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	Additional comments / Commentaires supplémentaires:	Various pagings.	
	Commentantes supplementantes.		Annual report of the Department of Interior ws: [2], [i]-iv, [ix]-xxx.

SESSIONAL PAPERS,

14-15

VOLUME 11.

FOURTH SESSION OF THE SIXTH PARLIAMENT

OF THE

DOMINION OF CANADA.

SESSION 1890.



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See also Numerical List, page 5.

ALPHABETICAL INDEX

TO THE

SESSIONAL PAPERS

OF THE

PARLIAMENT OF CANADA.

FOURTH SESSION, SIXTH PARLIAMENT, 1890.

A		c	
Adams, John	36	Canadian Immigration and Emigration	6*
Adulteration of Food	16	Canadian Pacific Railway:	
Advisory Council, North-West Territories	33d	Lands sold	31
•	81		31a
Agriculture, Annual Report	6	Subsidies for Steamships	316
American Vessels carrying bonded freight	37	Bridges on Branch Lines	31c
	94	Cars on Intercolonial Railway	41 <i>f</i>
Annapolis, Nova Scotia	56	Cascumpeque Harbor	59c
Appropriation Accounts of 1889	33k	Casualties on Intercolonial Railway	41e
Archives, Canadian	6b	Caughnawaga Indians 43b,	43c
Auditor General, Annual Report	5	Chambly Canal	466
· • • • • • • • • • • • • • • • • • • •		Chartered Banks4,	30c
В		Charters of Banks	3 0 <i>b</i>
Bank of British Columbia	306	Chatham, McGregor's Creek	79
Bank of British North America	306	Chinese Immigration	64
Baptisms, Marriages and Burials 1	100	Chisholm, Kenneth	63
Batoche Electoral District	71	Civil Service Board of Examiners	76
Beauharnois Junction Railway	42c	Civil Service List	7a
Bécancour Station and St. Julie de Somerset,	}	Civil Service Superannuations	2 8
Mail between	21a	Commissioner, Dominion Police	23
Beds of Harbors, Rivers, etc	74	Commissioner, North-West Mounted Police.	13
Board of Examiners, Civil Service	7 <i>b</i>	Copyright Act	35
Bonds and Securities	32	Cove Head Harbor	59
Breakwater at Tignish	58	Criminal Statistics	6a*
British Canadian Loan and Investment Co	44	Cullers' Office, Quebec	28a
British Columbia, Settlers' Petitions	76	_	
Budget Speech	38	Ю	
C		Damages by Intercolonial Railway	41c
· ·		Damages to Government property 87a,	, 87c
Campbellton and Gaspé Basin, Mails between.	21d	Dam at Hungry Bay	89
Canadian Archives	6 <i>b</i>	Deposits in Savings Banks 30,	30a
Canada Atlantic Railway	42b	Derby Branch Railway	40
Canadian Flour	97	Dominion Lands Regulations	26
1	1		

D	T
Dominion Police Commissioner 23	Intercolonial Railway:
Dredge "Prince Edward" 60	St. Jean Chrysostôme Station 41
Dundas and Waterloo Macadamized Road 54	Property sold in Lévis 41a
	Petitions from employees
IE	Damage to Properties
Eau Clair and Bow River Lumber Co 331	Insurance Scheme 41d
Eggs, Exports and Imports of	Casualties to trains 41c
Electoral Lists	Officials' Cars 41f
Esquimalt Graving Dock	Freight Rates, etc 41g
Estimates, 1890-91	Interprovincial Bridge over Ottawa River 80
Expenditures and Receipts 29, 75	Inverness and Ste. Julie de Somerset, Mail
Experimental Farms, Annual Report 6c	between 21a
	Island Railway Reserve, B.C 76
F	J
Fisheries, Annual Report	
Fisheries Protection Service 17b	Jesuits' Estates Act 70
Fleming, Sandford, Report of 65, 65a	Justice, Annual Report 10
Floating Lights	K
Flour, Canadian	
Fort la Corne Half-breeds 33h	Kamouraska Wharf 57a
Freight Rates, etc	Kettle Creek 52
French Language, North-West Territories. $33b$, $33e$	Kinistino Electoral District 71
G	L
Garneau, Joseph 55	Lake St. Peter, Floating Light in 83
Geological Survey Reports	Legislative Assembly, North-West Terri-
Gordon, Lieut., Report of 87b	tories
Governments of Ontario and Quebec 74	Lévis Post Office
Governor General's Warrants 22	Lévis, Property sold in
Graving Dock, Esquimalt 59g	Library of Parliament, Annual Report 8
Great Eastern Railway 67	Liquor License Act 91, 91a
Grosse Isle Quarantine	Lobster Factories in P.E.I
	Losses of Ships 72
н	Lothinière, Floating Light in 83a
Half-breed Claims	Lourdes and Somerset, Mail between 21
Half-breeds at Fort la Corne	
Hall's Harbor, Nova Scotia 59f	TME
Harbor Works, Quebec 59g	Mail between Bécancour Station and Ste. Julie
Harvey-Moncton Section of Railway 84	de Somerset
Herring Fishing Industry 17a	Mail between Lourdes and Somerset 21
High Commissioner, Report of 6d	Mail between Inverness and Ste. Julie de
Homesteads in North-West Territories 33f	Somerset
Hungry Bay Dam 89	Mails between Campbellton and Gaspé Basin 21d
Hurrell, Private C. J	Mails in Prince Edward Island 21b
Hydraulie Lots	Marine and Emigrant Hospital, Quebec 48, 48a
r	Marine, Annual Report 16
• • • • • • • • • • • • • • • • • • •	Matane Branch Railway 90
Immigration and Emigration, Canadian 6*	Military District No. 1
Indian Affairs, Annual Report 12	Militia and Defence, Annual Report 11
Indian Reserves 43, 436	Militia and Defence, Changes in Department
Indians, Intoxicating liquors sold to 43a	of 92a
Inland Revenue, Annual Report 1	Miscellaneous Expenses
Inspectors of hulls of steamers 45	Montreal Court House 78
Insurance Companies 9a, 9b	Mc
Insurance, Report of Superintendent 9	
Interior, Annual Report	McGirr, William 61
Interior Department, Clerks in 50	McCwaren's C. 1 Cl. 1

N		R	
New Brunswick Vice-Admiralty Court	47	Railways and Canals, Annual Report	19
	59a	Railways built by Dominion	
North-West Mounted Police	13	Railway Statistics.	19a
North-West Territories :			42d
Resolutions of Legislative Assembly	33	Receipts and Expenditures 29,	
Memorials for Legislative Assembly	33a	Registered Letter sent to Dead Letter Office.	21c
Separate Schools and French Language.	336	Registry Offices, North-West Territories	33g
Half-breed Claims	33c	Regulations affecting Dominion Lands	26
Resignation of Advisory Council	33d	Report on Social Economy	20
Printing in French	33e	River Thames.	54a
Second Homesteads	33f	Rivière du Sud	53b
Registry Offices	33g	Rocky Mountains Park	27
Half-breeds at Fort la Corne	33h	"Rooth," Seizure of tug	99
Seed Grain		Royal Military College	68
Appropriation Accounts	33k		
Eau Clair and Bow River Lumber Co	331	8	
St. Albert Bridge	33m	C. 1. 1. 1	00
Pasture Lands	33n	Saskatchewan Land and Homestead Co 82,	
List of Schools	330	Saskatchewan Provisional District	71
Nova Scotia Vice-Admiralty Court	47	Savings Banks 30,	
1101a bootla 1 loc Hamilarly Cours	^'	Sawdust in Ottawa River	
0		Schools in the North-West	300
		Schreiber, Collingwood, Report of	84
Ontario and Quebec Governments	74	Secretary of State, Annual Report	7 22:
Ontario Manufacturers' Association	86	Seed-grain, Purchase and distribution of 33i,	
Ottawa City and the Government	69	Seizure of the tug "Rooth"	99
Ottawa River Interprovincial Bridge	80	Self-binders, Reapers and Mowers	81
P		Separate Schools, North-West Territories Shareholders in Banks	33b 4
r			
Pagans in Census Returns	98	Ships, Losses of	72
Palmer Road Post Office	56b	Short Line Railway	84
Pasture Lands leased	33n	Social Economy, Report on	20
Petitions from Intercolonial Railway em-		St. Albert Bridge	33m
ployees	41b	Steamboat Inspection	16a 41
Picton Harbor and Public Buildings	59e	St. Jean Chrysostôme Station	57
Pierreville Post Office	56c	St. Roch-des-Aulnets Wharf	42c
Pinette Harbor	59a	Subsidies to Canada Atlantic Railway	426
Postmaster General, Annual Report	15	Subsidies to Canada Atlantic Ranway	
Post Office, Quebec	28b	Sud, Rivière du	53b
Prince Edward Island, Dredging in	60	Sultana Island 49,	
Prince Edward Island, Mails in	21b	Superannuation in Cullers' Office, Quebec	28a
Prince Edward Island, Wharves, etc., in	58a	Superannuations, Civil Service	28
Président et Sydics, Seigneurie d'Yamaska	53	Supplementary Estimates	3
Prieur, Arthur	77	Supplementary Estimates	·
Printing Bureau	95	T	
Public Accounts, Annual Report	3	mi i i i . Como Dosto Dosto de	00
Public Buildings	96	Telegraph Line along Cape Breton Railway.	88
Public Printing and Stationery	7c	Temperance Colonization Co 82, 82a,	
Public Works, Annual Report	18	Thames River	54a 58
Q		•	36a
•		Timber Limits Toronto Harbor Works	59d
Quarantine Regulations, Grosse Isle	62	Tracadie Harbor	59b
Quebec and Ontario Governments	74	Trade and Navigation, Annual Report	2
Quebec, Cullers' Office	28a	Trent Valley Canal Commission	46a
Quebec Harbor Works	59g	Tions valley Canal Commission	100
Quebec Marine and Emigrant Hospital 48,		\mathbf{v}	
Quebec Post Office	286		E-4
Quebec Vice-Admiralty Court	47	Valiquette's Pension 51a,	
"Quinté," Loss of steamer	87	Vice-Admiralty Courts	47
$1\frac{1}{2}$		3	

\mathbf{w}	\mathbf{w}
Warrants, Governor General's 22 Weights, Measures and Gas 1a Welland Canal, Report of A. F. Wood 46, 46c Western Union Telegraph Co 88 West India Steam Service 85	Wharf at St. Roch-des-Aulnets 57 Wiggins, John 101 Wood's Island 59α
Wharf at Kamouraska	Yamaska River 53, 53a

See also Alphabetical Index, page 1. Tax

LIST OF SESSIONAL PAPERS,

Arranged in Numerical Order, with their Titles at full length; the Dates when Ordered and when Presented to both Houses of Parliament; the Name of the Member who moved for each Sessional Paper, and whether it is Ordered to be Printed or Not Printed.

CONTENTS OF VOLUME No. 1.

- 1. Report, Returns and Statistics of the Inland Revenues of the Dominion of Canada, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 17th January, 1890, by Hon. J. Costigan Printed for both Distribution and Sessional Papers.
- 1a. Inspection of Weights, Measures and Gas, being a Supplement to the Report of the Department of
- 1b. Report on Adulteration of Food, being a Supplement to the Report of the Department of Inland

CONTENTS OF VOLUME No. 2.

Tables of the Trade and Navigation of the Dominion of Canada, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 17th January, 1890, by Hon. M. Bowell-

Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 3.

Public Accounts of Canada, for the fiscal year ended 30th June, 1889; presented to the House of Commons, 17th January, 1890, by Hon. G. E. Foster. Estimates for the fiscal year ending 30th June, 1891; presented 30th January, 1890. Supplementary Estimates of Canada, for the fiscal year ending 30th June, 1890; presented 27th March, 1890. Further Supplementary Estimates for the fiscal year ending 30th June, 1890; presented 25th April, 1890. Supplementary Estimates for the year ending 30th June, 1891; presented 6th May, 1890-

Printed for both Distribution and Sessional Papers.

4. List of Shareholders in the Chartered Banks of the Dominion of Canada, as on the 31st December, 1889. Presented to the House of Commons, 9th April, 1890, by Hon. G. E. Foster —

Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 4.

5. Report of the Auditor General on Appropriation Accounts, for the year ended 30th June, 1889. Presented to the House of Commons, 27th January, 1890, by the Hon. G. E. Foster-

Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 5.

- Report of the Minister of Agriculture for the Dominion of Canada, for the calendar year, 1889. Presented to the House of Commons, 20th March, 1890, by Hon. J. Carling-
- Printed for both Distribution and Sessional Papers. 6*. Canadian Immigration and Emigration. Annex to the Report of the Minister of Agriculture—

Printed for both Distribution and Sessional Papers.

..... Printed for both Distribution and Sessional Papers. 6a. Criminal Statistics for the year 1888.....

CONTENTS OF VOLUME No. 6.

- 6c. Reports of the Director and Officers of the Experimental Farms, for the year 1889. Presented to the House of Commons, 9th April, 1890, by Hon. J. Carling—

Printed for both Distribution and Sessional Papers.

6d. Report of the High Commissioner for Canada, with Reports from Agents in the United Kingdom, for the year 1889. Presented to the House of Commons, 9th April, 1890, by Hon. J. Carling—

Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 7.

- 7. Report of the Secretary of State of Canada, for the year ended 31st December, 1889. Presented to the House of Commons, 29th January, 1890, by Hon. J. A. Chapleau—
 - Printed for both Distribution and Sessional Papers.
- 7b. Report of the Board of Examiners for the Civil Service of Canada, for the year ended 31st December,
 1889. Presented to the House of Commons, 30th January, 1890, by Hon. J. A. Chapleau—
 Printed for both Distribution and Sessional Papers.
- 8. Report of the Joint Librarians of Parliament on the state of the Library of Parliament. Presented to the House of Commons, 16th January, 1890, by Hon. Mr. Speaker—

Printed for Sessional Papers only.

CONTENTS OF VOLUME No. 8.

- 9. Report of the Superintendent of Insurance, for the year ended 31st December, 1889-
- Printed for both Distribution and Sessional Papers.

 Page 18. Preliminary Abstract of the business of Canadian Life Insurance Companies, for the year ended 31st

December, 1889. Presented to the House of Commons, 7th February, 1890, by Hon. G. E. Foster.

Printed for both Distribution and Sessional Papers.

9b. Abstract of Statements of Insurance Companies in Canada for the year ending 31st December, 1889.

Presented to the House of Commons, 9th April, 1890, by Hon. G. E. Foster—

Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 9.

- 10. Report of the Minister of Justice as to Penitentiaries in Canada, for the year ended 30th June, 1889.
 Presented to the House of Commons, 28th March; 1890, by Sir John Thompson—
 - Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 10.

- 12. Annual Report of the Department of Indian Affairs, for the year ended 31st December, 1889. Presented to the House of Commons, 22nd January, 1890, by Hon. E. Dewdney—
 - Printed for both Distribution and Sessional Papers.
- 13. Report of the Commissioner of the North-West Mounted Police Force, 1889. Presented to the House of Commons, 17th March, 1890, by Sir John Macdonald—

Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 11.

- 14. Annual Report of the Department of the Interior, for the year 1889. Presented to the House of Commons, 31st March, 1890, by Hon. E. Dewdney—
 - Printed for both Distribution and Sessional Papers.
- Report of the Postmaster General, for the year ended 30th June, 1889. Presented to the House of Commons, 23rd January, 1890, by Hon. J. Haggart—

OMISSION.

The two following documents were not printed until the Index was issued, which accounts for their omission:

6e. Abstracts of the Returns of Mortuary Statistics for the year 1889. (Printed for both Distribution and Sessional Papers.)

[The above paper has been inserted as the first of Volume No. 7, immediately preceding the Report of the Secretary of State.]

19b. Canal Statistics for Season of Navigation, 1889. (Printed for both Distribution and Sessional Papers.)

[Inserted as last paper in Volume No. 13, immediately following Railway Statistics.]

CONTENTS OF VOLUME No. 12.

- 16. Twenty-second Annual Report of the Department of Marine, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 24th February, 1890, by Hon. Mr. Colby—
- 17. Annual Report of the Department of Fisheries, for the year 1889. Presented to the House of Commons, 16th April, 1890, by Hon. Mr. Colby Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 13.

- 18. Annual Report of the Minister of Public Works, for the fiscal year 1888-89, on the works under his control. Presented to the House of Commons, 3rd February, 1890, by Sir Hector Langevin—

 Printed for both Distribution and Sessional Papers.
- 19. Annual Report of the Minister of Railways and Canals for the past fiscal year, from the 1st July, 1888, to 30th June, 1889, on the works under his control. Presented to the House of Commons, 3rd March, 1890, by Sir John A. Macdonald... Printed for both Distribution and Sessional Papers.
- 19α. Railway Statistics of Canada, and Capital, Traffic and Working Expenditure of the Railways of the Dominion, 1889. Presented to the House of Commons, 9th May, 1890, by Sir John A. Macdonald—Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 14.

- 20. Report of the Social Economy Section of the Universal International Exhibition of 1889 at Paris, prepared by Jules Helbronner, member of the Royal Labor Commission. Presented to the House of Commons, 8th May, 1890, by Hon. M. Bowell. Printed for both Distribution and Sessional Papers.

- Statement of Governor General's Warrants issued and expenditure made under same since last session of Parliament, in accordance with Consolidated Revenue and Audit Act, section 32, sub-section 2. Presented to the House of Commons, 20th January, 1890, by Hon. G. E. Foster—

Not printed.

CONTENTS OF VOLUME No. 15.

- 28b. Return to an address of the House of Commons, to His Excellency the Governor General, dated 22nd January, 1890, for copies of all Orders in Council, correspondence and documents respecting the superannuation of certain employés in the Post Office at Quebec, and in the Post Office Inspector's Office at Quebec; and the filling up of the vacancies caused by their superannuation. Presented to the House of Commons, 5th March, 1890.—Mr. Langelier (Quebec Centre)......Not printed.

- 30b. Return to an order of the House of Commons, dated 5th February, 1890, for copies of the original charters of the Bank of British North America and of the Bank of British Columbia, and of all amendments thereto. Presented to the House of Commons, 21st February, 1890.—Mr. Edgar—

- 33. Return to an address of the House of Commons, to His Excellency the Governor General, dated 27th January, 1890, for copies of all resolutions of the Legislative Assembly of the North-West Territories, respecting the application of moneys voted by this House for the use of the said territories. Presented to the House of Commons, 10th February, 1890.—Hon. Mr. Laurier......Not printed.

33h. Correspondence in relation to certain assistance afforded to the Half-breeds at Fort la Corne and other places. Presented to the House of Commons, 1st May, 1890, by Hon, E. Dewdney—

Not printed

- 33i. Statement respecting the purchase of seed grain (including a schedule of prices paid for wheat and oats). Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney....Not printed.
- 33j. Statement respecting distribution of seed-grain and instructions as to the distribution thereof. Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney...................Not printed.
- 331. Statement regarding the claim of the Eau Clair and Bow River Lumber Company against the Government for lumber alleged to have been taken off their limits. Presented to the House of Commons. 1st May, 1890, by Hon, E. Dewdney
- 33n. Return to an order of the House of Commons, dated 21st April, 1890, for a return showing: 1. The number of acres of pasture land now under lease in the North-West Territories. 2. The amount paid the Government for rental of grazing leases during the past year. 3. The amount due the Government for arrears on pasture leases, and the names of the lessees in arrears for pasture lease rental. 4. The names of the lessees holding leases of territory upon which settlers are not allowed to take up land without the consent of the lease holder, with the total area of such leases, and the location of each. Presented to the House of Commons, 9th May, 1890.—Mr. Charlton—

Not printed.

- 34. See Sessional Paper No. 17a.
- 35. Certified copy of a report of the Honorable the Privy Council, approved by His Excellency in Council on the 17th August, 1889, on the subject of the Copyright Act of last session, together with correspondence and other papers referring to the same subject. Presented to the House of Commons, 10th February, 1890, by Sir John Thompson... Printed for both Distribution and Sessional Papers.

- 39. Return to an order of the House of Commons, dated 23rd January, 1890, for a statement of all the expenses generally incurred to this day for the making of the electoral lists for the Dominion of Canada. Presented to the House of Commons, 25th February, 1890.—Mr. Casgrain—

Not printed.

- 41f. Return to an order of the House of Commons, dated 10th March, 1890, for a return showing (a) the names and number of officials' cars on the Intercolonial Railway and its branches; (b) the original cost, date and place of building of each car, or name of person or company from whom purchased; (c) the cost of repairs to, or expenditure in, each of such cars since acquired; (d) the names, salaries and expenses of each employee on such official cars; (e) the annual expenses of providing the supplies to each such car. Presented to the House of Commons, 9th May, 1890.—Mr. Davies—

Not printed.

- 41g. Return to an address of the Senate to His Excellency the Governor General, dated 1st May, 1890, for a return showing: 1. The rate per ton charged for carrying coal in car loads over the Intercolonial Railway from the mines of Nova Scotia to St. John, Moncton, Newcastle and Campbellton in New Brunswick, and to Rimouski, Rivière du Loup and Quebec, and by the same, with its connections, to Montreal and Toronto. 2. The rate per ton for carrying flour, wheat and other goods of the same class in car loads from Toronto, Montreal and Quebec to Campbellton, Newcastle, Moncton and St. John in New Brunswick, and to Amherst, Truro, Pictou and Halifax in Nova Scotia. 3. The number of freight trains which passed each way between Nova Scotia and Quebec and Ontario, and between New Brunswick and the same provinces, in the year 1889. 4. How many trains carried goods from the west to be shipped at Halifax and St. John, respectively, during 1889, and up to the present date in 1890. Presented to the Senate, 16th May, 1890.—Hon. Mr. Wark.
- 42. Return to an order of the House of Commons, dated 23rd January, 1890, for a return showing the amount of money expended by the Dominion in each province since Confederation to the 30th of June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault Branch. 2. The several railways built by the Dominion in each Province, including the Intercolonial branches and extensions, but not the main line as originally constructed. 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 26th February, 1890.—Mr. McMullen—

Printed for both Distribution and Sessional Papers.

42a. Amended return (in part) to a return presented to the House of Commons on the 26th February, 1890, showing the amount of money expended by the Dominion in each province since Confederation to the 30th June, 1889, under the following heads: 1. Subsidies to railways in each province excepting the Canada Pacific main line and Sault Branch. 2. The several railways built by the Dominion in each province, including the Intercolonial branches and extensions, but not the main

line as originally constructed. 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 22nd April, 1890.—Mr. McMullen

Printed for both Distribution and Sessional Papers.

- 42d. Papers, correspondence, etc., respecting subsidies to certain railway companies, and towards the construction of certain railways, as follows: Montreal and Ottawa Railway Company (late Vaudreuil and Prescott Railway Company); Waterloo Junction Railway Company; Northern Pacific Junction Railway Company; Ottawa, Morrisburg and New York Railway Company; Erie and Huron Railway Company; Brockville, Westport and Sault Ste. Marie Railway Company; Manitoulin and North Shore Railway Company; Port Arthur, Duluth and Western Railway Company; Lake Erie and Detroit River Railway (formerly Amherstburg, Lake Shore and Blenheim Railway Company); Lindsay, Bobcaygeon and Pontypool Railway Company; Kingston, Smith's Falls and Ottawa Railway Company; Ottawa and Parry Sound Railway Company; Bay of Quinté and Lake Nipissing Railway Company; Cobourg, Northumberland and Pacific Railway Company; St. Stephen and Milltown Railway Company; Woodstock and Centreville Railway Company; St. John River Railway Company, N.B.; Central Railway Company, N.B.; Shelburne and Liverpool to Annapolis Railway Company; Inverness and Richmond Railway Company; International Railway Company; Montreal and Sorel Railway Company; Pontiac Pacific Junction Railway Company; Montreal and Lake Maskinongé Railway Company; Great Eastern Railway Company; Drummond County Railway Company; Oxford Mountain Railway Company; Maskinongé and Nipissing Railway Company; Jacques Cartier Union Railway Company; Quebec Central Railway Company; Quebec and Lake St. John Railway Company; Stewiacke Valley and Lansdowne Railway Company; Temiscouata Railway Company; Tobique Valley Railway Company. Presented to the House of Commons, 14th May, 1890, by Sir John A.
- 43. Return to an order of the House of Commons, dated 12th February, 1890, for a list of Indian reserves within the Province of Manitoba, giving location and area of each one, number of Indians belonging to it at the time of location of such reserve, and number now actually living on same. Presented to the House of Commons, 26th February, 1890.—Mr. LaRivière—

Printed for both Distribution and Sessional Papers.

- 43b. Return to an order of the House of Commons, dated 10th March, 1890, for a statement showing: 1.

 All moneys in the hands of the Superintendent General of Indian Affairs, belonging to the Indians of the Caughnawaga Reserve. 2. All the several sources from which the said moneys were derived. Presented to the House of Commons, 26th March, 1890.—Mr. Doyon.....Not printed.

- 44. Statement of the affairs of the British Canadian Loan and Investment Company, on 31st December, 1889. Presented to the House of Commons, 16th May, 1890, by Hon. Mr. Speaker...Not printed.
- Return to an address of the House of Commons to His Excellency the Governor General, dated 1st April, 1889, for a return: 1. Giving the names and places of residence of the commissioners appointed in 1883 for the purpose of examining and reporting upon the fitness and eligibility of persons appearing before them for examination and qualification as inspectors of the hulls of freight and passenger steamers plying in Canadian waters. 2. Copies of the circular sent out inviting competitors to meet at Ottawa, and the date or dates so mentioned from time to time. The names and places of residence of all persons who were so examined at each and every meeting of the said commissioners up to date. 4. Copies of the recommendation or recommendations of any of the said commissioners, or any one of them, respecting the said examination or the qualifications, or otherwise, of any or all who underwent such examination at the first or any subsequent meeting of the said commissioners, or either of them. 5. The name and place of residence of each and every inspector of freight and passenger steamer hulls appointed by the Government from 1882 to date; indicating who were appointed after undergoing and passing the necessary examination, as well as giving the name and place of residence of each and every inspector of such hulls who was appointed without having successfully passed the said examination, together with the name and place of residence of any inspector so appointed, since 1882 to date, who had been dismissed or had resigned within the time specified, and the cause assigned for such dismissal or resignation. 6. The name and place of residence of any person appointed to fill any vacancy or addition as inspector of said hulls. 7. Copies of all correspondence between the Minister of Marine and any person respecting any of the questions enumerated herein. Presented to the House of Commons,

- 46b. Return to an order of the House of Commons, dated 3rd March, 1890, for a statement showing, for each year since 1878:
 1. The number of vessels which have passed through the Chambly Canal, and their tonnage.
 2. The amount of, and the description of freight carried by these vessels.
 3. The amount of tolls collected in the said several years on the said canal. Presented to the House of Commons, 17th March, 1890.—Mr. Préfontaine.

- 48. Return to an order of the House of Commons, dated 23rd January, 1890, for a statement in detail showing the expenditure made in connection with the Marine and Emigrant Hospital at Quebec, since the 30th June, 1886, the said statement giving: 1. The sum voted each year by the Dominion Parliament. 2. The amount expended. 3. The number of sailors and emigrants taken in each year, and the total number of days that each one of these passed in the hospital. 4. The number of persons not being sailors or emigrants, taken into the said hospital, and the number of days that each one of this class passed there. 5. The total cost day by day of each patient. 6. The amount received by the Government for the patients who are neither emigrants nor sailors. 7. The amount

- received from the Sick Mariners' Fund under the Act 49 Vic., chap. 76, section 16. Presented to the House of Commons, 5th March, 1890.—Mr. Langelier (Quebec Centre)—
- Printed for both Distribution and Sessional Papers.

 48a. Return to an address of the House of Commons to His Excellency the Governor General, dated 22nd
 January, 1890, for copies of all Orders in Council, correspondence and documents respecting the
 establishment of the Marine Hospital at Quebec and respecting the closing of the same. Presented
 to the House of Commons, 17th March, 1890.—Mr. Langelier (Quebec Centre)......Not printed.
- 49. Return to an order of the House of Commons, dated 29th January, 1890, for a return showing whether or not the island known as Sultana Island, in the Lake of the Woods, has been sold, and if sold, showing by what right or title the Government of Canada claimed to have the power to sell the same; showing, also, all correspondence had between the Government of Canada and the purchaser or purchasers of said island, or the solicitors or other persons acting on behalf of such purchaser or purchasers (if any); showing, also, the area of land contained in said island, and the value and extent of the pine timber thereupon, and the price or amount for which the said island was sold, and the names and addresses of the purchaser or purchasers thereof. Also any map showing locality of island. Presented to the House of Commons, 5th March, 1890.—Mr. Barron—Not printed.
- 49a. Supplementary return to an order of the House of Commons, dated 29th January, 1890, for a return showing whether or not the island known as Sultana Island, in the Lake of the Woods, has been sold, and if so, showing by what right or title the Government of Canada claimed to have the power to sell the same; showing, also, all correspondence had between the Government of Canada and the purchaser or purchasers of said island, or the solicitors or other persons acting on behalf of such purchaser or purchasers (if any); showing, also, the area of land contained in said island, and the value and extent of the pine timber thereupon, and the price or amount for which the said island was sold, and the names and addresses of the purchaser or purchasers thereof. Also any map showing locality of island. Presented to the House of Commons, 2nd April, 1890.—Mr. Barron. Not printed.
- 50. Return to an order of the House of Commons, dated 17th April, 1889, for a return showing the number of permanent clerks employed by the Department of the Interior, including inside and outside service. And also the number of extra clerks at present in the employ of the said department in the same service. Presented to the House of Commons, 5th March, 1890.—Mr. Weldon (St. John)—Not wrinted.

- 51c. Copy of a declaration made by Antoine Valiquette, father of the late Primat Valiquette, sergeant in the 65th Battalion. Presented to the House of Commons, 18th April, 1890, by Sir A. P. Caron.

- 53b. Return to an order of the House of Commons, dated 12th February, 1890, for copies of the late reports made by the Engineer of the Public Works Department respecting works to be carried out at Rivière du Sud, in the county of Montinagny. Presented to the House of Commons, 17th
- Return to an order of the House of Commons, dated 30th January, 1890, for a return of all correspondence, petitions, reports or other papers respecting the sale, ownership or condition of the Dundas and Waterloo Macadamized Road, since the close of the session of 1889. Presented to
- 54a. Return to an order of the House of Commons, dated 29th January, 1890, for copies of all petitions, reports of engineers, and all correspondence in reference to the dredging of the bar at the mouth of the river Thames, in the county of Kent, Ontario. Presented to the House of Commons, 10th
- Return to an order of the House of Commons, dated 22nd January, 1890, for copies of all correspondence and documents respecting the appointment of Mr. Joseph Garneau as Superintendent of Government works at Quebec; and respecting his removal and the substitution of a person named L. P. Lépine. Presented to the House of Commons, 10th March, 1890.—Mr. Langelier (Quebec
- 56. Return to an order of the House of Commons, dated 5th February, 1890, for a return of a copy of the contract and specification for the erection of the Post Office and Custom House building at Annapolis, Nova Scotia; the several tenders and amounts thereof; also any order or orders altering the quality and nature of the stone used in the construction. Presented to the House of
- 56a. Return to an order of the House of Commons, dated 4th March, 1889, for copies of all petitions and resolutions forwarded to the Government by the citizens or Corporation of the town of Lévis, in relation to the building of a post office in the said town. Presented to the House of Commons,
- 56b. Return to an order of the House of Commons, dated 12th February, 1890, for copies of all petitions, letters, etc., to the Department at Ottawa, praying for a post office at Palmer Road, Prince Edward Island; also all correspondence to and from the Post Office Department at Ottawa and the Post Office Inspector at Charlottetown, Prince Edward Island, on the same subject. Presented to the
- 56c. Return to an order of the House of Commons, dated 12th February, 1890, for copies of two enquiries made by Messrs. Bourgeois, King and Bolduc, respecting the post office at Pierreville, P.Q.—Mr.
- Return to an order of the House of Commons, dated 11th March, 1889, for copies of all correspondence, reports, etc., respecting the wharf at St. Roch des Aulnets, in the county of L'Islet, between the Department of Public Works and the late Charles Frs. Roy, surveyor, and the residents of the said municipality interested therein. Presented to the House of Commons, 10th March, 1890.—
- 57a. Return to an order of the House of Commons, dated 27th January, 1890, for copies of the accounts connected with the building of a wharf at Kamouraska, in the province of Quebec, made up in the course of the year 1889. Presented to the House of Commons, 10th March, 1890.—Mr. Dessaint— Not printed.
- 58. Return to an order of the House of Commons, dated 27th January, 1890, for a statement, in detail, showing the expenditure made in connection with repairs to Tignish Breakwater, Prince Edward Island, during 1889; the date of commencement of work, and when completed; the name of party in charge of work. Presented to the House of Commons, 10th March, 1890.—Mr. Perry-Not printed.

- 58a. Return to an order of the House of Commons, dated 26th February, 1890, for a statement showing the number of Government wharves, piers and breakwaters repaired in Prince Edward Island during the year 1889, the amount expended on each of said wharves, piers and breakwaters. Presented
- Return to an order of the House of Commons, dated 24th February, 1890, for copies of the reports made by the chief engineer relating to the survey of Cove Head Harbor, in Prince Edward Island, four or five years ago. Presented to the House of Commons, 10th March, 1890.-Mr. Davies-Not printed.
- 59a. Return to an order of the House of Commons, dated 20th January, 1890, for a copy of Government engineer's report of survey of Harbors of Pinette and Wood's Island, and also copy of report of survey of New London Harbor and Breakwater, in the province of Prince Edward Island. Pre-

- 59b. Return to an order of the House of Commons, dated 24th February, 1890, for copies of any reports made by the chief engineer relating to survey of Tracadie Harbor, Prince Edward Island, some years ago. Presented to the House of Commons, 20th March, 1890.—Mr. Davies....Not printed.
- 59d. Return to an order of the House of Commens, dated 10th March, 1890, for a return showing the number of tenders made or put in for the public work at the eastern gap of the Toronto Harbor works; the name or names of each person or company tendering for the work and the amount of each tender and the terms thereof, with a statement of the approximate quantities upon which each tender was calculated; and of all letters and correspondence, statements, documents and papers pertaining to the letting of the contract and to any and all of the tenders. Presented to the House of Commons, 1st April, 1890.—Mr. Barron.
- 59c. Return to an order of the House of Commons, dated 19th March, 1890, for a return of all correspondence, petitions, memorials, reports of the chief engineer of the Department relative to the necessity and expediency of dredging and otherwise improving the harbor at Picton, Bay of Quinté, since 1st January, 1883; and also containing all correspondence, petitions, memorials and reports concerning the desirability or expediency of construction of public buildings at the said town of Picton for the accommodation of post office, customs and inland revenue offices in that town, since 1st January, 1886. Presented to the House of Commons, 2nd April, 1890.—Mr. Platt—
- 59g. Statements and correspondence in reference to the Harbor Works at Quebec, Graving Dock at Esquimalt, etc. Presented to the House of Commons, 16th May, 189c, by Sir Hector Langevin—

 Printed for both Distribution and Sessional Papers.

63. Return to an order of the House of Commons, dated 12th February, 1890, for copies of correspondence in connection with a claim, made by the district of St. Peter's, in the county of Richmond, for medical attendance and board of Kenneth Chisholm, a sick mariner, belonging to the schooner "Jeanie." Presented to the House of Commons, 10th March, 1890.—Mr. Flynn—

Not printed.

64. Return to an order of the House of Commons, dated 24th January, 1890, for a return showing: 1.

The total number of Chinese immigrants who have arrived in the Dominion of Canada from the 31st March, 1887, to the 31st December, 1889, specifying the ports at which such immigrants have arrived. 2. The amount of fees or duties collected from Chinese immigrants during the same period. 3. The number of certificates of residence that have been issued to Chinese as provided for under section 13 of the Act to restrict and regulate Chinese immigration into Canada, since the passage of the Act. 4. The number of Chinese who have been detected in attempting to land in Canada upon fraudulent certificates and who were prevented by the courts from doing so. 5. Copies of all correspondence having reference to the removal from office of Mr. Vroman alias Mr. Gardner, and also all correspondence having reference to the appointment of a Chinaman to the

65. Return to an address of the Senate to His Excellency the Governor General, dated 21st January, 1890, for copies of all reports and other communications in reference to the deposit of sawdust, slabs, or other offensive material, in the Ottawa and other rivers of the Dominion. Presented to the Senate, 10th March, 1890.—Hon. Mr. Clemow—

Presented for both Distribution and Sessional Papers.

- 66. Return to an address of the Senate to His Excellency the Governor General, dated 22nd January, 1890, for a detailed statement showing the settlement effected with the lessees of hydraulic lots at the Chaudiere, city of Ottawa; as likewise copies of new leases entered into with the several lessees of the said hydraulic lots. Presented to the Senate, 10th March, 1890.—Hon. Mr. Clemow.
 Not wrinted.

- 68. Report in relation to the appointment of non-commissioned officers in the Royal Military College.

 Presented to the House of Commons, 13th March, 1890, by Sir A. P. Caron..........Not printed.

- 72. Return to an order of the House of Commons, dated 12th February, 1890, for a return showing the annual losses of ships since 1868 in the Gulf of St. Lawrence and on the Atlantic coast and Bay of Fundy, owing to tides, currents and fogs, with the name and tonnage of each vessel, and such particulars in each case as to the causes and extent of damage, as may be in the possession of the Government. Presented to the House of Commons, 17th March, 1890.—Mr. Curran—

Printed for Sessional Papers only.

78. Return to an order of the House of Commons, dated 24th February, 1890, for a return showing the number of Reports of the Geological Survey published respectively for each year of the last ten years, the number sold each year, the number distributed gratuitously, and the number still on hand. Presented to the House of Commons, 17th March, 1890.—Mr. Ferguson (Welland)—

Printed for Sessional Papers only.

- 80. Return to an order of the House of Commons, dated 24th February, 1890, for the report and plans of the Chief Engineer of the Department of Public Works employed to make a survey and examination, with a view to the construction of an inter-provincial bridge across the Ottawa River, between the village of La Passe, in the province of Ontario, and the village of Fort Coulonge, in the province of Quebec. Presented to the House of Commons, 1st April, 1890.—Mr. Bryson—

Not printed.

- 82. Return to an address of the House of Commons to His Excellency the Governor General, dated 22nd January, 1890, for copies of all correspondence between the officers of the Temperance Colonization Company, and the officers of the Saskatchewan Land and Homestead Company, and the Department of the Interior, or any member of the Government; and all correspondence between Rev. Alexander Sutherland and John T. Moore and the Department of the Interior, or any member of the Government, in relation to the location of lands and claims for placing immigrants on lands, and compensation for assisting immigration to the said lands, together with all Orders in Council relating to such claims. Presented to the House of Commons, 14th April, 1890.—Mr. Somerville—

82a. Supplementary return to an address of the House of Commons, to His Excellency the Governor General, dated 22nd January, 1890, for copies of all correspondence between the officers of the Temperance Colonization Company and the officers of the Saskatchewan Land and Homestead Company and the Department of the Interior, or any member of the Government; and all correspondence between the Rev. Alexander Sutherland and John T. Moore and the Department of the

- 83. Return to an order of the House of Commons, dated 10th March, 1890, for copies of all petitions and correspondence respecting the placing of a floating light opposite Yamachiche, in Lake St. Peter, River St. Lawrence. Presented to the House of Commons, 16th April, 1890—Mr. Rinfret.
- 83a. Return to an order of the House of Commons, dated 19th March, 1890, for copies of all petitions, correspondence and documents whatsoever respecting the placing of a floating light on the St. Lawrence opposite the church of Ste. Croix, in the county of Lotbinière, in place of the buoy now located there. Presented to the House of Commons, 25th April, 1890.—Mr. Rinfret Not printed.
- 84. Report of Collingwood Schreiber, Esq., Chief Engineer and General Manager of Government Railways, on the completion of the location survey of the proposed line of railway between Harvey Station on the New Brunswick Railway, and a point on the Intercolonial Railway near Moneton viâ Fredericton, known as the "Harvey-Moneton Section of the Short Line Railway." Presented to the House of Commons, 24th April, 1890, by Sir John Macdonald Not printed.
- 86. Return to an order of the House of Commons, dated 24th January, 1890, for a return of all papers and correspondence between the Ontario Manufacturers' Association and the Dominion Government, during the years 1883, 1884 and 1885, on the subject of proposed legislation relating to factories. Presented to the House of Commons, 1st May, 1890.—Mr. Edgar.......Not printed.

- 87c. Return (in part) to an order of the House of Commons, dated 5th March, 1890, for a return of all claims made by the Government since Confederation against individuals, companies or corporations for damages done to Government property by steamers, vessels or other craft; giving the names of vessels, etc., their owners, dates and items of each claim, distinguishing those paid and unpaid. Presented to the House of Commons, 16th May, 1890.—Mr. Cook.......Not printed.
- 88. Return to an order of the House of Commons, dated 14th April, 1890, for copies of all agreements made between the Government, or the Minister of Railways, and the Western Union Telegraph Company, respecting the construction and operation of a telegraph line along the Cape Breton Railway. Presented to the House of Commons, 2nd May, 1890.—Mr. Macdonald (Victoria)—

 Not printed.
- 89. Return to an order of the House of Commons, dated 14th April, 1890, for copies of the petitions, letters, and the plans and engineers' reports respecting the projected dam at Hungry Bay, in the county of Beauharnois. Presented to the House of Commons, 2nd May, 1890.—Mr. Bergeron—

- 91a. Return to an order of the House of Commons, dated 10th March, 1890: 1. For a return, in detail, of all expenses attending the passage and enforcement of the Liquor License Act of 1883 up to date.
 2. The amount of all law costs re its constitutionality. 3. The names of all the legal firm or firms employed by the Government, and the amount paid said firm or firms. Presented to the House of Commons, 16th May, 1890.—Mr. Trow.

- 94. Correspondence respecting the surrender of the Anderson contract for the Atlantic Steamship Service.

 Presented to the House of Commons, 13th May, 1890, by Hon. G. E. Foster—
- 96. Return (in part) to an order of the House of Commons, dated 23rd January, 1890, for a return showing the amount of money expended by the Dominion in each province since Confederation to the 30th of June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault branch; 2. The several railways built by the Dominion in each Province, including the Intercolonial branches and extensions, but not the main line as originally constructed; 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 7th May, 1890.—Mr. McMullen—

Printed for both Distribution and Sessional Papers.

- 98. Return to an order of the House of Commons, dated 12th February, 1890, for a return showing the names of the six Pagans returned for the parish of Ste. Elizabeth, in the county of Joliette and province of Quebec, in the census returns of 1881, as appears from the original schedule of the enumerator for that parish. Presented to the House of Commons, 16th May, 1890.—Mr. Charlton.
 Not printed.

ANNUAL REPORT

OF THE

DEPARTMENT OF THE INTERIOR

FOR THE YEAR

1889.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:

PRENTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.

1890.

To His Excellency the Right Honourable Lord Stanley of Preston, Governor General of Canada, &c., &c.

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to lay before Your Excellency the Report of the transactions of the Department of the Interior for the year ending 31st October, 1889.

Respectfully submitted,

E. DEWDNEY,

Minister of the Interior.

OTTAWA, 3rd March, 1890.

TABLE OF CONTENTS.

Report of	the Deputy of the Minister of the Interior	PAGE ix
	PART I.—DOMINION LANDS.	
Report of do do	Wm. Pearce, Superintendent of Mines	3 21 27
do do	and British Columbia	29 33 35 38 40
	Lands	41
do	B.—Statement showing Receipts on account of Timber, Grazing, Hay and Mineral Lands, commencing with fiscal year 1872-73 and ending 31st October, 1889 E. F. Stephenson, Crown Timber Agent, Winnipeg Statement of Receipts at Crown Timber Office, Winnipeg	43 44 47
	Statement showing quantity of Lumber entered at the Port of Winnipeg during year Statement showing saw-mills operating under License in Mani- toba, Keewatin and Assiniboia Summary of correspondence and transactions at Crown Timber Office, Winnipeg	48 49
do	Thos. Anderson, Crown Timber Agent, Edmonton Statement of Receipts at Crown Timber Office, Edmonton Statement showing saw-mills operating under License in the Edmonton Agency Statement of correspondence and transactions at Crown Timber	51 52 53 54
·do	Office, Edmonton C. L. Gouin, Crown Timber Agent, Calgary Statement of Receipts at Crown Timber Office, Calgary Statement showing saw-mills operating under license in the Calgary Agency	56 56 57 58
do	J. McTaggart, Crown Timber Agent, Prince Albert Statement of Receipts at Crown Timber Office, Prince Albert Statement showing saw-mills operating under License in the	60 61 62
⊶do	Prince Albert Agency Statement of correspondence and transactions at Crown Timber Office, Prince Albert T. S. Higginson, Crown Timber Agent, British Columbia Statement of Receipts on account of Crown Timber in British Columbia	63 64 65 66

•		DACIN
	Statement showing saw-mills cutting timber on Dominion Lands	PAGE
	in British Columbia.	67
Report o	I Wm. Mills, in charge of Ordnance and Admiralty Lands	68
	Statement of sales during the year	71
	Statement showing localities on account of which moneys have	
	been received	71
	Statement of Receipts	72
do	J. A. Pinard, Accountant of the Department	73
	Statement of Receipts on account of Dominion Lands	74
Appendi:	x A—Statement showing number of entries made at Head Office,	
	and the Agency of the Temperance Colonization Society	75
\mathbf{do}	B-Statement showing number of Letters Patent issued, and	
	number of acres patented	76
\mathbf{do}	C-Statement showing Registration Districts for which Lists of	• •
	Patents have been prepared	77
do	D-Statement showing number of Deeds of Transfer recorded at	• •
	Head Office, and amount received as fees therefor	77
		•••
	PART II.—DOMINION LANDS SURVEYS.	
Report of	f E. Deville, Surveyor General	9
10 por o	Schedule showing D. L. Surveyors employed during year	3
do	W F King Chief Ingrestor of Surveyors	8
do	W. F. King, Chief Inspector of Surveys Otto J. Klotz, D. T. S., computation of limits of Railway Belt in	10
uo	Buitish Columbia	40
do	British Columbia	13
uo	J. S. Dennis, Inspector of Surveys	17
	Schedule of Correction and Examination Surveys performed	
	during season	21
do	J. McAree, D.T.S., Correction Surveys in Manitoba	22
do	L. Gosselin, D.L.S., Correction Surveys on and near 2nd Meridian.	26
do	E. W. Hubbell, D.L.S., Examination and Correction of Surveys	28
do	E. Bray, D.L.S., Survey of Township outlines	31
do	J. McLatchie, D.L.S., Survey of Township outlines	33
do	C. F. Leclerc, D.L.S., Survey of Half-breed Settlement on South	
_	Saskatchewan River	38
do	J. L. Reid, D.L.S, Correction, Sub-division and Trail Surveys	39
do	P. R. A. Belanger, D.L.S. Survey of Trails and Settlements at Lake	
_	Ste Anne and Lac la Riche	40
do	W. S. Drewry, D.L.S., Triangulation Survey of Railway Belt in	
	Rooker Mountains	44
do	J. J. McArthur, D.L.S., Topographical Survey in Rocky Mountains	51
\mathbf{do}	A. Saint Cyr, D.L.S., determining limits of Railway Belt, British	
	Columbia	53
do	A. Driscoll, jr., D.L.S, Sub-division Survey and Traverses in British	-
	Columbia	56
do	Columbia	00
	of Railway Belt in British Columbia	5 9
\mathbf{do}	John Vicars, D.L.S., Survey in New Westminster District	61
do	E. Bray, D.L.S., Survey of Township outlines between Lakes Win-	O1
	nipeg and Manitoba	63
do	W. T. Thompson, D.T.S., Survey of Township outlines	
do	C. F. Miles, D.L.S., Surveys in southern part of District of Alberta	66
	tion Papers of Board of D. L.S. Examiners	73
		77
	PART III.—GEOLOGICAL SURVEY.	
Report of	f Dr. A. R. C. Selwyn, Director of the Geological and Natural His-	
	tory Survey	3
ii	INDEX.	•

Expl	orations and	Surveys	in British Columbia	PAGE 6
•	do	do	North-West Territories	10
	do	do	Manitoba	12
	do	do	Ontario	18
	do	do	Quebec	20
	do	do	District around Sudbury, Ont	21
	do	do	Eastern Townships, Que	22
	do	do	New Brunswick	24
26.	do	do	Nova Scotia	29
			ics	31
Chem	nistry and M	ineralogy		32
Palæ	ontology and	Zoology.		34
List (or additions	to Museur	n	37
				40
maps Tibro		• • • • • • • • • • • • • •		41
Vigit	ove to Muser		***************************************	42 43
Staff,	Appropriati	ion, Expe	nditure and Correspondence	43 43
	PΑ	RT IV	-NORTH-WEST TERRITORIES.	
TO 4 0				
			Royal, embracing therein:	
Sessio	on of Assem	biy	assed by Assembly	4
Liegis	siation—Ord	mances pa	26	4
_	or Justices of	ine read		5
do do	Commission	wong for	taking Affidavits	6 7
do				7
do	Tegnare of	Marriage	Licenses	7
do				7
do				9
do			S	9
do				9
do	Medical Pr	actitioner	3	9
do	Advocates		***************************************	10
do	Dentists			10
Return of	special per	missions	for the importation of intoxicating liquors	
Report of	g the year the Board o	f Education	on for the North-West Territories	11 17
	P	ART V.—	ROCKY MOUNTAINS PARK.	
Report of	Superintend	lent of the	Rocky Mountains Park of Canada	3
Statistical	Tables			7
Meteorolo Map of Pa	gical Tables			10
map or Fa	uk.			
			PART VI.	
Report of	the Forestry	Commis	sioner	3
			PART VII.	-44
Report of	the Half-bre	ed Comm	ission	3
-			INDEX.	ii

Part VIII.

REPORT OF WILLIAM OGILVIE, D.L.S.

EXPLORATORY SURVEY OF PART OF THE LEWES, TAT-ON-DUC, PORCUPINE, BELL, TROUT, PEEL, AND MACKENZIE RIVERS.

SECTION I.

`	PAGE.
Exploratory Survey from the Head of Taiya Inlet, through Taiya Pass, and down the Pelly-Yukon River to the International Boundary between	
Alaska and the North-West Territories of Canada	4
on the Pelly-Yukon during Winter of 1887-88Survey of Forty Mile River, from its mouth to the International Boundary	12
Line.	16
Section 2.	
Description of the Pelly-Yukon, its Affluent Streams, and the adjacent Country Agricultural capabilities of the Pelly-Yukon Basin	17 34 36
Minerals	37
Table of Distances from Taiya Inlet to Boundary LineList of Plants collected	49 5 0
Section 3.	
Exploratory Survey from the Pelly-Yukon to Mackenzie River by way of Tat-on-Duc, Porcupine, Bell, Trout and Peel Rivers	51
Section 4.	
Exploratory Survey from Fort McPherson to Fort Chipewyan by way of Peel and Mackenzie Rivers, Great Slave Lake and River, and Lake Ath-	0-
a hasea	67
Exploratory Survey from Mackenzie River through Great Slave Lake and	76
River to Fort Chipewyan, on Lake Athabasca Navigability of the various Streams and Lakes	78
Table of Distances from Fort McPherson to Fort Chipewyan	81
Timber resources	82
A gricultural capabilities	82
Table showing comparative durations of sunlight at Ottawa, Forts Chipew-	۰.
van. Simbson. Good Hope and McPherson	85
Fish	90
Furs Minerals	91 92
The Natives.	95
Fort Chipewyan to Edmonton.	97
Magnetic Observations	98
Meteorological Observations	99
do Tables	to 114

ANNUAL REPORT

OF THE

DEPARTMENT OF THE INTERIOR

FOR THE YEAR 1889.

DEPARTMENT OF THE INTERIOR,
OTTAWA, 28th February, 1890.

To the Honourable Edgar Dewdney, Minister of the Interior.

SIR,—I have the honour to submit the Annual Report of the Department of the Interior for 1889. This report covers the transactions of the Department in all its agencies in Manitoba, the North-West Territories and British Columbia, as well as at the Head Office, up to the 31st October last, and also contains a statement of everything of importance which has happened in relation to the Departmental business up to the close of the calendar year.

INSIDE SERVICE.

I regret to record the death, on the 20th April last, of Mr. P. B. Douglas, who held the position of Assistant Secretary. By that event the Department was deprived of the services of an officer in whom were united, in no ordinary degree, intellectual ability and executive capacity. Although he was still in the prime of life, Mr. Douglas had been in the service of the Government since the establishment of the Department. The vacancy caused by his death was filled by the promotion of Mr. Lyndwode Pereira,

OUTSIDE SERVICE.

During the past summer the Dominion Lands Agency for the Dufferin District was closed and the books and records were transferred to the Winnipeg Land Office. The greater part of the business consisted of correspondence. Nearly all the lands in the southern part of the agency and in the vicinity of the land office at Manitou had been disposed of, and the lands in the northern part of the district could be more conveniently dealt with at Winnipeg, as in order to reach Manitou from this more northerly section it was necessary either to make a long journey across the country or to go to Winnipeg by the Manitoba South-Western Railway, and from thence to Manitou by the South-Western branch of the Canadian Pacific Railway.

For the season of 1889 the agency for the Touchwood District was located at Saltcoats, that point being at the time the terminus of the Manitoba North-Western

Railway. This location was selected for the land office because most of the immigration into the Touchwood District passes over the Manitoba North-Western Railway Company's line, and the land taken up by settlers would naturally be as near as possible to the railway. Mr. T. B. Ferguson, who has for some years been actingagent for this district, was formally appointed as agent.

The Dominion Lands Office for the Coteau District has been removed from Carlyle to Cannington, as it was found that a majority of the incoming settlers passed through the latter place on their way to take up lands. The resignation of the agent, Mr. J. J. McHugh, has been accepted, and Mr. C. E. Phipps has been appointed as his successor.

I regret to have to report that the Department has lately received the resignation of Mr. H. B. W. Aikman, Agent of Dominion Lands for British Columbia, and member of the Land Board, who quitted the service of the Department on the 1st January, 1890. Mr. Aikman's services have been of great value to the Government, on account of his intimate knowledge of the land affairs of British Columbia; and while his retirement is a great loss to the Department, it is satisfactory to be able to say that he leaves his office in such an efficient condition as to make its administration in future comparatively easy. Mr. John McKenzie, the senior clerk in the New Westminster Land Office, has been promoted to the vacancy.

Representations having been made to the Department as to the difficulty of reaching the New Westminster office from points in the eastern part of the railway belt in British Columbia, arrangements are in progress for the erection of a new land district, to be known as the Kamloops District, and to include the portion of the railway belt lying north of a line between Townships 15 and 16, and east of the 7th Meridian. The land office will be at Kamloops.

CROWN TIMBER AGENCIES.

During the year the resignation of Mr. D. J. Waggoner, Crown Timber Agent at Prince Albert, was received and accepted, and the office was abolished, the duties of the position being performed by the agent of Dominion Lands at Prince Albert.

HOMESTEAD AND PRE-EMPTION ENTRIES AND SALES.

Following is a comparative statement of the homestead and pre-emption entries and sales which have been made at the several agencies of the Department during the years 1888 and 1889:—

	1888.	1889.
Homesteads, (acres)	420,333	$696,\!050$
Pre-emptions, (acres)	$70,\!521$	212,651
Sales, (acres)	197,140	177,092

It is very satisfactory to be able to state that the area of land entered by actual settlers under the provisions of the Dominion Lands Act during the past year is greater than in any previous year in the history of the Department, except 1882 and 1883. Since 1885, when the area entered for homestead purposes had fallen to

249,552 acres, the increase has been gradual but continuous. The area for the year 1888 exceeded that for the previous year by over 100,000 acres. The increase in 1889 over 1888 is about 275,000 acres. On the basis which has been assumed in these reports in past years of five persons to each family settled upon a homestead, and making a liberal deduction for possible cancellations on account of failure to comply with the requirements of the law and the regulations, the area taken up as homesteads last year is sufficient to maintain over 20,000 people.

There is also an increase in the area pre-empted of about 130,000 acres. Great care was taken to notify the public that, according to the law, the privilege of pre-emption would terminate with the close of the last calendar year, and settlers were doubtless stimulated by this fact to apply for and obtain pre-emption entries who otherwise might not have done so. It may be important to state in this relation that arrangements are being made by which any inconvenience that might be experienced in consequence of the termination of the pre-emption privilege will be avoided, and settlers who desire to increase their holdings and have the means of farming a larger area than 160 acres will be permitted to purchase on comparatively easy terms the quarter section adjoining the homestead which fomerly could have been acquired by pre-emption. This, of course, is a matter which it is within the power of the Governor in Council to regulate under the authority in that behalf conferred by the Dominion Lands Act.

In previous years I have furnished in this report a comparative table showing the land transactions of the Department year by year, from 1872 down to the close of the last Departmental year. On making an analysis of this table for other purposes during the summer, however, I discovered that deductions could be drawn from it which the facts would not warrant. The transactions year by year were stated correctly enough; but as homesteads and pre-emptions have been made the subject of two or even three entries in different years, as the result of cancellation or forfeiture, and as there was ground for thinking that the table would be misleading as to the whole area of land disposed of unless a proper deduction were made for these cancellations and forfeitures, I decided to omit the table this year. I hope, however, to be able to insert it in the report of next year, as the work of examination and correction is now in progress.

I submit, as usual, a statement, showing the number of homestead and pre-emption entries reported in each year since 1874, and the number and proportion of those entries which have since been cancelled for non-fulfilment of the conditions of entry. This table has been carefully revised and corrected from the returns which are received every month from the office of the Commissioner of Dominion Lands and the various Dominion Land Agencies. A comparison with the figures published in previous reports will show that the cancellations which have lately taken place have been principally of entries made in the earlier years of the settlement of the North-West. A very small proportion of the entries made in recent years have been cancelled, showing that there has been a great decrease in the number of speculative entries and a corresponding increase in the number made by bona fide settlers.

	Homestead.			Pre-emption.		
Year.	No. of Entries.	No. Cancelled.	Percentage Cancelled.	No. of Entries.	No. Cancelled.	Percentage Cancelled.
874	1,376 499 347 845 1,788 4,068 2,074 2,753 7,383 6,063 3,753 1,858 2,657 2,036 2,655 4,416	863 295 145 435 1,323 1,937 627 864 2,868 1,196 528 109 28 12	63 59 42 51 74 47 30 31 39 20 14 6 1 ½ of 1	643 391 263 594 1,580 1,729 1,004 1,649 4,120 2,762 653 1,046 1,585 454	597 223 131 334 888 1,407 438 609 2,066 784 376 75 9	93 57 49 56 56 81 43 36 37 19 13 11 \$\frac{1}{40}\$ of 1

CORRESPONDENCE.

The following statement shows the number of letters received and sent by the Department in each year since its establishment. The total number of letters received and sent during the last year was 99,816, of which 5,816 were received and 7,100 sent by the Geological Survey Branch. This is an increase of 4,111 as compared with 1888.

Year.	Letters received.	Letters sent.	Total.
1874	2,236 3,137 4,642 5,526 8,222 13,605 25,500 27,180 27,525 33,970 60,964 47,845	4,150 2,189 3,097 3,677 6,009 6,179 9,940 15,829 30,300 33,500 33,386 43,997 67,973 60,890 52,298 50,500	7,632 4,163 5,353 6,814 10,651 11,705 18,162 29,424 55,800 60,680 60,911 77,967 128,937 108,735 95,705 99,816

REVENUE STATEMENT.

. Herewith is a statement showing the receipts of the Department from year to year since its establishment, from every source except Ordnance and Admiralty Lands, of which an entirely separate account is kept. The net revenue for the last Departmental year was \$588,861.81, as compared with \$563,709.02 for the previous year.

STATEMENT showing Receipts on account of Dominion Lands from 1st July, 1872, to 30th June, 1889.

Fixed Vec	Homestead	Pre-emption	Improve-	SALES	ES,	Map Sales, Office	Surveyors,	, and a second	Inspection, Can- cellation,	Ë
I ISCAL I CAL.	Fees.	Fees.	ments.	Cash.	Scrip, &c.	Registration Fees, &c.	•		and Sundry Fees.	Timber Dues.
	s cts.	s cts.	e cts.	s cts.	s cts.	s cts.	e cts.	s cts.	s cts.	& cts.
1872-73 1873-74 1874-75 1875-76	6,960 00 7,310 00 11,510 00 4,680 00			19,170 20 19,834 75 13,666 90 3,478 94	320 00	129 00		, 125 50		109 25 2,710 55 2,335 25 387 00
1876-77 1877-78	2,250 00			1,085 86 2,794 86	136,955 16 120,159 54	4 00		100 00	40 00 290 00	
1878-79 1879-80	17,690 00	10,241		4,998 39 45,708 97	210,904 84 81,685 86				410 00 1,780 00	
1881-82X	54,155 00	39,843 54,795		1,240,328 27	50,590 84					
111 1883-84 1884-85	41,580 00	28,810 17,100		424,863 36 199,275 32	40,919 67 45,875 60					
1885-86 1886-87	26,110 00 19,614 00	14,371 00 6,887 93	1,101 50	76,140 41 48,175 76	214,657 97 337,640 19	1,339 34	360 00 240 00	20,070 00 44,561 00	5,025 00 7,778 40	
1888-89	39,460 00	10,550		57,513 16	318,238 57					
Totals	429,915 00	198,161 01	23,186 65	2,796,535 89	1,975,937 61	16,083 76	5,230 00	192,466 98	52,202 88	764,421 14
							The same of the sa			

STATEMENT showing Receipts on account of Dominion Lands, &c.—Concluded.

	GRAZING	LANDS.	HAY PERMITS, MINING Fres, Stone Quarried, &c.	S, Mining Uarried, &c.	Rocky	COLONIZATION LANDS.	N LANDS.			
Fiscal Year.	Cash.	Scrip, &c.	Cash.	Scrip.	Mountains Park of Canada.	Cash.	Scrip.	Gross Revenue.	Refunds.	Net Revenue.
	& cts.	& cts.	& cts.	s cts.	& cts.	& cts.	e cts.	& cts.	s cts.	s cts.
1872-73					:			26,239 45		26,239 45
873-74 874-75								27,641 15		27,641 15
1875-76								8,865 94		8,865 94
1876-77								139,584 40		139,584 40
1878-79								234,732 93		234,732 95
879-80								206,801 37		202,165 20
1880-81							:	206,990 54		201,952 32
881-82	2,245 00		40 00			354,036 17	: : : : : : : : : : : : : : : : : : : :	1,805,734 87		1,795,047 32
882-83	22,844 43		913 91		:::::::::::::::::::::::::::::::::::::::	248,492 01		1,051,403 60		1,042,657 55
A 1883-84	11,370 60		640 90			253,713 40	:	1,001,776 67		132,556 I7
1884-85	17,089 75		810 63			1,214 22	:	451,004 05		204 504 00
882-86	29,562 51	3,131 08	1,284 83	00 00				588 539 80	19 543 16	268 989 64
1886-8/	14,242 //	92,401,01	0,010 40	88	9 051 58		10 000 00	569.986.68		563,709 05
1888-89	2,207 69	16,802 63	3,946 55		2,528 73		16,000 00	594,088 04	5,226 23	588,861 81
Totals	105.485.22	82.444 66	11,485 95	160 00	5,480 31	857,455 80	26,000 00	7,542,652 86	144,835 42	7,397,817 44

J. A. PINARD, Accountant.

> Department of the Interior, Accountant's Branch, Ottawa, 4th January, 1890.

PATENTS.

The number of Letters Patent issued by the Department in each year since 1874, and the number of those issued in each year which have since been cancelled, is shown by the following statement:—

**				Letters Patent.		
		Year.	No. Issued.	No. Cancelled.		
Departmental year e	nding 31st Octo	ober, 1874	536	6		
do	do	1875	492	1 4		
do	do	1876	375	4		
do	do	1877	2,156	13		
do	do	1878	2,597	32		
do	do	1879	2,194	57		
do	do	1880	1,704	41		
do	do	1881	1,768	ii		
do	do	1882	2,866	11		
do	do	1883	3,591	16		
do	do	1884	3,837	24		
do	do	1885	3,257	18		
do	do	1886	4,570	17		
do	do	1887	4,599	26		
do	do	1888	3,275	34		
do	do	1889	3,282	30		

As mentioned in last year's report, the Territories Real Property Act was amended during the Session of 1887, by providing that the notification to the Registrar from the Minister of the Interior that the lands described therein have been granted to any railway company entitled to Dominion lands under the authority of an Act of Parliament shall be accepted by the Registrar as if such notification were letters patent in favour of such Company. The same Act provided that the notification to the Hudson's Bay Company by the Minister of the Interior, under the provisions of sub-section 7 of section 22 of the Dominion Lands Act, of the survey and confirmation of the survey of any township or part of a township, shall be accepted by the Registrar as equivalent to letters patent in favour of the Company for the lands to which they are entitled in such townships or parts of townships under the provisions of the Dominion Lands Act. These notifications usually cover considerable areas of land, and the labour incident to passing the Crown title to these areas has, as will be observed by the decrease in the number of patents as compared with previous years, been materially lessened by the operation of the amendment alluded to.

TIMBER, MINERAL AND GRAZING LANDS.

The revenue from the above sources during the past year amounted to \$102,732.61, a decrease as compared with 1888 of \$19,015.28. The timber dues are less than those of 1888 by \$14,781.92, being for this year \$77,071.97. Of the revenue for timber, \$18,044.77 was derived from bonuses, ground rents and royalties on timber cut from lands in the railway belt in British Columbia, being \$7,522.74 less than the previous year; but the Crown Timber Agent reports that he has collected since the 31st of October last the sum of \$15,147.61 on timber cut within the twelve months preceding that date. Taking this amount into consideration, the dues collected for

timber cut within the Departmental year, namely, from the 31st of October, 1888, to the 31st of October, 1889, amounted to \$33,192.38, being an increase of \$7,624.87 over the amount collected for timber cut during the previous year.

Grazing lands show a decreased revenue, as compared with 1888, of \$7,811.12, but the dues received for hay, \$6,909.55, exceed the amount received the previous year by \$3,539.98.

The receipts for minerals other than coal were \$184.15. No tract of coal land of considerable area was offered for sale during the year, and the amount received from that source was only \$1,662.50, being \$73,037.50 less than the previous year. The total area of coal lands sold up to date is 12,261.63 acres, and the total sum received therefor \$126.171.32.

PRICE OF LUMBER.

Following is a comparative statement of the average prices of lumber within the several Crown Timber Agencies for the last five years. The cost of this article to the settler has been very much reduced within that time, and I do not think any further reduction can reasonably be looked for, except at remote points:—

	1885.	1886.	1887.	1888.	1889.
Edmonton Calgary Fort McLeod Prince Albert Winnipeg Cypress Hills Lethbridge British Columbia.	25 00 to 30 00 30 00 30 00 to 45 00 13 50 to 25 00 10 00 to 15 00	15 00 to 20 00 30 00 to 37 00 30 00 to 42 00 16 00 25 00 to 36 00	20 00 to 40 00 21 00 to 42 00	12 00 to 18 00 15 00 to 43 00 20 00 to 42 00	Per M. \$20 00 to \$23 00 12 00 to 18 00 15 00 to 43 00 20 00 to 42 00 12 50 to 40 00 13 00 9 00 to 10 00

PRICE OF FUEL.

The Crown Timber Agent at Winnipeg reports that fuel is somewhat cheaper than last year, cordwood on the railway car at Winnipeg being \$2.75 to \$4.50 per cord for poplar and spruce, respectively, and \$8.75 is asked for American anthracite coal on car, and \$6.76 for native soft coal. The agent further reports that about 18,000 cords of wood and 30,000 tons of coal were sold in the Winnipeg and western markets during the year, and of the coal thus disposed of about 12,000 tons came from the North-West Territories.

LIVE STOCK.

The total number of cattle, horses and sheep in what are known at present as the grazing districts of Alberta and Assiniboia, as reported by lessees of ranches, and computed from information derived from other sources, is as follows:—

Cattle	106,963
Horses	13,322
Sheep	44,822

These totals are only approximate, and cannot be considered as representing the number of live stock within the territory in question, as I have no doubt there is a far greater number than the statistics gathered show. No information has been received as to the number of live stock in Manitoba nor in the remainder of the North-West Territories not included in the districts mentioned.

DUES ON BURNT AND FALLEN TIMBER.

During the year 1887 forest fires in Manitoba and the North-West were more than usually destructive, and I regret to say that the experience of last year was equally unfortunate. One of the consequences of these fires has been the partial destruction of quantities of timber upon berths under license to mill owners. well known that unless the timber which has been injured by fire is manufactured into lumber within two years from the time of the fire, it is rendered not only useless but harmful, inasmuch as it falls down, and being highly inflammable is a constant source of danger to what living trees there may remain in the locality. During my visit to the North Saskatchewan last autumn it was represented by various deputations of mill owners that it would be very desirable, in the interests of the country, as also in the interests of the licensees of timber births, that some inducement should be offered to cut and manufacture as much as possible of the the timber so injured before it became useless. These representations were duly submitted to you on my return, and steps have since been taken to reduce the royalty upon lumber manufactured from timber of this class to one-half the ordinary amount.

During the early part of last Session, after conference with the Senators and Members of Parliament from Manitoba and the North-West, you issued instructions to permit actual settlers on Dominion lands to obtain permits for 25 cents each, enabling them to cut all the burnt and fallen timber under 7 inches in diameter which they might require for their own use for fuel and fencing. This decision appears to have been very acceptable to the people.

TIMBER IN THE RAILWAY BELT IN BRITISH COLUMBIA.

The regulations governing the disposal of timber in Manitoba and the North-West Territories were, in September last, made to apply to timber in the railway belt in British Columbia, except as regards the ground rent for berths situated west of the Eagle Pass, which is 5 cents per acre per annum, as compared with \$5 per square mile, and a rebate of one-half the royalty upon lumber exported to foreign countries, which is also provided for by the regulations of the Provincial Government.

HAY LANDS.

In consequence of the injury to the hay crops resulting from cutting the hay before the seed matures, instructions were given in the month of May last that provision be made in the permits to be issued that no hay should be cut before the 20th July. A clause to this effect appears in the regulations of the 17th of September last, and meets with the approval of the people.

The nominal charge of 10 cents per ton for hay cut by settlers for their own use clearly indicates that in adopting the permit system it was never contemplated to derive a revenue therefrom, but the object aimed at, and which I think has been realised, was the preservation of the hay and a fair division amongst the settlers of the crop according to the number of their stock.

The Commissioner of Dominion Lands has recommended that hay lands be sold by public auction or otherwise, giving as his reason that the work involved under the present system seems to be out of all proportion to the revenue. This is very true, for, as already explained, the system never contemplated the creation of revenue; but if the hay lands pass out of the hands of the Government, it is a question whether the settlers at large would obtain as fair a division of the hay in their neighbourhood and at such a low figure as they do now. This is a matter which will require careful consideration.

FOREST FIRES.

It has been suggested that the Department should take further precautions for the prevention of forest fires. This might be possibly done if the present staff of forest rangers were greatly increased, but the good to be derived from this large additional expense would, I am afraid, not be adequate to the cost incurred. Our agents have rendered good service in endeavouring to prevent forest and prairie fires, and bringing to justice those who have originated them. I think it will be found that these fires will be of less frequent occurrence when the country becomes more settled, as the settlers will naturally, for their own protection, do all they can to prevent them. Meantime, I fear no increase of the staff which would be at all reasonable would be effective in protecting the timber on our public lands from these destructive visitations.

During my visit to Edmonton last season, what I had already heard as to the rapid reproduction of trees by natural processes on land on which the timber had been burned was confirmed by personal observation. Trees which are now springing up will, in the course of a few years, be at least fit for fuel, so that there need not be the slightest alarm that there will not always be a plentiful supply of wood for settlers.

The subject of re-foresting the prairie is one which deserves the greatest attention, but falls I think within the scope of the experimental work being conducted so ably and successfully under the Department of Agriculture by the Director of the Experimental Farms.

MINERALS WITHIN THE RAILWAY BELT IN BRITISH COLUMBIA.

At the date of last year's report the question of the ownership of the precious metals in the railway belt in British Columbia had been argued before the Judicial Committee of the Imperial Privy Council, and on the 3rd of April following judgment was delivered to the effect that they are vested in the Crown, subject to the control and disposal of the Government of British Columbia. In view of the anomalous condition of mineral rights within the belt, arising out of this decision, the jurisdiction over the lands being vested in the Dominion Executive, and the right to administer the precious metals being the concern of the Province, the following arrangement

between the two Governments was ratified by Orders in Council dated the 11th and 28th of February, 1890:—That all minerals, with the exception of coal, within the belt, may be administered under the mining laws of the Province; that all Dominion lands within the belt containing minerals, not being Indian reserves or settlements, and not being under license or lease from the Dominion Government, shall be open for purchase by the Provincial Government at the price of \$5 per acre; that nothing in the agreement shall apply to coal lands, or interfere with the operation of sub-section 4 of section 29 of the Dominion Lands Act, which provides that such unoccupied lands as the Minister deems expedient from time to time may, when he so orders, be withdrawn from ordinary sale and settlement and sold at auction to the highest bidder; that the agreement may be terminated at any time by either Government; and that all minerals, including gold and silver, within Indian reserves, shall be administered by the Department of Indian Affairs.

SCHOOL LANDS.

It was not considered advisable to hold any general sale of school lands in Manitoba or the North-West Territories during the past year. In Manitoba, Section 11 in Township 10 Range 19 west of the First Meridian, near the town of Brandon, and Section 29 in Township 13 Range 19 west of the First Meridian, adjoining Rapid City, were offered for sale on the 22nd and 29th of December, 1888, respectively, and realized very satisfactory prices. Of the Brandon section, 293:16 acres were disposed of, part in villa lots and the remainder in one quarter section. for the sum of \$7,238.34, or \$24.70 per acre. The north half of the school section at Rapid City was offered in quarter sections; the south half in 147 town lots. north-east quarter, 156 acres in area, was sold for \$1,326, or \$8.50 per acre, and 55 town lots were disposed of for \$2,598, an average price of \$47.23 per lot. June, 20 acres of Section 11 in Township 15 Range 18 west of the First Meridian, situated near Minnedosa, were sold by auction for \$20 an acre. In the North-West Territories, a sale was held at Calgary during the month of July, at which the undisposed of portion of Section 11 in Township 24 Range 1 west of the Fifth Meridian, 515.92 acres in area, for which a number of applications had been made. was offered at public auction, and realized the sum of \$8,265,96, or \$16.02 per acre.

The portion of the south-east quarter of Section 11 in Township 22 Range 29 west of the Fourth Meridian, situated south of the Bow River, and containing 63.80 acres, was also offered at the same sale, and was disposed of for \$414.70, or \$6.50 per acre.

With a view of obtaining accurate information for record as to the character and value of the school lands in Manitoba, also for the purpose of ascertaining to what extent these lands have been squatted on, and the nature and extent of the settlement in each case, a system of school lands inspection was established in May last, and a competent person was temporarily employed as inspector. Later on, the services of two of the forest rangers of the Department were also utilized for the purpose. The inspection for the present is chiefly confined to school sections applications to purchase which have been made, and from the information already obtained the Department will be in a position to appraise these lands accurately and to select for the next sale, after consultation with the Provincial authorities, those which have most nearly reached their fair maximum value.

SCHOOL LANDS ACCOUNTS.

The revenue from school lands for the year ending the 31st of October last was as follows:—

Manitoba	······	\$42,859 11,159	
Total		\$54,019	56

This statement merely shows the sum recieved, but from that will have to be deducted the amounts chargeable to the fund. I am now in correspondence with the Finance Department with a view to having the accounts adjusted so that the interest, if any, due upon the Manitoba account, may be paid over to the Provincial Government for the purposes specified in the provisions of the Dominion Lands Act having, reference to the school endowment. Under the Act 41 Victoria, Chapter 13, \$30,000 has been advanced at different times to the Local Government for the more pressing needs of education in the Province, and, according to the Act cited, this sum would bear interest at 5 per cent, per annum until repaid out of the proceeds of the first subsequent sale of school lands. The cost of administration will also, of course, have to be deducted; but that at most will be very trifling.

THE MORMON COLONY AT LEE'S CREEK.

It will be remembered that when the delegation of intending Mormon settlers visited Ottawa in December, 1888, they gave to the Government the most positive assurance that in removing to Canada they understood that they were coming to a country where the law forbade the practice of polygamy, and that they intended and desired in good faith to conform to this law. During the past year, however, representations reached the Department from various sources in the North-West that the Mormons of the Lee's Creek colony were not adhering to the pledge given by their delegates; and communication was had with Mr. Charles O. Card, the leader of the settlement, calling his attention to these representations, and stating that there was likely to be a strong public sentiment against the Mormons unless it could be immediately and clearly proven that the statements were untrue. were promptly received from Mr. Card and other leading men of the colony, in which it was stated that they had not lost sight of the agreement which they had entered into with the Dominion Government, denying the truth of the charges made against the members of the settlement, and inviting the fullest investigation into the doings of the community.

TOPOGRAPHICAL SURVEYS.

Last season was not a favourable one for the surveys. During the greater part of the summer great fires ran over the Rocky Mountains, and the smoke in British Columbia and the western part of the Territories was so dense as to interfere seriously with survey operations. Several parties were idle for long periods, and most of them lost much of their time.

The demand for the sub-division of land in new localities continues to increase. This is due in part to the progress of branch railways, and in part to isolated settlements formed on choice pieces of land outside of surveyed territory. It has been

the endeavour of this Department to meet this demand, and notwithstanding the small number of surveyors employed and the moderate amount expended for surveys, it is satisfactory to be able to state that the requirements of the settlers have been fully attended to.

A large proportion of the appropriation was spent on the railway belt in British Columbia, not because a large extent of territory has been covered, but because the nature of the country renders survey work slow and expensive.

As usual, a table of sub-division or settlement survey work completed each year since the commencement of the survey is given hereunder, with the results of last season added.

	Acres.	No. of Farms of 160 acres each.
Previous to June, 1873	4,792,292	29,952
In 1874	4,237,864	$26,\!487$
1875	$665,\!000$	4,156
1876	$420,\!507$	2,628
1877	231,691	1,448
1878	306,936	1,918
187 9	1,130,482	7,066
1880		27,950
1881		50,919
1882	9,460,000	59,125
1883	27,000,000	168,750
1884	6,400,000	40,000
1885	391,680	2,448
1886	1,379,010	8,620
1887		4,023
1888	1,131,840	7,074
1889	516,960	3,231
7	71,326,972	445,795

The total area sub-divided and set out for settlement is 71,326,972 acres, which, on the basis of five persons to each farm of 160 acres, would sustain an agricultural population of 2,228,975 persons, the number of such farms being 445,795.

GENERAL REMARKS ON SURVEY WORK,

An important step has been taken in relation to the mountain surveys, both in British Columbia and the North-West Territories, in beginning a triangulation which will eventually cover the whole of the mountainous territory under the control of this Department. In such a country the holdings occupied or lots of land owned by different parties are necessarily much scattered. Large spaces are valuable only for timber. At other places the rock is bare, while here and there are isolated patches or valley bottoms of the finest agricultural land. To run section lines over the whole of such a country would not only be a waste of money, but in many cases would be impossible. Under the system hitherto followed in British Columbia, the process for connecting a point with the township surveys consisted in running the township lines from the railway as far as the point to be connected.

Thus, for surveying a claim near the boundary of the belt at least twenty miles of township lines—and nearly always a much greater distance—had to be run. It is easy to understand that surveys in such a country are expensive, and the connection of a single claim might very well cost \$3,000 or \$4,000, without even the satisfaction of having established useful survey lines, while the greater part of them would prove quite useless, except for the particular purpose to which their origin was due. Apart from the excessive cost of such surveys, the time required for their execution is a very serious objection. It would take years to have provision made in the Estimates for the cost of the survey, to organize the party, to execute the work, and receive the returns. The triangulation now being carried out will determine, over the whole extent of the mountains, a number of points ten or fifteen miles apart, generally high peaks visible from a great distance. The position of any place from which three of these points are seen can at once be fixed, and the cost of the work will probably not exceed a few cents per square mile. After triangulation comes the topographer, who delineates rapidly the configuration of the country. the course of the main streams and creeks, the outlines of the lakes, the timber and prairie areas-the result being an exhaustive map of the country, showing its resources in detail, and at a small outlay, and permitting intelligent plans to be devised for their development.

THE LAC LA BICHE COUNTRY.

A survey party having been sent to Lac la Biche, near the Athabasca River. for the purpose of laying out the lands settled upon, the surveyor in charge, Mr. P. R. A. Belanger, reports that he found the land very good and well adapted for farm-"The climate," he says, "is very fine—so fine that I do not hesitate to say there is not its equal in any settlement in the North-West. The inhabitants of the place agree in saying that they have never seen any frost to injure their crops." It is now well recognized that a reasonable amount of care on the part of the farmer will generally insure immunity from frost anywhere in the settled part of the Territories, but at Lac la Biche, where the settlers are all Half-breeds, it is doubtful whether even that amount of care has been exercised in putting in the crops. ever, going so far as Mr. Belanger does in claiming any marked superiority for this settlement over other districts, it is gratifying to find that it is not inferior to any. This evidence is of great importance, the meteorological conditions at Lac la Biche being the same as on the Athabasca and Peace Rivers; and it is thus safe to expect that when the tide of emigration reaches that far north country the settlers will find there a climate fully equal to the average of the Territories.

THE YUKON AND MACKENZIE EXPEDITION.

Perhaps the most interesting feature of this report is the account given by Mr. Wm. Ogilvie, D.L.S., of the surveys, observations and explorations which he conducted in the Yukon and Mackenzie country, and which will be found in one of the appendices hereto. Mr. Ogilvie was absent from civilization for nearly two years, during which time he made instrumental and track surveys covering a total distance of 2,700 miles in a wild and almost unexplored country, some portions of which, it is certain, were never visited by a white man before. The energy, enterprise and intrepidity of Livingstone, Stanley and others who have explored the wilds of

Africa, have received at the hands of the public of all civilized nations the acknow-ledgement which they merited. In simple and unpretentious language Mr. Ogilvie tells the tale of an expedition of great magnitude and importance, conducted so efficiently, so inexpensively and so rapidly, and yet involving such dangers and hardships as I think will fairly entitle him to rank as one of the first, if by far the most modest, of the explorers of the nineteenth century.

GEOLOGICAL SURVEY.

A summary report by the Director of the operations of the Geological Survey forms Part III of this volume. During the earlier part of the summer the Director was occupied in supervising the printing of the annual report, and in connection with other administrative matters. Subsequently, he made an examination of a number of points on the north shore of the Gulf of St. Lawrence, as far east as Belle Isle, and after his return from this trip visits of inspection were made to the Eastern Townships of Quebec, Sudbury and Algoma. Investigations were also made in connection with the question of water supply by artesian wells in Manitoba and adjacent regions.

In pursuance of the general work of the survey throughout the Dominion, sixteen parties were in the field during a part or the whole of the summer.

In British Columbia Dr. Dawson made a preliminary examination of the West Kootenaie district, which at the moment appears to be of greatest importance in respect to discoveries of rich ores, and in which a large number of silver-bearing deposits have been discovered and partially developed. The remainder of his time was spent in detailed surveys of a region which includes part of the Thompson and Fraser Rivers, of which a geological map is in course of preparation. On the Lower Fraser Mr. Bowman spent some time in continuing his work on the newer formations in which deposits of coal of economic value may be expected to occur.

In the North-West Territories Mr. McConnell was entrusted with an examination of a tract of country between the Peace and Athabasca Rivers, with special reference to the occurrence of petroleum, which has been reported from a number of localities in that district. Mr. Tyrrell was again occupied in the country to the west of Lake Winnipeg in extending and completing former examinations, with a view to a detailed report on that country. In the country to the north-west of Lake Superior surveys toward the detailed geological delineation of the region were continued by Dr. Lawson. Mr. Ingall prosecuted, during the greater part of the summer, his examination of the phosphate region of the Liévre district, making detailed surveys and examinations where necessary.

In the vicinity of Sudbury, of special interest from its copper and nickel deposits, surveys were carried on by Dr. Bell, with a view to the completion of those already effected. Mr. Low was employed in the geological mapping of the country on the north side of the St. Lawrence in the Counties of Quebec and Portneuf, while Dr. Ells was engaged in carrying out work toward the completion of the south-west quarter-sheet of the map of the Eastern Townships; and some further work was carried out in the St. Maurice district and Saguenay region by Mr. Adams and Rev. Abbé Laflamme. In New Brunswick and adjacent parts of Quebec, Prof. Bailey, Mr. McInnes and Mr. Chalmers pursued field work in continuation of that already undertaken xxiii

and required for the completion of several sheets of the systematic geological map which is being extended over these parts of the Dominion.

Messrs. Fletcher and Faribault spent the season in extending the area of the systematic geological examination and mapping of Nova Scotia, the first mentioned gentleman working in Pictou and Colchester Counties, the second in Colchester and Halifax Counties.

A large amount of botanical work has been accomplished during the past year by Prof. Macoun; and, in addition to botanical collections, important zoological collections were made by him in British Columbia. The palæontological work, under Mr. Whiteaves' charge, has progressed satisfactorily, and several important publications have been issued. Interesting collections of fossils were also made in this branch by Mr. Weston in the North-West Territories. The chemical work, under Mr. Hoffmann, shows, as usual, a large number of analyses, assays and examinations of specimens brought in by the various field geologists, or received from other sources.

The continued additions of material to the Museum and to the Scientific Library of the Geological Survey render every day more and more apparent the necessity of a more commodious building for their adequate display and safe-keeping. The building at present occupied by the Survey, though sufficient at the time of its original occupation, cannot any longer be considered as satisfactory, and is exposed, by reason of its construction and contiguity to other buildings, to constant danger from fire. In view of these circumstances, it appears to be necessary to consider the advisability of providing, in the near future, some better accommodation for the collections and offices of the Geological Survey.

ROCKY MOUNTAINS PARK.

Mr. Stewart, Superintendent of the Park, reports that a considerable amount of work has been done during the past season in improving the roads and avenues already constructed, and in opening out new ones, the most important of the latter being one from the Spray River bridge down the Bow River, round the base of Peak Mountain and back again by the Bow River, which, when completed, will afford a charming drive of some seven miles. Several of the streets in the village of Banff were also graded and otherwise improved.

During the summer, which was an exceptionally dry one, forest fires were unusually prevalent in the mountains, and in the month of June a very serious one approaching from the west, swept all before it to the very boundaries of the Park, and threatened to extend into it. Fortunately, partly owing to the protection afforded by the bare summits of the mountains, and partly to the extensive system of "firebreaks" cut out about the Park, the damage caused was comparatively trifling. There is, however, no doubt that the prevalence of smoke from these fires interfered to some extent with the pleasure of visitors, as much of the beauty of the mountain scenery was lost in consequence of it, and but for this drawback the number of visitors, though exceeding that of any previous year, would have been still greater.

A new nursery has been laid out in a better situation than the previous one, and as the soil is good and the facilities for watering excellent it is confidently hoped that it will prove a success.

The varieties of deciduous trees which were imported and planted out have thriven well, about 75 per cent., so Mr. Stewart reports, having succeeded; but the imported evergreens have to a large extent proved a failure, and it is feared that very few of them will live. There is, however, a plentiful supply of evergreens in the Park already, so that the failure of the imported ones is not of so much consequence, the object in obtaining them being merely to secure, as far as possible, the different varieties of these trees.

The Eau Claire and Bow River Lumber Company have relinquished limits A and C, which include nearly all the timber lands within the Park which have been under lease. There is now but one timber berth within the limits of the reservation, and an effort is being made to exchange other lands for it.

During the month of October the Park was visited by their Excellencies the Governor General and the Lady Stanley of Preston, and suite, who remained there three days. It was also selected for the annual meeting of the Medical Association of Canada, and it is much to be regretted that the visit of this important body should have fallen upon a time when the forest fires were so prevalent, as their impression of the Park would be received under very unfavourable conditions.

A great improvement has been made in the establishment of the telephone system in the Park, connecting the Government offices with the police barracks, hot springs, hotels, &c.

Mr. Stewart submits with his report an interesting statement showing the temperature and other particulars of the weather during the past year, and also a statement showing the number of visitors to the Park, and their nationalities.

With this report will be found a very well executed map of the Park, which I believe will add not a little to the interest with which the publication of the volume will be received.

THE SCOTCH CROFTERS.

Another detachment of Crofters from the western highlands and islands of Scotland arrived in Manitoba last spring, and were placed upon homestead lands in the neighbourhood of Saltcoats, the present western terminus of the Manitoba North-Western Railway. The actual condition of these people has been the subject of a good deal of discussion and misrepresentation in the British press. To say that they are not yet particularly well fitted to make their living purely by the cultivation of the soil in a new country would not be more than the facts would warrant one in saying in regard to almost any similar number of immigrants from any part of These people are under the disadvantage of having the world who settle in a body. their experience of agriculture in the past confined to the cultivation of small crofts. with which they combined fishing. Many of the best settlements in Canada, however, have been formed by people less fitted for agricultural work, and although at first occasional disappointments and discouragements are to be expected, I see no reason to doubt that in the end the experiment will be a successful one. The colonists in this case were assisted, as were the Crofters who arrived the previous year and who went into the Pelican Lake country, in Southern Manitoba, by advances made by the Imperial Government, which advances are to be repaid in twelve years, and are secured by liens on the homesteads of the settlers. Frequent reports have been

received during the winter, through the Commissioner of Dominion Lands, from the agent of the Imperial Government, who is resident among them. These reports completely refute the statements made as to alleged distress existing amongst the Crofters. As might have been expected, the clothing of the immigrants was not well suited to the climate, and appeals were made in Toronto and Winnipeg to the rich congregations of the Presbyterian Church—to which church these people chiefly belong—to contribute articles of warm clothing for the benefit of the young and aged. This appeal, it will be satisfactory to learn, was answered promptly and liberally: and it was, so far as can be learned, the sole ground for the exaggerated reports alluded to.

GRAIN CROP.

The Commissioner of Dominion Lands has furnished, in his contribution to this volume, a statement of the crop results of last season for Manitoba, as calculated by the Provincial Government. The figures are as follows:—

	Busn.	
Wheat	7,200,000	approximately.
Oats		
Barley		
Potatoes		

This statement, of course, does not include the North-West Territories, and a considerable proportion would have to be added to the figures under each head on that account. There is no doubt that the result, in many instances, was a disappointment to the farmers, although the yield per head of the population would appear to be very large. The drought which prevailed all over the whole western country seemed to be much more detrimental to the crops in some localities than in others, and while the average crop therefore would, from the figures presented, seem to be high, there is scarcity in some localities. But although the harvest north of the 49th parallel was not as good as could be wished, the people of the North-West and of Canada generally have reason for great thankfulness when a comparison is made with the condition of affairs in Minnesota and Dakota, where there is an almost absolute failure, resulting in great and widespread distress. Unfortunately, some of the settlements in the States mentioned which are made up chiefly of Canadians have been the worst sufferers, and appeals have been made to their fellow-countrymen at home for aid, which it is fervently to be hoped will be responded to. There is every reason to believe that a great many of the Canadians in Minnesota and Dakota have had cause to regret that they left their own country, and there is strong probability that the stream of immigration from the States mentioned to Manitoba and the North-West, which has been steadily growing for the last two or three years, will be greatly augmented during the coming season.

THE HALF-BREEDS OF THE NORTH-WEST TERRITORIES.

In September last, with your authority, and under your instructions, I paid a visit to the settlements on the Saskatchewan River, and while prosecuting the duties naturally falling to me in regard to the public lands and land offices in the districts visited, I availed myself of every opportunity to enquire into the condition and prospects of the Half-breed population. I was accompanied by Mr. Deville, the

Surveyor-General, who is a French-speaking gentleman, and I found that he greatly facilitated my communications with these people, for I am not myself sufficiently familiar with the language to speak it with readiness. At that period of the year a large number of the Half-breeds were engaged in freighting between the railway and the centres of trade and population on the North Saskatchewan, and in this way I met and travelled with a great many of them along the trails, besides which I obtained much valuable information from the missionaries of all denominations and from leading merchants and farmers in the Territories. The route of travel took me through Qu'Appelle, the settlements on the south branch of the Saskatchewan, Prince Albert and its vicinity, Duck Lake, the south bank of the Saskatchewan from the Elbow to Battleford, and thence to Swift Current. From Swift Current I went to Calgary by rail, and from Calgary north to Edmonton and St. Albert. I learned that while in some cases the Half-breeds have made successful efforts to gain a livelihood by the cultivation of the soil, the great majority (especially of those of French origin) although claiming tracts of land as homesteads in various parts of the Territories by virtue of actual occupation, continue to live a more or less roaming life, and to look to trading and freighting as their chief means of support. Those who have devoted themselves solely to farming are at present, and are likely to continue to be in the future, self-supporting; but those who only cultivate small patches of land and with their families are absent from their holdings during the greater part of the year trading and freighting, were merely earning a bare living, with the prospect that during the winter many of them would be in straitened circumstances. The soil had been rather unskilfully prepared for the little crop which they had put in the ground, and in many instances, owing to the abnormal drought of the summer, they received no return whatever, while the average crop all over was poor, especially potatoes.

A great majority of the Half-breeds were then, as already stated, engaged in freighting. For this business in the Prince Albert district their services were in increased demand on account of the lowness of the water in the Saskatchewan and the consequent failure of the Hudson's Bay Company's boats to make their usual trips, the effect of which was to necessitate transport overland for a large portion of the distance between Lake Winnipeg and Prince Albert of what would otherwise have reached that point by water, and to produce an increase in the quantity of goods imported by way of the railway via Qu'Appelle station. The distance from Qu'Appelle station to Prince Albert is about 240 miles, and under the most favorable circumstances it would take the ordinary Half-breed team from twelve to fifteen days, barring accidents, to make the journey with a load, and not less than seven days to make the return journey without a load. To this should be added three days for loading and unloading, and waiting at either end of the journey, or from twenty-two to twenty-five days altogether. For this service the freighter received from the Hudson's Bay Company and other importers remuneration at the rate of \$1.00 per cwt. if he was paid in cash, \$1.25 per cwt. if he was paid half cash and half "in trade," or \$1.50 per cwt. if the whole account was settled "in trade." It will readily be understood that this left practically no margin for profit, but simply furnished the means of subsistence for the freighter and his family during the time the work lasted, leaving nothing to lay by for the winter, nor with which, if a horse died or a cart were disabled, the loss could be made good.

xxvii

The reports received through the North-West Mounted Police officers from time to time during the winter show that there has been some actual destitution amongst these people which, in every instance, has been relieved as seemed most fitting under the circumstances; but I have no doubt, from what I saw and heard, and in view of the severity of the winter weather, that there must also have been a good deal of real hardship of which we have not heard. Before next winter a line of railway will have been completed and running from Regina to Prince Albert-another of the few remaining sources of making a living will have been taken away from the Half-breed population, and there will thereafter be left to them in this line of business only the freighting from Saskatoon to Battleford, from Calgary to Edmonton, and from Edmonton, Battleford and Prince Albert to the northern country. I was careful to ask the missionaries of all denominations. and other people intimately acquainted with the habits and inclinations of the Half-breeds, what they supposed would become of them when there was no longer any considerable amount of freighting to be done, and the conclusion to which I was driven was that the problem is one which nobody who has earnestly considered the subject sees any means of solving satisfactorily. No doubt, said some, a large number of them will turn to farming; but in this occupation it is to be feared. judging from their history and training, that those who have been brought up as freighters or traders would not, during the present generation at least, be very Neither would the existing generation, as a rule, make satisfactory laborers or domestic servants. They are not accustomed to the subjection and control to which they would have to submit in those capacities, and experience has proved that they do not take kindly to such employment.

Among the Half-breeds themselves, and the majority of the white people, there is an almost unanimous opinion that the Government should come to their relief by granting scrip, as recommended by the North-West Legislative Assembly, to all the Half-breed children born in the country between 1870, the date of the transfer, and 1885, when the Government commenced to enquire into and deal with the claims of the Half-breeds as a special class of the community. It may be desirable in this relation to state that the Half-breeds of Manitoba and the Half-breeds of the North-West Territories have had their claims, as the descendants of the Indians, dealt with on precisely the same basis—that is to say, all heads of families living at the time of the transfer have received \$160 in scrip, and all the Half-breed children born and living at the same date either 240 acres of land or \$240 in scrip.

Except the Rev. Father Fourmond, the Roman Catholic priest in charge of the mission at St. Laurent, I found the missionaries of all churches unanimously opposed to this proposition. The Half-breeds, as a class, they say, have no adequate conception of the real value of money. Any sum given them in hand would be sure to be dissipated in a short time for not very economical, and in some cases even harmful purposes; and it would appear that the temporary possession of a large amount of cash or what can readily be converted into cash has a tendency to make them more discontented with their condition and more unwilling than ever to settle down to hard work. The scrip distributed as the result of the work of the Commission of 1885-6-7, while in many cases effective in assisting industrious and economical Half-breeds to buy stock and implements, left the great majority of the recipients poorer than

before. In a few months the scrip had passed into other hands, and little or nothing remained to show for it. I am informed that the Half-breeds are largely indebted to the white traders, and if this be the case it would doubtless account to a very considerable extent for the unanimity of the white people in demanding a new distribution of scrip; for the Half-breeds as a class are disposed to meet their obligations when they have the means. Looking at this matter in the light of the facts related, and bearing in mind the views entertained by the disinterested friends of the Half-breeds (I refer, of course, chiefly in this relation, to the missionaries), it is more difficult to understand how the demand should have received the approval of the North-West Assembly, containing as that body does some gentlemen having long experience and intimate knowledge of the North-West, and the history and characteristics of the Half-breed population.

On certificates granted by the Half-breed Commission of 1885-6-7 scrip was issued to 854 heads of families, the representatives of 264 deceased heads of families. 1,862 children and the representatives of 466 children, born in the Territories before the 15th July, 1870, but who have died since that date. The whole amount of scrip issued represented 61,020 acres of land and \$663,474 in money scrip redeemable in land. These figures, it may be added, include 1,292 persons who were formerly treaty Half-breeds. According to the census of 1885 there were in the Territories at that date 4,848 Half-breeds; and assuming that one-tenth of these, or about 500 in all, are Manitoba Half-breeds and their descendants, who would not be entitled to share in the distribution now asked for, and deducting the number of heads of families and children to whom scrip was issued by the Commission (but adding the descendants of the 1,292 persons who were upon the Indian Treaty rolls at the time of the census and have since taken Half-breed scrip, as stated-whose numbers I have put down at probably not less than 2,000) there would remain about 5,000 persons who would be entitled to \$240 each in scrip. This calculation is, of course, a pure approximation, for to ascertain the true figures would involve a long enquiry and the application of means which I have not at my command; but I think it is likely that the results of such an investigation would be found to be pretty nearly as I have calculated. To accede to the demand which has been made by the Half-breeds, supported by the North-West Legislative Assembly, would therefore mean a further distribution of at least \$1,200,000 of scrip. This is a large amount of money, and even if its payment were to finally and satisfactorily solve the Half-breed question, there might be some hesitation about paying so large an amount to so limited a number of people upon the grounds set forth in the request. But I have met no one so far who has alleged that the relief would be otherwise than temporary, or that the need for further relief would not arise at a very early day; and it is therefore difficult to see how, on grounds of equity and good public policy, a step of the kind could be justified.

My own view, which is submitted with much deference when I remember the opportunities which you and others who have lived so long in the North-West must have had of studying this question on the ground, is that the Government should immediately answer the petitions of these people in decisive language, and that answer should be that so many of the Half-breeds as are desirous of continuing to exercise the privileges of citizenship must also accept its full responsibilities, including the support of themselves and their families independent of assistance from

the Government of Canada, and that the remainder should be dealt with as wards of the Government. They are a proud spirited people, and it is doubtful whether many of them would be willing to assume that relation; but the experiment might be worth trying. The misfortune is that some of those who profess to be their friends encourage them to look for Government assistance as a matter of right, without making it plain to them that the granting of relief in this form, or for that matter the mere asking for it, involves a distinction between them and their fellow-citizens which entails no small sacrifice of independence and self-respect.

I take this opportunity of acknowledging the frankness with which the various missionaries disclosed to me their views respecting the situation, and their equal frankness in stating that they saw no way in which the Half-breed question—assuming that the Half-breeds are to be dealt with differently from the rest of the people of this country—can be settled upon a satisfactory and permanent basis, which does not involve some form of tutelage for those who are unable to provide for themselves.

ORDNANCE LANDS.

The revenue from Ordnance and Admiralty lands for the financial year shows an improvement over the previous corresponding period. This does not include the proceeds of a very successful sale of part of the Logan property, in the city of Montreal, which was held in the last days of June, too late to be included in the current year's transactions.

I have the honour to be, Sir, Your obedient servant,

> A. M. BURGESS, Deputy of the Minister of the Interior.

PART I.

DOMINION LANDS.

No. 1.

REPORT OF THE COMMISSIONER OF DOMINION LANDS.

Office of the Dominion Lands Commission, Winnipeg, 1st November, 1889.

To the Hon. EDGAR DEWDNEY,
Minister of the Interior,
Ottawa.

Sir,—I have the honor to submit for your information the following report respecting the work of my own office and the offices under my control, for the Departmental year ending the 31st October, 1889, and concerning certain North-West matters of interest to the Department.

I beg also to enclose the annual reports of Messrs. Pearce (Superintendent of Mines), Gordon (Inspector of Dominion Lands Agencies), and Aikman (Dominion Lands Agent at New Westminster), members of the Land Board, and that of Mr. E. F. Stephenson, the Crown Timber Agent at Winnipeg.

WORK PERFORMED, REVENUE OBTAINED, AND COST OF MANAGEMENT.

Commissioner's Office.

The following is a résumé of such of the work performed during the year in my own office as can be presented in a tabulated form:—

Correspondence Branch.

Letters received—	
November	2,047
December	2,850
January	3,238
February	
Manch	2,194
March	2,783
April	3,099
May	3,625
June	$3{,}764$
July	3,470
August	3,195
September	2,801
October	3,223
Total	36,289
Letters sent—	
November	2,182
December	2,165
January	4,086
February	2,414
March	2,704
April	
	RIIXU
	3,089
May	3,553

August September		3,731 3,089 2,412 2,506
m.	otol	25 416
Τ(otal	39,410
	Cancellation Branch.	
Cancellatio	ns carried out	1,079
do	refused	´ 98
do	cases pending	183
	1 8	
\mathbf{T}	otal	$\cdot 1,360$
	Patents Branch.	
Application	as for patent approved	1,730

In addition to this a considerable number of Manitoba Act cases have been investigated and decided; the Accountant's branch has been busily occupied; and a large amount of work has been done in connection with matters which I will hereafter more particularly refer to, such as school lands, the Crofter settlements, the collection of seed grain advances, the supervision of the Intelligence service, &c.

The cost of the office during the year has been: salaries, \$22,464.11; contingent

expenses, \$1,856.96.

I would invite your attention to the following table, comparing the work performed by this office (so far as it can be tabulated) and the cost of management for the past year with each previous year of its existence:—

SCHEDULE "A."

CONTINGENCIES, ANNUAL	Increase and Decrease.	Increase, Amount. Decrease, Amount.	\$ cts. \$ cts.	:	:			631 01	545 71	33 73	415 99
Contin		Amount.	e cts.	:	:	:	2,155 92	2,786 93	2,241 22	2,274 95	1,858 96
I.	ø	Per cent.			:	:	$11\frac{1}{2}$	15	-400	H	1 5
Salaries, Annual.	Increase.	Amount.	♣ cts.		:		18,256 69 1,876 69	58 2,730 89	09 82	220 27	1,177 66
SALARIE		Amount.	s cts.	:	12,349 20	16,380 00	18,256 69	20,987 58	21,066 18	21,286 45	22,464 11 1,177 66
	ase.	Per cent.		:	•	i	:	:	54	:	:
S FOF	Decre	.oV		:	:	:	:	:	1,616	:	:
ATION APPI	ase.	Per cent.		:	:	240	32	55	:	8	5
APPLICATIONS FOR HOMESTEAD. PATENT APPROVED.	Increase, Decrease.	.oV		:		1,024	471	1,064		278	<u>%</u>
AI Pa		No.	ļ	:	424	1,448 1,024	8 1,919	25 2,983 1,064	33 1,367	1,645	1,730
	se.	Per cent.		÷		 -	8	25.	8		
CARRIED OUT.	De- crease.	.oV		:	:	:	115	319	308		:
ANCELLATION CARRIED OUT.	In- crease.	Per cent.			<u>:</u>	250	:	:		65	11
ANC	cre	.oV	<u> </u>	<u></u>		1,358 969		- 4	<u>:</u>	976 360	1,079 103
		No.		335	389	1,35	3 1,243	924	919		1,07
	De- crease.	Per cent.								<u></u> :	<u> </u>
	Cre I	.oV			<u>:</u>	<u>:</u>	. 400	<u>:</u>	<u>:</u>		- <u>:</u>
OUT.	ge	Per cent.		:	:	73	:	48	42	21	103
Letters sent out.	Increase.	.oN				6,224	:	6,821	8,780	6,276	3,316 increase inletters.
LETT		No.		1,752	8,449	14,673	14,273	21,094	29,874	$\left\{egin{array}{c} ext{Letters} \ 32,100 \ ext{Post cards} \ 4,050 \ \end{array} ight\}$	
	age.	Per cent.		:	• :	110	ಣ	32	15	19	6
LETTERS RECEIVED.	Increase.	.oV		:	:	9,413	555	5,997	3,608	5,213	2,980
LE		No.		1,546	8,523	17,936 9,413	18,491	24,488 5,997	28,096 3,608	33,309 5,213	36,289 2,980
***	var X 1v.	Dерантивит		1882	(8 months) 4 1882-3	LA 1883-4.	[1]884.5	1885-6	1886-7	1887-8	1888-9

During the past year, it will be observed, the work in each branch has considerably increased over that performed in the previous year, while the excess in the cost of management is slight. It will be noticed, too, that there has been a continual and rapid increase in the business transacted by the office since its inception, while the increase in the cost has been comparatively small. While since the first complete year of the office's operation (1882-3) the annual work has more than quadrupled, the annual expense is not quite double what it then was.

It gives me much pleasure to refer to the cheerful and efficient manner in which their duties have been performed by the members of my staff. In order to keep pace with the increase of work it has been frequently necessary for many of them to work overtime, and the observance of a number of statutory holidays has been

discontinued.

Dominion Lands Agencies.

A detailed account of the work and expenses of the Dominion Lands Agencies will be found in Mr. Inspector Gordon's report. I may say, however, that the work has been heavier, the revenue greater and the expense lighter during the past year than in 1888. The increase in the number of homestead entries is very gratifying, 4,416 having been granted last year, as compared with 2,655 the previous year. This, I may point out, is the largest number of homesteads granted in any year in the Department's history, with the exception of the boom years of 1882 and 1883. In those two years, however, a considerable number of the entries were speculative, whereas I believe those granted during the year just closed have been granted to bona fide agriculturists. There has also been a very noticeable increase in preemption entries, their number being 1,355, as compared with 454 in 1888. number of general sales is, too, appreciably in excess of those made in 1888. Preemption sales, however, show a decrease as compared with the previous year, which is accounted for by the fact that while in 1888 a special effort was made by the Department to collect overdue payments of this class, no such efforts were made last year, protection to those desiring it having been freely accorded. The expenditure this year in connection with agencies has been \$48,747.741, as compared with \$49,345.61 in 1888, a saving of \$597.86½, while the revenue derived through them has been \$432,114.99, as compared with \$420,110.53 the previous year, an increase of \$12,004.46. The comparison regarding revenue will appear more favorable when it is borne in mind that the pressure put upon pre-emptors in 1888 was relaxed last year, and that the revenue in 1888 was augmented considerably by the efforts made to collect payments in arrears on Calgary town lot sales. The foregoing figures as to revenue include both cash and scrip payments. I desire, by the way, to protest against the practice of giving the Department credit for only the cash received. The scrip outstanding represents a liability on the part of the Government, which, when it receives scrip in payment of lands, this Department discharges, and for directly discharging that liability it is just as much entitled to credit as for such cash received as may be applied indirectly to discharge other liabilities. It would be as reasonable to refuse to credit the Department with any payments made in Dominion Government bills as it is to object to its taking credit for payments made in Dominion Government scrip notes.

During the year the agency at the Rocky Mountains Park has been abolished, and the work formerly done in connection with it has been added to the duties of the Superintendent of the Park. The agency at Manitou has also been closed, in consequence of the greater part of the lands in that district having been entered for, and the district is now incorporated into that of Winnipeg. The officials formerly employed at these two agencies have been removed to other offices, where the work was so pressing as to necessitate extra assistance, and an increase in the staff which would otherwise have been inevitable has thus been obviated. I trust that as settlement progresses it may be possible to close up other agencies in the well occupied parts of the country, so as to provide accommodation for the newer districts without

increasing the cost of the service.

[PART I]

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Homestead Inspection Service.

The number of applications for patent and cancellation having been larger, the work of the Homestead Inspection Service has been consequently heavier than in the previous year. The following is a statement of its year's work.

Inspector.	No. of Inspections made.	No. of Applications for Patent taken.	No. of Miles travelled.
Thos. H. Aikman John Allison W. H. Allison J. J. Arsenault R. S. Park John Rogers Thomas Swan W. R. Gunn (temporarily employed). Homestead inspections made by Forest Rangers and Intelligence Officers	340 487 540 691 516 499 545 20	111 159 194 223 249 108	4,268 5,321 4,994 4,432 4,231 5,237 4,056
Total	3,993	1,160	32,539

The number of inspections made the previous year was 3,898, an increase this year of 95, or at the rate of $2\frac{1}{2}$ per cent. The cost of the service has been: salaries, \$8,794; travelling expenses, \$5,675; a total of \$14,469. The cost in 1888 was: salaries, \$8,521.71; travelling expenses, \$7,799; total, \$16,320.71 which shows a saving effected of \$1,851.71. The benefits resulting to the Department, the settlers and the country generally from this service are very great. It protects the Department against fraudulent applications for patent, because, before an application for patent is considered, a Homestead Inspector is sent to examine the land and ascertain by personal enquiry whether the applicant has complied with the law. It is a great convenience to the settler, as it enables him to make application for patent in his own house, without travelling with his witnesses to the local agency, probably a long and expensive journey; and it protects him from having his claim "jumped" by malicious or unscrupulous individuals, as a cancellation case is never decided without a report having been obtained from an Inspector, who enquires fully into all the circumstances; it contributes to the improvement of the condition of the country at large by rendering impossible speculative homesteading, as the Inspectors report absentee homesteaders, which leads to the cancellation of their entries and the opening of their lands to bona fide and profitable settlers; and the knowledge that such officials are continually travelling through the country causes the settlers to reside on their lands more than they otherwise would. I am pleased to say that while productive of so much good, the service is practically self-supporting. In order to meet its cost the Department imposes a fee of \$10 on each cancelled quarter section upon re-entry for it being granted, in addition to the ordinary entry fees. This is in no way a hardship to the entrant, as the cancelled lands are usually in well settled districts, and are consequently more valuable than others. From this source a revenue of \$23,192 was derived during the year just closed; the total expense of the inspection service during the same period having been \$14,469. The revenue during the past twelve months from this source is considerably larger than in any previous year (which is in consequence of the great increase in the number of homesteads this year, to which I have before referred) and these fees cannot all be credited to the service's operations last year, some of the lands having been vacant for perhaps two or three years. A fairer comparison will be obtained by averaging the cost of the service for a series of years and the revenue derived from it during the same

period. The following is a statement of the expenses of the service and the revenue from inspection fees in each complete year of my tenure of office:—

		Revenue derived		
Year.	Salaries.	Travelling Expenses.	Total.	from Inspection Fees.
	\$ ets.	\$ cts.	\$ cts.	\$ ets.
1886	7,200 00	4,886 00	12,086 00	6,540 00
1887	7,200 00	5,737 00	12,937 00	7,710 00
1888	8,521 71	7,799 00	16,320 71	13,615 00
1889	8,794 00	5,675 00	14,469 00	23,192 00
Totals	31,715 71	24,097 00	55,812 71	51,057 00

During the period in question, you will notice, the cost of the service has been almost entirely met from these fees, the excess of expenditure being \$4,755.71, or an average of only \$1,188.93 a year. During the same time \$11,361 has been realized from forfeited improvements on cancelled lands, which, though it perhaps cannot properly be put to the credit of the Inspection Service, is in a great measure the result of its work. In order that the service might not be in any way a burden on the public exchequer I recommended during the summer that a fee of \$2.50 should be charged for each application for patent taken before a Homestead Inspector, of which recommendation you approved. This system has been in force since about the 1st of September, and up to the present \$525 has been realized from these fees. Inspection Service will hereafter, I think, be quite self-supporting. question has been paid willingly by the settlers, and when the convenience of making their application before an Inspector instead of having to go to the local agency for this purpose—as was necessary before Inspectors were authorized to take applications for patent-is taken into consideration, the imposition of this small sum seems perfectly reasonable.

Making application for patent before an Inspector is optional, however, and any settler who may object to paying the fee has the alternative of going before the local Agent, who will receive the application free. But no matter how near an agency a settler may reside, the cost of his going there with his witnesses is not likely in any case to be less than \$2.50.

Management of Trust and other Funds.

Trust Account.—An account is kept with the Merchants Bank, Winnipeg, in which are deposited the bond fees which are required to be deposited by persons who make application for cancellation of existing entries. Improvements paid for benefit of the former homesteader, when re-entry is granted for cancelled land, are also deposited in this account.

The balance on hand is \$19,309.18, and the interest earned on the balance of the account during the year is \$472.45, which has been deposited to credit of the Receiver-

General.

The receipts during the year number 1,615, amounting to \$38,510.32, and the

cheques issued for the same period number 1,193, amounting to \$28,827.62.

Letter of Credit Account.—The Letter of Credit Account, from which is defrayed the expenditure on account of Contingencies, Special Service, Intelligence and Land Guide Service, and Homestead Inspection Account, is kept with the Bank of Montreal, Ottawa, and 330 cheques have been issued thereon.

Seed Grain Repayments.

During the year just closed \$9,121.77 has been received in repayment of the seed grain advanced in the spring of 1887 to settlers in Assiniboia and on the North Branch of the Saskatchewan, making the total repayments up to the present date \$29,835.80. The 5,000 bushels of barley and oats which I referred to in my last report as being on hand at Prince Albert has been disposed of, the barley having been purchased by the Hudson's Bay Company, and the oats by the North-West Mounted Police.

In December last the collection of the mortgages given by the Red River settlers for seed grain relief supplied by the Government at the time of the grass-hopper visitation in 1876, was imposed upon this office by the Department of Agriculture, and \$3,231.85 has been paid in since the matter has been under my control. In consequence of the length of time these mortgages have been in existence, and the fact that the properties affected by them have, in most cases, changed hands frequently, this work is of a very difficult and complicated nature, and has occupied a considerable amount of time.

Manitoba University Lands.

The selection of the land grant of 150,000 acres to which the University of Manitoba is entitled under section 2 of the Act 48-49 Vic., chap. 50, has been vigorously prosecuted during the year. As mentioned in my last annual report, about 250,000 acres of land were temporarily reserved, from which the University might make choice, subject to your approval, of the quantity to which it is entitled. The lands reserved have been examined by inspectors employed by the University, which has periodically furnished this office with lists of such as have been chosen. As such lists have been received, I have recommended the transfer to that body of the lands included therein. Up the present time 123,541.43 acres have been so recommended. The whole selection will shortly be completed. It has not been found practicable to restrict the University to not more than two sections in any township in every instance, as was proposed when the selection was commenced, but this arrangement has been adhered to as far as possible. Care has been exercised that too large a block should not be granted in any district, and every precaution to prevent the selection interfering with settlement has been taken.

Crofter Settlement.

A great deal of my time and attention has been occupied this year in connection with the settlement of the Crofters assisted to the North-West by the British Government's Colonization Board. At the request of the Imperial authorities and in accordance with your own desire I have supervised this year's settlement, and have given advice and assistance to the Colonization Board's agent. This has involved a considerable amount of trouble in the purchasing of supplies, in selecting a location for the settlers, and in arranging in other ways for their reception. I have had to countersign all cheques issued by the Board's officer, and to approve all orders given by him; a large correspondence on the subject has had to be conducted, and some travelling has been necessitated.

On the 3rd of April 49 Crofter families sailed from Glasgow. They reached Halifax (where they were met by an officer of the Department of Agriculture) on the 14th, and arrived in Winnipeg on the 20th, proceeding on the same day to Saltcoats, the terminus of the Manitoba and North-Western Railway, in the vicinity of which lands had been reserved for them. Preparation was originally made to locate the settlement in the neighborhood of Grenfell and Wolseley, on the line of the Canadian Pacific Railway, but upon its being discovered that pre-emptions had been promised the settlers before leaving Scotland it was found that there were not enough lands in that district to give them all pre-emptions and allow them to be settled within a reasonable distance of the railway, and in such a manner that the settlement could be conveniently supervised by the agent, who, in accordance with my recommendation, was appointed by the Colonization Board to reside among them

[PART I]

and furnish them with advice and practical assistance in farming matters. A changein the location had, therefore, at the last moment, to be made; for, although I did not think pre-emptions at all necessary to the settlers—as they will have quite enough to do to repay their advances without paying for pre-emptions-I considered it best, to avoid the possibility of complaint that promises had been broken, that they should have an opportunity of taking 320 acres each if they desired. The lands reserved were visited before the arrival of the Crofters by Sir Charles Tupper, a member of the Colonization Board, who approved of their quality and situation. They are well adapted for mixed farming, and are close to a railway and local market. Colonization Board's agent was instructed to see that the settlers put as much land. as possible under crop, obtained a sufficient supply of hay to carry their cattle through the winter, and erected their houses and put them in such a condition as to withstand the cold weather. I regret to say that owing to the dry season and, tosome extent, to the dilatoriness of the people in breaking and seeding, the crops have not been very successful. Every effort has been used to procure employment. for all those who can be spared from the settlement, and I trust that sufficient will be earned to carry the people through the winter without hardship. The settlement has since its establishment been visited by Mr. Colmer, the Colonization Board's secretary, who has expressed satisfaction with the measures taken by this Department to promote its success. There is no reason, I think, why the settlers should not, in a year or two, become fairly prosperous, if they exercise reasonable industry and prudence. I may say, though, that the amount the Act allows to be advanced to each homesteader—\$600—is hardly sufficient to start in a satisfactory manner a man with a large family, who has absolutely no means of his own to supplement it, especially when, in addition to that of his own family, the passage money of a relative or ward has to be paid therefrom. I also consider that it would greatly increase the chances of success of any future parties the Colonization Board may send out if the lands for them were selected a year in advance of their arrival, and a certain quantity of each homestead broken, so that the settlers might be in a position to obtain some substantial return from their lands the first year of their residence in the country.

In regard to the settlement established near Killarney in 1888, I may say that the people managed to pass last winter satisfactorily, no cases of severe hardship having occurred. In company with Mr. Scarth, M.P., I visited the settlement in January and arranged with the storekeepers in the neighborhood to give the people credit in cases where such was absolutely necessary. The crops of some of these settlers have been poor, but I am informed they are equal to the crops of older and more experienced settlers in the same district. It is reported to me that the heads of families are all in residence and at work on their homesteads; the unmarried settlers and the junior members of families who are able to work being nearly all

away from the sttlement earning wages.

School Lands.

There have been no large sales of School Lands during the past year, but what lands have been disposed of have been sold to advantage. There have been three sales in Manitoba. In December last Section 11, Township 10, Range 19 west, in close proximity to the town site of Brandon, was offered at auction; 293.16 acres were disposed of, part in villa lots and the remainder in a block of 100 acres. The total price realized was \$7,238.34, an average of \$24.70 an acre. In the same month the School Section at Rapid City (29-13-19 west) was put up for sale, the north half by quarter sections and the south half in 147 town lots. The north east quarter was sold for \$1,326, i.e., at \$8.50 an acre, and 55 town lots were bought for \$2,598, an average price of \$47.23 per lot. In June last, 20 acres of Section 11, Township 15, Range 18 west, near Minnedosa, were sold for \$400, or at \$20 an acre. In the North-West Territories the sales and the prices realized have been as follows:—

515.92 acres of Section 11, Township 14, Range 1 west of 5th Meridian, near Calgary, were sold for \$8,265.36, or about \$16.02 per acre; and that part of the south east quarter of Section 11, Township 22, Range 29 west of the 4th Meridian,

10 [PART I]

south of Bow River, containing 63.80 acres, was sold for \$414.70, or \$6.50 per acre.

These sales were made by auction at Calgary in July last.

A large number of applications for the purchase of School Lands have been filed, and the advisability of holding further sales this winter is now being considered. During the past year a system of examination of School Lands has been inaugurated, which, I believe, will prove very helpful to the Department in dealing with them. Previously, there was no very satisfactory means of ascertaining the character, quality and value of the lands, and consequently some difficulty was experienced in deciding whether or not it would be in the interest of the education fund to offer them for sale, and in placing an upset price on them when 'a sale had been determined upon. Now, when any enquiry is made respecting any School Section, or any portion thereof, the land in question is placed on a list and is, as soon as possible, visited and reported upon by an Inspector. His report contains a full description of the property and all information necessary to enable the Department to correctly appraise its value and to decide whether it is advisable to offer it at the next sale. One regular Inspector has been employed in this work; but, in order to complete, before the inspection season expires, the examination of all lands respecting which applications have been received, two Forest Rangers have been detailed to temporarily assist him. The number of reports received from these examiners up to the present in 922. It is intended to have all the sections in the settled part of the country inspected in this manner. The system at present applies only to Manitoba; it will be extended to the North-West Territories as soon as the lands there come into demand.

The Inspector's reports show that squatting on and cultivation of School Lands are still being carried on very extensively, though the public is now well aware that these are illegal practices. The offenders, relying on the fact that in the past lands have been sold subject to payment for improvements, hope that consideration will be shown them when the lands are disposed of. I would recommend that School Lands be sold in future entirely irrespective of any "improvements" on them. Most of the School Lands thus taken possession of are near centres of population, and a very large number of those illegally cultivating them do not live on them, but reside in towns or villages or on neighboring farms. If the land they get the free use of belonged to private owners they would have to pay rent for it, in many cases quite a heavy rent, and they would also have to pay municipal taxes, which they now avoid, as taxes cannot be levied on undisposed of School Lands, and consequently the municipalities are deprived of revenue that they would otherwise receive. The "improvements" detract from the value of the land rather than enhance it. cultivation in many instances is done in such a manner as to take everything possible from the soil without making any return to it; and, if after cultivation for some time the cultivator ceases to use it, the land grows up with weeds and becomes It has been found, too, that the of much less value than the virgin prairie, squatters combine at the sales to prevent the lands being sold, either by threatening to run up the price, by exaggerating to the intended purchaser the amount of improvements on the land and their value, or by boasting of the trouble they will put a purchaser to before they will let him obtain possession. Not only do I, therefore, recommend that "improvements" be not recognized, but I am also of opinion that proceedings should be taken against those who are found by the Inspector to be pursuing these illegal practices. I may point out that in the Nebraska school law there is the following provision: "If any person shall commit, waste or trespass or other injury upon any of the lands herein referred to (School Lands) the person so offending shall, on conviction thereof, be fined a sum not less than twenty-five dollars nor exceeding one thousand dollars."

The area of surveyed School Lands in Manitoba is 897,563 acres; and the estimated area of those unsurveyed is 1,000,000 acres—making a total area of about 1,897,563 acres. Up to the present 21,717 acres have been sold (exclusive of the Rapid City town lots), the sum realized being \$158,620, or an average price of nearly \$7.30 an acre. The surveyed School Land area in the Territories is 2,890,469 38 acres. Of

PART I

the unsurveyed area there, it is impossible to make anything like an accurate estimate. The quantity sold is 1829 88 acres, and the total amount realized \$46,541.97, an average price of \$25 43 an acre. The high average price realized is, I think, an evidence that the Dominion Government is faithfully administering the trust it imposed upon itself when it reserved lands in Manitoba and the North-West Territories for educational purposes. Appended to this report is a memorandum containing all the particulars I have been able to obtain respecting the management of School Lands in the United States, and the results achieved by the various State Governments. From this it will be seen that the prices realized in Manitoba and the North-West are much larger than those at which School Lands are sold by a great majority of the State Govern-In a large number of States very poor results have been accomplished; the lands having apparently been given away for a mere trifle. It has been urged that the School Lands in Manitoba should be administered by the Provincial Govern-The average results of local administration in the States are not, however, so brilliant as to warrant the supposition that a change to that system in Manitoba would prove advantageous to the interests of education; on the contrary, they indicate that a change from the present mode of administration in that direction would probably be detrimental to those interests.

Pre-emptions.

The privilege of taking pre-emptions adjacent to their homesteads, when making entry for the latter, was first accorded to settlers in 1874. The Land Act of 1883 provided that this privilege should be discontinued after the 1st of January, 1885. In 1886 the Act was amended in this particular, extending the time within which pre-emptions might be obtained to January, 1887, and by the amendments of 1886 this privilege was further extended till the 1st January, 1890. There has been no subsequent legislation in this regard, and pre-emption entries will not therefore be

granted after the end of this calendar year.

There is no doubt that the pre-emption system served a good purpose at the time it was introduced. At that date all the public lands, whether odd or even numbered sections, were open to homestead entry, so that if a man were not in a position to purchase extra land when entering for his homestead, it was altogether likely all the land which was desirable in his neighborhood would be settled on by other homesteaders before he would have earned enough to buy any, and he would thus be prevented from making provision for the cultivation of more than 160 acres should he ever be in a position to so extensively engage in agricultural operations, or from acquiring land near his own for the use of his children. Some provision in the regulations which would give a settler the right to purchase within a certain period from date of settlement an additional quantity of land adjacent to his homestead at a reasonable price was, therefore, desirable and necessary. But the need for such a provision is not now so great, as, every alternate section being reserved from homesteading, the settler desiring to increase the area of his farm can generally buy land near his homestead on easy terms of payment, either from the Government or from the railway companies to whom odd sections have been granted as subsidy. Though in some ways it has been advantageous, there have been several objectionable features in connection with the pre-emption system. One is, that it has served to scatter settlement. Many settlers, with little prospect at the time of making homestead entry of being able in three years to purchase an additional 160 acres, have taken pre-emption entries on the chance either that they may be able to pay for them eventually, or that, in consequence of the construction of railways or the increase of settlement in their neighborhood, they may be able to dispose of their right to others, when they have obtained homestead patent, to good advantage. The entry fee is but ten dollars, which is not much loss if the pre-emption has to be given up, but may result in a good return if the speculation is successful. In the mean time, the pre-emption quarter section is locked up and lying useless, and settlers who, if it were vacant, would gladly homestead it, are forced into districts more remote from railways and settlements, while the localities in which the specu-PART I

lative pre-emptions are held are sustaining nothing like their full complement of population. Another objection is this: A settler having taken up a pre-emption is perhaps not able to pay for it when the necessity for doing so arrives, but at the same time, hoping he will shortly be able to do so, does not care to relinquish it. In many cases he mortgages his homestead after having got his patent, in order to help pay for his pre-emption. He thus burdens himself with debt in order to pay for land which, in a large number of instances, he is not cultivating, and which is of very little practical use to him. Sometimes he can manage to extricate himself from the liabilities he thus assumes, but it unfortunately only too often happens that he sinks under their pressure and, in the end, loses both homestead and pre-emption. I am glad to notice, however, that the settlers themselves are realizing that it is not advisable to take up too much land at first, and that it is better to rely upon purchasing odd numbered sections at some future date, if a larger farm is then found to be required, than to encumber themselves with pre-emptions before they really require or can afford them. This is shown by the gradual falling off during recent years in the number of pre-emption entries granted as compared with the homsteads taken up. In 1882, 76 per cent. of those homesteading entered also for pre-emptions; in 1883, 68 per cent. of the homesteaders pre-empted; in 1884, 73 per cent.; in 1885, 35 per cent.; in 1886, 39 per cent.; in 1887, 28 per cent.; in 1888, 17 per cent. In the year just closed 30 per cent. of the homesteaders took pre-emptions, the increase over the previous year being doubtless accounted for by the fact that the time for withdrawal of the pre-emption privilege is so close at hand, and perhaps because there may have been a larger number of well-to-do settlers among last season's immigrants than in the former year.

In view of this decreased demand, I do not think that the abolition of the preemption system will be a matter of much, if any, regret. In order, however, that those homesteaders who really require and can afford to farm more than 160 acres may not by chance be deprived of the opportunity of doing so, and that the Government may not entirely lose the revenue which has hitherto been derived from preemption sales, I would suggest the advisability of allowing a homesteader to purchase land adjacent to his homestead when entering for it, payable one-fourth in cash and the balance in three annual instalments, with interest on the unpaid principal at 6 per cent. A settler would not be likely to take up land on these terms for speculative purposes, as the first cash payment and the annual interest would be more than he could afford to lose if the speculation should be a failure. These sales, I think, would only be taken advantage of by farmers really needing the land, with some capital at their disposal when homesteading, and having a fair prospect of completing their purchases. A large quantity of land in the hands of such settlers would be in no way a disadvantage, but a positive benefit in many respects to the country.

be in no way a disadvantage, but a positive benefit in many respects to the country.

As mentioned in my last annual report, a circular was sent out in 1888, calling upon persons in default in the payment of their pre-emptions to complete their purchases within a given period or their entries would be cancelled, unless they furnished within the period allowed satisfactory reasons for non-payment, and showed that they were residing on and cultivating their homesteads in a bona fide manner, in which cases a reasonable extension would be granted; the object of this circular being to open to homestead settlement, under sub-clause 5, clause 38, of the Dominion Lands Act, all pre-emptions which were being held by speculative homesteaders. with no benefit to the holders and with great detriment to the country. At a conference held in Ottawa, in February, between yourself and the Senators and Members of Parliament from Manitoba and the North-West Territories, and at which the Deputy Minister and myself were present, it was represented that many bona fide settlers whose entries it would be a great hardship to cancel had failed to make application for extension of time for their pre-emption payments. In consequence of these representations you authorized the issue of instructions to the local Agents ordering them to discontinue the cancellation of pre-emption entries until the 1st of January next, except upon applications from intending settlers who wished to enter for pre-emptions as homesteads under sub-clause 5, clause 38, of the Dominion Lands

[PART I]

Act. The number of pre-emption entries cancelled this year has, therefore, been small.

Amendments to the Dominion Lands Act.

The amendments made to the Dominion Lands Act at the last Session of Parliament appear to have worked well. That relating to transfers made before issue of patent has quieted a number of titles, and that relating to liens for advances made to assist immigrants to the North-West and to start them on farms has removed many difficulties in the way of the successful working of this useful plan of colonization.

Crops.

Last season's crops in Manitoba and the North-West Territories were not so successful as might have been wished, owing chiefly to the dry weather which prevailed during the growing period. In Manitoba about a million acres are stated to have been prepared for seeding last spring, a considerably larger acreage than in the previous year, the acreage devoted to the principal crops being as follows: Wheat, 623,245 acres; oats, 218,744 acres; barley, 80,238 acres; flax, 13,333 acres; potatoes, 11,941 acres; other roots, 4,075 acres. Seeding was general throughout the Province about the 1st of April, but the weather was cool, and not favorable to rapid growth. At an early date the ground became very dry and, high winds prevailing, the seed in many places was uncovered, and in some cases blown away. The month of June was particularly dry, the rainfall during it being less than three quarters of an inch throughout the Province. A few showers at the commencement of July remedied the evil to some extent, and caused hopes that the damage would not be so serious as at first anticipated, but experience has shown that in many places the drought had affected the crops too seriously for recovery. The weather during the harvesting season was favorable. It is yet too early to give any reliable statement as to the quantity of the crop. It is estimated by the Provincial Department of Agriculture, from the returns of its crop correspondents, that the average yield per acre for the Province will be as follows: Wheat, 12.4 bushels; oats, 16.8 bushels; barley 13.6 bushels hels; peas, 81 bushels; potatoes, 119 bushels. It is difficult to arrive at a general estimate, however, as the crops have varied so in different localities. In the County of Souris River, for instance, the yield per acre is reported as follows: Wheat, 3.9 bushels; oats, 4.2 bushels; barley, 3.2 bushels; potatoes, 62 bushels; while for the County of Westbourne it is given as: Wheat, 23.4 bushels; oats, 22.5 bushels; barley, 24.0 bushels; potatoes, 225 bushels. The crops seen to have done best in the north-western part of the Province and worst in the south-western portion. The average crop yield per acre in the Province for the year 1887, the last year for which statistics were taken, was: Wheat, 27.9 bushels; oats, 46.2 bushels; barley, 36.3 bushels. The average for the period 1883-7 has been: Wheat, 20.6 bushels; oats, 33.7 bushels; barley, 25.8 bushels; potatoes, 205 bushels. If the Local Government figures are correct the aggregate yields of this year's crops are: Wheat, 7,201,519 bushels; oats, 3,415,104 bushels; barley, 1,051,551 bushels; and potatoes, 1,393,385 bushels. Of this, some 5,000,000 bushels of wheat will probably be exported. The quality of the grain this year is excellent, and up to the present the prices paid have been fairly good. The hay crop has been light, the average yield for the Province being reported as 1.10 tons per acre.

I have no data on which to base an estimate as to the quantity of the crop in the Territories, no statistics having been collected, and the yield having been so different in some localities from what it was in others makes it impossible to give even an approximate idea of the average. On some farms very good results seem to have been attained, while on others indifferent returns have been secured.

In addition to the damage caused by drought, the crops suffered considerably from the ravages of gophers, which were more numerous and troublesome than for some years past. This, however, is indirectly attributable to the drought, as the dry season was particularly favorable to their rapid propagation, and, by depriving 14

them of other succulent food, caused them to rely almost entirely upon the young ears of grain for their subsistence during the early part of the summer. Undoubtedly some steps should be taken for the destruction of this pest before it becomes too formidable; otherwise there is a probability of its developing into as great an evil as the rabbit pest in Australia. This would seem to be a matter for municipal or local government action.

General Condition of the Country.

In spite of the short crops, the condition of the country is satisfactory. Settlers do not appear to have lost confidence; a considerable quantity of new land has been broken, and a larger area than that of last spring will, I have reason to think, be seeded next season. In consequence of cattle and poultry raising and dairying operations being annually more extensively gone into by farmers, the effects of an unfavorable season are not quite so severely felt as formerly, when grain growing used almost entirely to be depended upon. From what I can learn, business is steadily improving, and should the next crop be a bountiful, or even an average one, the progress of the North-West will not be materially hindered by this year's experience. It is to be borne in mind that the drought was not confined to the Canadian North-West, but was general throughout the whole western portion of the continent, and that in regard to crops and the general condition of the people the country north of the 49th parallel compares favorably with that to the south of it.

Railway Construction.

An indication of the confidence felt in the country by capitalists is the extent to which railway construction has been prosecuted during the year, and the preparations which are being made by the various railway companies to undertake even more extensive work in this direction next season. The advantages of this activity to the settlers and the country generally are obvious; the construction work affords employment and causes circulation of capital, and the new lines not only provide greater transport facilities in well occupied neighborhoods, but open new districts to settlement,

The Canadian Pacific Railway Company has had 56 miles graded and 4½ miles of track laid in connection with its Souris Branch, which will run from the neighborhood of Brandon to near Melita, and has built a 6 miles extension of its Barnsley Branch from Barnsley to Carman. A considerable further amount of tracklaying will be done by the company before winter sets in, and work will be ener-

getically proceeded with in the spring.

On the Regina, Long Lake and Saskatchewan Railway, 130 miles have been graded and 40 miles of track laid, the grading being finished to within 9 miles of

.Šaskatoon.

The North Pacific and Manitoba Railway Company has laid, so far, during the present year, 160 miles of road, and expects to lay 25 more miles this season. The General Manager informs me that although it is not decided what will be done in construction work next year, the company will, in all probability, build 150 miles at least.

The Great North-West Central Railway intends to complete its first 50 miles this season. I am informed the whole of that length is graded, bridges have been built for nearly 40 miles, the first station is nearly completed, and 22 miles of track has been laid. Rolling stock has been shipped from the east, and the company contemplates building next year another 50 miles.

The Manitoba and North-Western Railway has done 15 miles of grading, and, I

understand, will probably perform a considerable amount of construction work next

season.

Immigration.

While I have at my disposal no complete and reliable figures as to the number of new settlers that have come to the North-West during the past season, there can [PART I]

be no doubt the immigration has been in excess of that of recent years, and that generally speaking the immigrants have been of a very desirable class. The large number of homesteads entered for this year in comparison with previous years is, I think, a good indication in this regard. The "farmers' excursions" organized by the Canadian Pacific Railway Company have been very useful in attracting to this part of the Dominion substantial farmers from the eastern Provinces, who are almost sure to do well for themselves and to benefit the country. Another party of Scotch Crofters has been assisted out here by the British Government, to the settlement of which I have elsewhere referred. There has been a considerable influx of foreigners. The existing foreign colonies have been increased, and a new colony, of Germans, has been established. It is in the neighborhood of Dunmore, and consists of some 170 families; its prospects of success, I am told, are excellent. Several Russian families have been amongst this year's arrivals.

The Mormon colony at Lee's Creek, Alberta, has, I am informed by Mr. Eliot Galt, of the North-West Coal and Navigation Company, been increased, there having been some 150 new arrivals. There is likely to be a considerable influx from Utah next year. Mr. Woodroff, one of the Mormon leaders, has visited the country during the year, and 58,000 acres have been bought from the North-West Coal and Navigation Company, on which it is proposed to settle some 350 families in the near future. I am told by Mr. Galt that this colony has made great progress, a large amount of building and fencing having been performed. The people are engaged in dairy farming, freighting, etc., and are prosperous and contended. Mr. Galt states they appear to perfectly understand that it will be impossible for them to practice polygamy in Canada. He says that from his own knowledge those already here are observing the law in this respect. Having had a great deal to do with these people in business matters, and being resident in their neighborhood, Mr. Galt is in a position to speak with authority on this point. I have obtained similar information from other sources through which I have made enquiry in this regard.

Land Sales by Railway and Land Companies.

The fact that the sales made by the large land corporations during the past season have been much larger and at better prices than during the previous year is evidence of an increased immigration and of the progress of the country. The Canadian Pacific and Manitoba South-Western Railway Companies' sales this year have been 191,856.99 acres, at \$719,879.15, as compared with 162,272.60, at \$553,911.17 in 1888; and this year's sales have almost all been made in small areas to settlers, whereas the 1888 sales included several large blocks to capitalists. The North-Western Coal and Navigation Company has sold 98,000 acres, as compared with 10,000 acres in 1888 and 26,000 acres in 1887, at an average price of about \$2 an acre. The Hudson's Bay Company's land sales, I am informed, have been larger than in 1888, and at better prices. The Canada North-West Land Company reports that its town lot and agricultural land sales have been considerably in excess of those of last year, and the Manitoba and North-Western Railway Company states that this season's operations have been satisfactory. I have reason to think that the experience of other companies and individual land owners has been of a similar nature.

Hay Lands.

As mentioned in the paragraph of this report relating to last season's crops, the recent hay harvest has been a very light one. Lands which formerly have produced good yields have this year been almost useless for hay purposes. This deterioration is caused to some extent by the gradual drying up of the country of late years, and the drought prevailing during the early part of last summer. But there is another cause which has operated to destroy the Government hay lands. Settlers, in order to make sure of securing the quantity they have obtained a permit to cut, commence haying operations at an early date, lest their neighbors should forestall them. It thus happens that the grass is often cut before the seed has had time to mature and become distributed. Deprived of this natural means of replenishment, the hay

swamps, especially in dry seasons, soon become exhausted. In order to remedy this the Government, when issuing hay permits last spring, granted them subject to the condition that the hay should not be cut before the 20th July, by which time it was estimated the seed would have ripened and fallen. This, I may remark, is a return to the custom of the country before its transfer to the Dominion Government, the Council of Assiniboia having had a law to the effect that if any settler cut hay upon common lands before the 1st of August, or some day proclaimed by the Council according to the earliness or lateness of the season, he should forfeit the same or the value thereof. In its efforts to conserve a product of such value to the country as is the natural hay supply, the Government might fairly have counted upon the hearty co-operation of the settlers, for whose future benefit this protective measure was chiefly designed. I am sorry to say, however, that in many cases individual cupidity seems to have been stronger than considerations of public interest, and a number of settlers commenced cutting before the prescribed date. When steps were taken to forfeit the hay thus illegally cut, complaints of course arose of harshness on the part of the Government.

I am inclined to think that the best policy for the Government to pursue in its own and the North-West's interest is to dispose of what hay lands remain in its posession in settled districts as soon as possible. Under present circumstances the expense and trouble of issuing permits is altogether out of proportion to the revenue derived from them. The difficulty in the way of enforcing protection regulations in districts where hay is scarce and where, of course, such measures are most required. is also very great; a close watch is required to be kept to detect violations, and when steps are taken to punish the offenders the Department cannot fail to incur odium and attacks, stirred up and promoted by the offenders. By selling the hay lands a considerable revenue would be derived, as hay is now in such demand, and the trouble and expense of administering these lands would be avoided. The hay supply would. I think, be very much more efficiently preserved if these lands were in the hands of private persons, as it would be in the owners' interests to prevent waste and exhaustion, and this, for obvious reasons, they would be very much better able to do than the Department. By adopting this course I do not think the Government could be accused of shirking a public duty as, if my view is correct, the hay supply will be better protected than at present; and I question whether it is the duty of the Government to provide practically free hay for any but homesteaders who have not earned their patents, the interests of which class of the community can still be protected by the Government retaining the hay lands, or a reasonable quantity of them, in districts where any considerable number of homesteads remain unpatented.

If my ideas meet with your approval I would suggest that a certain proportion of these lands be offered for sale at public auction before the next having season

arrives.

Timber Supply and Forest Culture.

I would direct your particular attention to the remarks of Mr. Crown Timber Agent Stephenson with regard to the rate of consumption of the timber of the North-West. They show how rapidly the already small accessible forest area of the country is being diminished, and present for solution a problem of the highest importance to the prairie region and the Dominion at large. The deforesting of countries having an abundant supply of timber, and where there is no rapid increase of population, is a serious matter; but when the timber supply of a country is scarcely sufficient for its present requirements, and that country is annually augmenting the number of its inhabitants in an abnormal degree, an extensive and annually increasing diminution of its wooded area is a question of supreme moment and a cause of the gravest alarm. I need not enlarge to any extent upon the serious consequences which must result to the North-West if this state of affairs continues, nor present an array of arguments to demonstrate the vital necessity of some steps being taken to check the loss which is being sustained and the pressing duty or devising measures for creating new sources of supply in order to repair the evil already PART I

These considerations are so obvious that they cannot fail to present themselves involuntarily to the mind of anyone acquainted with North-West matters. In a country of such long and severe winters as this an adequate supply of fuel, obtainable without excessive cost, is absolutely indispensable. Unless this can be assured, the value of North-West as a field for settlement, however fertile may be its prairies and however exuberant its crops, will be seriously affected. Fortunately, there appear to be coal deposits of considerable extent in various parts of it, and this in some degree compensates for its lack of timber; but coal can never altogether take the place of wood with the agricultural population, for, besides being their main article of fuel, wood is depended upon almost entirely by the settlers as a building material, and is largely used for fencing purposes. Its value in these respects alone is therefore sufficient to justify strenuous efforts to preserve and increase the quantity now in the country. But besides these very practical and patent considerations, other reasons for the preservation and multiplication of forests—more theoretical but of scarcely less importance, if valid—are advanced by many competent authorities on forestry: It is claimed that deforestation produces important climatic changes. In the deforested area, it is said, extremes of temperature are aggravated. and the average moisture of the air is lowered; the neighboring country loses the protection from cold and drying winds which the mechanical action of the forest as a wind-break affords; evaporation from the soil is augmented and accelerated and, the volume of streams, rivers and lakes is diminished. These unfavorable results are stated to be most marked and serious in countries at a considerable distance from the sea or other large bodies of water, and especially where they are separated from stretches of water by high mountain ranges, which interfere to prevent the passage of moisture-laden winds. An increase in a country's forest area is, contrariwise, claimed to exert an opposite influence—to modify temperature, to decrease cold winds in winter and scorching blasts in summer, and to increase the rainfall. These theories as to the climatic and hydrologic influences of forests may or may not be correct. It is a fact that in the North-West, and more particularly in the settled portions, the country has of recent years dried up very considerably-sloughs and marshes are fast disappearing, rivers once navigable are now so low as to render traffic upon them impossible, and damage to crops by drought is becoming frequent: but whether this is in consequence of the rapid consumption and destruction of timber. or results from other causes, I am not in a position to say. Though sufficient definite data have not been obtained to absolutely confirm them, these theories are worthy of notice when considering this subject. If they be correct they add tremendous force to the arguments for forest preservation and multiplication in the North-West, but even if they be chimerical the plain practical considerations of fuel and building material, as I have before said, are of quite sufficient weight to bespeak for this matter the most serious and intelligent regard.

I have the honor to be, Sir.

Your obedient servant,

H. H. SMITH,

Commissioner of Dominion Lands.

APPENDIX TO DOMINION LANDS COMMISSIONER'S REPORT.

MEMORANDUM containing such information as can be obtained respecting the methods of administering Educational Lands in the United States, and the results such have achieved (referred to the Report of the Commission of Dominion Lands, page 12.)

Oregon.—Almost all the school lands in this State have been disposed of. The total school fund is \$1,756,700.90. Lands are sold at \$1.25 an acre, in quantities of not more than 320 acres to one person.

Mississippi.—The fee simple of school lands in this State is never parted with. They are leased for periods of 99 years or less, and are administered by the county authorities. No figures are obtainable to show the financial results of this system.

Louisiana.—The total school land grant to Louisiana amounted to 1,024,000 It is not possible to ascertain how large a quantity has been sold. capital already realized is \$1,300,000. The School Boards lease the lands in their respective districts for a year at a time on what appears to them to be the most advantageous terms. Lands are sold to the highest bidder on a day set apart for the sale, after the sense of the people in the township where the lands are situated has been taken to ascertain whether they desire them sold or not.

Texas.—The total school land area is 40,000,000 acres. Of this, about 10,000,000 acres have been sold. The lands are sold to actual settlers in quantities of not less than 80 nor more than 2,560 acres, at a price not less than \$2.00 an acre. The prices realized have ranged from that figure to \$5.00 an acre. The terms of sale are:—Onefortieth cash at time of purchase; the balance in yearly instalments, with interest on unpaid principal at 5 per cent. The purchaser has the privilege of paying up in full in seven years. The lands are also leased, the annual rental being 4 cents an acre and the leases extending for periods of four and five years. The area under lease is 6,427,966 acres.

Florida.—The school grant to this State consisted of 908,503 acres, of which all but 439,411 have been disposed of. The total fund is \$561,984.25; the prices at which sales have been ranging, from \$1.25 to \$8.00 an acre. The terms of sale are usually

cash, three years time being allowed to actual settlers.

Illinois.—Total school grant was 1,000,000 acres, of which but 7,600 acres remain in the State's possession. The amount realized has been \$5,049,784. Local school authorities may lease the lands in their respective districts for periods not longer than five years. The rental goes to benefit the township school fund. Upon petition of two-thirds of the voters in any township the school land therein is offered for sale. Sales are at auction to the highest bidder, and the terms of purchase are cash at time

of sale. The upset price for the land is fixed by the county authorities.

Minnesota received a total school land grant of 3,000,000 acres, 1,231,293 of which have been sold. The sum of \$7,177,790 has been received for them, the average price being a little over \$5.96 per acre. Sales are at auction, and the lands cannot be disposed of for less than \$5.00 an acre. The terms of sale are, 15 per cent. of the purchase money at time of sale, the balance being spread over thirty years, or it may be paid in full at any time at the purchaser's option. Timber is sold separately from the land, if hardwood. A considerable revenue is derived from pine lands, on which stumpage is charged.

Wisconsin.—The school lands in this State have all been sold, except 79,469 acres. at prices ranging from \$1.00 to \$1.25 an acre. Payments are made, 25 per cent. in cash at time of purchase; the balance in instalments covering ten years, and subject

to interest at 7 per cent on the unpaid principal.

Kansas.—School lands in Kansas may not be sold for less than \$3.00 an acre. They are sold by auction upon petition of the residents in the school districts wherein they are situated. The terms of payment are one tenth cash, the balance PART I

in twenty years, subject to interest at 6 per cent. Lands not sold when offered at

auction may afterwards be disposed of by private sale.

Missouri.—All of the 1,250,000 acres of land granted Missouri have been sold, except 200,000 acres. They have been sold at from \$1.25 an acre upwards, the average price realized being \$2.50 an acre. The funds are under control of the county authorities.

Nebraska.—The school land grant comprises 2,884,398 acres. The State has deeded 162,051 acres and has under contract of sale 639,454 acres. There are 1,427,460 acres leased. The cash in hand from sales is \$2,100,744, and there is due the State, in unpaid principal, the sum of \$4,432,048. The principal derived from the sale of lands is placed in a permanent fund, and this fund invested in United States and registered county bonds. The funds derived from the interest on these bonds, the interest on unpaid balances on sales, and the lease rentals, go into a temporary fund, which is divided semi-annually to the school districts of the State in ratio of the per capita. The revenue derived from interest on sales for the year ending 30th November, 1888, was \$234,853, and the lease rentals for the same period amounted to \$153,276. Lands are sold by auction, and must not be disposed of for less than their appraised value, which must not be lower than \$7.00 an acre. The terms of sale are: one-tenth in cash; the balance in twenty years, with interest at 6 per cent. on unpaid principal, The land can, however, be paid for in full at any time, at the purchaser's option. Lands not disposed of at public sale are open for leasing, at an annual rental of 6 per cent. on their appraised value. Leases are for twenty-five years, with option of purchase before lease expires.

Indiana.—The school lands are under the control of the county authorities, and are sold at auction. When sales shall take place is decided by an election in the districts in which the lands supplied are situated. The price is not less than \$1.25 an acre, payable one-quarter cash and the balance in ten years. There have been 653,317 acres sold, for \$2,487,806. Lands may be leased for periods not exceeding

seven years.

Arkansas.—School lands are sold on petition of people in district they are situated in at not less than \$1.25 an acre. Terms: one-quarter cash; balance in three years, interest at 8 per cent. Lands may be leased by the county authorities.

Nevada.—Lands are sold from \$1.25 to \$2.00 an acre. California.—School lands are disposed of at \$1.25 an acre.

Territories.—The Territories of the United States do not obtain control of their school lands until they are admitted to Statehood. They are held in trust by the Federal Government, which does not, however, dispose of them, or take any steps to derive a revenue from them for the assistance of education in the Territories they are situated in. Congress has, though, passed legislation enabling the county authorities in Washington and Wyoming to lease the school lands lying in their respective counties, and to apply the revenue derived to local school purposes. The leases are not to be longer than five or six years.

No. 2.

OFFICE OF THE SUPERINTENDENT OF MINES, CALGARY, 31st October, 1889.

H. H. SMITH, Esq., Commissioner of Dominion Lands, Winnipeg, Man.

SIR,—I have the honor to report through you to the Hon. the Minister of the

Interior on the work of my office for the year ending this date.

In November last my duties called me to Winnipeg, and in December I investigated some matters in the Porcupine Hills, west of Fort Macleod. In January I made an inspection of the farms of the Canadian Agricultural Coal and Colonization Company, and went to Ottawa. I returned in March, and until June was at Calgary the greater portion of the time, making certain inspections from there. In June I investigated certain land claims at Revelstoke, and since the 1st of July have been chiefly engaged on the inspection of the lands within the Canadian Pacific Railway grant which that company desires to reject. Outside of the last matter, reports have from time to time been prepared on all the subjects mentioned.

Crops, &c.

The rainfall during the past season taken throughout the whole of the North West Territories, has been very much less than in any other since the country has been opened for settlement, although, judging from certain indications, not more so than it was about one-fourth of a century ago. On the heavy clay lands, where the cultivation had, however, been thorough, very good crops of wheat were obtained this season, the quality "A1" thereby demonstrating the success of that cereal in a large portion of our Territories during the most unfavorable seasons. Oats and barley generally were a light crop.

Prairie Fires.

During several years past in my reports this subject has been alluded to, and the experience of each succeeding season strongly emphasizes the opinion previously formed. In those districts where the rainfall is meagre, the grass crop is being greatly impoverished, and if preventive measures are not taken many portions of the country will become practically valueless. That these fires can be prevented, and at a moderate cost, has undoubtedly been already demonstrated.

Irrigation.

This matter is one concerning which action has been taken by the North-West Assembly, and reference made to a paper written by the undersigned and read before the Association of Dominion Land Surveyors at their annual meeting in February last. After another season's experience I do not wish to modify the views therein expressed concerning the importance of the subject.

Stock Interests.

The past winter was all that could be desired for range stock; there were few or no spring snow-storms, so that the loss of very young calves from that cause was practically nil; the pasturage being good the stock came out in the spring nearly fit for the butcher. This fact no doubt contributed largely to the prevalence of anthrax in some localities. It is frequently contended by horse raisers that considerable snow is a benefit, preventing worms caused by eating dry grass, the snow mixed with it causing better digestion. Some cattle men asserted that there were a number of

[PART I]

deaths among the range cattle at calving, this mortality being attributed to costiveness, resulting from the absence of snow.

Horse Breeding.

A very large amount of capital is being invested in the importation of well bred stallions, also a considerable number of high class mares have been imported, so that in the near future one may confidently predict a large and valuable output in that class of stock.

Sheep.

The low price of wool has retarded this industry, which when prosecuted on a large scale does not appear to have been a highly paying enterprise; at the same time, in every case where a settler has not had more sheep than he could personally look after—that is, a flock of from 500 to 2,500—it has proved most profitable.

Woollen Factories.

Probably nothing would stimulate the sheep industry to the extent that the establishment of woollen factories would. There appears to be no reason why, in the near future, if not now, the clothing, bedding, &c., required in this country should not be made here. An experiment in this direction will be made shortly by the opening of a woollen factory a short distance from Calgary.

Shipment of Live Stock to Great Britain.

To many who are not acquainted with the subject it will probably be a matter of surprise that cattle and sheep can be successfully shipped alive from this point to Great Britain. It is only in those cases where the size was low, quality medium and handling bad, that the shipments can be called a failure; and if a horse suitable as a roadster or for carriage or cavalry purposes in Great Britain can be produced here (and there is no reason why this should not be done, but, on the other hand, every indication that these kinds of horses can be reared of a quality equalled in few localities and surpassed in none), then the breeder need have no fears that the cost and risks of transport will make the undertaking a hazardous one.

Horse Fairs.

The suggestion that horse fairs, to be held at some central place, say twice a year, should be established seems an admirable one. These fairs would bring the dealer and breeder of horses readily and thoroughly together, and, if established at once, it is possible the transactions in connection with them would be considerable, and, within a short period, it is reasonable to anticipate, would assume large proportions.

Reservations for Stock Watering and Shelter.

During the past season several additional reservations for this purpose have been made chiefly in the newly surveyed townships. Many persons have imagined these reservations were intended solely for watering purposes, and have objected in a few cases to the selections; but when the explanation was offered that they were as requisite for shelter as for watering, the reservations have been acquiesced in, and, on the whole, the action of the Department has been well sustained by those conversant with the subject.

Dairying.

It is difficult to understand why more attention has not been paid to this branch of farming in the foot-hill country. Nature has endowed it lavishly in every respect, with succulent grasses, the best of spring water everywhere, a climate which nearly wholly prevents cows being pestered by flies, all that could be desired for curing and marketing dairy produce in the highest perfection, and a good market to the west for this kind of produce, which will rapidly grow, and to which this country has the [PART 1]

most convenient access. Scarcity of labor must be the chief reason why the development of this industry has been retarded, though the past year witnessed an increase of 100 per cent. over the preceding. For parties fitted for such an undertaking, there are on the North American continent few openings as good as this district affords, certainly there are none better.

Poultry and Eggs.

An industry that might be profitably conducted in connection with that of dairying is rearing poultry, both for the meat and also for the production of eggs. A visitor to the Pacific Coast portion of British Columbia is forcibly struck with the fact that large quantities of these products are imported from Oregon and California. As mining and other business developments proceed the demand will rapidly increase. The shipping to Japan, to China, and probably to South America and Australia, which is being rapidly developed, will also add largely to the demand for these, and also for first-class dairy products.

Tree Culture.

Considerable attention has been paid to this subject during the past year, and there has been urged on the Department of Agriculture the desirability of the establishment at some point in the south-western portion of the North-West Territories of a farm or garden for conducting experiments on this line. Failure in tree culture so far as tried seems to be owing not to the severity of the winters, nor to the droughts of the summers, but to the winds. Those in the winter known as "chinooks," which cause the sap to rise and the buds to swell, being followed by a lowering of the temperature (in some cases very rapid), prove destructive; and during the summer there are often high, dry, hot winds which blow continuously for several hours, and which seem to dry up the young trees. By planting in close clumps the native trees (cotton woods and others) which will grow, and among them those ornamental trees which are so much to be desired, these difficulties will probably be overcome, and in time it will be found what ones are best suited to the district.

Tanneries, &c.

In this report it may be well to direct attention to what has been said in my former reports as to the desirability of the establishment of tanneries, &c. It would occur to one who may not be familiar with the details of that business that as a commercial undertaking the prospects rank high. There must be now available, in the district tributary to the Canadian Pacific Railway in the North-West Territories west of Swift Current, at least 13,000 cow hides and 4,000 sheep-skins annually. And hemlock bark, or the extract therefrom, can be readily and economically obtained.

Iron Ore and Establishment of Iron Industries.

In the Bow River valley iron ores of several varieties, all of good quality and in large quantities, are to be met with in many places, in close proximity to coal of all grades, from first-class cooking to bituminous, semi-anthracite and anthracite proper; all the slags necessary are at hand or accessible by rail (many on the line, others only a short distance therefrom), and labor, if brought in considerable force, should be fairly cheap. Why then should there not be an iron industry? The conditions on the whole are much more favorable than at Pueblo, Col., at which point a large industry of this description has been established, which is growing year by year at a rapid rate.

Petroleum.

There has been considerable local excitement manifested on the east slope of the Rocky Mountains, north of the 49th parallel, respecting this mineral; but development will be required to enable one to estimate the value of the discovery. In this connection it is worthy of consideration whether it is not advisable in the

[PART I]

public interest that petroleum lands should be treated in the same way as coal lands: that is, sold outright at a fixed price per acre. The ordinary regulations requiring on each claim development equalling \$5 per acre per annum does not meet the case. To put down a test hole means an expenditure of several thousand dollars; anything less would be a mere waste of labor and money, and no one will go to that outlay unless a considerable area be secured.

Diamond Drill and Prospecting Company.

It would appear that the time is most opportune for the formation of a diamond

drill company.

This scheme might partake of a double capacity. 1st—The putting down test holes for others at a rate per foot agreed upon. 2nd—When not so engaged, the making of tests by the company on its own account; the recompense in the latter case to be derived from obtaining the first right of purchase should the result of drilling render purchasing desirable.

Natural Gas.

At two points on the Canadian Pacific Railway line, viz., Langevin and Cassils, gas wells have been in existence for nearly six years; the flow has not preceptibly diminished though the wells were piped for water not gas. The probabilities are that if thorough tests were made, combined with correct piping, it would be found that gas exists in sufficient quantity for fuel and lighting purposes. The impetus which the establishment of this fact would give to the progress of the district would be great.

Canadian Agricultural Coal and Colonization Company's Farms.

In January last these farms were all inspected by me, and a detailed report was given of what had been accomplished. Since then there has been no falling off in the energy displayed in the management. Unfortunately the past summer proved very dry and the crops being nearly all on sod and spring ploughing the yield on the whole was a light one, but the result was still good enough to give grounds for strong hopes of future success to the management. In addition to the stock enumerated in my report of January last, some 18,000 sheep, imported from Oregon, were placed on the various farms last fall. In cattle, the output of beef probably counterbalanced the calf crop. In implements, however, there has been a very large increase. The following table shows approximately the area cultivated on each farm during the past season, and also the area intended to be cropped next spring.

	1889	1890
Balgonie	1,440	1,440
Rush Lake	586	1,262
Swift Current	627	1,362
Gull Lake	500	1,212
Crane Lake	565	$1,\!292$
Kincorth	490	1,250
Dunmore	577	1,475
Stair	5 00	1,328
Bantry	266	1,112
Namaka	600	1,591
Langdon	480	1,165
Total	6,631	14,489

Of the anticipated increase about fifty per cent. has been already broken.

Coal Output.

During the past season the two principal points in the North-West Territories at which coal has been mined and shipped are Lethbridge and Anthracite.

24 [PART I]

Lethbridge.—The North Western Coal and Navigation Company has at this point very considerably extended its operations by completing the shaft for hoisting, and making new galleries, levels or drifts, further switches, &c., so that, although the output for the past twelve months may not have increased very considerably over the year preceding, the company is now in a position to increase its output to probably 1,000 tons per diem, and in a short time to double that quantity should the demand increase to that extent. It is anticipated that there will be during next season railway connection to the south giving access to the reduction works at Great Falls, Helena, Butte and Anaconda in Montana, which will afford this company a

large and profitable market for its coal.

Anthracite.—Mining at this point has not until recently been pushed with the energy with which it was formerly conducted, the hesitation being caused by negotiations which have been going on with a view to disposing of this property to a strong English company. These negotiations have not yet been completed, and the present owners have for the past three months been pushing as vigorously as possible new slopes and galleries, so that in a year the output can he worked up to 1,000 tons a day if necessary. In doing this the output of the mine has been greatly reduced temporarily, but in the near future it can be increased. The present proprietors have unlimited faith in this property, and even should the negotiations referred to fail, there is no doubt capital will be forthcoming to work the mine, and, in about one year, to quadruple its previous output. During the past season three new seams have been discovered at Anthracite, two of which, so far as one can judge from their present openings, are from five to seven feet in thickness and of first class quality. The third would appear to be thinner and possibly not of so good quality, but it has not been opened sufficiently for a correct idea to be formed.

Stair.—At Stair, near Medicine Hat, two companies are in existence. The old mine at Stair, originally known as the Woodworth, subsequently the Stair coal mine, has, within the past few months, passed into new hands, and mining and shipping coal has been in progress to some extent. Opposite this mine, on the south bank of the river (South Saskatchewan), a company, known as the Medicine Hat Coal Mining Company, has certain land on which, during the past season, a shaft was sunk to enable mining operations to be carried on. No mining of any appreciable extent has, however, been done, nor can it be done with profit till a branch line of railway, some six miles in length, is constructed, connecting this point with Medicine Hat. The construction of this switch or branch the company states will in the near future

be proceeded with.

Cochrane.—The development or output at the mines here formerly owned by Messrs. Chaffey and Vaughan and also by Mr. T. B. Cochrane, has in the case of the former been nil, in that of the latter not appreciable. A company has been floated in England with, it is reported, a capital of about half a million dollars to purchase and develop the properties of the latter gentleman at Cochrane, which, besides mining property, represent also some lumbering interests. This company has now a mining engineer from England making examinations as to the most economical means of development, and also respecting the establishment of coking furnaces, it being anticipated that next season will see a demand for coke for smelters to the west.

Canmore.—Considerable development has taken place near this point during the past season, and the number of seams which have been brought to light and their dimensions border on the marvellous. One cannot realize it without a personal inspection, and if late reports are reliable the area of the coal basin in the Bow River west of the gap is very much greater than was heretofore supposed. The output has not been extensive; but sufficient explorations have been made to enable the proprietors to acquire a correct estimate of the quality, of the enormous quantity, and also of how to open out the works to the best advantage.

Smelters.

In my last report the establishment of a smelter at *Vancouver*, B.C., was alluded to. As gathered from reports in the press, the first run of ore unfortunately demon[PART 1] 25

strated that a mistake had occurred. This has been followed by litigation, so that the works have heretofore lain idle. It is to be hoped they will shortly be placed in running order and become a source of revenue to the company and of advantage to the community. The mines at Field, B.C., claimed by the same company have also lain idle on account of the smelting operations having ceased.

At Revelstoke smelting works have been commenced; the sampling works in connection therewith are reported as ready to receive ore (in fact it is stated ore is being purchased), and it is expected next spring will see the smelting and reduction

works in operation.

At Golden a company purposes starting next season, at least, a forty-ton smelter, some of the machinery being already purchased. With these in operation mining will no doubt receive an impetus which will require the re-duplication many times over of such establishments. That there is ore in large bodies is undoubted; there are, however, no "poor-man-diggings," nor yet those where the valuable mineral could be obtained by mere stamping, a process which requires the outlay of only a moderate amount of capital. Hence, without the establishment of smelters by corporations with a sufficient amount of capital to construct works on a scale so that ore can be handled and extracted at the minimum of cost and to purchase ores from the individual miner, nothing beyond the merest surface development or prospecting can be accomplished. It may be reasonably anticipated that with a demand for ores a more healthy tone among miners and prospectors will be attained, and the present process of taking up a claim and doing only enough development to conform with the regulations will give place to a vigorous and hearty effort to ascertain by practical experiment on a large scale whether a claim is valuable or the reverse.

I have the honor to be, Sir, Your obedient servant,

WM. PEARCE,

Superintendent of Mines.

No. 3.

DEPARTMENT OF THE INTERIOR. OFFICE OF THE INSPECTOR OF AGENCIES, Winnipeg, 31st October, 1889.

H. H. SMITH, Esq., Commissioner of Dominion Lands, Winnipeg, Man.

SIR,—I have the honor to submit, for the information of the Honorable the Minister of the Interior, the following report upon the general work of my office for the

Departmental year ending this day.

Leaving Winnipeg on the 26th of November, 1888, I inspected the offices at Lethbridge, Calgary and Banff, and on the 9th of December I proceeded to New Westminster. After making an inspection of the Dominion Lands and Crown Timber Agencies at that point, I returned on the 18th of the same month to Calgary to complete some unfinished work. From Calgary I went to Regina, and after inspecting the Land Office there returned to Winnipeg. On the 28th of December I went to Brandon and inspected the Land Office at that place.

The office at Brandon was destroyed by fire on the night of the 13th of February, 1889; and on the following day I went there to secure new premises and

to make arrangements for resuming business.

The fire destroyed the greater portion of the records, but, fortunately, most of the books were saved at considerable personal risk, by Mr. Sutherland, the Assistant The loss of the records caused much inconvenience, but the satisfactory condition in which the books were found permitted the business to be resumed within four days' time. Much credit for such a condition of affairs is due to the energy of Mr. Hiam and his assistants.

On the 18th of February, 1889, I proceeded by rail to Moosomin, and drove from that point to Carlyle to enquire into certain complaints respecting the conduct of the Agent for that district, the result of which visit was, at the time, reported to you. I, at the same time, made an inspection of the Agency, and returned to Winnipeg to

resume charge of your office during your official visit to Ottawa.

On your return to Winnipeg I went to Deloraine and inspected the Agency there. Leaving Winnipeg on the 4th of April, I proceeded to Calgary, making inspections of the Dominion Lands Offices at Brandon and Regina, and the Land and Timber Offices at Calgary.

On the 21st of May, I left Winnipeg for Edmonton, going by rail to Calgary and

thence across country.

At Edmonton inspections of the Land and Timber Offices were made, and upon their completion I went to Battleford by trail. After inspecting the Land Office there, I went on to Prince Albert and made inspections of the Land and Timber Offices for that district, and then proceeded across country to Qu'Appelle Station, reaching Winnipeg early in July.

Throughout this trip much fine land was noticed, and though the season was exceptionally dry, abundance of good water was found up to the time of leaving

Prince Albert.

On the 10th of July I went from Winnipeg, and visited Minnedosa and Birtle, making inspections of the Land Offices at these places. After a stay at the Winnipeg Office. I visited Deloraine and inspected the office.

Early in August I visited Carlyle and inspected the Agency there.

In September I went to Ottawa on business connected with the Agencies, and upon my return to Winnipeg took charge of your office during your absence. PART I

27

On the 4th of October I went to Carlyle to arrange for the transfer of the office from that point to Cannington, and to install Mr. E. C. Phipps, who was appointed

to fill the vacancy caused by the resignation of Mr. McHugh.

On the 22nd of October I went to Deloraine, to ascertain the facts relating to certain charges made against the Land Agent and Homestead Inspector. The charges were discovered to be without foundation, and the person making them could not be found.

Inspections of the several Agencies have, as a rule, shown their affairs to be in a satisfactory condition. Reports of these inspections have from time to time been

made through you for the information of the Honorable the Minister.

I enclose herewith a statement showing the work performed in the several

Agencies during the Departmental year just closed.

When not otherwise engaged, matters pertaining to my duties as a member of the Land Board have fully occupied my time.

I have the honor to be, Sir,

Your obedient servant,

J. M. GORDON.

Inspector of Agencies.

STATEMENT Shewing work performed at the various Dominion Land Agencies, for Year ending 31st October, 1889.

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A. 1890

 $56,510 \cdot 18$ $64,460 \cdot 01$ Total Homesteads. 8488 848 $64,828 \cdot 03$ 8 14,817.23 696,050.05 128,954 :3 112,618 · 4 2,394 · (59,492.4 Acres. 2,709. 46,076. 41,911. 46,000. 12,800. STATEMENT shewing work performed at the various Dominion Land Agencies, for Year ending 31st October, 1889—Continued. 7057 7053 88 48 48 48 48 48 48 48 48 4,416 355±±355 No. 45 48 셠 33 B 7,824.60 Abandoned Preemptions Homesteaded 89,963 26,640 19,993 10,408 .88 1,903 320 3,200 160 431 Acres :28821 8 82 65 565 Żo. 240 320 8 Acres. emptions, 80 acres. 9 No. Homestead and Pre-emption Entries Granted. Re-instatements. 8 320 Homesteads, . Acres. 80 acres. Cancelled Lands Re-entered No. 12,630.16 51 Pre-emptions, 2,078 Acres. 3,040 5,760 4,480 1,440 2,887 76,724 160 640 160 acres. a Including 21 fruit culture entries. 25 -6888 885 482 649 .52 27.2 83 23,745 · 26 29,553.84 62,030 · 41,705 · 320 Homesteads, 160 acres. 320,465 12,275 9,920 7,360 640 21,050 13,446 Acres. 246,831 9 862 147 1,548 88 No. 62 32.82 135,366 · 72 4778 20 8 20,163.84 1,681 53 Pre-emptions. 5,004 15,364 18,672° 17,323° 800 22,907 - 20,731 - 20,480 - 5,681 - 5,681 Acres. Lands not Previously Entered 085848 119 86 36 126 21 298 No. 388 .19 22 848 42 .53 52 8 88 33 31,016 : 51,014 · 40,123°50,919°2 2,074°0 8,212. 27,369 Acres. 358,935 Homesteads. * Entries without fees. 342 35 251 319 13 159 192 155 82 2,300 Mining Locations Recorded. 521 Sold. Wood Lots. Entered 888888 10 8 1,928 581 Hay Permits Issued. | Number of Agency. ~ **8**6 1225 30 PART I

		and.	Homesteads and Pre-emption	ms.				Sales.			.,	f	-	·	•				Free Grants.	nts.	
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Number of	Acres.	No.	Acres.	Entries by	No.	Acres.	No.	Acres.	No.	Acres.	L Š	General.	Hay.	.SainiM	Salaries.	Rent.	Con- tingent.	No.	Acres.	No.	Acres.
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Statement shewing work performed at the various Dominion Land Agencies, for Year ending 31st October, 1889-Concluded.

	Total Receipts.		\$ cts. 1,238 76 45,535 28 5,975 27 2,944 78 25,665 89 25,665 89 25,665 89 3,670 74 3,670 74 4,570 88 45,688 89 45,688 89 45,6
	rice Cancelled	Extra p	59
	ë	Paid at H O.	\$ cts. 164 55 160 00 160 00 720 00 647 42 518 60
	Pre-emption Sales.	Scrip.	\$ cts. 5,173 08 2,833 00 408 001 6,288 00 488 001 5,597 559 5,69 00 1,280 69 6,665 99 45,560 62 7,658 43 13,154 60
	Pre-en	Cash.	\$ cts. \$
		Paid at H. O.	\$ cts. 22,759 03½ 3,952 67 1,8386 02 832 86 1,59 40 1,618 26 37,835 92½ 1,644 44 1,644 44 1,644 44 1,648 27 1,648 27 1,648 27
	General Sales.	Scrip.	\$ cts. \$ cts. \$ cts
ipts.	Gen	Cash.	\$ cts.
Receipts.	Sun- dries.	!	* cts. 38 36 58 36 52 00 b 52 00 c 52 00 c 53 00 c 31 50 c 31 50 c 52 00 c 52 00 c 53 00 c 64 00 c 64 00 c 7 00 00
	Hay Dues.		\$\begin{array}{c c c c c c c c c c c c c c c c c c c
	Mining Fees.		\$6 Cts. 55 25 25 25 25 25 25 25 25 25 25 25 25
	Improve- ments.		\$ cts. 326 00 189 00 170 00 208 00 175 75 4 00 175 75 4 00 175 75 4 00 175 75 4 00 175 75 105 00 105 00 105 00
	Inter- change Fees.		** C C C C C C C C C C C C C C C C C C
	Inspection Fees.		\$ cts. 1,865 00 1,1865 00 1,156 00 1,156 00 1,560 00 1,56
	Pre- emption Fees.		\$ cts. \$ cts. 70 00 10 00 0
	Home- stead Fees.		\$ cts. \$ 8 cts. \$ 6 c

J. M. GORDON,
Inspector of Dominion Lands Agencies.

82

No. 4.

Dominion Lands Office, New Westminster, B.C., 1st December, 1889.

H. H. SMITH, Esq., Commissioner of Dominion Lands, Winnipeg.

SIR,—I have the honor to submit for your information the following report on matters relating to this Agency for the Departmental year ended the 31st day of October last.

Settlement in all parts of the railway belt has been steadily increasing, and nearly all the surveyed available land in the New Westminster district is now entered.

The returns show that a total number of 437 homesteads, covering an area of 65,371½ acres, have been granted; that 53 homestead sales at \$1 per acre, aggregating 7,508·60 acres, have been completed; and 45 general sales, aggregating 6,567·94 acres, have been made. Of this number 31 were made at the rate of \$2.50 per acre, 12 at \$5, and 1 at \$15 per acre. 100 homesteads were cancelled on applications for inspection, and the lands so released regranted to the applicants.

The settlement of the dispute between the Dominion and Province with respect to the cwnership of the Sumass Dyking Reserve has enabled me to investigate the claims of settlers in that locality, the majority of whom have since been granted

entries.

Generally speaking, homesteaders are quite contented, and satisfied with their locations and prospects. Clearing is rapidly progressing in all parts of the Fraser River valley, and this district is now the most prosperous and thickly settled of any in British Columbia. Crops of all kinds have been exceptionally good, and above the average of last year, the rapidly progressing cities of Victoria, Vancouver and New Westmnister affording an increasing and remunerative market for all the farm produce of the Province.

In April last I attended at Golden and investigated a number of claims and granted entries in that locality; and in returning I stopped over at Sicamous, and went up the Spillamacheen River as far as Enderby, investigated a number of claims on the ground, and granted entries for such of them as were within the con-

firmed surveys.

Owing to the peculiar character of the country, the skeleton nature of the surveys, and the way in which settlers in advance of survey have located their claims, there will be considerable difficulty in granting entries in the interior districts, and I am of the opinion that in a large number of cases they will require to be dealt with on the ground. The establishment, however, of an Agency at Kamloops would greatly obviate the difficulty, and save the settlers much loss of time and expense, which they can ill-afford, in coming to and returning from New Westminster.

The development of the mineral resources of the railway belt has not progressed as rapidly as was anticipated. The decision of the Privy Council, giving the Dominion the surface rights and base metals, and the Province the precious metals, has greatly complicated matters; and until a joint modus operandi has been concerted between the two Governments foreign capitalists will be extremely shy of investing

in mining enterprises.

In my last report I mentioned that the smelting and reduction works in course of erection at Vancouver were then nearly completed. These works, I regret to state, are now at a standstill, the result of their first operation being to fuse the smelter

and ore in one solid mass. The company, I understand, intend procuring an expert

trom England before work is again resumed.

At Revelstoke smelting and reduction works are now being erected by the Kootenay, B.C., Smelting and Mining Syndicate, and another company is about to erect similar works at Golden. With these in full operation in the centres of the mining districts, a rapid development of the mineral wealth of the mountains may be expected.

Practically speaking, nothing has yet been done towards developing the large coal areas that exist within the railway belt. Numerous locations in the vicinity of Kamloops, Asheroft, Chilliwhack, Sumass, and Kanaka Creek, have been from time to time applied for, and the usual permission to prospect has been granted to the applicants, none of whom, with the exception of Messrs. Guerin and Laney, at Kamloops, and Messrs. McNicholl and Finney, at Ashcroft, have commenced active work of development, as required by the terms upon which their locations were reserved.

Iron ore is now attracting some attention, and locations convenient to the railway, in the vicinities of Cherry Creek, Lytton and Langley, have been granted to

the discoverers.

The erection of smelting and reduction works and the enquiries now being made for this class of mining property will soon give it an appreciable value, which will bring it more prominently to the notice of prospectors, whose attention has hitherto been almost entirely confined to explorations for the precious metals.

All of which is respectfully submitted.

I have the honor to be, Sir,

Your obedient servant,

H. B. W. AIKMAN,

Agent Dominion Lands, B.C.

No. 5.

TIMBER, MINERAL AND GRAZING LANDS.

DEPARTMENT OF THE INTERIOR, OTTAWA, 27th December, 1889.

A. M. Burgess, Esq.,
Deputy of the Minister of the Interior,
Ottawa.

SIR,—I have the honor to submit the tenth annual report of the Timber, Mineral

and Grazing Lands Office of the Department of the Interior.

Statements showing the revenue, amounting to \$102,732.61, derived from Crown Timber, Mineral and Grazing lands, but exclusive of sales of mineral lands for the Departmental year which ended on the 31st of October last, are appended hereto, together with the reports of the Crown Timber Agents at Winnipeg, Edmonton, Calgary, Prince Albert, and New Westminster, B.C. The above amount includes \$868.14, dues on timber cut on school lands.

The revenue is less than that of last year by \$19,015.28. There was a decrease for timber dues of \$14,781.92, for mining fees of \$47.60, for rent of grazing lands, of \$7,811.12; but an increase for hay dues of \$3,539.98, for stone quarries of \$29.23, and

for royalty on coal of \$56.15.

For the sake of reference and comparison, statements showing, both by Fiscal and Departmental years, the revenue received for timber, mineral and grazing lands, from 1872 up to the 31st of October last, have been prepared, and may be found at

the end of this report.

The total revenue from the Winnipeg office amounted to \$34,809.94, being a decrease of \$10,748.58 as compared with the previous year. Mr. E. F. Stephenson, the Crown Timber Agent at Winnipeg, in his report explains the reasons for this falling off of the revenue of his agency. He also makes suggestions concerning matters of vital importance to the public and this Department, which are worthy of careful consideration.

The price of lumber within the Winnipeg agency varies from \$12.50 to \$40, according to the kind and quality of the lumber. There are twenty mills in opera-

tion within this agency cutting timber under Government license.

The revenue received from the British Columbia Crown Timber Agency during the last year was \$18,044.77, a decrease of \$7,522.74; but \$15,147.61 due the Crown prior to the 31st of October, 1889, have since that date been paid in to the Department. Of the amount collected, the sum of \$4,092.50 has been received for bonuses of berths put up to public competition. The total area so acquired was about $45\frac{3}{100}$ square miles, averaging a bonus of \$90.32 per square mile. The total quantity of lumber manufactured for the year amounted to 23,759,942 feet, B.M., as compared with 24,436,895 feet, B.M., for last year, and sold at the rate of \$9 to \$10 per thousand. There are eleven mills cutting timber within this agency. Their capacity, &c., are shown in Schedule "B" annexed to the agent's report. The McLaren-Ross Lumber Company have lately erected the largest saw-mill in British Columbia, having a capacity of 250,000 feet B.M., in twelve hours.

The total amount of dues collected for timber within the Calgary agency during the year amounted to \$16,811.12, being an increase of \$6,211.73. The total quantity of lumber manufactured was 1,149,248 feet, B.M. The price of lumber at Calgary was from \$12 to \$18, at Cochrane \$12 to \$16, at Fort McLeod \$15 to \$43, at Lethbridge \$30, and Cypress Hills \$13. Six saw mills were cutting lumber within this agency last year under Government license, and several portable mills under permit.

The total amount of dues collected within the Edmonton agency was \$4,041.73, being a decrease of \$2,691.57 as compared with the previous year. The price of lumber at Edmonton during the year was \$20 to \$23 per M. feet B.M., and at St. Albert \$23 to \$25. The agent reports two saw mills in operation within his agency. Two mills were burnt last summer; one is being rebuilt, but it is not the intention to rebuild the other.

The total amount of dues collected within the Prince Albert agency was \$4,093.59, being an increase of \$674.57 over the previous year. Lumber sold at Prince Albert from \$20 to \$42 per thousand, and at Battleford from \$30 to \$35. There is only one saw mill in this agency cutting timber under license, namely, the one at Prince Albert, erected by Messrs. Moore and Macdowall in 1876. There are also several saw mills at Prince Albert and Battleford cutting timber under permit.

Saw mill returns received at the Head Office give the following quantities of building material as having been manufactured and sold during the year within the

five agencies:-

Man	uractureu. Soru.	
Sawn lumber 39,	.849.554 41.071.655	
Shingles 1,		
	682,400 675,098	

Sixty licenses to cut timber over a total area of 2,289.35 square miles were issued during the year. The areas licensed in the Province of Manitoba, the three Provisional Territorial Districts, and on Dominion lands in British Columbia, are as follows:—

•	wines.
Manitoba	$497 \cdot 31$
Alberta	$1,492 \cdot 67$
Assiniboia	
Saskatchewan	$197 \cdot 83$
British Columbia	41.79

The area under license in British Columbia seems small, seeing that the authority of Council has been obtained to issue licenses to cut timber over seventy berths containing, approximately, a total area of 663 square miles. This is caused from the fact that the returns of surveys of the majority of these berths have not yet been filed here. The regulations provide that this must be done before a license issues.

In addition to the 2,247.56 square miles in Manitoba and the North-West Territories under yearly license, an area of 791 square miles is covered by twenty-one year leases, which were issued prior to December 1883. Of this latter area 559 square miles are situated on the shores of Lake Winnipegosis. The leases in question

were acquired at public auction.

The number of applications received during the year to cut timber was 81, of which 45 were for licenses to cut timber in Manitoba and the North-West Territories, and the remainder to cut timber upon Dominion lands in British Columbia. The number of applications during the previous year was 107. Within the past year 11 Orders in Council, which authorized the issue of yearly licenses to applicants to cut timber on lands in Manitoba and the North-West Territories upon their complying with certain conditions, were cancelled for non-compliance. The total area of the berths described in these Orders in Council was, approximately, 506 square miles. The number of berths still under license or authorized to be licensed in the Province and Territories is 149; but it is probable that the Orders in Council which authorized the licensing of some of these berths will soon be cancelled for non-fulfilment of the conditions.

The regulations governing the granting of yearly licenses to cut timber in Manitoba and the North-West Territories, approved by His Excellency the Governor in Council on the 8th of March, 1883, as amended by Orders in Council passed since that date, have been superseded by regulations authorized by Council on the 17th of

36 [PART I]

September, 1889, which regulations also govern the disposal of licenses to cut timber on Dominion lands in the Province of British Columbia, with the exception that the yearly rental of timber berths situated west of Eagle Pass, in the Province of British Columbia, is 5 cents an acre—the same rental that is charged by the Provincial Government—instead of \$5 per square mile, the rent charged for berths in Manitoba and the North-West Territories.

By the same Order in Council the timber permit regulations for Manitoba and the North-West Territories were amended, and were also made applicable to Dominion

lands in British Columbia.

It will thus be seen that the Department has now one set of timber regulations for all Dominion lands, instead of, as formerly, three distinct sets.

Mining Lands other than Coal.

Returns from the Dominion Lands Agents show that during the past year 41 entries were made for mining locations other than coal. The revenue from mining lands other than coal for the year was \$184.15, received in payment for fees for entry, and for registration of assignments. The total area of mining locations sold up to date is 108,086 acres, which realized \$5,406.50.

No amendments have been made to the regulations since October, 1887, with

the exception that the regulations do not now govern the disposition of gold and

silver under Dominion lands in the Province of British Columbia.

Coal Mining Lands.

The number of applications during the year was 125, and 26 of the applicants were given the privilege of purchasing, within a specified time, the location for which they applied, and 43 of the applicants were given permission to prospect thereon. Only two of them bought the land applied for, or a portion thereof, and 4 of the applicants being homesteaders were permitted to mine coal by paying 5 per cent. royalty on coal mined.

The revenue for the year derived from the sale of coal lands was \$1,662.50, being \$73,037.50 less than the previous year. The total area of coal lands sold up to

date is 12,261.63 acres, and the total amount received therefor \$126,171.32.

Ten leases for twenty-one years each were issued in 1882 and 1883, of land within the Souris Coal District, but as the lessees had not complied with the provisions

thereof these leases have been cancelled.

By an Order in Council dated the the 11th of July, 1888, the regulations for the disposal of coal lands in the Province of Manitoba and the North-West Territories were made to govern the disposal of Dominion coal lands in the Railway Belt in British Columbia.

By Order in Council dated the 17th September last, several amendments have been made to the coal mining regulations, and provision has been made for the disposal of coal and other minerals under lands patented, the mining rights of which have been reserved. By the same Order in Council, all patents from the Crown for lands in Manitoba and the North-West Territories shall reserve all mines and minerals which may be found to exist within, upon or under such lands, together with full power to work the same. This is an extension of the Order in Council of the 31st of October, 1887, which made the same provision with respect to lands in Manitoba and the North-West Territories situated west of the Third Meridian.

Grazing Lands.

Several changes and additions have been made to the grazing regulations; the most important addition being that no person shall be allowed to graze stock of any kind on the public domain without the consent of the Minister of the Interior being first obtained, and that the grazing of the same will render them liable to seizure by the Crown and forfeiture by the owner. This provision, I think, will meet the complaint made by some of the lessees of grazing lands that they are paying rent, whilst others who have no leases are paying no rent.

PART I

The total number of leases issued by the Department to date is 195. A number of these leases have been cancelled—27 within the last year. The number of leases now in force is 115, covering a total area of 3,113,878 acres.

The following schedule shows the Names of the Lessees of Grazing Lands, the

Number of their Ranches, and the Areas covered by their Leases:-

No. of Ranche.	Name of Lessee.	Area in Acres.	No. of Ranche.	Name of Lessee.	Area in Acres.
1	North-West Cattle Company	44,000	149	P. Doyle	60,000
2 6	do do Durham Ranche Company	58,960 33,000	152	J. J. Sullivan	$23,000 \\ 2,835$
11	Alexander Begg	320	154	D. McEachran	$\frac{2,833}{16,640}$
15	Alexander Begg		160	J. K. Kerr	42,700
10	Williams	15,000		Ingram & Chambers	1,280
16a 16b	D. McEachran do	16,391 29,383	176	Glengarry Ranche Company McDermid & Ross	$52,320 \\ 36,588$
	Stewart Ranche Company	23,000	185	Herbert Samson	40,000
25	Cochrane Ranche Company	73,500	187	C. A. Bigger	11,000
26 28	do do A. B. Few	38,000 100,000	189	Greely & Wood	$8,960 \\ 38,750$
31	Military Colonization Company	60,131	195	Cypress Cattle Company	13,400
33	G. F. Wachter	7,000	197	W. C. Skrine	7,607
34 35	Cochrane Ranche Company	33,000	201	A. Adzit H. D. & F. E. Beveridge.	1,920
35a	North-West Cattle Company Moore & Martin	55,000 33,700	200	D. Macpherson	$3,675 \\ 18,800$
36	C. W. Martin	59,270	217	W. Carter C. W. Saunders	5,120
38	Alfrey & Brooke	10,000	219	C. W. Saunders	3,040
42 45	Bow River Horse Ranche Company. Wells & Brown	34,788 12,000	220	Medicine Hat Ranche Company	$17,000 \\ 5,972$
48	New Oxley (Canada) Ranche Co	80,000	236	G. W. Quick E. W. Murphy	66,000
55	Winder Ranche Company	50,000	240	W. G. Conrad	32,580
56 57	Bell Brothers.	5,000		W. Tait Curry Brothers	2,560
57 59	Ives & Sharp New Oxley (Canada) Ranche Co	5,000 73,934	240	George Alexander	$11,000 \\ 2,232$
59a	C. W. Martin	26,066	248	A. E. Cross	11,000
62	Brunskill & Geddes	8,606	251	G. L. Broderick	4,000
65 66	Bell & Paterson	6,000 3,840	252	Thynne & HoleGeorge Alexander	$5,120 \\ 2,250$
74	Julius Hyde	100,000	265	Jonathan Henderson	1,280
77	New Oxley (Canada) Ranche Co	100,000	266	Dixon, Gow & Co.	6,560
82 92	Walrond Ranche Company W. G. Conrad	100,000	268	F. W. & J. W. Ings. H. D. Beveridge	7,040
93	Garnett Brothers		287	S. L. Bedson	$16,650 \\ 880$
94	F. W. Godsal. W. F. N. Scobie.	20,000	289	Canadian Pacific Colonization Cor-	
96	W. F. N. Scobie	12,000 27,750	900	poration	44,000
101 104	Alberta Ranche Company	5,280	300	A. Caswell	1,920 $60,000$
107	T. B. H. Cochrane	51,000	308	5 J. C. Slater	320
108	D. McDougall		300	John Stewart	960
111 116	J. Walter Ings N. Boyd	1,920 5,120	307	John Quirk. J. & R. Mitchell	11,000 3,040
119	North-West Land and Grazing Co.			Canadian Pacific Colonization Cor-	3,040
120	M. Oxarart	11,000		poration	11,000
$\frac{122}{123}$	George Alexander	40,800 8,200	310	Joseph Fisher Boright & Parsons	2,500 6,400
123	W. C. Skrine B. M. Godsal	720	313	E. H. Maunsell	4,640
126	W. H. Somerton	9,700	314	1 A E Botterill	2,560
129 130	Rev. J. McDougall	7,680	313	H. T. Morton	640
130	Union Ranching Company	100,000	320	Charles Carey	1,120 1,920
132	J. Ick Evans	66,000	32	James Fidler	1,760
135	D. Macpherson	41,400	323	R. G. Robinson	2,560
137 139	Brown Ranche Company O. C. Gardiner		324	E. Fearon R. Mitchell.	480 2,240
140	J. B. Boustead	88,000	32	7 P. Byrne	480
141	P McLaren	7 500	32	J. Mitchell	1,920
143 145		9,700 100,000		Total	2 119 070
146 146		100,000		L'Octob	3,113,878
	Colonization Company	80,000	1		
38	1		11	1	<u> </u>
ЖX		101	T TO		

These lands are situated principally in the District of Alberta and the southern portion of Assiniboia, with a few tracts in the District of Saskatchewan and the Province of Manitoba.

The number of applications received for leases of grazing lands during the year was only 42. Since April, 1887, the time the Department ceased to grant grazing leases except by public competition, there has been a great falling off in the number

of applications received.

The amount received for rent of grazing lands was \$18,437.71, as compared with \$26,248,83 for the year which ended on the 31st of October, 1888. The revenue from this source has been decreasing rapidly since 1886. In that year it amounted to \$47,337.01; in 1887, \$39,577.10; in 1888, \$26,248.83; and in 1889 as above stated.

The following statement shows the total number of cattle, horses and sheep in what is known at present as the grazing districts of Alberta and Assiniboia, as reported by lessees of ranches, and computed from information derived from other sources :-

boulces.—	a	**	~1	
Lessees	Cattle. 91,822		Sheep. 29,282	
Non-leaseholders	15,141	2,851	15,540	
The following is a statement				ved and
returns examined:-	1	, 11		
Number of letters sent	• • • • • • • • • • • • • • • • • • • •	•••••	3,718	
Number of pages of memory	oranda and schedu	les	864	
Timber:—				
Number of berths applied Number of Orders in Cour	for		97	•
Number of Orders in Coun	ncil authorizing is	sue of license	38	
to cut timber			/ 26	
Number of licenses for tir	nber berths drawi	n up	65	
Number of returns for sa				
Number of returns of su	rveys of timber	berths receive		
and examined	4 4.4° 1	••••••	15	
Number of permits issued	to cut timper	•••••	4,227	
Grazing:—	n amorina landa na	animad	. 42	
Number of applications fo	r grazing lanus re	d to be isome	42 l. 9	
Number of leases of grazi	ng lands authorize	ed to be issued	10	
Number of leases of grazi Number of applications for	ng manus issueu	• • • • • • • • • • • • • • • • • • • •	18	
Number of applications in Number of permits to c	nt hav issued by	the Dominio	10	
Lands Agents	ut nay issued by	one Dominic	2,007	
Mining:—		• • • • • • • • • • • • • • • • • • • •	2,001	
Number of applications fo	r coal locations re	ceived	125	
Number of coal locations	of 320 acres and le	ess. sold	2	
Number of applications	for mineral locati	ions other the	ın _	
coal			19	
Number of entries for mir	ning locations by I	Dominion Land	ls	
Agents			41	
Number of mining location	ons other than coa	l, sold	0	
Number of stone quarries	applied for	****************	11	
Number of mill sites app	$egin{array}{c} egin{array}{c} egin{array}$	•••	3	
Number of applications for	or water power	• • • • • • • • • • • • • • • • • • • •	0	
Number of sites for smelt	ing works applied	for	4	

I have the honor to be, Sir,

Your obedient servant.

G. U. RYLEY,

Clerk of Timber, Mineral and Grazing Lands Office. PART I

STATEMENT of Receipts on account of Crown Timber, for the twelve months ending the 31st October, 1889.

Month.	Bonus.	Ground Rent.	Royalty on Returns of Sales.	Permit Fees and Dues.	Seizures, Dues and Fines for Trespass.	Miscel- laneous.	Totals.
1888.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ ets.
November	2,162 95 142 50	318 32 126 32	1,120 23 3,897 14	1,123 08 2,255 07	182 14 464 25	75 60 7 10	4,982 32 6,892 38
1889.							
January February March April May June July August September October Totals	69 75 2,865 00 175 00 60 00 30 00	1,164 64 6,808 19 348 36 585 34 142 54 1,000 00 403 34 1,287 60 2,475 39 1,649 64	2,784 72 1,063 73 121 29 1,144 32 305 01 952 88 1,311 14 2,478 46 377 34 5,705 67 21,261 93	2,705 60 4,230 81 2,751 16 3,047 81 640 70 3,170 43 818 95 252 37 67 44 4,418 55 25,481 97	989 22 1,017 16 963 68 282 62 273 76 77 83 1,007 83 159 44 38 86 266 90 5,723 69	118 85 10 00 40 00 18 96 3 00 2 70 33 65 309 86	8,880 53 13,623 89 4,184 49 5.169 84 4,245 97 5,376 14 3,544 26 4,240 57 2,989 03 12,074 41 76,203 83
School La	nds						868 14
	Total	• • • • • • • • • • • • • • • • • • • •					\$77,071 97

G. U. RYLEY, Clerk of Timber, Mineral and Grazing Lands.

DEPARTMENT OF THE INTERIOR, OTTAWA, 31st October, 1889. STATEMENT of Receipts on account of Grazing, Hay and Mineral Lands, for the twelve months ending the 31st October, 1889.

Month.	Grazing	Lands.	Hay Lands.	Mining Fees.	Royalty from Coal	Royalty from Stone	Totals.
,	Cash.	Scrip.	,	rees.	Lands.	Quar- ried.	
1888.	\$ cts.	\$ cts.	\$ ets.	\$ ets.	\$ cts.		\$ cts.
December	41 37	1,140 00	249 60	20 00			3,877 26 1,450 97
January February	58 10 452 87 14 52	847 00 160 00 1,480 00	236 40 50 05 50 70	5 00 12 00 23 25	20 00	10 00	1,156 50 694 92 1,572 47
April	87 67 296 20 324 90 99 73	840 63 4,840 00 595 00 1,300 00	86 00 182 95 373 45 1,592 70	5 50	4 70	15 00 10 00	1,019 00 5,324 65 1,308 35 3,002 43
August	148 08 30 63	1,600 00 380 00	2,887 40 767 10 298 35	5 00 51 00 29 00	1 15 35 40	20 98	4,641 63 1,285 11 327 35
Totals	1,635 08	16,802 63	6,909 55	184 15	73 25	55 98	25,660 64

G. U. RYLEY, Clerk of Timber, Mineral and Grazing Lands.

DEPARTMENT OF THE INTERIOR, OTTAWA, 31st October, 1889.

A.—Statement showing Receipts on account of Timber, Grazing, Hay and Mineral Lands, commencing with the Departmental Year 1872-73 and ending the 31st October, 1889.

From 1st November to 31st October	Timber	Grazing Lands.	Lands.			Royalty	Royalty	F	Totals added
each Year.	Dues.	Cash.	Scrip.	nay Dues.	from Coal Lands.	willing rees	Charried.	LOGES	Year to Year.
	s cts.	s cts.	e cts.	e cts.	\$ cts.	e cts.	e cts.	s cts.	sto 🕏 cts.
1872-73	662 05	:	:		:	:	:	662 05	2000
1873-74	2,4,6 24,74,08	:	:			•			3,003 05 5,155 05
1875-76	387 00								5.542 0
1876-77	320 00		:						5,862 05
1877-78	1,820 00								7,682 00
1878-79.	3,388 15		:		:		:::::::::::::::::::::::::::::::::::::::		11,070 %
4 1879-80.	31,339 95								42,410 1E
I8-0-81	44,524 35								86,934 50
L 1881-82.	75,781 26	10,123 60			8 8				172,919 36
1882 83	150,712 27	18,778 83			880 00				343,386 18
11883-84	93,765 86	10,642 50			541 30				448,543 25
1884-85	63,533 84	20,342 74		481 60	150 00	401 00	46 98		533,499 35
1885-86	70,927 70	26,723 72	20,613 29		90 9 +				653,325 33
1886-87	77,871 91	11,528 77	28,048 33						772,805 08
1887-88.	91,538 24	5,988 42	20,260 41		* 17 10				894,237 25
1888-89	76,203 83	1,635 08	16,802 63						996,101 76
Totals	787,269 41	105,763 66	85,724 66	13,995 87	1,781 65	1,265 90	300 61	996,101 76	

B.—Statement showing Receipts on account of Timber, Grazing, Hay and Mineral Lands, commencing with the Fiscal Year 1872-73, and ending the 31st October, 1889.

ļ	Timber	Grazing Lands.	Lands.		Rents and Bonuses	Mining	Royalty	Total	Totals added
Fiscal Year.	Dues.	Cash.	Scrip.	Hay Dues.	from Coal Lands.		Quarried.		Year to Year
	e cts.	es cts.	s cts.	& cts.	e cts.	s cts.	e cts.	e cts.	& cts.
872-73	109 25	:			:		:	109 25	109 2
1873-74	2,710 55						:	2,710 55	2,819 %0
874-75	2,335 25	:						2,000 387 387 387	5,542 0
1876.77	368							320 00	5,862 0
877.78	1.620 00							1,620 00	7,482 0.
	325 00		:		:			325 00	7,807 0
F1879-80	25,121 46							39,098,34	64,926 8
880-81	52,028 10	00 346 6		:				61.038 14	125.994 9
000 000	90,000 11	99.844 43						113,824 80	239,819 7
I 1889 84	147,983 10	11,370 60		23 00	498 90		105 00	159,994 60	309,814 3
884.85	87,474 99	17,089 75		207 25				105,380 37	505,194 7
1885–86	64.820 31	29,562 51		996		257 00		98,798 73	603,993 4
886.87	65,111 74	14,242 77		1.509 40*				120,492 58	724,486 0
2007	94 964 55	5,999,47		2,123 52*				126,264 03	850,750 19
888-89	90,290 00	2,207 69	16,802 63	3,621 10	39 80			113,246 87	963,996 9.
Dorrang to 20th Time 1889	764 491 14	105 485 22			1.745 10	1.180 90	269 63	963,996 97	
Trevenue to som e une, roos	3,544 96	90 73					10 00	6,546 69	970,543 6
Angust 1880	4.240.57	148 08	1,600 00			5 00		8,882 20	979,425 84
eptember 1889	2,989 03	30 63		767 10	35 40	21 00	20 98 86 07	4,274 14	983,700 00
October, 1889	12,074 41	:				29 00		12,401 76	996,101 7
Totals	787.269 41	105.763 66	85.724 66	13.995 87	1,781 65	1,265 90	300 61	996,101 76	

* Scrip Note for \$80.00 included.

A. 1890

WINNIPEG CROWN TIMBER AGENCY.

DEPARTMENT OF THE INTERIOR, CROWN TIMBER OFFICE, WINNIPEG, 31st October, 1889.

A. M. Burgess, Esq.,
Deputy of the Minister of the Interior,
Ottawa.

SIR,—I have the honor to submit my annual report of the business transacted within the Winnipeg District for the year ended this date, to be read in connection with which are the following detailed statements, namely:—

(a.) Statement of revenue derived from timber dues and other sources.

(b.) Statement of saw-mills operated under Government license in Manitoba and the Provisional District of Assiniboia as far west as the 3rd Initial Meridian, together with the quantities of material manufactured, sold and on hand by each lessee, respectively.

(c.) General office returns, and other information respecting the work of the

office.

The year was not a favorable one to those engaged in lumbering in this district. The winter was short and the snowfall light. Instead of four months sleighing, as is usual in Manitoba, there were hardly three; hence the season in which hauling could be done was greatly shortened.

I believe that fully one half of the whole winter's cut was left in the woods or hung up on streams, in consequence of low water. But if the quantity of timber cut and left in the woods, from the causes just mentioned, be taken into consideration, a larger business, by several million feet, was done than in the preceding year.

It will be observed, on reference to schedule B, that the total quantity of lumber manufactured by the mills operating under Government license amounts to 13,826,827 feet, B.M., which, compared with last year, shows a falling off of 3,582,309 feet. It must be remembered, however, that the amount of lumber manufactured for the preceding year included the output at the mills at Rat Portage and Keewatin, while this year the operations there were carried on under the supervision of the Ontario Crown Timber Agent, who collected the revenue derived therefrom.

No pine lumber is now manufactured within this agency, except what is brought down the Red River from the State of Minnesota, of which this season there was about 3,000,000 feet. The only standing pine in my district, excepting Jack pine, is in that part of the district of Keewatin to the north of English River and Lac Seul.

Lumbering here is almost exclusively confined to spruce. Tamarac is the only other available timber to be found in any quantity, and as it rarely exceeds a diameter of 12 inches at the stump, it is found more profitable to make it into ties and piles for railway purposes.

The following is a nearly correct statement of the lumber sold during the year:—

Canadian manufacture, 38,464,454 ft., B.M. United States manufacture, 10,429,017 ft., B.M.

The above shows a large increase in the importation of United States lumber over that of last year. This lumber is manufactured at Duluth and other points in the State of Minnesota, with a view, principally, of supplying the trade in the American territories to the West; but owing to the lightness in the demand, brought about largely by the failure of the grain crops in many districts, notably northern Dakota, the Manitoba market is looked to. Shipping facilities have so improved by the incoming of the Northern Pacific Railway that no difficulty is now experienced in [PART I]

placing this lumber upon the market in competition with that from the mills at Rat Portage and Keewatin.

No timber or other products of the forest have been exported from this agency

to the United States during the year.

The gross revenue of my agency for the year amounts to \$34,809.94, which, compared with last year, shows a decrease of \$10,748.58, accounted for chiefly by the fact that about half of the season's cut of logs were not manufactured, the licensee

only being required to pay royalty dues on the amount of timber sold.

It is regrettable to have to report another year of disastrous bush fires. The country lying to the west and north-west of Lake Winnipegosis, as far as the Saskatchewan River, has been pretty generally burnt over, including the valuable timber on the berths on the Bird-Tail Creek, the western slope of the Riding Mountains, Shell River and Duck Mountain district, Swan and Etoimaini Rivers, and the Porcupine Hills. The quantity of timber in the districts named, as nearly as can be estimated, is upwards of 900,000,000 feet, B.M., of which a large part has been damaged by fire. It is needless to point out to you the almost irreparable loss thus sustained.

Timber that has been fire killed only remains good for manufacture three years at the most. A very important question now is, what is the best policy for the Department to pursue in order to get as large a quantity as possible of this dead timber manufactured into lumber within the time mentioned? The subject, I think, deserves

immediate investigation.

In reference to the destruction of our forests, a question much debated is, how do these fires originate? I may say that I have enquired most carefully into the subject, and believe that, in most cases, fires can be traced to the camps and hunting grounds of Indians, while in but few cases they are started by white settlers. When it is known that Indians are constantly roaming through our northern forests, and that white people are seldom seen there, it is apparent that the former are, in nearly every case, the ones who must be held responsible. Those who are familiar with the habits of the Indians on our northern lakes will bear me out when I say that, of late years, the practice has become common among them of starting these fires as a means of communicating their whereabouts to their friends, the smoke serving as a signal. It is further reported that forests are set on fire for the purpose of driving the game to the open. I would recommend that means be adopted to bring to the minds of these people the disastrous consequences to themselves of the destruction of the woods, and that action be taken to punish those guilty of violation of the law, in which efforts I believe the Department would have the support of the more intelligent Indians.

Little damage has occurred during the past year through prairie fires to the timber on Dominion lands in the settled districts, the settlers having taken greater precautions than in former years to prevent them. Many are still of the opinion that these fires are frequently started by sparks from locomotives; but since coal has been substituted for wood as fuel on the engines, and an improved spark arrester has come into use, I believe fires from this cause are of comparatively rare occurrence.

A question which is suggested by the depletion of our forests by fires, and one that cannot be too earnestly considered by the Government, but which has hitherto received little attention, is that of the cultivation of trees on such a scale as to ensure a supply of timber for the future. Although there is no immediate cause for anxiety in Manitoba on that account, still, in some localities the settlers, having cut away all the timber within easy reach, are now compelled to go as far as two days journey, to the heavy timber belts, for a supply. In such localities the people would be found ready, I think, to co-operate with the Government in furthering any measure that promised relief.

The settlers in the North-West Territories are still less favorably situated as regards their timber supply. The treeless prairie, however rich the soil, has little to attract settlement. This is proved by the fact that, up to the present time, settlers are rarely found beyond the reach of timber. What, then, shall be the

remedy? Tree planting, as a means of earning land patents, has, I believe, whereever it has been tried, proved a failure. It seems to be the general opinion of authorities on this subject that it is one which must be dealt with directly by the Government to insure success.

I would therefore respectfully suggest, as a means of encouraging early settlement on the treeless tracts of prairie lands in the North-West Territories, the laying out, at favorable points, along the line of the Canadian Pacific Railway, say between the towns of Moose Jaw and Calgary, of two or more blocks of about eight square miles each, for the purpose of experimenting in forest tree culture. In a very few years under the supervision of a competent nurseryman, these farms could be planted; and by the selection of quick growing trees, such as the native maple, cottonwood, ash and poplar, in the space of about ten years a supply of timber for fencing and fuel could be obtained from the plantation, as a process of thinning out would be necessary from time to time to give room for the development of the timber that would be preserved until it had obtained its full growth. I am informed by experimenters in tree culture that under ordinarily favorable circumstances the maple and ash will bear seed in five years from the time of seeding. If this be true, I see no reason why the forest should not go on increasing by a natural growth from year to year, protection against the invasion of prairie fires being provided: this, in my mind, being almost the only real difficulty in carrying out such an undertaking. And besides the direct advantage to the country of the success of such an experiment, it would probably encourage the settlers to imitate the Government in tree culture on their own farms.

Fuel is somewhat cheaper than this time last year. At Winnipeg cordwood is selling, in car lots, at \$2.75 and \$4.50 a cord—poplar and spruce, respectively; \$8.75 is asked for American anthracite coal on car, and \$6.75 for native soft coal.

It is estimated that about 18,000 cords of wood and 30,000 tons of coal were sold on the Winnipeg and western markets during the year, of which quantity about

12,000 tons came from the North-West Territories.

In addition to the ordinary duties of this office, I undertook, in compliance with your instructions, the looking after the illegal cutting of hay upon Government lands. The yield of prairie hay this season has been very light, excepting on the low, marshy lands. The total absence of rain in the spring and the continued dry weather during the early summer can be regarded as the cause. Although many settlers were doubtless obliged to drive their stock a long distance in order to secure a supply of hay, still, I believe that in most cases an ample supply was obtained.

I am glad to be able to report a better observance on the part of settlers of the timber regulations, of which the increased number of permits issued and the fewer number of seizures made is evidence, as may be seen on referring to Schedule C; still, the Rangers are taxed to their utmost, and it is largely due to their constant

vigilance that trespasses appear so comparatively few.

A large increase in the routine work of the office over the preceding year will be seen on reference to the same schedule. It is still being performed with the assistance of the Accountant and one other clerk.

I have the honor to be, Sir,
Your obedient servant,
E. F. STEPHENSON,
Crown Timber Agent.

SCHEDULE A.

	Totals.	s cts.	1,409 26 2,647 57	3,867 38 4,808 62 1,457 10 1,689 02 693 03 859 23 2 003 69	2,255 26 460 93 9,809 68	31,960 77 2,849 17	34,809 94
	Hay Illegally Cut.	s cts.	38 60		358 358 861 25 36 39 30 30	675 05	675 05
ber, 1889	Stone Quarries.	s cts.			20 98	20 98	20 98
31st Octo	Coal Mines.	s cts.	8	20 00 4 00	1.15	33 15	33 15
ending 5	Timber School Lands.	s cts.	17 50 82 32	140 144 35 75 37 75 14 15 3 25 25 3 25 25		698 64 169 50	868 14
for year	Refunded Disburse- ments.	ets.	64 00	118 85 10 00 46 00	27 65	262 50	262 50
/innipeg,	Seizures, Dues and Fines for Trespass.	e cts.	182 14 426 77	679 80 931 63 267 75 264 75 158 75 68 43 990 01		4,285 29	4,285 29
Agent, W	Permits.	e cts.	776 30 2,014 56	2,451 05 3,056 46 1,046 90 649 97 518 13 291 83	91 42 44 94 4,213 79	15,880 98	15,880 98
Timber	Royalty.	& cts.	157 19 28 32	362 58 250 74 20 20 83 30 495 72 124 36	793 39 110 28 3,776 02	6,202 10	6,202 10
m Crown	Ground Rent.	sts.	204 13 55 00	80 00 395 00 82 50 570 00	1,000 00 $5 59$ $1,426 92$	3,902 08 194 47	4,096 55
T of Receipts from Crown Timber Agent, Winnipeg, for year ending 31st October, 1889	Bonus.	sto.				2,485 20	2,485 20
STATEMENT Of Rec	Month.	1888.	November December 1889.	January VE February March MApril J. May June	August September October	Collections at Head Office	Totals

E. F. STEPHENSON, Crown Timber Agent.

CROWN TIMBER OFFICE,
WINNIPEG, 31st October, 1889.

PORT OF WINNIPEG.

STATEMENT showing the quantity of Lumber, dressed and rough, entered at the Port of Winnipeg during the Year ended 31st October, 1889.

Description of Goods.	Unit of Quantity.	Quantity.
Lumber, dressed, pine do oak. Sash. Doors. Lumber, rough, pine do oak do basswood do cherry.	Feet. Number. Feet. " " " " Number. M.	4,852,587 4,500 33,030 12,752 5,236,175 271,600 27,165 19,000 1,000 16,990 18,215 26,962 2,263

I hereby certify this statement to be approximately correct.

THOS. SCOTT, Collector.

Custom House, Winnipeg, 14th December, 1889.

Schedule "B," showing the number of Saw Mills in the Province of Manitoba and the Provisional District of Assiniboia operating under Government license, for the Year ending 31st October, 1889.

Name of Owner or Owner and Assignee.	Where Situated.	Kind of Power.	Horse Power.	Capacity per 12 hours.	Commenced operations.	, Location of Limits.	Description of Timber.	Quantity of Lumber manufactured during Year ending 31st Oc- tober, 1889.	Quantity of Lumber sold from amount on hand 31st October, 1888, and manufactured to 31st October, 1889.	Quantity of Lumber on hand, 31st October, 1889.	Quantity of Shingles manufactured during Year ending 31st Oc- tober, 1889.	Quantity of Shingles sold from amount on hand 31st October, 1888, and manufactured to 31st October, 1889.	Quantity of Shingles on hand, 31st October, 1889.	Quantity of Lath manu- factured during year ending 31st October, 1889.	Quantity of Lath sold from amount on hand 31st October, 1888, and manufactured to 31st October, 1889.	Quantity of Lath on hand 31st October, 1889.	Remarks.
Brouse & Co., C. A	Bad Throat River	Water	20	Feet.	1879	Bad Throat River.	Spruce and tamarac	Ft B.M. 580,284	Ft.B.M. 580,284	Ft.B.M.	No. 10,000	No.	No.	27,000	27,000		
Brown, Rutherford & Co	Fisher Bay Millwood Minnedosa.	do do Water	30 75 25	10,000 30,000 6,000	1884 1885 1878 1881	Fisher Bay Little Boggy Creek. Riding Mountain. Lake of the Woods	do do do Red and white pine	2,401,582 94,034	3,851,582 445,033 146,529	500,000 448,164 43,631		112,250	57,250		38,750	116,000	See foot note.
Imperial Bank of Canada	Minnedosa	Steam	150 75 50	15,000	1883	Ebb and Flow Lake, Lake Winnipeg Riding Mountain	Spruce and tamarac do	795,759	713,560 84,149	334,508					43,028	3	34,561 railway ties sold.
*Keewatin Lumbering & Manf. Co Likely, John		do Water Steam	200 25	12,000 12,000 8,000	1880 1884	Bad Throat River. Islands, Lake of the Woods. Bear Creek, Winnipeg River.	Red and white pine	144,000	144,000					.}			301 ship knees on hand. See foot note.
Miller & Patton. Morton, George. McArthur, Peter. McFadyen, David North-West Timber Co.	Bird Tail Creek	do do do	50 40 20 16	20,000 12,000 6,000 3,000	1882 1885	Riding Mountain Turtle Mountain Basket Creek Riding Mountain	Oak and poplar Spruce and tamarac	. 800,000	49,584 229,682	613,703		18 000					3.403 r'v ties sold (all out under nermit)
)		35	12,000	1884	Humbug Bay, Lake Winnipeg	do	251,553	413,140							.	Lumber manufactured from logs purchased by T. Cochrane at sheriff's sale. See foot note.
Selkirk Lumber Co	Rat Portage Whitemouth Fisher River Turtle Mountain	do do	35 75	10,000 30,000 7,000	1880	Whitemouth River	Spruce and tamarac	. 2,747,072	2,747,072 1,692,613								Cut under permit. License cancelled.
Sprague, Daniel	Winnipeg. Balmoral Strathclair	do do	75 16	30,000 3,000 6,000	1 1884	Turtle Mountain Roseau River Township 17, Range 2 E. Riding Mountain	Spruce and poplar	.1 47,011	50,678 47,611	289,967							
							Grand Totals	13,826,827	14,744,454	3,699,277	695,000	1,112,250	942,250	·		-	.{

E. F. STEPHENSON,

Crown Timber Agent.

^{*} Now operating under supervision of the Ontario Government { Dick & Banning. Keewatin Lumbering and Manufacturing Co. (Limited). Rainy Lake Lumber Company.

SCHEDULE C.

GENERAL OFFICE Return for the Twelve Months ending 31st October, 1889.

Description of Return.	Number.	Compared with Last Year.		
Description of Relation	Trumber.	Increase.	Decrease.	
Number of letters written do do received do permits issued homesteaders free do do subject to dues do seizures made do mill returns received and verified	5,922 2,315 774 2,868 441 35	952 254 72 1,500	1,049 10	

E. F. STEPHENSON, Crown Timber Agent.

CROWN TIMBER OFFICE, WINNIPEG, 31st October, 1889.

EDMONTON CROWN TIMBER AGENCY.

DEPARTMENT OF THE INTERIOR, CROWN TIMBER OFFICE, EDMONTON, 2nd November, 1889.

Sir,—I have the honor to enclose annual statements for the year ending 31st ult., showing an increase as compared with last year of 37 permits granted; also an increase of 57 letters received and 66 sent. The amount received under the head "Returns under Lease" also shows an increase of \$174.84.

The quantity of sawn lumber shows a decrease, owing to the fires that have been burning since early spring which have destroyed large quantities of timber, and which also destroyed two saw-mills. One has since been rebuilt, the other,

owned by the Mission, will not be rebuilt.

This country has suffered severely from fires since early spring, and they are still in the peat smouldering, and will continue until we have heavy snow. I used every possible means to find the origin, but without avail. We are not alone in regard to these fires; they extend over the mountains, and have been more destructive across the international boundary.

Our crops are light, but of an excellent quality, when it is taken into account that last winter we had no snow, and only two or three showers of rain since. It

speaks volumes for the fertility of this district.

Different parties from Ontario, Dakota, &c., have visited this part during the summer, some of them brought here by the Edmonton Board of Trade. They have all left favorably impressed with the country. Some, before leaving, secured homesteads; others intend returning with their families and friends.

The Deputy Minister visited Edmonton this fall, and settled some long standing disputes to the satisfaction of all concerned, and has left behind him the good opi-

nion of all he came in contact with.

The whole respectfully submitted.

I have the honor to be, Sir,

Your obedient servant,

THOS. ANDERSON,

Crown Timber Agent.

H. H. SMITH, Esq., Commissioner of Dominion Lands, Winnipeg, Man.

14--51*

4,064 65 22 92 2 35 83 266848848684 33 450 524 524 106 325 1,027 391 891 4,041 35 26 26 7 40 Totals. Crown Timber Agent. STATEMENT of Receipts on account of Crown Timber, for the Twelve Months ending the 31st October, 1889. cts. 88 :8 :6 1,598 70 Total Collected at Head Office. 88. 80. 250 ANDERSON 29 60 cts. 2824824833 2,411 25 88 Total Collected Edmonton. 95 136 **9**9 Add \$54.70 collected prior to the 31st October, 1888, and received at Head Office subsequent to that date...... Dadue: \$22.92 collected prior to 31st October, 1889, but not received at Head Office until after that date...... cts. 909 8 :8 ೭೪ 8 Miscel-laneous. :01.00 \Box ģ Seizures, Dues and Fines for 3223 82 8 27 27 Trespass. **488** 121 121 88833883388 48 14 :8 Permits. SCHEDULE A. 88668994168 :હ્રું 88 33 33 :**\$**8 99 84 84 8 Royalty. 491 112 1,187 50 50 165 1,187 108 20 cts. 88 9 38 40 :8 Ground Rent. 88 88 1,877145 627 550 Total. cts. 8 8 Bonus. EDMONTON, 31st October, 1889. November..... Amounts collected at Head Office... CROWN TIMBER OFFICE, Month. 688 April May March June PART I

58

SCHEDULE
Showing the Saw Mills in the Edmonton Crown Timber Agency, operating

Name of Owner or Owner and Assignee.	Where Situated.	Kind of Power.	Horse Power.	Capacity per 12 hours.	Commenced operations.	Description of Timber.
				Feet.		
Moore & Macdowall	White Mud	Steam	40	10,000	1885	Spruce
Fraser & Co	Edmonton	Steam	30	10,000	1880	Spruce
Lamoureux Bros	Stony Plain	Steam	20	5,000	1883	Spruce
*St. Albert Mission	St. Albert	Water	20	5,000	1883	Spruce
Totals						

^{*}Mill burned down. Not rebuilt.

Crown Timber Office, Edmonton, 31st October, 1889.

B. under Government License, during the Year ending 31st October, 1889.

Logs Cut at	Quantity of Lumbermanu- factured during the Year ending the 31st October, 1889.	Quantity of Lumber sold during the Year ending the 31st October, 1889.	Quantity of Shingles manufactured during the Year ending the 31st October, 1889.	Quantity of Shingles sold during the Year ending the 31st October, 1889.	Quantity of Laths manufactured during the Year ending the 31st October, 1889.	Quantity of Laths sold during the Year ending the 31st October, 1889.
	Ft., B. M.	Ft., B. M.	No.	No.	1	
White Mud, North Saskatchewan	404,212	493,987	229,000	133,000	178,300	18,600
North Saskatchewan River	572,096	273,503	262,000	231,500	7,500	7,500
Stony Plain	97,229	313,561	378,500	373,500	76,500	89,500
Near Egg Lake	40,000	4,744	9,000	98,500		
	1,113,537	1,085,795	878,500	836,500	262,300	115,600

THOS. ANDERSON, Crown Timber Agent.

SCHEDULE C.

GENERAL OFFICE Return for Twelve Months ending 31st October, 1889.

Description of Return.	Number.	Compared w	Remarks.	
Discription of Results.	rumber.	Increase.	Decrease.	Temai ks.
Number of letters written	649 267 90 4 14	66 57 37	28	

THOS. ANDERSON, Crown Timber Agent.

CROWN TIMBER OFFICE, EDMONTON, 31st October, 1889.

CALGARY CROWN TIMBER AGENCY.

DEPARTMENT OF THE INTERIOR, CROWN TIMBER OFFICE, CALGARY, 5th December, 1889.

Sir,—I have the honor to submit my annual report of the business transacted within this agency for the year ended the 31st October, 1889, viz.:—
Schedule "A." Statement showing the revenue derived from timber dues.
Schedule "B." Number of saw-mills operating under Government license in the

District of Alberta and part of Assiniboia.

Schedule "C." General office returns and other information respecting the work of this office.

I have the honor to be, Sir,

Your obedient servant,

C. L. GOUIN.

Crown Timber Agent.

H. H. SMITH, Esq., Commissioner of Dominion Lands. Winnipeg, Man.

SCHEDULE A.

1889.
October,
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Twelve
for the
Timber,
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STATEMEN

	tal cted Totals. lead	\$ cts. \$ cts. 25 00 278 44 188 12 3,597 70	250 00 2,245 84 678 58 6,615 70 10 86 558 70 25 00 2,434 70 102 19 7 31 27 76 669 89 166 66 168 91	10,644 22 16,787 03	44 05	16,831 08 19 96	16 211 19
,	al Total collected at Head Office.	cts. 44 58 3,4	25, 25, 25, 25, 25, 25, 25, 25, 25, 25,	6,142 81 10,6			
	Total collected at Calgary.	cts. \$ 253	995 995 102 96 102 102 103 103 103 103 104 104 107 107 107 107 107 107 107 107 107 107	9 : 9	date	nat date	
0	Miscella neous.	cts. \$	20.000.000.000.000.000.000.000.000.000.	43 24	nent to that	until after tl	
	Seizures, Dues, and Fines for Trespass.	£	140 92 274 60 6 52 58 97 141 94	660 . 27	ffice subsequ	Нем Отсе	
	Permits.	\$ cts. 12 25 67 00	2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2	2,473 94	d at Head O	received at 1	
,	Royalty.	\$ cts. 241 19	635 12 640 82 15 84 279 67 7 06 15 01 479 70	2,322 12 4,488 12 6,810 24	3, and receive	1889, but not	Total
	Ground Rent.	ee cts.	250 00 250 00 12 26	512 26 6,089 10 6,601 36	Oetober, 188	1st October,	
	Bonus,	\$ cts.	150 00	150 00 40 00 190 00	05 collected prior to 31st October, 1888, and received at Head Office subsequent to that date.	\$19.96 collected prior to 31st October, 1889, but not received at Head Office until after that date	
	Month.	November December	January February March April May Lu June June August September	Amounts collected at Head Office	ADD—\$44.05 collected	DEDUCT—\$19.96 collec	

Memo.—During the year the sum of \$4.70 was collected for Royalty on Coal Mines.

CROWN TIMBER OFFICE, CALGARY, 31st October, 1889.

Crown Timber Agen

SCHEDULE Showing the Saw Mills in the Calgary Crown Timber Agency, operating

Name of Owner or Owner and Assignee.	Where Situated.	Horse Power.	Kind of Power.	Capacity per 12 hours.	Commenced operations.	Description of Timber.
				Feet.		
Peter McLaren	Mill Creek	20	Water	5,000	1882	Spruce, red fir and pine.
Peter McLaren	Fort McLeod	25	Steam	10,000	1888	Spruce, fir and pine
aJames Walker	Kananaskis	60	do	15,000	1887	Spruce, pine & cypress
bCalgary Lumber Company	Cochrane	75	do	20,000	1885	Spruce and fir
Eau Claire & Bow River Lumber Company	Calgary	75	do	25,000	1887	Fir, spruce and Douglas
Louis Sands	Cypress Hills	30	do	18,000		Pine and spruce
cNorth-Western Coal & Navigation Company	Lethbridge	20	do	5,000	1885	Spruce
dD. Morrison	Sheep Creek					
eAlberta Lumber Company	Red Deer	ļ				
Totals					ļ	

aLast return received 31st October, 1888. bLast return received 30th June, 1888. cMill closed in August, 1888. dDid not saw this season. cNot operating as yet.

CROWN TIMBER OFFICE, CALGARY, 31st October, 1889.

B., under Government License during the Year ending the 31st October, 1889.

Logs Cut at	Quantity of Lumber manufactured during the Year ending the 31st October, 1889.	Quantity of Lumber sold during the Year ending the 31st October, 1889.	Quantity of Shingles manufactured during the Year ending the 31st October, 1889.	Quantity of Shingles sold during the Year ending the 31st October, 1889.	Quantity of Laths manufactured during the Year ending the 31st October, 1889.	Quantity of Laths sold during the Year ending 31st October, 1889.
	Ft., B. M.	Ft., B. M.	No.	No.	No.	No.
Mill Creek		72,884		33,500	3,200	3,200
South Fork of Old Man River	24,248	221,813	48,250	159,750		300
Bow River		! 		• • • • • • • • •		
Cochrane		:			·	
Calgary	1,125,000	909,626			352,000	347,000
Cypress Hills		86,907		107,750		
South Fork of Old Man River				• • • • • • • • • • • • • • • • • • • •		
• • • • • • • • • • • • • • • • • • • •						
•••••						
	1,149,248	1,291,230	48,250	301,000	355,200	350,500

C. L. GOUIN, Crown Timber Agent.

SCHEDULE C.

GENERAL OFFICE Return for the Twelve Months ending 31st October, 1889.

Description of Return.	Amounts.	Com- with Prev	pared ious Year.	Remarks.
		Increase.	Decrease.	
Number of letters received do written Notices sent Free permits issued Due do Seizures made Mill returns received Leases cancelled	470 262 34 7 12	194 105 367 154 16 6		

C. L. GOUIN, Crown Timber Agent

Crown Timber Office, Calgary, 31st October, 1889.

PRINCE ALBERT CROWN TIMBER AGENCY.

CROWN TIMBER OFFICE, PRINCE ALBERT, 26th November, 1889.

A. M. Burgess, Esq.,
Deputy of the Minister of the Interior,
Ottawa.

SIR,—I have the honor to submit for your information the following report of the business transacted by this office for the Departmental year which ended on the 31st October last, including:

Schedule (A). Statement showing revenue derived from timber dues.

Schedule (B). Number of saw mills operating under Government license in the District of Saskatchewan.

Schedule (C). General office returns, and other information respecting the work of this office.

I have the honor to be, Sir,
Your obedient servant.

JOHN McTAGGART,

Crown Timber Agent.

SCHEDULE A.

STATEMENT of Receipts on account of Crown Timber, for the Year ending the 31st October, 1889.

Month.	Bonus.	Ground Rent.	Permits.	Seizures, Dues and Fines. for Trespass.	Total collected at Prince Albert.	Total collected at Head Office.	Totals.
1888.	\$ cts	ets.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts
November	•		141 65)	149 65	\$ 000.	149 65
December			8 00* 124 01 160 60*	\{\bar{\}}	284 61	10 00	294 61
1889.							
January			58 84]	67 44		67 44
February			8 60* 51 60	15	53 10	20 00	73 10
March			1 50* 51 26	ή	59 01	375 00	434 01
April			7 75* 233 19	lí	281 39		281 39
May			48 20* 49 58	9 40	151 01		151 01
June			92 03* 51 05	8 00	60 05	54 50	114 55
July			1 00* 102 20	1 4 00	109 40		109 40
August			3 20* 104 91	lή	109 81		109 81
September			4 90* 148 00*		148 00	2,269 54	2,417 54
October			1 00 228 25*	}	229 25		229 25
A			1,681 32	21 40	1,702 72	2,729 04	4,431 76
Amounts collected at Head Office	30 00	2,269 54	54 50	375 00		}	
Totals	30 00	2,269 54	1,735 82	396 40			
				er, 1888, and			15 03
T) 1			. 01 . 0 . 1	1000 1 :			4,446 79
				er, 1889, but r			353 20
		M-4-1				ļ-	4,093 59

Note.—Dues collected at Battleford shown thus * $\,\,$

JOHN McTAGGART, Crown Timber Agent.

Crown Timber Office, Prince Albert, 31st October, 1889.

SCHEDULE B.

SHOWING the Saw Mills in the Prince Albert Crown Timber Agency, operating under Government Liceuse, during the Year ending the 31st October, 1889.

Quantity of Laths sold during the Year ending the 31st October, 1889.			44,500
Quantity of Laths manu- factured during the Year, ending the 31st October, 1889.			Nii.
Quantity of Shingles sold during the Year ending the 31st October, 1889.		M.	155
Quantity of Shingles manu- factured during the Year ending the 31st October, 1889.		M. ,	Nil.
Quantity of Lumber sold during the Year ending the 31st October, 1889.		Ft., B. M.	190,214
Quantity of Lumber manu- factured during the Year, ending the 31st October, 1889,		Ft., B. M. Ft., B. M.	
Logs Cut at	٠.		7:
Description of Timber.			76 Spruce, pine and poplar
Commenced operations.			9281
Capacity per 12 hours.		Feet.	35,000
Horse Power.			75
Kind of Power.			Steam
Where Situated.		Daines Albont	N.W.T.
Name of Owner or Owner and Assignee.		J. Moodoon	T.M.N.

JOHN McTAGGART, Crown Timber Agent.

CROWN TIMBER OFFICE, PRINCE ALBERT, 19th November, 1889

SCHEDULE C.

GENERAL OFFICE Return for the Twelve Months ending 31st October, 1889.

	Description of Return.	Number.	Compared w	
			Increase.	Decrease.
Number o do do do do do do	of letters written do received	386 291 169 3 5 27		81 92 46 2 1 17

JOHN McTAGGART, Crown Timber Agent.

CROWN TIMBER OFFICE,
PRINCE ALBERT, 19th November, 1889.

BRITISH COLUMBIA CROWN TIMBER AGENCY.

DEPARTMENT OF THE INTERIOR, CROWN TIMBER OFFICE, NEW WESTMINSTER, B.C., 26th Dec., 1889.

A. M. Burgess, Esq.,
Deputy of the Minister of the Interior,
Ottawa.

Sir,—I have the honor to submit my annual statement of timber matters in this Province for the Departmental year ending 31st October, to which are attached the following:—

A.- Statement showing the revenue from all sources.

B.—Statement of saw-mills in operation, the logs to supply which are derived

from both Dominion and Local Government lands.

In the statement I had the honor to submit to you on the 31st October of last year, I stated that enquiries had been made by both Eastern Canadian and American lumbermen, with the view of establishing extensive mills in the Province. I am now pleased to be able to state that as a result of these enquiries James McLaren, Esq., of Ottawa, and the Ross family, of Quebec, have erected on the Fraser River near this city, the largest mill in the Province, being 450 feet by 75 feet, with a cutting capacity of 250,000 feet B.M. per diem. This has stimulated Canadian and American capitalists, many of whom have their advance guards looking after limit and mill sites.

In my last report I mentioned that our Douglas pine and cedar, both of which are acknowledged by experts to be superior to anything found on this continent, have already found sale at remunerative prices in the markets of China, Japan, the Australian Colonies, and South American States. I am now enabled to say that since that time several cargoes of these woods have been shipped to Great Britain, by way of the Horn, and notwithstanding an excessive rate of freight, found ready sale at prices which warranted further shipments. We have, therefore, every reason to look forward, at a very early day, to an immense expansion of the lumber trade of the Province, the timber of the Rocky, Selkirk, and Gold Ranges of the Rocky Mountains finding their way to our great North-West prairies, the wheat fields of the world; while the lumber manufactured from the timber growing nearer the coast will chiefly go to the other markets mentioned above.

The total amount of timber dues for the Departmental year ending 31st October,

1889, amounted to \$33,192.38.

being an increase of \$7,624.87 over the previous year. I have therefore every reason to anticipate, considering the unprecedented development and ever increasing value of the lands in the 40-mile belt, a revenue for the present year of at least \$50,000.

I have the honor to remain, Sir,
Your obedient servant,
T. S. HIGGINSON,
Dominion Crown Timber Agent for British Columbia.

99 STATEMENT Of Receipts	SCHEDULE A. sceipts on account of Crown Timber, for the Twelve Months ending the 31st October, 1889	of Crown	SCHEDULE A. Timber, for the I	LE A. r the Twelv	ve Months	ending the	31st Octob	er, 1889.	
Month.		Dues on Timber Cut under License.	Bonus.	Ground Rent.	Permits.	Seizures, Dues and Fines for Trespass.	Total collected at New Westminster.	Amounts collected at Head Office.	Totals.
1888.		ee cts.	& cts.	es cts.	s cts.	es cts.	& cts.	e cts.	& cts.
November December		537 60 380 70		13 72	162 25		699 85 394 42	89 19 57 60	789 04 452 02
1889.	,								
January February March March May June June July A July Cotober Amounts collected at Head Office.		491 16 240 98 282 25 28 25 725 05 305 01 450 10 680 29 1,680 29 1,778 53 7,034 80	4,092 50	36 40 33 60 13 72 1,367 39 1,464 83	834 85 1,596 83 2,625 41 5,219 34 5,219 34	168 50 17 50 12 00 35 30 233 30	659 66 1,093 33 1,694 08 7,254 08 376 71 3,075 51 680 29 1,030 66 1,722 28 12,584 88	1,179 64 755 61 5 00 2,633 25 175 00 320 40 320 40 5,459 89	1,839 30 1,848 94 1,639 08 3,025 05 3,250 51 1,128 27 1,128 27 3,00 68 2,001 25
Grand Total		:							18,044 77

T. S. HIGGINSON, Crown Timber Agent.

CROWN TIMBER OFFICE, NEW WESTMINSTER, B.C., 31st October, 1889.

SCHEDULE B.

16		1									1
ring tl	Quantity of Lumber sold during the Year ending 31st October, 1889.	Ft., B.M.	13,130,841	2,514,767	1,392,078	1,862,496		3,606,150	1,253,610		23,759,942
Lands, du	Quantity of Lumber manufactured dur- ing the Year end- ing 31st October, 1889.	Ft., B.M.	13,130,841	2,514,767	1,392,078	1,862,496		3,606,150	1,253,610	:	23,759,942
Oominion	ut at		nster	:			nster	:	:	:	
mber on I	Logs Cut at		Vew Westmi	op	Wapta River	Beaver River	New Westminster.	op	op	qo	
ng Ti	.:		edar.	- :	:	-=-	:	:	·	:	$\frac{\cdot}{ \cdot }$
B.C., cutti :, 1889.	Description of Timber.		spruce and c	op	op	op	op	do	op	op	
stminster, 1st October	Descriptio		75,000 Douglas pine, spruce and cedar. New Westminster	op	qo	op	qo	qo	op	qo	
r, New We nding the	Capacity Per 12 hours.	Feet.	75,000	40,000	25,000	25,000	20,000	15,000	15,000	250,000	
Agency Year e	Kind of Power.		n	op		op	Water	п п			
er.	XH.		Stean	qo	qo	do	Wate	Stear	qo	ф	
own Timber			tminster Stean	:	:	:	Wate	ody			
the Crown Timber	Where Situated. I		New Westminster Stean	op	alliser	eaver	Popeum Wate	Port MoodyStean	Ladners do		
SHOWING the Saw Mills in the Crown Timber Agency, New Westminster, B.C., cutting Timber on Dominion Lands, during the Year ending the 31st October, 1889.			Royal City Planing Mills Co New Westminster Steam	op	. Wells) Palliser	eaver	Popeum	:		MacLaren Ross Lumber Co New Westminster do	Totals.

T. S. HIGGINSON, Crown Timber Agent.

CROWN TIMBER OFFICE,
NEW WESTMISTER, B.C., 31st October, 1889.

No. 6.

ORDNANCE AND ADMIRALTY LANDS.

DEPARTMENT OF THE INTERIOR,
ORDNANCE AND ADMIRALTY LANDS BRANCH,
OTTAWA, 12th December, 1889.

A. M. Burgess, Esq.,
Deputy of the Minister of the Interior,
Ottawa.

Sin,—I have the honor to submit a report of the transactions in connection with the Ordnance and Admiralty Lands Branch of the Department of the Interior for the fiscal year ended the 30th June, 1889.

The schedules annexed, marked respectively A, B and C, show the receipts for the

year to be considerably in excess of those of the year ended 30th June, 1888.

(A.) Statement of Sales.

The following properties have been disposed of during the year :-

(1.) The "Feeder Farm" being part of Lot No. 9 in the 1st or front range of the township of Chatham, P.Q., comprising an area of 90 acres, was sold by public auction for \$1,368 (at the rate of \$15.20 per acre).

(2.) At Edmundston, in the County of Madawaska, N.B., sub-lots Nos. 28 and

29, area 3 roods and 2 perches, were sold for \$75.00.

(3.) At Fort Erie 6 acres of land, forming part of Garrison Reserve, were sold in accordance with an Order in Council, to Mr. W. A. Wood, whose family had occupied and improved the property during a period of thirty-six years. The price paid was \$120 (or \$20 per acre).

(4.) Certain water lots at Fort Erie, situated in front of lots Nos. 2, 3 and 4, in the 1st Concession of the Township of Bertie, comprising 2,850 lineal feet, were, in pursuance of an Order in Council, sold to the Erie and Niagara Railway Company, who had been in continuous possession of the lots since the year 1864, for the sum of

\$4,000 (in addition to the payment of \$4,000 on account of interest).

(5.) At Temiscouata, the property known as "Fort Ingall," consisting of 11 acres of land and sundry dilapidated buildings, was sold by public auction for \$200. For some years prior to the date of the sale it was considered necessary to employ a caretaker, who resided on the premises, and was paid at the rate of \$91 per annum. By the disposal of this property a saving of the amount mentioned has been effected.

(6.) The premises known as the "Old Military Hospital" at Hochelaga with 2a. 1r. 19½p. of land in connection therewith, was sold by authority of an Order in Council to the Government of the Province of Quebec, for the sum of \$11,641.23. As in the case of Temiscouata, the sale of this property has rendered the services of a caretaker no longer necessary. The salary paid to the caretaker for a number of years past has been at the rate of \$182.50 per annum, to which extent a further saving as been effected.

(7.) At Sorel, lot No. 189, in concession of Rhimbeault, 12 arpents and 15 perches,

was sold for \$24.30.

68

(8.) In the city of Ottawa 12 ordinary town lots and one-half of a lot have, by the payment of \$2,284.82, made by the respective lessees, been converted into freehold, in accordance with the terms and conditions contained in the original leases, granted by the principal officers of Her Majesty's Ordnance.

(B) Statement showing the several localities of Ordnance properties on account

of which moneys have been received.

[PART I]

(C.) Statement of amounts received (monthly) during the fiscal year. The total receipts were, \$42,072.07, being \$5,783.59 in excess of the receipts of the previous year.

In the month of May last a survey and sub-division of a part of the "Logan's Farm" property lying south of Sherbroke street and extending from the west side of Papineau road to the west side of Beaudry street, in the city of Montreal, was made by Mr. Joseph Rielle, P.L.S., under instructions from this Department, and was laid off into 132 ordinary building lots, having, with a few exceptions, a uniform frontage of 25 feet, by a depth varying from 92 to 121 feet. On the 27th June 97 of these lots were sold by public auction at the rooms of Mr. W. H. Arnton, auctioneer, 1747 Notre Dame street, Montreal, and realized good prices; but as the return of the sale could not be made until after the close of the fiscal year, the receipts on account thereof

will be included in the monetary transactions of the current year.

The lease of the Government farm at Longueuil, at present held by Mr. Michael Carmel, will expire on the 1st of May next, and its future disposition will be a matter for the consideration of the Honorable the Minister of the Interior. I have long entertained an opinion that if this property, which comprises an area of about 190 acres, were surveyed and laid off into villa or ordinary building lots, and the same were offered for sale by public auction, upon the usual easy terms as to payment, a sum would be realized sufficiently large to produce, say at 6 per cent. an annual income of at least four times the amount, viz., \$525.00 now paid as rent by Mr. Carmel, and which has been subject to several abatements on account of damages sustained by

him during the prevalance of the serious floods of 1886-87.

The Ordnance property known as "The Common," at Chambly Canton, which has been laid off into 20 building lots, varying in size, has remained vacant for several years. The depressed state of business which has existed for a long time in Chambly has rendered the sale of this property for anything like a sum approaching its real value quite hopeless. The land is eligibly situated, and if fenced in, planted with trees and properly levelled and turfed, might be made a very attractive spot, and could be used when required as a camping and parade ground for the volunteers. Situated as it is, in the immediate vicinity of the picturesque ruins of the old French Fort "Pontchartrain," it would be a subject of regret if it became disfigured by the erection thereon of unsightly and inferior buildings. The custody of this "Common" should, in my opinion, be placed in the Department of Militia and Defence, by whom the suggestions I have ventured to make might be considered worthy of consideration.

With reference to the contemplated leasing of the valuable water power and the premises known as the "Old French Fort" attached thereto, situate at Coteau du Lac, it was considered advisable, before proceeding to advertise the sale of the lease of the property by public auction, to consult the Department of Railways and Canals with a view to ascertaining whether or not any portion of the property was likely to be required for canal purposes, and upon being notified by that Department that it would not be advisable to dispose of these lands in any way before the canal question there is quite decided, the leasing of the property or any portion thereof was indefinitely postponed.

I had intended to submit for your consideration a scheme for the disposal of certain Ordnance properties situated in the city of Ottawa, and at other places referred to in my last annual report, but the pressure of other and important matters have prevented me from doing so. I hope, however, to be in a position to prepare such a scheme as will meet with your approval in the course of the ensuing spring. Since the close of the fiscal year a number of lots, situated in the town of Prescott, have been disposed of, at prices fairly satisfactory. The particulars of this sale will

appear in the report for the current year.

The work of this branch has, during the year, been sufficiently heavy to engage continuously during the ordinary office hours, and not infrequently for hours after, the time and undivided attention of the clerk in charge, and his two assistants, and may be summarised as follows:—

Letters received 590; letters written (including a number of special and lengthy reports), 655; upwards of 500 notices and statements of account prepared and forwarded to tenants and purchasers in arrears; leases issued, 7; drafts prepared for letters patent, 55; assignments registered, 51; and warrants issued for the Bank of Montreal to receive moneys, 117. In addition to which the accounts, numbering 1,100, at present open in the books of this branch, have been carefully kept. Other duties of minor importance might be referred to.

I have the honor to be, Sir,
Your obedient servant,
WILLIAM MILLS,
In charge of Ordnance and Admiralty Lands.

A. STATEMENT of Sales made during the Fiscal Year ended 30th June, 1889.

Locality.	Number of Lots Sold or Redeemed.	Amount Sold for.	Amount Received on Account.
Fort Ingall. Hochelaga Ottawa Sorel, Seigniory of.	$\begin{array}{c} 6 \text{ acres.} \\ \text{Water Lot in front of Lots 2,3 and 4} \\ 11 \text{ acres.} \\ 2 \text{ A. } 1 \text{ R. } 19\frac{1}{2} \text{ P.} \\ 12\frac{1}{2} \text{ lots.} \end{array}$	\$ cts. 1,368 00 75 00 120 00 4,000 00 200 00 11,641 23 2,284 82 24 30 19,713 35	\$ cts. 273 60 75 00 120 00 4,000 00 40 00 11,641 23 2,284 82 24 30 18,458 95

WILLIAM MILLS,

In charge of Ordnance and Admiralty Lands.

DEPARTMENT OF THE INTERIOR,
ORDNANCE AND ADMIRALTY LANDS,
OTTAWA, 12th December, 1889.

B.

STATEMENT showing the several Localities on account of which Moneys have been received during the Fiscal Year ended 30th June, 1889.

Locality.	Amount.	Locality.	Amount.
	\$ ets.	Brought forward	\$ cts. 26,498 08
Amherstburg. Chambly Chatham Elmsley. Edmundston Fort Erie Gloucester. Grand Falls, N.B Hochelaga. Kingston. Longueuil. Montreal. Nova Scotia. Nepean	444 50 121 88 289 60 9 70 75 00 8,241 00 189 58 190 18 11,666 23 4,033 00 562 50 2 00 40 25 632 66	Niagara New Brunswick. Niagara Falls. Oxford. Ottawa Point Pelee Quebec. Sorel. Sarnia. South River. Toronto Temiscouata Wolford Registration fees	518 75 256 25 102 00 1 60 9,656 11 400 00 3,000 00 631 89 40 00 25 00 802 40 40 00 19 39 80 60
Carried forward	26,498 08	Total	42,072 07

WILLIAM MILLS,

In charge of Ordnance and Admiralty Lands.

DEPARTMENT OF THE INTERIOR,
ORDNANCE AND ADMIRALTY LANDS,
OTTAWA, 12th December, 1889.

[PART I]

C

STATEMENT of Receipts on account of Ordnance and Admiralty Lands, for the Fiscal Year ended 30th June, 1889.

Date.	Registration Fees.	Rent or Interest.	Principal.	Total Amount.
1888.	\$ ets.	\$ cts.	\$ ets.	\$ cts.
July. August September October. November December	11 25	5,300 03 1,912 88 483 80 808 55 385 01 391 26	4,533 70 12,272 23 411 32 983 00 4,623 54 563 50	9,856 93 14,185 11 895 12 1,802 80 5,008 55 954 76
1889.				
January February March April May. June	19 00 1 00	355 98 448 57 622 00 2,310 08 1,176 99 715 82	677 59 558 91 508 91 340 00 724 80 883 00	1,039 52 1,007 48 1,130 91 2,669 08 1,902 79 1,619 02
Total	80 60	14,910 97	27,080 50	42,072 07

WILLIAM MILLS,

In charge of Ordnance and Admiralty Lands.

DEPARTMENT OF THE INTERIOR,
ORDNANCE AND ADMIRALTY LANDS,
OTTAWA, 12th December, 1889.

No. 7.

ACCOUNTANT'S REPORT.

DEPARTMENT OF THE INTERIOR,
ACCOUNTANT'S BRANCH,
OTTAWA, 28th December, 1889.

A. M. Burgess, Esq.,
Deputy of the Minister of the Interior,
Ottawa.

Sir,—I have the honor to submit the following report referring to the accounts

of this Department for the year ending 31st October, 1889.

During the current year the work connected with this branch has increased with the general work of the Department. The accounts in connection with the expenses of Government for the North-West Territories are rapidly increasing; the school lands accounts, both for revenue and expenditure, which are under the control of this Department, have also considerably increased during the current year. I may be permitted to state that the accounts of this Department, now one of the most important of the Civil Service, are managed most economically, in view of the fact that the staff of this branch is composed of but 3 permanent and 4 extra clerks.

The receipts for the sale and rental of Ordnance lands for the Departmental

year have been \$24,938.15.

Hereto annexed you will find a detailed statement of receipts on account of Dominion lands, showing the monthly revenue from all sources for the twelve months ending 31st October, 1889:

Gross revenue in cash	
•	
Total	\$551,409 63

I have the honor to be, Sir, Your obedient servant,

J. A. PINARD,

Accountant.

Map Sand Hees, 8 Map Sand Hee
Ma 85 Cts. 120 05 77 01 120 05 77 01 120 05
\$ cts. \$ c
4,982 32 6,802 38
00 2,862 89 95 4 977 34
777
:

APPENDIX A.

STATEMENT of Entries affecting Dominion Lands, which were made at the Head Office and at the Agency of the undermentioned Colonization Company, during the year commencing the 1st of November, 1888, and ending the 31st of October, 1889.

Where Made.	Hor	nesteads	Pre-	Homesteads. Pre-emptions	1	Special Grants.	Ğη	Hudson Bay C. P. Railway. North-Western S-Western Railway.	C. P.	Railway.	Nort R	Manitoba and orth-Western Railway.	R.S. V.	Manitoba and S-Western Railway.		North-West Coal and Navigation Company.		Total.
	No.		No.	Acres.		Acres.	No.	Acres. No. Acres. No. Acres. No. Acres.	No.	No. Acres.	No.	No. Acres.	No.	No. Acres.	Z.	No. Acres.	No.	Acres.
:																		
Head Office. The Temperance Colonization			<u>:</u> _	:	55	6,095	10	74,159 315	315	101,927	37	16,283 17	17	3,712 69	8	39,937	203	242,113
Society	2	1,600	ಣ	322	:	:	:		_ <u>:</u>		:		<u>:</u>		:	:	13	1,922
Total	10	1,600	ee	322	55	6,095	10	74,159 315	315	101,927	37	16,283 17	17	3,712	69	39,937	516	244,035
												WW	I. M	WM. M. GOODEVE,	DE	/E,		

WM. M. GOODEVE, Chief Clerk, Patent Branch.

[PART I]

DEPARTMENT OF THE INTERIOR,
LANDS PATENT BRANCH, OTTAWA, December, 1889.

75

APPENDIX B.

Abstract of Letters Patent covering Dominion Lands situated in Manitoba, the North-West Territories, and British Columbia, issued from the Department of the Interior between the 1st of November, 1888, and the 31st October, 1889.

		1888-	1889.	1887-	1888.
No.	Nature of Grant.	Number	Area in	Number	Area in
		Patents.	Acres.	Patents.	Acres.
•	Transaction de	1 500	946 990	1 791 *	269.464
	Homesteads	1,568	246,380	1,731	
	Sales	911	176,533	999	175,425
	Half-Breed allotments	68 17	16,320	66	15,840
	Grants under Manitoba Act	17	1,715	$\frac{28}{23}$	$2,553 \\ 2,289$
	Commutation right of common, &c	44	1,843	23 37	2,269 4,629
	Special grants Hudson Bay Company	5	$6,164 \\ 1,679$	31 20	26.973
8		323	108,210	$\begin{array}{c} 20 \\ 270 \end{array}$	122,310
	Canadian Pacific Railway Company North-West Half-Breed grants	323 30	5,667	54	9,302
	Coal land sales	30 25	4,822	94	9,302
11	55		4,022	2	40
	Manitoba and North-Western Railway Com-			4	40
14		37	19,737	22	12,800
13	pany grants	10	2,052	8	1,480
	Manitoba and South-Western Colonization Rail-	10	2,002	0	1,400
		16	3,748	7	1,203
15	way North-West Coal and Navigation Railway Com-	10	0,740	•	1,200
10	North-West Coal and Navigation Italiway Com-	69	39,933	2	3,336
16	pany Mining land sales	6	681		0,000
17	Forest tree claims		160		
18	Military bounty grants.		320		
	North-West Mounted Police grants		160		
20	Homesteads in British Columbia Railway Belt.	$5\overline{7}$	8,495		
	Sales do do do	30	3,222		
22	Military homesteads	41	12,794		
23	Leases		1,000	3	
24	Fore-shore rights		1,000	3	
	Totals	3,282	661,636	3,275	647,644

WM. M. GOODEVE, Chief Clerk, Patent Branch.

DEPARTMENT OF THE INTERIOR,
LANDS PATENT BRANCH, OTTAWA, December, 1889.

APPENDIX C.

STATEMENT showing number of Patents forwarded to the several Registrars for the Land Registration Districts of the North-West Territories, and number of notifications mailed to Patentees, from 1st November, 1888, to 31st October, 1889, inclusive.

Registration District.	Number of Patents sent Registrars.	Number of Notifications mailed to Patentees.
Assiniboia East Saskatchewan West do North Alberta. South do Totals.	110 15	705 110 15 33 446 1,309

WM. M. GOODEVE, Chief Clerk, Patent Branch.

DEPARTMENT OF THE INTERIOR,
LANDS PATENT BRANCH, OTTAWA, December, 1889.

APPENDIX D.

STATEMENT showing the number of Deeds of Transfer recorded at Head Office, from the 1st of November, 1888, to the 31st of October, 1889, and the amount received as fees therefor.

Number of Deeds registered	260	Amount received as fees	\$ 492	cts.
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WM. M. GOODEVE, Chief Clerk, Patent Branch.

DEPARTMENT OF THE INTERIOR, LANDS PATENT BRANCH, OTTAWA, December, 1889.

PART II.

DOMINION LANDS SURVEYS.

No. 1.

REPORT OF THE SURVEYOR-GENERAL.

DEPARTMENT OF THE INTERIOR,
TECHNICAL BRANCH,
OTTAWA, 28th December, 1889.

A. M. Burgess, Esq.,
Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honor to submit the following report on the operations of the

Technical Branch of the Department of the Interior during the year 1889.

The great drought which has affected the western part of the Continent for over a year made everything so dry that prairie and forest fires spread with an activity unknown before. Early in the spring they started in the Mountains of Montana, and soon British Columbia and the western part of the Territories were enveloped in smoke. The delay thereby occasioned to survey parties was very great; at times it was impossible to see further than a few hundred feet; several parties could not do any work for months, while others had frequently to stop their surveys, waiting till they could see the line pickets.

MANITOBA.

At the request of a number of settlers, steps have been taken to extend the surveys around Lake Dauphin, principally in the direction of the valley between Duck and Riding Mountains. Dominion Land Surveyor Edgar Bray was instructed to establish the outlines of townships in that locality, and to pay particular attention to the places best adapted for farming. Some of his lines had to be cut through dense woods: it was therefore thought advisable to delay the commencement of operations until the fall of the year and to continue them throughout the winter. His report shows that there is a considerable area of first class land to be found near the Lake.

D.L.S. J. W. Fitzgerald subdivided one township near Whitemouth: he had also to make certain corrections found necessary to his former surveys in that local-

ity.

D.L.S. N. R. Freeman retraced the lines of Townships 14 and 15, Range 8, East of Principal Meridian. These townships are in a low and wooded country and were among the first ones to be surveyed in Manitoba. Most of the marks of the original survey had disappeared.

D.L.S. Č. P. Brown had a subdivision contract between Lakes Manitoba and Winnipeg, North of Shoal Lake: the land is low, but excellent for mixed farming.

NORTH WEST TERRITORIES.

In view of the extension of the Manitoba and North Western Railway in the direction of Prince Albert, a party for the survey of township outlines in charge of D.L.S. McLatchie was sent to the White Sand River District early in the spring. The work was carried on throughout the summer and until late in the fall, the party returning only at the end of December.

The halfbreeds of Prince Albert District having made a petition for the survey into River Lots of the lands occupied by them, D.L.S. C. F. Leclerc was sent there during the winter of 1888-89, with instructions to lay out all the lands so occupied in that district. He made the survey to the satisfaction of all parties concerned,

but, owing to some misunderstanding, left out the Carlton Settlement. This was attended to later on.

D. L. S. J. L. Reid located the old trails from Fort a la Corne to Spence's Crossing, from Pahonan to Carrot River Settlement, and from Duck Lake to Batoche, for the purpose of transferring them to the Lieutenant Governor for the public uses of the Territories. He also renovated and corrected some old survey lines, and laid out into river lots the halfbreed settlement at Carlton which had been left unsurveyed by D. L. S. Leclerc.

D. T. S. J. I. Dufresne had to establish the township outlines west of Muskeg Lake and Misko-wa-sis reserve, preparatory to the subdivision of the lands. Unfortunately, while in the discharge of his duties, he met with a severe accident by which he nearly lost his life, and his survey was thus suddenly brought to an end. He has

not yet sufficiently recovered to leave Prince Albert.

D. T. S. W. T. Thompson located the trail from Qu'Appelle Station to Katepwe. The small wooden pickets used for marking the lots of the Battleford town plot having been pulled out by Indians during the Rebellion or having otherwise disappeared, D. L. S. R. C. Laurie received instructions to replace them. This will be done shortly.

The old trails from Fort Saskatchewan to Edmonton, and thence to St. Albert, were located by D. L. S. P. R. A. Belanger with a view to their transfer to the North-West Territories. He then proceeded to survey the settlements of Ste. Anne and Lake la Biche. The latter is the most northerley settlement in the North-West Territories: it is very satisfactory to find, according to Mr. Belanger, that the climate there is as good as it is anywhere in the Territories.

Sub-division contracts were let as follows:-

D. L. S. J. H. Brownlee was located in South-Western Manitoba, where a resurvey of four townships, nearly all settled, had been applied for several years ago.

Difficulties of a legal nature delayed the work until last spring.

D. L. Ss. W. R. Burke, John Bourgeois, A. J. Brabazon, Thos. R. Hewson and F. Vincent had contracts on the proposed extension of the Manitoba and North-Western Railway, near the White Sand River. They all completed their work with the exception of Mr. Vincent, who fell sick before commencing his survey and had to return home.

D. L. Ss. C. G. Sheppard and F. W. Wilkins had contracts on Jack Fish Lake, North of Battleford. A few settlers have already located there and more will follow so soon as the lands are open for entry.

D. L. S. J. F. Ritchie subdivided a few townships or fractions of townships

south east of Fort McLeod.

A triangulation of the portion of the Rocky Mountains under the control of the Dominion Government was commenced this year; the object is to provide a certain number of points from which sectional surveys may be started at any time. At present these surveys can only be made by producing township lines from the railway, so that, for establishing the position of a single claim, it may be necessary to run twenty or thirty miles of township lines. With inaccessible mountains blocking the way, this method is slow, expensive and inaccurate. By the system now adopted, the whole territory will be covered, at a very moderate expense, with a network of triangles, the summits of which being accurately fixed will afford a quick, convenient and economical way of extending the sectional surveys.

This work was under the direction of D. L. S. W. S. Drewry. His force was

This work was under the direction of D. L. S. W. S. Drewry. His force was divided into three parties: he personally selected the positions of the triangulation points and built the signals, being assisted in doing this by his own party and another one in charge of an assistant. The angles were measured by the third party

under D. L. S. L. A. Dufresne.

A base line of over a mile and a half in length was laid on the Cochrane flats in the Bow River Valley: the measurements were made with a 66 foot steel tape to which a uniform tension was applied by means of a spring balance.

4 [PART II]

The progress of the operations was very much delayed by smoke: little could

be done until the end of August.

During his explorations, Mr. Drewry discovered a connection between the Vermillon Pass and the Ottertail Valley: it is quite possible that this may prove, on further examination, a better location for the Railway than the Kicking Horse Pass.

D. L. S. J. J. McArthur continued his topographical survey of the Rocky Mountains. So far, his work has only included the National Park and adjoining coal district, and has therefore been executed with great care and detail. In future, the operations will be carried out with greater rapidity. From present data, it is estimated that the cost should be less than one cent per acre. The first sheets of the maps are now being engraved and will soon be published.

BRITISH COLUMBIA

D. L. S. A. St. Cyr established the boundaries of the Railway Belt on the Columbia River below Golden, above and below Revelstoke, and on Shuswap Lake. For that purpose, he made a micrometer survey of the Columbia River from Golden around the Big Bend to Revelstoke and to the Southern Boundary of the Belt. He had two small wooden canoes and a party of three men. When last heard from he was on Shuswap Lake.

D. L. S. A. Driscoll subdivided lands in Kamloops District: the country being generally open does not offer serious difficultes for surveying, but the settlers are so

scattered that much time is lost in travelling.

In New Westminster District two parties were at work in charge of D. L. Surveyors John Vicars and J. A. Kirk. Their surveys were of the same scattered nature as those in Kamloops District, but the heavy woods along the coast made progress very slow. Part of their time was occupied in correcting and extending the old Provincial Surveys, the other part in traversing the creeks or lakes and marking the boundaries of the Railway Belt.

INSPECTION AND CORRECTION OF SURVEYS

The Inspector of Surveys was, as usual, in charge of the examination of survey contracts in the field, and of the corrections to previous surveys. He had four parties under his direction.

The first party, under D. T. S. J. McAree, was engaged on correction surveys and examination of contracts in Manitoba. In the beginning of the season he laid out the settlement at Pine River on Lake Winnipegosis. Since then he has been constantly engaged in the field and is at the present time examining a survey contract at Whitemouth.

Another party, in charge of D.L.S. L. Gosselin, made a re-survey of the Second Initial Meridian. It was found that, owing to a misunderstanding among the several surveyors who worked in that vicinity, some small errors had crept in. These will be corrected, or the plans made to agree with the lines on the ground.

be corrected, or the plans made to agree with the lines on the ground.

The Fourth Initial Meridian was renovated by D. L. S. E. W. Hubbell. This line runs through the driest part of the Territories, and the party experienced

some hardship from the want of water.

In the McLeod Calgary District, D. L. S. C. F. Miles surveyed a portion of the Fifth Initial Meridian and effected several corrections to previous surveys.

OFFICE WORK

Owing to sickness among the clerks and to other causes the office work has somewhat fallen behind.

The correspondence was as follows:-

Letters	received.	 888
Letters	sent	 .315

The Chief Inspector of Surveys assisted me in the general supervision of the work of the Branch.

In addition to his other duties he made, with the assistance of Mr. Klotz, the preliminary calculations necessary for the determination of the limits of the Railway Belt. Details on the subject will be found in his report.

In the draughting room, the work was as usual of a varied character.

A map of the Railway Belt in British Columbia drawn on a scale of twelve and a half miles to an inch, in order to be uniform with our map of the North West Territory, was prepared for printing. Three sheets have also been compiled of a map of the Railway Belt in British Columbia on a scale of three miles to an inch, as small a scale as can be used to show the lots taken up under the Provincial land regulations. It will take altogether five sheets to complete this map: those finished represent the Eastern part of the Belt, the portion around Kamloops and the adjoining district to the West.

The map of New Westminster District, formerly published on a scale of two and a half miles to an inch, was corrected and revised up to the 1st October, for a new edition: this will serve to supply a map of that district in the meanwhile, until a new sheet on the three mile scale, uniform with those of the rest of the Belt, is com-

piled.

A map of the Kamloops District on a scale of two miles to an inch, not intended for printing, was also compiled, specially to show timber and grazing lands and lands taken up by settlers.

Among other miscellaneous plans prepared were those of the Park Reserves in

British Columbia, and the Rat River Settlement.

Considerable progress has been made in the preparation of an index giving the names of the surveyors and dates of survey for both outlines and subdivision: this index will save much time and trouble in the office.

A schedule for notification to the Hudson's Bay Company of townships surveyed was completed on July 26th, and an account against the same Company for their

share of the cost of surveys was completed on October 11th.

Tables of latitude and departure of a great part of the extensive micrometer traverses made by D. L. Surveyors Fawcett and Ogilvie between the 5th Meridian and Cumberland House have been made up in order to check the agreement of these surveys with that of the Saskatchewan by D. T. S. Klotz. This has involved finding the latitude and departure on more than 1600 courses: a result will soon be arrived at, and will be a valuable check on our maps.

Other miscellaneous work performed in the office includes the preparation of contracts for surveys with accompanying sketches, the revision and copying of reports, copying field notes, making descriptions for patents, and checking surveyor's accounts, as well as the considerable amount of work necessary in keeping the information derived from our surveys and surveys of the Timber and Minerals Branch and the

Geological Branch in a form available for use in mapping.

The work in connection with the examination of survey returns, and the preparation of township plans has been carried on as usual.

Below is a synopsis of plans received, examined, &c., during the twelve months.

Plans received with corresponding field notes:

Subdivision	128
Outlines	
Road Surveys	
Correction and Inspection	143
Settlements or Town Plots	2
Miscellaneous	
	20

6

Number of plans examined	204
Township plans compiled	77
Copies of township plans made by hand	71
Miscellaneous plans, sketches and diagrams	96
Miscellaneous tracings	72
Plans completed for printing	
Proofs examined	
Statutory declarations received	29
Progress sketches received	

The photographer developed and printed the photographs required for the topographical survey of the mountains, made many copies, enlargements and reductions of maps, and had also a considerable amount of work from the Geological Survey.

A schedule is appended giving the details of the work of the lithographic office.

It shows a total of 88,600 copies, all printed by hand.

BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

The Board has to mourn the loss of one of its members, Mr. P. N. Dorion. Dorion was one of the original members of the Board when first organized and was most regular in his attendance. His loss will be seriously felt.

Mr. J. I. Dufresne, Dominion Topographical Surveyor, of Montmagny, Que., was

appointed to the vacant place.

Meetings of the Board were held in February and August 1889, and special exa-

minations before one member of the Board in February and June.

The following gentlemen having passed the requisite examinations were granted commissions as Dominion Land Surveyor:—

Examined at Ottawa-

C. H. Pinhey, P.L.S., Ottawa, Ont.

Examined at Winnipeg before Mr. A. H. Whitcher— H. G. Dickson, P.L.S., Selkirk, Man.

Mr. Geo. M. White, D.L.S. of Toronto, Ont. having passed the higher examination, was granted a certificate as Dominion Topographical Surveyor. The correspondence of the Board amounted to:

APPENDICES.

The following documents are appended:-

1. Schedule showing Dominion Land Surveyors employed during the year.

2. Schedule showing the work executed in the Lithographic Office.

3. Reports of the Chief Inspector of Surveys, Inspector of Surveys, and Surveyors in charge of parties.

4. Report of W. T. Thompson on survey in Peace River District (omitted at the

time.)

5. Examination papers of the Board of Examiners for Dominion Land Surveyors.

I have the honor to be, Sir,

Your obedient servant,

E. DEVILLE, ·

Surveyor-general.

53 Victoria.

SCHEDULE of Dominion Land Surveyors employed during the Year ending 31st October, 1889.

Saskatchewan—Pahonan to Carrot River Settlement—Duck Lake to Batoche—and survey of Township boundaries. Thompson, W. T Laurie, R. C Battleford, Sask Belanger, P. R. A. L'Islet, Que Brownlee, J. H Brandon, Man Sub-division of Townships 28 and 29 in Range 31 and 32, all wes of the Principal Meridian. Sub-division of Townships 29 and 30 in Range 7, and Township 30 in Range 9, west of the 2nd Initial Meridian. Brabazon, A. J. Portage du Fort, Que. Survey of town plot of Canmore and sub-division of Township 28 and 29 in Range 8 all west of 2nd Initial Meridian. Sub-division of Townships 28, 29 and 30 in Range 5, west of the 3rd Initial Meridian. Sub-division of Townships 47 and 48 in Ranges 17 and 18, west of the 3rd Initial Meridian. Sub-division of Townships 45 in Range 15, Townships 47 and 48 in Range 16, and Township 46 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 3 and 4 in Range 20, Township 4 in Range 16, and Township 46 in Range 20, Township 4 in Range 21, and Darts of Townships 1, 2 and 3 in Range 2			
Miles, C. F. Walkerton, Ont. do	Surveyor.	Residence.	Description of Work.
Miles, C. F. Walkerton, Ont. do			
Miles, C. F. Walkerton, Ont. do	Dennis, J. S	Ottawa, Ont	Inspection and correction of Surveys.
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Dufresne, J. I	Reid, J. L	Port Hope, Ont	Saskatchewan—Pahonan to Carrot River Settlement—Duck
Belanger, P. R. A. L'Islet, Que. Brownlee, J. H. Brandon, Man. Burke, W. R. Ingersoll, Ont. Bourgeois, John Three Rivers, Que. Brabazon, A. J. Portage du Fort, Que Sub-division of Townships 29 and 30 in Range 4, and part of 3 in Range 4, west of the 2nd Initial Meridian. Sub-division of Townships 29 and 30 in Range 7, and Township 29 and 30 in Range 8 all west of 2nd Initial Meridian. Sub-division of Townships 29, west of the 2nd Initial Meridian. Survey of town plot of Canmore and sub-division of Township 29 and 30 in Range 8 all west of 2nd Initial Meridian. Sub-division of Townships 29, and 30 in Range 5, west of 2nd Initial Meridian. Sub-division of Townships 29, 29 and 30 in Range 5, west of 2nd Initial Meridian. Sub-division of Townships 47 and 48 in Ranges 17 and 18, west of the 3rd Initial Meridian. Sub-division of Township 45 in Range 15, Townships 47 and 48 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 45 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 45 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 45 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 45 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 3 and 4 in Range 20, Township 4 in Range 17, west of the 3rd Initial Meridian. Sub-division of Townships 3 and 4 in Range 20, Township 4 in Range 21, and parts of Townships 1, 2 and 3 in Range 27, and 5 in Range 29, a west of the 4th Initial Meridian. Triangulation of Railway Belt. Triangulation of Railway Belt. Topographical Survey of Rocky Mountains. Posting boundary of Railway Belt, B.C. Sub-division and other surveys, New Westminster District B.C. Sub-division and other surveys, New Westminster District B.C.	Dufresne, J. I Thompson, W. T	Montmagny, Que Qu'Appelle, Assa	Survey of Township outlines. Survey of trail from Qu'Appelle to Katenwe, Assa.
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Hewson, T. R. Peterboro', Ont Sub-division of Townships 28, 29 and 30 in Range 8, and part of Township 28 in Range 8 all west of 2nd Initial Meridian. Sheppard, C. G. Sorel, Que. Sub-division of Townships 47 and 48 in Ranges 17 and 18, west of the 3rd Initial Meridian. Wilkins, F. W. Norwood, Ont Sub-division of Township 45 in Range 15, Townships 47 and 48 in Range 16, and Township 46 in Range 17, west of the 3rd Initial Meridian. Ritchie, J. F. Lethbridge, Alta. Sub-division of Townships 3 and 4 in Range 20, Township 4 in Range 21, and parts of Township 3 in Range 29, a west of the 4th Initial Meridian. Drewry, W. S. Belleville, Ont Triangulation of Railway Belt. McArthur, J. J. Aylmer, Que. Topographical Survey of Rocky Mountains. Saint-Cyr, A. Quebec, Que. Posting boundary of Railway Belt, B. C. Driscoll, A. Aylmer, Que. Sub-division and other surveys, New Westminster District B.C. Kirk, J. A. Stratford Ont Sub-division and other surveys, New Westminster District B.C.		,	30 in Range 9, west of the 2nd Initial Meridian.
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Sheppard, C. G	• 1	i	Sub-division of Townships 28, 29 and 30 in Range 5, west of 2nd Initial Meridian.
Ritchie, J. F. Lethbridge, Alta. Sub-division of Township 3 and 4 in Range 20, Township 4 in Range 21, and parts of Township 3 in Range 22, and 3 in Range 27. Township 3 in Range 25, and Township 9 in Range 29, a west of the 4th Initial Meridian. Drewry, W. S. Belleville, Ont. Triangulation of Railway Belt. McArthur, J. J. Aylmer, Que. Township 3 in Range 29, a west of the 4th Initial Meridian. Triangulation of Railway Belt. Topographical Survey of Rocky Mountains. Posting boundary of Railway Belt, B. C. Vicars, John. Cannington, Ont. Sub-division and other surveys, New Westminster District B.C. Stratford Ont. Sub-division and other surveys, New Westminster District B.C. Sub-division and other surveys, New Westminster District B.C.			Sub-division of Townships 47 and 48 in Ranges 17 and 18, west of the 3rd Initial Meridian.
Range 21, and parts of Townships 1, 2 and 3 in Range 22. Township 3 in Range 25, and Township 9 in Range 29, a west of the 4th Initial Meridian. Triangulation of Railway Belt. McArthur, J. J. Aylmer, Que. Topographical Survey of Rocky Mountains. Quebec, Que. Posting boundary of Railway Belt, B.C. Driscoll, A. Aylmer, Que. Sub-division and other surveys, Kamloops District, B.C. Vicars, John. Stratford Ont. Sub-division and other surveys, New Westminster District B.C. Sub-division and other surveys, New Westminster District B.C. Sub-division and other surveys, New Westminster District B.C.			in Range 16, and Township 46 in Range 17, west of the 3rd
Drewry, W. S			Sub-division of Townships 3 and 4 in Range 20, Township 4 in Range 21, and parts of Townships 1, 2 and 3 in Range 24, Township 3 in Range 25, and Township 9 in Range 29, all west of the 4th Initial Meridian.
Saint-Cyr, A	Drewry, W. S	Belleville, Ont	Triangulation of Railway Belt.
Saint-Cyr, A	McArthur, J. J	Aylmer, Que	Topographical Survey of Rocky Mountains.
Kirk, J. A Stratford Ont Sub-division and other surveys, New Westminster District R.C.	Saint-Cyr, A	Quebec, Que	Posting boundary of Kailway Belt, B.C.
Kirk, J. A Stratford Ont Sub-division and other surveys, New Westminster Distric	Vicars, John	Cannington, Ont	Sub-division and other surveys, Kamicops District, B.C. Sub-division and other surveys, New Westminster District,
Klotz, Otto J Preston, Ont Exploratory Survey.			Sub-division and other surveys, New Westminster District,
	Klotz, Otto J	Preston, Ont	Exploratory Survey.

E. DEVILLE. Surveyor-General.

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E. DEVILLE, Surveyor-General.

No. 2.

REPORT OF W. F. KING, D.T.S., CHIEF INSPECTOR OF SURVEYS.

DEPARTMENT OF THE INTERIOR, TECHNICAL BRANCH, OTTAWA, 13th December, 1889.

Sir,-I have the honor to submit my report on survey operations during the

past year.

Since the date of the last annual report, I have not performed any field work. the astronomical determinations of positions having been temporarily stopped. I must therefore confine myself to a short account of the work performed by me in

the office, with a few words regarding the surveys in the field.

During the greater part of last winter, I was engaged in the calculations of the longitudes observed during the season of 1888. The manner of making and reducing the observations I have discussed in my reports for the years 1887 and 1888, and some of the results, as to personal equation, instrumental constants &c, were given in the latter report. The final results, viz. the longitudes of the various stations at which observations were made, cannot be given, as they depend upon the longitude of Winnipeg, which is subject to a large uncertainty, and until this longitude is known the publication of the results would be misleading.

Afterwards I was engaged in the calculation of the limits of the Railway Beltin British Columbia. In this I was assisted by Mr. Klotz, who, in his report, gives the method adopted in making the calculation. The reason of the intricacy of the calculation may be explained thus:

The limits of the belt are to be twenty miles from the Canadian Pacific Railway. If this railway were a straight line on a plane surface, the line 20 miles from it would be a parallel straight line, and it would be very easy to determine its intersections with section or other lines, and to tabulate the positions of these intersections for the use of surveyors in the field, who would have merely to survey these section lines and to plant their post to mark the limit when they arrived at the given point of intersection. Or if the line were an arc or arcs of circles on a plane surface, having radii greater than the distance apart of the lines (20 miles), the limits would then be arcs of circles about the same centres as the arcs forming the railway line.

But since these arcs have radii much less than twenty miles (not more than a few thousand feet at most) the radii cross one another on the concave side of the curve before they reach the limit, and the resulting arc of the belt limit will fall nearer to the railway line than the arc similarly drawn from the adjacent curves of the railway, and therefore will not be the true limit of the belt. Only on the convex

side of the curve will the arc described as above form the limit.

It is necessary therefore to make a plot, or to perform a calculation equivalent to plotting, of all these curves, and to exclude those which fall in the above manner within the belt limit, since this limit must not be less than twenty miles from the

nearest point of the railway.

The calculation, however, is rendered much more difficult by the fact that the railway, although a series of straight lines and circular curves, does not lie on a plane surface, but on a spheroidal one. For the parallel to a straight line (i.e., a great circle) becomes, on such a surface, a small circle, or a circular curve on the ground. The parallel to the arc of a circle becomes the arc of another circle not having the same centre, or, rather, it becomes a geodetic circle. The calculation of the limits with these refinements of geodesy is impracticable, on account of the great

number of curves (nearly 6000) which have to be computed.

The best that can be done is, when certain points have been determined by the method given by Mr. Klotz, to plot them on township diagrams, and connect them by curves of the proper radius. Then rejecting those curves or parts of curves which fall nearer the railway line than others, to tabulate the positions, with regard to section, township, and range, of the various intersections of the outer curves, as well as the radii of the arcs between them, and the positions of the centres of these arcs.

The surveyor being on the ground in the vicinity of some of these tabulated points will then know that between such and such points the limit is an arc of given centre and radius, and can readily determine his actual distance from that centre, and thence how far he is from the limit.

It is needless to say that the calculation is very long and tedious; that portion

of it described by Mr. Klotz is but a small part of the work.

Mr. Drewry has been engaged on the triangulation survey in the Rocky Mountains. In his report will be found a full description of the work performed. Unfortunately much time was unavoidably lost by the dense smoke which prevailed in the mountains during a great part of the summer, but nevertheless the triangulation was

successfully inaugurated and a large tract of country covered.

In the mountain region, there are often fertile valleys, mineral deposits, or tracts of forests, distant from the railway line, and not readily accessible therefrom except by circuitous routes, but yet valuable. There are no means at present of connecting the survey of these tracts with the general system other than by making long, circuitous, and very expensive surveys to the points established by the traverse of the railway line. The stations of the triangulation are marked by large and not easily mistakeable cairns on the summits of the most prominent peaks. Other and intermediate marks are left by the surveyor engaged in filling in the topography. It will be easy for a surveyor to locate himself, whenever he can see three cairns at once, by measuring the angles between them; or one cairn will be sufficient if he makes a triangulation and takes an azimuth observation. For many purposes probably a sufficiently accurate location can be effected by compass bearings on the cairns.

Much advantage will also be indirectly obtained from this survey by the exploration of trails and passes, as well as the discovery of minerals and other natural res-

cources.

Mr. McArthur has been engaged on the photo-topographic work in the mountains. His camera stations are fixed by subsidiary triangulations based on the stations of the main triangulation. Being thus relieved of the work of making a continuous triangulation, he has more time to devote to the accurate filling in of the topographic details. The advantage of the topographic method adopted is shown by the fact that an accurate survey on the scale of 1:20,000 is made with but a small party at the rate of 300 to 400 square miles a season. During last summer, deducting the time lost by smoke and storms, in 70 days Mr. McArthur covered 350 square miles, an average of 5 square miles a day. Capt. Wheeler of the U. S. Engineers in his report on the Geographical Congress states that in the plane-table surveys made in Europe the speed averages from one-half to one square mile per day, for surveys made on the scale of 1:20,000. These surveys are made in comparatively level country, and the method would be altogether impracticable in mountains, except at vast expense and difficulty. On the other hand, the photographic method is not well adapted to a level or a wooded country.

In connection with Mr. Drewry's triangulation, I beg to point out that all the distances depend upon the length of the steel band with which he measured his base line. The exact length of this band is not known, and there appears to be in Canada no means of finding it. This is an important matter, as year by year our surveys are extended further, and an inaccuracy in the standard measure affects all the work

done.

I need not speak here of the inspection and correction surveys, as they will be fully treated of by Mr. Dennis, under whose supervision they have been.

I have the honor to be, Sir,
Your obedient servant,
W. F. KING,
Chief Inspector of Surveys.

E. Deville, Esq., Surveyor General, Department of the Interior.

No. 3.

REPORT OF OTTO J. KLOTZ, D.T.S.

COMPUTATION OF LIMITS OF RAILWAY BELT IN BRITISH COLUMBIA. PRESTON ONT., 9th, December 1889.

Sir,—I have the honor to submit the following report.

The first part of the year was spent in finishing the astronomic computations of the previous season's work.

Thereafter I was engaged on the computation of the position of the limits of the

railway belt in British Columbia.

"Twenty miles on each side of said line" is a simple and unequivocal description of the railway belt. Its demarcation on the ground, however, irrespective

of mountains, is by no means so simple.

In 1885 and 1886 the Dominion Government had an accurate azimuth survey made of the line of the railway through British Columbia.

This survey was adjusted to the astronomic determinations of latitude and longi-

tude, made for this purpose at Port Moody, Kamloops, Revelstoke, and Field.

From this adjustment resulted the position of the railway with reference to the section, township, and range lines of Dominion lands projected over the railway belt; and the position of every point of the line of railway from the neighboring north and east section lines became known.

The foregoing furnished the data of computation of the limits of the railway belt. The first step in the latter computation was to ascertain the position, with reference to the system of Dominion lands, of the extremity of the radius of 20 miles extending at right angles successively to the courses of the railway, and beginning at each course.

From the azimuth of the chord of the line of railway was obtained the direction of the 20 mile radius. This was then resolved into its equivalent of latitude and longitude, in terms of townships, sections, and chains, and ranges, sections, and chains, respectively, due regard being had for the curvature of the earth. This latter result was combined with the known position of the corresponding point of the railway, and by a long and tedious computation evolves one of a series of points, referred to the co-ordinates of Dominion lands.

Many of these points will fall, however, inside of the railway belt, although distant 20 miles from the particular point of the railway line from which they

have been computed.

The railway belt resolves itself into this: "that tract of land lying on each side of the line of railway; the distance from any point on the limit of said tract to the nearest point on said line of railway shall be 20 miles."

When we take into account the curving of the railway, a little consideration will show that the extremity of a 20 mile radius at right angles to the railway will

not necessarily give a point on the limit of the railway belt.

The railway belt is the area covered by a radius of 20 miles moving at right angles to the line of railway on each side thereof; but in its motion following the various curves, it is continually swaying backwards and forwards in its general forward motion; thereby making complicated intersections on the limits of the railway belt.

These intersections must be computed ere surveyors can be sent to establish the

limits on the ground.

There are very nearly six thousand positions of termini of radii to compute for the railway belt in British Columbia corresponding with half that number of survey stations on the line of railway.

To give somewhat of an idea of the labor entailed in computing such points, a

copy of the abstract of the computation for one point is given.

BOUNDARIES OF 20 MILE BELT.

K = 1,600 chains.

Station.	Bearing of Radius.	K Cos Z.	Corr.	K Cos Z. —Corr.	K Cos Z. +Corr.	K Sin Z.
121	347° · 86	Chains. 1,564 · 26	Chains. 0.22	Chains. 1,564 · 04	Chains. 1,564 48	Chains. +336'30

In order to determine the latitude of the extremity of any 20 mile radius, we apply the vertical element K Cos Z after correcting it by the quantity given in the fourth column, headed Corr.

This latter quantity expresses in chains the distance that K Cos Z. falls below the parallel passing through the extremity of the radius, and is found by the formula:

Corr. = 00000196 (K Sin Z.)²

in which

K = 1,600 chains (20 miles)

Z = azimuth of radius.

K Cos Z-Corr. gives the meridian ordinate to the north.

K Cos Z + Corr. gives the meridian ordinate to the south.

K Sin Z is made + when to the west, and—when to the east.

20 Mile Belt Computation—British Columbia. North Side.

Station No.	K Cos Z. —Corr Ch.	T. S. Ch.	Station T. S. Ch.	T. S. Ch.	K Sin Z. Ch.	Converg Ch.	R. S. Ch.	Station R. S. Ch.
121	1,564.04	3-2-45 96	27-6-48 96	31-1-14 · 42	+336:30	-1.13	0-4-11 · 17	18-0-22.01

Station reduced to Corr. Line.	Jog Ch.	Station reduced to Corr. Line.	Converg Ch.	R. S. Ch.	TO 1 1 1		RESULT.			
					R. S. Ch.	S. T. R.	Mer.	Northing Ch.	Easting Ch.	
18-0-21 88	67·16	17-5-36 03	01	17-5-36 02	18- 3 -47 · 19	4-31-19	5	14.42	47 · 19	

The following is an explanation of the nineteen columns of the Computation sheet:-

Column 1.—Gives the number of the azimuth survey station on the line of the railway.

Column 2.—Expresses in chains the meridian ordinate to the north.

Column 3.—In this, T. S. shows the nearest number of townships and horizontal tiers of sections greater than K Cos Z—Corr., and Ch. shows in chains the excess of [PART II]

T. S. over K Cos Z-Corr.; or in other words, how far the northern extremity of K Cos Z—Corr. is from the northern limit of the section in which that extremity is

Column 4.—This gives the position in latitude, expressed in terms of the system of Dominion lands, of the azimuth survey station on the railway; the S. indicating the horizontal tier of sections, beginning at the south side of the township, in which the station is situated; and the Ch. the number of chains it is distant from the north side of that tier of sections.

Column 5.—Is the addition (or subtraction) of the two preceding columns. the sum of the chains is greater than 80°.50, 80°.50 must be subtracted and S. reduced by one section.

Column 6.—Expresses in chains the easting or westing of the extremity of the radius from the survey station on the railway.

Column 7.—Expresses in chains the convergence of meridians with arguments.

distance of Q from base line, and K Sin Z.

Column 8.—Is the addition of the two immediately preceding columns,

expressed in ranges, sections and chains.

Column 9.—Gives the position in longtitude of the survey station on the railway, in terms of ranges, vertical tiers of sections, and chains west of the initial meridian.

Column 10.—Is the position given in column 9 reduced on the meridian to the

correction line intervening between Q and station.

Column 11.—Gives the jog on the correction line at the reduced position of the station.

Column 12.—Gives the position of the station referred to the north (south) side of correction line.

Column 13.—Gives the convergence of meridians for the distance expressed by

chains in the last column to bring it to Q.

Column 14.—Is the addition of the last two columns, and gives the position of Q in ranges, tiers of sections, and chains on the parallel of Q west from the initial meridian. The point Q is on the meridian of the survey station, and distant therefrom K Cos Z—Corr.

Column 15.—Is the addition of column 14 and column 8, and gives the position

(in longitude) of the point or extremity of the 20 mile radius on the belt limit.

In the example given, the interpretation of column 15 is: The point is distant from the initial meridian, measured westward along the parallel of the point, 18

ranges 3 sections and 47° 19.

We have now the position of the extremity of the 20 mile radius on the belt; expressed in latitude by giving the number of townships and tiers of sections from the first base line or International boundary, the chains given expressing the distance of the point south from the north limit of the tier of sections in which the point is situated; and expressed in longitude by giving the number of ranges, tiers of sections and chains from the initial meridian. Hence nothing remains to be done but to combine these expressions and give the distinctive number of the section. township, and range, in the system of Dominion lands.

The township number as given in column 5 for Q will be the same for the extremity of the radius; the number for the range will be greater by one than the range number given in column 15; for as the point is a certain number of ranges and sections west of the initial meridian, it follows that it must be in that range of the Dominion lands expressed by the number greater by one than the number in

The number of the section is found by knowing the horizontal and vertical tiers in which the section lies, counting from the south and east of the township respec-

Column 16.—This gives the particular section, township and range in which the

extremity of the 20 mile radius on the railway belt is situated.

Column 17.—Shows the initial meridian from which the ranges are numbered westward.

Column 18.—Gives the distance of the point from the north side of the section. Column 19.—Gives similarly the distance from the east side of the section in which the point is.

The computation of these six thousand points will occupy one person nearly a

year.

Hereafter those points which fall *inside* of the railway belt, for reasons already pointed out, will have to be eliminated; and the intersections of the line, described by the extremity of a radius of 20 miles, moving at right angles to the line of railway with itself be determined.

This will again entail considerable complicated work, ere full data can be given

to the surveyor for locating the limit of the railway belt on the ground.

There will undoubtedly be many parts of the limits of the railway beit impossible or at least impracticable to define on the ground, from the mountainous character of the country; yet in the computations every point must be determined, as no a priori elimination of any point can be made.

All of which is respectfully submitted.

I have the honor to be, Sir, Your obedient servant,

OTTO J. KLOTZ, D.T.S

E. Deville, Esq., Surveyor General, Ottawa.

17

No. 4.

DEPARTMENT OF THE INTERIOR, TECHNICAL BRANCH, Ottawa, 17th December, 1889.

SIR,—I have the honor to submit my annual report regarding the examination and correction of surveys, and in relation to the general surveys of this branch under my charge.

The distribution of the season's field work having been completed, under instructions from you, dated the 9th of May, I proceeded to Winnipeg, reaching that point

on the 16th.

Before leaving headquarters the corrections to existing surveys, which it was proposed to effect during the season, had been divided as nearly as possible into four districts, and the parties who were to be engaged on this work were distributed as follows:-

The work in Manitoba and the eastern portion of Assiniboia was allotted to Mr.

John McAree, D.T.S.

The investigations and corrections on the Second Initial Meridian, and in town-

ships adjoining the same, were allotted to Mr. Louis Gosselin, D.L.S.

A re-survey of a portion of the Fourth Initial Meridian and of townships comprising subdivision contract No. 9 of 1886 was undertaken by Mr. E. W. Hubbell, D.L.S.

Mr. D. L. S. Miles was to re-survey a portion of the Fifth Initial Meridian, and to effect other corrections required in the south-western portion of the Territories,

Instructions were also issued to Mr. D. L. S. Reid covering required corrections

to existing surveys in the Prince Albert District.

At Winnipeg I was joined by all the above named gentlemen, and I remained there until the 24th May, the time being spent in preparation of instructions for the surveyors who were to effect correction surveys in Manitoba and the eastern portion of Assiniboia, in arranging for the manufacture and shipment of the iron bars needed in marking the season's surveys, and in the purchase of certain horses, supplies, etc. Further instructions were also issued at this time to Messrs. McLatchie and Belanger, Dominion Land Surveyors, in relation to the work they had in hand.

Proceeding to Calgary I arrived there on the 25th May, this point being my headquarters for the season. I was very kindly given office room in the office of Mr.

Wm. Pearce, Superintendent of Mines.

I now issued the necessary instructions to Messrs. Miles and Hubbell, who had

accompanied me to Calgary, and arranged for the transport required by them.

I remained in Calgary until the early part of June, when I returned to Winnipeg, meeting Mr. D. L. S. Gosselin at Moosomin for the purpose of giving him some

further explanations regarding his instructions.

After my return to Calgary, and in the latter part of June, I made several trips to Canmore, in relation to surveys needed at that point, and also accompanied Mr. Drewry to Morleyville, and consulted with him and Mr. McArthur in relation to the employment of their parties during the delay, owing to dense smoke, in the work they had in hand.

Early in July I visited Mr. Miles, who was at work on the Fifth Initial Meridian in the Porcupine Hills, and after returning to Calgary I began the survey of "the old Mission Trail," lying south of the Elbow River and west of Calgary. I carried on this work from time to time during the season when office work permitted.

On the 1st of August I left Calgary and proceeded to Churchbridge, a point on the Manitoba and North-Western Railway, near where I met Mr. Gosselin, and after consulting with him regarding difficulties met with in carrying out his instructions, I issued new instructions for his guidance.

Leaving Calgary again on the 5th of September, I proceeded to Medicine Hat: there I met Mr. Hubbell, and accompanied him to the mouth of the Red Deer River, PART II

where he was then at work on the 5th Initial Meridian. Returning to Medicine Hat I made a trip in company with Mr. Pearce to the Kootenai, or "Waterton" Lakes, and there met Mr. Miles, who was engaged in subdividing the available portions of Townships 1 and 2, in Range 29, west of 4th Initial Meridian, these being the townships in which the discovery of petroleum had been made, and in which a large number of claims had been staked out.

On my return to Calgary from the last mentioned trip I remained in the office a few days, and then proceeded north and completed a re-examination of townships comprising subdivision contracts numbers 7 and 14 of last season. A special report

in regard to this examination will be submitted.

I returned to Calgary on the 11th of October, and remained there until the 15th, when I left for British Columbia. At New Westminster I met Messrs. Kirk and Vicars, D.L.S., and discussed with them certain matters relating to the surveys they were then engaged on in that district. I have already reported to you in reference to this and other matters attended to while in British Columbia.

I reached Calgary on my return trip on the 20th, and leaving again on the morning of the 22nd I returned to Ottawa, reaching home on the 27th, having during the season travelled some 7,000 miles by rail, and 1,050 miles with horses.

While at headquarters at Calgary during the summer my time was fully occupied in attending to correspondence and the general survey matters requiring attention. These need not be referred to here, as full reports were duly forwarded from time to time during the season.

The reports of the gentlemen engaged on correction surveys, which are being forwarded to you direct, will give full particulars regarding the work accomplished

by them.

EXAMINATION OF SURVEYS.

Eleven subdivision contracts were let this season, covering 28 townships. These, together with some 17 townships in subdivision contracts of last year, which were completed too late to allow of an examination being effected during that season, made 45 townships in which it was necessary to carry on examinations or verification surveys. This work was accomplished by Messrs. Miles, McAree, McLatchie and Reid, D.L.S. The full reports regarding these examinations, accompanied by the usual illustrating sketches, and field notes, will be duly forwarded.

From general reports received I am glad to be able to say that the work in the subdivision contracts of this season seems to have been well and carefully performed

The townships subdivided this year, excepting those in contracts 1 and 2, east of Winnipeg, are all well adapted for settlement. The townships covered by contract number 5 in South-western Manitoba are somewhat broken, but being on the line of the Souris branch of the Canadian Pacific Railway, are likely to be in demand for settlement at an early date.

Contracts numbers 6, 7, 8, 9 and 14 covered townships at Beaver Hills, on the

line of the extension of the Manitoba and North-Western Railway, and the district

subdivided is a very fine one.

The townships comprising contract 3 are situated on the Milk River ridge, south They are somewhat broken; but being on the line of the proposed of Lethbridge. extension of the North-West Coal and Navigation Company's Railway, and in the vicinity of the rapidly growing Mormon colony, they are likely soon to be in demand

either for settlement or grazing.

It is popularly supposed that the larger portion of the desirable part of the North-West Territories has been subdivided; at least, I have heard such opinions expressed. This is of course an erroneous idea: a glance at our general map of Manitoba and the Territories will show that, while the belt of country extending for some distance on both sides of the main line of the Canadian Pacific Railway has been subdivided, and the larger portion of the remainder of the country south of the North Saskatchewan River has been outlined into townships, only a comparatively small portion of the Northern or Saskatchewan district has been subdivided.

This latter district is particularly well adapted for settlement, there being in most parts an abundance of wood and water, and the soil in the larger portion of the district is excellent.

The Northern or Saskatchewan portion of the Territories will make rapid strides in the way of settlement so soon as the railway communication, which is about to be afforded by the construction of the Regina and Long Lake Railway, is available for the transport of immigrants and their effects.

The centres now existing at Prince Albert, Battleford, Edmonton, and other points in this district will grow rapidly, and an active demand for agricultural holdings will follow, necessitating the subdivision in the near future of a number of

townships in that part of the Territories.

The past season was a very unfavorable one for surveying operations. During June, July and August heavy fires raged throughout the timbered portion of the Rocky Mountains; and at times the smoke was so dense on the eastern slope of the mountains, and as far east as the 4th Initial Meridian, that it was impossible to see any distance, and many of the parties working in the western district were seriously

delayed from this cause.

Throughout the greater portion of Manitoba and the Territories the rainfall was very light, and as a consequence great scarcity of water was experienced. This was notably the case in that portion of the country traversed by the section of the 4th. Initial Meridian, upon which Mr. Hubbell was working. Surveying parties have many hardships and inconveniences to put up with, but the most serious of all is the want of water. Mr. Hubbell's report shows the suffering experienced by his party from this cause, and credit is due to him for having successfully carried on his operations in spite of such obstacles.

Mr. Gosselin was also somewhat retarded owing to the want of water; and the extreme dryness of the season will be readily understood when attention is drawn to the fact that, when the original survey of the 2nd Initial Meridian and adjoining townships was being carried on, much inconvenience was experienced owing to

the numerous swamps and great quantity of water everywhere.

In accordance with your authority all the subdivision surveys of this season were

marked with a post and mound only, the tin being discarded.

The posts used are somewhat larger than those used with the tin, and the necessary marking is put on the post itself with a file or cold chisel. The great trouble and complaint regarding inability to distinguish the positions of posts, owing to the tins having been lost or removed, will now be obviated.

Although the first cost of these larger posts is slightly greater than the posts and tins, I feel confident that the surveys will be much more permanently marked

by using the larger posts.

I would respectfully draw attention to a suggestion made to me by Mr. D. L. S. McLatchie in one of his reports during the summer, and in regard to which he has, I understand, reported to you, viz. that iron posts and mounds should be placed at all corners in wooded country, where at present wooden posts and bearing trees are placed. I am very much in favor of the adoption of Mr. McLatchie's suggestion. Its advantages are obvious. The larger portion of the wooded district of the Territories is covered with timber of comparatively small growth, and this timber is subject to almost annual fires, which in many cases completely destroy the wooden posts and bearing trees.

The iron posts and mounds would not be affected by these fires; and the additional cost, if any, in first surveying a township, is trifling in comparison with the

value of the permanent marking secured.

Mr. McLatchie found great difficulty in locating many of the points marked by posts and bearing trees on some of the old lines examined by him; and during the past two seasons we have re-surveyed townships owing to the first posts and bearing trees being entirely obliterated by fires.

It seems like formal repetition to speak each year of the progress noted in the prominent points in Manitoba and the Territories, and in the country generally; but

[PART II]

19

this progress is so marked and noticeable, particularly to those of us who visit the country annually, and who have seen the wonderful—for they are really wonderful—strides made during the past fifteen or sixteen years, as to warrant mention.

In those places passed through in travelling along the main line of the Canadian Pacific Railway, and also on the branches of this road, and on the Manitoba and North-Western Railway, each year sees a marked growth and improvement—a few new buildings here, graded streets and sidewalks there, new faces at all points; and a general air of solid growth is fast removing the appearance of newness, which many centres had not long since.

The same may be said of the country generally. I see a large portion of both Manitoba and the Territories during each of my annual visits, and have been struck during the last two seasons with the general improvement in the character of farm

buildings, fences, etc.

In closing this report I would bear testimony to the satisfactory manner in which the correction surveys were performed by those gentlemen working under my immediate instructions, and also to the ready and prompt way in which all instructions issued by me to any of the Surveyors employed by the Department were carried out.

The usual schedule shewing correction surveys effected during the season is appended.

I have the honor to be, Sir, Your obedient servant,

> J. S. DENNIS, Inspector of Surveys.

E. DEVILLE, Esq., Surveyor General, Department of the Interior. Schedule of Correction and Examination Surveys performed during Season of 1889.

Township.	Range.	West of	By whom Performed.	Description of Work done.
2nd In	itial Mo	eridian	L. Gosselin	The Meridian was re-traced and re-measured from the north boundary of Township 18 to north boundary of Township 27, and a portion of each township chord closing on the Meridian was re-surveyed and closings checked; the closings of certain section lines in each township were also checked.
18	31	1	do	Posts and mounds on both sides of Correction Line moved to correct
18 18 33 34	32 33 1 1	$\begin{array}{c c} 1\\1\\2\\2\end{array}$	do	position. do do do do Posts on 2nd Initial Meridian changed from old to new system. do do do
4th In	itial M	eridian 	E. W. Hubble	The Meridian was re-traced and re-measured from the north boundary of Township 20 to the north boundary of Township 48, mounds were rebuilt, and mounds of old system removed. The posts and mounds were offsetted between the 11th Base and 11th Correction Line to provide for jog in Meridian.
21	29	3		This township was re-subdivided.
$\begin{array}{c} 22 \\ 42 \end{array}$	29 1	3	do J. L. Reid	do do The north and south boundaries of this township surveyed and
				marked
42 A 49	1	3 3	do	Northern boundary surveyed and marked. Subdivision of portion of township south of North Saskatchewan River.
44	4	3		River lots surveyed.
44 22	5 4	3 1	do	do do
18	5	1	John McAree do	Eastern boundary surveyed. Northern do
19	10	1		Northern do Southern do
18	10	i	do	Northern do
-ĕ		E of 1	do	Eastern do
8	25	W of 1	do	do do
4	6	1	do	do do
13	10	1	do	Portion of township subdivided.
16	22	1	do	Lake in Sections 27, 33 and 34 traversed.
19 Main t	26	1	do	Portions of south half of Sections 13 and 14, originally in Indian
Main trail Morris to International Bdy do			do	Reserve, surveyed and marked. Posts omitted in original survey of this trail were placed.
16	16	an Duy	do	Examination of reported errors in positions of posts.
5th Ini	5th Initial Meridian C. F. Miles			This Meridian was re-surveyed from the 7th to the 3rd Bases.
12	29	4	do	Township re-subdivided.
12	30	4	do	do do
8	22	4	do	N.W. 1 Section 3, formerly in Blood Indian Reserve, surveyed.
6	1	5	do	Road surveyed in Sections 18 and 19.
5 7	30 28	4	do	Portion of township subdivided.
4	28	4	do do	Sections 7 and 18, formerly in Piegan Indian Reserve, surveyed. Eastern boundary re-surveyed.
4 2	25 25	4	do	Lastern boundary re-surveyed. Interior Meridian do
-		^	uo	ALEVOLICE AND AMERICAN CO.

J. S. DENNIS,
Inspector of Surveys,

No. 5.

REPORT OF J. McAREE, D.T.S.

CORRECTION SURVEYS IN MANITOBA, 1889.

WHITEMOUTH, MANITOBA, 23rd December, 1889.

Sir,—I have the honor to submit the following general report of my past season's work on Correction and Inspection Surveys in the Province of Manitoba.

Upon my arrival in Winnipeg on the 23rd of May I reported to Mr. Dennis, and began preparations for the trip to Pine Creek, on Lake Winnipegosis, to lay out lots

for the settlers there.

After obtaining the best information available, I decided to go by the west shore of Lake Manitoba. Accordingly, with two horses, a cart and buckboard, and accompanied by one man, a start was made from Winnipeg on 28th May, and, passing through Portage la Prairie and Westbourne, we took the trail along the west shore of Lake Manitoba and arrived at Manitoba House on 4th June. From Sandy Bay the trail was in a very bad condition, there being no choice between the loose sand of the lake shore and the boggy soil of the track inside. On our return some five weeks later the inside track was tolerably good. No canoe being obtainable at Manitoba House, we took passage on a boat of the Hudson's Bay Company, going to Pine Creek with supplies for the post there, and reached our destination on 11th June, having met with unfavorable winds during most of the voyage. The settlers at Pine Creek are French Halfbreeds, chiefly from Duck Bay, Lake Winnipegosis, or from St. Laurent, Manitoba, and Indians on the reserve. All subsist, to a greater or less extent, by hunting and fishing, and the employment afforded by the fur trade, although some have cattle, and nearly all cultivate some potatoes.

Marshy land, yielding an inferior grass and hay, is found in considerable areas along Pine Creek, and a large amount of stock might be kept. These open, grassy tracts, which appear in nearly every instance to be of a marshy character, are the result of the saline quality of the soil, in every case due probably to the percolations from brine springs. The vents of some of these springs were pointed out in the marsh at one place by the natives. The springs were then dry, but I was shown a sample of water from a shallow excavation in the cellar of one of the houses, which, although quite clear and icy cold at that season, tasted like a strong solution of common salt.

Outside the grassy areas, all is forest, consisting of poplar, spruce, white birch and tamarac of good size. There is no true prairie.

The soil of the woodland appears to be very good, and would no doubt produce

abundant crops under cultivation.

Pine Creek itself, from its mouth to the rapids a little above the Hudson's Bay Company's post, is a somewhat sluggish stream, with an average width of about two chains. It enters Lake Winnipegosis through marshy land, which extends along the left bank with gradually diminishing breadth, almost to the rapids, but ends on the right bank before the south boundary of the Indian Reserve is reached. Above the rapids the stream is about a chain wide. The Hudson's Bay Company have a trading post at Pine Creek, as have also Messrs. Hartmann & Co. Bears, other fur-bearing animals, and moose, are still comparatively plentiful in the adjacent territory. Revd. Father Dupont has for several years resided here in the capacity of parish priest and missionary to the Indians, and during the past winter has got out hewn logs for the erection of a church, which was to have been built this summer. He has had a school for the Indian and Half-breed children in operation a considerable time. The reverend gentleman has the only garden. The cultivation of grain has not yet been attempted in the settlement.

I found nine lots to be sufficient for the requirements of the settlers at present. There are a greater number of families than this, but owing to the fact that there are three natural frontages, viz., the shore of Lake Winnipegosis, and the two banks of Pine Creek, the houses were so crowded that in some instances I found it impossible to lay out the lots, so that no single lot should have more than one house upon it. This is easily seen from the plan.

'Little or no dissatisfaction was caused, however The lots have an average area of about 160 acres, with a normal depth of about 160 chains; they are staked off along a base line in the usual manner of river lots, and the system abuts upon the Indian Reserve, with the usual road allowance of 1 chain between the two surveys.

Besides laying out the lots, I located the trail across the settlement.

The survey having been completed, being uncertain when there would be a chance of returning to Manitoba House by boat, and being unable to make any satisfactory arrangement about a canoe, I engaged a team, and taking the Indian trail towards Riding Mountain, by the west of Lake Dauphin, I arrived at the Half-breed settlement on Turtle River, a few miles from the south end of Lake Dauphin, where I expected to get conveyance to Manitoba House. All the horses of the settlement were absent, however, and I was obliged to wait several days before starting again. Manitoba House being at length reached, we resumed our journey with our own horses which had been left in charge of a settler, and reached Winnipeg on 10th July.

Procuring three additional horses and carts, and otherwise completing my outfit, and being now joined by my assistants, I left Winnipeg on 15th July for the regular work of the season. I had three assistants, one laborer and a cook, five horses, four

carts and a buckboard.

My first work was to run the east boundary of Township 6, Range 3, east of Principal Meridian. We found that this line had been run at one time, and as the land was occupied I, according to my instructions, did not change any of the

corners, but put in new posts.

My next work was putting iron posts in the mounds along the (west) side of the trail from Morris to the international boundary, surveyed by Mr. McPhillips, D.L.S., in 1886. These posts were of the length required for section corners, being made of 1s in. gas pipe. They are numbered consecutively along the trail, beginning at Morris. In addition to its number each post bears the letter "R" on the side next the trail. The number of the post at the international boundary is "124," No. 1 being in the initial mound on the west side of the main street of Morris.

My next work was to survey the east boundary of Township 4, Range 6, west of Principal Meridian. This line I found had been previously run; I therefore did not

change any of the corners, but ran it over again, and put in iron posts.

Next I proceeded towards Township 9, Range 7, west of Principal Meridian, where the east boundaries of Sections Nos. 5, 8, 17, 20, 29 and 32 had to be run. Coming to the southwest quarter of the township, however, we found the whole country a brulé, growing up with a dense growth of poplar, willow, &c., in which we could find no post, line, or mark of survey. It being evident that a very considerable amount of work would be required to establish the starting point for our line, so much of the survey of the township having been obliterated, I decided to let the work stand, and report the state of affairs to the Inspector of Surveys, and proceed with some other work. In reply the Inspector ordered me not to go on with the work.

From Township 9, Range 7, west of 1st Principal Meridian, we went to Oak Lake, to run the east boundary of Township 8, Range 25, west of 1st Principal Meridian. On account of the dense growth of tall reeds on the east boundary of Section 1 we were obliged to desist and leave the line unrun; we ran it, however,

later in the season, while en route to the work on the Antler creek.

In order to give the weakest of my horses a rest, I had left my main camp some thirteen miles south of Brandon, and made a flying trip to Oak Lake. Returning from Oak Lake we proceeded *via* Brandon, Carberry and Gladstone to Woodside, on the M. and N. W. Ry. and began work there, to complete the subdivision of

Township 13, Range 10, west of Principal Meridian. A good deal of time was consumed in recovering old lines and monuments, both when starting the work and when connection had to be made with old work. The work was additionally tedious on account of the marshy nature of the ground, and we desisted before the lines were all run, intending to finish on our way from the west later in the season when the marshes would be frozen over.

Our next work was to run the north boundary of Township 18 and the south boundary of Township 19, in Range 10, west of Principal Meridian. Returning from this we camped near the north-east corner of Township 13, Range 10, and completed the survey of it. Next we proceeded to examine Townships Nos. 5 and 6, in Ranges Nos. 31 and 32, west of Principal Meridian, being contract No. 5 of this season, halting on our way at Oak Lake to complete the survey of the east boundary of Township 8, Range 25, west.

Having completed the examination of contract No 5, we went north by the Moosomin Trail, through Moosomin and Fort Ellice to Todburn, and ran the east boundaries of Sections 13 and 14, Township 19, Range 26, west, south of the Indian Reserve.

Next we moved to Strathclair and traversed the lake on Sections 27, 33 and 34, in Township 16, Range 22, west of Principal Meridian. In the subdivision of the township this lake had not been surveyed, but was described as a dry lake bed. Then we took up our march for Township 16, Range 16, west of Principal Meridian, which township it was stated contained numerous errors in the subdivision survey, which I was instructed to investigate. I made an examination by chaining over a number of lines, the result of which was that the reports of inaccuracies were fully justified. Most of these errors might be corrected, to a considerable extent at least, without disturbing any of the settlers in the improvements they have made. Details will be found in my special report of the examination in question. The Hungarian immigrants settled in this township appear to be thriving, and are evidently an intelligent and industrious people.

Our next work was to survey the north boundary of Township 18, Range 5, west of Principal Meridian. The line had been run, but not very accurately, and we therefore made new mounds throughout, there being no vested interests in the way of improvements on the land to be interfered with.

Next we proceeded with the examination of the contracts of 1888, for the subdivision of Townships 21, in Ranges 3 and 4; Townships 22, in Ranges 3, 4, 5, 6, and 9; and Township 23, in Range 5, all west of the Principal Meridian.

I also resurveyed the east boundary of Towhship 22, Range 4, west of Principal Meridian. While engaged in this examination work I was joined by N. R. Freeman, D.L.S., who had received instructions to assist me. Thereupon I left the completion of the work to him, viz., the examination of Townships 21, Ranges 3 and 4, of Township 22, Range 9, and to finish in Township 22, Range 4, and Township 23, Range 5.

I then proceeded to Winnipeg, and sold my horses and carts by auction, according to instructions, before proceeding by rail to Whitemouth to examine certain contract surveys there. One horse had become so emaciated through some ailment that he had to be abandoned at Mr. J. Crawford's, on Section 12, Township 21, Range 4, west.

Having disposed of my transport outfit, I went to Whitemouth to make an examination of certain townships in survey contracts in that neighborhood. This work will be finished in a day or two, when I shall return to Winnipeg to disband my party.

The season has been a fine one for camping out, owing to the slight rainfall; and the trails, owing to the same reason, were generally in good condition. Nearly all the ponds and sloughs in the country are dried up, and the lakes and streams have reached a lower level than has been seen for many years. On the open prairies of Manitoba the crops have been very light as a rule, while in the timbered or partially timbered parts they have been fairly good.

This disparity was no doubt due to the more moist condition of the soil in the wooded country, derived from the snow which drifts in the brush, whereas on the open prairie it blows away.

I shall have the honor to transmit to your office, as early as possible, the returns

of my surveys, consisting of plans, field notes, reports and accounts.

I have the honor to be, Sir, Your obedient servant,

JOHN MCAREE, D.T.S.

E. DEVILLE, Esq., Surveyor General, Ottawa, Ont.

No. 6.

REPORT OF L. GOSSELIN, D.L.S.

CORRECTION SURVEYS ON AND NEAR 2ND INITIAL MERIDIAN.

Quebec, 23rd November, 1889.

Sir,—I have the honor to submit the following report of my operations during

the past season.

I left Quebec on the 25th of May for Winnipeg, where I had to receive my final instructions. I spent two days in that city in order to buy the part of my outfit that could not be obtained in Wapella or Moosomin; I also hired there the two men needed to complete my party, and proceeded then to Wapella, where I bought the rest of my outfit and my supplies. Some further delay was caused by the non-arrival of my outfit from Winnipeg until the 10th of June, at which date I left Wapella and proceeded to the north-west corner of Township 18, Range 33, west of the Principal Meridian.

After a few days work on this correction line, I saw that both sides of it would require resurvey, instead of only one side as set forth in the memorandum given me with my instructions. Being doubtful what to do, I reported the matter to Mr. J. S. Dennis, Inspector of Surveys, and meanwhile proceeded to Township 20, Range 33,

in which I effected the necessary corrections.

I then began to work on the 2nd Initial Meridian, in Township 21, but after a few days I was obliged to abandon that also, being convinced that I could not carry out my instructions, because the existing errors differed so much from those mentioned therein. Having received an answer from the Inspector of Surveys relative to the corrections to be made on the 5th Correction Line, I returned there and moved the posts and built new mounds on both sides in Ranges 33, 32, and part of 31. The owner of Section 34, Township 18, Range 31, would not allow me to move the posts, but the changes to be made there were very small.

During this survey, two of my assistants were for a week unfit for work.

According to new instructions received I then returned to the 6th Base Line, and continued the re-survey of the 2nd Meridian as far as Churchbridge, on the Manitoba and North-Western Railway. Finding that I met with the same difficulties as before in carrying out my instructions, I telegraphed to the Inspector of Surveys requesting him to meet me at Churchbridge if possible.

He came on the 4th of August, and after hearing full explanations, gave me fresh instructions how to proceed. Following these, I re-surveyed the 2nd Meridian again, from the 6th Base Line going north, running a part of every township chord and some subdivision lines in every township, always from the posts of the original survey on the 2nd Meridian, so as to be able to understand the exact position of affairs on the ground.

I was obliged to abandon this work however at Stony Creek, in Township 27, having to travel some nine miles from my camp to the work in consequence of the

scarcity of water.

I then started for Fort Pelly, to change the posting from the old system to the

new on the 2nd Initial Meridian, in Townships 33 and 34.

After having completed that, not being able to procure any supplies at Fort Pelly except flour and bacon, I went back to Wallace, where I learned from the Postmaster that I could now find some water in one place in Stony Creek, so I returned there to continue the work abandoned some weeks before.

From my camp there I re-surveyed the 2nd Meridian in Township 27 and in part of Township 28, where I was obliged to give up work a second time for want

of water, having six or seven miles to walk to get to work. I expect that in the remaining townships up to 33 the same errors will be found to exist as in those I examined.

Having no instructions for other work I went to Whitewood, and thence to Moosomin, where I had my horses and outfit sold by auction, this being the only

place where they could be disposed of to advantage.

To account for the slowness of my operations I would draw your attention to the fact that I had to find all the old posts, which sometimes involved a great loss of time, to open all the east and west lines, and very often the meridian line, and also to do much travelling.

The summer has been so dry that if I had not been supplied with water by settlers I should not have been able to continue the survey. I was obliged very often

to camp a long distance from my work.

I reached Moosomin on the 16th of October and left that place for Winnipeg on the 18th.

I have the honor to be, Sir, Your obedient servant,

LOUIS GOSSELIN, D.L.S.

E. DEVILLE, Esq., Surveyor General, Ottawa.

No. 7.

REPORT OF E. W. HUBBELL, D. L.S.

EXAMINATION AND CORRECTION OF SURVEYS.

OTTAWA, ONT., 11th December, 1889.

Sir,—I have the honor to submit the following general report upon my operations for the past season.

In compliance with your instructions dated 7th May, 1889, I reported myself to Mr. J. S. Dennis, Inspector of Surveys, with whom I proceeded to Winnipeg,

arriving there on the 16th.

On the 18th I received further instructions from Mr. Dennis to retrace, re-measure and offset the 4th Initial Meridian, making corrections where necessary, and to

inspect and correct certain townships west of the 3rd Initial Meridian.

Leaving Winnipeg on the 19th, I arrived at Medicine Hat the following day, where I completed my party and the greater portion of my outfit, and on the 25th, in company with Mr. Dennis, I proceeded to Calgary, where I received the remainder of my outfit and shipped it to Medicine Hat.

We were delayed at Medicine Hat for some time awaiting iron posts, which I

was informed had been shipped to me from Winnipeg on the 21st.

The posts not having arrived at Medicine Hat on the 30th, I telegraphed Mr. Dennis at Calgary to that effect, who instructed me that if they did not arrive by the 31st I was to leave without them and proceed with my work. As they did not come to hand on the date specified we accordingly left Medicine Hat on the 1st June, and arrived at the forks of the Red Deer and Saskatchewan Rivers on the 6th.

Here we experienced considerable difficulty in crossing our outfit, both on account of the rapidity of the current, the high water at the time, and the unsuit-

able character of the means for crossing.

After leaving the forks our progress was retarded in some measure by scarcity of wood and water.

I arrived at the north boundary of Township 48, where I commenced operations, on the 22nd.

I was unable to obtain a good observation for azimuth until the 24th, owing to the dense smoke; this prevailed more or less during the whole summer, and was

a great obstacle to rapid progress.

Having obtained an observation, I found the azimuth of the meridian north of On working south from this point, I discovered the greater number of mounds previously made to be slightly incorrect, and these, according to instructions, we destroyed, placing new ones in proper position.

This was done in Townships 43 to 48, inclusive, and in some others where two rows of mounds existed, one being of the old system of survey. On arriving at the eleventh base I found an error in azimuth of about two chains, which I corrected

according to instructions, by leaving it on the eleventh correction line.

Leaving the eleventh base and working south towards the forks, we found no wood whatever and great scarcity of water, the latter owing to the exceptional and continued drought, which was only broken by one rainfall during the summer. In consequence of this we experienced extreme difficulty and inconvenience in proceeding with our work as quickly as we otherwise would have done, inasmuch as we were obliged to locate our camp where water could be obtained, and had to travel many miles every day between camp and the point of operation.

Again, the effect of the protracted drought upon the ground was such that the surface was warped into hummocks in many places, and broken open into wide deep cracks in others, so that travelling by buckboard, and even on horseback, was rendered

tedious and unsafe.

28

On one occasion my buckboard, in which I was often obliged to carry four persons, was broken down by pitching into one of these cracks; and owing to the roughness of the ground our horses were badly galled by the constant chafing of the shafts and harness.

Adverting to the character of the country where we carried on these operations, I may say that the soil generally possesses good agricultural qualities, being a

rich black loam, varying to sandy loam, with clay subsoil.

From Township 41 I was compelled to send my cook (the only available man) to Medicine Hat, a distance of 200 miles, for provisions. But, he losing his way and meeting with an accident which very nearly had fatal results, I did not see him again for fifteen days.

Having completed the work to the forks, on the 1st September we recrossed the river taking our outfit on rafts specially built for the purpose. This crossing proved to be much easier than that on our way north, owing to the extreme lowness of the

water in the river.

Leaving my party at the forks in charge of Mr. O'Keeffe, my assistant, to make repairs to the outfit, of which it stood greatly in need, I proceeded to Medicine Hat as pre-arranged by Mr. Dennis, and, accompanied by him, I returned to the forks and together we made an examination of work in Township 21, Range 29, west of the 3rd Initial Meridian.

After the departure of Mr. Dennis on the 10th September, we finished work on the 4th Meridian and proceeded to inspect and correct the subdivision of Townships

21 and 22, Range 29, west of the 3rd Initial Meridian.

We commenced the subdivision of Township 21 on the 16th of September by running the north boundary. The western two and one half miles are cut up with large coulées, which made chaining over this part impossible.

The eastern boundary of the township was then resurveyed to locate the south-east corner of the township where an iron bar was found in the drifting sand hills.

The southern part of the township is of such a sandy character that the mounds retain their form but a short time, and for this reason few of the old posts and mounds were to be found. The sand hills are covered in places with bluffs of cherry and willow scrub. The northern part is good agricultural land, being a black loam with clay subsoil.

This township was corrected according to instructions; posts were moved and new mounds built wherever they were found to be incorrect.

On the 3rd October we commenced the correction of Township 22 by running easterly across the township from the north-west corner of Section 19; this line runs through immense coulées and ravines, rendering chaining impossible, and necessitating a series of offsets and trigonometrical calculations. The subdivision of the remainder of the township was then proceeded with and necessary corrections made. Progress in this township was very much retarded owing to deep coulées and ravines, which extend from the South Saskatchewan and Red Deer Rivers for miles; work was also much hindered from having to make 18 crossings of these rivers with the lines surveyed.

No water is to be found in Township 21, but several small springs feed the river in Township 22. These townships are well adapted for grazing purposes, as was to be seen from the condition of a large herd of cattle and horses belonging to Messrs. Palmer and Carre who are located at the forks. These animals destroy mounds almost immediately after they are built, and for this reason I would respectfully recommend that posts and pits be substituted in any further corrections of old surveys that may be necessary in this locality. A number of river lot mounds found in Township 22 were destroyed according to instructions.

Before completing work the rivers were filled with floating ice, and finally frozen over on the 8th November. As the season was getting far advanced and the days of short duration, I concluded to stop field operations for the year. I left the forks for Medicine Hat on the 12th November, in the midst of a heavy snowstorm which

lasted three days: arriving at Medicine Hat on the 15th, I pitched camp and awaited

remittances from Calgary, which arrived on the 18th.

After paying off the party on the following day, and having stored my outfit with Messrs. Tweed and Ewart, I left for Ottawa on the 20th. I am now engaged making the necessary plans, notes, &c., of the various correction surveys intrusted to me, which will be forwarded to you with all possible despatch.

I have the honor to be, Sir, Your obedient servant,

E. W. HUBBELL, D.L.S.

E. DEVILLE, Esq., Surveyor General Ottawa Ont.

No. 8.

REPORT OF EDGAR BRAY, D. L. S.

SURVEY OF TOWNSHIP OUTLINES.

Dauphin Lake, 15th December, 1889.

SIR,-I have the honor to forward the following report of the work performed by me up to the 14th December 1889.

I left home on 13th September and arrived in Winnipeg on the 16th, where I purchased the necessary supplies and camp outfit and shipped them to Strathclair.

I proceeded with my party to Strathclair on the 24th, but the bulk of my outfit did not arrive until the 28th.

While at Strathclair I bought four horses, and, as I could not obtain any carts, I was compelled to take a waggon. I also engaged two teams to freight my supplies to the Dauphin Settlement.

We arrived at McIntosh's store on 3rd October and there arranged for and stored my extra supplies, &c. In this settlement I bought a cart, which I had repaired. It

has been very serviceable.

On 7th October we left for the corner of Township 24, Range 20, west of the Principal Meridian, and found that a road would have to be cut through some woods. Owing to this, and to the entire absence of water, it was not until Monday the 14th October that we began work on the 7th Base Line. I may say here that almost the only places where water is found are in Valley and Drifting Rivers. This want of water greatly delayed the survey, as it compelled us to walk long distances to and from our work.

The work performed to date comprises the outlines of Townships 25 and 26, in

Ranges 21 and 22, and the 7th Base Line across Range 23, in all 66 miles of line.

Tp. 25, R. 21.—Along the 7th Base Line there is excellent soil, and in the remainder of the township good land is plentiful. Valley River runs through the north westerly sections of this township, and along the river some light sandy land is found. Except a small area in the south-west corner, this township appears to be wooded with poplar and, in some places, spruce; but a considerable portion of the timber has been killed by fire.

Tp. 25, R. 22.—The southerly and south-westerly sections of this township consist of a very scrubby prairie, called here, "Gilbert Plains." The balance of the township is pretty well covered with woods of small poplar and scrub, which here been mostly killed by fire. The soil is nearly all first rate being a sandy loam with a clay subsoil. Valley River enters the township in Section 7, and flows north

easterly, making its exit in Section 25.

Tp. 26, R. 21, has some open country near Valley River, but in all the other sections it appears to be wooded with poplar and small bluffs of spruce, a large quantity of which has been killed by fire. Valley and Drifting Rivers run through portions of this township, the former in the south east and the latter in the north. The soil is of fair quality, except along Valley River where sand is occasionally met

Tp. 26, R. 22, is mostly good land. Poplar and spruce timber covers the northerly sections of the township, while the remainder is mostly covered with small poplar and scrub now nearly all dead. Drifting River flows easterly through the north-easterly sections of this township.

Tp. 25, R. 23, appears to be excellent land and lies mostly in Gilbert Plains. Scrub is very plentiful and some timber was found. Valley River runs easterly

through the township, along which some light sandy land was seed.

Tp. 24, R. 21, is probably half woods and half scrubby prairie, the woods covering the easterly half. The soil so far as seen was of excellent quality.

Tp. 24, Ranges 22 and 23. Scrubby prairie with a first class soil of loam, and in most cases a clay subsoil. The surface is slightly rolling with mostly long gentle slopes, giving good drainage. Dead fallen timber is frequently found, but live woods were not visible from the 7th Base Line.

I have the honor to be, Sir, Your obedient servant,

EDGAR BRAY, D.L.S.

E. DEVILLE, Esq., Surveyor General, Ottawa, Ont.

No. 9.

REPORT OF J. McLATCHIE D. L. S.

TOWNSHIP OUTLINE SURVEY.

DEVIL'S LAKE, Assa. 10th December, 1889.

Sir,—I have the honor to submit the following report of outline surveys performed by me during the past season in the District of Assiniboia, in the North-West Territories.

The townships outlined were Townships 29 and 30, in Ranges 9, 10, 11, and 12, situate at Beaver Hills, Townships 31 and 32, in Ranges 5, 6, 7 and 8, and Townships 29 and 30, in Ranges 4 and 5, in the vicinity of Devil's Lake, all being west of the Second Initial Meridian.

Township 29, Range 9.

This township is thickly wooded; the southerly half with poplar from four to

eight inches in diameter, the northerly half with small poplar and willow.

The surface is rolling, but not hilly or broken. The soil is composed of black loam from four to ten inches in depth, with clay subsoil, and is good agricultural land. Only a limited supply of hay can be procured in this township, as the hay marshes are neither numerous nor extensive in area. The whole township has been overrun by fire during the past season which has destroyed most of the timber of any value. Three creeks run in an easterly direction across the township, with banks from 60 to 100 feet in height.

Township 30, Range 9.

The southerly half of this township is covered with a thick growth of small poplar and willow; the northerly half with clumps and belts of poplar and willow, with openings of scrubby prairie and scrub. The soil in the southerly half of the township is composed of black loam with clay subsoil; in the northerly half the subsoil is gravel. A creek enters this township in Section 7 and, running in an easterly direction across it, leaves it in Section 12. This creek and several ponds in the township give an unlimited supply of good water.

Several ponds containing water, strongly alkaline, are also found in this

township.

The southerly half contains some good farming land and a few hay marshes; the northerly half would be suited for sheep and cattle raising, and would besides produce a considerable quantity of hay.

Township 29, Range 10.

This township is thickly wooded with poplar and willow, excepting a portion of the north-west quarter, where poplar and willow are found in clumps and belts, with openings of scrub, and scrubby prairie. The soil varies from a sandy to a black loam, with clay subsoil, and is good agricultural land. The surface is rolling. It contains a fair proportion of hay land. A creek taking its rise from a spring, half a mile south of the township line, enters this township in Section 4, and, running in a north-easterly direction, leaves it in Section 36. A spring containing good water was found in Section 33, near the north boundary of the township. The greater portion of the township has been overrun by fire during the past season, which destroyed much valuable timber.

PART II

Township 30, Range 10.

The surface of this township is rolling. The ridges are mostly covered with a thick growth of poplar and willow, the valleys with thick willows and willow scrub. surrounding the hay marshes. The soil is a sandy and black loam, with clay subsoil.

It is well suited for agricultural purposes.

A creek enters this township in Section 35, and, running in a southerly and then an easterly direction, leaves it in Section 12. Several springs on this creek give a supply of good water.

Township 29, Range 11.

The surface of this township is rolling, and in places hilly. The ridges are usually covered with a thick growth of poplar and willow, spenings of scrub, scrubby prairie, and hay marshes intervening between the belts and clumps of timber. The soil is a sandy and black loam, with clay subsoil, and is well suited for farming or stock purposes. A creek enters this township in Section 18, and, running in a northeasterly direction, leaves it in Section 33. It contained no water where it entered the township, but was supplied from a spring east of the township line. A spring containing good water was found in Section 24 near the east boundary of the township.

Township 30, Range 11.

The surface of this township is rolling. It is partly wooded with a dense growth · of poplar and willow, occurring in clumps and belts, with openings of scrub, scrubby prairie and hay marshes. It is well suited for agricultural or stock purposes, the soil being a sandy and black loam, with clay subsoil. A creek containing an abundant supply of excellent water enters this township in Section 4 and leaves it in Section 32. The cart trail from Touchwood Hills to Fort Pelly passes through Section 31.

Township 29, Range 12.

The surface of this township is slightly rolling. It is partially covered with poplar and willow in belts and clumps, with openings of scrub, scrubby prairie, and hay marshes intervening between the belts and clumps of timber. The soil is a The soil is a sandy and black loam, with clay subsoil. It is well suited for farming or stock purposes. One creek enters this township in Section 1, and leaves it in Section 13; another enters in Section 3, and leaves in Section 31. Neither of these creeks contained any water, nor was there any water found in this township. It was overrun by fire several years ago, destroying much valuable timber.

Township 30, Range 12.

This township is slightly rolling, and is fairly well timbered in belts and clumps,

with scrub and scrubby prairie openings. It contains a fair quantity of hay land.

The soil is a black and sandy loam, with clay subsoil, and is well suited for stock or farming purposes. One creek enters this township in Section 6, and leaves it in Section 35. Another, supposed to be Duck Hunting Creek, containing good water, enters in Section 30, and leaves in Section 34. Still another, crossing and recrossing the north boundary, runs from west to east, leaving the township in Section 33. The eart trail from Touchwood Hills to Fort Pelly, passes through this township in a north easterly direction.

Township 31, Range 5.

This township is slightly undulating. It is partly wooded with poplar and willow, and contains some extensive hay marshes. The soil is a sandy and black loam, with clay subsoil. It is better suited for stock-raising than farming. PART II

Township 32, Range 5.

This township contains some large hay marshes. The ridges are lightly timbered with poplar and willow.

The soil is a sandy and black loam, with clay subsoil. This would be a good township for stock-raising, or for mixed farming.

Township 31, Range 6.

This township contains some good farming land along the banks of Devil's Creek, which enters the township in Section 33, and leaves it in Section 14. There is some good hay land in the creek valley and in other portions of the township. At the west outline of the township there is a heavy belt of poplar. The rest of the township is scrubby prairie, with clumps of poplar and willow.

Several persons located on Devil's Creek are going extensively into sheep

and cattle ranching.

Township 32, Range 6.

The northerly half contains large hay marshes and belts of poplar timber. The southerly half is open prairie with clumps of poplar and willow. Devil's Creek enters this township in Section 18, and leaves it in Section 4. The soil is black loam with clay subsoil, and is well suited for farming or stock-raising.

Township 31, Range 7.

This township is mostly covered with poplar and willow. Belts of poplar from 6 to 10 inches in diameter are found on the north, east, and south boundaries. The soil inclines to sand and sandy loam, with gravel subsoil on the south boundary, while in the northerly part there is sandy loam with clay subsoil. The township contains a number of hay marshes, and is better suited for stock than for farming purposes.

Township 32, Range 7.

This township is covered with a thick growth of poplar and willow, and contains a great number of small hay marshes.

The soil is a sandy and black loam, with clay subsoil, and is equally well adapted

for farming or stock-raising.

The northerly part has been overrun by fire during the past season, which has destroyed some valuable timber.

Township 31, Range 8.

The White Sand River enters this township in Section 30, and leaves it in Section 17. The township is lightly wooded with poplar and willow. It contains a considerable number of hay marshes, and the soil is light and gravelly. It is not a desirable township for settlement but would be good grazing land for cattle or sheep, especially the latter.

Township 32, Range 8.

The northerly half of this township is very thickly wooded with poplar and willow. The southerly half is lightly wooded with clumps of the same wood. It contains a great number of small hay marshes. The soil on the north and east boundaries is a sandy and black loam, with clay subsoil, while on the south boundary it is light and gravelly. This is only an average township for either stock or farming purposes. It has been overrun by fire during the past season, destroying much valuable timber.

Township 29, Range 4.

The White Sand River enters this township in Section 3, and leaves it in Section 25, and along the river banks there is some good farming land. The soil is generally a sandy loam, with sand subsoil.

This township contains a large number of hay marshes, and is thickly wooded, in belts, with poplar and willow, and is well suited for stock-raising or farming. Several settlers have already located in it, with the intention of raising horses.

Township 30, Range 4.

This township contains some extensive hay marshes. A thick growth of poplar and willow occupies the ridges. The soil is a sandy loam, with subsoil of sand in the south, and clay in the north part of the township. It is well adapted for either farming or stock-raising.

Townships 29 and 30, Range 5.

Devil's Lake, a beautiful sheet of water about eight miles in length and three miles in breadth, is situated in these townships. It contains excellent water, probably the best water to be found north of the Qu'Appelle and west of the Assiniboine Rivers. It also contains a great number of pike, or jack-fish, some having been caught weighing as much as twenty pounds; and, being the only lake containing fish in this locality, it is extensively patronized by the settlers.

On the south east side of the lake, sand hills, composed of blown or drifting sand, rise to a height of from 60 to 100 feet, and besides poplar, sustain a growth of willow, cherry, saskatoon and juniper bushes. Immediately east of the sand hills the country is low, level, and marshy. These townships in an ordinary season would produce an immense quantity of hay; although the past season was dry there was a great quantity of hay cut, so that there are now wintering in the vicinity of the lake, and mostly in these two townships, about 1,000 head of cattle and horses. If the season had been favorable for producing hay 10,000 might be wintering here just as easily. There is no water running out of the lake, and but little appearance of an outlet, as it passes into marshes on its way to the White Sand River. The Indians, however, claim that there was a time when they could paddle their canoes up from the White Sand River into Devil's Lake; and I think there is nothing unreasonable in this, as in 1880, when the block line was run between Ranges 4 and 5, many of the posts appear to have been placed in the marshes in water two or three feet in depth, while during the past season the marshes were perfectly dry, so dry that they only produced an indifferent crop of hay. The soil is a sandy loam, with subsoil throughout of sand.

The ridges between the swamps are covered with a thick growth of poplar and willow. While there is some fair farming land in these townships, they are better

adapted for stock-raising than farming.

In carrying on the survey during the past season there were two difficulties to contend with—scarcity of water and prairie fires. After a succession of dry seasons there was a very light fall of snow during the past winter, which had all disappeared in the month of March, so at the outset it was difficult to procure water. The usual June rains failed, and a dry, hot summer followed. By digging wells and camping at places where water could be procured, at great distances from the work, and by using water from alkaline ponds, June and July were passed. Throughout the remainder of the season water was drawn in barrels, often more than 10 miles.

The horses had also to be taken to get their daily supply. In one instance, in Beaver Hills, I sent 7 or 8 miles for water, and had to do without water, or dinner,

until after 3 o'clock.

The following day a spring was found, 10 or 12 chains from camp. I only give this instance to show that in an unexplored region both men and horses may be suffering for want of water, while if settled, or better known, an abundant supply The troubles that arise in surveying an unknown country would often disappear entirely if the country was well known.

The difficulties arising from the scarcity of water are considerably increased

when the country has been overrun by prairie fires.

If the camp is placed where it best suits the work, the horses have to be sent miles away to get feed; then the feed is not always found where water is, and 36 PART II

the horses have to be taken to water, and back again to the feeding ground; otherwise they have to be picketed where the food is limited, and not on grass they would have chosen, but what they are compelled to use through stern necessity. The consequence is that with scarcity of water and food they become reduced to living skeletons. But while it is disagreeable, to say the least, to work a whole season in burnt country, this is nothing compared to the incalculable damage done by the fires to the public domain. The damage done by the destruction of timber, in some districts not too plentiful, and the burning of the vegetable mould in hay marshes, will take years to repair. There will always be some difficulty in tracing the origin of prairie fires, as they are often started at great distances from settlement. In settled districts neighbors are not inclined to become informers, and usually do not give information, unless they have sustained serious loss themselves as a result of the fire. All that is required is to exercise a little care in dry seasons to avoid the danger of leaving a fire behind after preparing a meal on the prairie.

I have the honor to be, Sir, Your obedient servant,

JOHN McLATCHIE, D.L.S.

E. DEVILLE, Esq., Surveyor-General, Ottawa.

No. 10

REPORT OF C. F. LECLERC, D. L. S.

SURVEY OF HALF-BREED SETTLEMENT ON THE SOUTH SASKATCHEWAN RIVER

St. Jean. Port Joli. 14th November, 1889.

SIR,—I have the honor to report as follows on my operations in the survey of the Half-breed settlement on the south branch of the Saskatchewan River, in the District of Prince Albert:

On receiving my instructions from the Department on the 26th December last, I proceeded immediately by the C. P. R. to Qu'Appelle, and from there by mail stage to Batoche, where I organized my party and procured the necessary outfit.

to Batoche, where I organized my party and produced the necessary outfit.

I paid a visit to Revd. Father Lecoq, of St. Louis de Langevin, and consulted in his presence a few of the settlers about their claims and the way in which they wished to have them surveyed.

I then proceeded with the survey of river lots in conformity with their wishes, as much as possible, and they all seemed to be well satisfied, and very grateful to the Department.

On the 18th of February I received instructions from Ottawa to confer with the Agent of Dominion Lands at Prince Albert, in order to ascertain if he had any request for similar surveys from the Half-breeds in his district.

In accordance with his instructions I made surveys in Townships 44 and 45,

Range 1, west of 3rd Initial Meridian.

While I was thus engaged the land agent collected information from the rest of the District, and on February 27th, on going again to Prince Albert, I received new instructions from him for surveys in Townships 42 and 43, Range 1, and Townships 41 and 42A, Ranges 1 and 2, all west of the 3rd Initial Meridian.

I finished this work on 10th April and made a report to the Prince Albert Agent, who informed me that this completed the surveys required. After settling with my

party on 13th April I left for the east.

I have the honor to be, Sir, Your obedient servant,

CHS. FRS. LECLERC, D. L. S.

E. Deville, Esq., Surveyor General, Ottawa.

No. 11.

REPORT OF J. L. REID, D. L. S.

CORRECTION, SUBDIVISION AND TRAIL SURVEYS.

PRINCE ALBERT, N. W. T., 23rd November, 1889.

Sir,—I have the honor to report that I have completed the work given me by your instructions of the 7th of May and the 13th of September last, viz:—

- Survey of trail from Gabriel's Crossing of the South Saskatchewan to Humboldt.
- 2. Survey of trail from Batoche's Crossing of the South Saskatchewan to its junction with the Qu'Appelle and Prince Albert trail.
- 3. Survey of trail from Fort a la Corne to Spence's Crossing of the South Saskatchewan.
- 4. Survey of trail from Pahonan settlement to the Carrot River settlement.

5. Survey of portion of trail from Duck Lake to Batoche.

6. Survey of the north and south boundaries of Township 42, Range 1, west of 3rd Meridian; also north boundary of Township 42 A, Range 1, west of 3rd Meridian.

7. Survey of river lots at Carlton.

8. Subdivision survey of that portion of Township 49, Range 1, west of 3rd Meridian, lying south of the North Saskatchewan River.

Though this district has, to a certain extent, felt the general drought; still, owing to its great natural advantages, the settler has abundance of water, wood, and hay, and the grain harvest, though not as large as usual, is of superior quality. I would also beg to draw your attention to the terrible destruction, from fire, of timber, that has occured in this district during the past summer. The whole country to the north of the North Saskatchewan River has for miles been devastated; thousands of dollars worth of valuable timber has been destroyed. Report comes to us that the timber about Montreal Lake, Red Deer Lake, Trout Lake, Candle Lake, and away east down the Sturgeon River, has been completely destroyed. Large belts of fine spruce and poplar, which cannot be replaced to the country, have disappeared.

I have the honor to remain, Sir,

Your obedient servant,

J. LESTOCK REID, D. L. S.

E. DEVILLE, Esq., Surveyor General, Ottawa.

No. 12

REPORT OF P. R. A. BELANGER, D.L.S.

SURVEY OF TRAILS AND SETTLEMENTS AT LAKE STE ANNE AND LAC LA BICHE.

L'Islet, 13th December, 1889.

Sir-I have the honor to submit the following general report of my doings

during the last season.

In accordance with your instructions, dated the 7th May last, for the survey of certain trails in the Edmonton district, and the settlements at Lake Ste. Anne and Lac la Biche, I left home on the 14th for Winnipeg and Calgary, reaching the latter place on the 23rd of the same month.

There I bought some supplies and camp equipage, while waiting for the Inspector of Surveys, who arrived on the 26th, and supplied me the next day with the

remainder of my outfit.

On the 27th I started for Edmonton, where I arrived on the 4th of June.

Here I spent a couple of days in completing my outfit and hiring my party, after which I commenced the survey of the Edmonton and St. Albert trail, from the north boundary of the settlement of Edmonton, on Section 6, Township 53, Range 24, west of 4th Meridian, proceeding north-westerly to St. Albert.

This trail measures about six miles and a-half in length, and connects with a

street on the Roman Catholic Mission town site at St. Albert.

It runs across a settled country of nearly level prairie, and though the soil is

loamy the road is generally good.

The general course of the trail was followed by my survey, making alterations worth mentioning only in two places, in order to straighten bad bends. In one of these places I ran the trail 5 or 6 chains off the old track and across a cultivated field owned by a Mr. Harnois, but the consent of the proprietor was obtained, and he was satisfied with the change.

Mounds with wooden posts were placed in proper positions; but, with regard to these mounds, I regret to say that on my way back this fall I noticed that the cattle had already destroyed them and knocked down the posts, leaving only the pits to witness to the corner approximately. On the 12th June, having finished the Edmonton and St. Albert trail survey, I proceeded at once to Lake Ste. Anne, which I reached on the 14th.

Here I was employed during sixteen days in the survey of the trail and of the settlement. The latter survey occasioned a great loss of time in opening up the lines, as, though the settlement is small, the land is heavily timbered. I experienced also some delay through the dense smoke of the bush fires that prevailed in June and July, which fires destroyed an immense quantity of valuable timber in the northern districts.

The settlement is situated on the south shore of Lake Ste. Anne. It extends over

a distance of about six miles, and numbers twenty lots in all.

The lots, with the exception of five, were made as regular as possible, and about 160 acres in area. The side lines were run north and south as far as practicable, and chords of sections were surveyed for the rear line.

Lot A, as laid out, was intended as a homestead for the settlers on lots 9, 10 and 11, but they objected to it, because the land was too swampy for farming purposes, although it might serve for grazing land; and as they declared themselves satisfied with the few acres they had already cultivated around their houses, I arranged the lots to suit their wishes.

The said lot A is applied for by the Oblat Fathers in compensation for the loss of some land on which they had a claim of 40 years' standing, but which has been taken possession of (jumped) by squatters.

40 real possession of (jumped) by squatters.

The population of the settlement, with the exception of the missionary and the H. B. Co's. Factor, his family, and an old French Canadian, is composed of Half-breeds and some Indians, the majority of whom speak only the Cree language, and like their ancestors the Crees, they do not care much for farming and seem to depend entirely on fish and game for their living.

As to the agricultural capacity of the land, it may be called good. The climate is also very good, and free from summer frosts for a mile around the lake, but not-withstanding these advantages the settlement is bound to progress very slowly, owing to the great quantity of timber that covers the land and the want of proper

settlers for such a country.

Lake Ste. Anne is a beautiful sheet of water, somewhat in the shape of a pair of spectacles, with narrows in the centre about 4 chains wide. Its length is about 10

miles and its width 4.

It seems to be the breeding ground of the black ducks which abound in that region. It was also at one time full of whitefish, but, owing to the great numbers taken in nets by the Half-breeds and Indians during the spawning season, the supply is rapidly diminishing every year, and before long none will remain to be caught.

On the 4th July, having completed the survey of the Lake Ste. Anne settlement, I returned to Edmonton to survey the Edmonton-Saskatchewan trail; but, finding that Messrs. Wilson and Oliver, members of the North West Council, to whom I had been referred as advisers concerning the location of that trail, had not yet made up their minds about it, I decided to postpone the survey till the fall, and after applying to you for instructions I discharged my party and proceeded to Lac la Biche via the Victoria and Saddle Lake trail, a distance of about 180 miles. I reached Lac la Biche on the 14th July, and the next day I hired a new party and started work at once.

Here I was employed during three full months in the survey of the settlement and the main trail which crosses it.

Nearly all lines, either for the survey of the lots or for the trail, had to be cut through the bush. This occasioned great delay in the progress of the work.

The settlement, though comprising only 80 lots in all, extends over a distance

of about 40 miles, that is, following the sinuosities of the lake shore.

It is scattered around the southern and north east parts of Lac la Biche, and is situated near latitude 55°, and about 160 miles from Edmonton by the shortest road.

The lots I laid out vary in width from 10 to 45 chains, and in depth from 40 to 160 chains, and were surveyed in such shapes as to comply with the instructions received by me, and to satisfy the squatters whenever possible, avoiding interference with their improvements.

My operations consisted in the traverse of the lake from one end of the settlement to the other, the survey of a base line along the shore of the lake, on which I planted posts to mark the frontage of each lot, and a rear line, on which I also planted posts to show the width and depth of each lot. The main trail was also surveyed for a distance of twenty-six miles across that part of the settlement where the lots are contiguous or nearly so.

In the eastern part of the settlement, where the lots are distant from one another, I did not make any survey for the trail, but I reserved a road allowance across such lots.

Important changes were also made in the location of the trail, in order to avoid crossing the claims unnecessarily, and to throw it inside of the settlement where it ran for a long distance from 5 to 10 chains outside of the boundary.

Several lakes in the interior of the settlement were surveyed, and side lines of lots were run in different places, in order to test the work and establish the true position of different points. The azimuths of lines were checked by observations about every three miles, but my work was not tied to any old survey, as no line has been run so far north in this neighborhood.

As at Lake Ste. Anne, the population of Lac la Biche is almost entirely composed of Half-breeds and Indians, who for the most part speak only the Cree language, and, like their brethren at Lake Ste. Anne, depend on the game and fish for a livelihood.

Lac la Biche is a large sheet of water, measuring about 60 miles in contour and nine miles broad. It is situated about ten miles north of the height of land, and empties its waters through the La Biche River into the Athabaska River. It abounds in fish of different kinds, such as whitefish, pike, carp, etc. To give me an idea of the value of the fishing, a squatter told me that last year, during about ten days in October, the spawning time, 113,000 whitefish were killed, and the year before 108,000 had been caught. If we add to that number about 500 to 1,000 fish that are caught daily all the summer for the consumption of the settlement, we will form an idea of the great destruction of fish that is going on at Lac la Biche. regard to the agricultural capacities of the land in that settlement I may say they are The soil is either clay loam or sandy loam, and will produce all kinds of cereal or root crops. The only apparent objection to this district for settlers is the labor involved in clearing a forest country. The climate is very fine, so fine that I do not hesitate to say there is not its equal in any settlement in the North-West. This is due to the warmth of the waters of the lake which tempers the atmosphere for a couple of miles around its shore. The inhabitants of the place agree in saying that they have never seen any frost to injure their crops. With such advantages, it is a pity to see that so little has been done towards opening up this fine country. inclined to believe that as long as there are fish in the lake the settlement is bound to remain at a standstill. Settlers in search of safe farming lands I should strongly recommend to go to Lac la Biche. There they will find what they desire, and will not be exposed to disappointment.

In the interest of the settlers located in such a distant region, and for the advantage of the travelling public, I will take the liberty to suggest that the Government should open a new road in a direct line from Lac la Biche to St. Albert. This would shorten the distance about 60 miles, and would have the further advantage of avoiding a number of bad creeks and rivers that have to be

forded on the old trail, and are a great source of annoyance.

The settlement of Lac la Biche possesses a mission, of which the parochial duty is performed by the Oblat Fathers, M. I. These missionaries have a homestead on which they have already cleared about 80 acres of land which are under cultivation. This year they had a good wheat crop on about 40 acres; they have also raised 2,000 bushels of potatoes, most of which is for the benefit of their flock. They possess also on their claim grist and saw-mills, which prove of great advantage to the whole settlement. The Sisters of Charity have a convent where they bring

up and educate orphans.

On the 16th October I left Lac la Biche to return to Edmonton, and arrived at that place on the 22nd. Messrs Wilson and Oliver having left for Regina without informing me as to their decision about the location of the Edmonton-Saskatchewan trail, I telegraphed to the Lieutenant-Governor, asking him to appoint a Trail Commissioner to decide in the case. In reply, the Lieutenant-Governor instructed me to act as commissioner and to examine into the respective advantages of the two trails known as the "inner" and "outer" trails, forwarding, at the same time, a copy of the After investigation, and inquiries from the interested petitions in favor of each. parties, I soon found out that the general desire was in favor of the "inner" trail. The people most interested, the travelling public of Edmonton and Fort Saskatchewan, were almost unanimous in favor of the "inner" trail, and among the settlers whose claims are crossed by that trail I found only one who offered serious objection; therefore, I proceeded to survey the inner trail. This, though not very old, was in existence before the township surveys were made in the locality, and has always been used since, while the "outer" road is not what may be called an "old trail"; it has never been used for one-half the distance, which is the part where it is proposed to follow the correction line. Further, that trail needs no survey in order to be recognized by law, except the small piece which would follow the "Athabaska Landing trail" to the correction line. The first part of the "outer trail," as proposed, follows the road allowance along a meridian line. No great alteration was made in the general course of the trail surveyed except the one made by the Fort Saskat-PART II

chewan people two years ago near their settlement. In order to shorten the distance the old trail had been abandoned and that piece adopted and improved with public

moneys.

The distance between the two settlements of Edmonton and Fort Saskatchewan measures thirteen miles and 30 chains. The survey covers all the improvements made by the North West Council on the trail, with the exception of a small bridge at the start, which had been made common to both the "inner" and the proposed "outer" trails.

The small change I made at the starting point in the location of the road, at the request of the only opponent to its survey, will necessitate the construction of a small bridge about 15 feet long.

According to instructions, mounds with wooden posts were erected to mark the

angles.

On the 4th November, having completed the surveys allotted to me for the season, I discharged my men and returned to Edmonton, where I spent the three following days on private work, after which I left for Calgary, where I arrived on the 14th and delivered my outfit at the survey depot. The following day I left Calgary for home which I reached on the 20th.

I have the honor to be, Sir, Your obedient servant,

P. R. A. BELANGER, D. L. S.

E. DEVILLE, Esq., Surveyor-General, Ottawa.

No. 13.

REPORT OF W. S. DREWRY, D.L.S.

TRIANGULATION SURVEY OF RAILWAY BELT IN ROCKY MOUNTAINS.

Ottawa, 14th December, 1889

Sir,—I have the honor to present the following interim report of field operations on the triangulation survey of the Railway Belt in the Rocky Mountains.

On being informed that it was intended to place me in charge of this survey I at once began collecting information regarding the country from all available sources, and before leaving Ottawa had projected a scheme of triangulation.

The views of the Bow Pass and surrounding country taken by J. J. McArthur, D.L.S, during the season of 1888, and his verbal statements regarding the same, were

a very valuable aid, and I desire to acknowledge my obligation to him.

The objects of this survey were to be purely practical, the refinements of geodetic work not being attempted and, in fact, being prohibited by the class of angle-measuring instrument employed. It being impossible to run a system of meridian and base lines in the mountains as on the prairie, an accurate definition of points, to which topographical surveys, and surveys of mining claims, timber limits, and lands, could be tied, was necessary for the proper administration of the country.

This end could be reached only by a triangulation survey.

While carrying on this work other very necessary work was to be performed, such as track surveys of passes, the taking of photographic views from the several stations occupied, and, in general, the collection of information from which to construct a topographical map for the guidance of parties making future detail surveys.

In compliance with your instructions, dated 4th June 1889, I left Ottawa on

8th June and went to Calgary.

At this place packers, laborers, and cooks were hired, and the pack horses,

saddles, etc., essential to a mountain survey, purchased.

The men were divided into two parties—one, consisting of a cook, packer, and laborer, being placed in charge of my assistant, L. A. Dufresne, D.L.S., to do the angle measuring, while I, with an assistant, packer, cook, and three laborers undertook the work of exploring, trail cutting, choosing the stations, signal setting taking of photographs, and collection of other information for topographical purposes.

While we were fifting out at Calgary the whole country became enveloped in a dense smoke, and remained in this state with little interruption for several weeks.

Our purpose had been to begin work at the continental divide, as instructed, and work eastward to the prairie, where a base could be measured; but, in view of the dense smoke, I decided to camp in the footbills, near the mountains, where supplies could be easily procured and work done in short intervals of clear atmosphere.

Early in July there was a heavy fall of snow in the mountains and the air cleared sufficiently to allow the selection of two foothill stations and their supplementary mountain ones. On the 8th day of July I accompanied the observing party to a high foothill north of Ghost River, and selected the position for a signal, pointed out a mountain peak lying north of the east end of Devil's Head Lake, on which another signal was to be erected, and left them with instructions to set both, while I returned to my own men, set the Chiniquy Lake signal south of Morley, and went on into the mountains.

The signal setting above mentioned had not been completed before dense smoke again enveloped everything; but, acting on the information gained before leaving Ottawa, I determined to push on into the mountains while the observing party

returned to Chiniquy Lake to await weather favorable to their work.

We followed the south side of the Bow River as far as Canmore, exploring, en route, toward Wind Mountain, our objective point. Finding it inaccessible from the Bow Pass we turned aside at Canmore, and entered White Man's Pass, which led us in a southerly direction and along the south-westerly foot of this gigantic mountain, which rises at its highest point 10,400 feet above the sea.

It had been purposed to place a signal on the most northerly peak of this mountain, but, upon climbing and exploring, we found it inaccessible with our means, so we explored the next peak south, and found it was slightly higher than

its sister peak and could be ascended.

We camped at its foot for several days, waiting for clear weather, but none came.

Our stock of provisions began to show very alarming signs of shrinkage, so we ascended the peak and built a cairn of stones about 9 feet high, 8 feet diameter at the base and 2 feet at the top. In this we built a pole, to which was attached a bright red flag 26 inches wide by 3 feet long. Wrapped about the cairn and built into it we put red, white and black cloth, the ends being firmly sewn together, and the whole bound by strong cord.

This was the form of signal used throughout in the mountains, with the exception that on all others we guyed the poles, tying the lower extremities of the guys about

the cairn, half way down its height.

This form of signal has disadvantages, which I hope to discuss in a later technical report; but it has the great advantage of being permanent, and of its heavy

parts being found on the mountain tops.

Wind Mountain signal is some 10,200 feet above the sea, and can be reached by but one route after a long, hard and rather dangerous climb, the upper 500 feet of the peak being a succession of short cliffs, which necessitates careful work in climbing.

Two of us had a narrow escape from falling stones, caused by an inexperienced member of the party crossing above us and loosening rocks, one of which, about the size of a man's head, barely missing, whizzed between us almost with the speed of a cannon ball. Warnings and other things being hurled at the offender made him quickly realize the danger, and during the whole season we had no more escapes of this kind as everybody was careful.

The next day, after our descent to camp, we started for Canmore.

It had been purposed to make a survey of White Man's Pass, but the dense smoke rendered all topographical work impossible, and indeed our time was very fully occupied in cutting our way through the heavy windfall which extends for miles at a time. Besides, the greater part of our route lay within Mr. McArthur's topographical work, now being mapped, and I did not deem it advisable to delay my work to duplicate that already done.

We followed the Bow Pass from Canmore to Banff, and camped on Whiskey

Creek at the foot of Cascade Mountain.

We had now progressed to a point beyond which it was useless to go without clear weather, so we remained encamped here until the 26th day of August, in the meantime building a signal on the highest point of Cascade Mountain, 9,800 feet above the sea. This is a long, tiresome climb, but not specially dangerous.

When the smoke disappeared I telegraphed Mr. Dufresne to begin observing, and after a few days delay from the return of the smoke we moved down the Simpson Pass to the neighborhood of Mount Assiniboine, where another signal was to be

erected.

Crossing Bow River at Banff we followed its south side some ten miles to the mouth of Simpson's Pass, which, as far as the summit, is the valley of Healy's Creek.

The creek itself flows for a considerable distance in a deep canyon, the pack trail

being high up on the mountain sides.

It then gradually approaches the creek, crosses, and after following its banks for some miles leads abruptly upward until the summit is reached, nearly 7,000 feet above the sea.

At this point a singular freak of nature was found. A rugged gulch breaks the mountain side to the south, and down this rushes and leaps a stream of water which, reaching the pass, separates, one part flowing to the Bow River and eventually to Hudson's Bay, while the other forms a branch of the Simpson River, finally reaching the Pacific Ocean.

The pass from the divide to the Vermilion River is the valley of the Simpson. and the descent from the summit to its fork is very steep, and rather dangerous for

As stated in my progress report of 27th August, I deemed it advisable, in view of the protracted delay from smoke, and the season during which we were certain of being able to work rapidly drawing near its close, to partially neglect topographical work and devote our whole time and energy to completing the triangulation to the summit, as this work was urgently needed to tie in Mr. McArthur's topographical work of 1887 and 1888, the routes over which we would travel having already been mapped by Mr. McArthur and members of the Geological Survey.

On reaching the forks of the Simpson we camped, and began exploring for a sta-

This entailed considerable work, as the smoke had rendered it impossible to see anything of the country from other stations, and away from the pass it had never been correctly mapped.

While exploring we found an old Indian trail leading up to what might be termed the east branch of the Simpson River, and examination revealed the fact that it led through a pass which probably opens out into the White Man's near Cone Mountain.

Considerable chopping had been done on this trail, the Indians probably preferring

this route to climbing over the summit on the Simpson Pass.

Finally, after delay from rain and snow, a point suitable for our operations was found, and we climbed to it through snow nearly knee-deep. The air was piercingly cold, and it was with difficulty we kept from freezing, although the sun shone brightly.

I tried to take photographs of the surrounding country, but found that the plate holders had swelled to such an extent that they could not be forced into the camera.

I then measured angles to different peaks with the prismatic transit, took compass bearings, and attempted to sketch the surrounding country, but my hands had become so stiffened with cold that I could not control the pencil, so was forced to desist.

Returning to camp we were all affected by snow-blindness, and for two or three

days thereafter suffered considerably from this cause.

The men called this station "Fatigue Mountain," it having been a terribly

severe day's work to reach its top and return to camp.

While on the peak I saw what appeared to be a much easier route to the signal than that follwed by us, and examination showed it to be quite feasible, so I determined to send a man to guide the observing party by it.

I had decided to go down Simpson Pass to its junction with the Vermilion, and thence up the Vermilion to Mount Bell in preference to risking the horses over

the summit of Simpson Pass.

We accordingly started on what proved to be the roughest trip yet experienced. Reaching the confluence of Simpson and Vermilion Rivers, we were delayed by a heavy rain, which fell as snow on the mountains. As soon as it cleared we started up the Vermilion, and were again overtaken by rain and snow, but, as we had just sufficient supplies left to sustain us until we could procure more at the railway, we were forced to move.

It was truly desperate work, everything and everybody being thoroughly soaked from the snow on the brush, and yet so cold was the air that when we camped it was a matter of considerable doubt whether or not any of us could take a pack off a horse or hold a match in our-benumbed fingers to light a fire. Finally we reached Mount Bell, and leaving the party camped there, I started in company with one man for Castle Mountain station, on the Canadian Pacific Railway. For sixteen miles we 46 PART II

plodded through a blinding snowstorm, following an Indian trail, consisting mostly of a blaze on a tree here and there, and jumping our horses over windfall that seemed almost impassable. Having found a good crossing of Bow River we reached the station towards nightfall, thoroughly tired out, wet and hungry.

I took the train that night, went to Banff, procured supplies, and shipped them to Castle Mountain, from which point they were packed into camp without delay.

I found that the observing party had just reached Banff after occupying Chiniquy Lake, Ghost River, and Devil's Lake stations. Learning that Chiniquy Lake had not been observed from Devil's Lake, I gave instruction for the re-occupation of that station, made an examination of the readings taken, and instructed Mr. Dufresne to proceed to Wind Mountain after going to Devil's Lake.

I then returned to camp in Vermilion Pass and found from explorations carried on during my absence that although Mount Bell could probably be ascended, it

was not suitable for a station, as it was glacier-capped.

We therefore separated into exploring parties of two each. After climbing seven mountains it was found that Storm Mountain, in the Summit Range, was the only one available.

Six stations will be observed from this point, and it is therefore easy to under-

stand its importance and the difficulty in selecting it.

On its location depended our chance of getting around the much higher and inaccessible Lefroy and Goodsir Ranges, but I think this can be very successfully done from the point chosen.

Having decided on the point we took our blankets and some provisions on our backs and followed up a small creek heading on the south-east side of Storm Mountain

and emptying into the Vermilion.

This creek flows through a narrow, rugged gulch, which rises quite rapidly, so that at night we camped at timber line. Early the next morning we started for the summit and at eleven o'clock stood on the topmost point, 10,350 feet above the sea, as shown by the barometer.

It was a long, steep and laborious climb, but not dangerous.

The view was commanding and magnificent, so I took photographs of the surrounding country, and measured the azimuths and zenith distances necessary for their use in mapping.

While thus engaged the men were busy erecting a signal, and as it might be necessary to see it at a distance of some thirty-eight miles, it was built 12 feet high, 8 feet diameter at the base, and 2 feet at the top.

When coming up Vermilion Pass I had observed a low gap in the wall of mountains to the west, out of which flowed the West Fork of the Vermilion, but had not paid any particular attention to it.

However while exploring, and on Storm Mountain, I found that this gap extended through to the Ottertail Valley, and that the Indians use this pass instead of coming up what is known as the "Big Hill," in Kicking Horse Pass.

So far as I am aware, this pass has not been explored or mapped by white men, but from what I saw of it, I am inclined to think it might offer an alternative route for the Canadian Pacific Railway, enabling them to avoid the excessively heavy grade on the Kicking Horse, besides slightly shortening their line.

Vermilion Pass is easy of access and favorable to railroad construction.

Following up the West Fork of the Vermilion, the valley leads in a very direct line to the Ottertail, and this creek flows almost in a continuation of the same line to the Kicking Horse Valley.

It is difficult to judge the nature of a country when looking down upon it from a mountain top, as everything appears flat, but the valley seemed to offer such easy passage that during another season's operations a track survey of it should be made, with barometic determinations of elevations.

Having finished our work at Storm Mountain, we moved to Banff, which place

was reached on 28th September.

Hearing that the observing party were at Canmore, I at once went there and found that they had met with a series of unfortunate delays, among others having

one of their best horses killed on the railway track.

The season was so far advanced that it was a matter of doubt whether they could occupy all the stations at which signals had been set, so I decided to leave the Mountains, set the foot-hill signals, and measure the base, while the observing party continued their work in the mountains as long as the weather permitted.

Accordingly, I moved my party to Morley, from which point we went to re-set

the Chiniquy Lake signal, which had blown down during a tremendous gale.

In setting the signal previously no guys had been used, but we now secured it

with wire guys, and used this means on all signals set thereafter.

We travelled southwest from Morley some seventeen miles to a hill or butte near the north-west corner of the Sarcee Indian Reserve, and finding it suited to our

purpose, placed a signal on it, and named the place "Sarcee Butte Station."

We then moved to Mitford, about two miles west of Cochrane station on the Canadian Pacific Railway. I had already selected station points to the north and west, but as it was getting late in the season, and the observing party were considerably behind, we began the base operations and neglected signal-setting until such time as it was needed.

An examination of the country showed that the portion of the Bow Valley between Mitford and Cochrane was best suited to a base location, so I at once selected the ground for this purpose and began an exploratory compass survey of the adjacent country to find its possibilities.

We found that a base of 8,120 feet could be had, and an expansion to a side of the main triangulation effected by occupying seven intermediate stations in addition

to the two primary ones, the smallest angle used being 43° 24'.

A base was then ranged out and marking stakes 2 inches square driven solidly into the ground 66 feet apart; these were then sawed off to true grades at a height of about 2 feet from the ground. The ends of the base were marked by bars of 2 inch square bar iron, driven 3 feet 6 inches into the earth, and on the tops of the bars crosses were cut with a cold chisel, one cut being in the line of the base and the other at right angles to it, the crossing of the cuts being the points to which measurements were made.

The centre line was then marked on the tops of the intermediate stakes, and the base measured with a steel tape stretched at a constant tension of twenty pounds.

Two wholly independent measurements were made, with a resulting difference

of but 036 of a foot.

When not occupied on the base work we were engaged in setting the various signals needed, so that but two days were lost during this time. The base measuring and signal setting were completed on the 7th day of November, and in the meantime the observing party had finished their work in the mountains and moved into the foot hills.

The weather being favorable, they made good progress, and completed their work on the 19th day of November, reaching Calgary on the 20th. I then stored our outfits, wound up the business of the survey, and on the 22nd of November left for Ottawa, where the returns of survey are to be made.

RESULTS OF SURVEY.

The primary triangulation extends from Cochrane, Alberta, to the summit of the Rocky Mountains.

The whole work necessitated the occupation of seventeen instrumental stations, which was performed between 8th July and the 20th November. About six weeks of this time was practically lost through smoke. Deducting this from the time between the given dates would give an average of over a station per week in ordinary weather, which was much better than had been calculated upon.

This result was obtained by travelling in all about one thousand miles through the mountains and foothills, in addition to twenty climbs of lofty mountains and twelve ascents of high foothills.

The angle-measuring instrument employed was a three vernier 6 inch altazi-

muth reading to $\frac{4}{1000}$ of a degree or $14''\cdot 4$.

The greatest side observed in the primary triangulation was 22·3 miles, and the least 11 miles; the greatest closing error in any triangle, as shown by the field calculations, being 26 seconds and the least 0 seconds. It must be noted, however, that the greatest closing error as given occurred in the expansion from the base with sides of less than six miles.

It had been decided to make the base measurement with a steel tape, and it was necessary to procure some apparatus for holding it in position. Having studied the matter, I devised a means which will perhaps be worth describing, as it gave good results. It is, I believe, unique, and cost but \$5.75.

When in Calgary I had two straining stakes made of one-inch round iron with square heads, on which fitted iron handles at right angles to the axis of the stake.

and somewhat the shape of those on an ordinary chain.

One end of the tape was firmly lashed with snare wire to the end of a turnbuckle such as is used on the ordinary woodsaw, another turnbuckle being similarly lashed to the ring of a spring balance, its hook holding the free end of the tape. Lanyards of snare wire were in turn fastened to the free ends of the turnbuckles, and the straining stakes being driven at distances of about 3 feet from the marking stakes, the tape was then lifted into position and stretched by these lanyards, they being rove through the handles on the straining stakes, the handles permitting the lateral adjustment of the tape.

By means of the turnbuckle at the rear end the mark on the tape was made to coincide with the mark on the stake, and with the forward turnbuckle the tape was brought accurately to a tension of twenty pounds.

The forward mark was then made, the tape loosed, and the whole apparatus

moved forward to its next position.

We also constructed a small tripod of willows, from which a thermometer was suspended, having its bulb about level with the tape.

This was placed at the half distance between marking stakes, close to the tape,

and the temperature during the measurement of each length noted.

Measurements were made only during calm weather, as a very slight current of air sufficed to vibrate the tape to such an extent that accurate work was impossible.

The two measurements made actually differed 242 of a foot, but the mean temperatures differed 3°9 Fahrenheit, so that using '0000065, Professor Johnson's co-efficient for 1° Fahrenheit, I find the true difference to be but 036 of a foot.

This may not be the true co-efficient for the tape used, but the possible difference

from the truth would not affect the result very appreciably.

The results given are in terms of the graduated length of the tape used; but I would draw your attention to the fact that although the Statutes say that every Dominion Land Surveyor shall have a standard of length stamped by the Department of Inland-Revenue, and fix a heavy penalty for non-obedience, yet, I believe there is not at present, in the Dominion of Canada, any means by which the accurate length and constants of a 66 foot chain or tape can be determined.

The length might be found closely enough, so as not to seriously affect ordinary surveys, where short lines only are measured, but surveys of precision being undertaken, very serious discrepancies will arise from this cause alone, which may vitiate thousands of dollars worth of work.

It must be noted that any error in the base is multiplied throughout the whole work, and while an error in the length of tape would be multiplied but one hundred and twenty-three times in the base measured by us, yet, in extending the work through the triangulation for the distance of two hundred miles, the error in the length of tape would be multiplied sixteen thousand times.

In travelling through the mountains we found numerous traces of mineral wealth; but as we were not carrying on a mineralogical and geological survey, we conceived it to be no part of our duty to search out the deposits from which came the float found.

However, while exploring in Vermilion Pass, within twenty miles of the Railway, we came across some small veins of red hematite which evidently came from a large deposit in the vicinity.

We also found a vein of silver bearing galena cropping out about 12 feet wide. Between Banff and Vermilion Pass we found a vein of red hematite from 3 to

4 feet wide, and within three miles of the railway.

From what I observed on Simpson River, I believe that a very large body of iron ore exists there, but this would have to be reached through Vermilion Pass.

I also believe that a deposit of magnetic ore exists in the vicinity of Storm Mountain, as float was found, and the disturbance of the magnetic needle was quite marked.

We frequently found float ore, which would tend to prove the existence of

numerous deposits.

I also had a number of conversations with prospectors who, when they found I was not seeking information for private use, talked freely, and mentioned having found a number of veins, one of red hematite, specially mentioned as being of an average width of 15 feet and traceable for miles, easily reached, and within ten or twelve miles of the railway.

Prospectors have not been active in bringing deposits of iron ore to the notice of the public, as it requires a large capital for their proper development; and until now, such ores have been of little value in the Bow Valley. But the discovery of a great quantity of good coking coal at Canmore would seem to indicate that iron mines may be profitably worked in the near future.

Much fine timber, consisting of black pine, spruce, and Douglas pine or fir, was found in Simpson and Vermilion Passes, but the bulk of it lies west of the divide,

and is not available to the North West Territories by water.

The only important body of timber, not under license, observed by us in the Bow Valley, lies at the mouth of Vermilion Pass, near a limit held, I believe, by the Eau Claire Lumber Company, of Calgary.

I have the honor to be, Sir, Your obedient servant,

W. S. DREWRY.

E. Deville, Esq., Surveyor General, Ottawa, Ont.

No. 14.

REPORT OF J. J. McARTHUR, D. L. S.

TOPOGRAPHICAL SURVEY IN ROCKY MOUNTAINS.

AYLMER, 25th November, 1889.

Sir,-I beg leave to submit to you my report on the topographical work

performed by me during the past season.

I reached Canmore on 21st June, but up to 25th August dense smoke interfered with our operations, and we were seldom able to work more than one or two days in each week.

A wintry storm set in on 6th September, which lasted several days, and the great depth of snow on the mountains rendered climbing dangerous for some time

The tract covered by my survey is about 350 square miles in area, and extends from the National Park east along Bow River. To the south of the valley it takes in a strip from six to ten miles in width, and extending to the east to about eight miles beyond the mouth of Kananaskis River.

To the north it covers all the country west of this point, and lying between the

Bow River and the Park boundary.

We occupied fifteen triangulation stations, which, together with the setting of signals, necessitated making twenty-five ascents from 8,000 to over 10,000 feet above

I established twenty-five camera stations, and took 250 views. The plate used this year was the orthochromatic, which, I am happy to state, has given decidedly better

results than that used last year.

Several of my stations were located in the foothills. I cannot help remarking on this beautiful ranching country, with its luxuriant vegetation, pure water, and

well sheltered valleys.

From one of the high hills in the neighborhood of Morley a beautiful, diversified scene meets the eye; all around are foothills, their summits mostly covered with large pines, whose deep green contrasts pleasantly with the bright color of the faded grass which covers the slopes and valleys.

In every direction we see herds of cattle and horses, with here and there an Indian habitation, for it must be borne in mind that the greater part of this beau-

tiful tract is included in the Stoney Indian Reserve.

We can trace the canyon banks of Bow River, running for miles through a level plain. To the west rise the Rocky Mountains, stern and forbidding, their gilded snow-capped peaks piercing the sky, while at their base, nestling in troughlike depressions, are numerous lakes, their surfaces glistening in the sunlight.

An attractive point in this neighborhood, the beautiful Kananaskis Falls, are

situated a short distance from the mouth of Kananaskis River.

After being reinforced by the latter stream, the Bow descends through a tortuous walled channel in a succession of chutes for a couple of hundred feet, and then falls through a gateway of rock, a distance of 25 feet.

From the canyon below the large expanse of broken water, and the walls of rock. with the towering peaks of the Rocky Mountains in the background, forms a picture both wild and fascinating.

The coal deposits in the neighborhood of Canmore have been extensively prospected during the past season.

Outcrops have been followed along the Bow River valley from the Cascade River as far as the Gap. PART II

These deposits are regarded as belonging to a much later geological period than those of Pennsylvania. The latter belong to the Carboniferous age, while the former are found chiefly in the Cretaceous or Tertiary period.

Some of the seams which are being worked by the Anthracite and Brinkerhoff

Companies are in places from 12 to 14 feet thick.

The value of these coals is unquestioned, and they derive an additional importance from their geographical position.

Diligent search for iron is being made; and, from indications, it is expected that

it will be found in this neighborhood.

Should the search prove successful, these two minerals will supply the chief requirements for the development of the resources of this vast mountain and prairie country, and we may safely predict a prosperous future for the new town of Canmore.

> I have the honor to be, Sir, Your obedient servant,

> > J. J. McARTHUR, Dominion Land Surveyor.

E. DEVILLE, Esq., Surveyor General, Ottawa, Ont.

No. 15.

REPORT OF A. SAINT CYR, D.L.S.

DETERMINING LIMITS OF RAILWAY BELT, BRITISH COLUMBIA.

SICAMOUS B. C., 22nd November, 1889.

Sir,—I have the honor to report as follows on my surveys of the past season. These surveys were for the purpose of determining the limit of the railway

belt at all accessible points between Leanchoil and Sicamous stations.

According to your instructions dated 23rd April last, I proceeded to Golden City, B.C., in order to commence my work. I began by traversing the right bank of the Columbia River from Golden City to Beaver station, with the object of fixing the areas of the sections adjacent to the river. In the measured distance of 34 miles numerous tributaries swell the waters of the Columbia: on the right, the Wapta River enters the Columbia one mile below Golden City, Blaeberry Creek two miles below Moberly, and the Wait-a-bit and Blue Water Creeks at distances of one mile and two and a-half miles respectively below Donald; on the left, the Beaver River, which flows into the Columbia one mile below the Beaver station, is the only tributary of importance. There are two rapids, short but dangerous, on the Columbia River between Donald and Beaver. The first, named "Cañon Rapid," is half a mile below the mouth of Blue Water Creek; the other, Kitchen Rapid, is three miles and a-half above Beaver. Between Donald and Golden the Columbia River winds through a valley of which the width varies between 10 and 12 miles. This valley is bounded to the left by a range of high mountains, known as "Dog Tooth Mountains," of which the eastern slope is covered by a forest of fir and spruce of good size. The western slope of the Van Horne Mountains, which confine the valley on the right, is entirely bare, but close to the river there is occasionally a fringe of spruce.

I was informed that good timber would be found in the valley of the Blaeberry and Blue Water Creeks, and also along the Black Water, an affluent of the Blue Water; but I shall be able to furnish better information on these points when I have

made the traverse of the Blue Water.

From Beaver I continued the survey along the Columbia River as far as the limit of the railway belt, which crosses the river 70 chains below the head of the "Surprise Rapids." In the distance of twenty-five miles, following the windings of the river, the mouth of three considerable streams were seen; on the left Eight-Mile River and Gold River, and on the right Bush River. This last river joins the Columbia three-quarters of a mile below the Gold River. It has a width of 70 rods at its mouth, and is navigable for 30 miles. For 20 miles up this river large flats extend on each side as far as the hills, which are a mile distant from the river banks. The valley of the Gold River is of the same nature. From the mouth of the Beaver River to the limit of the railway belt, the eastern flank of the Selkirk Mountains, which bound the valley of the Columbia to the left, is well wooded with spruce, fir and cedar, averaging 20 inches in diameter. Pine is also found, but in small quantities. In the part of the valley to the right from the Beaver to within two miles of Bush River the forest has been to a great extend destroyed by fire. What remains of the timber is in narrow strips here and there on the mountain sides and along the ravines, or on the flats bordering the river. On these flats I frequently noticed cedar of 30 inches diameter; the spruce averages about 20 inches. Two miles above Bush River the forest again occupies the valley and also covers the left bank of that river for a distance of more than 20 miles from its mouth; on the right bank, what timber remained has been recently destroyed by fire. There is good timber along the Columbia River near the limit of the belt, comprising spruce of 24 inches diameter, pine 24 inches, cedar 36 inches, and balsam 15 inches. mile further down the brule recommences and extends almost without a break to the south end of Lake Kimbasket, 20 miles away. Throughout this distance the eastern slope of the Selkirk Mountains is timbered with spruce, cedar and fir, averaging 15 inches in size. There is but little timber on the shores of Lake Kimbasket, which is eight miles in length. The Big Bend Rapids, which begin at the outlet of the lake, extend over more than 20 miles, ending three miles before Canoe River is reached. Along this stretch of the river we found timber of the following kinds in abundance: spruce 30 inches diameter, pine 24 inches, cedar 36 inches, and hemlock 36 inches: From six miles above Canoe River down to the mouth of that stream the original forest has been burnt and replaced by a second growth. After receiving the waters of Wood River and Canoe River, which discharge within a short distance of one another, the Columbia suddenly changes from the north-westerly direction in which it flows from Beaver downward, making a sharp turn to the south round the northern extremity of the Selkirk Mountains. Here these mountains lose the rugged aspect that they present when seen from the east; the glaciers and snow-covered peaks disappear and give place to a long succession of well wooded hills which slope gently down to the river. The timber on these hills does not exceed about 15 inches diameter. This description applies to the ten miles below the Canoe River.

The eastern slope of the Gold Range which now bounds the valley to the right is well wooded with fir, spruce and cedar of 30 inches diameter. At Smith Creek, 40 miles below Canoe River, there is also good timber, much of it cedar of large size. Ten miles further down we pass "Gold Stream." This river has several affluents and they all bring down gold. It is in consequence a station of some importance for miners, who find coarse gold here in considerable quantity. A good road connects this place with Revelstoke. Good timber is said to exist on the banks of Ten miles below this begin the rapids called "Dalle de Mort." The timber along these rapids has been destroyed by fire. Between the "Dalle de Mort" and Carne's Creek we passed several gangs of Chinese engaged in washing for gold in the Columbia River. From Carne's Creek (where the Columbia River crosses the limit of the railway belt above Revelstoke) down to within two miles of the Big Eddy, the valley is well wooded on the right with spruce and fir 15 inches in size; some pine is also seen on the high ground. The Big Eddy mentioned above is the only place between Beaver and Revelstoke where logs cut on the Columbia can be enclosed in booms: 50,000 logs could be boomed here. On the left of the Columbia River, from Carne's Creek to within half a mile of Eighteen Mile Creek, there is good timber (cedar 30 inches, spruce 24 inches). In the next ten miles, which brings us to "Petites Dalles," fires have made great havoc among the woods Some good timber, however, remains, including cedar of considerable near the river. In the neighborhood of Revelstoke all the timber has been killed by fire.

From Revelstoke I continued the traverse of the Columbia as far as the southern limit of the railway belt. I saw but little merchantable timber in the first six miles. Between the Illecillewaet and Akolkolex Rivers what little wood has escaped the fires is found in small strips here and there on the hills to the left of the Columbia. It consists principally of spruce and cedar from 12 to 15 inches in diameter. On the flats the cedar is often from 24 to 30 inches. From the Akolkolex to the limit of the belt there are also fringes of spruce, cedar and pine. The eastern side of the valley is somewhat better timbered, the wood being spruce, cedar and hemlock 15 inches in diameter. The best timber, however, is met with on the last ten miles before crossing the belt limit. It is mostly cedar, spruce and pine, averaging 20

inches in size.

From Revelstoke I went to Sicamous, from where I was to determine the belt limit on the East Arm and Seymour Arm of Lake Shuswap. I made a traverse of the east shore of the lake from Sicamous to the mouth of East Arm River.

The shores of the lake in the part surveyed are extremely rocky, in some parts consisting for long distances of cliffs of great height which are almost perpendicular. The only wood which grows on the high lands near the part surveyed of Lake PART II

Shuswap is fir, and that not exceeding 12 inches in diameter, and only in scattered groves.

Lake Shuswap swarms with excellent Silver Trout and Salmon Trout, the latter

often attaining a weight of twelve pounds.

The East Arm River, on which I was instructed to mark the limit of the railway belt, being found unnavigable, I began to run section lines from the extremity of the East Arm, in order to reach the limit. These lines pass through a fine forest of cedar (8 feet diameter), white pine (2 feet), fir (16 inches), and hemlock (3 feet). This forest stretches along the East Arm River and extends to Seymour River twelve miles north of the East Arm.

On the completion of my work in this locality I intend to begin the survey of

the South Pass, Eagle, Beaver, and Beaverfoot Rivers.

I have the honor to be, Sir, Your obedient servant,

ARTHUR SAINT CYR,

Dominion Land Surveyor.

E. DEVILLE, Esq., Surveyor General, Ottawa.

No. 16.

REPORT OF A. DRISCOLL, JR., D.L.S.

SUBDIVISION SURVEY AND TRAVERSES IN BRITISH COLUMBIA.

Kamloops, B.C., 7th December, 1889.

Sir,—I have the honor to submit the following report on the surveys performed by me during the past season of portions of the railway belt in the Kamloops' and Ashcroft districts, British Columbia.

In accordance with instructions from you, dated the 23rd of April last, I proceeded to Vancouver and New Westminster, to make preparations for my season's operations. I then returned to Kamloops, and commenced the subdivision of Townhips 21, 22 and 23, Range 16—this, as well as all other work upon which I was engaged this season,

being west of the Sixth Initial Meridian.

On completion of the greater portion of these townships, I proceeded to Eight Mile Creek, which is situated about that distance east of Ashcroft, and, connecting with Mr. Garden's survey of 1887, worked along the creek to its intersection with Semlin's Valley, which runs north-east, connecting the valleys of Cache and Deadman's Creeks. In this survey, and in the survey of Semlin's Valley, I performed work in portions of Townships 21, Ranges 23 and 24, and Township 22, Range 22. From the junction of this valley with Deadman's Creek, I carried my survey along the latter through Townships 22 and 23, Range 23, to within a few miles of the northern boundary of the railway belt. This concluded the survey of the arable land in this vicinity. From there I went to Oregon Jack's Creek, situated about eleven miles south of Ashcroft, and performed considerable survey work in Townships 19 and 20, Range 25.

While at work here, settlers from that creek anxiously requested me to visit their places and locate them. As the season was closing I therefore shortened my work here and made a hurried trip to their claims, and picking up the termination of Mr. Garden's survey near the mouth of the creek, I ran a straight line south, with the exception of a jog of a mile, through Townships 21, 20 and 19, Range 26, locating

settlers as I went.

This finished my work of the season, and a description of the preceding localities

may now be of some interest.

Between Kamloops and the north boundary of the railway belt, on the east side of the North Thompson River and extending eastwards about 10 miles, lies a country with considerable slope to the west. It is partially timbered, but through its centre and running north and south is a long open valley, containing numerous lakes and creeks. Along these creeks are many good flats of land, which squatters were ready to occupy as soon as they were surveyed. This locality is much favored with rain, which is attributed to the dense belt of fir extending eastwards. This, of course,

makes it require far less irrigation than is customary.

Semlin's Valley, which joins Cache and Deadman's Creeks, does not average more than half a mile in width, and in some places the sides meet. Cache Creek could be made to irrigate a part of it, but all other streams are recorded, and the only cultivated land in the valley is a dairy farm, which is owned by C. Semlin, M.P.P. At the junction of this valley and Deadman's Creek is an Indian Reserve, which extends from here south to the Thompson River, and contains about 3,500 acres; but, like all large blocks of land in this country, it is mostly pasture. It has, however, on both sides of Deadman's Creek (which runs through its centre), many large flats of good land, which may be converted into excellent farms, especially as the supply of water is of easy access and unlimited quantity.

56 [PART II]

It is a pity that the Indians at the lower end of this Reserve do not emulate those at the upper, some of whom possess farms of which any man might be proud; but the lower end presents a very barren appearance, and gives a most wasteful look to land which might be worked with great advantage.

From the head of this Reserve and following Deadman's Creek north lie numerous arable flats, some of which are already and others about to be homesteaded.

Below Ashcroft, in the vicinity of Oregon Jack's Creek, is a purely stock country, the limited supply of water being scarcely sufficient to irrigate the small quantity of land which has been in cultivation these last fifteen years. The climate, though, is very mild, and if the stock get even a fair amount of grass off the hills they winter tolerably well; but the range having been long in use, the ranchers are reducing the

number of cattle, and keeping them off it during the summer.

West of this district, and separated from it by high hills, lies the south fork of Hat Creek, which takes its source from within a few miles of Oregon Jack's Creek. The valley of this creek is about two miles wide, rather open, and plentifully supplied with water from Hat and Anderson Creeks. The present settlers, of whom there are quite a number, all settled here about three years ago, and the valley being about fifteen miles long, I have no doubt that there will be many more here soon. The location is rather high, but the crops grown this year were all that could be desired. Another advantage this valley possesses is the location of a coal mine here by Messrs. McNichol & Finney, of Ashcroft, who have discovered a most wonderful seam of coal in Section 12, Township 21, Range 27. At the time of my visit to it this autumn they had sunk a shaft 80 feet deep, and half way down had drifted in 50 feet, and in all their workings had struck nothing but coal. The quality is soft, and though not very good on the surface, it much improves as a further depth is attained. The C. P. R. authorities think so highly of it that they intend, I believe, to further develop it with a diamond drill, and if indications are still favorable, build a branch line to the mine, a distance of about 25 miles from Ashcroft, as the line would have to go, although it is only about 14 miles in a straight line. The working of this mine would be of great benefit to the surrounding country, and also to the C. P. R., which has at present to bring its supply of coal some hundreds of miles, either from the East or West. As directed, There give the information gathered on the timber of the country coverd by my survey. I should first say, though, that the part covered is not generally considered a timber-producing country, but rather a grazing one, and that situated as it is, away from any rivers or lakes, the timber treated of would not, on account of the expense of getting it out, be used for lumber purposes, until those great belts of timber contiguous to the South Thompson River and Shushwap Lakes were exhausted, which time is considered very remote.

About two miles up from the mouths of Hefferly and Sullivan Creeks, belts of yellow pine are seen, timber averaging from 1½ feet to 3 feet in diameter. The belts extend on each side of the creeks for about half a mile, and then begin to intermingle with the fir trees which grow on the hills, the fir being about the same size as the pine. Good timber is made from these trees, but on account of their being a long distance apart, an average yield to a square mile would not exceed 9,500,000 square feet. Twenty-five square miles could be obtained, necessitating, however, a haul with horses of from 4 to 10 miles; but as it would be all

down grade the pull would not be very heavy.

In Semlin's Valley the yield would be about the same to a square mile, and the quality a mixture of yellow pine and Douglas fir, averaging from 1½ to 2½ feet in diameter. Egress from the valley could only be obtained by way of Cache Creek. Where the creek and valley join we found a wagon road, a charcoal pit, and the remains of an old saw-mill, which were in use here before the construction of the C. P. Railway. This valley would yield about ten square miles.

In the vicinity of Hat and Oregon Jack's Creeks the timber is only fit for

building and fencing purposes.

Great satisfaction is expressed by the people of the surrounding country at the establishment of a land office in Kamloops, a want which was much felt, and also at

[PART II] 57

the report that the pasture land within the belt was to be open to purchasers at the same rate as Provincial land outside the belt. In fact, the feeling is general throughout this district that the Dominion Government is trying to meet the wishes of the people in all matters pertaining to the land within the railway belt.

I have the honor to be, Sir, Your obedient servant,

A. DRISCOLL, Jr., D.L.S.

E. DEVILLE, Esq., Surveyor General, Ottawa.

No. 17.

REPORT OF J. A. KIRK, D.L.S.

SUBDIVISION OF TOWNSHIPS AND FIXING BOUNDARY OF RAILWAY BELT IN BRITISH COLUMBIA.

CAMP NEAR HARRISON, B.C., 2nd December, 1889.

SIR,—I have the honor to submit the following report on the surveys I have executed for the Department of the Interior this year.

In accordance with your instructions I proceeded to New Westminster, B. C.,

on the 5th of April.

Having made the necessary preparations for the work, I left New Westminster on the 18th of April to subdivide the lands at the lower end of Stave Lake. The first operation was to run a tie line from a survey station of the Canadian Pacific Railway to the place of commencement. The lands subdivided are portions of Town ship 18, east of the Coast Meridian, and Townships 3 and 4, Ranges 2 and 3, west of the Seventh Initial Meridian.

They lie for the most part along Cascade Creek—a name I considered appropriate, as the stream descends a mountain in a series of cascades. Reaching the adjacent bottom lands it flows in a westerly and north-westerly direction through Section 36, Township 18, east of the Coast Meridian, Sections 32 and 33, Township 3 (fractional), and Sections 5, 6, 7 and 12, Township 4, Range 2, west of the Seventh Initial Meridian.

The land for a width of from a quarter to one mile back from the creek on both sides is timbered principally with alder; the soil is rich sandy loam. Leaving Section 12, the stream pursues a more northerly course to Stave Lake, which it enters a short distance east of Stave River, the outlet of the lake. The character of the soil remains unchanged, the timber is mostly hemlock and cedar. The valley of Cascade Creek is fully 20 to 30 feet higher than Stave River, and is not subject to floods.

With an unusual freshet the creek might overflow; but the removal of accumulated debris from its channel would double its carrying capacity and overcome the difficulty. The creek is about 15 feet wide at the base of the mountain; three

miles further on it is 80 feet.

Sheltered by mountains to the north, east and west, and well exposed to the sun, this valley will probably prove a good locality for fruit culture. Several of the claims are already occupied. When making the survey the settlers were away—probably at work elsewhere, as is the custom here in summer.

The next survey was fixing the boundary of the railway belt by traversing Harrison River and both sides of Harrison Lake to the twenty mile limit. On this work a Lugeol micrometer was used to measure distances. Five readings were taken for each course, their mean being afterwards reduced to Gunter's chains.

Astronomical observations for azimuth were taken at frequent intervals, and the angular measurements converted into astronomical bearings. The boundary of the railway belt was determined in the manner prescribed in your instructions, and at its intersection with those lines large posts, marked R.B.L., were erected in stone mounds.

Harrison Lake may be considered an expansion of the Lilloet River. This river rises near the fifty-first paralled, and flowing south-easterly through a narrow valley, it widens for the last forty miles of that course into Harrison Lake. Within half a mile of the foot of the lake, on the west side, a channel suddenly opens to the south-west, through which the waters—now known as Harrison River—find their way for ten miles further, and then fall into the Fraser River, close to Harrison Station. Both river and lake are navigable for steamers similar to those in use on the Fraser. Mountains from three to eight thousand feet high rise from both shores.

The railway belt extends over twenty miles up the lake on the east side, and over eighteen miles on the west side. Within this limit there are two large islands, [PART II] 59

named Long and Echo Islands, respectively; and several streams discharge their waters into the lake through narrow valleys, or down the mountain slopes in beautiful cascades.

The distinctive features of the opposite shores differ widely. On the west side from Harrison River, north, the mountains rise gradually from the shore without a break, the crest of this long ridge attaining its greatest elevations far inland. A few small streams, or rather torrents, rush down the slope, the most conspicuous being

Eagle Falls, which enter the lake with a plunge of about 50 feet.

These falls are nearly ten and a-half miles from the foot of the lake. Four and a-half miles north of this point the lake attains its greatest width—five and a-half Long Island extends northerly over five miles from a point almost directly opposite Eagle Falls, and Echo Island-remarkable chiefly for its bay with seven echoes-lies about five miles to the south.

The east shore is broken by valleys, and the mountains are precipitous.

The Rainbow Falls, six and a-half miles from the lower end of the lake, decidedly the most beautiful of the many objects of interest on the lake, dash from ledge to ledge down the mountain side for 1,700 feet, in a succession of falls varying from 70 to 300 feet. Glimpses of some of the higher cascades are seen from the lake.

A judicious trimming of the trees would reveal at one view the fascinating beauty of this wild scene. At present, owing to the labor of climbing the mountain,

the higher falls are seldom visited.

Continuing up the shore twelve and a-half miles we come to Silver Creek, the largest stream entering the lake within the limits of the railway belt. Canoes can be poled up for two miles from its mouth, but from this point numerous rapids The valley through which it runs—the first make further progress impossible. mile of which I subdivided—is broken with spurs from the adjacent mountains, and varies in width from a quarter to half a mile. The soil is a sandy loam of good quality.

Fir and cedar 1 to 5 feet in diameter grow in the bottom.

The valley in which Harrison Lake lies extends southerly to the Fraser.

Some progress has been made in regard to a knowledge of the resources of this district. Close to the south shore two mineral springs, possessing remarkable medicinal properties, issue from the mountain side at a high temperature. They are known as the St. Alice Wells, or Harrison Hot Springs. Near by a town plot has been laid out, and a first-class hotel erected. Limestone near Eagle Falls, sandstone and marble above Rainbow Falls, a pigment pronounced by experts to be sienna earth, near Silver Creek, a bed of brick clay underneath the town plot, and several silver-bearing lodes, are said to have been discovered. Doubtless, further prospecting would soon swell the list.

The mountains are well wooded with Douglas fir of inferior quality and size: the timber mentioned as growing in the Silver Creek valley is of good quality, but limited in area. On the opposite shore, from a point a little more than fifteen miles up the lake to beyond the limits of the railway belt, there is a belt of timber extending back perhaps a mile and a-half, similar to that of Silver Creek, known as

"Martin's Limit."

Trout abound in the creeks, and on the hill sides grouse are plentiful. in the season, when snow drives larger game to lower levels, deer, goats, mountain sheep, black bears, and sometimes the formidable grizzly, afford splendid sport.

This work being completed, I proceeded to the south bank of the Fraser, to complete some surveys in Township 27, east of the Coast Meridian, where I am

now engaged.

E. DEVILLE, Esq.,

With the exception of the inconvenience arising from the smoky atmosphere in July and August, the season has been very favorable for surveying, the rainfall being light, and the mosquito a rara avis.

I have the honor to be, Sir,

Your obedient servant, J. A. KIRK, D.L.S.

Surveyor-General, Ottawa, Ont. 60

PART II

No. 18.

REPORT OF JOHN VICARS, D.L.S.

SURVEY IN NEW WESTMINSTER DISTRICT.

VANCOUVER, B. C., 2nd December, 1889.

SIR,—I have the honor to submit the following report of my operations during the past season.

Acting under your orders I left Cannington on 1st May and proceeded to Van-

couver, B.C., where I received my instructions for the season's operations.

After a few days' delay in getting my camp equipage and supplies ready, I proceeded to Township 10, east of Coast Meridian, to perform some subdivision surveys which had been omitted in the first survey. These completed, I proceeded to Township 11, east of Coast Meridian, where I also made some subdivision surveys, which had been similarly omitted. Both these townships are admirably adapted for agricultural purposes. The soil is rich—principally loam. Both townships are entirely taken up by settlers, who have from one to fifty acres of clearance, mostly under crops, which, at the time I was there, were in a flourishing condition. I saw new potatoes dug on the 1st June.

The timber in Township 11 has practically been destroyed by fire, though certainly enough still remains for building and fencing purposes, or even to supply a portable saw-mill for a few years. The timber in Township 10 has also been greatly damaged by fire, though not to the same extent as in Township 11. Groves of timber containing from 100 M. to 500 M. feet can be found in almost any section in this township; and in Sections 19, 20, 21, 28, 29 and 30 there is a magnificent belt of timber containing not less than 200 million feet, of which two-thirds would be fir, and the remainder equally divided between spruce and cedar. Trees of from 8 to 9 feet in diameter and 140 feet clear of branches are not uncommon. I measured several which are larger. There are several large creeks running through this township, which, if properly cleaned and dammed, I have no doubt could be utilized to take out this timber.

Having finished the work in Township 11 I started for New Westminster Junction, from which point I traversed Coquitlam River and Lake as far as the northern boundary of the railway belt. The river northward from the junction is broad, rapid, shallow, and full of boulders and shoals. It is not navigable, but with some improvements, in the shape of side piers, it might easily be made available for transport of timber.

Six and a-half miles from Westminster Junction lies Coquitlam Lake, a beautiful sheet of water, having a length of about seven miles and a breadth varying from 25 to 40 chains. It has an altitude of 435 feet above the level of the sea, and is about

to be used as a water supply for the city of New Westminster.

From Coquitlam Lake north the river is simply a succession of rapids and cascades, and it rapidly grows smaller until its source (a small lake) is reached. This is just within the railway belt, and from its shores some of the grandest scenery in the mountains was seen. To the south-east extended field on field of snow; to the south lay the valley of the Coquitlam, broken, rugged and narrow; to the west and north rose bare, rugged mountains, reaching to the clouds; and the lake itself lay in what looked like the crater of an extinct volcano.

There is little available agricultural land along the Coquitlam, though a few patches of from 50 to 500 acres may be found here and there. Its basin is heavily timbered with valuable trees, consisting of fir, cedar and hemlock in the valley, and cypress and larch on the mountains. This timber, in which cedar will

predominate, should average at least 40 M. to an acre.

Having finished the Coquitlam traverse I next ran out certain section lines in Township 39, west of Coast Meridian, and then proceeded to Port Moody, from which point I traversed Burrard Inlet and the North Arm as far as Bidwell Bay. Here I was so much retarded by rain and fog that I did not consider the amount of work I was doing justified my remaining in the field in that locality any longer, so I returned to Vancouver, intending to close work for the season, when I received your instructions regarding verification survey in Township 5, Range 27, west of 6th Initial Meridian. This I will proceed to perform at once.

There is some fair agricultural land along Burrard Inlet which is mostly taken

up for fruit or vegetable culture, for which it is admirably adapted.

One settler with whom I was speaking informed me he had raised four tons of strawberries during the past season, and sold them at an average of 10 cents per pound.

I have the honor to be, Sir, Your obedient servant,

JOHN VICARS, D.L.S.

E. DEVILLE, Esq., Surveyor-General, Ottawa.

No. 19.

REPORT OF EDGAR BRAY, D. L. S.

SURVEY OF TOWNSHIP OUTLINES BETWEEN LAKES WINNIPEG AND MANITOBA.

OAKVILLE, ONT., 6th June 1888.

Sir,—I have the honor to submit the following report of my survey of block lines and other township outlines lying between Lakes Winnipeg and Manitoba, and of the country covered thereby.

I left Winnipeg on the 14th of October, and on the 17th we camped in the north-

erly part of Township 19, Range 4, west of the Principal Meridian.

From examination and enquiry I found that the posts in Townships 19 and 20,

Ranges 3 and 4, were in a good state of preservation and the lines easily found.

In Townships 19 and 20, Range 5, no mounds were found. The lines are overgrown with brush, &c., and cannot be easily followed, while the posts shew the effects of age and frequently of fires, though some part of the post can nearly always be found in the ground. I cut out, in these townships, 40 miles of line, and set new posts in place of old ones.

The swamps being then sufficiently frozen to bear horses, I moved camp on the 28th October to Lundyville (Lilly Bay), where I stored my supplies, &c., and com-

menced cutting out a cart trail to the north, moving camp at the same time.

We were much delayed by a thaw which set in on the 3rd of November and lasted almost until we arrived at the 7th Base Line on 17th November. Here we were again delayed by clouds and snow which prevented my taking an observation until 24th November, when work was commenced by running the line between Ranges 6 and 7, west of the Principal Meridian, beginning at the 7th Base Line.

The work was continued all the winter, with only occasional delays, caused by

snow storms, &c., which prevented sights along the line.

On 28th March I started for Winnipeg, and arrived there on the 2nd of April, when the party was paid off.

Below is a description of the country covered by my surveys.

Meridian Line between Ranges 6 and 7, west of Principal Meridian.

Township 25 is timbered land, with some hay marshes. The northerly section is covered with poplar and pine of fair quality. The remaining five sections are timbered with poplar, of which a considerable portion has been killed by fire.

The township is nearly level, and appears to have a very fair soil.

Township 26 is also nearly level land with some hay marshes. It is covered with woods of poplar, pine and spruce, the greater part of which has been much damaged by fires.

The soil is either sandy or clay loam and is of fair quality.

Township 27 is composed of nearly level land with a fair soil. It is mostly covered with pine, spruce and poplar, but the greater part of the wood has been killed by fire.

Township 28 is mostly good, level land, timbered with poplar, pine and spruce which has been more or less damaged by fire, except on or about Section 24, where

the woods have not been injured.

At and near the north boundary of this township, the timber has mostly fallen and a new growth of pines has started.

8th Base Line.

In Range 6 there is windfall in Section 31, and part of Section 32, from which point, eastward, pine woods extend for about three miles, when marshy and swampy land occurs, extending east of the range.

PART II

The land is level and the soil good in Sections 31, 32, 33 and 34, and swampy in

Sections 35 and 36 excepting on a couple of ridges found in Section 35.

Range 7 has a nearly level surface and is composed of good land broken by hav marshes. Part of Section 36 contains windfall or marsh, the rest of the section, with all of Section 35 and about one half of Section 34 is timbered with pine, spruce and some poplar.

Going west from the middle of Section 34 we find the timber all dead and mostly

fallen

Range 8 is generally good level land, broken by numerous hay marshes. Some dead and fallen timber is found in Section 36, but the remainder of the range is well timbered with poplar, spruce, tamarac, etc., frequently of good size.

Range 9 is composed of low ridges of good land, separated by hay marshes, the ridges being timbered with poplar, spruce, etc., of good quality, and frequently of

very fair size. The west half of this range will be too wet for cultivation.

Meridian Line between Ranges 6 and 7.

Township 29 is fair level land, broken by marshes, excepting in Section 36 where a stony tract is entered.

Good timber of pine, spruce and tamarac has covered this township, but it is

now nearly all dead and mostly fallen.

Fixed limestone rock can be found almost anywhere in Township 30, and therefore the soil is poor and shallow. Bluffs of green woods were passed in Sections 13, 25 and 36. Elsewhere the timber has been killed by fire, but is still standing.

Township 31 has a poor soil, the southerly four miles being rocky, while the northerly two sections are swampy. Sections 20 and 36 are wooded with small spruce and tamarac. Some pine was found in Sections 1 and 12. In other sections the

timber is dead.

Township 32-The southerly three-fourths of Section 1 is swampy and covered with small spruce and tamarac. Next, a tract of good land was passed over, about 50 chains in width, covered with good spruce, poplar, tamarac and birch; then a hay marsh was crossed and Lake St. Martin reached in the north-easterly quarter of Section 12. The meridian was produced on the ice of Lake St. Martin to the 9th Base Line, and in Section 25 crossed a point of land on which there is an extensive hay marsh.

9th Base Line.

Range 7, Sections 36, 35 and a small part of 34, lie in St. Martin's Lake. The remainder of the range containing level land with good soil is covered with woods of poplar, spruce and tamarac, often of good size and quality, though in Section 6 the timber has been killed, and in some other sections somewhat damaged by fires.

Range 8 is composed of good land somewhat broken by hay marshes, and, excepting a ridge in Section 34, the surface is nearly level. The easterly sections of the range are timbered with mixed spruce, tamarac and poplar, while those to the west are covered with poplar woods with scattered spruce. This timber is mostly of good quality, but some tracts were found where damage had been done by fire.

Range 9 is good level land, alternating with marshes It is mostly wooded with poplar and scattered spruce, the timber being often of considerable size. In Section 35 a rough, rocky tract was found, which probably is a part of the Gypsum Hills, though only common limestone was noticed. Where the line crosses this tract the elevation is only a few feet above the surrounding country.

Meridian Line between Ranges 8 and 9.

Township 32 has mostly a level surface, and, excepting a marsh in section 24, the soil is a good, dry sandy loam. It is timbered with poplar, mixed here and there with spruce, which is often of good size and quality. All the southerly half of this township has been overrun by fire and the timber somewhat damaged. Fire has also destroyed some timber in Section 25. 64

PART II

Township 31 is also comparatively level, and the soil generally a good, dry, sandy loam. It is wooded with poplar of fair size, which has been partly killed by fire.

Meridian Line between Ranges 7 and 8.

Township 32 is level land, and, excepting in the marshes, the soil is a good, sandy loam. Nearly the whole of the northerly three sections has been timbered with mixed woods of spruce, tamarac and poplar, but it has been very badly damaged by fires. The remainder of the township is wooded with poplar of fair quality. Section 1 lies in Lake St. Martin.

Through Township 31 the line was run on the ice on Lake St. Martin.

Through Township 30 the line for about a quarter of a mile of Section 36 and nearly all of the jog is on an island in St. Martin's Lake. This island is mostly wooded with poplar and birch, which is now partly dead. South of the lake (Sections 1, 12 and part of 13), the land is generally of fair quality, and is heavily timbered with mixed woods of spruce, pine, tamarae and poplar.

Township 29 is mostly good, level land with a fair soil of sandy loam. It is timbered with a mixture of spruce, pine, poplar and tamarac of very fair size, but in most of the southerly half of the township the woods have been very badly dam-

aged by fires.

It will be noticed from the above that the timber in considerable portions of this survey has been badly damaged by fires, which appear to have swept through the country about two years ago. In some localities the timber has been entirely killed; and, as so much inflammable material now covers the ground, it is nearly certain that another fire will run over this tract and convert considerable areas into prairie. At present the dead timber is mostly sound, but of no value, as no means exist by which it can be taken to a market.

I believe the country in Townships 25 to 32, in Ranges 8 and 9, will be found more suitable for settlement than that lying farther east, as no rocky land was

noticed in these townships.

It is an objectionable feature in this district that the land is very flat, and likely to be wet in rainy seasons. However, as plenty of hay land exists, stock raising will be profitable, more especially in some tracts near St. Martin's Lake, where very large meadows were noticed.

In this locality the winter season will probably be found the most favorable for

surveying operations.

I have the honor to be, Sir, Your obedient servant,

EDGAR BRAY, D.L.S.

E. Deville, Esq., Surveyor-General, Ottawa.

No. 20.

REPORT OF W. T. THOMPSON, D.T.S.

SURVEY OF TOWNSHIP OUTLINES.

SIR,—Having completed the survey of the 4th Base Line and Meridians running north from it, between the 3rd and 4th Initial Meridians, on the 16th of August, 1882, I at once set out with my party for Edmonton via the Forks of the Red Deer River, from where I forwarded, on the 28th of August, a report on the above named survey; and, leaving on that date, struck out over the plains in a nearly direct course for Edmonton, where I arrived on the 16th of September. About one half of my supplies had arrived here by the last steamer, and I was informed by letter that the balance had been forwarded from Qu'Appelle by cart on the 1st of September and would probably reach Edmonton by the 15th of October. I arranged, however, with the Hudson's Bay Company and others for a supply of the leading articles of which I was short, to be replaced on arrival of carts, and as there appeared no probability of my being able to procure a York boat at Athabasca Landing, we set out on 22nd of September for the Pembina River, via the old cart trail of the Hudson's Bay Company, and arrived there on the 28th. Here a saw-pit had been constructed by Lloyd and Haye's party, who built a boat and went through to Lesser Slave Lake in the spring of 1882.

At this place we prepared two rough flat bottomed boats to carry the outfit and supplies, and on the 9th October, all the freight having arrived from Edmonton, we loaded the boats and started down the river, arriving without mishap at the

mouth of Lesser Slave River on the 16th of October.

The country and journey from the Forks of Red Deer River to Edmonton and thence to the foot of Lesser Slave Lake, have been already described in my reports of progress dated 30th September and 22nd December, 1882. At the mouth of the Lesser Slave River I expected to find a Hudson's Bay boat to forward the supplies up the river, which is rapid and difficult to ascend. No boat being on hand I decided to advance the supplies as far as possible with the means at my disposal, and on the 1st of November reached the head of the rapids with the whole, a distance of 18 miles from the mouth.

Finding it impossible to proceed further with all the supplies, the greater portion were cached here, and with one boat containing the balance we reached the foot of Lesser Slave Lake on the 12th November, a distance of 53 miles from the Athabasca, having been much impeded for several days by floating ice in the river.

The ice had now begun to set on the river and lake, preventing our advancing further, and, the country eastward from the foot of the lake being low and marshy, work could not be commenced till the ice had formed over this region. In the mean-

time the party were employed preparing sleds for moving the camp, &c.

On the 12th of November I sent a messenger to the Hudson's Bay Company's post at the head of the lake for certain articles required, and requesting three dog trains to be sent down for camp shifting as soon as the ice had formed. On the 9th December, the ice being sufficiently strong, work was commenced by running eastward from the foot of the lake, and the dogs not having arrived the camp outfit was shifted on sleds drawn by members of the party.

On the 22nd of December two dog trains arrived from the head of the lake, after which we advanced more rapidly, and on the 16th of January reached the mouth of Lesser Slave River, a distance by the traverse lines of thirty one miles from foot of

lake.

Here I blazed a tree, marking same station "O," and left a note for Mr. Ogilvie requesting him to send me a memorandum giving the position of this point in reference to his meridian, and then set out on our return.

66 [PART II]

The native drivers having become dissatisfied had left with their trains several days previously. We were now obliged to draw the sleds to the foot of the lake, where two fresh trains and drivers met us on the 22nd of January.

The traverse was now continued westward, towards the head of the lake, which was reached on the 9th of February, a distance by the traverse lines of sixty four

miles from the foot,

From the head of the lake the lines were run in a general westerly direction, through lightly timbered country, towards the junction of the Little Smoky with Smoky River, which was reached on the 6th April, and camp shifted to the west side of the river.

The snow was now fast disappearing, and the country becoming so wet that work had to be discontinued, and the dogs and drivers were sent back to Slave Lake. I next employed myself making computations to correct and reduce the traverse, so that, upon hearing from Mr. Ogilvie, there might be no delay in determining my position.

On the 6th of May six pack horses were got in from Dunvegan, and finding from the assumed longitude of the mouth of Lesser Slave River that I had about thirteen miles yet to go before reaching the 118th Meridian, work was at once resumed, the line being continued westerly through densely timbered country, with numerous marshes and beaver ponds.

Or the 31st of May a messenger arrived from Mr. Ogilvie, giving the position of my initial point at the mouth of Lesser Slave River, from which I found that I had yet two miles to go to reach the 118th Meridian, and on the same day the line was

completed to the meridian.

I here took observations for latitude by transit over the Prime Vertical, and found the point of observation to be 5" too far south as compared with the computed latitude obtained from the length and direction of the line joining the initial and terminal points of the survey. The station, however, was not favorably situated, the Birch Hills lying close to the north and a depressed tract of country extending to Smoky River on the south, thus having a tendency to make the observed less than the geodetic latitude.

I therefore made only a small correction to the computed latitude, and commenced surveying the 6th Initial Meridian northwards, and temporarily posting the same, my intention being to obtain further observations at different points on the meridian, which, connected by the chaining, would give a closer value of the geodetic latitude. Up to the date of Mr. Ogilvie's arrival on the 20th of July, however, no further observations were obtained, owing to unfavorable weather, and he at once commenced the survey of the 21st Base Line, working westward from my meridian.

On the 10th August I had completed the survey of the meridian to the latitude of the 22nd Base Line, nearly at the summit of the White Mud Hills, which are covered with brulé and windfall, and finding further progress northward difficult, I concluded to turn west on this base, which, according to the map and Indian reports, would pass through comparatively open fertile country. It would also afford the means of fixing the position of the 120th Meridian or British Columbia boundary.

On the 20th of September a distance of 50 miles had been surveyed, and, supplies becoming scarce, I decided to complete the range upon which I was working (a

distance of four miles), and return east.

On the above date three members of the party, with eight horses, were accordingly sent out to proceed via old Fort Assiniboine to Edmonton, my assistant leaving at the same time with one man to permanently post the meridian on the south side of Peace River, and then proceed via the Forks of Little Smoky River to Lesser Slave Lake, where he would await the arrival of myself with remainder of party. On the 22nd, however, a supply of provisions arrived unexpectedly from Dunvegan, and, the country becoming more open, I considered it advisable to continue to the boundary, which was reached on the 8th of October.

This completed the work for the season, and opening a trail southward to Peace River for the pack horses (a distance of ten miles), we reached it on the 10th. Here we constructed a raft to carry the party and baggage, and proceeded down the river

67

on the 12th, reaching Dunvegan on the 15th, where we obtained a York boat, and leaving on the evening of the 16th reached the Peace River Landing on the 18th. The horses which had been sent east via the Fort St. John trail arrived on the 20th. Four carts had been left here for me by the Hudson's Bay Company to earry the baggage, and leaving on above date we reached Lesser Slave Lake on the 25th. Here we obtained a York boat for the trip to Athabasca Landing, and set sail down the lake on the 26th. At Big Point we took on a pilot for the descent of Lesser Slave River, which, owing to low water, was reported difficult to navigate except for one intimately acquainted with the channel. On October the 31st we reached the Athabasca without mishap. Fragments of ice were now floating in this river, and the water was so shallow that our boat, though drawing only 18 inches of water, frequently grounded on the gravel bars. In high water, however, the depth varies from 10 to 20 feet.

We reached Athabasca Landing on the 3rd November, and travelled thence by cart to Edmonton, a distance of ninety-six miles. Here we were delayed from the 8th to the 12th, the ice on the Saskatchewan not being sufficiently strong to allow the horses and carts to cross. Leaving on the latter date, the party reached Calgary on the 22nd, and Winnipeg (by rail) on the 25th.

Description of the Country in the Vicinity of my Lines of Survey.

The country on both sides of the Lesser Slave River, as far as I have been able to ascertain, is densely timbered with spruce, poplar and jack pine. There are many spruce and tamarac swamps, alternating with poplar and jack pine ridges, the soil on the ridges being generally of fair quality. The country, generally, is not suitable for agricultural purposes.

Westward from the head of Lesser Slave Lake for about ten miles the land is low and marshy; thence west to within a few miles of Smoky River it is a slightly elevated plateau, containing a number of grass marshes, and broken by occasional ridges, and timbered with poplar and spruce, with the exception of a

few openings made by fires and now partially overgrown with willows.

The soil is generally of fair quality, and a considerable portion of this tract is suitable for agricultural purposes. Along the east bank of Smoky River there is a belt of marshy or boggy land about two miles in width and extending some distance to the north. The banks of Smoky River, where the line crossed, are fully 400 feet high. In the valley there are some fine fertile benches, the largest containing about 300 acres, with prairie openings. Westward from the river to the 6th Initial Meridian, a distance of 15 miles, the country is densely wooded with poplar and spruce, and is somewhat broken by knolls and ridges, all the low ground being occupied by marshes and beaver ponds.

The wet condition of the country is caused entirely by beaver dams, which are

found on every little creek.

Northward from the terminal point of my traverse to Peace River, a distance of eighteen miles, following the 6th Initial Meridian, the country is densely wooded, except a narrow belt on the north side of the Birch Hills. The surface is broken by knolls and ridges, and the low ground is occupied by marshes. The soil is a sandy loam of fair quality, with white silt subsoil.

Peace River was crossed on the 6th of July, about 25 miles east of Dunvegan. Here it flows with a strong current among islands, its width being nearly half a mile

and depth about 25 feet in the centre of the channel.

Northward from the river the country traversed by the meridian is, with the exception of some small prairie openings, generally wooded. A part has been burnt over, leaving a good deal of brule; there are some extensive grass marshes, and several muskegs. The soil, generally, is of very good quality. In the vicinity of the cart trail to Dunvegan, which was crossed eleven miles north of the river, the line passes through about two miles of prairie, and looking eastward extensive tracts of open prairie were seen. Twelve miles north of the trail the foot of the White Mud Hills was reached. These are covered with dense brulé and windfall, the timber 68

being chiefly spruce, from 10 to 40 inches in diameter. The greater part of the timber is still valuable, having been only slightly scorched by fire. Six miles from the foot of the hills the latitude of the 22nd Base Line was reached, and finding the country for a considerable distance to the north covered by a dense brulé and windfall, I did not consider it advisable to proceed further in that direction, and turned west on 22nd Base Line, which, according to the map and Indian reports, would pass through comparatively open country, well suited for agricultural purposes.

The north limit of Township 84, Range 1, west of the 6th Initial Meridian, lies in the White Mud Hills, which, as before stated, are mostly covered with brulé and windfall, and, the surface mould having been burnt off, the soil is generally inferior.

Range 2 is somewhat broken by hills and ridges, timbered with green poplar

and some spruce, with a few small prairie openings.

Range 3.—The country is hilly, and timbered with poplar and spruce; good

loam soil, with white silt subsoil.

Range 4.—Surface undulating, timbered chiefly with poplar, except Sections 32 and 33, which are nearly open prairie. On section 33 a small creek, tributary to Island Creek, was crossed.

Range 5.—Surface nearly level. Sections 35, 34 and 33, prairie and bluffs; the remaining sections timbered with popular and willow, with some spruce brule. Soil

of excellent quality

Range 6.—Level country, generally burnt over. We crossed the east fork of the Montagneuse River in Section 36; its valley is 200 feet deep and half a mile wide; the river is 50 links wide and 1 to 2 feet deep, and very rapid, flowing over stones and boulders, its depth in high water increasing to 6 or 8 feet; the valley is covered with dense brulé and windfall. The west fork of the same river was crossed in Section 33; the banks are 150 feet high, and the creek 10 links wide. Soil of excellent quality.

Range 7.—Land generally low and swampy, alternating with fine poplar ridges. Range 8.—Sections 36,35 and 34 are much broken by deep ravines running down to Peace River, which is about half a mile south of the north-east angle of Section 35. The above named sections are covered with spruce and poplar brule; the remaining sections are timbered with large poplar. The soil is clay loam of excellent quality; subsoil clay.

Range 9.—Surface level, timbered with poplar, jack pine and spruce; occasional

marshes and swamps. The soil is generally of good quality.

Range 10.—Level country, partly burnt over; a few ridges of jack pine and

poplar, remainder brulé, with second growth of willow. Soil, class 1.

Range 11.—Level country, covered generally with jack pine brulé and windfall, and second growth poplar and willow. We crossed the Clear River at the north-east angle of Section 32, the valley being one mile wide, and the banks 450 feet above the river, which is about 50 yards wide and from 1 to 3 feet deep, rising to 10 feet in high water.

Range 12,—Sloping to west; timbered with fine green spruce and poplar, with

some brulé. Soil, class 2.

Range 13.—Sections 36 and 35, spruce muskeg; Sections 34 and 33, covered with poplar and jack pine brulé. Soil, class 2.

DESCRIPTION OF PEACE RIVER.

From the mouth of the Clear River to the landing, which is about three miles east of the forks of Smoky River, I made a running traverse of Peace River, taking numerous soundings. Between these points the river flows in a trough-like valley from 700 to 1,000 feet deep, and one to three miles from rim to rim. At the Clear River perpendicular exposures of a whitish sandstone of compact structure rise from the water's edge to a height of 20 or 30 feet on both sides. About six miles down the river exposures are seen several hundred feet above the water; here the sandstone has been much eroded, leaving pillars and very picturesque forms; outcrops were seen at intervals all the way to the landing.

PART II

The depth of the river was found to vary from 3 to 30 feet, the former being near the mouth of the Montagneuse River, where the channel is broken by islands and sand bars. In high water, however, the depth in the shallowest part must

be at least 15 feet.

The width varies from 1,000 to 3,000 feet, and the current from two to six miles per hour. The south bank is densely wooded with spruce and poplar, with some birch at intervals; the north bank is generally sparsely wooded with a light growth of poplar, and in many places is quite open. There are few benches of any extent, except at Dunvegan, and again near the forks of Smoky River. On the north side of the Peace River there are some fine extensive benches, elevated from 20 to 80 feet above the river, and well adapted for agricultural purposes.

The following streams, affording suitable sites for mills, empty into the Peace from the north, viz., Clear River, Montagneuse River, Little Burnt River, and a large

creek six miles west of the Landing.

From the Landing to Lake Athabasca I am informed by officers of the Hudson's Bay Company that no impediment to navigation exists, except at the Falls, below Fort Vermilion, 120 miles west of Athabasca Lake. The fall is said to be 10 feet, and I am imformed on the same authority that locks could be constructed to pass this obstruction without great expense.

I may point out that from the east end of Athabasca Lake to Fort Churchill, on Hudson's Bay, the distance is somewhat less than 400 miles. The intervening

country is reported as level, and containing a number of muskegs.

GENERAL REMARKS ON THE PEACE RIVER COUNTRY.

On the fertile tracts in the Peace River Basin the following are the most accessible, and, as far as I could ascertain, the best suited for agricultural purposes:

1st. The Grand Prairie region lying thirty miles south of Dunvegan, and bounded on the east by Smoky River, containing about 230,000 acres. The soil is described by Dr. Dawson as of the finest quality; the surface is diversifed by aspen ridges, and serviceberry coppice; the Indians collect large quantities of serviceberries here and dry them for future use. This region is described by the officer in charge of the Hudson's Bay Company's post as being a very fertile and beautiful tract of country. The distance from the east limit of the Grand Prairie in a nearly direct course to Edmonton via Dirt Lake is 240 miles, while by the usual land and water route via Athabasca Landing and Lesser Slave Lake it is 450 miles. From what I can ascertain, it would be quite practicable to construct a road in a nearly direct course, as stated above, and this would afford the best means of access to the Grand Prairie region, and the road could then be continued to Dunvegan, a distance of thirty miles, which would give connection with Peace River and the country to the north.

2nd. The country in the vicinity of the trail from Peace River Landing to Dunvegan, a distance of 65 miles, is mostly prairie, dotted with bluffs of poplar and willow; the soil is very fertile and appears to be well adapted for agricultural purposes. Between the Little Burnt River and Dunvegan, a distance of about 20 miles, the country is very fine; extensive prairie openings are separated by bluffs of large-sized poplar, the approximate area of prairie and bluffs being 300,000 acres.

3rd. From Island Lake to the British Columbia boundary, following the Fort St. John trail along the foot of the Clear Hills, there is a considerable amount of fine prairie land, most of this tract lying north of the 22nd Base Line. Approximate

area of prairie and bluffs, 100,000 acres.

4th. Besides the foregoing, there are the following fertile prairie tracts, viz., small areas of prairie south of Dunvegan, the White Mud prairie lying about 20 miles north-west from Peace River Landing, and the Battle River prairie, lying north of Battle River. As to the tract lying north of Battle River, I have been unable to get any accurate information. It is stated, however, that the trait to Fort Vermilion passes through a large amount of prairie and bluffs. Except the tracts above described, the country is generally densely wooded with spruce and 70

poplar, the former from 10 to 40 inches in diameter, and the latter sometimes reaching 20 inches. The spruce, especially, is well suited for lumber, spars, &c.

The map sent herewith shows in a general way the distribution of prairie and

woodland, and the leading topographical features of the country.

But little attempt at farming has yet been made in the Peace River country. At Dunvegan the Hudson's Bay Company and Roman Catholic Mission have each, for a number of years, cultivated a few acres of land in the valley, growing wheat,

barley, and the different kinds of vegetables successfully.

In the spring and summer of 1883 there were a number of severe frosts, from which the crops of vegetables at Dunvegan suffered to some extent. The grain, however, was not injured. The yield of wheat on the Hudson's Bay Company's land was estimated at 30 bushels per acre; at the Roman Catholic Mission 20 bushels were raised on one-third of an acre, which had been very carefully cultivated. No attempt at cultivation worthy of mention has yet been made on the upland, but the fertility of the soil is indicated by the rank growth of wild vegetation.

At Lesser Slave Lake the Hudson's Bay Company cultivate successfully grain and vegetables, and some of the natives raise small quantities of potatoes. At Sturgeon Lake and at Bear Lake, north-west of the Peace River Landing, potatoes

are also successfully grown by the natives.

It is but right to state that according to those who have resided for a number of years in the Peace River country frosts, either in spring or summer, are very unusual.

In the latitude of Dunvegan the sun is above the horizon nearly 17½ hours on the 22nd of June, and its greatest angular distance below the horizon on that date is only 10°. There is no actual night, the twilight being sufficiently strong to enable one to see objects distinctly at a short distance. The amount of sunlight in summer compensates to a great extent for the loss of heat due to the obliquity of the sun's rays, as vegetation was observed to be very rapid and luxuriant.

Climate.

Regarding climate, I may state my own experience.

On the 28th September, 1882, and following days, snow fell at the North Pembina River to a depth of 8 inches; on the 9th October, however, it had all disappeared, and we had fine weather until the 1st of November, when it became cold and raw, with flurries of snow; by the end of January the depth of snow reached

its maximum, 2½ feet, in the vicinity of Lesser Slave Lake.

Very cold weather was experienced in the beginning of December, and again for the first two weeks in January, 1883, when the lowest temperature recorded at Dunvegan was 57°. With the above exception, the winter compared favorably with that of Ontario; we had no weather of such severity as to prevent work on the line; and, living in canvas tents, did not find it uncomfortable, except in the cold periods above named. On the 20th March the snow began to disappear; on the 15th April the ice broke up on Smoky and Peace Rivers, and the open prairie was clear of snow, while in the wooded parts it did not entirely disappear until the 10th of May. On the 24th April I saw a number of flowers on the north bank of Peace River, and from that date onward vegetation advanced rapidly.

The spring and summer we've cool and cloudy, with light showers of rain and occasional frosts (the latter, I was informed, were quite unusual). The weather continued open and pleasant until the 1st November, 1883, when snow began to fall. It is proper to state that traders and others who have resided for a number of years in the Peace River country as well as in other parts of the North-West, consider the climate of the former much the most favorable, and state that summer frosts in that

region rarely occur.

Outlet for Products.

From the above description it will be seen that the fertile portion of the Peace River country is almost completely separated from Edmonton and the North-West [PART II] 71 by an extensive tract of broken and inferior country, and until the means of access are improved, either by opening up a road in the direction previously indicated, or the construction of a railway, it cannot become settled to any extent. Agricultural implements and the different articles required to commence operations must be brought in from Edmonton, but the agricultural products of Peace River can never be profitably exported in that direction. There are, however, the Peace and Mackenzie River districts, which, could be directly supplied. These consume a considerable quantity of flour, &c., which is now being brought from Edmonton and British Columbia, and which, owing to the difficulties of transport, sells at a high price; but the demand being limited could be supplied by a few well cultivated farms. For an outlet to the great European markets one must look to Hudson's Bay.

On the Peace River, from the Rocky Mountains to Lake Athabasca, there is only one impediment to navigation, viz., at the falls, 120 miles west of Lake Athabasca, which, as before stated, could be passed by means of locks, thus giving continuous navigation to the east end of that lake; and thence to Fort Churchill on Hudson's Bay, a distance of about 400 miles, the country is reported generally level and swampy, and it is probable would admit of the construction of a railway.

Should the Hudson's Bay route prove practicable, it is evident that the country drained by the magnificent Peace River is perhaps more favorably situated in regard to it than any other part of the North West.

Fish, Game, &c.

Lesser Slave Lake abounds in whitefish upon which the natives residing there almost exclusively exist; salmon trout and pike are also found in smaller numbers.

In the spring and fall large numbers of ducks, geese, cranes and swans are found at this lake. Whitefish Lake, lying to the north about a day's journey, also abounds in fish and wild fowl, and in Smoky River brook-trout and gold-eyes are found; but very few fish are obtained in the Peace River. Near the mountains all the streams are said to abound in brook-trout.

Moose are found in considerable numbers in the vicinity of Smoky and Peace Rivers, and at Dunvegan dried moose meat forms one of the staple articles of diet. Bears are also very plentiful in the vicinity of these rivers; three varieties being found, the black, cinnamon and grizzly. In the wooded parts the Canadian partridge or ruffed grouse are found in large numbers, and prairie chickens in the open parts.

The following fur-bearing animals are still plentiful, viz: beaver, musk-rat, otter,

fisher, mink, fox and lynx.

In conclusion I may state that, owing to the great expense attending the transport of supplies to the Peace River country, I do not consider that it would be advisable to prosecute surveys extensively there at present.

I have the honor to be, Sir, Your obedient servant,

WM. T. THOMPSON, D.T.S.

E. DEVILLE, Esq., Surveyor-General, Ottawa.

No. 21.

REPORT OF C. F. MILES, D.L.S.

WALKERTON, ONT., 27th December, 1889.

SIR,—I have the honor, in accordance with my instructions, to submit the following report on my last season's surveys in the southern part of the District of

On receipt of my instructions, dated 7th May, I proceeded to Toronto and thence by Canadian Pacific Railway connections to Winnipeg, where I stopped over to purchase supplies, thence going on to Calgary, arriving there on the morning of the 27th of May, where I received more detailed instructions from the Inspector of Surveys, and on the 1st day of June commenced re-tracing and re-mounding the 5th Initial Meridian from the 7th Base southward. While on this work I also made a traverse of part of Bow River, where it crosses Sections 6 and 7 in Township 22, Range 30, west 4th Initial Meridian.

No great difference in measurement was found until I reached the Porcupine Hills. While re-tracing the 5th Meridian in these hills, I was compelled, on 27th June, to abandon my carts, and to move my outfit on the horses' backs. Not having any

pack saddles it was rather severe on the horses.

The meridian line crosses some of the highest peaks in the hills; however, it also intersects valleys well adapted for settlement. The growth of herbage was luxuriant, compared with that on the prairie, added to which the hills are well watered by numerous springs and spring creeks. Plenty of timber, both poplar and

spruce, are met with, well adapted for domestic purposes.

On measuring the east boundary of Section 1, Township 11, I found the quarter section mound 8 chains and 37 links too far south, and the whole surplus on the last two quarter sections on the 3rd Correction Line 23 chains and 28 links. Communicating this fact to the Inspector of Surveys, he recommended re-measuring the 24 miles between the 3rd and 4th Bases, which was done, but no material difference

was made in the surplus.

After completing re-tracing and re-mounding of the 5th Meridian I returned to Townships 12, Ranges 29 and 30, west 4th Initial Meridian, to examine and correct the subdivision of the same. Having measured the outlines of these townships, I connected the quarter posts on the outlines a half mile south of the 4th Base by a straight line, thus determining the depth of quarter sections adjoining the 4th Base. I also ran the interior cords and made these lines govern the width of intervening sections. Scarcely any topography was taken while making the measurements for the necessary corrections in these two townships, being under the impression that it was not necessary.

After completing the correction of these townships I proceeded with my outfit via Fort McLeod to Township 8, Range 22, west 4th Initial Meridian, where I surveyed the north-west quarter of Section 13, this being a part of the "Blood" Indian Reserve. Some of the corners had been previously established by Mr. Nelson, Surveyor to the Indian Department. This quarter-section is traversed by the Belly River, and

includes the old trading post formerly known as "Whoop-Up."

From here I proceeded to the west side of the "Piegan" Indian Reserve, on which I located and surveyed Sections 7 and 18 in Township 7, Range 28, west 4th The corners of the sections I found had also been previously established by D. L. S. Nelson, and iron bars planted. These two sections are somewhat cut up by the Old Man's River, the bed of which is here of considerable width, although the river itself, owing to the very dry season, was but of small dimensions.

[PART II] 73 On Section 7 one settler is located, whose crops, notwithstanding the drought, looked promising. On Section 18 fields of oats were seen in the valley on the north side of the river. Several other fields were also seen on the bench north of the river. The latter, I was informed, were under cultivation by some of the Piegan Indians.

After completing the survey of these two sections I proceeded to Township 6, Range 1, west 5th Initial Meridian, for the purpose of surveying a road from the Old Man's River south-westerly to the sawmill situated near the south-west corner of Section 18 in this township. In travelling to this point I passed through what appeared a fine country, well adapted for the growth of cereals and for stock-raising purposes. The land is generally rolling and undulating up to within a couple of miles from the mill, where the country becomes more hilly and the hills more abrupt. Rock is exposed in many places.

Mill Creek, which furnishes the power for running the mill, is a fine stream, and although not containing much water at the time I made the survey, has the appearance of carrying a large body of water at certain seasons. It is also well stocked with

trout.

The road I surveyed is partly on the south-east quarter of Section 19 and partly on Section 18; that part of the road on the south half of Section 18 has been in use for some time, and has been graded in several places, whereas that part on the north half of Section 18 and on part of the south-east quarter of Section 19 is a deviation from the former travelled road. I was informed that good timber is within easy reach of the mill, and can be floated down without much difficulty.

From here I proceeded to the south half of Township 5, Range 30, west of 4th Initial Meridian. This part of the township consists mostly of rolling prairie, covered in many places with a dense growth of willow scrub and second growth poplar. There are also good hay meadows in the southern half of this township, and I would

consider it well adapted for settlement.

After completing the subdivision of the south half of this township, I proceeded to the north-east corner of Township 4, Runge 28. I experienced some difficulty in finding any posts or mounds, as owing to the large herds of cattle ranging here all the mounds were found to be obliterated and posts knocked down. The grass is of a luxuriant growth, which added to the difficulty of finding section corners. However, after half a day's search, we finally found the township corner, and then proceeded south, re-tracing the outline of Township 4. Not finding any material difference in rechaining the first three sections, I renewed the old pits and planted iron posts at section corners. Section 13 was found to be 87 chains and 55 links in length. I made the necessary correction, and continued establishing corners according to corrected measurement. The land adjacent to this line is undulating, with a good black loamy subsoil, also well watered with numerous ponds, and on the east and west by Belly and Kootenai Rivers.

I made the necessary change in the line, tying in the Police Reserve at "Big Bend" of the Belly River, with the north-east corner of Section 13, Township 3,

Range 28.

I completed retracing and marking the section and quarter section corners of Townships 2, 3 and 4 on September 7th, and shortly afterwards moved my camp

to the Waterton River, or, as it is better known, the Kootenai River.

I arrived on the banks of this river on the 9th of September in a dense fog, so dense that an object a chain distant could only be dimly discerned, and, as we were travelling across country, I had to make constant reference to the compass. The following night a heavy snow storm set in, continuing all the next day, which was succeeded by a heavy frost and flurries of snow. However, all the snow had disappeared by the 14th, and we enjoyed about a month's fine weather after that. Heavy winds prevailed during our stay at this point, and I was informed by old settlers that they were peculiar to that locality.

Quite a rush of speculators took place on account of the recent discoveries of petroleum on a creek, since named Oil Creek, about two miles south of the South Kootenai Pass. I visited this creek, which is somewhat difficult of access, and saw several

74 [PART II]

small pools both on the north and south sides of the creek, each containing probably a gallon of oil and water mixed. I send a sample of the oil for your inspection. The ground for a short distance around these pools appears saturated with the oil, which is also seen oozing out from the banks of the creek in various places. It is situated quite close to an old Indian hunters' trail, and is said to have been known by the Indians, and the oil used by them as a medicine, for many years.

Quite a number of mining locations have been surveyed in the valley of this creek, and since the visit of an expert, who had been sent up by some eastern Oil Company to test the discovery, nearly 20,000 acres have been staked out and surveyed, comprising parts of Townships 1 and 2, Ranges 29 and 30, west of the 4th

Initial Meridian.

I tied in the claims surveyed on Oil Creek with my subdivision survey by

triangulation.

The formation contiguous to the oil springs consists of a gray and red sandstone, generally capped on the peaks by an overflow of limestone. There is a considerable dip to the strata, often almost vertical, from which a conclusion may be drawn that in boring for the oil at any distance from the Mountains, the wells may have to be sunk to a very great depth before striking the oil-bearing rock.

The Kootenai Lakes, as they are more commonly called, and as they are said to be named by the "Stony" Indians, comprise three fine sheets of water. The lower two are about one and a-half miles and two and a-half miles in extreme length, respectively; the upper one is said to be about fifteen miles in length, of which only about three

and a-half miles are north of the International Boundary.

Salmon trout are very plentiful in the upper lake, and speckled or rather mountain trout in the Kootenai River, which is the outlet for these lakes. The growth of grass is very luxuriant in this the most extreme south westerly corner of the District of Alberta, although the flats in many places are very stony.

District of Alberta, although the flats in many places are very stony.

Two old settlers were met with in Townships 1 and 2, Range 29. One of them,

Mr. John George Brown, in Township 2, was resident at the time of my survey; the

other one, Mr. H. A. Kanouse, had retired to Fort McLeod.

A small seam of anthracite coal has been discovered in the southerly portion of Township 1, Range 29, on or near Canon Creek, the specimens of which looked very promising; but as so many more extensive seams have been recently discovered in close proximity to the Canadian Pacific Railway, it will probably be some time before this will be developed.

I completed my survey in this district on October 15, and moved out the same day to "Big Bend" on the Belly River. I forded the river here the following day and travelied across country to Township 2, Range 25, W. 4th I. M., passing through

Cardstone, the centre of the Mormon settlement.

Whatever may be the tenets held by these people it must be acknowledged that they are industrious. It is two years since I passed through here before, and they, the first comers, were then under canvas. After the lapse of two years the progress they have made is very noticeable. Many good substantial houses have been erected, generally in fields or gardens well fenced; and what would strike a casual visitor perhaps most is the number of hay, grain and straw stacks surrounding almost every house.

In Township 2, Range 25, I retraced and repitted the east boundaries of Sections

31, 30, 19, 18, 7 and 6.

From here I proceeded to examine subdivision contract No. 13, comprising part of Township 3, Range 24; Township 4, Range 21; and Townships 3 and 4, Range 20, west of the 4th Initial Meridian, situated on the Milk River ridge.

Owing to the great scarcity of prairie grass during the past summer, a considerable quantity had been cut on this ridge, the greater part of which had been for the

requirements of Lethbridge and vicinity.

I returned to Fort McLeod, by way of "Whoop Up," passing through a very dry and bare-looking country. Owing to scarcity of feed my horses strayed while camping near Fort McLeod, and I was therefore delayed several days.

PART II

In compliance with instructions received from the Inspector of Surveys, I returned in November to the Porcupine Hills, and chained outlines of Townships 9 and 10, in Ranges 29 and 30. I measured the three first deflection angles on the 3rd Base, east of the 5th Meridian. They were 0.°106, 0.°11 and 0.°101. My measurements on the east limit of Townships 9 and 10, Range 29, varied at most 21 links from theoretical distance, and the depth of the last quarter section on the 3rd Correction Line differed in length 9 links from distance on sketch supplied me. Of the last quarter section in Range 30, the original measurement is given as 40 chains; according to my measurement Section 25, Township 10, is 87.46 chains, and Section 36 measured 82.74 chains, thus making a surplus in Sections 25 and 36 alone.

I enclose a list of my measurements.

I traced the 3rd Base across Range 28 without finding any errors. The several nights that I camped on the Base Line, the weather was not favorable for observing. I, however, succeeded in catching "Polaris" one morning soon after elongation, which led me to conclude that the azimuth of the 3rd Base at Section 2, Township 9, Range 29 was very nearly correct. I was more successful in observing on Range Lines 29 and 30, about six miles north of the 3rd Base, the azimuth of both these lines being within 0.005 of a true meridian.

Owing to the season being far advanced, and the weather in the hills continuing very threatening, with daily snow flurries, I became somewhat alarmed lest I should be snowed in with my carts and outfit. I therefore did not proceed any further in determining the exact point of deviation, but concluded that the error

must be somewhere on the 3rd Base in either Range 29 or 30.

We left the hills on 22nd November, and returned to the vicinity of Fort McLeod, where, after laying in oats and other supplies, I started my party for Calgary on the 25th, travelling myself by stage. They arrived at Calgary on 30th November, and I paid them off the same day.

All of which is respectfully submitted.

I have the honor to be, Sir, Your obedient servant,

> C. F. MILES, Dominion Land Surveyor.

E. DEVILLE, Esq., Surveyor General, Ottawa, Ont.

No. 22.

EXAMINATION PAPERS OF THE BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

EXAMINATION FOR ADMISSION AS ARTICLED PUPIL.

PENMANSHIP AND ORTHOGRAPHY.	
Time, 3 Hours.	No. of Marks.
Penmanship. Orthography.	50 200
"Canada our Home."	
ARITHMETIC AND LOGARITHMS.	No. of
Time, 3 Hours.	Marks.
 Find the value of ·25⁸ multiplied by 17·68⁸. A starts driving from Winnipeg to Calgary, 900 miles, at the rate of 25 miles a day; B starts from Fort Ellice, 220 miles west of Winnipeg, two days after A also for Calgary, at the rate of 20 miles a day; while C starts from Calgary for Winnipeg five days after A starts and at the rate of 30 miles per day. At what distance from Winnipeg will A and B, A and C, and B and C be together? 	15 20
 The tabular logarithmic tangent is 8.9274067; what is the angle? Extract the square root of .0372854. Raise to the 5th power the cube root of 178.324. What is the numerical value of 	12 8 15 15
(Cos 40° 21′ 30″) (Cos 32° 13′ 10″) tan 52° 18′ 25″ 7. The assessed value of a town is \$3,482,650. The total taxes to be raised are \$53,460, of which the school tax exceeds the combined municipal and special tax by 25 per cent., the municipal exceeding the special tax by 25 per cent also. What is the rate of taxation for the special tax?	15
ALGEBRA.	No of
Time, 3 Hours.	Marks.
 Find the H. C. F. of x²+5x+6, x²+7x+10 and x²+12x+20 Find the L. C. M. of x-1, x²+x+1, and x³-1. A man has three nophews. His age is 50 and the joint ages of the nephews are 42. How long will it be before the joint ages of the nephews will be equal to the age of the uncle? 	10 10 10
[PART II]	77

4. Solve for <i>x</i>	25
10x + .91y + 1.20z = -7.93 .91x + 9.08y - 6.07z = +9.63 1.20x - 6.07y + 42.62z = -22.18.	
5. The sum of two digits composing a number is 8, and if 36 be added to the number the digits will be inverted. Find the number.	15
6. The sum of the squares of two consecutive numbers is 481. Find the numbers.	15
7. For a journey of 108 miles 6 hours less would have sufficed had one gone 3 miles an hour faster. How many miles an hour did one go?	15
GEOMETRY.	No. of
Time, 3 Hours.	Marks.
1. Triangles upon the same base and between the same parallels are equal to one another.	16
2. To make a triangle of which the sides shall be equal to three given straight lines, but any two whatever of these must be greater than the third.	16
3. If a straight line be divided into two equal and also into two unequal parts, the squares on the two unequal parts are together double of the square on half the line and of the square on the line between the points of section.	16
4. For squaring a number mentally we have the following rule $(a-x) (a+x)+x^2=a^2$ in which a is the given number, and x that number which added or subtracted from the given number makes a multiple of ten. Prove	20
the rule geometrically. 5. If two straight lines cut one another within a circle, the rectangle contained by the segments of one of them is equal to the rectangle contained by the segments of the other.	16
6. In any triangle the squares on the two sides are together double of the squares on half the base and on the straight line joining its bisection with the opposite angle.	16
7. To trisect a given straight line. 8. To describe an isosceles triangle having each of the angles at the base double of the third angle.	20 20
9. The square inscribed in a circle is equal to half the square described about the same circle.	20
 10. Inscribe a circle in a rhombus. 11. About a given circle to describe a triangle equiangular to a given triangle. 	20 20
PLANE TRIGONOMETRY.	
Time, 3 Hours.	No. of Marks
1. Prove that the sum of the square of the sine of an angle and the square of the cosine of that angle is unity.	10
2. Give the algebraic signs of Sine, Cosine, Tangent, Cotangent, Secant, and Cosecant in the four quadrants.	10
3. Prove Cos $(x + y) = \text{Cos } x \text{ Cos } y - \text{Sin } x \text{ Sin } y$. 4. Given $A = 50^{\circ} 38' 52''$, $B = 60^{\circ} 07' 25''$, and $a = 412.67$; find b and c . 5. Given $a = 10$, $b = 12$, $c = 14$, find the angle of A . 6. Given $a = 6.24$, $b = 2.35$, and $C = 110^{\circ}32'$; find A , B and C . [PART II]	15 20 20 25

SPHERICAL TRIGONOMETRY.	
Time, 3 Hours.	No. of Marks.
1. Prove that in a spherical triangle the sines of the sides are proportional to the sines of the opposite angles.	10
2. Show that $\cos a = \cos b \cos c + \sin b \sin c \cos A$.	15
3. In a right angled triangle the hypothenuse $c=110^{\circ} 46' 20''$, $A=80^{\circ} 10' 30''$; solve the triangle.	25
4. Given $A = 120^{\circ}$, $B = 130^{\circ}$, $C = 80^{\circ}$; find c.	25
5. Show that $\operatorname{Sin} \frac{1}{2} A = \sqrt{\frac{\operatorname{Sin} (s-b) \operatorname{Sin} (s-c)}{\operatorname{Sin} b \operatorname{Sin} c}}$	25

MENSURATION OF SUPERFICIES.	ĺ
$Time, \ 3 \ Hours.$	No. of Marks.
1. A circular race course, 30 ft. wide, is half a mile long measured on the line within the track 3 ft. from the inside of the course. How many acres will be required in the square field just sufficient to include the course?	•
2. In the quadrilateral $A B C D$, B is a right angle, $A B=4.62$ chains, $B C=5.84$ chains, $C D=7.41$ chains, and $D A=8.79$ chains. What is the area in acres, roods and perches.	20
3. The area of the annulus between two concentric circles is 10 sq. ft., and the diameters are to each other as 1 to π . What is the length of the diameters, π being the ratio of the circumference of any circle to its diameter?	•
4. How many six acre lots can be laid out in a square mile after deducting therefrom a boulevard 100 ft. wide running around the square, and o the remaining land ten per cent. to be appropriated for roads.	
5. The area included between a circle and the inscribed hexagon is 61.74 sq. inches. What is the radius of the circle?	20

FULL EXAMINATION FOR ADMISSION AS SURVEYOR.

	PLANE GEOMETRY AND MENSURATION,	
	Time, 3 Hours.	No. of Marks.
1.	What changes can be made in the shape and dimensions of a parallelo- gram without altering its area? Illustrate.	8
2.	A straight line drawn at right angles to the extremity of a diameter falls without the circle.	10
3.	A rope attached to the top of a vertical pole standing upon a plain just reaches the ground. Desiring to find the height of the pole, I took hold of the end of the rope, keeping it perfectly taut, and pulled it out a feet from the foot of the pole, and found then the end of the rope to be b feet from the ground. How high was the pole?	16
4 .	If two circles intersect, the common chord produced will bisect the common tangent.	12
5 .	The diagonal of a rectangular lot is 83.82 chains, and the sides are in the ratio of 5 to 16; what is the area of the lot?	16
	[PART II]	79

6. If in example 5 the diagonal be divided in the ratio of the sides, and a line drawn from one of the opposite angles through the point of sec-	22
tion to the opposite side, what is the area of the triangle so cut off? 7. The sides of a triangular field are 12.68 chains, 15.42 chains, and 9.90 chains respectively. What is the area?	16
	
SOLID GEOMETRY.	No. of
Time, 3 Hours.	Marks.
1. If a solid angle be contained by three plane angles any two of these angles are greater than the third.	15
2. The plane angles which contain any solid angle are together less than four right angles.	15
3. What must be the radius of a sphere of iron so that the weight of the sphere equals that of a cube of ice, side 2 feet. Specific gravity of ice	30
being '92, that of iron 7.20, and a cubic foot of water weighing 62½ lbs. 4. The surface of a sphere has 100 sq. inches. What are the dimensions of a right cone of equal volume with the sphere if the height of cone equals twice diameter of base?	30
5. In a cylindrical tub 2 ft. in diameter there are 9 inches of water. A cylinder of iron 1 ft. long and 1 ft. in diameter is laid in the tub. What is the height of the water then?	30
6. What is the weight of a township bar 5 ft. long, cylindrical, 1\frac{3}{8} inches in diameter, hollow, iron \frac{3}{8} inch thick, squared at one end, the other end being pointed conically 4 inches; a cubic inch of iron weighing a quarter of a pound.	30
SPHERICAL TRICONOMETRY	1
SPHERICAL TRIGONOMETRY.	No. of
SPHERICAL TRIGONOMETRY. Time, 3 Hours.	No. of Marks.
Time, 3 Hours.	
Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2} (A + B)}{\cos \frac{1}{2} (A - B)} = \frac{\tan \frac{1}{2} C}{\tan \frac{1}{2} (a + b)}$	Marks.
Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2} (A + B)}{\cos \frac{1}{2} (A - B)} = \frac{\tan \frac{1}{2} C}{\tan \frac{1}{2} (a + b)}$ 2. Give Napier's rules for the solution of right-angled spherical triangles,	Marks.
Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2}(A+B)}{\cos \frac{1}{2}(A-B)} = \frac{\tan \frac{1}{2}C}{\tan \frac{1}{2}(a+b)}$ 2. Give Napier's rules for the solution of right-angled spherical triangles. 3. When C is the right angle, $c = 140^{\circ}$ and $a = 20^{\circ}$, solve the triangle. 4. $C = 36^{\circ} 45' 28''$, $a = 84^{\circ} 14' 29'' b = 44^{\circ} 13' 45''$; find the remaining parts.	22 10 20 25
Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2}(A+B)}{\cos \frac{1}{2}(A-B)} = \frac{\tan \frac{1}{2}C}{\tan \frac{1}{2}(a+b)}$ 2. Give Napier's rules for the solution of right-angled spherical triangles. 3. When C is the right angle, $c = 140^{\circ}$ and $a = 20^{\circ}$, solve the triangle. 4. $C = 36^{\circ} 45' 28''$, $a = 84^{\circ} 14' 29'' b = 44^{\circ} 13' 45''$; find the remaining parts. 5. Find the angles of an equilateral spherical triangle, each of whose sides	22 10 20
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Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2}(A+B)}{\cos \frac{1}{2}(A-B)} = \frac{\tan \frac{1}{2}C}{\tan \frac{1}{2}(a+b)}$ 2. Give Napier's rules for the solution of right-angled spherical triangles. 3. When C is the right angle, $c = 140^{\circ}$ and $a = 20^{\circ}$, solve the triangle. 4. $C = 36^{\circ} 45' 28''$, $a = 84^{\circ} 14' 29'' b = 44^{\circ} 13' 45''$; find the remaining parts. 5. Find the angles of an equilateral spherical triangle, each of whose sides is 60° . 6. Given $A = 132^{\circ} 16'$, $B = 139^{\circ} 44'$, $b = 127^{\circ} 30'$; find a.	22 10 20 25 21
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Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2}(A+B)}{\cos \frac{1}{2}(A-B)} = \frac{\tan \frac{1}{2}C}{\tan \frac{1}{2}(a+b)}$ 2. Give Napier's rules for the solution of right-angled spherical triangles. 3. When C is the right angle, $c = 140^{\circ}$ and $a = 20^{\circ}$, solve the triangle. 4. $C = 36^{\circ} 45' 28''$, $a = 84^{\circ} 14' 29'' b = 44^{\circ} 13' 45''$; find the remaining parts. 5. Find the angles of an equilateral spherical triangle, each of whose sides is 60° . 6. Given $A = 132^{\circ} 16'$, $B = 139^{\circ} 44'$, $b = 127^{\circ} 30'$; find a. 7. Given A, B and C; discuss the remaining parts.	22 10 20 25 21 22
Time, 3 Hours. 1. Deduce $\frac{\cos \frac{1}{2}(A+B)}{\cos \frac{1}{2}(A-B)} \frac{\tan \frac{1}{2}C}{\tan \frac{1}{2}(a+b)}$ 2. Give Napier's rules for the solution of right-angled spherical triangles. 3. When C is the right angle, $c = 140^{\circ}$ and $a = 20^{\circ}$, solve the triangle. 4. $C = 36^{\circ} 45' 28''$, $a = 84^{\circ} 14' 29'' b = 44^{\circ} 13' 45''$; find the remaining parts. 5. Find the angles of an equilateral spherical triangle, each of whose sides is 60° . 6. Given $A = 132^{\circ} 16'$, $B = 139^{\circ} 44'$, $b = 127^{\circ} 30'$; find a. 7. Given A, B and C; discuss the remaining parts. DIVIDING AND LAYING OFF OF LAND.	22 10 20 25 21 22 30 No. of

14--6**

southern boundary of t A man wishes to divide straight lines radiating	he section, and 20 the section equa	ere is a large spring on the chains from the S.E. corner. lly among his four sons by What are the lengths of the	20
A B. A B=4.62 chains It is required to divide	ins, B C=7.46 ch the parcel into t	to BC and at right angles to ains, and AD=5.30 chains. wo equal parts having equal t is the length of the dividing	20
5. Through the south-east p curve, convex towards the southern boundary; the S. W. angle of the part cut off into halve	the S.W. angle of 9 chains and thewe section. It is recess by a straight te length of the di	9 R. 5 W., runs a 4° railroad the section, and intersecting stern boundary 12 chains from quired to divide the triangular line parallel to the western viding line, and where will it	30
· ME	CASUREMENT OF A	REAS.	
	Time, 3 Hours.		No. of Marks.
1. Station.	Bearings.	Distances.	45
1 2 3 4 5	S. 69° 15′ E. N. 37° 15′ E. N. 39° 30′ W. S. 57° 45′ W. S. 30° 00′ W.	7.06 chains. 5.93 " 6.00 " 4.65 " 4.98 "	
2. In the above example, it	des and departure f the chain was ha	s, first "balancing" the survey. If a link too long, what would	10
(a.) And from them supplied. (b.) How does the su	show what missi applying of miss	osed survey by two equations. ing data in a survey can be ing data in a survey affect	30
"balancing" th 4. In what cases of missing determination of the m	g data in a survey	may ambiguity result in the ow how.	15
	DESCRIPTIONS.		
	Time, 3 Hours	•	No. of Marks
south of the C. P. Rail section on a tangent section, and leaves the south-west angle of \(\frac{1}{4} \) \(\text{S} \) side of centre line. M 2. The registered plan of the block A to be a receive of the control o	lway. The centre 10.14 chains from \$\frac{1}{4}\$ Sec. at a point Sec. The right of take a description the town of Derby tangle 75 links by 18' W. respection.	uarter Sec. 3 Tp. 9 R. 5, lying a line of the railway enters the m the south-east angle of the distant 16:80 chains from the f way extends 50 links on each for conveyance of part sold. y shows town lot number 2 in y 2:00 chains and bearings N. vely. The owner sells 33 feet the lot, the division line to be. Make a description for con-	25
veyance of part sold.	PART		{
146**	f	· •	

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20

3. Let in question 1 the centre line continue from the western boundary of the 4 Sec. on a 1° curve, deflection northward, to the western boundary of the section. Make a description for the right of way through said section.	25
A reserve is to be granted. It is to adjoin the 5th I. M. to the west; its southern boundary to extend along the 15th Base Line for 25 miles, and its eastern boundary along the Initial Meridian 40 miles north; the western boundary to be a meridian, and the northern one to conform with the system of Dominion Lands Survey. Make a description of the reserve, giving the townships included in part or in whole.	25
PRACTICAL ASTRONOMY.	
Time, 3 Hours.	No. of Marks.
I. Explain fully the difference between apparent, mean and sidereal time.	12
2. Give one or more methods for determining the value of a division of the striding level. What are the characteristics of a good level?	13
3. In taking a single meridian altitude of the sun, what error or errors is the observation subject to, and what corrections must be applied to the observation for obtaining the latitude of the place?	15
4. What is meant by the "equation of time?" Explain why its value is	15
greatest in November. 5. In latitude 53° 43', longitude 110° W., the Government telegraph line runs N. 80° W. At what time of the day on August 19th, 1880, will	25
the shadow of a telegraph pole fall on the wire? 5. The observed altitude of Polaris at lower transit was 52° 16′ 20″ on May 30th, 1880, in approximate longitude 114° W. What is the latitude of the place?	20
PRACTICAL ASTRONOMY.	l
Time, 3 Hours.	No. of Marks
7. On March 31st, 1880, at 53° 43′ N. latitude and 110° W. longitude, a sidereal chronometer is fast 0h. 47m. 42s. (no rate), and at 4 o'clock mean local time in the afternoon of that day it is slow on a watch 1h. 39m. 37s. For what meridian does the watch show the correct mean time?	20
8. At the same place and date as in the last question, in the forenoon the observed altitude of the sun was 25° 26', a watch shewing 9 o'clock. What is the error of the watch?	20
What is the error of the water;	90

9. In question 8 what is the azimuth of the sun an hour after the observa-

10. What is the azimuth of the sun at sunset at the place and date of

11. At Kamloops latitude 51° 40′ 39″ longtitude 120° 19′ 35″, when is

sidereal time exactly 6 hours ahead of mean time in the year 1880?

tion?

question 7?

DELEVELY OF GUIDANT LAND DOMESTON LANDS AGE	
MANUAL OF SURVEY AND DOMINION LANDS ACT. $Time, 3 \ Hours.$	No. of Marks.
1. Describe the	25
 (a) first system of survey. (b) second system of survey. (c) actual system of survey. 	
 2. What area and townships are covered by (a) the first system. (b) the second system. 	25
3. Describe the different kinds and sizes of posts and mounds, how and	16
where they are placed. 4. How would you mark the following posts: (a) at the N.E. corner of Sec. 17 Tp. 48 R. 3, West of the P.M. (b) at the easterly corner between Tps. 9 and 10 R. 5, East of the P.M. (c) at the southern corner between Secs. 5 and 6 Tp. 19 R. 8, W. of 4th I. M. (on a correction line). (d) at the N.E. corner of Sec. 9 Tp. 19 A. R. 7, W. of 2nd I. M. (on the south side of the road allowance dividing two systems of survey). (e) at the N.E. corner of Sec. 36 Tp. 42 R. 13, West of the 3rd I. M. (on a correction line).	17
5. Describe fully the process of subdividing a township. What notes are to be taken, what traverses made, and the limit of closing error?	17

MANUAL OF SURVEY AND DOMINION LANDS ACT.	
Time, 3 Hours.	No. of Marks.
6. How would you re-establish the posts—question 4 — (a) (b) (c) and (d) ?	25
7. How are legal subdivisions to be surveyed? How are they num-	20
bered? How are they surveyed in fractional sections?	
8. What instruments are to be used in subdivision surveys? How and with what is the linear measurement determined on a survey? What precautions are to be used in making the measurements? How are obstacles to be passed, such as swamps or rivers or inaccessible hills?	20
9. Describe fully what the field book and plan of subdivision of a town-ship for final return should contain? What conventional colors are used for topography?	20
10. How would you summon a person to give evidence before you regarding the position of a corner or boundary? How would you proceed if he failed to appear before you at the time specified?	15

PLANE GEOMETRY.	1
Time, 3 Hours.	No. of Marks.
1. All the angles of a rectilinear figure, together with four right angles,	13
are equal to twice as many right angles as the figure has sides. 2. Each angle of a regular polygon is 156°. What is the number of its sides?	12
[DADW II]	88

14--61/2**

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3.	If a straight line be divided into two equal, and also into two unequal parts, the squares on the two unequal parts are together double of the square of half the line and the square of the line between the points of section.	13
		12
	Through three given points only one circle can be drawn.	
5.	On the same straight line, and on the same side of it, there cannot be	13
	two similar segments of circles, not coinciding with one another.	
6.	How many equal circles can be placed within a circle having a diameter three times as great as theirs, in such manner that no two of the circles shall cut one another? If each of the smaller circles be 1 sq. ft. in area, what is the area of the part of the large circle not occupied by the smaller ones?	12
7.	Divide a given straight line into parts which shall have the same ratio to one another that the parts of a given divided straight line have to one another.	13
8.	O is a fixed point from which any straight line is drawn meeting a fixed straight line at P; in O P a point Q is taken such that the rectangle OP, OQ is constant; show that the locus of Q is the circumference of a circle.	12
	SOLID GEOMETRY.	ļ
		No.Fof
	Time, 3 Hours.	Marks.
	· · · · · · · · · · · · · · · · · · ·	
1.	If three straight lines meet all at one point, and a straight line stand at right angles to each of them at that point, the three straight lines shall be in one and the same plane.	25
2.	Planes to which the same straight line is perpendicular are parallel to one another.	25
3.	If two points be taken on the surface of a sphere, the great circle joining them is shorter than any small circle of the sphere connecting the same two points.	25
4.	Find the surface and the volume of a right cylinder, the diameter of the	25
	base being 10 inches and height 2 feet; also the surface and height of	<i>∆</i> :0
5.	base being 10 inches and height 2 feet; also the surface and height of a right cone having the same base and volume. What is the content in imperial gallons of a frustrum of a square pyramid, the sides of its ends being 52 and 28, and its depth 36 inches,	25
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SPHERICAL TRIGONOMETRY.

Time, 3 Hours.	No. of Marks.
1. Deduce the fundamental formula.	
$\cos a = \cos b \cos c + \sin b \sin c \cos A$.	
2. Find the relations connecting the angles and sides of the polar triangle with those of the primitive triangle, and show how these relations may	25

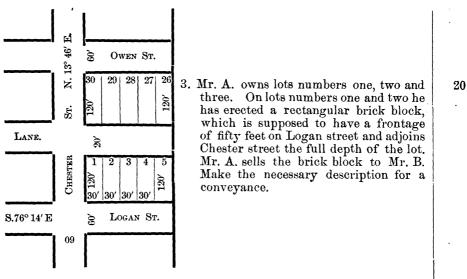
be used in transforming spherical formule.

84 [PART II]

 3. In a right angled spherical triangle, A=140°, a=150; solve the triangle. 4. In a spherical triangle, 	25 25
a=27° 10′, b=35° 16′, c=12° 18′; solve the triangle. 5. Two ports are in the same latitude 54°, and their difference of longitude	25
is 51°. Find the saving in distance in sailing from one to the other along a great circle, instead of sailing due east or west along the circle of latitude.	20
6. Show in what cases the solution of a spherical triangle is ambiguous.	25

DIVISION OF LAND.	
Time, 3 Hours.	No. of Marks.
1. Required to lay off $7\frac{1}{2}$ acres in the form of a triangle, one of whose sides is 25 chains, and the lengths of the other two are in the ratio of 2 to 3. Find the lengths of these sides.	18
2. Divide a triangular field by a straight line into two parts of equal area, in such manner that they may require the same amount of fencing, the sides of the triangle being 10, 15 and 17 chains.	20
3. Two sides of a field meet at a point A at an angle of 75°. It is required to part off from the field a triangle, with vertex at A, of area 2½ acres, by the shortest possible line. Find the length of this shortest line and the points where it cuts the sides.	19
4. A rectangular lot has 25 chains frontage, and is 60 chains deep. The land on the front is valued at \$300 an acre and that at the rear \$150. The value is assumed to decrease uniformly from front to rear. It is required to divide the land into three parts of equal value by means of straight lines meeting at a spring which is at the intersection of the diagonals of the rectangle.	25
5. Show how to divide a quadrilateral into parts having given areas by straight lines parallel to one side.	18

Time, 3 Hours.	No. of Marks.
1. Mr. A. owns the south-east quarter of Section 3, Township 6, Range 7, west of 2nd Initial Meridian. He sells the eastern half thereof to	20
Mr. B. Make a description of the part sold. 2. The centre line of the Mackenzie Basin Railway enters the eastern side of Section 18, Township 32, Range 1 west of the 5th Initial Meridian on a tangent running N. 65° W., and at a distance of 14.82 chs. from the southeastern angle of said section. The lands appropriated for the railway extend 33 ft. on each side of the centre line. Make a description of the right of way through said section.	20



4. Using the above diagram:—Mr. B. buys from Mr. A. twenty feet frontage of Lot No. 1, the frontage extending from Chester St. along Logan St., and the parcel bought to have a uniform width to the rear thereof. Make a description for a deed of the parcel bought.

5. A ranching company leases from the Government 100,000 acres. land is to comprise Townships 16 and to extend westward from the 5th Initial Meridian; the western limit of said land to be a meridian. Make the description of the land for the lease.

MEASUREMENT OF AREAS.

Time, 3 Hours.

1. Supply the omissions and calculate the are a of a tract of land from the following field notes:-

Station.	Course.	Distance.
1	$ m N~55^{\circ}~W$	25.50 chs.
${f 2}$	N 23½° W	33.50 "
3	N 62½° W	18.30 "
4	-	61.00 "
· 5	S 473° E	44.00 "
6	S 83½° E	53·00 "
7	S 26½° E	
8	N 28½° W	50.00 "

2. Explain how to "balance" a survey when the notes are complete.

3. Show how to supply omissions in field notes such as the above, distinguishing all the different cases.

20

20

No. of Mark.s 50

> 20 30

PRACTICAL ASTRONOMY. Time, 3 Hours.	No. of Marks.	
1. Explain fully the terms: right ascension, declination, celestial latitude and longitude, terrestrial latitude and longitude. From what points		
and in what directions are they measured? 2. Define—hour angle, sidereal time, apparent and mean solar time, and	14	
explain how one is converted into another. 3. The sidereal time at the meridian of Greenwich on May 21st, 1880, of a certain occurrence being 7h. 23m. 51·3s., find the corresponding mean solar time. Also find the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the constant in length of the sidereal and mean solar times at the sidereal and mean sol	18	
same instant in longitude 103° West. 1. Describe the observation of a star at its greatest elongation for azimuth. How would the result be affected by imperfect levelling of the instru-	18	
ment, and by error of collimation? 5. In latitude 53° 32' what is the zenith distance of a star, declination 53° 10', when crossing the prime vertical, and what is its hour angle?	20	
3. On June 10th, 1880, in longitude 105° 13′ W., the observed altitude of Polaris at upper transit was 53° 28′ 17″. Find the latitude of the place of observation.	18	
PRACTICAL ASTRONOMY.		
$Time,3\ Hours.$	No. of Marks.	
7. On the 17th May, 1880, in longitude 110° 15' W., the observed meridian altitude of the sun's upper limb was 68° 25' 34". What was the	25	
latitude? 3. On the 9th August, 1880, in longitude 105° W., the observed altitude of the sun's upper limb was found to be 20° 14′; latitude 48° 30′; approximate time of observation, 7 ^h a.m. Find the mean time of observation.	25	
vation. On July 20th, 1880, in latitude 50° N., and longitude 102° W., at 10 ^h 20 ^m sidereal time, the magnetic azimuth of the sun was S. 60° W. What was the magnetic declination?	25	
10. Find from the Almanac the right ascension and declination of the moon at 15 ^h 30 ^m 15 ^s , Greenwich mean time, on 17th Sept., 1880.	25	
PLANE GEOMETRY.	1	
$\it Time, 3 Hours.$	No. of Marks.	
1. Describe a circle about a given triangle. 2. In any triangle if squares be described on the three sides and the external adjacent angles joined then the three triangles thus formed and lying between the three squares are each equal to the original	11 11	
triangle. 3. Similar triangles are to one another in the duplicate ratio of the homologous sides.	11	
4. Prove the proposition corresponding to the algebraic statement $(a + b)^2 + (a-b)^2 = 2 \ a^2 + 2b^2$.	11	
[PART II]		

5. ABC is a triangle inscribed in a circle and AD, AE are drawn parallel to tangents at B and C to meet the base at D and E. Show that the	15
ratio of B D to CE is the duplicate of the ratio of A B and A C. 6. The surface of a circle and hexagon is in each 15 sq. feet. What is the	11
difference between the circumference and perimeter? 7. To find a mean proportional between two straight lines.	15
 (a) If of three straight lines in continued proportion the mean and the difference of the extremes are given, find the lines. 8. Two circles of 10 and 15 feet diameter respectively, intersect one 	15
another. Their common chord is 8 feet. What is the area of the surface common to both?	
SOLID GEOMETRY.	
Time, 3 Hours.	No. of Marks.
1. If a solid angle be contained by three plane angles, any two of these angles are greater than the third.	16
2. The plane angles which contain any solid angle are together less than four right angles.	16
3. Any three straight lines which meet one another, not in the same point, are in one plane.	16
4. A tank in the form of a frustrum of a right cone is 10 ft. in diameter at the top and 12 ft. at the bottom and 18 ft. high. How many gallons	26
of water will it contain? 1 gallon = 277.274 cub. inches. 5. In a hemi-spherical vessel 12 inches in diameter stands a right cone, base 8 inches, height 10 inches. How many gallons of water will it	25
take to fill the vessel? 6. What is the difference in yards required for a bell (conical) tent 10 ft. high and covering the same number of square feet as an A tent 8 ft. by 10 ft. and the latter tent, it being 6 ft. high and having a 2 foot wall, and square ends?	25
7. The length and diameter of a cylinder are equal; the volume is equal to that of a sphere of radius a; what is the volume of the sphere circumscribing the cylinder?	26
SPHERICAL TRIGONOMETRY.	
Time, 3 Hours.	No. of Marks.
1. In any spherical triangle establish the following:— $\cos a = \cos b \cos c + \sin b \sin c \cos A$ $\sin (a-b)$	25
$\cos B - \cos A = \frac{\sin (a-b)}{\sin c} (1 + \cos C).$	
2. Deduce $\frac{\cos \frac{1}{2} (A + B)}{\cos \frac{1}{2} (A - B)} = \frac{\tan \frac{1}{2} c}{\tan \frac{1}{2} (a + b)}.$	25
3. Show that	25
$\sin^{2}\frac{1}{2}A = \frac{\sin(s-b)\sin(s-c)}{\sin b\sin c}.$	
4. In a spherical right triangle $A = 100^{\circ}$ and $a = 112^{\circ}$; solve the triangle fully.	25
5. In a spherical triangle $A = 95^{\circ} 38' 4''$, $C = 97^{\circ} 26' 29''$, $b = 64^{\circ} 23' 15''$; find B.	25
6. Given $A = 120^{\circ}$, $B = 130^{\circ}$, $C = 80^{\circ}$; find $C = 80^{\circ}$	25
[FART II]	

DIVIDING AND LAYING OFF OF LAND.	No. of
Time, 3 Hours.	Marks.
1. In a triangular piece of land ABC, the side $a = 10c$ ·78, $b = 8c$ ·42 and $c = 12c$ ·06, the course of AB being due north; it is required to divide the triangle into two equal parts by a straight line starting on the side c at a distance of $5c$ ·00 from A. What is the azimuth and length of the dividing line?	25
2. The centre line of the C. P. R. enters on a course N. 70° W., the southern limit of Sec. 3, T. 13, R. V., at a point 16c·40 from the southwest angle of said section. It is required to divide that part of the section lying north of the railway into two equal parts by a line parallel to the above tangent. What is the length of the dividing line, the right of way extending 50 links on each side of the centre line?	25
3. If in the last question that part of the section south of the railway be divided into one acre lots by lines parallel to the west section line, what will be the frontage of such lots?	25
4. Divide the area contained within a circular race course one mile in circumference into three equal parts by parallel lines. Give the length of the dividing lines.	25

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	MEASUREMENT OF	AREAS.		No. of
	Time, 3 Hours.			Marks.
1.	Stations. 1 S. 69° 1 2 N. 37° 1 3 N. 39° 3 4 S. 57° 4 5 S. 30° 6 Compute area, after balancing survey.	15' E. 15' E. 30' W. 45' W.	Distances. 7c·06 5·93 6·00 4·65 4·98	30
2. Show by equations how to solve for: (1) Where the bearing and length of one course are unknown. (2) Where the bearing of one course and length of another are unknown. (3) Where two bearings are unknown. (4) Where two lengths are unknown.			30	
3.	If in a survey the angles are read by a trecheck, how would you balance the surby latitude and departure?			15
	. If we assume the temperature correction every 10° F, and the chain standard at of 100 acres to be laid out in August v out allowing for expansion, what is the	t 60° F ; and a with the chain at e error in area of	parcel of land $100^{\circ} F$, with- the parcel?	10
5.	. A triangular piece of land measures on i respectively. What is the area?	ts sides 10c·14, 7	7e·62 and 9e·58	15

DESCRIPTIONS.	No. of
Time, 3 Hours.	Marks.
1. The Saskatchewan Driving Park Association buys from Mr. A the southwest corner of Sec. 3, Tp. 13, R.V., for a one-mile circular race course. The land bought to be in the form of a square, with its sides one chain from the nearest point of the one-mile line. Make the necessary description for a deed.	20
2. Mr. A sells to Mr. B the northern half of the above section. Make the necessary description for a deed.	20
3. In the town of Hope and District of Assiniboia, the lots are laid out 50 feet by 150 feet, the side streets running north and south, the others east and west. Mr. A sells to Mr. B twenty feet frontage off lot 4 extending from the south-west corner of the lot. The parcel bought to have a uniform width to the rear. Make the necessary description for a deed.	20
4. In giving distance in descriptions when are the words "more or less" properly applied?	20
5. Draw up the affidavit of a witness regarding the position of a town lot corner, the post of the original survey having disappeared.	20

PRACTICAL ASTRONOMY.	{
Time, 3 Hours.	No. of Marks.
1. Define solar, mean and sidereal time. Show how to obtain a ready ap-	16
proximation of the difference between a mean and sidereal day. 2. Define parallax, right ascension and declination. In the Nautical Almanac are given the mean and apparent declinations of stars; explain each.	16
3. Explain the cause of the variation in the equation of time, and why the equation of time is greatest in November. A graphical solution may be given.	16
4. On August 19th, 1880, in latitude 53° 43′, longitude 110° W., an observation for azimuth was taken on Polaris at the computed time of eastern elongation. Afterwards it was found that the watch giving the time was slow 25 minutes. What was the resulting error in azimuth?	20
5. On May 20th, 1880, in approximate longitude 115° W., the observed meridian altitude of the sun's lower limb was 57° 10′ 30″. What is the latitude of the place?	16
6. In question 4 how does the line of collimation affect the observation, and how does the level of the axis?	16
7. On Sept. 25th, 1880, in latitude 51° 40′, longitude 112° 36′, the observed altitude of the sun was 34° 15′ when a watch showed 9h. 42m. 36s. What was the azimuth of the sun, and watch correction?	30
8. In question 7, what was the sidereal time of observation and for what meridian did the watch show the correct mean time?	10
9. At what time does the sun set on June 21st, 1880, in latitude 52° 38′, longitude 103° 30′?	20
10. In latitude 54° 42′ 9″ the observed meridian altitude of the sun was 32° 08′ 20″. What day of the year (1880) was it and what was the longitude of the place, approximately.	20
11. On May 10th, 1880, at what time A.M. will the shadow of a vertical picket be due east and west, in latitude 50° 00′ longitude 96° 30′ W.?	20
90 [PART II]	

EXAMINATION FOR DOMINION TOPOGRAPHICAL SURVEYORS.

ALGEBRA.

Maximum No. of Marks 50.	No. of Marks.	
Time, 3 Hours.	5	
1. Solve the equations:		
a . $\begin{cases} \sqrt{-y} + \sqrt{x} - 2 \end{cases}$		
$a. \begin{cases} \sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} = \frac{5}{2} \\ \sqrt{\frac{x^2}{y}} + \frac{y^2}{x} = \frac{9\sqrt{2}}{2} \\ (x+y+z=3a) \end{cases}$	5	
$b. \begin{cases} x+y+z=3a \\ yz+zx+xy=3a^2 \\ xyz=a^3 \end{cases}$		
2. Two vessels are sailing on courses at right angles to one another towards the intersection of the courses. Their distances from this intersection being at one time 4 miles and 3 miles, and their respective velocities 6 miles and 8 miles per hour. When are they nearest to	5	
each other, and what is the shortest distance between them? 3. If p be greater than unity, then for all the real values of x the expression	5	
$\frac{x^2-2x+p^2}{x^2+2x+p^2}$ lies between $\frac{p-1}{p+1}$ and $\frac{p+1}{p-1}$ 4. If m a is greater, equal to, or less than n c , according as m b is great-		
er, equal to, or less than n a, whatever values are given to m and n,	5	
then $\frac{a}{b} = \frac{c}{d}$		
 5. Find the sum of the cubes of the first n natural numbers. 6. Write down the first five terms of the expansion of (5-4x)-1 	5 5	
7. Prove that $\left(1+\frac{1}{n}\right)^n = e^x$ in the limit when n is made very large.	7	
8. Show that.		
$\log_a y = \frac{y - 1 - \frac{1}{3} (y - 1)^2 + \frac{1}{3} (y - 1)^3 - \&c.}{a - 1 - \frac{1}{2} (a - 1)^2 + \frac{1}{3} (a - 1)^3 - \&c.}$	6	
9. If $y = x - \frac{x^2}{2} + \frac{n^4}{4}$ — &c., find x in a series of ascending	10	
powers of y. 10. A point taken at random within a circle is joined with two fixed points on the circumference. What is the chance that the centre of the cir-	7	
cle is within the triangle thus formed? 11. Three balls marked, 1, 2, 3 are placed in a bag. Five successive drawings are made, the ball being each time replaced. What is the chance that the sum of the numbers thus drawn is even?	10	

PLANE TRIGONOMETRY.		
Maximum No. of Marks, 50.	No. of Marks.	
Time, 3 Hours.	· · · · · · · · · · · · · · · · · · ·	
 Assuming the formula for sine and cosine of A + B and A - B in terms of sines and cosines of A and B to hold true for angles less than 90°, prove that they hold universally. Prove 	5	
$\sin (a-b) + \sin (b-c) + \sin (c-a) + 4 \sin \frac{a-b}{2} \sin \frac{b-c}{2} \sin \frac{c-a}{2} = 0$. 4	
$\tan^{-1}\frac{1}{3} + \tan^{-1}\frac{1}{5} + \tan^{-1}\frac{1}{7} + \tan^{-1}\frac{1}{8} = \frac{\pi}{4}$	4	
3. Find x from the equations Sec a sec $x+\tan a \tan x$ sec β $4 \sin x \sin (x-a)=2 \cos a-1$ $\tan x \tan 2x+\cot x=2$ $\cos n x+\cos (n-2) x=\cos x$ giving the general values of x . 4. Prove the formula $\sin a = a - \frac{a^3}{1/3} + \frac{a^5}{1/5} - \frac{a^7}{1/7} + \dots$	4 4 4 4	
5. Expand $\tan \frac{1}{\sqrt{3}} \sqrt{5} \sqrt{7} + \dots$ 5. Expand $\tan \frac{1}{2} x$ in terms of x . 6. Show how the formula $\sin \theta = \theta \left(1 - \frac{\theta^2}{\pi^2}\right) \left(1 - \frac{\theta^2}{2^2 \pi^2}\right) \left(1 - \frac{\theta^2}{3^2 \pi^2}\right) \dots$	8 6	
 and the corresponding formula for cos θ may be used for the calculation of tables of logarithms of trigonometrical functions. 7. Given sin x= n sin (x+a), expand x in powers of n. 8. If in a triangle the angle C differs from 180° by a small angle θ, shew that c=a+b-(a b θ²)/(2 (a + b)) sin² 1" very nearly, θ being given in seconds. 9. Find the sum of the series sin a + sin (a + β) + sin (a + 2β) +	8 8	
SPHERICAL TRIGONOMETRY.		
Maximum No. of Marks, 50.	No. of Marks.	
Time, 3 Hours.		
1. Prove the formula $\cos a = \cos b \cos c + \sin b \sin c \cos A$	9	
and deduce from it the corresponding formula of plane trigonometry. 2. Prove $\frac{\cos \frac{1}{2} (A+B)}{\cos \frac{1}{2} (a+b)} = \frac{\sin \frac{1}{2} C}{\cos \frac{1}{2} c}$	9	
4. Prove that the area of a spherical triangle is equal to the square of the	9 9	
 radius of the sphere multiplied by the spherical excess. 5. In a spherical triangle whose sides are quadrants, a point within it is distant α, β, γ, from the angles. Prove that cos ²α + cos ²β + cos ²γ=1. 	9	

6. The locus of the vertices of all right-angled spherical triangles upon the same hypothenuse (c) is expressed by the equation: $\cot^2 \frac{1}{2} c = \cot^2 p + \sin^2 P$, where p is the distance of the right angle	9
from the middle point of the hypothenuse, and P the angle this distance makes with the hypothenuse.	
7. Prove that the locus in the last question becomes a circle when the	9
radius of the sphere is made infinitely great compared with the sides	
of the triangle.	
8. Find what the following formulae become when the radius of the sphere is made infinitely great compared with the sides of the	6
triangle:	
$\cos a \sin b = \sin a \cos b \cos C + \sin c \cos A$	
$\cos a \sin b = \sin a \cos b \cos c + \sin c \cos A$	
$\frac{1}{\sin(s-b)\sin(s-c)}$	

$\tan \frac{1}{2} A = \sqrt{\frac{\sin s \sin (s - a)}{\sin s \sin (s - a)}}$	
ANALYTICAL GEOMETRY.	l
Maximum No. of Marks, 80.	No. of Marks.
Time, 3 Hours.	
1. Prove that the general equation of the first degree represents a straight line.	8
2. What loci are represented by the equations $(Ax + By + C) + k(Dx + Ey + F) = 0.$ $(Ax + By + C) \cdot (Dx + Ey + F) = 0.$	4 4
$rac{(Ax+By+C)^2-(Dx+Ey+F)^2}{A^2+B^2}=O$ (axes rectangular).	4
3. Deduce the equation of the straight line in the form	
$\frac{x-h}{c} - \frac{y-k}{s} = l$ (rectangular axes).	8
4. If the position of any point in a plane be represented by r and r_1 , its distances from two fixed points, find the equations to rectangular axes of the loci represented by the following—	
$r+r_1=c$	4
$r - r_1 = c$	4
$rr_1 = h^2$	4
$rac{r}{r_1} = c$ $r^2 + r_1^2 = c^2$	4
r_1 $r_2 + r_2 = c_2$	4
2h being the distance between the fixed points and c any constant, and the point midway between the two fixed points being origin, and the straight line joining them the axis of x .	
5. Find the equation to a circle, centre at point a, b , radius r . Rectangu-	8
lar axes.	
6. Find the condition that the straight line $lx+my=1$ is a tangent to $x^2+y^2=r^2$.	8
7. Show that any transformation of coördinates may be expressed by the substitution for x and y respectively of $Ax+By+C$ and $Dx+Ey+F$, and prove thence that the degree of an equation is neither raised nor	8

[PART II]

8 8

10. Find the equation of the locus of the point which divides the ordinates	8
of the circle $x^2+y^2=r^2$ in the constant ratio $\frac{b}{a}$	
11. Find the equation to the diameter of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$	8
$\frac{x}{x_1} = \frac{y}{y_1}$ conjugate to the diameter.	,
12. Find the locus of the intersection of tangents to the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, at right angles to one another.	8
13. Find the locus of the feet of the perpendiculars from the foci on any tangent to $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.	8
ANALYTICAL GEOMETRY—(Second Paper.)	No. of
Maximum No. of Marks 50.	Marks.
Time, 3 Hours.	marks.
1. If the position of any point on a given ellipse be defined by the inclination (Φ) of the normal at the point to the major axis, express the rectangular coördinates of the point in terms of Φ .	15
2. Express in terms of Φ the length of the normal included between the	12
point and major and minor axes respectively. 3. Write down the formulæ expressing in terms of Φ, the radius of curvature of the meridian of a spheroid and that of the normal section at right angles to the meridian, and express in terms of these two the median of a specific making any angle with the meridian	12
radius of curvature of a section making any angle with the meridian. 4. Define the term "geodetic line" as applied to a surface, and show that the geodetic line joining two points is the shortest distance between any two intermediate points which lie on the line.	12
5. At what point of an ellipse whose axes are 12 and 8 must a normal be drawn to make an angle of 45° with the axes.	12
6. The eccentric angle of a point on an ellipse is 45° , and the angle which the normal at the same point makes with the axis of x is 60° . What is the eccentricity of the ellipse?	12
LIMITS AND DIFFERENTIAL CALCULUS.	No. of
Maximum No. of Marks 50.	Marks
Time, 3 Hours.	Marks
1. Two variable quantities may have zero for their limits, and yet not be ultimately equal. Illustrate by the sine and versed sine of a small angle.	7
2. Prove that the volume of a right circular cone is equal to the area of the base multiplied by $\frac{1}{3}$ of the height.	7
3. Find the area of an ellipse.	8
4. Find the volume of an oblate spheroid.	8 8 7
5. Which increases faster: a number or its logarithm, an arc or its sine? 6. Find the differential coefficient of $a x^2$, x being independent variable,	7 7
and a constant.	l
94 [PART II]	

7. Develop by Taylor's theorem: $\tan^{-1}x$, and $\log (1 + x)$.	10
8. Differentiate $\log \frac{4}{\sqrt{\frac{1+x}{1-x}}} + \frac{1}{2} \tan^{-1}x$.	7
9. Show that the differential coefficient with respect to x of	7
log $(x + \sqrt{a^2 + x^2})$ is $(a^2 + x^2)^{-\frac{1}{2}}$ 10. If in a spherical triangle C and c remain constant, the corresponding small variations δa and δb of the sides a and b are connected by the equation: $\delta b \cos A + \delta a \cos B = O$.	7
<u> </u>	•
GEODETIC SURVEYING.	
	No. of
Maximum No. of Marks 150.	Marks.
Time, 3 Hours.	
1. A trigonometrical station is situated on the top of a hill, and from it is visible another station on top of a hill of equal height 80 miles distant. The line of sight is at its nearest point 200 feet above the surface of the level plain on which the hills stand. What is the height of the station above the plain?	30
2. In the measurement of the base lines, how are changes of temperature of the rods allowed for or compensated? State some of the methods by which accurate contact of the rods is obtained. How is the effect of flexure of the rods avoided?	30
3. If a base line consists of two parts making with one another an angle very nearly 180°, deduce a series to express the distance between the two ends of the base in terms of the parts.	30
4. If the direct angle between two objects not on the horizontal plane of the observer be measured with a sextant of repeating circle, deduce the horizontal angle, in the form of a series. Find the correction to the horizontal angle as measured with a theodolite for inclination of the graduated plate.	30
5. Show that the calculation of the relative positions and azimuths of two stations from the measured distance between them may be made by spherical trigonometry, using a sphere whose radius is the radius of curvature of the great circle perpendicular to the meridian at one of the points; and that the resulting difference of latitude must be multiplied by $\frac{N}{R}$, the difference of longitude needs no correction, and the deduced azimuth of one point from the other needs a correction almost infinitesimal.	30
6. Show that the azimuth of a vertical flag staff, as seen from a distant station, is different according as the point sighted at is the top or the bottom of the flag staff. Define geodetic lines and curves of alignment.	30
7. What is the effect in seconds on the observed latitude and longitude of a point of the attraction of a hill, estimated at one two hundred thousandth of the earth's attraction, the azimuth of the hill from the station being α . What effect will this attraction have upon the direction of a line run from the point in azimuth β .	30

	1
PROJECTIONS.	No. of
Maximum No. of Marks 100.	Marks.
Time, 3 Hours.	maiks.
 Distinguish between a true projection and development. Describe the orthographic, stereographic, gnomonic and globular projections. Describe Mercator's projection; its use and defects. In Flamsteed's projection, what are the coördinates of a point whose latitude is l and difference of longitude from middle meridian n? Explain fully in what respect Bonne's projection differs from the simple conic projection. 	30 15 30
4. In the polyconic projection how is the azimuth affected by the projec-	35
 tion? Demonstrate your assertion. 5. In the development of the cone tangent at 49° parallel, 97° longitude being the middle meridian, what is the offset at longitude 102° for that parallel from its tangent, tangent being at the middle meridian. Log N=6.8443422. N being in yards. Scale 500000. 	35
ASTRONOMY—(First Paper).	
Maximum No. of Marks 125.	No. of
Time, 3 Hours.	Marks.
1. The sun in rising shone on a mountain peak 4 minutes before he shone on the plane of the horizon. How high was the peak? Latitude 42°, sun's declination 20° N.	25
20 N. 2. In what latitude will•two stars cross the prime vertical at the same time, their declinations being δ and δ' and difference of right ascensions P?	25
3. The length of the year in mean solar days being 365.24222, show that the arrangement of leap years in the Gregorian calendar entails an error of about one day in 4,000 years, and that in a calendar where 31 leap years are allowed in 128 years, the error would amount to one day in 32,000 years.	25
4. Deduce the formula for calculation of latitude by altitudes near the	25
meridian. 5. Deduce the formula—	25
$\tan Z = \frac{\cot \delta \sec \varphi \sin t}{1 - \cot \delta \tan \varphi \cos t}$ where z, δ, φ, t , are azimuth, declination, latitude, and hour angle respectively.	
 ε, ε, φ, ε, are azimuth, declination, latitude, and notify angle respectively. In an observation for time by an altitude, find the position of the star in which a small error in the altitude has the least effect on the deduced time. Find also in what position of a star a small error in the time has the least effect on the deduced azimuth. 	25
7. Deduce the correction necessary on account of the changing declination of the sun, in the observation for time by equal altitudes before and after noon.	25
8. Deduce a formula for determining the latitude from the observed difference of azimuth of two circumpolar stars at their greatest elongation.	25.

I	ASTRONOMY—(Second Paper.)	· Wf			
	Maximum No. of Marks, 125.	No. of Marks.			
	Time, 3 Hours.				
1.	Find the error in an observed azimuth resulting from inclination of the	20			
2.	axis and collimation error. How can the inequality of the pivots of a transit instrument be de-	20			
	termined? How is it applied in the reduction of observations?				
ა.	When the transit instrument is very nearly in the Meridian, find the effects of small errors in azimuth, collimation and inclination. How are the amounts of these small errors practically determined?	20			
4.	Given a portable transit instrument and a sidereal time piece, describe the method of adjusting the instrument in the meridian.	20			
5.	When the transit instrument is nearly in the prime vertical, deduce the effect of the small error of azimuth, and also of errors of collimation and level. How are these errors determined? How can	20			
e	the undetermined collimation error be cut out of the result?	20			
	How are the values of one division of the level and the micrometer of the zenith telescope determined?	20			
7.	Compare the advantages of the three methods of determining latitude:	20			
	 (a) By zenith telescope. (b) By meridian altitudes measured with a graduated arc. 				
8.	(c) By prime vertical transits. In determination of longitude by electric telegraph, how are the effects cut out of the time of passage of electricity, armature time, personal equation of observers, and errors in the right ascensions of the stars	20			
9.	used? Explain the method of determining longitude by moon culminations.	20			
	Least Squares.	l			
	Maximum No. of Marks, 80.	No. of Marks.			
	Time, 3 Hours.				
1.	In determining the value of one turn of the micrometer of a zenith telescope, we have from 20 determinations of the time of passage of a star through 10 turns of the micrometer, the sum of the squares of the residuals = 68.35. What is the probable error of one turn? Interpret fully in words what is meant by your resulting "probable error."	20			
2.	Show that the sum of squares of the residuals found by taking the arithmetic mean is a minimum.	20			
3.	Define mean square error. Given the observation equations, all of equal weight: $x = 1$	20			
	x + y = 3 x - y + z = 2 -x - y + z = 1				
4.	Form the normal equations: Given the telegraphic longitude results: Seattle West of Greenwich 8^h 09^m 19^s . $45 \pm .27^s$. Kamloops East of Seattle 8^m 01^s . $09 \pm .08^s$.	20			
	Winnipeg East of Kamloops 1 ^h 32^m 47^s . $34 \pm .12^s$. [PART II]	97			
	14—7**	71			

What is the longitude of Winnipeg, and what is its probable error? 5. From the following differences of longitude, deduce the weighted mean	20			
and its probable error. Washington—Key West $19^{\rm m}$ $01^{\rm s}.42 \pm .^{\rm s}044$. $19^{\rm m}$ $01^{\rm s}.37 \pm .^{\rm s}037$. $19^{\rm m}$ $01^{\rm s}.38 \pm .^{\rm s}036$.				
6. In the longitude triangle, Brest, Greenwich, Paris, the observed values were:	20			
Brest—Greenwich, 17^{m} 57^{s} .154 weight 10. Greenwich—Paris, 9^{m} 21 .120 " 7.	·			
Brest—Paris, 27 ^m 18 .190 "9. What are the most probable values and the weight of each?				
SYSTEM OF SURVEY, MICROMETER AND TRACK SURVEYS.				
Maximum No. of Marks, 150.	No. of Marks,			
Time, 3 Hours.				
 In the first table in the Manual of Surveys, the difference of two successive logarithms of R sin. 1" is three times that of the corresponding logarithms of N sin. 1". Why is this? Find the width of the last range of the 5th Base, west of the 2nd Initial Meridian, adjoining the Third Initial Meridian; assuming that the average elevation of the base line above the sea is 1,500 feet, and that 				
the 8th Base, second system, = 8' 29".698. 4. What is the distance of a point in latitude 51°, longitude 107°, from the eastern and northern boundaries of the section in which it lies,				
and give the section, township and range. 5. State fully the advantages and disadvantages for exploratory work of the solar compass, prismatic compass, box sextant and a 4-inch transit theodolite.				
6. In exploratory work in a mountainous country, where it is desired to locate mountain ranges and the more prominent peaks, what observations would you make, so that a map could be made showing approximately the topography of the country?	30			
7. In an exploratory survey made with an angular instrument, and a distance-measuring micrometer, how can latitude observations be used as a check, and under what conditions will these observations also afford a check of any value on difference of longitude?	30			
	•			
THEORY AND USE OF INSTRUMENTS.	No. of			
Maximum No. of Marks, 150.	Marks.			
Time, 3 Hours.				
 What are the principles of the Rochon micrometer and the Lugeol? Give some methods of practically determining the magnifying power of a telescope. 	15 15			
98 [PARTI I]	-			

3. Express the brightness and the intensity of the image in terms of the diameter of the object glass and the pupil of the eye. For what purposes are telescopes with large objective and low magnifying power used, and when are high powers used?	30
4. How is the perfection of the object glass tested?	15
5. How is the eccentricity of graduated circles eliminated? What are the	15
advantages of three verniers over two?	10
6. What are the qualities of a good level, and how is it tested?	15
7. Explain the method of comparing mean solar and sidereal chronometers	15
by coincident beats. What is the probable error of one comparison?	
8. How are the index glass, horizon glass and telescope of a sextant	15
adjusted? How is the index correction determined?	
9. Explain the use of the collimating eye-piece, in the determination of	15
the collimination error of the transit instrument, or the nadir point	
of a graduated vertical circle. How may it be used to determine the	
value of a division of the movable thread micrometer?	
10. Describe the mercurial barometer. What corrections to its readings	15
are necessary?	
11. Give formulæ for converting Fahrenheit's scale to Centigrade and	15
Reaumer.	
12. Describe the instruments used for obtaining the hygrometrical condi-	15
tions of the air.	
13. Define area of low pressure—isobars and isotherms.	15
14. How is the amount of snow or rainfall measured?	15
THE THOM IS DIE CHILDRIE OF SHOW OF LUMBER INDUSTRIES	10

`	MINERALOGY AND GEOLOGY.		
	Maximum No. of Marks, 50.	No. of Marks.	
	Time, 3 Hours.		
1.	Substance, a dark yellow powder. Sub. + Ht. (heat) in closed tube = O. Sub. + Ht. do in open tube = becomes red. Sub. + Ch. (charcoal) + R. fl. (reducing flame) = yellow incrustation. Sub. + Na. O C O_2 + Ch. + R. fl. = malleable globule. Sub. gives a colorless bead with both fluxes. Sub. + H Cl. = solution. Sol. + K O H O. = precipitate. What is the substance?	7	
2.	What are the more important of the iron ores, how are they distinguished from each other, and where do they severally occur in Canada?	20	
3.	How would you distinguish between scales of gold, mica, iron pyrites and copper pyrites? Give characteristics of each.	10	
4.	Give a general outline of the position of the azoic rocks in Canada.	10	
5.	What recognized geological periods are represented in Ontario—between Ottawa and Windsor? Give them in their proper order.	10	
6.	How are limestones from different localities distinguished as to their geologic age? State some of the limestone formations occurring in Canada, and their position.	10	

TRIGONOMETRICAL LEVELLING.

Maximum No. of Marks, 50.

Time, 3 Hours.

No. of Marks.

10

10

10

10

10

- 1. An observation is taken of the angle of elevation of a mountain peak at a known distance. Deduce a formula for the height of the peak above the observation station, taking account of the curvature of the earth and the refraction.
- 2. How is the co-efficient of terrestrial refraction determined? Explain by formulæ.
- 3. How are heights determined by the temperature of boiling water? What precautions are necessary?
- 4. In the use of the barometer for determining heights, what effect has the temperature? Why is it necessary to compare with the readings of a barometer at another place? How far away may the station of comparison be?
- 5. Why does the length of a pendulum beating seconds vary in different latitudes? What is the law of variation of a pendulum of constant length at different elevations?
- 6. A clock is running with no rate. If the temperature of the pendulum rod is raised 20 degrees, how much will the clock gain or lose in one day, given co-efficient of expansion of the rod = 0.000007, assuming that the only effect of heat is expansion of the pendulum rod?

MAGNETISM.

Maximum No. of Marks, 50.

Time, 3 Hours.

No. of Marks.

10

10

10

10

10

- 1. How is the declination determined? What is the best time of day for observation? What is the approximate range of the diurnal variation? What effect has the secular variation at present upon the declination at Toronto—and what at Winnipeg?
- 2. How is the dip circle placed in the plane of the magnetic meridian?

 What is eliminated by reversal of dip circle—reversal of face of needle—and reversal of polarity?
- 3. Deduce a formula for determining the dip when the position of the magnetic meridian is unknown.
- 4. Explain the method of determining total force by means of a deflecting magnet. Deduce formula.
- 5. If the total force be found by observation in a plane inclined to the magnetic meridian, deduce the total force in the magnetic meridian.
- 6. Describe the unifilar magnetometer, and the method of determining therewith the horizontal force.
- 7. What is the magnetic pole? Why is the pole for total force not the same as that for declination or inclination?

PART III.

GEOLOGICAL SURVEY.

DEPARTMENT OF THE INTERIOR, GEOLOGICAL AND NATURAL HISTORY SURVEY AND MUSEUM BRANCH, OTTAWA, 31st December, 1889.

The Hon. EDGAR DEWDNEY, M. P.,
Minister of the Interior,
Ottawa.

Sir,—I have the honor to submit herewith the customary summary report of the work of the Geological and Natural History Survey corps during the past

calendar year.

From January to May was occupied in the preparation of the reports and maps that have since been published, forming a volume, in two parts, of about 1,400 pages, with numerous maps and illustrations. It contains thirteen separate reports, relating to the geology, the mineral resources and the natural history of various portions of the Dominion, from British Columbia and the North-West to Hudson's Bay and Nova Scotia.

The following publications have also been prepared and published during the

year:-

1. Vol. I., Part 2, Contributions to Canadian Palæontology.

2. Description of eight new species of fossils from the Cambro-silurian rocks of Manitoba, with six plates.

3. Contributions to the Micro-Palæontology of the Cambro-silurian rocks of

Canada: by Ulrich.

4. List of publications of the Geological and Natural History Survey of Canada from 1843 to 1889, with prices, and a brief description of the contents and the arrangement of the Museum and Library. 36 pp., R. 8vo.

There are also in preparation and in part ready for press:

1. Enumeration of Canadian Liverworts, with Notes.

2. Part V. of the Catalogue of Canadian Plants.

3. Catalogue of Canadian Birds, with their Habits and Range; also, list of species now represented in the Museum.

4. The Vertebrate fossil fauna of the Tertiary rocks of the North-West, with

plates: by Prof. E. Cope.

Early in April,16 parties were organized for field exploration, and were distributed as follows:—British Columbia, 3; North-West Territory, 2; Manitoba, 1; Ontario, 2; Quebec, 4; New Brunswick, 2; Nova Scotia, 2. A brief summary of these explorations is given in the following pages, as well as of the work that has been performed

in connection with the Museum, the Chemical Laboratory and the Library.

Up to the end of June my own time was fully and constantly occupied in attending to executive details, in answering enquiries verbally and by letter, and in work connected with editing the Annual Report and maps above referred to. On the 5th June I left Ottawa, for the purpose of making some observations at various points along the north shore of the lower St. Lawrence and in the Strait of Belle Ile. This was effected by securing a passage on board the Lighthouse Service steamer "Napoleon," but afforded opportunities for examination only at widely separated points, mostly at or in the vicinity of the lighthouses, along the great stretch of over 500 miles of coast line, extending from Point des Monts to Belle Ile. Some interesting facts were, however, ascertained, and I have acquired such a general knowledge of the character of the country as will enable me better to direct any future explorations that may be undertaken in this region with a view to ascertaining what its mineral resources are. In this connection it may be stated that Belle Ile itself, hitherto supposed to be composed of Laurentian gneiss, was found to consist largely, if not wholly, of various crystalline and sub-crystalline strata, like those of the $14-1\frac{1}{4}***$

Huronian mineral-bearing belts of the country north and west of Lakes Huron and Superior, and it is not improbable that considerable areas of these rocks may yet be found on the main land of Labrador; and, if so, they may be expected to be accompanied by deposits of valuable economic minerals, like those which characterize them in all the areas where they have yet been recognized and explored.

Hasty examinations were made, and specimens collected, at the following places:
—Point des Monts, Egg Island, Pentecoste, Sheldrake, Seven Islands, Perroquette Island, Esquimaux Island, West, South-west and South points of Anticosti, Greenly Island, Point Amour, Chateau Bay and Belle Ile; and in Newfoundland at Cape Bauld and Quirpon Harbor, and at Capes Norman and Rich. The geological formations of the northern peninsula of Newfoundland have been described in the Geology of Canada, 1863, and are there all referred to one or other of the divisions—Levis, Lauzon and Sillery—of the Quebec group. From what I have seen this summer I am led to believe that the true order of succession of the strata has been misinterpreted, as it was in the Eastern Townships, and that much of the so-called Sillery and Lauzon is probably Huronian, but certainly not more recent than Lower Cambrian. Diorites and serpentines appear to be somewhat largely developed, and it seems quite likely that valuable deposits of asbestos may accompany them, as they do in the Eastern Townships of Quebec.

In this connection it may be interesting to quote some passages from a Memoir by A. S. Packard, Jr., read before the Boston Society of Natural History, October,

1865, and published in Vol. I of its Memoirs.

On page 216, under the heading "Huronian Group," he says: "A system of quartzite and trap rocks which lie in a depression of the Laurentian rocks, about 125 miles long and probably 25 miles broad, stretching along the coast between Domino Harbor and Cape Webuc, I refer with some hesitancy to the Huronian series of Sir Wm. Logan, and consider as probably equivalent to the Quartzose division of the primitive slate formation of Newman and Keilhau. It agrees in part with the Domino gneiss of Mr. Lieber." The author then gives further interesting details of these strata, and in conclusion, page 218, says: "Should further search prove the existence, in connection with this quartzite, of beds of a true conglomerate, which we should look for in the interior, and of the presence of copper ore in connection with quartz veins near the trap rock, the identity of this formation with the Huronian rocks of Canada and of similar rocks in Sweden would seem satisfactory; and, if proven, will be interesting, not only to the geologist, but be of practical value in the search for ores on this coast."

Mr. Packard also describes the remarkable columnar basaltic, trap rocks of Castle and Henley islands, in Chateau Bay, but I think erroneously assigns them to the Laurentian. From their attitude and appearance, they are, I think, more probably of Cambrian age, and equivalent to the Animikie of Thunder Bay, Lake Superior, Lake Nipigon, and the islands on the eastern shores of Hudson's Bay. No such rocks are, so far as I am aware, associated anywhere with the Laurentian system. If this proves to be correct, we may expect to find areas in East Main and Labrador of both the Archæan (Huronian) and the Cambrian (Animikie) metaliferous-bearing zones of Lake Superior. The white quartzites of Marble Island, described by Dr. Bell* as Huronian, seem to correspond closely with those described by Mr. Packard at Dominio Harbor and Cape Webuc, while the columnar basalts of Castle and Henley Islands, Chateau Bay, are almost identical with those of Castle Peninsula, Richmond Gulf, † the Outer and Inner Barns of Lake Nipigon and the better known trap formation of Thunder Cape, Pie Island and McKay's Mountain, on Lake Superior.

At Sheldrake near the eastern end of the Seigniory of Mingan, and both east and west of the settlement, the coast is occupied by massive Labradorite rocks. On shore, where tidal action has polished these rocks, some fine examples of the beautiful opalescent anorthosite or labrador spar were observed, but specimens could not

Boston Society Natural History, Vol. I., 1866-69. * Report Geological Survey of Canada, 1882-83-84. P. 35 D.D., † Bell—Geological Survey of Canada, Report 1877-78, p. 14c.

be easily obtained without appliances for blasting the rock. Inland for a considerable distance, where the vegetation has been burnt, the weathered surfaces of these rocks are perfectly white, making the country look as if there had been a heavy fall of snow. The extent of the area of these rocks in this region is entirely unknown. It is not impossible that it is continuous with that described by Prof. Hind, on the Moisie River and its branches, † and that this again extends continuously southeastward to Pentecoste River, where similar rocks occur as described by Richardson.* We should then have in this region the largest known area in Canada of these Norian rocks, and here doubtless it would not be difficult to determine their true relations to the red and grey granitoid orthoclase gneisses, which they have been supposed to unconformably overlie. There can, however, be little doubt that they are intrusive igneous rocks. On the 29th July I returned to Quebec, where Prof. C. Walcott, of the United States Geological Survey, met me by appointment, for the purpose of examining some of the typical sections around Quebec, on the correct interpretation of which so much has of late years been said and written by the geologists of the United States and Canada.

From the 14th to the 23rd August I was occapied, in company with Professor Walcott, in studying the relations of the Cambrian and Cambro-silurian formations on either side of the boundary between Vermont and Canada, with a view to uniformity of mapping by the respective surveys, and which, it is hoped, will now be secured.

After attending the meeting of the American Association for the Advancement of Science, in Toronto, from the 28th of August to the 2nd of September, a few days were spent—with a similar object in view to that above referred to, but in connection with the work now in progress along the Minnesota boundary, in company with Professor N. H. Winchell, of the United States Survey, and Dr. Lawson—studying the Huronian rocks around Sudbury and Algoma, and in an endeavor to show that the metaliferous Huronian strata of the Sudbury-Algoma region do not differ in any important particular from the similarly metaliferous schists, etc., which occur in the country between Lake Superior and Lake Winnipeg, including the Lake of the Woods, and Rainy Lake and River. In connection with this matter, and the importance of the work of tracing out and mapping these bands or belts of Huronian rocks, I may here quote what I wrote respecting it in 1873: *

"Apart from the geological interest which attaches to the determination of the distribution of these rocks and their precise relations to the underlying Laurentian gneiss, the foregoing facts show that it is economically important that the extent of these bands should be defined; and that their mineral characters should be closely investigated is equally so, inasmuch as the gold, the copper and the iron of the region, as far as known, are associated with similar strata, and thus not only the best land, but likewise valuable mineral deposits, are to be looked for within the limits which they occupy." * *

which they occupy." * *

Since the above was written, nearly all the discoveries and developments of mines and minerals in the Huronian areas that have been indicated by the Survey have been made. That these facts are somewhat of the nature of cause and effect may, I think, reasonably be surmised; and whether they prove the truth or otherwise of the reiterated and apparently somewhat popular statements that of recent years the Survey has paid no attention to and takes no interest in the development of the mineral resources of the country may perhaps be left to the decision of the public and to the testimony of the sixteen volumes of reports, maps and other documents that have been published by the Survey since 1870.

In the enormous area which stretches from the Georgian Bay north-west to the Mackenzie River, and from the same point north-east to the Straits of Belle Ile and Cape Chudleigh, there are probably many such areas to be investigated and located; and a

⁺ Explorations in the interior of the Labrador Peninsula, 1863.

^{*} Geological Survey of Canada, Report 66-69, p. 307.
* Geological Survey Report of Progress, 1872-73, pp. 13-14.

map on which they are even roughly indicated will always be a valuable guide to

the mineral prospector.

The rest of the season, from the 9th of September to the 10th of October, the date of my return to Ottawa, was devoted to investigations and enquiries bearing on water supply in the North-West. The artesian wells of the James River valley and Devil's Lake, in Dakota, were visited, and also the boring now in progress at Deloraine. The quality of the water in the Dakota wells varies considerably. Most of the wells give a copious supply of excellent water. At Devil's Lake, however, though a copious supply was obtained at about 1,750 feet, the water, though good for stock, contains too much saline matter for ordinary domestic uses. There seems every probability, when a sufficient depth has been reached at Deloraine, of a good supply of artesian water being obtained. What the quality will be there is no evidence to show, but this is not now important, because even if as saline as is much of the surface and the artesian water of the Red River valley, it can, by a simple and inexpensive process of filtration, be made sufficiently pure for all domestic uses. This has recently been proved by experiments made at my suggestion on some of the most saline water of the Red River valley south of Winnipeg. It consists in simple filtration through from 50 to 60 feet of sandy gravel. Further experiments will perhaps suggest additions to the material used that would render the process still more perfect. Even as it is, the importance and value of this discovery to the whole of Manitoba and the North-West in such seasons as that of 1889 can scarcely be estimated.

The history of the discovery and development of natural gas in Ontario, to which I briefly referred in my last summary report, is interesting; but as it is somewhat of a personal character, I shall not now refer to it. The results attained during the past year are stated under the head of mineral statistics. They are highly satisfactory; but it would be well to bear in mind that the supply is not inexhaustible, and that wells that are now sending out their millions of cubic feet a day will gradually decline and become extinct. The greater the number of wells bored in a district the sooner will this inevitable event occur. Unlike water, neither gas, nor oil, nor coal, are constantly replenished, and must therefore sooner or later be exhausted. I called attention to this in my summary report for 1887, pages 24-25; and on page 30 of my summary report for 1888, in commenting on Mr. Coste's report on investigations I had directed him to make the spring of that year. I said: "There seems no reason why further trials, especially in that part of Ontario between Lake St. Clair on the south-west and Lake Simcoe on the north-east, should not prove more successful and yield as abundant a supply of gas or petroleum as do some of the Ohio wells." Since that expression of opinion, all the large gas wells

now referred to have been bored.

Dr. G. M. Dawson was, during the past season, again occupied in continuing the geological exploration of the southern part of the province of British Columbia. In consequence of the recent important mineral discoveries in the West Kootanie district, it was considered desirable that he should visit that district in the first instance, and should afterwards give as much time as possible to the completion of the more systematic work on which he had previously been engaged in the Kamloops region. Dr. Dawson, who was assisted by Mr. J. McEvoy, B. Ap. Sc., and by Mr. P. Edgar, furnishes the following summary account of the explorations carried out:—

"About a month, in the earlier part of the summer, was devoted to the examination of the more important localities in the West Kootanie district, which have lately been proved to afford valuable ores. While I was occupied in this work, accompanied by Mr. Edgar, Mr. McEvoy was independently engaged in examining a stretch of country between the North Thompson and Bonaparte Rivers, along the northern edge of the geological map-sheet now in course of completion. Work during the remainder of the season was practically confined to the area of the sheet just referred to.

rere

"It should be explained that, in comformity with the suggestion made in last year's Summary Report, the area covered by the original reconnaissance map of the Southern Interior portion of British Columbia, was divided into four equal parts, each forming a square of eighty miles side, and including a superficies of 6,400 square miles. The scale was at the same time increased from that of eight miles to that of four miles to the inch, and a preliminary compilation on that scale was made by Mr. McEvoy before field work commenced. The sheet to which the field work of last summer related, extends in longitude from the vicinity of the North Thompson to that of Lillooet (long. 120° 10′ to 122°), in latitude from 50° 10′ to 51° 20′. The exploratory work required for this sheet may now be considered as completed, with the exception of a belt of mountainous country to the west of the Fraser between Lillooet and Lytton. The enlargement of the scale of the map will enable greater justice to be done to the somewhat complicated geological and topographical features of the country.

"The Kootanie district, to the south of the line of the Canadian Pacific Railway, is naturally separated by the high, rugged, axial portions of the Selkirk and Purcell ranges, into eastern and western sub-districts. The first of these may be reached by ascending the Columbia from Golden, the second from Revelstoke, by way of the Columbia River and Arrow Lakes. Much prospecting has been going on in both East and West Kootanie for the past two or three years, and a large number of promising discoveries—chiefly of silver-bearing ores—have been made. The West Kootanie sub-district was that visited by me last summer, and in it no previous observations by officers of the Survey had been made, with the exception of a traverse of

the Columbia and Arrow Lakes by Mr. Bowman in 1884.

"Attention was first prominently drawn to the mineral wealth of the West Kootanie region when the discovery of rich ore by the Hall Brothers on a mountain which has since been known as Toad Mountain became known in 1887. Many prospectors soon flocked to the vicinity and a large number of claims have since been taken up, not only on and near Toad Mountain, but also at Hot Springs or Ainsworth, on the west side of Kootanie Lake, at Hendryx on the opposite side, and at many outlying localities. At Nelson and Ainsworth town sites have been laid out, and the first steps toward the establishment of permanent mining centres have been

"Speaking generally of the district, I may say that the result of my examination has been to convince me that the importance of the mineral discoveries made has not been exaggerated, while their number and the area over which they are distributed is such as to guarantee a large and continuous output of good ore so soon as adequate means are provided for the transport of the product to market. As a number of details respecting the various deposits, (chiefly obtained through the kindness of Messrs. G. B. Wright and G. M. Sproat,) have already been given in my report on 'The Mineral Wealth of British Columbia,' recently printed, it will not be necessary in the present summary to speak of the individual claims and deposits visited by me. These particulars I hope to embody in a more comprehensive report shortly to be published. It may be noted, however, that in nearly every instance the result of my personal examination has been to verify the accuracy of the statements made in the publication just alluded to.

"The majority of the ores met with are to be classed as silver ores, and in the vicinity of Hot Springs and Hendryx these are for the most part argentiferous galenas, which, in a number of instances near Hot Springs, are decomposed to a considerable depth, forming so-called 'carbonate-ores.' These possess a special value owing to the ease with which they are worked and their importance in the process of smelting the unaltered galenas. The aggregate quantity of such 'carbonate ores' to be found in the deposits already proved must be great, but all will no doubt pass in depth

into sulphide ores.

taken.

"At Hot Springs or Ainsworth a truly remarkable number of metalliferous veins has already been brought to light within a very limited area, and additional discoveries are still being made from time to time even within this

area. Near the lake-shore, the country-rock is a coarse mica-schist which is overlain further back by green and grey schists, and these in turn are followed by limestones and black argillaceous schists, a mass of granite bounding the whole at a distance of two to three miles inland. In evident relation to this change in the country-rock is the circumstance that the ores improve almost uniformly in respect to content of silver in crossing the series of veins in a westward direction from the lake and rising higher above the lake-level. Some of the deposits associated with the limestones hold more or less native silver in a filiform condition, and very high assays are frequently obtained from these. It is not yet possible to quote assays of the ores of this vicinity made from specimens collected by myself, but it is safe to say that from several of the claims, considerable quantities of ore can already be obtained by ordinary hand picking which yield from 50 to over 100 ounces of silver to the ton, in addition to a high percentage of lead.

"At Hendryx, the only considerable developments made are those of the New Haven Mining and Smelting Company. The principal feature at this place is a lode of very great size, consisting largely of galena, but classing in respect to silver as a low-grade ore. So soon as efficient means are provided for handling and smelting this ore and shipping the product, a very large output may be counted on.

The Toad Mountain ores differ from the foregoing in containing a large amount of copper and less gelena. The Hall Brothers' property, known as the 'Silver King Mine,' from the name of the claim on which most work has been done, is so far the leading one here, and has turned out a considerable quantity of ore which has approached or surpassed \$300 to the ton in total value as sold at the smelter. Other claims are, however, being opened out, some of which present a very favourable appearance.

"At the east end of Toad Mountain, a wide belt of rusty schistose rocks, containing more or less quartz and much iron pyrites, has been discovered. The superficial portions of this belt have been completely oxidised and afford free-milling gold. This property has been acquired by an English company, known as the Cottonwood Company, and a Huntingdon mill has been erected for the purpose of treating, in the first place, the decomposed surface material, of which there is, in the aggregate, a great quantity in sight. The results of trials so far carried out have not been made public. Should it prove, however, that the deeper pyritous portion of the deposit contains sufficient gold to pay for concentration, roasting and chlorination, the quantity of the ore appears to be almost unlimited. Another gold-bearing deposit, in the form of a well-defined vein traversing a granitic rock, is situated on Eagle Creek, toward the west end of Toad Mountain. Work is being carried on here and a stamp mill is in process of erection.

"Beyond the neighborhood of the better known centres, a great number of discoveries, chiefly of silver ores, are reported throughout the district. Most of these isolated localities time did not permit me to visit. Mention may be made, however, of an extensive deposit of copper-pyrites, on the north side of Kootanie River, nearly opposite Forty-nine Creek, and of a peculiar and apparently important occurrence of magnetic iron-ore on the same side of the river below the lower fall.

"No large quantity of ore has yet been shipped from the deposits of the vicinity of Kootanie Lake and Toad Mountain, but small shipments of hand-picked rich ores have been made from time to time during the two past summers, representing a total value of over \$75.000. The ore has been carried down to the lake-shore on horses or mules, taken by steamer to Bonner's Ferry in Northern Idaho, thence over thirty miles by waggon to the nearest point on the Northern Pacific Railway, and then, as a rule, to Montana, where it has been sold and smelted. The cost per ton of transporting the ores to smelter by this route has been not less than \$30, and when to this is added the cost of mining and cobbing the ore, it is evident that very high-grade ore alone can thus be utilized, while even in the case of deposits capable of yielding a considerable proportion of such high-grade material, the greater part of the ore extracted, embracing the lower grades and requiring concentration, must at present be put to one side.

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"It may thus be said that the West Kootanie district is at present waiting merely for some satisfactory outlet for its ores, and the developments already made, though for the most part merely of a preliminary character, are such as in my opinion to justify the expenditure necessary to provide such an outlet at once. It might be added, that capital for the proper development of the various discoveries is also required; but this will naturally follow so soon as the district is rendered more accessible, and can only be prevented from doing so, for a longer or shorter time, by the exaggerated ideas of the value of undeveloped properties too apt to prevail among the holders of claims in such new districts.

"The construction of a railway twenty-four miles in length along the unnavigable portion of the Kootanie River, between Nelson on the West Arm of Kootanie Lake and Sproat's Landing on the Columbia, would connect the navigable waters of this lake with those of the Columbia and Arrow Lakes, and would enable ores to reach the Canadian Pacific Railway at Revelstoke. A still more efficient and permanently satisfactory route would, however, be afforded by a direct line of railway from the north end of Kootanie Lake to Revelstoke, a distance of about eighty-six miles by the route which would have to be followed. Of this length of line, however, only that part between Kootanie Lake and the North-east Arm of Upper Arrow Lake need be constructed in the first instance, with a length of about fortyeight miles; the remaining portion of the distance being for a time served by steamer on the Columbia. Still another alternative outlet may also eventually be supplied by a branch line from the Northern Pacific Railway; but it is of importance to the prosperity of the district that it should have a means of communication independent of the rulings of the United-States Customs as to the introduction of silverlead ores, &c., into that country. The metals likely to be produced in quantity in the district are silver, lead and copper, all of which may be sold to advantage at first hand in the markets to which the same metals are exported by the United States.

"For the purpose of treating the ores from the East and West Kootanic districts, a large and well appointed smelter has just been completed at Revelstoke,

while arrangements for the erection of a second are in progress at Golden.

"In the above summary, particular prominence has been given to the main features which appear to be of immediate economic importance in the West Kootanie district. It is of course impossible to give here any general review relating to the province as a whole. It may, however, be stated that during the past summer a considerable amount of substantial progress has been made in the exploration of mineral deposits already known, while a number of new discoveries of promise have occurred. The output of ore, which has already in a small way been fairly initiated, will now doubtless increase from year to year, till British Columbia attains the prominence from a mining point of view which her great mineral resources guarantee. The rate at which this development may proceed must depend for the most part on the degree of energy which those primarily interested exhibit.

"I have reason to believe that the publication giving a synoptical account of the minerals of the province, printed last spring under the title of "Mineral Wealth of British Columbia," has already served a useful purpose, in directing the attention of capital to the province. I may also take this opportunity of stating that gypsum, one of the minerals enumerated in the above mentioned publication among those unknown in British Columbia, has since been discovered, and, according to the accounts received, in large quantity. The locality is stated to be on the Salmon River, about twenty miles distant from the railway. From the excellent quality of the specimens which I have seen, this discovery may prove to be of importance."

Mr. Amos Bowman was occupied during a portion of the summer in continuing the examination of the country on the Lower Fraser River, with special reference to the question of the occurrence of beds of coal or lignite-coal of economic importance. This work was briefly referred to in my last summary report and the facts then ascertained were given. No report of the past season's work has yet been received from Mr. Bowman.

Mr. R.G. McConnell left Ottawa on the 30th of April, with instructions to explore the almost unknown country north of Lesser Slave Lake, bounded by the Peace and Athabasca Rivers. On this work he reports as follows: "I reached the Athabasca landing on the 19th of May, and descended the Athabasca to near the mouth of the Pelican River. From this point a portage of three miles brought us to the Pelican, some miles above its mouth, and above most of the bad rapids. We then followed the Pelican,—a small, winding stream,—to its source in Pelican Lake, and crossing the latter, followed up Beaver Creek for a short distance, and then made a portage of a couple of miles across the height of land to Sandy Lake, which drains northward to the Peace. Following the outlet of Sandy Lake, we soon reached the Wabiscaw Lakes, and crossing these, entered the Wabiscaw River, which we descended to its junction with the Loon, and then continued our way down the latter until it emptied into the Peace.

"Loon River, with its continuation, the Wabiscaw, has a length of about 350 miles, and drains an area of over 25,000 square miles. It might be navigated with strong, light-draught steamers, and by using the line in some places, up to the Grand Rapids, a distance of about 150 miles. Its principal tributaries are Bear River, Pine Creek, Panny Creek, Trout River and Wooden-house River—all fair-sized

streams, but reported to be very swift and filled with rapids.

"From the mouth of the Loon we ascended the Peace to Fort Vermilion for supplies, and, then returning, explored Little Red River for a distance of 200 miles. I ascended this river with the expectation of finding exposures of the bitumenbearing sands which outcrop along the Athabasca, but failed in this, as the river in its upper part does not cut down below the boulder clay, and for long distances is destitute of any valley whatever. The geological data it affords are in consequence very slight.

"Returning from Red River to Fort Vermilion a trip with pack-horses was made into the Buffalo-head Hills, after which we continued our way up the Peace to the Peace River landing, making on the way exploratory excursions eastwards into the

wooded country which borders the river.

"From the Peace River landing we crossed over to Lesser Slave Lake, and engaging there a small pack-train, started north along an execrable trail for Trout Lake, where we left the horses and pushed on, partly on foot and partly with canoes, until we reached the Wabiscaw and made connection with the previous traverse down that stream. On this trip I sketched in the outlines of White-fish Lake, Loon Lake, Bear Lake, Trout Lake and a host of smaller ones, and crossed and followed for some distance a score of streams, but obtained little geological information, as the country is everywhere so deeply mantled with drift that none of the streams which I examined have succeeded in cutting through it and so exposing the rocks beneath.

"After returning to Lesser Slave Lake I coasted around it examining on the way the tertiary plateau south of the lake, and Martin Mountain at the north-east corner, and then continued our way down Lesser Slave River to the Athabasca, and down the latter to the Athabasca landing, making side trips on the way to Moose Lake and Baptiste Lake. We arrived at the landing on the 1st October and started at once

for Ottawa arriving there on the 13th October.

"The whole country between the Peace and the Athabasca north of the Loon,—an area of about 25,000 square miles,—is generally forested, mainly with spruce and poplar, and is everywhere characterized by an abundance of lakes, and of muskegs and marshes. Narrow strips of excellent land are usually found along the main rivers and surrounding many of the lakes, and in the interior many areas often equal in size to an eastern county, might be selected which are well adapted for cultivation, but the wide morasses which separate these detract greatly from their value. Numerous streams, mostly draining northwards, everywhere intersect the surface. Few of 10

these have large valleys, and they usually flow in a sluggish manner, often dilating into lakes in the flat districts, but break over the steeper slopes of the country in a series of strong rapids. With the exception of Loon River and Red River, none of the streams are navigable.

"Two ranges of hills cross the district in question. One of these the Buffalo-head Hills commences abruptly about fifty miles above the mouth of the Loon, with an elevation of 1,000 feet, and running in a south-south-westerly direction, with a gradually diminishing height, dies away opposite the mouth of Battle River, while the other commences north of the east end of Lesser Slave Lake and extends in an easterly direction towards the Athabasca.

"Excellent sections of the rocks of the country are found along the Peace and Athabasca and the lower part of the Loon, but the geological information obtained in regard to the interior of the district is small, owing to the almost complete absence of deep valleys or scarped banks showing exposures. The exploration has, however, added largely to our geographical knowledge of this little known region.

"Lignite was found in several places along the Peace River, but in seams too small to be workable. It was also found in the Laramie plateau, south of Lesser Slave Lake. Here four seams were found ranging in thickness from one to four feet, besides a number of smaller ones, scattered through about 1,000 feet of shales and sandstone. This lignite is apparently of fair quality but has not yet been analyzed. Drift lignite was also found in Martin River near the base of Martin Mountain but was not traced to its source.

"Clay iron stone is of universal occurrence in the Cretaceous shales exposed along the Peace Valley, and, in many places between Battle River and the mouth of the Smoky forms thick accumulations at the foot of the cliffs lining the valley, some of which may prove to be of economic value.

"Gold was found in many of the bars along Peace River and in several places in sufficient quantities to deserve some attention. Four miles above the mouth of Battle River is a large bar, nearly a mile long, from which we obtained fifteen or twenty colours of fine gold by washing a few handfulls of the mixed gravel and sand in an ordinary frying pan. We tried the bar at several points, and always with the same result. A small stream descends from the plateau on the opposite side of the river, and by leading its waters across the river, which is here 1,000 feet wide, the bar might be easily and inexpensively worked on a large scale. A few miles further up the river another bar was examined, which yielded from twenty to forty colours when washed in the way just mentioned.

"A couple of colours of gold were washed out in one place on Loon River. This is of some interest as the Loon heads in a south easterly direction, and has no connection whatever with the mountains.

"Inspissated petroleum, lining cracks in calcareous nodules was found along Peace River for some sixty miles below the Peace River landing. At Tar Islands, about thirty miles below the mouth of Smoky River, there is a saline spring which is kept in a constant state of ebullition by the escape of natural gas. Small quantities of tar line the sides of the spring and float on the surface of the water. This spring and a couple of others which are reported near by, are situated near the axis of a broad, flat anticlinal, one of the essential conditions of a successful oil field. Gas and oil in paying quantities are most frequently found in these great natural domes, and the only element of uncertainty in this district is the presence or absence of some porous formation to act as a reservoir. It is possible that the loose sands found along the Athabasca extend this far, or that some equivalent formation occupies their place, but as natural sections are wanting this can only be proved by artificial sections obtained by boring.

"Bituminous nodules were also observed along the north side of Lesser Slave Lake, and a tar spring is reported on this lake near the mouth of Martin River, but its situation is kept a secret by the Indian who professes to have discovered it.

"Cost of season's exploration, \$2,183.63."

Mr. J. B. Tyrrell, assisted by Mr. D. B. Dowling, was engaged during the past season in making a thorough geological examination and completing the surveys of the shores and islands of Lake Winnipegosis. Red Deer, Swan, Dauphin and Waterhen Lakes were also surveyed and examined. The Red Deer River was explored up to the mouth of the Etoimami, and several excursions were made into the Porcupine Mountains. The expedition was eminently successful in obtaining a continuous section from the Cambro-silurian to the Devonian rocks, and in determining the exact contact of the latter with the overlying Cretaceous beds.

Mr. Tyrrell reports as follows:-

"On 11th May I left Ottawa and proceeded to Winnipeg, where supplies were obtained sufficient to last for the summer, after which I descended the Red River to

West Selkirk.

"A small fishing smack had been purchased from Wm. Watts & Son, of Colling-· wood, and shipped by Canadian Pacific Railway to West Selkirk, whither Mr. Dowling had preceded me by a few days, in order to have the boat launched and properly rigged. Into this the cargo of supplies and general camp equipage, &c., was stowed, and on the afternoon of 23rd May we left West Selkirk and sailed down the river and thence northward across Lake Winnipeg to the mouth of the Little Saskatchewan River.

"In descending the Red River from Winnipeg the banks first seen consist entirely of grey stratified alluvial clay. This deposit gradually decreases in thickness, and at the first rapid the river is found to have cut through these bedded clays into unstratified till containing boulders. From this point downwards the banks constantly show little cliffs of boulder clay containing many boulders of white or cream colored limestone, mixed with some of gneiss, &c., and from those cliffs are falling the boulders that are afterwards carried into the channel, and there cause the rapids which form such serious impediments to the navigation of the river.

"At Lower Fort Garry the Cambro-silurian limestone makes its appearance for a short distance, and thence to the mouth of the river the banks are generally low and wooded, and the channel is wide and deep, so that boats have no difficulty in

ascending the stream after the bar at the south end of the lake is crossed.

"Leaving Red River, a straight course was taken across the lake to the north

end of Big Island and thence to Black Island.

"The object we had in view in visiting this latter locality was to examine the deposit of iron ore known to occur on its south shore, owned by the International

Smelting and Mining Company, of Winnipeg.

"The island itself lies at the north end of the southern expansion of Lake Winnipeg, fifty-four miles from the mouth of Red River, in a large bay or depression in the east shore of the lake, with deep channels both to the east and west of it; that to the west separates it from Big Island, on which there is now a flourishing Icelandic settlement. It has a total length of twelve miles and three-quarters in a direction N. 56° E, and a greatest width of four miles and three-eights, and an area of 40.4 square miles.

"The southern portion of the island is overlain by horizontally stratified sandstone and limestone of Cambro-silurian age, the latter being somewhat similar to that quarried at East Selkirk and used so extensively in Winnipeg as a building stone.

The surface of the island is thickly wooded with poplar, birch and spruce.

"Five miles and a half along the south-east shore from its south-west point, altered and highly inclined rocks are for the first time met with. They consist of light green cericitic schists and quartzites probably of Huronian age which are often externally reddened by oxide of iron. When first met with they strike N. 15° E. and S. 15° W. and dip at angles varying from 60° to 75°. These schists **12** PART III

[&]quot;The Athabasca River was not examined during the past season, but it is proposed to devote next summer to it and its tributaries.

outcrop along the shore for a distance of 450 paces, forming generally a rough,

irregular beach which slopes gradually into the water.

Towards the north-east end of the exposure, however, a low rugged cliff rises above and behind the sloping beach, and on examination this cliff is found to consist in the centre of a mass of hematite, which extends along the shore for a distance of a hundred paces and rises to the height of seven feet above the water. As shown in sections running back from the shore, it dips away from the lake at an angle of 30°, and in the vicinity of the mass of ore the bedding of the schist is almost entirely obliterated.

"The ore is a more or less pure hematite, not very compact on any of the exposed surfaces, and with numerous little seams and particles of crystaline calcite scattered throughout the mass, along with which are also a number of small lenticules and crystals of quartz. In some places, especially near the outside of the mass, the hematite assumes quite a pisolitic or botryoidal structure, the spherules being often arranged in very well defined rows, the interspaces of which are filled with calcite.

"Towards the outside of the mass in places the ore has been converted for

from a few inches to a foot into a hydrated oxide of iron or limonite.

"No analyses have yet been made of the typical specimens collected during the past summer, but a number of analyses have been made of specimens previously sent in from Black Island, both in the laboratory of the Geological Survey of Canada, and by Messrs. Gilchrist, Riley and Miller, in London, England.

"These show an amount of metallic iron ranging from 53.99 per cent, downwards. None were found to contain more than a trace of phosphorus. One specimen gave on analysis 2.026 per cent of sulphur, the sulphur being present in the ore as finely disseminated iron pyrites, while three other specimens show respectively 0.07,0.12 and 0.032 per cent of this impurity. In the other five analyses the sulphur was not determined. No iron pyrites was seen in the general run of the ore, but indications of decayed nodules could be traced in a very few places as yellow incrustations on the surface of the rock, and two or three small nodules were seen lying loose at the bottom of the cliff.

"As stated above, this deposit extends for about 300 feet along the shore, which has here a direction of N. 70° E., rises to a height of seven feet in the centre of the exposure, and dips back from the shore at an angle of 30°. The direction of its strike differs very materially from that obtained for the schists at the south-west end of the exposure, but in the immediate vicinity of the ore itself the bedding was entirely or almost entirely obliterated, so that it was impossible to determine in the short time at my disposal whether it was a true bedded deposit, or a lenticular inclusion in the schists.

"The hematite is underlain at the water's edge by a green quartzitic schist, and is overlain by a greenish white argillaceous breecia from one to two feet in thickness. Overlying this is a mixture of quartzite (or infiltrated quartz) and rather hard green schist, containing a considerable quantity of hematite. This quartzose band is again overlain by light green argillaceous or cericitic schists, very much crumpled, but generally dipping at an angle of 60° and striking on the west side of the ore N. 50° E. and S.50° W. Beyond this is twelve feet of light green soft cericitic schist, and this then runs into the harder and more quartzitic schists, which comprise the rest of the whole exposure of Huronian rocks along this part of the shore.

"On our way north from Black Island we stopped for a short time at the north end of Big Island, at Big Grindstone Point and at Deer Island. The cliffs at these places present some very interesting geological features, being capped by compact impure Trenton limestone, below which are white, more or less soft, sandstones, interstratified with bands of light blue clay shale. These sandstone beds have been referred by Mr. Billings to the horizon of the Chazy of Eastern Canada, on the evidence of a few obscure fossils. These rocks require a much more extended examination, but some fossils were this year obtained from them, which, it is hoped, may determine more accurately their taxonomic position.

"At Deer Island we were delayed several days by heavy north-west winds, so that it became advisable to secure the service of a little steamer that was passing, and obtain a tow to Swampy Island. While waiting at this island for the wind to moderate I secured a fine collection of fossils from a cliff of Trenton limestone, a mile west of the Fishing station. These were immediately packed and, along with the fossils and rock specimens from Black, Big and Deer Islands, and Grindstone Point, were shipped directly to Ottawa, where some of them have since been examined, and are described by Mr. Whiteaves in the Transactions of the Royal Society of Canada, Volume VII.

"From Swampy Island we sailed to the mouth of the Little Saskatchewan River, where the services of several Indians were secured, and the next four days were spent in tracking and poling the boat and canoes with their loads of provisions up to St. Martin's Lake, after which the greater part of a day was occupied in ascending the Partridge Crop River to Lake Manitoba. It was late in the evening of Saturday, the 10th of June, when we arrived at Manitoba House, where we were hospit-

ably received by Mr. and Mrs. Armit.

"The Little Saskatchewan River, from Lake St. Martin to Lake Winnipeg, is for much of the way a swift stream 250 feet wide, and with a depth varying according to the seasons from one to five or six feet. It has a total length of 31·2 miles and a fall in this distance of eighty-five feet, the larger part of which is accumulated into the lowest seven miles of its course.

"Following the river upwards from its mouth for 1.1 mile, the banks are generally low and consist of stratified alluvial clay without pebbles or boulders. The water is moderately deep and flows with an easy current. At this point, however, a light brown calcareous sandstone makes its appearance at the bottom of the bank. This sandstone is in general horizontally bedded, though sometimes slightly undulating, and a few obscure fossils found in it show it to be of the age of the Hudson River formation. It is exposed in low outcrops along the bank for 1.75 mile, when it finally disappears. Throughout the distance it is overlain by stratified blue clay, five or six feet in thickness.

"Above the last outcrop of bedded rock the banks rise rapidly to a height of twenty feet above the bed of the stream, and are here seen to be composed of light grey unstratified boulder clay or till, containing pebbles and boulders, chiefly of white limestone, though some are of gneiss; above which the banks again fall, relatively to the stream, till at the distance of 7.5 miles from the mouth they are only four feet above the water. At this latter point there is another low exposure of rock, consisting of a soft, light, buff-colored, semi-crystalline, horizontally stratified dolomitic limestone, in which are very few traces of organic remains.

"The river between the highest and lowest rock exposures here mentioned is one succession of heavy rapids, the bed of the stream being covered with gravel and boulders. Very few of these latter are of any great size, and it is rather their number than their magnitude that gives rise to the rapids. The channel is very clearly defined; there is no valley, other than the channel itself, and there is no bottom-land, though an occasional slide from some of the higher banks has sometimes the appearance of a kind of grassy terrace. The banks were once very generally timbered with poplar and spruce, but much of this has lately been burnt,

and there is now little else to be seen but a succession of dead tree-trunks.

"This long rapid is, as will be seen, a very serious obstruction to the general navigation of the river, but on the other hand it will furnish a water-power that will be of the greatest value to Northern Manitoba in years to come. Above this rapid, which, on account of our heavy load, cost us two days of incessant labor to surmount, the river up to the Elbow, a distance of 8.36, miles is, on the whole, remarkably beautiful. It consists of stretches a mile or more in length of quiet water severed by six short though often swift rapids or shoals, where considerable care must be exercised in navigating the boat, though it was rarely necessary to lighten it. The grassy banks, not more than two or three feet in height, descend in a graceful curve to the edge of the water, or break down in little scarps 14

covered with sliding clay and pebbles. Open park-like woods of aspen poplar fill in the centre of the picture, and it is only now and then that occasional glimpses can

be had of the coniferous forest in the distance.

"Above the Elbow to Lake St. Martin, the river has a length of 15.28 miles, in which distance there are three short rapids, and three other short stretches of river where the current is very swift. For the rest it is generally wide and sluggish, with low. flat meadow banks, evidently often flooded, stretching back to a forest of poplar and spruce. Lake St. Martin is a shallow evaporating basin or expansion at the head of the Little Saskatchewan. It has an elevation of eighty-five feet above Lake Winnipeg or 795 feet above the sea, a shore line of eighty-five miles, an area of 1184 square miles, and a greatest depth, as far as at present ascertained, of fifteen feet. Init are situated a number of islands, with a total area of 31 square miles, some of which, however, are chiefly interesting from the fact that they, along with several hills in the vicinity, are composed of trap and gneiss which rise as bosses above the surface of the surrounding bedded Silurian limestone, though ${f these}$ limestones sharply against the gneiss, &c. and are quite undisturbed by it. The islands and hills are thus shown to be original inequalities in the paleozoic ocean floor on which the limestones were laid down, and as these are probably unusually high points on this floor, so there may be unusually deep depressions holding rocks much lower than any now known in Manitoba, the existence of which, however, will in all probability be determined only by close and long continued investigation.

"The total distance through St. Martin Lake from the head of the Little Saskat-

chewan to the mouth of the Fairford River is twenty-two miles and a half.

"The Fairford River flows from Lake Manitoba into Lake St. Martin, expanding in the middle of its course into a shallow, marshy lake, known as Partridge Crop Lake. The river has a total length of ten miles and a total fall in this distance of about fifteen feet. Most of this fall occurs in two rapids, one a short distance below Partridge Crop Lake and the other a mile and a-third in length, between the Fairford Mission and Lake Manitoba. This latter is caused by a bed of compact white limestone, which crosses the river at the head of this rapid, while most of the other rapids, both in this and the Little Saskatchewan River owe their origin to banks of hard boulder elay and the great numbers of boulders that fall from them and dam back the water.

"The total distance by water from Lake Winnipeg to Lake Manitoba is sixtythree miles and three-quarters, and the time occupied in the journey was a little

more than five days.

"After the week of severe and incessant labor, the Sunday at Manitoba House

was thoroughly enjoyed as a day of rest.

"Monday was spent in obtaining two experienced canoe men, and on Tuesday morning we set sail for the north end of Lake Manitoba and the mouth of Waterhen River. The wind proved to be contrary, and we were obliged to beat up to Garden Island, where a day was spent running tie lines in the north west portion of the

lake, to correct some errors that had crept into its topography.

"From Garden Island we crossed to the mouth of the Waterhen River, and with a fair wind sailed up the river to the Hudson's Bay Company's post, near the south end of Waterhen Lake. From Waterhen Lake we ascended the upper portion of Waterhen River, in which there are no rapids, and skirted along the low lying, gravelly shore on the west side of the long point of land that separates Lake Manitoba from Lake Winnipegosis, till the Meadow or Plain Portage was reached, and of which a careful examination was made. This portage has been already pretty thoroughly reported on by engineers sent out at the time the old location of the Canadian Pacific Railway was being surveyed. It is about two miles in length, and runs over a low flat ridge, the top of which is either marshy or wooded with small oak and poplar, the water in the marshes being dammed back by a ridge of sand and gravel running along the summit of the eastern slope. The top of this gravel ridge is the highest point on the portage, rising from ten to twelve feet above Lake Winnipegosis. This whole point may possibly be underlain by limestone, though none was seen, or it may be a compact ridge of till, with the exception of some of the higher narrow ridges

[PART III]

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of sand and gravel above mentioned. A little further to the south I was informed that in seasons of high water the Indians can pass from one lake to the other in their birch canoes without making any portage at all. From the Meadow Portage we coasted along the south shore of Lake Winnipegosis to the mouth of Mossy River, calling at Snake, Spruce and other islands on the way. Numerous exposures of fossiliferous Devonian limestone were examined. The islands, both here and throughout the rest of the lake, were surveyed with a Massey's patent floating log. A micrometer and compass survey was made by Mr. Dowling of the Mossy River, and the shores of Lake Dauphin were run in with the floating log. Descending the Mossy River we coasted northward along the west shore of the lake, past the old Salt Springs—where salt used to be boiled down for the supply of the Red River settlement, and from which water was collected for analysis in the laboratory of the Survey—to the mouth of Pine Creek, where there is another large saline area, from which brine was collected. From the Hudson's Bay Company's store at Pine Creek the specimens of brine and the fossils collected up to that date were shipped to Ottawa in order to avoid possible delay on my return in the autumn.

"North from Pine Creek the shore and adjacent islands were carefully examined, both in connection with any outcrops of the underlying rocks, and to gain all the other information possible about the structure of the islands, the mode of formation of beaches, &c. Many of the islands were found to be rounded or lenticular hills of boulder clay (Drumlins), lying with their longer axis parallel to the glacial striæ, and rising a few feet above the surface of the water.

"A number of soundings were taken, sufficient to show the general depth of the lake in different places, and a record was also kept of any timbered areas seen, although most of the forest has been destroyed by fires that have ravaged this country in late years. We reached the mouth of Shoal River on the 30th of July, but before ascending the river I considered it advisable to examine the islands in Dawson Bay, on many of which cliffs of bedded rock were known to occur. These islands were accordingly visited, and the scientific results obtained from them quite exceeded our most sanguine expectations. They were found to consist chiefly of thick-bedded dolomites very rich in fossils of lower and middle Devonian age, rising in vertical cliffs out of from twenty to thirty feet of water. The high point on the west shore of the bay, known as Point Wilkins, was also found to be particularly interesting, as it showed the lowest sandstones of the Cretaceous rocks in this area resting unconformably on horizontally stratified Devonian limestones. Leaving these interesting cliffs for a time, we took two canoes and ascended Shoal River to Swan Lake. This was a task of considerable difficulty, as the water during the past season was very low, and in periods of high north winds the bar at the head of the river was almost dry. Swan Lake was thoroughly examined, and a survey made of the islands dotted through it. These were found to present exposures of fossiliferous Devonian limestone similar to that seen in Dawson Bay.

"At the south end of Swan Lake a small brine spring is flowing out on the shallow, muddy beach, while a short distance back in the woods a hill rises to a height of between 200 and 300 feet. Its sides are beautifully terraced, showing successive stages in the recession of the water of the general lake under which this country was submerged, down to the conditions at present existing. On some of these terraces many traces are to be seen of a thick deposit of the white sandstone of the Dakota group. These Dakota sandstones have not previously been definitely recognized in Manitoba, though for a number of years they have been known to occur in the states, immediately to the south, and it has been thought that the bitumen-bearing sands on the Athabasca River are also of the same age. This discovery will form an important link in the chain connecting the typical sections in the United States with those in the far North-West of Canada. The sandstones are here found not to be bituminferous, however, and no bitumen is seen in the underlying limestones, as there is said to be in the limestones on the Athabasca. Their position, immediately overlying the horizontal Devonian limestones, also for [PART III] 16

this district practically settles in the negative the question of the existence or nonexistence of intermediate Carboniferous rocks.

"From the west side of Swan Lake an excursion was undertaken along the foot of the Porcupine Mountain to Wild Turnip River, a branch of the South Woody River, where a good section of Cretaceous beds was seen, and meanwhile Mr. Dowling crossed to Bell River, and ascended it to the summit of the mountain, also obtaining an excellent section of the Cretaceous shale and the overlying drift. North of Porcupine Mountain the Red Deer River was ascended in canoes to Red Deer Lake. There horses were obtained from a small band of Indians living at the west end of this lake, and with two men I struck back to the foot of the mountain and obtained a good section of the Niobrara-Benton rocks on the North Woody River. From this stream two gravel track ridges were followed alternately to near the mouth of the North Etoimami River, where they merge into an extensive sandy delta plain. An old trail was then followed down the north side of Red Deer River back to the lake. The valley in all its upper portion was found to be thickly filled with till or alluvial deposits. On approaching the lake, however, the river cuts a deep gorge, in which the Dakota sandstones are well shown. The whole of the wide plain or valley lying between the Porcupine and Pasquia Mountains would appear to be underlain by rich alluvial soil, and will doubtless in the near future be the home of a thriving population. Portions of it are now thickly wooded with large spruce, which if protected from destruction by forest fires will furnish Manitoba with an abundant supply of timber.

"From the mouth of Red Deer River we coasted round the north shore of Lake Winnipegosis to the two Mossy Portages, which are respectively the winter and summer highways to Cedar Lake. The western Mossy Portage was examined and surveyed by Mr. Dowling, who found it to be between four and five miles in length, running for the greater part of the distance through a deep mossy swamp, thinly wooded with small spruce and tamarac. The eastern portage runs along the summit of a gravel ridge for all but the northern half mile of its course, the land descending on either side into a mossy spruce and tamarac swamp. About the middle of the portage some small cedars were first noticed, and from here north to Cedar Lake they may be seen at intervals. An old corduroy road is still in existence at the northern end of the portage, made by the Hudson's Bay Company to facilitate the transport of their goods in carts from one lake to the other.

"From Mossy Portage we descended the east side of the lake, where, on account of the extreme low stage of the water, the underlying limestone, here found to be of Silurian or of Cambro-silurian age, was in many places visible. at its mean elevation this rock would be entirely covered. When the water is

From the Hudson's Bay Company's post at Pine Creek I despatched Mr. Dowling with the boats to Manitoba House, where he arrived safely on the 20th of On the way he again examined some rock exposures in the south-eastern portion of Lake Winnipegosis, and made a survey, with the floating log, of Waterhen Lake. Meanwhile, I took horses and carts and made an odometer survey of a new cart trail back to one of the upper gravel ridges near the foot of the Duck Mountain, here connecting with my survey of 1887. I also ascended one of the forks of Pine Creek to the summit of Duck Mountain, determining the existence of the Pierre shales in this vicinity. I then drove southward and then eastward through the flourishing settlement on the Lake Dauphin plain to Manitoba House, where I arrived on the 21st of October. We then sailed southward to Westbourne, where the men were paid off, and the boats laid up for the winter.

"Returning to Winnipeg, I made a hasty trip to Deloraine, in south-western Manitoba, where a deep well is being sunk through Cretaceous shales in the hope An excellent set of specimens from this well was obtained. of finding water. The gentlemen engaged in sinking this well have shown the most commendable enterprise in their endeavor to supply a very pressing want in this beautiful section of country; and also, as soon as asked to do so, in collecting specimens from every five or ten feet bored through, in order to make the well of thorough scientific and practical value to the surrounding country. It is sincerely to be hoped that a large supply of water will be obtained as soon as the permeable Dakota sandstone is struck.

"I returned to Ottawa on the 10th of November, having been absent exactly six

months.

"During the year a very large and interesting collection of Cambro-silurian, Silurian and Devonian fossils was gathered, and typical rock specimens were obtained from all the exposures of older rocks, and also from many places where the sands, clays and gravels were examined. Having a small schooner, we were able to transport them to the railway, whereas, if we had been entirely dependent on canoes, it would have been very difficult or perhaps impossible to have got them out of the country. Specimens of brine from all the principal springs in Swan and Winnipegosis Lakes, and Red Deer River, were also secured, and are now in the Museum of the Survey.

"One hundred and ten photographs were taken, illustrating points of geological and historical interest, and showing the general character of the country and the peculiarity of its native inhabitants. Most of these photographs were developed by

Mr. Dowling in the field.

"It affords me much pleasure to acknowledge the efficient assistance that I have received from Mr. Dowling throughout the season, not only in carrying on the surveys connected with the exploration, but in carefully collecting fossils and rock specimens from any exposures visited.

"Cost of season's exploration, \$2,176.73."

Dr. A. C. Lawson, assisted by Messrs. W. H. Smith and Wm. Lawson, was engaged during the season in prosecuting geological and topographical surveys in the country north-west of Lake Superior, in continuation of the work of which he

has had charge for some years past. He reports as follows:-

"The usual preliminary work of purchasing supplies and hiring men for the season was begun at Port Arthur on 31st May, and a few days later the party proceeded to Savanne, where the survey work proper began. It was deemed expedient to divide into two parties, Dr. Lawson, as usual, devoting his time to the study of the geology of the region; while Mr. Smith, accompanied by Mr. W. Lawson, with a somewhat larger outfit of canoes and men, was engaged throughout the season in making surveys between Savanne and Pine Portage, and thence throughout the country south of the Seine River as far as Sturgeon Falls.

The nature and extent of these surveys may be briefly summarized as follows:-

1. A transit and micrometer line down the old Dawson Route from Savanne to Pine Portage, and thence to the north end of Hunter's Island, connecting there with

previous surveys.

2. A transit and micrometer line from a point on the above line, running down the Atic-okan River, and thence down the Seine River to Sturgeon Falls, where connection was made with previous surveys in the Rainy Lake region. These two lines aggregate about 160 miles in length, and afford an excellent base line, to which can be tied the various more rapid compass and micrometer, or compass and log surveys, of the numerous lakes which are distributed over the region.

3. The survey of all the known lakes south of the Seine River, with prismatic

compass and log or micrometer.

4. The survey of a chain of lakes in Hunter's Island which it had been found

impossible to finish the previous season.

The measurements of these various lake surveys aggregate about 450 miles, and the distances so measured served as the bases for compass triangulation whereby other distances were determined. The area under survey comprised about 1,400 square miles.

Throughout this survey work Mr. Smith took careful notes of the geological features of the country through which he passed, and these, together with an excellent suite of rock specimens which he collected, will be of much service in the mapping

of the region, and in giving direction to future geological examination by Dr. Lawson. Mr. Smith also visited the new iron locations on the Seine River route, which are attracting attention, and procured specimens of the ores. His topographical survey completes all the field work necessary for the construction of the south half of the Seine River sheet. It is estimated that another season's work will be required

for the completion of the northern half.

While Messrs. Smith and W. Lawson were carrying out these surveys Dr. Lawson proceeded with the geological examination of a portion of the country where topographical surveys had already been made, supplementing these by his own sketches when necessary. From Savanne he proceeded across Lac des Milles Lacs to the portage leading to Kashabowie Lake, and thence across Kashabowie Portage to Shebandowan Lake. From the west end of this lake a route leading by several long portages and small lakes was followed to Round Lake, and thence the Kahwawiagamak River was followed to Hunter's Island. Hunter's Island was the principal field of study; and this route to it was followed chiefly because it passed through a new country which had not been before examined. The greater part of two months was spent by Dr. Lawson in circumnavigating Hunter's Island, and in traversing it in various directions by the numerous chains of lakes which lie within it. The work done together with that of a former year, supplemented by the notes and specimens secured by Mr. Smith in 1888, while making a topographical survey of the island, supplies us with all the data necessary for the compilation of a geological map of the region, the drafting of which is now under way. This sheet, which is known as the Hunter's Island sheet, will, it is expected, be ready for the engraver in the course of a month.

Hunter's Island is interesting economically, chiefly for the iron ores associated with jaspery beds which occur on its south-east side, and which are entirely analagous, geologically, to the famous iron ores of Vermilion Lake at Tower, Minnesota. Some patches of good pine at the west end of the island also are of considerable value. Having thus completed all the work that was deemed necessary for the Hunter's Island sheet, Dr. Lawson proceeded to Port Arthur for the purpose of inaugurating some preliminary enquiries into the ancient beaches and terraces of Lake Superior. In various parts of the continent the ancient shore lines of lakes which were once necessarily perfectly horizontal are found at the present day to be tilted at a considerable slope, the measurement of which affords us important data for determining the extent of the local elevation or depression of the crust of the earth in quite

recent geological times.

It becomes, therefore, desirable to ascertain whether the old beaches of the north shore of Lake Superior will throw any light on this important problem With this object in view, Dr. Lawson walked along the Canadian Pacific Railway track from Port Arthur to Terrace Bay, north of the Slate Islands. Numerous old beaches were observed and many interesting notes on the geology of the sections along the railway and the coast were obtained. It was seen that there is a regular succession of beaches and terraces which range between the present level of the lake and an altitude of probably 350 feet. It would seem from the observations made that the beaches run to higher altitudes towards the east, and it was concluded that very interesting results would be obtained by a systematic levelling of the beaches from Sault Ste. Marie to Pigeon Point. This trip along the railway occupied the latter half of August, and at its conclusion Dr Lawson proceeded to Toronto to attend the meeting of the American Association for the Advancement of Science, in the geological section of which he read two papers on subjects pertaining to Canadian geology. On the way back some days were spent on the Huronian rocks between Sudbury and Sault Ste. Marie, for the purpose of comparing them with the analogous formations north-west of Lake Superior. On the return to Port Arthur the remainder of the season was occupied in levelling up instrumentally the old lake beaches between that town and Pigeon Point; in visiting and examining the Badger silver mine, one of the newest and most successful of the mining enterprises of the region; and in investigating certain reported finds of native copper in the townships of Blake and Crooks.

The season's work was brought to a close at Port Arthur on 17th October when Dr. Lawson and party left for Ottawa.

Cost of season's operations for both parties \$2,300

Mr. E. D. Ingall, Mining Geologist to the Survey, has been engaged during the summer in continuing the investigation into the nature and lithological surroundings of the deposits of apatite of the River du Lièvres district, in Ottawa county, P.Q.

He says: "In prosecuting this work during the past summer, the main lines upon which it had been started the previous season were adhered to, and efforts were made to further elucidate and understand the nature and origin of the pyroxenite belts, with which the apatite deposits are mostly associated, and the relationships of the same to the rocks forming the general mass of the district, as well as to add to our knowledge of the nature and habits of the apatite deposits themselves.

"In connection with the latter, as many deposits were visited and studied as the time necessarily expended upon the other branch of the work would allow of, whilst the principal mining developments of the district were visited from time to time, so as to watch for and note any new features that might be brought to light during

their progress, plans being made of some of the chief of these.

"In pursuance of the first object mentioned, the main source of information on these points would naturally be found in a close study of the contacts of the pyroxenites with the surrounding gneissic and granitoid rocks, so that the investigation thus naturally confined itself to a detailed examination of these points along some of the more thoroughly worked belts, where in the course of considerable mining developments the ground had been sufficiently cleared of bush, &c., to give a reasonable chance of seeing sufficient rock exposures to acquire the evidences sought.

"Thus, the geological work was found to concentrate itself chiefly on the broad and extended belt upon which are the considerable excavations of the Crown Hill, High Rock and Star Hill mines, time being also found to similarly investigate for some distance the belt on which are the openings of the North Star mine and adjacent properties, at which latter point, the belt being narrow and the bush and surface cover having been more thoroughly removed by clearance and bush fires, better facilities were afforded than elsewhere for acquiring the necessary data.

"With a view to illustrating some of the results thus attained, and as a necessary prelude to the purely geological part of the work, the limited areas thus dealt with were mapped accurately and in detail, where small the plane table alone was used whilst where of greater extent that instrument was used to fill in the detail in con-

nection with skeleton transit and chain surveys.

"In this way it is hoped to obtain a few thoroughly worked-out examples which may serve as illustrations of the numerous similar belts in the surrounding country and of their nature, associations and habits, thus possibly adding something to our stock of knowledge of the pyroxene belts and the associated apatite deposits. Such systematized knowledge, systematically applied, must necessarily be the basis of all intelligent mining ventures."

Mr. Jas. White continued attached to the party as topographical assistant, and besides laying out the transit and chain skeletons for the more detailed mining plans and some underground surveys, was mostly engaged completing the necessary surveys throughout the surrounding district for the compilation of an accurate topographical map of the area comprehending the chief mines, with a view to showing their position, means of communication and other such information pertaining to the phosphate district in general.

The topographical work was commenced under Mr. Jas. White's direction on 10th June and finished 16th September, whilst Mr. Ingall followed, and was occupied in the geological investigation from the 10th of July to the 28th of September.

The total expenditure on this work was \$1,399.56.

Mr. Ingall having been recently appointed to the vacant position of Mining Engineer to the Geological Survey, in charge of the collection of the statistical and other information for the compilation of the annual report on the mining and mineral production of the Dominion, his time will be necessarily considerably encroached upon by these new duties, but it is hoped, notwithstanding, during the winter, to prepare for publication the results of the above mentioned work in the Lièvre phosphate belt.

During the season of 1889 Dr. Bell has continued the geological survey of the district around Sudbury, on which he was engaged the previous year, and he has now completed this work over an area measuring 72 miles from east to west by 48 miles from north to south, which will be represented on sheet No. 130 of the regular series of maps on the scale of four miles to one inch. A part of this area has been surveyed into townships by the Crown Lands Department of Ontario. Some of the lakes and rivers within it had been traversed by the late Mr. Alexander Murray, of the Geological Survey. in 1856. These surveys, and also those of the Canadian Pacific Railway lines were utilized by Dr. Bell in laying down his work, but it was found necessary to do a good deal of topographical surveying before the natural features within the limits of this sheet could be correctly mapped. In this work Dr. Bell was again assisted by Mr. A. E. Barlow, who left Ottawa for the field on the 10th of June and returned on the 18th of September, while Dr. Bell started on the 5th of July and returned on the 26th of October.

In addition to the geological investigation work of the season, Dr. Bell made a micrometer survey of Pogamasing Lake and the Spanish River, from near Spanish Forks to the township of Hyman, a distance of about seventy miles, below which the river is laid down on the maps of the Ontario Crown Lands Department and those of the late Mr. Murray. He also made a careful track-survey of Onaping Lake, which was found to be about thirty miles in length, and of a smaller lake lying parallel to it on the west side, and a similar survey of the Onaping River throughout its entire course. Mr. Barlow's time was mostly occupied in surveying the following lakes and rivers by means of the micrometer, at the same time making notes on the rocks which came under his observation: Panache Lake (which had been outlined by Mr. Murray in 1856), two small lakes which he named Wavy and Gabodin Lakes lying to the north-east of the east end of Panache Lake, a canceroute from Round Lake to Rat Lake, the southern branch of Veuve River, Aiginawassing, Elbow and Red Deer Lakes, the western bay of Lake Nipissing, parts of two western branches of Wahnapitæ River, and the Vermilion River from the intersection of the main line of the Canadian Pacific Railway to a point east of the township of Lumsden.

In the district covered by the above mentioned sheet there are a few settlements, chiefly along the line of the Canadian Pacific Railway, but the district may be described in a general way as still in a state of nature. Scarcely any common roads exist, and it was therefore necessary to carry on operations principally from the railway and from the lakes and rivers as bases from which the minor explorations were made. The surveyor's lines were often useful, not only for locating geographical positions but in facilitating journeys in the woods. Still, there were some tracts in which there were neither the advantage of such lines nor of canoe routes, and in these it became necessary to make the best traverses possible through the primeval forest.

The following are some of the most notable geological features within the limits of the above sheet: The western and north-western part of the ground is occupied principally by a great area of reddish quartz-syenite, which extends beyond the limits of the sheet in these directions. It appears to belong to the Huronian rather than the Laurentian system. The position of the boundary between these two systems was traced north-eastward across the sheet,—the Laurentian consisting almost

entirely of gneiss, occupying its south-eastern corner. There is also a considerable

area of these rocks in the middle of the northern part of the sheet.

The great Huronian belt of Lake Huron runs diagonally across the whole sheet, from south-west to north-east, and embraces a considerable variety of rocks, including crystalline schists, quartzites, breccias, conglomerates, argillites, greywackés, diorites, diabases and syenites. These rocks seldom appear to run far as distinct bands with parallel boundaries, but have rather the form of elongated masses, which pinch out in both directions or give place to other rocks. The Huronian region, including the syenitic areas, is traversed by diabase dykes, newer than any other rocks of the district, which are remarkable for their persistence in length. Their commonest direction is about west north-west.

Ores of copper and nickel are the most important of the economic minerals which have yet been discovered in the above district. Five mines are in operation at present. Three of them are worked by the Canadian Copper Company, namely: the Stobie, three miles and a half north north-east of Sudbury Junction, the Copper Cliff, three miles and a half south-west of the same point, and the Evans, one mile further south. The Dominion Mineral Company is working a mine, situated about a mile north-east of the Stobie, and the Messrs. Vivian, of Swansea, are opening the Murray Mine, on the main line of the Canadian Pacific Railway, three miles and a half north-west of Sudbury Junction. Similar deposits of these ores have been found in various localities within the district examined, and these will be described in the fuller report to follow.

The general character of the mixed ore and its mode of occurrence are nearly the same in all three localities. It consists of pyrrhotite in which some of the iron is replaced by nickel mixed with more or less chalcopyrite. These sulphides are mingled with fragments of all sizes of quartz-diorite in some cases, and of a kind of greywacké in others, so that the ore has often the appearance of a conglomerate. The ore-bearing masses are of all sizes, and they take the form of lenses or pod-shaped bulges, conforming with the large scale lamination of the strata. Around the richer ore-bodies the country rock is filled with coarse and fine impregnations of the sulphides. These deposits may be described as "stockwerks" in which the vein structure is very obscure. The strata of the whole district generally stand at high angles, approaching the perpendicular, so that the underlie of the ore-masses is usually very steep. The rocks immediately associated with them are not always the same, but it most frequently happens that the ore itself occurs in some form of diorite, more particularly in diorite brecia, with quartz syenite or gneiss on one side. The diabase dykes above referred to were seen near the ore deposits in several instances, and further search may show their presence in all cases. It would not be surprising if they should prove to have had some connection with the concentration of the ore in these masses, which may be locally enriched portions of certain ore-bearing belts.

Two smelting furnaces, capable of reducing 300 tons of ore a day, are in operation at the Copper Cliff mine. One of them has been running without interruption for nearly a year. The other went into blast on the 4th September. Both the Dominion Mining Company and the Vivians are erecting similar blast furnaces.

The rock specimens collected in the above district during the season number 285, but 665 had been obtained in the same district the previous year, making a total of 950 specimens.

The cost of the season's field work was about \$1,800.

Mr. Low was employed during the past summer in completing the geological investigation of the N. E. sheet of the Eastern Townships map on the north side of the St. Lawrence River, comprising the southern portion of the counties of Quebec and Portneuf—the work extending from Ste. Anne de la Parade on the west to the Montmorency River on the east.

He left Ottawa 23rd May, and was engaged until 17th June, making a micrometer survey of the Ste. Anne River and its north branch, from the northern limit of the sheet to the St. Lawrence.

Odometer surveys of the roads to the west of the Jacques Cartier River occupied the time to 31st July; when a geological examination of that river was

made, which lasted until 5th August.

The road survey to the eastward was then continued up to 1st October, with four days spent in making a section along the north shore of the St. Lawrence, from

Deschambault to Cap Rouge.

In all eight hundred miles of surveys were completed, comprising six hundred and four miles of odometer, seventy-five miles of micrometer, seventy-one miles of pace, and fifty miles of track surveys. By these surveys the contact of the Laurentian gneisses with the Cambro-silurian limestones and shales was traced out, and the boundaries of the latter formation established.

The rocks of the Laurentian area were carefully examined for economic minerals. Magnetic iron ore in small disseminated masses was found to be common in many localities, but never in sufficient quantities to be practically worked, but

showing that such masses may exist.

The prevalent rock being a mica gneiss without pyroxene or limestone, no phosphate areas were found, and are not likely to be discovered in this vicinity. The areas covered with drift and superficial deposits were noted, and will be mapped on the sheet, as they are of considerable economic importance, from the deposits of bog iron ore which occur associated with all, or nearly all of the stratified sands of the region.

The work of Dr. Ells during the past season was, for the most part, confined to the south-west quarter sheet map of the Eastern Townships, and to that portion lying south of the Grand Trunk Railway, between Acton and Richmond, to the Ver-

mont boundary.

In addition, however, accurate chain and micrometer surveys were made of the Black Lake and Thetford asbestos areas, in order to complete the proposed map of that district. The area examined during the season contains nearly all the outcrops of serpentine in the south-western section. A careful study of these was made to determine the presence of asbestos-bearing belts. The character of the serpentine in this section appears to present several points of difference as compared with that from Thetford and Coleraine, and in so far as examined, asbestos in workable quan-

tity has not yet been found in it.

The results obtained during the past season are not yet in shape for publication, more particularly as regards the determination, of the exact age and the relative position of several of the slate formations. The Sutton mountain range of Pre-Cambrian schists and associated rocks was carefully traced to the River St. Francis, and the position of the black slates series, as intermediate between these, and the overlying red and green slates and sandstones of the Sillery, verified; but further careful examinations of these belts will be necessary during the coming season, in order to determine from the evidence of fossils, if possible, or in some other way, the exact horizon of the rocks which extend across into Vermont, and in which surveys are now being carried on by the United States geologists, more especially by Prof. Walcott. But little work is being done in this section at present in the way of mining.

The new mine of the Memphremagog Mining Company, lot 28, range ix, Potton, was examined. It shows a body of ore, mostly iron and copper pyrite, about sixteen feet thick, and extending for several hundred yards. This is capped by a considerable body of bog iron ore, which should be valuable if facilities for shipping and smelting were afforded. But little work other than exploratory has yet been done at this place.

Some efforts have been made to develop asbestos areas on the east side of Brompton Lake, on lot 26, range x, Brompton Gore, but at present this locality is accessible with difficulty, and the indications are not equal to those presented at Thetford and Coleraine. On lot 7, range xv, Cleveland, the slate quarry, formerly

Stubs', has been re-opened by Mr. Bedard and others, and some very good slate extracted. At the time of my visit, however, this work was not sufficiently advanced to warrant an opinion as to its ultimate success. On lot 18, range X, Brompton Gore, a new quarry, in red rock slate, has been started.

Quarries of excellent granite are in operation on the east side of Lake Memphre-

magog, in the area which extends across the Vermont boundary.

During the past season Dr. Ells was assisted by Mr. Giroux. The surveys of lakes, roads and streams aggregate 750 miles, of which 17 were by chain, 87 by micrometer, 105 by pacing and 547 by odometer. A large collection of graptolites in a very fine state of preservation was obtained from the black slates on the west side of Memphremagog Lake.

The cost of the season's operations was \$1,100, and occupied from the 27th

May to the 18th October inclusive.

Mr. F. Adams left Ottawa on 10th July, 1889, and spent about three weeks in continuing the examination of that portion of the St. Maurice district which is included in the N.W. sheet of the Eastern Townships map. On this work he reports as follows:—

"I proceeded first to St. Michel des Saints, a village situated in the township of Brassard, in the county of Berthier, and having secured a canoe and two men, made an examination of the Rivière du Poste (or Rivière au Lac Clair, as it is called on our map), as well as of the lakes out of which it flows. I then examined the country about the Red Canoe River and descended the Matawin to Birch Rapids, about fifteen miles from its junction with the River St. Maurice.. I then returned to Montreal by way of Shawenegan, reaching that city on 2nd August The country examined is all underlain by Laurentian gneiss, that along the Matawin, east of Ile de France, dipping at very low angles, and in many places lying flat. Thin bands of crystalline limestone were found at several places on the eastern arms of Lac Croche (Lac Long), as well as on the discharge of Lac Clair, and at three points along the course of the River Matawin, viz.: (1) in woods about four miles North of Rapids Lacroix, (2) just above Rivière à l'Aigle, and (3) two miles and a-half below this river. In the last mentioned locality the limestone band is These limestones hold little grains of serpentine, mica, about ten feet thick. apatite, &c., and in character are identical with the Laurentian limestones elsewhere. Bands of quartzite, and occasionally thin bands of pyroxenite, are also found associated with these gneisses; their presence, taken in connection with that of the crystaline limestones, shows that the series cannot be considered as belonging to the lower or fundamental gneiss, as had previously been stated. The only anorthosite which was observed, with the exception of that in the township of Shawenegan, which was mentioned several years ago by Mr. McConnell, was a small band which crosses Ile de France, situated in the River Matawin, a short distance below the mouth of the Rivière du Poste, and which was again met with about five miles north of the Matawin, between Red Canoe-Lake and the Rivière du Poste."

Cost of season's exploration, \$158.10

The Rev. Abbé Laflamme has made some further interesting observations in working out the geology in the Saguenay region and in determining the position and approximate extent of certain areas of Cambro-silurian limestones which lie there in depressions in the Laurentian gneiss, but are often largely covered by superficial deposits. Such areas are of considerable economic importance as future sources of lime. Further details of the work in this district will be given in the Annual Report.

Cost of season's work, \$400.00.

On the work in northern New Brunswick and Quebec, Professor Bailey reports as foilows:—

"The work of the summer of 1888 having been devoted chiefly to the study of the Silurian system in its extension northward to Lake Temiscouata, as well as east and 24 [PART III]

west of the latter, and to the preparation of the map sheet (No. 17 N.E.) illustrating the same, that of 1889 has had for its main object the study of the Cambrian and Cambro-silurian rocks, making up a portion of the so-called Quebec group which lies between the lake referred to and the shores of the St. Lawrence, being the area to be included in the next succeeding sheet (No. 18 S. E.) of the series of

maps of New Brunswick and Quebec.

As connected with this work, and with a view to a better understanding of the Cambrian strata of the succession, a few days were devoted, in company with Mr. G. F. Matthew, at the commencement of the season, to a revision of those which occur in the valley of the St. John River, in King's county, N.B., and which were referred to in the report of 1873. This revision led to the recognition, in the district mentioned, of most of the sub-divisions of the Cambrian system, as distinguished in the St. John basin, including the red rocks of the series (Series A,) bands a, b and cof Division 1 (Series B,) and an imperfect representation of Division 2; while Division 3, containing the Dolgelly and Arenig faunas, appeared to be wholly wanting.

In Division 1, Band b, of Caton's Island, examples were collected of Obolus pulcher; Matthew, a fine species resembling Lingula (?) favosa, Linnarson, of the Eophyton sandstone of Sweden, but larger, and (at Belyea's Landing) specimens of Volbrothella tenuis, a species of the blue clay of Russia, thus, according to Mr. Matthew, extending the vertical range of this species in New Brunswick from near the base of the Cambrian deposits upwards nearly to the Paradoxides beds. The fossils referred to

have been forwarded to the office of the Survey.

After the examinations last described I proceeded northward to the Temiscouata region, devoting a few days, on the way, to search for fossils in the supposed Cambro-silurian rocks of Carleton county, but without adding anything to the informa-

tion previously had upon the subject.

Upon reaching my proper field of work, my first efforts were given in accordance with your instructions, to the examination of the region about the head waters of St. John River and adjacent to the Quebec boundary, with a view to determine, if possible, the limits of the Silurian basin in that direction, and the distinction between the latter and the resembling rocks of the Eastern Townships, which, formerly regarded as Upper Silurian, have recently been referred by Dr. Ells, upon palaeontological and stratigraphical grounds, to an earlier horizon. For this purpose a traverse was made across the country from L'Islet, on the St. Lawrence, to Big Black River, and down the latter to the St. John, this being followed by the ascent of the last-named stream to one of its principal sources in Baker Lake; and a return traverse, by way of the north-west branch of the St. John and its tributary, the Daaquam, to St. Magloire and St. Valier. These traverses afforded good opportunities for observing some of the varying aspects of the so-called Quebec group, the members of which are generally well exposed; but as regards the rocks in the country lying to the south of the latter, the age of which was one of the chief questionssought to be determined, the results were much less satisfactory, owing chiefly to the almost entire absence of any exposures from which conclusions could be drawn. As far as could be seen, no appreciable change in the character of the slate occupying the valley of the St. John was discovered, nor any reason for regarding the strata about its head as other than an extension of those of Silurian age found around the lower half of Lake Temiscouata, and over large areas in northern New Brunswick, Quebec and Maine. At one point only (the falls of the North-West Branch) were they found to be fossilferous; but the remains, in the form of branching and corrugated stems of plants, were too imperfectly preserved to be of any value in the determina-tion of the age of the strata. With the view, if possible, of obtaining further information upon the subject, a few days were subsequently spent, in company with Dr. Ells, in the vincity of Sherbrooke, where a similar doubt had arisen as to the age of certain slates which hitherto had been regarded as Silurian, but which Dr. Ells now considers as belonging to the Cambro-silurian. The close resemblance of portions of them to the slates of the Upper St. John valley is certainly quite marked, but without more extended information than we have as yet been able to obtain upon the subject we do not feel justified in concluding that the two are of the

same age.

Examinations were also made of portions of the country adjacent to the Temiscouata portage road and in the vicinity of Rivière du Loup, St. Paschal, Kamouraska, Cacouna and L'Islet, partly alone and partly in company with Mr. McInnes. Having taken the field on the 1st of July, my work was continued, with the inter-

ruption of a few days only, until the 1st of October."

Mr. McInnes left Ottawa on the 10th of August and arrived at Rivière du Loup on the 12th. The first part of the season was spent in pacing a section along the coast, from the long wharf at Rivière du Loup eastward as far as St. Luce. But few fossils were found in the pre-Silurian rocks during the season. Fucoidal marking, or trails, occur in the greenish-grey slates which underlie-the limestone conglomerates, and were noticed at various points along the coast. Numerous fragments of trilobites were found in a pebble in the limestone conglomerate near Trois Pistoles, and obscure brachiopods and a fragment of a trilobite in bands of fine limestone conglomerate, enclosed in soft shale, at the portage road above Rivière du Loup.

A few days were spent on the Rimouski River, in an examination of the high ridge south of Lac Ferri. This was found to be made up of undoubted Silurian strata, highly contorted slates, with bands of limestone. A collection of fossils was made from the Silurian shales at Tuladi Falls, on the Rimouski River. These have

not yet been examined.

The remainder of the season, after the 20th of September, was devoted to a survey, by prismatic compass and odometer, of the roads of the district. Two hundred and sixty-two miles were surveyed in this way, and about one hundred miles by pacing. The field work was closed on the 23rd of October:—

"In the study of the region referred to we have necessarily had constantly in view the work of previous laborers in this field, and more particularly the recent investigations made by Dr. Ells and his associates in the Gaspé peninsula, and by the same gentleman, as well as by Dr. Selwyn and others, in the Eastern Townships and around Quebec. As the results of these investigations, in common with our own, differ in important particulars from those of earlier investigators, and tend to place the age and succession of the so-called Quebec group in a very different position from that which it first occupied, we had hoped that the report of Dr. Ells, embodying these results, would have been in hand during the progress of our own field work, and have been available for purposes of comparison. As this, however, has not been the case, we are at present unable to judge how far our conclusions are concordant with or likely to be modified by those obtained by more extended examinations. In view of this fact, and the desirability of the avoidance of any conflict of opinion, it is suggested that a more lengthened report upon the work here reviewed be postponed, until such time as will allow of a further study of the important questions involved."

Mr. Chalmers left Ottawa on the 2nd of May, with instructions to continue the exploration and mapping of the superficial deposits of southern New Brunswick, on which he had been engaged during the two previous seasons (1887 and 1888). Mr. E. W. Swinyard accompanied him as volunteer assistant. The area on which Mr. Chalmers has now spent three seasons is that delineated on the three ‡ sheets—1 S.W., 1 S.E. and 1 N.E.—in which lie the counties of Charlotte, St. John, King's, the chief part of Queen's, and portions of Albert, Westmoreland and Sunbury. The survey of the surface geology of this area is now completed, at least as far as the nature of the country will admit of such being done in detail. Considerable portions are still unsettled and in a wilderness state, and in these, of course, the study and mapping of the surface deposits could only be done in a very general way. The data on hand seem sufficient now, however, to enable the surface geology to be exhibited on the three sheets referred to with a considerable degree of detail, and to prepare a report thereon. This will be done during the coming winter. 26[PART III]

The main portion of the past season's work was on the surface geology of sheet No. 1 N.E., that is in the counties of King's, Queen's, Albert and Westmoreland; but unfinished portions of the districts examined during the two previous seasons were also studied. Much difficulty was experienced in determining the mode of glaciation and the distribution of the superficial deposits in the hilly country lying to the south of the great Carboniferous overlap. In the cleared and settled parts, however, careful investigations have been made in regard to striæ, boulder-clay, stratified deposits, alluviums, agricultural character of the soil, forest covering, &c., and the results obtained will, it is hoped, serve to elucidate, in some degree, the problems which perplex students of surface geology.

On 2nd of July Mr. Chalmers engaged Mr. W. J. Wilson, of St. John, to examine and map, under his direction, the southern part of Queen's county, included in sheet No. 1 N.E. Mr. Wilson continued this work till the 9th of August, and showed himself competent to perform the duty assigned him in a satisfactory manner. Mr. Chalmers further reports as follows: "The glaciation of the eastern part of the area embraced in \(\frac{1}{4}\)-sheet 1 N.E., in which lies the north-eastern extension of the ridge or plateau bordering the Bay of Fundy, was investigated with some care, and facts of much interest discovered. This ridge forms a prominent feature in the landscape, being higher than any part of the country, except the north-western highlands or the Gaspé peninsula. Here, therefore, we might naturally expect to find traces of a continental glacier, if any such ever swept over the eastern part of New Brunswick. None were observed, however; on the contrary, great masses of decayed rock in situ encumber its northern and north-western flanks, while along the valleys of rivers descending from it northwardly into the Petitcodiac strie were found clearly indicating northerly ice movements. Along the Petitcodiac valley, however, which lies below the 200 feet contour line, strie were seen to follow its course, showing ice movements in an easterly direction. It is evident that local glaciers and icebergs were amply sufficient to produce all these phenomena.

On the summit of the Bay of Fundy ridge or plateau referred to, local areas which served as gathering grounds for glaciers, sent some of these off towards the Bay of Fundy. A large number of facts relating to the glaciation of the district will

be given in the detailed report.

Excellent opportunities for studying boulder distribution are afforded in eastern and southern New Brunswick. One fact worth noting here is that while boulders from the Bay of Fundy pre-Cambrian ridge are found to have been transported northwardly over the low Carboniferous area, none from the latter rocks were found upon the ridge itself. The older ridges of crystalline rocks have, it would seem, been the centres of boulder distribution, and have sent off waste material in all directions around them. Along coasts and areas submerged during the Post-Tertiary period various distributing agencies seem to have been in active operation, rendering boul-

der distribution on these lower levels a somewhat complete problem.

Till or boulder-clay is found wherever there are traces of glacier or iceberg action, and in some places where there are none. My study of the boulder-clays in New Brunswick has led me to the conclusion that they have formed in two or three different ways, viz.:—(1) by land ice or icebergs, these two producing similar deposits; and (2) by the kneading and compacting of ordinary decayed rock meterial in situ by ice passing over it, or simply by the weight of ice and snow acting upon it, while saturated with water; and, in some cases, in their beds, by a mechanical assorting of the clays, gravels, &c., somewhat in the manner that hardpan is produced. The first two usually contain transported and glaciated materials; the last do not, except on the surface. Another kind of deposit which resembles boulder-clay, but which occurs in limited quantities, is that of landslips. These landslips may sometimes have produced striæ. It is found along the base of cliffs and of mountains, &c., and is without glaciated boulders.

The above classification may render some slight change in the definition of the terms till or boulder-clay necessary. Full details respecting them will be given in

[PART III]

my forthcoming report.

The examination and study of the other superficial deposits in the area under consideration have revealed no new facts. I shall now, therefore, briefly refer to the materials of economic importance observed in connection with the work during the past season.

Peat bogs are numerous and well developed near the bay of Fundy coast and in many places inland. Those near Musquash, Popelogan and Digdeguash Rivers are quite extensive. Lying just east of Musquash Harbor is a bog covering an area of 450 acres and 20 feet in depth, which is now about to be utilized in the preparation of "moss litter." This is an article used in stables as bedding for horses. Owners of studs in the United States have for some time been looking for a material for this purpose sufficiently light and porous to be an absorbant of the liquids, moisture and ammonia which collect in stables, and which could afterwards be used as a fertilizer in gardens, &c. A few capitalists from St. John, St. Stephen and other places have formed what is known as the Musquash Moss Litter Company, and having purchased this bog, are now erecting buildings and machinery there for the preparation of this article, which, it is claimed, is well adapted for the object intended, and as good as the imported European moss litter. The kind of peat used is not the upper or living peat, nor the deep-lying, decayed material, but that between the two, in which the mosses and rootlets are only partially decomposed, and which has the fibres nearly whole. The chief process in its preparation is depriving it of the water, of which it contains 90 to 95 per cent. This is done by a plunger, by pressing it between rollers and by evaporation. When thoroughly dried it is packed in bales for shipment, and is worth \$15 to \$17 per ton in the principal United States cities. This new enterprise promises to be successful.

Brine springs are found at Sussex, at Salina, on Salt Springs Creek, and at Bennett's Brook, near Peticodiac. Five or six hundred bushels of salt per annum are manufactured at Sussex. This is all consumed locally, and used chiefly for table and dairy purposes. Several springs occur near the site of these salt works. A boring 125 feet deep was recently sunk at one of these springs-13 feet of it through surface deposits and 112 feet in rock. The object was to find the salt rock, but nothing of the kind was met with. The strength of the brine, I was informed, increased slightly till the solid rock was reached; beyond that it did not perceptibly change. At Salina an attempt was made some years ago to manufacture salt from the brine of the surface springs there, but was discontinued. Possibly a series of borings might result in improving the quality of the brine, but none have yet been made. At Bennett's Brook nothing has been done to utilize the springs there, to my knowledge. In all these places the brine contains a considerable percentage of sulphate of lime or gypsum. There appears to be less, however, in that of the Sussex springs than at Salina or Bennett's Brook. The salt manufactured at the Sussex works is said to be of a superior quality.

Medicinal springs are met with at Apohaqui and at Havelock Corner, King's county. The one at the former place, which is situated about a mile from Apohaqui station, Intercolonial Railway, has attained quite a reputation for its herapeutic properties. It is an alkaline water, and is said by chemists to resemble the famous Vichy water, and also to be a natural emulsifier. Favorable mention has been made of it in the Canada Medical and Surgical Journal, and it has been used in the General Public Hospitals of Montreal and St. John, N.B.

The Havelock mineral water has, for some years, had a local reputation as a remedy for certain diseases; and as an extensive deposit of mud surrounds the spring, it might be utilized for the establishment of "mud baths," which are said to be beneficial in the treatment of some diseases.

Infusorial earth has been reported as occurring at Fitzgerald Lake, St. John county, and at Pollett River and Pleasant Lakes, King's county. The deposits at the two first mentioned places are quite large. Mr. Wm. Murdock, C. E., of St. John, who owns the one at Fitzgerald Lake, is endeavoring to introduce this material into use in some ways. Clays and sands suitable for brick-making, &c., occur in 28

many parts of the district. Near Sussex, and at St. John and Fairville, there are

large brick-making establishments.

On the 21st of October Mr. Swinyard left for Ottawa. Afterwards I visited the ship railway now under construction across the Isthmus of Chignecto. excavation which is being made for docks in the salt marsh at its western end, the following series of deposits is disclosed:—(1) Marsh mud, 5 to 10 feet; (2) finegrained, stratified blue clay, holding numerous shells of Mya arenaria and Macoma fusca—thickness, from a few inches at one end to five to eight feet at the other; (3) peat or humus, sixto fifteen inches thick, containing roots and stumps of small trees, chiefly hacmatae, and in some places portions of the stems. This peat or forest bed evidently grew on a sloping bank at the border of a lagoon or quietinlet. The owestl part of it is now twenty feet or upwards below the level of high tides in the Bay of Fundy.

At Aulac station, Intercolonial Railway, which is on the great Tantramar salt marsh, a boring 305 feet deep, was put down under the direction of P. S. Archibald, chief engineer, Intercolonial Railway. This boring shows likewise (1) marsh mud, eighty feet; (2) "turf and bog;" (3) red clay, &c. These facts clearly establish the conclusion that a subsidence has taken place here since the growth of the peat beds, and confirms the observations made previously by Sir J. W. Dawson, (Acadian

Geology, 3rd ed., p. 13).

Later on a cursory examination of the surface geology of the northern and western ports of Nova Scotia was made. In Pictou county striæ and transported boulders, showing northerly ice-movements, were observed. In Annapolis valley boulders derived from the South Mountain were also found strewn about in profusion. Numerous facts having a close relation to the surface geology of southern New Brunswick were noted.

Field work was continued until the 14th of December.

Cost of season's explorations, \$997.75.

The district examined by Mr. Fletcher in Nova Scotia in 1889 comprises a portion of Pictou and Colchester counties, lying between the Gulf of St. Lawrence west of Pictou harbor, and Cobequid Basin, including the valleys of Toney, John, Waugh and French Rivers, on the north side of the Cobequid Hills, and of the Salmon. North, Chiganoise and Debert Rivers on the south side of these hills. northern part of the district is being opened up by the short line of railway from Oxford to Pictou, now nearly completed, which will pass near the celebrated red freestone quarries of River John, Tatamagouche and Toney Rivers.

Along the north side of the hills, as far west as Waugh River, runs a belt of red conglomerate, described as Permian in previous reports, of the same geological age as that of New Glasgow, interstratified with red grit, sandstone and marl, and overlaid by grey sandstones, like those of Pictou and the West River. These are succeeded in turn by brownish and red sandstones and marls, with one or two thin layers of limestone. They form the rich agricultural country which borders the Gulf shore. All are affected by important east and west faults. Associated with the conglomerate, and also occasionally with the grey sandstones are veins of albertite and of baryte. The veins of albertite are not, however, confined to these rocks. Hitherto no veins of greater thickness than four inches have been found, and these are lenticular and irregular. Barytes was quarried to some extent in the grey sandstone of Hodson, near River John, some years ago, but at present none of the known deposits are being worked, none of them perhaps warranting a large expenditure for exploitation. Small seams of bituminous coal have been discovered in the grey sandstone, but none seem to be persistent.

Reference has often been made to the grey sulphide and carbonate of copper found associated with carbonized plants in calcareous, concretionary beds among the grey sandstones of this formation, or as nodules in red and green marls. In many places, but particularly on Waugh River and French River, these ores have been

largely but not profitably worked.

The rocks of the southern slope of the hills, from Salmon River to Great Village River, near the Londonderry iron mines, consist for the most part of the brick-red crumbly sandstone and conglomerate, called Triassic by Sir J. W. Dawson, underlaid here and there by Carboniferous and probably also by Permian rocks, in some of

which unimportant seams of coal have been discovered.

The structure of the Cobequid Hills is much more varied and interesting. No evidence of the age of the trap, felsite, syenite, diorite and schistose rocks was found on the north side of the hills, where they are immediately overlaid by Permian strata evidently newer; but on the south side and towards Earltown, similar rocks cut Silurian and Devonian in such a manner as to make it appear probable that they are igneous and younger than these sedimentary strata. The Silurian is confined to small areas at and near Earltown, in Waugh River, and at Wentworth railway station, the principal sedimentary rocks being an extension of the Devonian slates of Mount Tom and of Waters' Hill, and McCulloch Brook, at the north-western corner of the Pictou coal field, similar to a group containing iron ores in Guysboro', Antigonish and Pictou counties, including the iron ore belt of the Londonderry mines, in the slate of which, on the I. C. R., and many of the brooks of the neighborhood, many well preserved remains of plants have been discovered.

The small coal seams of West River, Riversdale and Kemptown, with their associated slaty shales and quartzites, have been traced in the North, Chiganoise and Debert Rivers, where much money has been spent in attempts to find them in workable shape. In every case in which the including strata have been followed to contact with the syenite and diorite of the hills, they have been found greatly altered.

Towards the close of the season, several weeks were spent in a further examination of the Pictou coal field, in which recent mining operations, borings made by Mr. R. P. Fraser, of Pictou, with the diamond drill for certain mining companies, and geological explorations made by the late Mr. Jesse Hoyt, and Mr. H. S. Poole for the Acadia Coal Mining Company, have added many facts necessary for understanding the complicated structure of this field. A visit was also made to Kennetcook Corner, where coal has been reported to occur; but the seams are all apparently too small to be workable, and the basin in which they lie, between lower Carboniferous limestone

and gypsum, is very narrow.

During the past summer two companies began to work the iron ores of the East River of Pictou. One of these, under the management of Mr. H. V. Leslie, of New York, has begun the construction of a railway from Sunnybrae to New Glasgow, which is projected to extend to the harbor of Liscomb, on the Atlantic coast. The second company, under the management of Mr. Graham Fraser, of New Glasgow, has also surveyed a line of railway from the iron mines to the I. C. R., near the fork of the East River, and vigorously pushed the development of the mining areas. The mining has been done on a large vein of excellent limonite, which follows the contact of Silurian and Cambro-silurian rocks with Carboniferous limestone in the valley of East River. The same company is also mining a vein of excellent red hematite at Newton Mills, Stewiacke, and another near Maitland. Other discoveries of red hematite have lately been made in the hills at the head of French and Sutherland Rivers, in Pictou county. Mr. Fletcher was assisted during the summer by Mr. M. H. McLeod, and for nearly three months by Mr. Archibald Cameron. Field-work was begun about the end of May and continued to the middle of December. Mr. Faribault continued his explorations on the gold-bearing series of rocks in Colchester and Halifax counties, and reports as follows:-

"The district surveyed lies westward of that surveyed in 1884 and northward of that surveyed in 1887 and 1888. It comprises, in Halifax county, the whole of the basin watered by the Musquodoboit River and the head waters of the West Sheet Harbor, Tangier, Ship Harbor and Gay's River; and, in Colchester county, the south branch and the south-eastern tributaries of the Stewiacke River and the St.

Andrew's River.

Narrow basins of lower Carboniferous rocks extend along the Musquodoboit, Gay's, Stewiacke and St. Andrew's Rivers, containing large deposits of gypsum and 30 PART III

limestone, and lie unconformably upon the sharply folded auriferous rocks of the lower Cambrian. The folding of these latter rocks, and more especially the anticlinal folds, were carefully examined and traced out, on account of their close relation to the richest auriferous belts. The Caribou and Moose River gold mining districts are situated in the region examined. They are now extensively worked with steady good Auriferous quartz veins have also been opened up on Fish River, Gay's River and the south branch of the Stewiacke River, but none of them have so far been worked to any extent."

Mr. Faribault was assisted, as in the previous year, by Messrs. A. Cameron, J.

McG. Cruikshank and P. A. Faribault.

An area of some 350 square miles has been surveyed. The season's work extended from the 16th of May to the 1st of October.

Cost of season's work by Messrs. Fletcher and Faribault, about \$2,000.

MINING AND MINERAL STATISTICS.

Mr. Brumell was occupied during the winter and spring in preparing the report on the Mining and Mineral Statistics of Canada for 1888. About 3,000 circulars were sent out, and were followed by about two thousand five hundred letters asking for the returns. Fifteen hundred were received.

The work was under the supervision of Mr. E. Coste, M. E., till March, when he obtained, leave and eventually resigned his position. A summary statement of the totals of the mineral production for 1888 was published in March, and the detailed report, completed by Mr. Brumell, was published and issued in October, and forms Part S, Vol. IV., of the Annual Report of the Survey.

Of the past summer's work, Mr. Brumell reports as follows:-

"I left Ottawa on 27th August last to visit the various places in southern Ontario, where boring operations were in progress. The counties visited were Welland, Lambton and Essex, in all of which drilling is being actively carried on.

In Welland county a company has been in operation since the month of June last, and had, at the time of my visit, completed one well, which attained a depth of 846 feet, and had begun a second. From the first well a flow of gas of 1.000,000 cubic feet had been obtained, though subsequent to my visit this well was shot, and the flow increased to about 1,750,000 cubic feet.

An accurate log and specimens were obtained of this well, and also of others in the Niagara Peninsula. In August last eight wells had been completed in the Pen-Of these, three are at Port Colborne, two at Niagara Falls South, and one each at Thorold, and at St. Catharines and in the Township of Bertie. A very small flow of gas was obtained in the well at St. Catharines and at Thorold, while from the wells of Port Colborne there is a total production of about 50,000 cubic feet per diem. It is understood that the burning spring at Niagara Falls is being supplied

with gas from one of the wells recently sunk at that place.

At Bertie and Port Colborne the gas was obtained from the upper beds of the Medina formation, which is reached at these places at a depth of 735 and 730 feet respectively. At Niagara Falls the gas comes from a depth of 201 feet, at which depth the bore is in the lower beds of the Niagara shales, while at Thorold and St. Catharines the flow is obtained from the lower part of the Trenton series, in the former place at a depth of 2,394, feet or 489 feet in the Trenton limestone, and at the latter in a sandstone at a depth of 2,185 feet, or 13 feet below the limestones of the Trenton series.

Two more wells have been drilled in the townships of Birtie and Humberstone, to a depth of 851 and 836 feet respectively, having a flow of gas of about 500,000 cubic feet per diem each, the flow in both cases being from the Medina sandstone.

In Lambton county the oil fields of Enniskillen township are still being extensively drilled upon. A number of drillers living in Petrolia and Oil Springs were interviewed, and logs and information regarding wells throughout the province were obtained from them.

In Essex county exploration for gas is being continued. It has, however, been obtained in quantity but in one well, namely, "Coste No. 1," which has a daily flow of 10,000,000 cubic feet. This well, drilled to a depth of 1,031 feet, is situated in the township of Gosfield, lot 1, concession 3, eastern division. Wells had recently been completed at and near Kingsville and at Comber, and drilling was, in September, being carried on at Amherstburgh, Essex Centre, Marshfield, Kingsville, Leamington and Blytheswood. The well at Marshfield, being sunk for Messrs. Walker & Sons, of Walkerville, will be watched with considerable interest, as it is the intention of the firm to carry this drilling down as far as the Trenton limestone.

Logs and specimens of drillings were obtained of most of the wells in the county. In order to further work out the underground geology of the province, in connection with the boring operations, elevations were obtained of many of the wells, their relative levels to the nearest railway station being generally obtained. Accur-

ate instrumental measurements were made when necessary.

About 150 logs or records are now on fyle in this office, which number is con-

stantly being supplemented, as operations continue.

Mr. Brumell returned to Ottawa on 3rd October, after having, in addition to the counties named, visited and obtained information in regard to borings at London, Brantford, Hamilton, Toronto and Whitby. Since his return he has been preparing the circulars for the Mining and Mineral Statistics for 1889, and in constructing from the data he obtained during the summer, and from all other available sources, maps and sections on which it is proposed to show the location of the numerous borings that have been made, or are now in progress in Ontario; also, the depth of each boring, and the nature of the strata passed through, and the strata in which gas, oil or water was obtained.

Mr. E. D. Ingall, M. E., Associate of the Royal School of Mines, has now been appointed to succeed Mr. Coste, and will henceforth be in charge of the Mineral Statistics Division, and be assisted by Mr. Brumell.

CHEMISTRY AND MINERALOGY.

The report handed me by Mr. Hoffmann on the work carried on in the Chemical Laboratory also embraces that in connection with the Mineralogical Section of the Museum, to the arrangement of which he has devoted much time and care.

Mr. Hoffmann reports as follows:—

"The work carried out in the Chemical Laboratory during the past year was of an almost exclusively economic character, and embraced—

1. Analyses of coals, lignites, and other fossil fuels.

2. Analyses of iron and copper ores.

- 3. Analyses of limestones and dolomites.
- 4. Analyses of mineral and other waters.

5. Gold and silver assays.

6. Miscellaneous examinations.

The number of mineral specimens received for examination amounted to 472. A large number of these were brought in by visitors desirous of having them identified and obtaining information in regard to their economic value; and this information was communicated either at the time of their calling or, where a more than cursory examination was called for, subsequently by letter. The number of letters written, most of which partook of the nature of reports, amounted to 205.

Mr. E. D. Adams, in the capacity of Assistant Chemist, rendered good service up

to the time of his leaving for field work in July.

Mr. R. A. A. Johnston has, as Junior Assistant Chemist, diligently applied himself to the work entrusted to him. In addition to the gold and silver assays, he has, as opportunity afforded, made further analyses of limestones and dolomites, besides carrying out a great many minor examinations.

In the Mineralogical Section of the Museum a large amount of work has been carried out in the way of labelling and re-adjusting specimens. The manuscript catalogue of the scientifically arranged collection of minerals is, as stated in my last 32

[PART III]

report, completed, and that of the economic collection of rocks and minerals is now almost so. Apart from the replacement of numerous specimens, already represented, by more typical ones, the collection has been augmented by the addition of some 140 others, including the following presentations:—

Allan, W. A., Ottawa, O.:—

Hematite, from the west half of lot 28, range 5, of the township of Oso,

Addington county, O.

Allison, J. F., per Dr. G. M. Dawson:—

Chalcopyrite, from the British Columbia Copper Company's mine, South Similtamen River, B. C.

Bedard, —, per Dr. Ells:—

Roofing slate, from Bedard's quarry, lot 5, range XV, of the township of Cleveland, Richmond County, Q.

Boulanger, Horace, J. P. for Keewatin and Chief Factor in charge at Norway House, per Mr. J. B. Tyrrell:— Serpentine, from the extreme north end of Reindeer Lake, N.W.T.

Brock, S. R., Alwyn, Ottawa county, Q.:—
Phlogopite, from the township of Alwyn, Ottawa county, Q.

Brown, John R., St. Alice Hotel, Harrison Hot Springs, B. C.:—
Iron ochre, from Silver Creek, Harrison Lake, twenty miles north of
Harrison Hot Springs, B. C.

Breels, Joseph, East Templeton, Ottawa county, Q.:—
Fluorite, from lot 15, range 1, of West Templeton, Ottawa county, Q.

Chambers, R. E., Truro, N. S.:— Limonite, three miles from Brookfield station, Colchester county, N. S.

Chapman, C., Prescott, O.:—
Huronian quartzite, three polished slabs of, from the north shore of St.
Joseph Island, Lake Huron, O.

Dickson, W. H. Ottawa, O.:—
Apatite and graphite, from lot 28, range VI, of the township of Buckingham,
Ottawa county, Q.

Furlonge, W. H., Port Arthur, O.:-

Native silver, from Silver Mountain mine, township of Lybster, district of Thunder Bay, O.

Argentite, from the Beaver mine, Rabbit Mountain, district of Thunder Bay, O.

Marion, Rev. Father, Douglas, Renfrew county, O.:—
Magnetite, from lot 24, range II, of the township of Stafford, Renfrew County, O.

McKay, J. W., Kamloops, B. C.:—
Molybdenite, from near the head waters of the South Fork of Spuzzum
Creek, Fraser River, B.C.

Poole, H. S., Stellarton, N. S.:—
Altered bitumen, from the falls measures, immediately overlying the Acadia seam at Westville, Pictou county, N. S.

Russell, A. L., Port Arthur, O.:—
Native silver (two specimens) from Silver Mountain vein, mineral location range 56, township of Lybster, district of Thunder Bay, O.

Native silver with sphalerite from Silver Hill, near Silver Mountain, district of Thunder Bay, O.

Argentite, from Silver Mountain vein, mineral location range 56, township of Lybster, district of Thunder Bay, O.

[PART 111] 88

Argentite, from Rabbit Mountain mine, township of Gillies, district of Thunder Bay, O.

Saunders, Wm., Ottawa, O.:-

Altered bitumen, from Queen Charlotte Island, B.C.

Stewart, G., West River, Sheet Harbor, N. S.:-

Native gold in quartz, from the Killog mine, Sheet Harbor, Halifax county, N.S.

Trethewy, T. H., Port Arthur, O.:-

Native silver (two specimens) from Silver Mountain, district of Thunder Bay, O.

Wertheim, Ed., Desjardins P.O., Q.;—

Asbestus (chrysotile), from south half of lots 27 and 28, range XII, of the township of Coleraine, Megantic County, Q.

Samples of mill-board, steam-packing, &c., manufactured from the asbestus of this locality.

Wilson, —, per Dr. G. M. Dawson:— Magnetite, Rivers Inlet, B. C.

Mr. R. L. Broadbent has rendered most efficient service in the mineralogical section of the Museum. Indeed, but for the interest and assiduity he has displayed in the work, the progress achieved could hardly have been hoped for. In the early part of the year, Mr. C. W. Willimott was occupied in making up collections of minerals and rocks for various institutions. Of such collections, the following have been sent out in the course of the year:—

	•	Specimens.
To	W. G. Kidd, Public School Inspector, Kingston	13
	Public School, Upper Sumas, B.C	87
	Bishop's College, Lennoxville, Q. (Supplementary)	32
	Manitoba College, Winnipeg (supplementary)	35
	Town Council, Sault Ste. Marie, O	112
	Bourget College, Rigaud, Q. (Supplementary)	40
	High School, New Westminster, B. C	112
	Iberville Convent, Iberville, Q	112
	Mrs. A. Frechette, Ottawa, O., (fragments)	70
	Rev. D. Borthwick	25

During the summer he visited the townships of Leeds, Garthby, South Ham, Grenville, and several of the townships in Ottawa county, in the province of Quebec. A large quantity of material was obtained for the purpose of making up collections for educational purposes, as also numerous interesting specimens for the Museum.

PALÆONTOLOGY AND ZOOLOGY.

On these divisions of the Survey's field of operations Mr. Whiteaves reports as follows:—

Advance sheets of the letter press of pages 151-184 of the second part of "Contributions to Canadian Palæontology" were printed and distributed in July, 1889. A similar edition of pages 185-196 of the same publication was printed and distributed in August. The manuscript of the pages last mentioned, which consists of a descriptive report on the fossils of the Niobrara-Benton formation of the Duck and Riding Mountain district in Manitoba, for the most part collected by Mr. J. B. Tyrrell, in 1887, was all written during the present year. The entire part, which consists of 107 pages large octavo, illustrated by fifteen full-page lithographic plates, was issued in August, 1889. About one half of the letter press of the third part of the "Contributions to Canadian Palæontology" has been written. This part is intended to contain a descriptive report on the fossils collected by Mr. McConnell 34

in 1888 and 1889, from the Devonian rocks at several localities in the Mackenzie River basin. A paper entitled "Descriptions of Eight new Species of Fossils from the Cambro-silurian rocks of Manitoba," has been written for the transactions of the Royal Society of Canada for 1889. Three hundred advance copies of this paper which consists of nine pages quarto of letter press, illustrated by six full-page plates, were printed and distributed in November. A preliminary examination has been made of a rather large series of fossils collected by Mr. J. B. Tyrrell, during the summer of 1889, from the Cambro-silurian rocks at Swampy, Big and Deer Islands, in Lake Winnipeg, at Grindstone Point, on the west side of that lake, and at the mouth of the Little Saskatchewan; also of a number of fossils recently obtained by Mr. R. G. McConnell, from the Cretaceous rocks of the Peace River and its tributaries, Lesser Slave Lake and the Athabasca River. A short visit was made to Thetford, Ont., in September and some fossils of interest were collected from the Devonian shales and limestones of that neighborhood.

In the upper flat of the Museum a new upright glass case, seven feet five inches high, six feet five inches long, and two feet nine inches broad, has been constructed for the reception of the fine collection of Dinosaurian and Mammalian remains recently made by Mr. Weston, from the Laramie and Tertiary formations at various localities in the North-West Territory, and all the specimens in this case have been provisionally labelled. In the same flat a small glass case has been made, in which are now exhibited a named series of the fossil plants collected by Mr. McConnell in 1888, from the Tertiary rocks of the Mackenzie River, 20 miles above Bear River, recently

described by Sir William Dawson.

In the Department of Zoology a large collection of the mammalia birds, reptiles, &c., of British Columbia, has been received from Professor Macoun. Seventy-seven additional specimens of fifty-nine species of Canadian birds, and nineteen specimens of sixteen species of Canadian mammals, most of which were collected by Professor Macoun, have been skilfully mounted by Mr. T. Herring during the year. These have been carefully labelled and arranged in their proper places in the zoological cases. Two large upright glass cases (each 7 feet high, 6 feet 5 inches long, and 3 feet 6 inches broad, with plate glass shelves) have also been constructed for this flat of the Museum. One of these is now filled with a collection of the mammalia of Hudson's Bay and Strait (including a pure albino wolf from that district, which has recently been mounted), and the other with a choice series of seals from the Atlantic and Pacific coasts of Canada, and with a fine head of the walrus. The specimens in each of these cases have been re-labelled and re-arranged.

The number of official letters received during the year is 330, and the number

written 283.

From the 1st of January to the end of June Mr. T. C. Weston's time has been employed in museum work, in the sections devoted to paleontology and ethnology. Many new specimens have been added to some of the fossil cases, and a large number of labels written. Numerous additional specimens, also, have been placed on exhibition in the room devoted to ethnology, among which are about seventy implements or other objects of Indian manufacture, recently collected for the survey by Dr. Franz Boas, in British Columbia. On the 1st of June Mr. Weston left Ottawa for the Red Deer River, N. W. T. From the Laramie sandstones near Calgary some fine specimens of fossil plants were obtained, which have since been identified by Sir William Dawson, and are now labelled and exhibited in their proper place in the Museum. The Red Deer River, eight miles below the crossing of the Calgary and Edmonton road, was reached on the 13th of June. Four days were spent preparing boats for the journey down the river, and in collecting fossil plants from the Laramie sandstones and argillites of the Blind Man River. On the 17th of June the journey down the Red Deer was commenced, and in a short time the great coal seams in range 24, township 28, were reached. The confluence of the Red Deer with the South Saskatchewan was reached on the 14th of July. Between this point and Tail Creek, a distance of about 250 miles, the rocks were examined in a number of places, and a fine series of vertebrate remains was obtained from the Laramie and

PART III

35

Belly River deposits. Among these are the right and left side of the jaw of a Deinosaur (probably $L \alpha laps$) vertebræ, limb bones, teeth and claw cores. The Battleford and Swift Current crossing was reached on the 19th of July. below this, at the mouth of Swift Current, there is a large exposure of the Pierre, from which a small but interesting collection of fossil shells and reptilian remains was obtained. After this the White River beds of the Cypress Hills were re-visited and a few fine fossil bones were collected, among which is a large portion of the right ramus of the lower jaw, apparently of an Elotherium. On the return journey to Ottawa, a few days were spent searching for fossils among the Animikie rocks of Port Arthur and Rossport, but none were found. Ottawa was reached on the 21st of August. From 2nd September to the 16th several fossiliferous localities in the Eastern Townships of the province of Quebec were examined, various specimens of interest (including examples of Salterella from two new localities) were obtained for the Museum. The remainder of the year has been occupied by Mr. Weston in preparing, labelling and arranging for exhibition in the Museum the collections received

during the summer.

With the exception of two months spent in Europe, on leave of absence, a considerable portion of Mr. H. M. Ami's time has been occupied in the examination of numerous collections of fossils recently made by members of the staff at various localities in the provinces of Quebec and New Brunswick. Separate lists of the species from each locality in the province of Quebec have been prepared by Mr. Ami, which have been incorporated into Dr. R. W. Ells' second report on the geology of a portion of that province, and a systematic list of the whole, by Mr. Ami, has been printed as a supplement to that report. Similar lists of fossils, collected at various places in northern New Brunswick and adjacent areas in Quebec and Maine, have also been made by Mr. Ami, which have since been published in Prof. L. W. Bailey and Mr. McInnes' report on the geology of that region. A paper "On a Species of Goniograptus from the Levis Formation, at Levis, P. Q.," written by Mr. Ami, has been published in the seventh number of the third volume of the "Canadian Record of Science," and another paper, consisting of additional notes on the same species, has been published in the eighth number of that volume. These papers are illustrated by an octavo plate, skilfully executed by Mr. L. M. Lambe. Some progress has been made in the manuscript of a report on the fossils contained in the Cambro-silurian exposures and outliers in Central Ontario along the line of contact with the Laurentian area to the north. Labels for the species of fossils enumerated or described in recent paleontological publications by Mr. Whiteaves, Prof. T. Rupert Jones, Dr. G. J. Hinde and Mr. E. O. Ulrich, and for other specimens mostly of recent addition to the Museum, have been prepared for the printer by Mr. Ami. By permission of the Director, and on special application, the types of a few Canadian species and some other specimens have been sent for examination to Professors James Hall, T. Rupert Jones and H. A. Nicholson, to Dr. G. J. Hinde and Mr. C. D. Walcott, but all of these specimens have since been returned. Named sets of duplicate fossils are being made up by Mr. Ami for distribution to educational and other public institutions in Canada. One of these sets has been despatched to the Historical and Scientific Society of Manitoba, at Winnipeg, and it is hoped that six similar ones will be distributed at an early date.

In the paleontological work of the office Mr. L. M. Lambe, the artist to the Survey, has also rendered most efficient service. All the drawings required for the illustration of the palæontological publications issued by the Survey during the year have been made by him and he has either effected or superintended their reproduction in a most satisfactory way. He has also made a number of drawings of fossils, which are as yet unpublished, and all the figures which have been used to illustrate Sir William Dawson's paper on the fossil plants collected by Mr. McConnell in the Mackenzie River basin, published in the transactions of the "Royal Society of Canada" for 1889, are from his skilful pencil. In addition to this, Mr. Lambe has materially helped in the elucidation of the characters and specific rela-

tions of many of the fossils which have been entrusted to him to draw.

86

The following collections have been received during the year from members of the staff:—

Dr. Selwyn:-

Fifteen specimens of fossils from the Cambrian and Cambro-silurian rocks of the Strait of Belle Isle and Newfoundland.

Dr. G. M. Dawson:—

About forty fossils from the southern part of the interior of British Columbia. Also a few skins of small mammals and birds.

J. F. Whiteaves:---

About 100 specimens of fossils from the Hamilton shales at and near Thetford, Ont.

Prof. Macoun:-

Skins of 358 birds and seventy three mammals from British Columbia; also a collection of reptiles, butterflies, shells, &c., from the same province.

Dr. R. W. Ells:-

About 100 slabs, containing graptolites, from the Cambro-silurian rocks near Lake Memphremagog, P.Q.

Prof. L. W. Bailey:—

Fifteen specimens of Obolus pulcher, Matthew, from the lower Cambrian rocks at Caton's Island, N.B.

J. B. Tyrrell:-

About 5,000 fossils from the Cambro-silurian and Devonian rocks at various localities on Lakes Winnipeg and Winnipegosis.

R. G. McConnell:-

Forty specimens of fossils from the Devonian rocks of the Peace River and 200 from the Cretaceous rocks of the Peace and Athabasca Rivers.

T. C. Weston:

Fifty specimens of fossils from the Quebec group of the province of Quebec. Thirty specimens of vertebrate and 300 of invertebrate fossils from the Cretaceous rocks of the South Saskatchewan. 200 specimens of invertebrate and the same number of vertebrate fossils, including a fine series of Dinosaurian remains, from the Laramie of the Red Deer River, N.W.T. Seventy specimens of fossil plants from the Blind Man River, N.W.T.

W. McInnes:-

About 100 fossils from Tuladi Falls, Rimouski River, and a few from Notre Dame du Portage, P.Q.

H. M. Ami:—

A number of fossils from the Trenton and other formations near Ottawa; also arrow heads and fragments of pottery from near Casselman, Ont.

The additions to the palæontological, zoological and ethnological departments of the Museum, by presentation, exchange or purchase, are as under:—

By presentation:

G. R. White, Ottawa:-

Skin of a female Ruddy Duck (Erismatura rubida) from the Ottawa River.

Rev. G. W. Taylor, Stewarton, Ont .:-

Eggs of twenty four species of Canadian birds, mostly from British Columbia. One specimen of a crab (*Echidnocerus cibarius*) from Vancouver Island.

[PART III]

James Fletcher, Ottawa:-

Eggs of thirty two species of Canadian birds, and photograph of egg of the Great Auk (Alca impennis).

W. A. D. Lees, Ottawa:-

Eggs of nineteen species of Canadian birds. Specimen, in the flesh, of the Mole Shrew (Blarina brevicauda), from near Ottawa.

F. E. Trudeau, Ottawa:-

Mounted specimen of the American Raven (Corvus corax sinuatus) shot at Lake Edward, P.Q.

James Davidson, West Templeton, P.Q.:-

Specimen, in the flesh, of an Ermine (Putorius ermineus.)

Philip Cox, Newcastle, N.B.:—

Pair of the Hudsonian Chickadee (Parus Hudsonicas), from the Miramichi River, N.B.

Joseph Edwards, Ottawa:—

Specimen, in the flesh, of the Northern Hairy Woodpecker (Dryobates villosus leucomelas), from Blue Point, Lake St. John. Specimen of the Hoary Bat (Atalapha cinerea), from the Rideau River, in the flesh. A Brown Creeper (Certhia familiaris Americana.) A male House Wren (Troglody tes ædon), both in the flesh; also two eggs of the Horned Lark (Otocoris alpestris), and two of the Flicker (Colaptes auratus), all from near

The U. S. Geological Survey (per C. D. Walcott):—

Fourteen species of fossils from the Lower Cambrian rocks of Newfoundland, &c.

J. Heron, Billing's Bridge:-

A female Woodchuck (Arctomys monax), in the flesh.

Female Jumping Mouse (Zapus Hudsonius) from Billing's Bridge, in the flesh.

W. C. Bedingfield, Ottawa:-

Nest of the Ruby Throated Hummingbird (Trochilus colubris), from Kemptville.

H. M. Ami, Ottawa:—

One Brown Bat (Scotophilus fuscus), in the flesh.

D. Herring, Toronto.-

Skin, since mounted, of a female Buffle Head (Charitonetta albeola); do of a female Green-winged Teal (Anas carolinensis); do of a female Blue-winged Teal (Anas discors), and do of a female Black-throated Green Warbler (Den droica virens); all from near Toronto.

S. Herring, Ottawa:-

Pair of the Whip-poor Will (Antrostomus vociferus), from near Toronto.

W. McRae, Twin Glen, Carleton Co., Ont. .—

Rattle of a large Rattle Snake from Arkansas.

Dr. C. A. White, Washington, D.C.:-

Three specimens of Astarte Packardi, White, from the Sauranodon beds ("Jurassic") at Aurora, Wyoming.

Alex. Jacques, Ottawa:-

Piece of oak of the "Royal Savage," a culverin and musketoon ball, each of which were taken out of a beam on the church at Plattsburgh, and pieces of Indian pottery found near that city.

Piece of sound wood found 116 feet below the surface of the ground at

Polk Co., Indiana.

- W. J. Baylay, Ottawa:-
 - Female Sharp-shinned Hawk (Accipiter velox) shot at Aylmer, P.Q., in the flesh.
- E. G. White, Ottawa:-
 - Specimen of the American Crow (Corvus Americanus), in the flesh.
- R. A. A. Johnston, Ottawa:-
 - Albino Chipmunk (Tamias striatus), from Uxbridge, Ont.,—mounted.
- Sir William Dawson, Montreal:-
 - Sixteen specimens of ten new species of fossil sponges, one example of *Butotrephis pergracilis*, Dawson, and nine of *Linnarssonia pretiosa*, from Métis, P.Q.
- Prof. R. J. Hill, Austin, Texas:-
 - Thirty-one specimens of *Terebratula Wacoensis*, Romer, from the Washita limestone west of Austin, Texas.
- Rev. Hector Currie, Thedford, Ont.:-
 - Twelve specimens of fossils from the Hamilton shales near Thetford.
- Rev. W. H. Barris, Davenport, Iowa:-
 - One specimen each of three rare species of fossils from the Hamilton formation near Alpena, Michigan.
- R. R. Rowley, Curryville, Pike Co., Missouri:-
 - One hundred and three specimens of twenty-four species of fossils from the Burlington and Kinderhook formations at Pike Co., Miss.
- By Exchange.
 - From the Manitoba Historical and Scientific Society, Winnipeg, per C. W. Bell (President):—
 - Four fossils from the Cambro-silurian rocks of East Selkirk and Stony Mountain, and two from the Cretaceous rocks of the N. W. T.
 - From Prof. T. F. Calvin, Iowa City:-
 - Thirty-two species of fossils from the Devonian rocks of Iowa and Missouri, one from the Niagara limestone of Iowa, two from the Hamilton shales of Ontario, and six from the Cretaceous of Montana.
- By Purchase.
 - Semi-albino Red-tailed Hawk (Buteo borealis); semi-albino Song Sparrow (Melospoza fasciata); male Grasshopper Sparrow (Ammodramus savannarum passerinus); female Wilson's Warbler (Sylvania pusilla); and albino or nearly albino variety of the Red Squirrel (Sciurus Hudsonius); all from Hyde Park Corners, Ont.
 - Albino American Crow (Corvus Americanus), shot near Whitby, Ont.
 - Remarkable colour variety of the American Robin (Merula migratoria), shot near
 - Male Murre (Uria troile), shot near Wakefield, P.Q.
 - Male Coot (Fulica Americana), shot near Toronto.
 - Sixty-four specimens of fossils from the Silurian and Devonian rocks of western Ontario.
 - Skeleton of a large Snapping Turtle (Chelydra serpentina), obtained at Markham, Ont., and prepared by M. Jules Bailly, Montreal.

In the section of entomology Mr. Fletcher reports that the collections have been regularily examined since they have been in his charge, and are now in a good state of preservation, no instance of injury by insects, mould or accident having occurred.

- Mr. Fletcher further reports as follows:-
- The collections have been considerably augmented by donations, and by the labours of different members of the staff of the survey, who have brought from distant

localities a number of insects of rarity and interest, many of which were previously

unrepresented in the cabinets.

Since Mr. Fletcher had charge of the collection, (1887) the following additions, made by members of the staff, have been examined, identified and prepared for the cabinets.

1. By Professor Macoun, at Nipegon, in the Rocky Mountains, in Vancouver

Island, in Prince Edward Island and on the mainland of British Columbia.

2. By Dr. G. M. Dawson, in the Yukon District and in the interior of British Columbia.

3. By Messrs. McConnell and Ogilvie, in the Mackenzie River district.

4. By Mr. Frederick Bul, at Fort Simpson, Mackenzie River, and presented for the museum to Mr. McCanell.

5. By Mr. J. B. Tyrrell, in Manitoba.

6. By Mr. A. P. Low and Mr. J. M. Macoun, at Hudson Bay.

7. By Mr. J. S. Cotter, at Moose Factory, Hudson Bay, and presented to Mr. Low, for the museum.

8. By Mr. T. C. Weston, in the North West Territory.

Of these collections by far the most important were those made by Professor

Macoun, Dr. Dawson and his assistant Mr. McEvoy.

It is true that most of the above mentioned collections consisted largely of specimens in a poor state of preservation; but they included many rare insects, amongst the more important of these are the following:—Oeneis Macouni and Nemeophila Selwyni, both new species discovered by Professor Macoun, at Nepegon, Papilio Machaon var Aliaska, collected by Dr. Dawson on the Liard River, and by Mr. Ogilvie, on the Mackenzie River, Erebia discoidalis collected at Fort Simpson, Mackenzie River, by Mr. Frederick Bell, Colias Nastes brought from Hudson Bay by Mr. Low, Colias Interior from Nipegon and Prince Edward Island, collected by Professor Macoun. A fine series of Lycania Couperi was brought from British Columbia by Dr. Dawson. The specimens in the best preservation were those collected by Mr. James McEvoy and by Messrs. James and William Macoun.

In addition to the above, fine collections of insects belonging to various orders have been presented to the museum, by Mr. T. E. Bean, of Laggan, North-West

Territory.

All the specimens bear dates and localities of their capture, which materially enhance their scientific value.

During the past year several students have examined the collections.

Mr. Fletcher is at present engaged in the preparation of a small collection representing the insects of Canada only, which is for exhibition in open cases in the hall of the museum, and which it is believed will be of interest to visitors.

BOTANY, &c.

During the greater part of the winter Professor Macoun was confined to the house by sickness, but with the aid of his assistant, Mr. J. M. Macoun, the office work was carried on and the specimens that had been collected during the summer were named and mounted. He was also able, before leaving for the field, to make good progress with the catalogue of Canadian birds, referred to in the summary report for 1888.

On the work of the past summer, Professor Macoun reports as follows:—

"On the 30th of March last, accompanied by my assistant, I started for British Columbia, and reached Vancouver, 4th April. Next day we commenced work, and between that date and 12th August, with the aid of one man, we collected birds, mammals, reptiles and insects, and also made a complete collection of the flora from the coast to the Eagle Pass in the Gold Range, a distance of nearly 400 miles on the Canadian Pacific Railway. This being the first season of my duties of naturalist, we devoted much more time to general natural history than to botany. Our season's work ended at Griffin Lake, on Eagle River, after we had lived at an altitude of 7,000 feet for ten days, and collected as much of the mountain flora and fauna as time and means would permit.

40

The total cost of the exploration was \$1377.21.

"Since our return to Ottawa we have been engaged in sorting, naming and arranging the collections of the season. Satisfactory progress has been made up to 31st December; forty species of plants new to science have been examined and named, and others are still to be determined.

Mr. Pearson's paper on Canadian Liverworts is now passing through the press, and will be followed by Part V. of the Catalogue of Canadian Plants, and by the Catalogue of Canadian Birds, already mentioned. These papers were placed in the hands of the printer last spring, so that they might be in type before my return.

During the past three years I have spent much time in collecting and working up the mosses of the Dominion, and with the aid of European specialists, hope during 1890 to complete the work, and publish a full list of them, forming Part VI. of the Catalogue of Canadian plants.

Many hundred species of plants have been received from Newfoundland, and from every province in the Dominion, for identification, the largest number being

from Newfoundland, Quebec and New Brunswick.

While in British Columbia we collected over 1,400 species of plants, in which were included more than 15,000 specimens; 431 skins of birds and mammals, representing 141 species were secured. Nearly 100 reptiles were collected and preserved in alcohol, and several hundred insects, which are now being determined by specialists.

All work in connection with the herbarium, and the distribution of specimens, has been done by Mr. Jas. M. Macoun. During the past year there were mounted and placed in the herbarium 4,406 sheets of specimens. Of these, 3,592 sheets were of flowering plants, and 814 of cryptogams. Of the flowering plants, 1,987 sheets were Canadian, 1,079 from the United States, 340 from Australia and 186 from Europe. The cryptogams mounted were, with few exceptions, Canadian; 5,960 sheets of specimens were sent to public institutions and to private individuals in exchange for desiderata; 3,593 of flowering plants and 2,167 of cryptogams. These included 400 sheets to the University of Copenhagen, in exchange for which plants from Greenland were sent; 432 sheets to Columbia College; 445 sheets to the British Museum; 293 to the National Museum at Washington; 200 to Miss R. Marson, Lausanne Switzerland; 200 to J. B. Ellis, Newfield, N. Y.; 100 to Prof. L. M. Underwood, Syracus, N. Y. For all of these, specimens have been sent us in exchange; but besides these several hundred specimens were sent to McGill University, the Department of Public Instruction, Quebee, Harvard University, the California Academy of Sciences, the University of Nebraska, and a set of Canadian grasses to Prof. Scribner, at Knoxville, Tenn., U.S.

Since my last report, 448 letters, of sufficient importance to copy, were written

in connection with our work and about the same number were received."

While the collections of Natural History specimens are rapidly growing larger, and increasing in value, no greater space is being given for their disposal, and while the danger from fire is constantly increasing, the absence of any fire-proof room or building renders it impossible to take any precautions to insure their safety. The room now occupied by Professor Macoun is so crowded with inflammable material that a spark, or the dropping of a match, would in a few moments cause the destruction of specimens of inestimable value, which could never be replaced, and such a fire would endanger the whole building.

MAPS.

Maps in course of preparation and lately published, December, 1899.

Area in Square Miles.

PART III

British Columbia, part of Southern Interior (Dr. Dawson), in draughtsman's hands, scale four miles to one inch	
hands, scale four miles to one inch	6,400
Kootenay district, British Columbia (Dr. Dawson), in draughtsman's hands,	
scale eight miles to one inch	11,000
North-Western Manitoba Preliminary Map, published. Report E, 1887-88	
Mr. Tyrrell, scale eight miles to one inch	12,000
Mr. Tyrrell, scale eight miles to one inch	
one inch	5,000
Northern Manitoba, in draughtsman's hands (Mr. Lynch), scale eight miles	
to one inch	20,000
Western Ontario, Lake of the Woods (5 sheets), No. 2, ready for engraver	
shortly, scale two miles to one inch	2,000
Western Ontario, Rainy Lake Map (No. 3), published Report F, 1887-88,	
scale four miles to one inch	3,456
Western Ontario, Hunter's Island Map (No. 7), in hands of draughtsman,	
scale four miles to one inch	1,450
Ontario, Sheet 130 (Sudbury Mining District), Dr. Bell, in hands of draughts-	
man, scale four miles to one inch	3,456
Ontario, Sheet 115, ready for draughtsman, scale four miles to one inch	3,456
Ontario, General Map (in progress), scale four miles to one inch	
Quebec, N. E., ‡ sheet (E. Township map), in hands of draughtsman, scale	
four miles to one inch	4,500
Quebec, S. W., ½ sheet (E. Township map), in hands of draughtsman, scale four miles to one inch	4 500
four miles to one inch	4,500
Quebec, N. W., 1 sheet (E. Township map), partly in hands of draughtsman,	4 200
scale four miles to one inch	4,500
Quebec, Lièvre River and Templeton phosphate region (Ottawa county),	
scale forty chains to one inch, Mr. Ingail, ready for engraver in about	0.00
two months	260
Quebec, New-Brunswick, 4 sheet 17 N. E., published 1887-88, and 4 sheet 18	
S. É., in hands of draughtsman	
Nova Scotia, 4 sheet 11 N. W., and S. W., in engraver's hand, scale four	
miles to one inch	
Nova Scotta, 4 sneet 4 N. E. and S. E. (Mr. Fletcher), drawn on scale of one	
inch to one mile	
North-West Territory, Mr. McConnell's traverses on the Liard, MacKenzie	
and Porcupine Rivers, in the draughtman's hands, scale eight miles to	
one inch	

LIBRARY.

The Librarian, Dr. Thorburn, reports that from 2nd January to 31st December, 1889, the number of copies of the Geological and Natural History Survey publications, comprising annual reports, parts of same, special reports and maps, was 9,199. Of these, 8,032 were distributed in Canada; the remainder, 1,167, were sent to foreign countries as exchanges to scientific and literary institutions, and to individuals engaged in scientific pursuits.

Every year the list of our exchanges is increasing, so that, as a consequence of this, the operations of the Survey are being more widely known and its publications

more sought after.

There have been received during the year 2,367 publications, including books, transactions, memoirs, periodicals, pamphlets and maps. In addition to these, 51 books were purchased and 38 periodicals were subscribed for, on geological, mineralogical and natural history subjects. For a considerable time past the space allotted to the Library has been found to be altogether insufficient, and, consequently, many of the books, which are frequently required for reference, have had to be stored away in other parts of the building, to the great inconvenience of those wishing to consult them.

42

The number of books bound during the year has been 162.

There were sent out during 1889, by the Librarian, 1,511 letters, and 1,256 were received by him, thus showing the large and increasing interest taken in the work of the Survey.

The number of volumes in the Library is now about 8,000, and of pamphlets

3,000.

The sales of the Survey publications during the year, to 31st December, have amounted to \$2,909.57.

VISITORS.

The number of visitors to the Museum during the year, from 1st January to the 31st December, was 18,300, being an increase of 886, as compared with the previous year.

STAFF, APPROPRIATION, EXPENDITURE AND CORRESPONDENCE.

The strength of the staff at present employed is 47, viz., professional 32, ordinary 15.

During the calendar year the following changes in the permanent staff have taken place:—

Mr. Eugene Coste, Mining Engineer, resigned.

Mr. Jno. McMillan, Field Explorer

Mr. F. D. Adams, Assistant Chemist

Mr. M. O'Farrell, Caretaker, superannuated. Mr. E. D. Ingall, appointed Mining Engineer.

Mr. Thos. Burke Caretaker.

" Mr. Allan McKinnon Messenger.

Mr. R. G. McConnell, promoted from 2nd to the 1st class.

Mr. E. R. Faribault 3rd to the 2nd class.

The amount available for the fiscal year ended the 30th June, 1889, was:—

CL THE A	\$	cts.	\$	cts.
Civil list appropriation		• • •	45,900	
Civil list appropriation			60,055	91
The expenditure may be summarized under the divisions named as follows:—	40.010	20		
Civil list salaries	43,319			
Wages of temporary employés Exploration and survey.	15,396			
Exploration and survey.	24,095			
Frinting and lithography	12,000			
Purchase of specimens.		75		
Purchase and binding of books and purchase of instruments	1,437			
Laboratory apparatus and chemicals	514	47		
Stationery and mapping materials, and Queen's Printer				
Incidental and other expenses	2,104	75		
	100,607	96		
Less—Paid in 1888	3,259			
	97.348	3 54		
ADD—Advances to field explorers				
	103,375	5 47		
Unexpended balance, Civil list appropriation	2,580	44		
	105,95	5 91	105,955	91

The correspondence of the branch shows a total of 7,100 letters sent and 5,860 received.

In my summary report for 1887, page 14, a report to be prepared by Mr. Warren Upham, of the United States Geological Survey, on the Glacial Lake Agassiz, was mentioned.

The report and accompanying maps were received only on the 19th of December, too late to be incorporated in the last Annual Report. I am now in correspondence with Mr. Upham respecting it, and I hope it will soon be ready for the printer.

I have the honor to be, Sir,
Your obedient servant,
ALFRED R. C. SELWYN,
Director.

PART IV.

NORTH-WEST TERRITORIES.

PART IV.

REPORT CONCERNING THE ADMINISTRATION OF THE NORTH-WEST TERRITORIES FOR THE YEAR 1889.

GOVERNMENT HOUSE, REGINA, 7th January, 1890.

To the Honorable

The Minister of the Interior, Ottawa.

SIR,—I have the honor to submit the following report concerning the administration of the North-West Territories for the year 1889.

I am happy to be able to report favorably upon the general prosperity of the

country.

The harvest of the year has not yielded quite as abundant a return as in 1888; the farmer has had to contend with difficulties of an exceptional character; but upon the whole it may be said that the crop has been satisfactory.

In the ranching districts the year has been most favorable, and shipments of cattle to the markets of the East and Europe have proved remunerative and

encouraging.

The immigration during the season has not been as large as we had hoped for, but the country may well be congratulated upon the class of settlers who are coming from eastern Canada and the European continent to plant their homes in the North-West.

The unprecedented drought which has prevailed this year all over the Territories has caused prairie and forest fires to be more extensive and disastrous than ever. The Ordinance in this respect has proved beneficial, and many parties guilty of criminal carelessness have been brought to justice. I cannot here too strongly express my acknowledgement of the services rendered to the settlers by the North-West Mounted Police in their zealous and active endeavors to enforce the provisions of the Ordinance.

Peace, order and contentment seem to reign supreme at the present day in these vast possessions; criminal offences are few in number, and the laws are everywhere

cheerfully obeyed.

The visit of His Excellency the Governor General of Canada to our Territories has afforded the people a happy opportunity of assuring the representative of Her Majesty of their strong sense of loyalty to the British Crown and their deep attachment to the laws and free institutions of Canada. The Governor General's journey across this vast extent of country will, I am sure, convince him of its unbounded resources, while the cordiality with which he has been welcomed everywhere will certainly result in permanently securing for Canada one more illustrious and devoted friend.

I am happy to state that the two most important items of public expenditure, that of schools and public works, have been applied with the most satisfactory

results.

I can again report an increase in the number of school districts established during the year. Owing to the liberal policy of the Dominion Parliament, in providing for the education of the youth of the Territories, there are to-day in existence 164 schools, attended by 4,574 children, and taught by a staff of 183 properly qualified

teachers. The increase in 1888, over the preceding year, was 20 schools, 240 chil-

dren; the increase in 1889 is 33 schools, 1,121 children.

The provisions of the Ordinance for the establishment of a higher grade of schools have been put into force, and Union schools are now in operation at Regina and Calgary.

Further details in reference to schools and the general state of education in the Territories will be found in the Report of the Board of Education, a copy of which I

forward herewith.

On the 5th November 1889, I selected as an Advisory Council, under the provisions of Sec. 13, Chap. 19, Vic. 51, in lieu of previous Council resigned, the following gentlemen, viz.:-

Robert George Brett, Esquire, Member for Red Deer. John Felton Betts, Esquire, Member for Prince Albert. David Finlay Jelly, Esquire, Member for North Regina. Benjamin Parkyn Richardson, Esquire, Member for Wolseley.

Subsequently, on the 16th November following, I accepted the resignation of this latter Council, and their successors are now in course of being s lected.

SESSION OF ASSEMBLY.

The second Session of the first Legislative Assembly opened on the 16th day of October and closed on the 22nd day of November, 1889.

LEGISLATION.

The following Ordinances were passed during the above Session, namely:-

Schedule of Ordinances passed by the Legislative Assembly of the North West Territories during the Session of 1889.

- An Ordinance to amend the Ordinance respecting Insane Persons.
- An Ordinance to amend "The Poisons Ordinance." No. 2.
- An Ordinance to amend Ordinance No. 5 of 1888, intituled "The North West Territories Medical Ordinance, 1888."
 - An Ordinance to amend "The Agricultural Societies Ordinance." No. 4.
 - An Ordinance to amend "The Mechanics' Lien Ordinance." No. 5.
- An Ordinance to amend "The Ordinance respecting Auctioneers, No. 6. Hawkers and Pedlers."
- An Ordinance to amend Ordinance No. 6 of 1888, intituled "An Ordi-

nance respecting the registration of Births, Marriages and Deaths." An Ordinance concerning Receipt Notes, Hire Receipts and Orders for No. 8.

Chattels.

- An Ordinance to regulate the practice of Dentistry in the North-West No. 9. Territories.
 - No. 10. An Ordinance respecting the Expropriation of Lands.
 - An Ordinance to amend "The Game Ordinance."
 - No. 11. No. 12. An Ordinance to amend "The Unincorporated Towns Ordinance."
- An Ordinance to provide for the incorporation of Butter and Cheese No. 13. Manufacturing Associations.
 - An Ordinance respecting Justices of the Peace. No. 14.
 - No. 15. An Ordinance to amend "The Herd Ordinance."
 - An Ordinance respecting the Personal Property of Married Women. No. 16.
 - An Ordinance respecting Hides.
 - No. 17. No. 18. An Ordinance respecting Mortgages and Sales of Personal Property. An Ordinance to amend "The Municipal Ordinance."
 - No. 19.
 - No. 20. An Ordinance to amend "The School Ordinance.
 - An Ordinance to amend "The Brand Ordinance." No. 21.
 - An Ordinance to amend "The Brand Ordinance." No. 22.

PART IV

No. 23. An Ordinance to incorporate "The Calgary Water Power Company, Limited."

No. 24. An Ordinance to amend "The Interpretation Ordinance."

No. 25. An Ordinance to amend Chapter 41 of the Revised Ordinances of the North-West Territories, respecting the Legal Profession.

No. 26. An Ordinance to amend Ordinance No. 25 of 1889.

No. 27. An Ordinance to incorporate "The Medicine Hat General Hospital." No. 28. An Ordinance to amend Ordinance 25 of 1887, intituled "An Ordinance to incorporate the Municipality of the Town of Mossomin."

No. 29. An Ordinance to legalize By-law No. 41 of the Municipality of Indian

Head.

No. 30. An Ordinance to legalize a certain Debenture of the School District of Kenlis Protestant Public School District.

No. 31. An Ordinance to empower certain Boards of School Trustees to compromise for the payment of arrears of taxes.

APPOINTMENTS.

The following is a list of the Territorial appointments made since the Lieutenant Governor's last Report.

Justices of the Peace.

Name.	Address.
Thomas Cope	Alameda, Assiniboia.
Dennis Quigley	Sintaluta do
Samuel William Shaw	Midnapore, Alberta.
William Cox Allen	Fort Macleod, Alberta.
Zachary Taylor Wood	Inspector, N. W. Mounted Police.
Albert Huot	do do
Hugh Matheson Bannerman	Edmonton, Alberta.
John R. McPhail	Prince Albert, Saskatchewan.
Wm. Cameron Bellemont Grahame.	Winnipeg, Manitoba.
Francis David Wilson	Victoria, Alberta.
Henry William Pollock	Whitewood, Assiniboia.
William McBeth	Prince Albert, Saskatchewan.
Joseph Knowles	do do
John Stewart	do do
Robert Wyld	Battleford do
Alexander Roderick Chisholm	Bresaylor Settlement, Saskatchewan.
George McCrum	Cumberland House do
Eucher Arcand	Battleford, Saskatchewan.
Angus McKay	Fort Pitt, Alberta.
Simeon Morin	Battleford, Saskatchewan.
Louis D'Eschambeault	Prince Albert do
Charles Shillingford	Fleming, Assiniboia.
Charles Michel Daunais	Battleford, Saskatchewan.
Anthony Thomas MacLellan	Katepwe, Assiniboia.
John Clarence Richards	Kinbrae do
Thomas Gilman	Moosomin do
Joseph_Courtney	Island Lake, Saskatchewan.
Hugh Hassard	Alameda, Assiniboia.
Peter McLellan	Arcola do
Samuel McGurk	Carlyle do
Thomas Montgomery	Alameda do
John Young	Antler do
George John Gagen	Moose Jaw P.O., Assiniboia.
Thomas Bawden	Broadview, Assiniboia.
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Name.	$\mathbf{Address.}$
Adam McBeath	Prince Albert, Saskatchewan.
James Nichol Cowan	Montgomery, Assiniboia.
Hubert Pelham-Clinton	Swift Current do
Joseph Victor Begin	Inspector, N. W. Mounted Police.
Julius Vass	Esterhaz Assiniboia
Samuel Chipperfield	.Chickney do
Alexis O. F. Degagne	. Edmonton, Alberta.
Thomas Scott Rutherford	Balgonie, Assiniboia.
John Cameron	Edmonton, Alberta.
Daniel Maloney	.St. Albert do
Edward Fitzgerald	.Grenfell, Assiniboia.
Thomas Breers	Kinheae do
Daniel William Riedle.	Langenburg do
William Brough Heath	.Dunmore do
William Moran	. Moosomin do
William Walter McDonald	Fleming do
William McCorkell	. do do
Septimus Marshall Smith	Moosomin, Assiniboia.
Richard James Phin	do do
Jean-Baptiste Payette	Green Lake, Saskatchewan.
Hugh James Alexander Davidson	Inspector N. W. Mounted Police.
John Cardell	Bantry, Alberta,
Reginald Beatty	Kinistino, Saskatchewan.
Robert Hamilton	Saskatoon do
John Creagh	Bantry, Alberta.
John Creagh	Saskatoon, Saskatchewan.
Herbert Frank Boyce	Abernethy, Assiniboia.
David J. Cantelon	Lorlie do
John Warden McIntosh	Moose Jaw. do
Henry Dorrell	do do
William Edward Bayley Thomas O. Davis	Balgonie do
Thomas O. Davis	Prince Albert, Saskatchewan.
William Carter Sanders	Buffalo Lake, Assiniboia.
William Creighton Matchett	Balgonie do
John Charles McKenzie	Kinistino, Saskatchewan.

Notaries Public.

William Alfred Galliher	Lethbridge, Alberta.
Thomas Hart	The Pas Reserve, Saskatchewan,
George Forbes Guernsey	
Thomas Christopher West	
Joseph Allison Fraser	Battleford, Saskatchewan.
Benjamin Parkyn Richardson	
John James Heaslip	Alamedá do
Frederick G. Fauquier	Maple Creek, Assiniboia.
John Dixon	do do
Frederick James Boswell	
Harry Bird	
David Venne	Batoche, Saskatchewan.
George Henry Gibson	Battleford do
William John Pozer	Duck Lake do
Julius Vass	Esterhaz, Assiniboia.
Thomas Gainsford Rothwell	Ottawa, Ontario.
Sidney Stockton Taylor	Edmonton, Alberta.
	ART IV]

Commissioners for taking Affidivats.

Name.	\mathbf{Add}	lress.
James George Ross	. Montrea	l, P. Q.
John Greenfield	. London,	England.
Richard John Wicksteed		
William Alexander Caldwell	. Montrea	ıl, P. Q.
David Hepburn Russell	.London,	England.
James Hume Dodgson	. do	do
Thomas William Bischoff	. do	do
Philip Henry Coxe	. do	do
George Cox Bompas		do

Coroners.

Arthur Edwin Shelton	Calgary, Alberta.
Ernest Carter	Broadview, Assiniboia.

Issuers of Marriage Licenses.

A. A. Davidson	.Calgary, Alberta.
John T. Stemshorn	
Robert C. McPherson	
John C. Richards	
George Lawley	
Richard B. C. O'Donoghue	
Harry Bird	
William Leigh Bernard	
George Edward Jacques	
Robert Harkness Henderson	
Thomas Jennette Pearson	
	· · · · · · · · · · · · · · · · · · ·

Fire Guardians.

John Coates	\dots Perley, Ass	siniboia.
Inspector Constantine	North-Wes	t Mounted Police.
do Drayner	do	do
Staff-Sergt. Fyffe	do	do
do Richards	do	do
do McGinnis	do	do
do Waddell	do	do
Sergeant Cochrane	do	do
do Brymner	do	do
do Colebrook		do
do Straton	do	do
do Pollock		do
Staff-Sergt. Diamond	do	do
do W. J. Hall		do
Sergeant Mountain	do	do
$\overline{ ext{do}}$ Bidwell	do	do
do Marshall	do	do
do Blake	do	do
do Hilliard	do	do
do Roby	do	do
do Macfarland	do	do
do Rohrig	do	do
do Garnham		do
do Murison	do	do

[PART IV]

Name.	Address.	
Sergeant Bruce		Mounted Police.
Corporal Wright		do
do Work	•	do
do Bunt	1	$d\mathbf{o}$
do Sparrow		do
do Armer		do
do Bossange	. do	do
do Shleacow		$d\mathbf{o}$
do McLellan	do	do
do Shepherd	. do	\mathbf{do}
Constable J. A. Smith		$d\mathbf{o}$
do Kirkman	do	$\mathbf{d}\mathbf{o}$
do Sellon	do	do
do Pearson	do	do
do O'Gorman		do
Inspector White-Fraser		do
do Matthews		do
dc Starnes	do	do
do Macpherson	do	do
Sergeant Manely	do	do
Corporal Horne	do	do
do Friars	do	do
do Purchas	do	do
do Bierd	do	do
do Baker	do	do
do Skinner	do	do
do Martin	do	do
${\rm do} \qquad {\rm Weeks}$		do
${\rm do} \qquad {\rm Birtles}, \dots \dots \dots$		do
do Sexton		do
Constable Ashe		do
do Barham		do
do Green		do
do <u>Blight</u>		do
do Rushton		do
do Lynch		do
do Watson	•	do
do Panet		do
do Vaudrieul		do
Staff-Sergt. White		do
do Ross		do
Sergeant Macdonnell		do
Corporal Turnbull		do
do Campbell		do
do Elliott		do
Constable Allfrey	do	do
do Patrick		do
do Tabor		do
SergtMajor Spicer	do	do
do Stewart		do
do Hetherington		do do
Staff-Sergt. Fane	do do	do
do Bradley	do	do do
Sergeant Allen	ao	do
do Barker		do
do Brook		uu
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Nar	me.	Address.	_
Sargeant	Monjean	.North-West	Mounted Police.
do	Hayne	. do	do
Corporal	Clarke	. do	do
$ar{\mathbf{do}}$			do
do	Healey	. do	do
do	Cunningham	. do	do
do	McDonnell		do
George 1	Ness	.Pincher Cre	ek, Alberta.

Game Guardians.

Leveret George DeVeber	Macleod, Alberta,
Andrew Christie	Pincher Creek, Alberta.
John Smith	Belly River do
Edward Neale Barker	Lee's Creek do
Frederick W. Atkinson	

Veterinary Surgeon.

Charles Henry Sweetapple......Sergeant, N. W. Mounted Police.

Registrar General.

Appointed under the Ordinance for the Registration of Births, Deaths and Marriages.—The Clerk of the Legislative Assembly.

Division Registrars.

Oliver Neff	Moosomin, Assiniboia.
William Walley	Saltcoats do
Robert Patterson	Broadview do
Harry Bird	
Samuel V. Bray	
William Syme Redpath	Qu'Appelle Station do
George Forbes Guernsey	Fort Qu'Appelle do
Thomas Brown	
Reginald James Steele	do do
Hugh Macdougall	Moose Jaw do
William Cousins	Medicine Hat do
Alfred F. Grady	Macleod, Alberta.
William Leigh Bernard	Calgary do
Richard B. C. O'Donoghue	Banff do
Hugh Richardson, jr	Battleford, Saskatchewan.
Joseph M. Coombs	Prince Albert do
Charles Adams	
William John Poser	
Colin F. Strang	Edmonton, Alberta.
<u> </u>	

Medical Practitioners Registered.

Ernest Harold Scott	.Moosomin, Assiniboia.
George Allan Kennedy	. Macleod, Álberta.
Allan Marshall Lafferty	.Lethbridge, do
Charles Selby Haultain	. Asst. Surgeon, N. W. Mounted Police.
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Advocates Enrolled.

Name.	\mathbf{Addr}	ess.
William Alfred Galliher	Lethbridge	e Alberta.
Sidney Stockton Taylor	Calgary	do
Thomas Christopher West		do
James Albert Manning Aikens		Manitoba.
Lawrence King	.Moose Jaw	, Assiniboia
Isaac Campbell	.Winnipeg,	Manitoba.
Nicholas Dominic Beck	Calgary, A	lberta.
Edmund Cave		do
James Stewart Tupper	. Winnipeg,	Manitoba.
Nathaniel Francis Hagel	do "	do
Hector Mansfield Howell		do
Charles Patrick Wilson		do
William Redford Mulock	. do	do
John Skirving Ewart	do	do
Patrick James Nolan		Alberta.
William Henry Culver		
Albert Elswood Richards		do

Dentist registered.

Frederick Davis Shaw......Macleod, Alberta.

I append hereto a Return, as required by Section 93 of "The North-West Territories Act," of all liquor Permits issued by me during the year 1889.

I have the honor to be, Sir, Your obedient servant,

J. ROYAL, Lieutenant-Governor of the North-West Territories.

Total Quantities.	Alcohol. Beer. Porter.												01	10	2				
Total Quantities.	Gin.									:		: : : : : : : : : : : : : : : : : : :			2				
To Table 10	Brandy.		4.8	99	44		100	9	9.5		8 9 9	:				20 20 20 20 20 20 20 20 20 20 20 20 20 2	: 		
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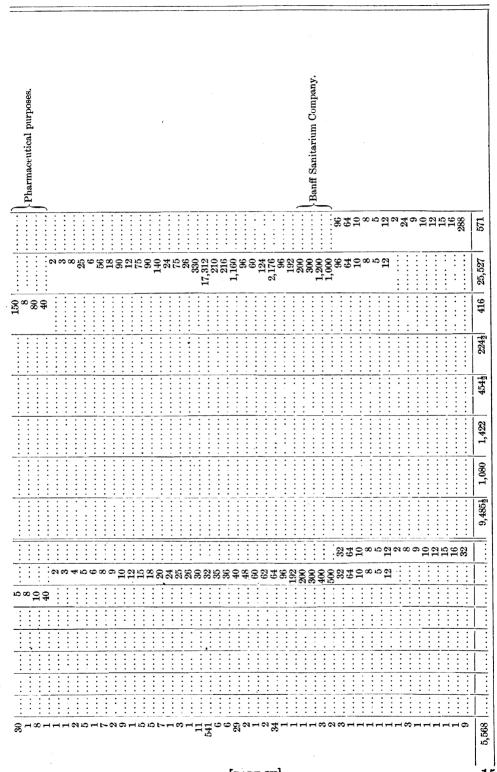
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REPORT OF THE BOARD OF EDUCATION FOR THE NORTH-WEST TERRITORIES, FROM THE 13TH SEPTEMBER, 1888, TO 17TH SEPTEMBER, 1889.

REGINA, 17th September, 1889.

To the Honorable JOSEPH ROYAL, LLD.,

Lieutenant-Governor of the North-West Territories.

SIR,—The Board of Education has the honor to submit the following report of its proceedings for the past year:

Meetings of the Board were held on the 11th December, 12th, 13th and 14th

March, 16th July and 17th September.

The Rev. A. B. Baird, B.D., having resigned his seat as a member of the Board on account of his having gone to reside in Manitoba, the Rev. S. J. Taylor, B.A., of Moose Jaw, was appointed Member in his stead.

The Rev. John McLean, Ph.D., was appointed a Member of the Board of Exam-

iners, vice Rev. Mr. Baird, resigned.

The Inspectors of Schools, under the control of the Protestant Section of the Board, are the same as last year. For schools under the control of the Roman Catholic Section, the Rev. J. M. Lestane has been appointed Inspector for the Edmonton District, vice the Rev. H. Grandin, resigned; and the Rev. D. Graton has been appointed Inspector of Schools in Western Assiniboia.

UNION SCHOOLS.

In order that the provisions of the Revised School Ordinance, with respect to Union Schools, might be carried out, the Board, at its meeting in March, adopted the following regulations with reference to Entrance Examinations and the course of study to be used in such schools.

Instructions to Inspectors having Union Schools and to the Principals of such Schools.

The Board of Education, in putting forth the regulations relating to Union Schools, desire it to be understood that these regulations are tentative and provisional, the idea being to bring such schools into operation as soon as possible. When they exist and the Board has had an opportunity of forming an opinion about them, it will revise all the regulations relating to the course of study in all its schools, as well as the regulations relating to the attainments of its teachers.

With regard to the Normal Sessions, the Board feels that it must, at this stage of things, rely very greatly upon the judgment and good sense of Inspectors and Principals to make such arrangements as will result in the carrying on of a complex

system with the utmost advantage to all the pupils concerned.

Students whose literary attainments do not extend beyond the subjects of examination for 3rd class teachers, should be encouraged to take as much of the work required in Standard VI., prescribed for Protestant Schools, or in the Superior Course, prescribed for Roman Catholic Schools, as possible, having regard to the time required to be given to professional subjects, and to what may be required of them in order to gain a knowledge of practical teaching. Such students should, from time to time, take classes in the junior departments of the school, and then only under the direction of the Principal or the teacher of the department.

Students studying the subjects assigned either for first or second class teachers, may take classes in all departments of the school, at the discretion of the Principal.

JAS. BROWN, Secretary Board of Education.

Adopted 14th March, 1889, Department of Education, Regina, N.W.T.

Provisional Regulations with respect to Union Schools, adopted 14th March, 1889.

1. The head teacher of every High School Branch of a Union School shall be

styled the Principal of such school.

2. The Principal shall be a graduate of some University in Her Majesty's Dominion, or have attainments which, in the opinion of the Board of Education, are equivalent thereto, and must also be able to satisfy the Board as to his knowledge and ability to conduct such a school, and to train teachers according to the most approved methods of teaching.

3. The maximum salary for the Principal of any Union School shall not exceed.

eighteen hundred dollars per annum.

4. The following books and apparatus shall be provided for each Union School

An Encyclopædia—Britannica, Chambers' or International; An Unabridged Dictionary—Webster, Worcester or Imperial;

A Gazetteer—Lippincott;

A Biographical Dictionary—Lippincott;

English History - Green and Knight's History of the English People, or Lingard; General History-E. A. Freeman, Merivale's "General History of Rome from the Foundation of the City to the Fall of Augustulus;"

Natural Science—Deschanel; Fowne's and Roscoe's Chemistry; Gray's New Manual of Botany; Physiological Charts (White's);

English Literature—Chambers' Encyclopædia of English Literature;

Spalding or Taine;

Minto's Manual of Prose Literature;

Characteristics of English Poets-Minto;

Shakespeare's Life, Art and Characters—Hudson;

Dowden's Art of Shakespeare;

Rolfe's Shakespeare;

Victorian Poets—Stedman;

Classics-Andrew's Lexicon (Lat.-Eng.); Liddell and Scott's Lexicon (Greek-Eng.), (larger editions); Smith's Classical Dictionary; Butler's Classical Atlas and Sketch of Ancient Geography;

Geography—Ritter; Guyot's Earth and Man; Guyot's Physical Geography; Guyot's Common School Geography; King's Aims and Methods in Geography; Maps—Classical Maps of Italia, Gracia, Asia Minor and Gallia.

The necessary apparatus for teaching Botany, Chemistry and Physics.

ENTRANCE EXAMINATION.

5. (1.) The regular entrance examination for pupils for the High School Branch shall be in writing, and shall be held half-yearly before the close of each term.

(2.) There shall be papers set on reading, spelling, composition, writing, arithmetic, grammar, geography, history and elementary English literature, bookkeeping (single entry), as prescribed in Standard V of the programme of studies for Protestant schools, and in the "superior course" in the programme of studies for Roman Catholic schools.

(3.) The papers shall be prepared and examined, and the examination shall be conducted by the Inspector for the district and the Head Teacher or Principal of the school. When the examination is over and the results have been declared, the papers, together with the marks obtained, shall be sent to the Secretary of the Board of Education to be filed.

(4.) In order to pass the examination a candidate must obtain twenty-five per cent. of the marks attached to each of the subjects of examination, and forty per cent, of the total number of marks.

[PART IV]

18

(5.) Pupils who come into the district after the regular examination has been held, and who are thought to be qualified for admission, may be placed by the Principal in the High School until the ensuing entrance examination, when they shall be required to pass such examination.

(6.) The following shall be the course of studies in the High School Branch of

Union Schools:—

(a) For Protestant Schools:

STANDARD VI.

Reading-Sixth Reader with recitations.

Spelling—From reading lessons and dictation.

Composition—Further extension of the subject from Standard V.

Writing-The subject continued.

Arithmetic—The whole of Kirkland & Scott's Arithmetic.

Grammar—A thorough knowledge of Mason's Outlines of English Grammar. Geography—Map Geography generally, with Canada and the British Empire more particularly; map drawing.

History—A review of English and Canadian History; Canadian Literature.

Book-keeping—Single and Double entry.

Drawing—Reading's High School Course commenced.

Calisthenics and Drill—The subject continued.

Algebra—To the end of simple equations. Geometry—Euclid, Definitions and Book I.

Latin-Smith's Pricipia Latina, Part I., or Harkness' Introductory Latin Book.

French—Fasquelle's Lessons in French.

(b) For Roman Catholic Schools:

Review of Intermediate Course.

Superior Course commenced and continued.

Geography—General; Canada and the British Empire more particularly; map drawing.

Canadian Literature—Withrow and Adam.

Calisthenics and Drill-Continued.

French—Fasquelle's Lessons in French.

Latin—Smith's Principia Latina Part I., or Harkness' Introductory Latin Book.

NORMAL SESSIONS IN UNION SCHOOLS.

1. Every Union School shall have, if required by the Board of Education, a Normal School Department, which shall hold one session each year. Every such session of the Normal School shall open on the first Monday in November and close on the last Friday in March following.

2. The course of instruction during such session shall include:—The History, Science and Art of Education; Methodology; School Organization and Management;

School Hygiene; School Law; Drill and Calisthenics and Practical Teaching.

(a.) Text books prescribed for the use of teachers.

(1.) For 1st class teachers:

Sully's hand-book Psychology; Bain's Education as a Science; Compayre's History of Pedagogy; McCosh's "The Motive Powers;" Fitch's Lectures on Teaching; Landon's School Management; the School Law of the Territories; Hughes' Drill and Calisthenics.

(2.) For 2nd class teachers:

White's Elements of Pedagogy; Quick's Educational Reformers; Janet's Elements of Morals; Fitch's Lectures on Teaching; Baldwin's Art of School Management; the School Law of the Territories; Hughes' Drill and Calisthenics.

(3.) For 3rd class teachers:

Baldwin's Art of School Management; Browning's Educational Theories; Fitch's Lectures on Teaching; Janet's Elements of Morals; the School Law of the Territories; Hughes' Drill and Calisthenics.

- 3. All students in attendance at any Normal Session, shall provide themselves with such books as they are required to use.
- 4. Such persons as desire to attend the Normal Session of any Union School shall notify the Secretary of the Board of Education of their intention not later than the 15th day of September in each year; and shall state:

(a) Age last birthday.

(b) Class of certificate held, (if any).

(c) If holding no certificate, the subjects they desire to study.

(d) The name of the Union School they desire to attend.

Each such notification shall be accompanied by a certificate of good moral character.

- 5. All persons, who have passed the non-professional examinations for first, second or third class teachers' certificates, shall be eligible for admission to the Normal Session of any Union School. All other candidates for admission shall be received only by the special sanction of the Board of Education, upon their presenting satisfactory evidence of good moral character and literary attainments.
- 6. Students admitted to any Normal Session shall be required to present themselves at the opening of the Session, to be punctual and regular in their attendance, and to perform faithfully the duties assigned them.
- 7. Any student, whose conduct or deportment during any Session is reported by the Principal as not satisfactory, shall be reported to the Board of Education, and his name shall be taken off the roll, or his case otherwise dealt with, as the Board may determine.
- 8. All students who, at the close of each session, have passed a written examination in the subjects included in the course of instruction, and whose aptiude in teaching is found satisfactory, shall be entitled to a diploma, signed by the Inspector and Principal, certifying the same, and such diploma shall entitle the student receiving it to have the non-professional certificate he then holds exchanged for a professional certificate of the same class and grade; and any student not in possession of a non-professional certificate, who obtains such diploma, shall be entitled to teach until the ensuing August examination, upon passing which, he shall be entitled to receive such professional certificate as is provided for under said regulations.
- 9. Any student, whose aptitude in teaching is reported, at the close of a Normal School Session, to be superior, shall be entitled to receive a professional certificate of Grade "A" of the class he then holds or has held within one year of the date of such session, or if he holds no non-professional certificate, he shall be entitled to a professional certificate of the highest grade in the class in which he may pass within one year thereafter, subject to the regulations governing the issue of professional certificates.
- 10. No person who has once obtained a third-class professional certificate shall be entitled to another professional certificate of the same grade, upon his passing the non-professional examination, without a second attendance at the Normal School, unless certified as an efficient teacher by his Inspector.
- 11. Any student attending a Normal School Session shall have the right to attend such classes, in Standard VI, in the programme of studies of the Protestant section, or the superior course of the Roman Catholic section, as he may desire, but, having once come to a decision, he shall not withdraw from any class without the consent of the Principal.
- 12. The examinations at the close of a Normal Session in any Union School shall be conducted by the Inspector for the district and the Principal of the school, and when the examination is over and the results have been declared, the papers, together with the marks obtained, shall be sent to the Secretary of the Board of Education to be filed.

ENTRANCE EXAMINATION.

In accordance with the foregoing regulations examinations were held, with results as follows:—

School.	No. of Candidates.	No. who Passed.
Regina	18	18
Moose Jaw	. 7	7
Medicine Hat	. 5	5
Lethbridge	15	15
Calgary	. 28	24
Prince Albert	22	16
Lacombe (Cath. sep,)	15	15

From the above statement it will appear that Moose Jaw and Medicine Hat are not yet in a position to open Union Schools.

At Lethbridge, we teachers only being employed, the school does not fulfil the

requirements of the Ordinance.

At Prince Albert 16 of the candidates were pupils of the Nesbit Academy, a

private institution, and were therefore ineligible.

Since the summer vacation Union Schools have been opened at Regina and Calgary, and the reports from them are encouraging. We understand a Union School will be opened in Lacombe district during the present term.

TEACHER'S EXAMINATION.

The annual examination of candidates for teachers' certificates began on the 6th and closed on the 10th August last. In order to meet the convenience of the candidates, examinations were held at the following places in the Territories, viz.:—

Moosomin, where 34 candidates were present.

Saltcoats " 14 " " Carnduff " 4 " "

Fort Qu'Appelle, where 3 candidates were present.

Regina, where 40 candidates were present.

Prince Albert, where 15 candidates were present.

Saskatoon, where 3 candidates were present.

Lethbridge " 2 " "
Calgary " 9 " "
Edmonton " 4 " "

In all 128 candidates presented themselves for examination, 8 for first-class certificates, 23 for second-class, and 97 for third-class. The result of the examination was as follows: 7 candidates passed for first class certificates, 19 for second-class, and 69 for third-class.

The following is a list of the successful candidates, namely:-

First Class.—Grade B.

James Balfour, Sister Delphine Bouquet, Sister Philomena Crotty, L. Bruce Latimer, Sister M. Agnes Ollivier, William Short, Allen D. Tracy.

Second Class.—Grade A.

Herbert H. Skinner.

Second Class.—Grade B.

William Adams, Sister Theresa Ambrose, Emma Mary Andrews, Carrie Bray, Frankie G. Brown, Edgar Albert Chappell, Isabella A. Coulson, Sister Faustine Cornish, James A. Hamilton, Mary K. Hunter, George H. Hutton, James W. Jones, Mrs. M. O. McCready, John McLean, John W. McPhail, Willa Simpson, Herbert A. Solly, Jean P. M. Piquet.

Third Class.

Clara Adair, Mary Alexander, David Archibald, Aggie M. Balfour, Thomas Bear, Addie Bird, George P. Bray, Charles F. Brears, Maggie Broley, Joseph N. Brunet, Louisa Burton, Lizzie Cameron, Lisle Carr, Samuel R. Carrothers, Hugo E. Carstens, Louie G. Chappell, Sarah A. Cox, Jennie Cullum, Carrie Davies, George R. Davies, Harry F. Dennehy, Carnaby W. Ferry, Ebon T. Ferry, Catherine E. Geddes, Kate J. Gillespie, Frances Gilroy, May Givin, Donald H. Grant, Hulda E. Graves, Victor L. Greenwood, Florence Glover, Sadie Hastings, Frances Mary Hayward, Annie Henderson, Edith Revilo Higgins, Annie Hodnett, Edward Hopkins, James Hulme, Gudney Jones, Thomas E. Jones, Joseph Lapointe, Charles H. Lawford, Kate Lawford, Mary Lucas, Mary McCallum, Minnie McCallum, Duncan A. McDonnell, Tillie McIntosh, Sarah McMillan, Kate Middlemiss, David Miller, Joseph Morton, Lena May Neville, Samuel Spencer Page, Philomene Parenteau, Herbert J. Rex, Christopher J. Rosborough, John R. Sangster, Helen A. Shaw, Wm. James Skafte, Louisa Smith, Wm. Stiff, Charles Ibeson Sweet, J. Donaldson Tait, Eliza Tate, Agnes Thompson, Martha Thompson, Clara White, Minnie Wismer.

UNIVERSITY LAND GRANT.

At the meeting held on the 14th March the following resolution was unanimously adopted:—

"Whereas several years ago the Government of Canada gave a grant of 150,000

acres of land to endow a University for the Province of Manitoba:

"And whereas such land was not selected at the time, and now, owing to the settled state of the country, great difficulty is experienced in obtaining suitable lands available for the purpose:

"And whereas the very rapid growth of educational matters in the Territories leads to the belief that, in a very few years, it will be necessary, in order to complete

our educational system, to establish a University:

"And whereas each of the three Provisional Districts of the Territories is of larger area than Manitoba, and each is therefore entitled to a grant for University

purposes at least as large as that given to said Province:

"And whereas the Board feels that it is most desirable that such a grant should be obtained as soon as possible, and that the land should be selected and set apart for University purposes before much more settlement takes place, and while large quantities of land are available for selection:

"Therefore the Board of Education would respectfully request His Honor the Lieutenant Governor in Council to make representations to the Dominion Government, as soon as convenient, with a view to obtaining, at an early date, a grant of land for University purposes for each of the Provisional Districts of Assiniboia, Alberta and Saskatchewan."

The above resolution was endorsed by His Honor the Lieutenant Governor in

Council, in the following minute passed 2nd May, 1889:—

"Resolved,—That this Council strongly endorses the resolution of the Board of Education passed on the 14th March, 1889, with reference to a grant of land for University purposes in the Territories, and that the same, together with a copy of this resolution, be forwarded to the Secretary of State of Canada, for the consideration of the Governor General in Council."

Subsequently the following reply was received from His Excellency the Governor General in Council:—

"Certified copy of a report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council on the 26th June, 1889.

"The Committee of the Privy Council have had under consideration a despatch dated 20th May, 1889, from the Lieutenant Governor of the North-West Territories, transmitting a copy of a resolution passed by the Board of Education of the Terri22 [PART IV]

tories in reference to obtaining a grant of land for University purposes in the Territories.

"The Minister of the Interior, to whom the question was referred, states that the consideration of this question at the present stage in the history of the North-West is, in his opinion, premature, and that not until the country has been divided and erected into separate Provinces can a question of this nature be finally and advantageously dealt with.

"The Committee recommend that the Secretary of State be authorized to forward a copy of this minute to the Lieutenant Governor of the North-West

Territories.

"All which is respectfully submitted for your Excellency's approval."

The Board at its meeting in July passed the following resolution:-

"This Board having had laid before it a copy of a report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council on the 26th June, 1889, in respect to a resolution passed by this Board in reference to obtaining a grant of land for University purposes in the Territories, and in which the Committee report 'that the consideration of this question at the present stage in the history of the North-West is premature, and that not until the country has been divided and erected into separate Provinces can a question of this nature be finally and advantageously dealt with.'

"While this Board recognizes the difficulties at present in the way of making grants of land for University purposes, as requested by the minute of this Board, passed on the 14th March last, yet this Board would respectfully suggest the advisability of, by minute of Council or in some other way, selecting and setting apart lands for University purposes in the Provisional Districts of Assiniboia, Alberta and Saskatchewan, so that the same may be available to be granted when the country is divided and erected into into separate Provinces; otherwise, when that time arrives, no lands may be available for that purpose, or the lands available may be of comparatively little value:

"And resolved, that a copy of this minute be furnished to His Honor the Lieutenant Governor in Council, for transmission for the consideration of His Excellency

the Governor General in Council."

SECRETARY'S SALARY.

In June, 1888, the Board adopted a resolution respectfully recommending that the salary of the Secretary of the Board be increased from \$1,500 to \$1,800 per annum.

No action having been taken upon this resolution, the following resolution was

unanimously adopted at the meeting of the Board held on the 14th March last.

"The Board of Education has heard with regret that His Honor the Lieutenant Governor in Council has not acceded to the wish of the Board in reference to an increase of salary for its Secretary, as expressed in a resoution of the Board which was unanimously adopted at a meeting held in June last:

"The Board, in venturing to bring the matter again before His Honor the Lieutenant-Governor in Council, desire very respectfully to submit that the Secretary's duties are increasing almost daily; that the present salary bears no adequate proportion to their extent and importance; while, at the same time, the manner in which these duties are performed leaves nothing to be desired:

"For these reasons the Board earnestly hopes that the question will be reconsidered, so that the salary may be increased to \$1,800 per annum, and that such

increase date from the 1st of July last (1888)."

NUMBER OF SCHOOLS IN OPERATION.

The following table shows the number of schools in the different inspectorates in operation during the last quarter of the current year, as contrasted with those in

operation during the corresponding quarter of last year, from which it will appear that the increase of schools, under the control of the Protestant section of the Board, is as follows:—

In	crease in	number	of schools	25
	do	do	teachers employed	2 8
	do	do	pupils	801
And in	schools	under th	e control of the Roman Catholic section of	the Board:—
In	crease in	number	of schools	8
	do	do	teachers employed	5
	do	do	nunils	320

Making a total increase of 33 schools, 33 teachers, and 1,121 pupils during the year.

SCHOOLS IN THE VARIOUS INSPECTORATES.

		1889.		1888.					
Inspectorates.	Schools Open.	Teach- ers Em- ployed.	Pupils.	Schools Open.	Teach- ers Em- ployed.	Pupils.			
Under Protestant Section.									
East Assiniboia West Assiniboia Prince Albert District Calgary do Macleod do Edmonton do Battleford do	52 41 17 12 3 6	54 46 19 15 4 7	1,123 1,153 520 410 147 183 69	38 38 13 9 3 5	40 42 14 11 4 6 2	727 1,050 361 345 122 154 45			
	133 108	147 119	3,605 2,804	108	119	2,804			
Increase in 1889	25	28	801						
Under Catholic Section.									
Edmonton District. Calgary do Macleod do Battleford do Prince Albert District. Assimboia East. Assimboia West	6 1 3 1 13 5 2	9 3 3 1 13 5 2	248 113 74 57 321 115 41	5 1 1 1 8 7	8 3 1 2 10 7	165 70 13 48 220 113			
	31 23	36 31	969 649	23	31	649			
Increase in 1889	8	5	320						
Showing a total increase in 1889 of	33 Schools.	33 T'chers.	1,121 Pupils.						

NEW SCHOOL DISTRICTS.

During the year 37 new school districts have been erected and proclaimed in various parts of the Territories, as per following list:—

SCHOOL DISTRICTS UNDER CONTROL OF PROTESTANT SECTION.

No.	District.	Secretary.	P. O. Address.
137	Mistawasis	Edward Johnstone	Snake Plain via Carlton, Saskatchewan.
138	Esterhaz	Rev. T. A. Teitelbaum	Esterhaz Assa
139	Swea		
		Thos. McNutt	
141		Thos. Cope	
142	Cochrane	James Johnson.	Cochrane, Alta
143	Winlaw	R. H. Henderson	Winlaw Assa.
144	High River	Isaac Potter	High River viá Calgary, Alta.
145	Rose Dale	G. C. Lewis	Fairmede, Assa.
	Workman	Allan McDougald	Elmore do
147	Stanley	W. J. Dimmick.	Moosomin do
148	Elmore	John Ormond	Elmore do
149	Duck's Point	Jno. W. Large	Grenfell do
150	Grenfell	M. Freeman	do do
151	Grahame	Wm. Cross	Saltcoats do
152	Riverdale	C. H. H. Parker	Kinbrae do
		Glasgow Winter	
154	Inglesfield	Kenneth Corbett	Fleming do
155	Maryfield	Wm Stableford	"Dene Grange," Lippentott, Man.
156	Marlhorough	Ino D Fraser	Marlborough via Moose Jaw, Assa.
157	Ehenezer	Hugo Carstens	Vorkton Assa.
158	Cotham	Ernest Jno. Bissick	Broadview do
159	Vorkton	W. P. Hopkins	Vorkton do
160	Cannington Manor	S Spencer Page	Cannington Manor Age
161	Sunny South	E W Stowart	Ou'A ppalle Station do
169	Moose Mountain	Ing F Hindmarch	Cannington Manor do
163	Polly	E. W. Stewart Jas. F. Hindmarch. Murdoch McDonald.	Fort Polly Asso
100	it eny	Murdoen McDonaid	Port Peny, Assa.
			HOLIC SECTION—PUBLIC SCHOOLS.
23	Sitkala	Joseph Lapointe	Willow Bunch, Assa.
94	Hourmond	Rev J V Fourmond	Grandin Sack
25	Belanger	Elie Vaud. Leon E. Paré.	St. Laurent, Sask.
26	St. Thomas Duhamel	Leon E. Paré	Holbrook, Alta.
27	St. Jean Baptiste	Rev. V. Pineau	Stobart, Sask.
		SEPARATE SCHOO	DLS.
7	St. Joachim	Antoine Prince	Edmonton, Alta.
8	Holy Cross	C. F. Gigot	Macleod do
9	Lethbridge	Christopher McRae	Lethbridge do
10	St. Alexander	Rev. Geo. Montreuill	Qu'Appelle Station, Assa.
11	St. Patrick	Julia Stack	Prince Albert, Sask.
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STATISTICAL TABLES.

The statistical tables prepared by the Secretary and appended to this report furnish interesting and important details of the working of our educational system in the various school districts of the Territories.

These tables are as follows:-

Stat	istics of	school for	r summer term, 1888A ₁	pendi	ix I
	do	do	winter term, 1888-89	do	\mathbf{II}
	do	do	quarter ended 30th June, 1889	do	III
Exp	enditure	of school	of funds from 1st July, 1887, to		
•	30th Jur	ne 1889	······································	do	ΤV

We have the honor to be, Sir,

Your obedient servants,

CYPRIAN, SASKATCHEWAN AND CALGARY, Chairman, Board of Education.

JAS. BROWN,

Secretary, Board of Education.

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REPORT for Quarter ended 30th June, 1889.

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Report for Quarter ended 30th June, 1889—Continued	Teacher.		Ida J. Morrison. M. McLean J. C. Richards	J. K. Drinnan Marion Fotheringham.	J. W. Kennedy. Maggie Maxfield.	C. I. Sweet. Jean Traquair	Margt, Hislop Louisa F. Brogden Helen A. Shaw		Alma McLeod	Mrs. Inglis	W. R. C. Willis.	Mary Rex. Miss Wilson		Wm. Stiff Mrs. Caewell	W. Lindeny Miss L. J. Cowan. B. Barton
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-	42 5 5 42 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	65 65 65 65 65 65 65 65 65	28 28 28 28 28 28 28 28 28 28 28 28 28 2	8 85 83 8884888 888		2: \$288888	

	Total.	s cts.	39 06 13 87 66 00 37 19 35 50
		97	
	ation nt.	cts.	2 84828
	Grant for Capitation Quarter. Grant.	90	007 008 008 004
	t for ter.	cts.	25 24 28 33 33 33 33 33 33 33 33 33 33 33 33 33
	Gran	9€	82288
	Percentage of Salary.		65 65 65 65
	7 per tth.	cts.	88888 8 : :
d.	Class of Salary pe Certificate. Month.	€€	884888
tinue	of of		
-Con	Class		
REPORT for quarter ended 30th June, 1889—Continued.	5	<u> </u> 	1st. 3rd. 2nd. Pro Pro Pro
	No. of Pupils on Register Average Daily Attendance. Percentage of Attendance.		12 10 83 H. M. Lister 18 79 Eliza J. Rutherford 18 8 C. H. S. Traill 7 6 86 Miss M. Alexander 16 14 87 Hugo Carstens 20 19 90 Ellie E. Carson.
	Days Open.		201 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	District.		152 Riverdale 153 Spring Lake 153 Spring Lake 154 Inglessfield 155 Maryfield 156 Marlborough 157 Ebenezer 157 Ebenezer 159 Yorkton 160 Cannington Manor 161 Sunny South 161 Sunny South 162 Moose Mountain 162 Moose Mountain 163 Moose Mountain 163 Spring Parket 164 Spring Parket 165 Moose Mountain 165 Moose Moose Mountain 165 Moose Moos
49	No.		EEEEEEEEEEEEEEEEE

ROMAN CATHOLIC-Public.

Total.	e cts.	106 25		425 00		240 00													38		*85 00
Capitation Grant.	ets.	12 50		:::::::::::::::::::::::::::::::::::::::		15 00	- :: :: ::	11 25		:	:		38			15 00		38			*20 00
Grant for Quarter.	s cts.	93 75															200		888		*65 00
Percentage of Salary.		75	25	5.5	3 :8	25	2 8	3.8	2	21	22	င္သ	3 %	35	32	33		S 5	3.6	3 :	65
Salary Per Month.	e cts.	41 66																	33.50		25 00
Class of Certificate.		1st	1st	1st	3rd	1st	Znd	ord 3rd	2nd	1st	Ist	ord	Fro	1st	1st	Pro	,	FT0	Pro		Pro
Teacher.		Rev. J. Moulin.	Sister Dillon.	do des Anges	· .	Rev. Quevillon	G. W. Galrdner.	Miss Pelletier.	O. Regnier	Miss O. Dorval	Alexander de la Konde	L. S. F. de la Croix	Mrs Fourmond	T P Plamondon	A Hebert	H. F. Dennehy.	F.	Mrs. Farenteau.	IMISS Vandal		Miss Bélanger
Percentage of Attend- ance.		67	_	:		78	:	50	35	:	<u>:</u>	: 8	200	8 75	3 8	92	:	5 6		: :	83
Average Daily Attend-		17	3	75	16	25	61	- 4 - 6 - 7	ိထ	98	器 —	3	3 g	31-	10	22	:	3;	78	3	13
No. of Pupils on Register.		88	3	93	23	88	ន	ā ≈	6	22	\$	÷;	4 %	3 55	2	14	: 8	25	3 5	ī :	16
Days Open.		53	5	ß	57	8	S 7	85	62	28	67 <u>4</u>	1 9	8 5	3 6		22	: 6	70	25	;	81
District.		St. Antoine		St. Albert	St. Leon		Dellerose	St. Laurent	Lourdes	St. Vital of Battleford	Lebret	St. Louis de Langevin	St. Joseph de Dauphinais	t. Joseph	At Agnes		Mazenod	St. Junen	Sitkala	Fourmond	Bélanger
No.		H 6		<u>ගා</u> ෆ	4	200		000	9			4. n		20.	-		88				

* For four months.

	Total.	s cts.	258 12	90 00 47 61	106 25 327 50 129 00 157 50	128 12
	Capitation Grant.	e cts.		02.6	12 50	18 75
	Grant for Quarter.	es cts.	121 87 87 50	388	93 75 187 50 140 00 105 00 157 50	*109 37
	Percentage of Salary.		355	8538	720 22 22 22 22 22 22 22 22 22 22 22 22 2	02
	Salary per Month.	es cts.		888 888	41 66 83 83 66 66 70 90	41 66
	Class of Certificate.		1st	1st. 3rd	lst. 1st. 2nd 2nd 1st.	2nd
Roman Catholic—Separate.	Teacher.				Sister McCormack do Coghlan do O'Neill W. J. Macdonald G. McRae	Sister Stack 2nd
Bo	Percentage of Attend- ance.			25	67	· 82
	Average Daily Attend- ance.		81	82.		Ħ
	No. of Pupils on Register.		113	817	24 64 19 37	14
	Days Open.		99	£ £		72
	District.		Lacombe	St. Andrew. St. Mary St. Margaret	St. Peter. Prince Albert St. Joachim Holy Cross Lethbridge	St. Alexander St. Patrick
	S.	1	_ =	çंग सः द ा	10 to 00 co	22

* For 3g months.

APPENDIX No. 4—Estimates and Expenditures of School Funds from 1st July, 1887, to 30th June, 1889.

	Items.	Financial 1st July to 30th Ju	, 1887,	Financial Year, 1st July, 1888, to 30th June, 1889.				
		Estimates.	Expenditures.	Estimates.	Expen. ditures.			
		\$ cts.	\$ ets.	\$ cts.	\$ cts.			
1	Grants to teachers and assistant teachers	23,924 79	27,823 71	38,916 60	34,523 20			
2	Capitation grants and grants on Inspectors'	7,137 50	7,709 64	10,012 50	10,130 70			
	Salaries of Board of Examiners and School Inspectors, including travelling expenses	2,950 00	3,364 84	4,400 00	5,546 32			
	Expenses of Board of Education, remuneration and travelling expenses	1,000 00	1,479 40	1,700 00	1,064 10			
	Secretary's salary	1,200 00 195 00	1,400 00 111 86	1,500 00	1,500 00			
7	School supplies, rent, &c., &c		111 60	100 00	30 00			
•	Lieutenant-Governor	5.000 00	1,205 00	5,000 00	2,262 50			
8	Printing forms, regulations, reports, &c	500 00	884 80	500 00	775 67			
9	Clerical assistance	300 00	250 00	600 00	630 00			
	Stationery, postage, telegrams, &c	300 00	216 60	500 00	258 74			
11	Miscellaneous	• • • • • • • • • • • • • • • • • • • •	101 21		263 40			
,		42,507 29	44,547 06	63,229 10	56,984 63			

PART V.

ROCKY MOUNTAINS PARK.

PART V.

REPORT OF SUPERINTENDENT OF ROCKY MOUNTAINS PARK.

Banff, 30th December, 1889.

To the Honorable

EDGAR DEWDNEY, M.P.,

Minister of the Interior, Ottawa.

SIR,—The following report of the works carried on in the Rocky Mountains Park for the past year under my supervision I have now the honor of presenting.

On the 1st of May, 1889, a small force of men was placed at work on Spray Avenue, several culverts built, the roadbed completed and put in first-class condition. This avenue was also extended south of the Canadian Pacific Railway hotel to give access to the villa lots taken up the year previous in that locality. This road may now be considered as second to none in the park.

A large quantity of the surplus material taken from the ditches on this road was used for gravelling Glen and River Avenues after they had been ditched and drained, so that these roads, which had been cut out and made passable during the previous years, were fully completed and placed in good order this year in the most economical manner, as the surface material of one road served to make up the difficiencies of the others at one operation.

Mountain Avenue—leading to the Hot Springs—was the first road constructed in the park, and each year since it was opened a certain amount of labor has been expended in widening and draining it, as circumstances required.

This work has been completed this year, and Mountain Avenue may now be

classed with the others in the park as excellent.

The branch avenue leading from Mountain Avenue to the middle springs was also completed, and easy access to that beautiful and interesting spot is now attainable.

These works were carried on with a small force, and occupied the months of May and June, and on and after the first of July the force was increased, and the work of opening and extending new avenues was commenced more vigorously.

The most important of these being the road from the Spray bridge down the Bow River, and round the base of Peak Mountain, and round again by the Bow, thus affording a drive of about seven miles of the most charming scenery in the park, and giving access to many fishing points along the Bow.

Portions of this road were also necessary to reach certain building sites on the

Bow, which persons expressed a desire to take up and build on.

Buffalo Street was graded and ditched as far along the Bow as villa lots had been taken up and built on, but easy access to which was not attainable till this road was completed.

Later on in the season this road was extended on down the Bow River to the

falls, affording the most beautiful and romantic drive in the park.

A portion of Minniwauka Avenue was gravelled this year, having been left

unfinished the previous year in consequence of early snowfall.

Several of the streets in the village of Banff were graded this summer, and the lanes in rear of the building lots cleared out and graded, giving the people the means of reaching their warehouses by the rear, and preventing injury to the trees and plantations in front of their buildings.

A sidewalk was also built on each side of the Main Street, from the bridge to

Cariboo Street, and crossings made at points most convenient for the public.

14-13****

A number of evergreen trees were planted along the outside of the sidewalk, and inside the ditch, and grouped so as to add much to the beauty of the village.

These works are now completed, and will in the future require only ordinary repairs. They were necessary, from the fact that many persons living on the rear streets had no roads but the natural surface of the ground, and in some cases their places of abode or business were nearly inaccessible from the main roads.

Besides the utility of this work it has had the effect of adding much to the

appearance of the town as well as to the convenience of the inhabitants.

In closing the work for this season advantage was taken of a fall of a few inches of snow to clean up and burn a large quantity of brush and rubbish that had accumulated during the summer from the work on the roads, and a small force of men was kept on for that purpose, which will not only add to the appearance of the drives but reduce the danger from fires next year.

FOREST FIRES.

Early in May a fire occurred in the hay marshes on the south and west of the Bow River, which for a time appeared very serious, but through the exertions of the men on the works, the inhabitants of the place, and the favorable change of the wind, no damage was done further than the scorching of some ornamental trees in that portion of the park, but which, however, was of sufficient importance to cause great regret that these fires should occur, and their causes remain so difficult to ascertain.

During the month of June very extensive fires were seen coming towards the park from the west, and in due time they approached the boundary. No human efforts could avail to arrest the flames while they surged through the heavy pine timber beyond the limits of the park, on the north-west side, but the bare summits of the mountains, which form that boundary, were effectual in arresting their progress, notwithstanding the terrific fury of their approach.

All that could be done under these circumstances was to watch carefully for the sparks and masses of burning wood carried by the wind over the mountain peaks,

and falling thousands of feet from their source.

All the men on the works had to be taken off to fight this demon, and the inhabitants were warned out to assist for days in cutting out fire breaks and preventing the spread of these fires down into the valleys of the park: at last success crowned our efforts, with comparatively little damage to the park, but considerable destruction to the adjoining timber limits.

The fires this season have been the most destructive known for many years, and now that they are over it is satisfactory to know that as regards the track of the fire this year we can hardly be visited from the same quarter for some time to

come

The damage and danger experienced this year from bush fires and the risk of them forcing their way to the interior of the park at some future time impressed me with the importance of cutting out avenues through the dense pine groves. Over six miles of this work was done this summer, and not only are good fire breaks found to that extent, but easier means of access to distant fires are afforded the men in their efforts to reach the places threatened. In cases such as these, any kind of a road or path is of great use in enabling the men to reach the fire in its early stages. Many of the avenues leading in the direction to intersect the usual path of these fires are now opened, and in future the difficulties attending this work will be much lessened, besides which the labor of opening these roads is so much work done towards their final completion. This I considered as the most economical mode of meeting the difficulties from fires.

Besides the advantages of this work as fire breaks, these opened roads afford means of access to many points in the park for persons on foot or horseback who visit to explore, hunt or fish beyond the range of the carriage roads, and persons seeking sites for building can now better locate their positions by having the plan of the park mapped out on the ground for them.

4

NURSERY.

As mentioned in my report for last year, a better site had been secured for the nursery, and as early as possible last spring the ground was laid out and fenced with wire.

The young trees were moved from the old sites and from the trenches in which most of them were placed, and planted afresh in the new nursery—and as this work could not be commenced till after the frost had left the ground, the time left for this tedious operation was not sufficient to give these young trees a fair chance; but, not-withstanding this, they appeared in a very flourishing condition throughout the summer, owing in part to the good quality of the soil and to the excellent facilities for watering and irrigating the whole space allotted to the nursery.

It is situated immediately at the base of the Cascade Mountain, and the stream from whence the mountain takes its name falls perpendicularly some thousands of feet down its face and disappears amidst the *debris* at its base at a point about 300 feet above the level of the plain. At this point a portion of the water is led into a box or small reservoir, and from thence a pipe leading down the slope conveys the water to the nursery, where stand pipes, at several places, allow the water to be distributed by means of a short hose to every point required, and the whole nursery can be watered on short notice at no additional labor or expense.

Had this site not been secured for the nursery and this system of irrigating it not been devised, it is a question if the idea of cultivating a nursery could have been carried out successfully, as the difficulties and expenses of supplying water to

the shrubs would have been very great.

The trees have now had two removals, and it cannot be said that they have had a fair chance for living; but notwithstanding this drawback they show ample life and vigor, at least as regards the deciduous trees.

The evergreens never did look healthy, and I fear that many of them cannot recover. This, however, is of little consequence, as the park is well supplied with evergreens, and of a quality much superior to anything that can be imported.

About seventy-five per cent. of the deciduous trees have succeeded, and there can be no doubt that a much larger proportion would have been saved if the present site for the nursery could have been secured at the time of their arrival here. This, however, was impossible at the time, and the next best thing was done.

BRIDLE BOADS.

The avenues chopped out this year but not yet graded will answer in the mean time a good purpose as bridle roads and paths for persons on foot, but I would strongly advocate the opening up of a more extended system of these bridle roads leading up the several valleys of the park.

At the heads of the several smaller streams falling into the Bow, and on the Bow itself, many small lakes are found, well stocked with fish, and the surrounding

country abounds with game of various sorts.

It is very desirable that these points should be reached for the benefit of sportsmen and others, and it is thought that this object can be attained most effectually and cheaply by means of bridle roads leading up through the valleys; while in the centre of the hunting grounds a cheap log hut could be built and rented to parties wishing to occupy it, at so much per week, whereby a sum sufficient to pay the interest on the outlay on the building could be obtained. This scheme would be very popular, and would add much to the attractions of the park.

These bridle roads can be built cheaply, and no true sportsman would object

These bridle roads can be built cheaply, and no true sportsman would object to travel 10 or 15 miles over such a road for the sake of a few weeks sport. Besides it is desirable that roads leading to these hunting grounds should not be available as carriage roads, as in that case the seclusion of the hunting grounds might be inter-

fered with.

VISITORS.

The number of visitors to the park during the past season, although exceeding that of any previous year, did not come up to what might reasonably have been expected.

Several causes may be assigned for this, the most effective being the great quan-

tities of smoke that lodged in the mountains for many weeks.

The fires that took place early in the season, although local, did not have the effect of obscuring the mountains in the park, but those that occurred later on, in August and September, threw a dense cloud over the whole mountain ranges, as far west as the Pacific coast, and eastward to Medicine Hat.

These fires raged through Oregon and Washington Territories along the Pacific, and westerly winds prevailing for several weeks carried the smoke through the mountains. The consequence was that hundreds of people passed on through the mountains without stopping, as usual, to enjoy the magnificence of the scenery, and others deferred making the trip from the reports they heard of the obscuring effects of the smoke.

It was unfortunate that the visit of the Canadian Medical Association took place at this time, as it was very desirable that such a highly intelligent and influential body of men should see this health resort in its usual condition, and not in the exceptional one in which it was unfortunately their fate to witness it.

On the 19th October His Excellency the Governor General, Lady Stanley and suite, visited the park, and during the three days of their stay visited many places

of attraction and interest.

BUILDINGS.

In the autumn of 1888 a contract was entered into for the erection of a dwelling house for the Land Agent here, and in November another contract for the dwelling for the Superintendent.

The contract for the Agent's house was completed in April last, but the Superintendent's house has remained unfinished, in consequence of the builders' inability to complete it within the terms of the contract.

TELEPHONE.

A telephone system has this year been established by Mr. Gisborne, under instructions from the Minister of Public Works.

The system connects the Mounted Police barracks, the Government offices, the Hot Springs, the Cove and the Canadian Pacific Railway hotel.

METEOROLOGICAL.

A table of the temperatures and other particulars of the weather for the past year is the result of observations made by Mr. Macleod, who had also charge of the nursery during the summer months.

I have the honor to be, Sir, Your obedient servant,

> GEO. A. STEWART, Superintendent.

Work done from 1st May to the 31st October, 1889. ROADS.

Nature of Work.	Locality.	Quantity.
Gravelling.	. Minniwauka	242 4 rod
Ditching and gravelling	. Glen Avenue	109.0 do
Gravelling	River do	133 · 3 · do
Grading and gravelling	. Spray do	218·2 do
Widening, &c	Glen do	60.6 do
do	. Mountain Avenue	151 5 do
Close cutting, grading	. Cypress do	2,290.7 do
Grading	. Middle Springs	
Grading and ditching	. Buffalo do	290 · 8 do
	T-4-1	0.505.4
	Total	3,587 4 rods or 11 21 miles
Close cutting	Torot Assessed	0.000 6
do	Tuning do	2,980 feet
do	Juniper do	4,900 do
do	Spray do	750 do
do		
do	1	3,030 do
do		6,500 do
do	Pine do	3,970 do
	Time do	7,610 do
	Total	*32,940 feet
STREETS,	LANES, ETC.	
Gravelling and ditching	Puffelo Street	200 6
do do		300 feet
do do		1,020 do
do do		1,200 do
do do		600 do 1,400 do
	Total	
	10041	4,520 feet
Lanes		2,800 feet
Sidewalk	Banff Avenue	1,600 feet
EXPENDITU	RE ON WORKS.	
On What Expen	ded.	Amount.
		\$ cts
Roads		9,729 19
Buildings		6,066 12
Surveys	** **************************	1,500 87
Bridges		1,500 87
Waterworks	***********************	1,587 11
		22 10
ave and Basin		1 008 10
Dave and Basin	****************************	
Jave and Basin Caretakers' salaries Nursery		420 37
Cave and Basin Daretakers' salaries Nursery Diearing land Contingencies	•••••••••••	420 37 170 61

^{*}Equal to 6.23 miles 40 feet wide or 30.24 acres.

Number and Nationality of Persons who Registered at the Cave and Basin.

Nation.						
Zanada.	2,24					
Jnited States.	51					
England	17					
Scotland	3					
reland	11					
ndia						
Australia	1					
China	1					
France						
apan	1					
Cape of Good Hope.						
sle of Man						
Finland						
outh America						
andwich Islands						
Ilexico						
Denmark						
Vales,						
Bermuda						
taly						
Track 1	3,1					
Total						

C. P. R. HOTEL.

Visitors between 1st November, 1888, and 31st October, 1889.

From	November, 1888.	December, 1888.	January, 1889.	February, 1889.	March, 1889.	April, 1889.	May, 1889.	June, 1889.	July, 1889.	August, 1889.	September, 1889.	October, 1889.	Total.
Canada England Scotland Ireland Australia New Zealand India China Japan Germany France Holland Switzerland Belgium Sandwich Islands Cape of Good Hope Mexico United States of America	1							89 27 2 4 1 3 2 3 4 1 	151 26 2 4 1 4 2 1 1	309 19 5 2 2 2 1 1 158	156 40 5 3 1 2 4 5 1	145 26 4 1 1 1 30	1,199 177 22 7 15 5 7 15 17 2 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Total	76	44	34	55	58	86	129	205	327	501	273	211	1,999

SANITARIUM.

Visitors between 1st November, 1888, and 31st October, 1889.

From	November, 1888.	December, 1888.	January, 1889.	February, 1889.	March, 1889.	April, 1889.	May, 1889.	June, 1889.	July, 1889.	August, 1889.	September, 1889.	Octuber, 1889.	Total.
Canada England Scotland	1			129 	98 1	103	99 3	142 12	$\frac{206}{10}$	173 2	106 2	136	1,516 30 3
Australia					3			1	····· 1				1 3 1
Germany. United States of America. Total	7	9	12	1 130	2 104	$\frac{1}{3}$	8	13	7 226	13	9	6 142	90 1,645

Observations of the Temperature and general state of the Weather, taken at Banff, between the 7th November, 1888, and 31st October, 1889.

		<u>.</u>					_				
Date.		$Th\epsilon$	rmome	eter.	Weather.	Date		The	ermome	ter.	Weather.
2 44001	_	1	_	0	Tr outlines.	Dute		_		0	, caunor
	7 a	.m.	2 p.m.	9 p.m.				7 a.m.	2 p.m.	9 p.m.	
1888.		o ′	o ′	0 ′		1888		` 0 /	o ′	a /	
Nov. 7		5.0	33.0		Fine.	Jan.	5	6.0	27:0	29:0	Fine and bright sun.
do 8 do 9	2	8·5 9·5	40·0 42·0	26 0	do squally. do and bright.	do do	6 7	$\frac{27.0}{9.0}$			Cloudy. Fine and bright sun.
do 10 do 11		80·0 89·5	39·8 43·0	38·0	Dull; cloudy. do slight rain.	do do	8	-12.0	0.0 0.0	-2.0	
do 12	1 8	3.0	28.0	22.0	Snow, 9 inches.	do	10	2.0	14.0	10.0	do
do 13 do 14		$\frac{7.0}{3.0}$	23·5 11·0	0.0	Fine. Bright and fine.	do do	$\begin{array}{c} 11 \\ 12 \end{array}$	-12.8		4·5 -13·0	Snow; cloudy.
do 15	-	9.0	11.0	-5.0	do	do	13	-23.0	-1.5	-12.0	do
do 16 do 17		$\frac{9.0}{8.5}$				do do	14 15	-17.0	8·5 10·0	1.5 -5.0	
do 18	-	5.0	13.0	5.0	do	do	16	-7.0	14.0	6.0	do
do 19 do 20	1	$\frac{7\cdot 0}{22\cdot 0}$	29.0		Gloomy. Fine.	do	17 18	-1.0		$12.0 \\ -3.0$	
do 21	.)]	12.5	35.0	25.0	do	do	19	1.0	20.0	19.0	do
do 22 do 23	1 2	25°0 16°0	36·0		do	do do	20 21	20·5 17·0		21·0 19·0	
do 24		18.2	31.0	34.5	Bright and fine.	do	22	7.0	26.0	24.0	do do
do 25 do 26		30·0 24·5				do	$\frac{23}{24}$	27·0			Cloudy and squally. Overcast.
ძი 27	1	5.0	27:0	11.0	do	do	25	7.0	30.5	21.5	Fine and bright sun.
do 28	3	6.0 10.0		12.0	do Snow; cloudy.	do	26 27	$egin{array}{ccc} 12^{+}0 \ 7.0 \end{array}$		16·0 22·0	
do 30) [16.0	29.0	25.0	Fine.	do	28	14.0	38.5	24 · 0	do
Dec. 1		$\frac{13.5}{8.5}$	29·0 27·5		do Dull and squally.	do do	29 30	12·5 10·0			do Fine.
do 3	3	33.0	44.0	42.5	Overcast: slight rain.	do	30 31	19.5	32.0	29:0	do
do 4 do 5		38·5 28·2		40.0	Cloudy and squally.	Feb. do	1 2				do Cloudy ; squally.
do 6	3 :	25.5	34.0	25.5	Dull.	do	3	37.0	36.5	34.0	Snow.
do 7 do 8		14·5 37·0		32.0	do do	do do	4 5	14·0 7·0		25.0 18.0	Fine and bright sun.
do S) :	17.0		10.0	Slight snow.	do	6		33.5	15.0	do
do 10 do 11		-4·0 18·0		17.0	Dull.	do do	$\frac{7}{8}$	3.0			
do 12	2¦ ∶	18.0		20.0	Fine and bright. Slight snow; cloudy.	do	9				Fine.
do 13		$\frac{27.0}{20.0}$		39 0	Fine.	do	10				Cloudy.
do 14 do 18		29 · 0 24 · 0			do do	do do	11 12			38.0	do Snow, $1\frac{1}{2}$ inches.
do 16		15.0	26.0	28.0	do	do	13			8.6	Fine.
do 17 do 18		$rac{22.5}{24.0}$		31 (Fine and bright. Fine, bright, squally.	do do	14 15			-7.0	Gloomy. Overcast.
do 19		28:0	39.5	27 () do	do	16			-11.0	Fine and bright sun.
do 20 do 21	L I	30·0 38·5				do do	17 18			2.0	do Fine.
do 25	2	27.0	28.0	10 (Snow, 14 in.; cloudy.	do	19	-16 0	16.2	14.0	0 do
do 23	1 -	-1·0 18·5		6.0	Fine.	do Feb.	20 21		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	-13.	o do squally.
do 2	5 -	11 · 0	1.5	-5.0	Very fine and brightsun	do	22	-16·0	-3.0	- 12·0	O'Fine.
do 20 do 2		-3·0 -5·0				do do	23 24				Fine and bright sun.
do 2	8 -	-5.0	8.8	2.	do	do	25	11 (32.5	30 .	5 do
do 25 do 36		-4·(-9·(do do	26 27				OGloomy. OFine and bright sun.
Dec. 3		3.0			Fine; squally.	do	28	36 :	42.5	40.	0 do
1889.						Mar. do	2				
	1	1.0		3.	Fine.	do	3	14.	5 41.0	32.	0 do
		-3·(-2·{		$\begin{vmatrix} 1 & 1 & 1 \\ 0 & -2 & 1 \end{vmatrix}$	5 Fine and bright sun.	do	4				
do		- 2 ·0			0 do	do_	. 6	18.			
10					PA	rt v]	l				

OBSERVATIONS of the Temperature at Banff, &c.—Continued.

Date	e.	The	ermome	eter.	Weather.	Dat	e.	The	ermome	eter.	Weather.
	- 1	7 a.m.	2 p.m.	9 p.m.				7 a.m.	2 p.m.	9 p.m.	
1889		o ′	0 ′	0 '		1889).	0 /	0 /	0 /	
Mar.	7	18.5	49:0		Fine and bright sun.	May	4			34.0	Overcast; heavy squalls
do do	8	15·0 14·5		29:0	do	do do	5 6	35·0		43°2	Cloudy. Overcast; snow and
do	10	27.0	32.5	27.0	Overcast.	1				(rain.
do do	11 12	$17.0 \\ 23.0$	29·8 26·0		Fine. Snow.	do	7 8	32·2 31·8	58·8 61·5	52·5	Fine. Cloudy.
do	13	1.0	10.0	1.0	do	do	8		68.5	51.0	Fine and bright.
$rac{ ext{do}}{ ext{do}}$	14 15	-3.0	12·5 44·0		Overcast. Fine and bright sun.	do do	10 11	34·0			
do	16	27.0	46.0	37 5	do -	do	12	35.0	60.5	41.2	do rain in p.m.
do do	17 18	23·0	47·0 41·5	42·0 30·0		do do	13 14	41·2 37·5	46 5 44 0	39.2	Very gloomy.
do	19	20.5	40.5	21.0	Cloudy.	do	15	33.8	40.0	37.5	Overcast; slight snow.
do do	20	17·0 21·0	40·5 45·0	27 0	Fine. Fine and bright sun.	do	16	29·8 28·3	58.5	39·2 46·0	Fine.
do	21 22	29.0	50.0	40 0	Gloomy.	do	17 18			42.0	Overcast ; rain.
do	23	33 5	53.5		Fine.	do	19	39.5	61.0	62.2	Fine.
do` do	24 25	36·0 23·5	46·0 47·0	38·0 42·0	Gloomy. Fine; slight rain.	do do	$\frac{20}{21}$	29·8 36·8	71·0	51·0 39·5	Cloudy; rain.
do	26	33.5	51.0	42.2	Fine.	do	22	36.5	59.0	34.5	Fine; squally.
do do	27 28	24·0 25·0	54·5 45·0	34·0 30·5		do do	23 24	29·8		51·0 54·0	do squally.
do	29 30	36.0	46.0	38.0	do	do	2 5	43.0	71.0	52.0	do
do do	30 31	23·0 33·5	47·2 51·0	42.0	do squally.	do do	26 27	30.0	67.5	51·5 51·0	
April	1	36.0	34.0	33.5	Overcast, slight snow. Snow, 3 inches.	do	28	46.5			Cloudy.
do	2	26·5 30·0	39·0 49·5	33.0	Snow, 3 inches.	do	29 30	46.0			
do do	3	32.5	60.0	35.0	Fine and bright.	do June	1	27:0		47·5 51·0	do do rain. Fine.
do	5	27.5	55.5	45.0	do Mosquitoes	do	3	30.0	76.0	57.0	do
do	6	29.5	51.2	33.0	Snow gone. Sine and	do do	3 4	36·0 47·0		58.5	Fine; squally.
					bright.	do	5	46.5	54.5	49.0	do
do do	8	25 0 27 5	58·5 62·0	35.0 43.2	Butterflies seen. Bright sunshine.	do do	6 7	33·5 36·0	51 5 52 0	43·0 42·5	
do	9	28.0	65.8	38.5	do	do	8	39.0	66.0	55.5	do heavy smoke.
do	10	27.5	63.8	36.0	do Thermometer 82° in sun.	do do	9 10	38·5 44·2	74·0 77·0	64·5 68·5	
do	11	26.0	57.0	47.0	Thermometer 100° in sun	do	11	45.5	72.0	48.5	do do
do do	12 13	$\frac{32.0}{31}$	49·5 39·0	40.0	Cloudy.	do do	12 13	47.0 40.0			Cloudy.
\mathbf{do}	14	28.5	44.0	28.5	do squally.	do	14	39.0		61.5	Fine.
	15 16	24·0 25·0	44.5	30.0		do	15	45.5	71.0	58.5	Fine and smoke.
do do	17	29.0	45·0 46·0	34·0 40·0		do do	16 17	51·5 47·0		51.0	do
do	18	34 5	46.0	37:5	do	do	18			51.0	Fine sky, obscured by
do do	19 20	$\frac{35 \cdot 2}{25 \cdot 0}$	48·5 55·0	46.0	Fine and sunshine. Fine.	do	19	42.5	61.5	52.0	smoke.
$\mathbf{d}\mathbf{o}$	21	34.0	45.0	39.0	Cloudy; rain.	do	20	40.0	60.5	52.5	do
	22 23	36·5 30·2	50·5	40.5 45.0	Fine. do and clear.	do do	21 22	43·0 45·0	73·0 72·0		
do	24	43.0	56.5	48.0	do windy.	do	23	39.0	42.0	35 5	Cloudy; heavy squalls.
	25 26	24·0 25·6	63·0 64·2	\ 40.8 41.5		do do	24 25	43·5 46·0		59.0	Fine.
	27	33.5	66.5	20.0		do	26	47.0		48.0	do
	- 1				tain fires.	do	27	45.5	63.5	54.0	Cloudy.
	28 29	29·0 24·5	63·0 61·8	47·0 46·2		do do	28 29	43·0 46·5			
	30	27.0	68.5		Fine; smoke from forest	do	30	46.0	61.0	48.0	do slight rain.
May	1	29.0	73.5	53.0	fires. do do	July do	1 2	44·0 46·0			Fine.
do	2	24.0	71.0	52.0	do do	do	3	43.5	78.0	69.0	do
d o	3	25.0	69.0	55.0		do TV	4	48.0	74.0	46.5	Cloudy.
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OBSERVATIONS of the Temperature at Banff, &c.—Concluded.

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Date.		Ter	nperati	ure.	Weather.	Date		Ten	nperatu	ıre.	Weather.
Date.	_		1		weather.	Date	•				weather.
	7ε	.m.	2 p.m.	9 p.m.				7 a.m.	2 p.m.	9 p.m.	
1889.		, ,	o '	0 /		1889).	o ,	o /	0 /	
July 5		33.0	38.0	39.0	do rain.	Aug.	26	53.0	63.5	58:0	 Cloudy ; slight rain.
do 6	4	45·5	58.5	37.0	do do	do	27	45.0	58.0	47.0	Heavy rain; squalls.
do 7	:	35.0		37.5	Rain.	do	28	41.0		49.0	Heavy rain; squalls. Cloudy. Fine.
do 8 do 9		36·0 41·0		48 0	Fine. do	do do	29 30	49·5 48·0		64.0	Fine. Cloudy & heavy squalls.
do 10		39.0		46.0	Cloudy.	do	31	39.0		34.0	Rain and snow.
do 11	1	35.0	60.0	43.0	do rain.	Sept.	1	39.0	52.0	45 0	do
do 12		35.2			Fine.	do	3	44.5			Rain.
do 13	١ '	43.0	73.0	58.0	do thunder storm in		3 10	31·0 25·0		45.0	Cloudy.
do 14	: ا	34 ·0	76.0	51.0	p.m. Fine.	do	10	25 0	38.0	21.0	Snow fell during night of 9th and all day—9
do 15		46.0		52.0	Cloudy; thunderstorm. Fine.	1					inches.
do 16		46:0	65.5	50.5	Fine.	do	11	26.0		30.5	Gloomy; snow. Cloudy. Slight snow.
do 17 do 18		45·5 46·0		56.5 52.0	do	do do	$\frac{12}{13}$	23·0 21·5	37·0	27.5	Cloudy.
do 19		43·5		55.0	do	do	14	22.0	39.0	32.0	Overcast; snow.
do 20	١.	44.0	57.0		Cloudy; rain.	do	15	39.0	50.5	41.0	Cloudy.
do 21		48.0		50.0	do	do	16	37.0	59.0	52.0	Fine.
do 22	:	35 ·0	73.0	59.0	Fine; thunder storm in	do	17	36.0		62.0	do clear sky.
do 23	١.	4 0·0	72.0	50.5	p.m. Fine.	do do	18 19	39·0 38·0		60.0	do do do cloudy sky.
ქი 24	١.	41·0		61.0	do	do	24	31.0			Cloudy.
do 25		46·0	76.5	69.0	do	do	25	36.0	68.0	51.5	Fine and clear.
do 26		61 . 0		68.5	Fine; forest fires.	do	26	33.0			
do 27 do 28		46 ·5	76.0	56.0	do	do Oct.	27 3	36·0 48·0			do Cloudy and squally.
do 29			78.5	55.0	Fine smoke.	do	4				Fine and clear.
do 30		43·0			Cloudy; rain, thunder	do	5	41.0			
• ~					Cloudy; rain, thunder and lightening.	do	6	34.5		59.0	
do 31 Aug. 1		42·0 44·2		58.5	Fine; heavy smoke.	do	7 8 9	33·0			
Aug. 1]]	$\frac{11}{41}$			do do do do	do do	9	31.0		53·0	
do 3	١.	44 0	73 0	58.0	do do	do	10	45.0	55.0	44.0	do
do 4		45.0			do do	do	11		51.5	43.0	Cloudy.
do 5		46:0			do do	do	12	39.5		46.0	Fine and clear.
do 6	1	40 ·0	58.0	00.0	Fine; 9° of frost during night.	do do	13 14	38.0 41.0			
do 7	1	39 · 0	68.0	50.0	do	do	15		60.0		
do 8		39.0	76.0	51.0	do	do	16	34.0	58.0	43.5	
do 9		41.0		60.0	Smoke; heavy.	do	17	34.5		48.0	do
do 10		40 · 0	70.0	N 23.0	do	do	18			37.0	Cloudy.
do 11 do 12		42·0 41·0		60 0		do do	19 20			36.0	Fine and clear.
do 13		41 · 0			do	do	21	31.0			do
do 14		39 0	62 0	51.0	do	do	22	29.0	50.0	34.0	do
do 15		41 6			Fine; heavy smoke.	do	23	33.5	57.0	33.0	
do 16 do 17		38·0 36·0				do	24	33.0	52.0	41.0	in p.m. Fine.
do 18		43 (do	do	25	34.0	44 0	48.0	Cloudy and squally.
ძი 19	ا ا	35 0	62.0) 51.0	do	do	25 26	42.0	58.5	47.0	Fine and clear.
do 20 do 21	1	37:0			do	do	27	44 0		45 5	Cloudy; rain; squalls.
do 21 do 22	1	35 · 6 39 · 6				do do	28 29	42 0 29 5			do Fine and clear.
do 23	1	39 C				do	30	28 0			of the and clear.
do 24	Į.	50.0	61.0	54 (Fine.	do	31				
do 25	1	48.0		59 5		1			1		
					I	[1		1 .	1	<u> </u>	<u> </u>

PART VI.

REPORT OF THE FORESTRY COMMISSIONER.

PART VI.

REPORT OF THE FORESTRY COMMISSIONER.

Anderdon, Ont., 31st December, 1889.

To the Honorable

EDGAR DEWDNEY, M.P.,

Minister of the Interior, Ottawa.

Sir,—I have the honor to report that during the past season successful efforts at the plantation of forest trees have been made on the Experimental Farm for the North-West Territories at Indian Head. Several fine varieties of elm, ash, maple, pine, locust, spruce, alder, birch and cedar have been cultivated with success. Mr. Mackay, the Superintendent, has also introduced from Brandon a large number of ash-leaved maples, and appears to be succeeding well in the cultivation of forest trees. At Brandon, Mr. Bedford, the Superintendent of the Experimental Farm there, has successfully engaged in forest tree culture, having planted out a large number of ash-leaved maples, and having also a nursery in which native ash, maple and basswood trees are being raised from the seed. These attempts are, however, on a small scale, and are only indications of what it might be possible to accomplish. Any other attempts at forest tree culture in the North-West are being left for the present to private enterprise. Their cultivation is being carried on in isolated cases with varying success by individual owners.

Professor Saunders, Director of Experimental Farms, has given much thought to the question of forest tree culture. He is trying various methods, with a view to solve the difficulties which are incident to the problem of tree planting in the North-West. He has experimented with seedlings purchased from nurserymen who cultivate the forest tree from seed, and also has planted out nurseries from seed. His experiments with the Riga pine, which is planted out in beds with seed imported from one of the Russian forests near Riga, bid fair to be highly successful. Should

they prove so, it will be of inestimable advantage to the North-West.

The great difficulty which at present impedes the cultivation of large plantations of forest trees in Manitoba and the North-West is climatic. In early spring delightfully soft, balmy days, something like the maple sugar weather in Ontario and Quebec, awaken the young trees to life and cause the sap to run, and then suddenly a terrific blizzard from the north and north-west comes down and freezes up the sap and destroys the trees. Professor Saunders is now engaged in experiments with a view to overcoming this climatic obstacle. I have thought that by planting the young trees very closely together, or by sheltering them during their earlier seasons, as is done in the case of the seedlings at the Model Farm at Ottawa, this trouble might be gradually lessened, or willows or cotton wood might be planted with the young trees as a shelter belt protection for them against these early spring frosts and sudden and extreme changes of temperature. As yet, of course, we have no practical experience in the North-West on the subject, and can only base any action we may take upon knowledge obtained from what has been done in other countries with the same characteristics both of soil and climate. In the several Provinces of the Dominion and in the North-West the practical study of forestry can hardly be judged by what our people have done—for what have we done? Nothing but destroy.

I would respectfully recommend that an effort be made to arouse the interest of the Local Governments in the different Provinces to the importance of the question of forest tree plantation, and that they be asked to appoint commissioners to

co-operate with your commissioner in holding meetings and discussing this important question, as is done by forestry commissioners in the United States. The commission might meet at Winnipeg or Regina, and prepare, from the best available sources of information, a hand-book for the use of the farmers and settlers of Manitoba and the North-West. They should also evolve some plan which would meet with the approval and adoption, not only of the Dominion Government, but of the several Provinces, for re-plantation and plantation of forest trees on an extensive scale by the respective Governments in the Provinces and Territories.

I would suggest that in the meantime such an amount as you may deem consistent, considering the importance of the work to be done, be placed in the Estimates for the cultivation of forest tree plantations at different points in the North-West. I would suggest that these plantations be commenced, in the first instance, at the several stations of the North-West Mounted Police, and that that force be given the

control and responsibility of their development and protection.

The great desert steppes of Russia have in large districts, by the action of the Government, been changed into extensive and valuable forests, which are now a source of revenue to the State. Towns have sprung up in their neighborhood, where fruit culture is carried on in consequence of the protection of these forests, and at

points as far north as any existing settlements in the North-West.

The work to be done in the North-West is one of gradual and almost imperceptible growth; but it is one which, if properly done, and on an extensive scale, may be made a source of great future profit to the Dominion. The Government, the ranch companies, the land companies, the railway companies at all their several stations, and the people themselves, have all to do their share. But the Government must take the initiative, and the first step would be the establishment of these experimental forestry plantations, which I have suggested, at the different stations of the North-West Mounted Police. These stations would in time furnish not only a practical but a scientific school for the intelligent management of forests by means of knowledge derived from experiment and experience, and would give encouragement to settlers to cultivate smaller plantations on a smaller scale, each on his own

In British Columbia the ravages by fire during the past year have been greater than any hitherto known, caused almost entirely by sparks from locomotives. On each side of the railroad track is a belt of felled timber which, on account of its extreme dryness, ignites easily and acts as a medium or train for conveying the fire to the forest. My reports from there estimate the loss during the year at over \$1,000,000. This could have been avoided had the smoke pipes of the engines been properly screened. On the other hand, it is satisfactory to be able to report that in many places which in former years had been swept by flames the forests are

reproducing themselves.

One correspondent, a man thoroughly conversant with lumbering in all its branches, writes: "British Columbia contains more timber to the square mile than any country in the world, and with careful management would yield an unlimited supply for all time." None but the mature trees should be cut. The growing trees would mature more rapidly and young seedlings spring into life. This applies more particularly to the interior and eastern slopes of British Columbia than to the vicinity of the coast, where rains are much more frequent and the atmosphere Owing to the mountainous character of the country, the total denudation of hills by the axe would be ruinous to the land, as the heavy rains which always follow a protracted drought would wash down all the soil, leaving only bare and rugged rocks.

The forests which cover the head waters of all rivers that originate in the mountains should be carefully protected from destruction. If not, the accumulated snows of winter, under the influence of the Chinook winds, the hot sun and spring rains, will melt rapidly, causing disastrous floods at one season of the year, while at others the volume of water will be so reduced as to materially lessen the availability of the river for navigation or other purposes. At the recent Congress of the

[PART VI]

American Forestry Association held at Philadelphia, the Hon. Carl Schurz gave particular emphasis to the paramount necessity of guarding the forests that guard the rivers: "There is a mountain region in the far north-west which demands the earliest possible attention of our national authorities. It is the great area of mountain forest covering the head waters of the Missouri and the Columbia. The Government cannot too soon take effective steps to protect these forests, which are the most important in the United States, against destruction, by making them permanent reservations and having them carefully guarded." These warning words of the venerable statesman speak with equal meaning to us. The Fraser and many other Canadian rivers are exposed to the danger that threatens the Missouri and the

The absence of trees on the plains and prairies is keenly felt by settlers, and they are looking forward hopefully to the establishment of the forestal experimental stations. The Government would find it to its own interest to establish them in the neighborhood of the Mounted Police stations, where young trees could be obtained at a nominal price, or for nothing. It would also be well to encourage tree planting by offering premiums for the best groves or groups of trees. But mere tree planting will never meet the requirements of the North-West. Large tracts must be planted and maintained in order to promote industrial and climatic advantages; and till something in this respect is done the advance in the settlement of the country will not be what we could hope for or expect in a country otherwise so richly endowed. The Government has been bountiful in promoting almost all other enterprises. The forests alone have had no helping hand, although they have hitherto been one of our

greatest sources of wealth.

I have referred to the benefits that accrued from the planting of forests on the great steppes of north-eastern Russia. These steppes, like our western plains, were deemed inhospitable and worthless. They now support a numerous and well-to-do population, with large towns and villages exporting largely of fruits, cereals, &c. In order to achieve a success equal to that which crowned the efforts of Russia on the great steppes, we must have trained and experienced foresters. To originate, conserve and manage such forests so as to make them profitable, requires a thorough practical knowledge of, as well as technical skill in, forestry, and these can only be acquired in schools of forestry. When the Government of India awoke to the great necessity of conserving and renewing the forests, some seventy-five young Englishmen were sent by the Secretary of State for India to be educated at the forestry schools of France and Germany. Sir D. Brand, F. R. S., &c., &c., late Inspector General of Forests to the Government of India, in his report, 1888, dwells at considerable length on the absolute necessity of having thoroughly trained officers; and it was at his request that the Government of India utilized the forestry schools of France and Germany for the training of young men for the Indian Forest Service. Our wants are not so pressing as those of India, and it is not likely that any students will in the near future be sent abroad to study. The expense that would necessarily occur would be the greatest objection. But could not something be done at home? Could not forestry classes be attached to our Military School at Kingston and our Universities? We now expend large sums of money for propagation of fish, for harbor protection and improvements, and many other things that are of no greater moment nor of more pressing necessity than forest culture on the great plains of the North-West. In Europe, particularly in Germany, where education in forestry has attained the highest standard, opinion inclines towards uniting the forestry schools with the Universities. Recently the Wurtemburg Forest Academy was removed from Hohenheim to the University of Tubingin, and the Bavarian Academy to the University of Munich. may be worthy of note here that at these German Forestry Academies there are several Japanese students. At the Royal Forest Academies at Tharandt, in Saxony, three of these students, very able men, are pursuing their studies in the theory and practice of forest culture.

In Prussia there are three grades of forest schools. The first two are preparatory, where pupils from 12 to 17 years of age receive an elementary education and practical instruction under the direction of a forester. There are two academies under the Department of the Minister of Agriculture. The term of study is two years, and the course embraces—Physics, including Meteorology and Mechanics; Chemistry, organic and inorganic; Mineralogy, Geognosy and Geology; Botany in all its phases; Zoology; Mathematics; general Political Economy; History and literature of forest affairs; Forest planting and preservation; Forest technology; Forest valuation; Wood measuring, survey and statistics; Forest administration; Jurisprudence; Prussian civil and penal code; Forest road construction; Game laws. A student, before he is admitted to these academies, must have a certificate that he has graduated at a Prussian technical school of the forest class, must have a good character, and be possessed of the necessary means to pursue his studies.

The only forest academy in France is at Nancy. It was founded in 1824. At first it was an establishment of minor consideration, but great progress has taken place during the last sixty-five years, and it is at present in a high state of efficiency. The Director, the Inspector General of Forests, is aided by a staff of twelve professors. Admission to this school is obtained by competition. Candidates must be between the ages of 18 and 22 years. They must be in sound health, and hold certificates showing that they have completed their course of general studies at the Lycee (High School). The subjects in which they are required to pass at the entrance examination are as follows, viz.:—Arithmetic, elementary geometry, algebra, trigonometry, analytical geometry, descriptive geometry, natural philosophy, organic and inorganic chemistry, cosmography, mechanics, the German language, history, geography and plain drawing. The number of candidates admitted annually is about 18, and the course of study extends over two years. The time of study in each year comprises six and one-half months of theoretical and two and one-half months of practical instruction—one month being devoted to examination and two months to vacation. The school is well equipped in every way. The buildings are very extensive. There is a spacious amphitheatre, halls of study, a recreation room and an infirmary. The museum is very complete, and there is an excellent professional library containing about 4,000 volumes. There is also a complete chemical laboratory. Both Frenchmen and foreigners can obtain permission to follow the courses of the school as free students, without the payment of any fees. Among the free students who received education there were 73 Englishmen who had been sent there by the Secretary of State for India to be trained for the Indian forestry service under a special arrangement with the French Government. Ordinarily, the free students merely attend the lectures, and are not examined; but the English students have to pass all the examinations. There is a secondary or primary school at Barres, to prepare men for subordinate positions in the forest service.

Austria and Russia have each a free system of forestry education.

In Australia the Forestry Department, under the efficient management of John Ednie Brown, F.L.S., Conservator of Forests, is doing good work, and the results thus

far are very gratifying.

In conclusion, permit me respectfully to contrast what is being done in the Dominion and its several Provinces with what is being done in the rest of the civilized world. In the United States the Federal Government keeps up a permanent forestry staff; and the several States, particularly the prairie States, are expending large sums annually in forestry plantations. Australia, though a much younger country than ours, is earnestly at work looking after the re-plantation and preservation of her forests. All the great countries of the continent of Europe have thoroughly systematized the science of forestry, and in each of them it has become a source of considerable revenue to the State. In Canada alone the outlook is discouraging. In the older Provinces of the Dominion the destruction of our forests by fire and by the axe goes on with unabated fury and with painful disregard of the inevitable consequences in the near future. The chief sinners in this respect are the Provinces of New Brunswick, Quebec and Ontario. I would earnestly recommend that steps be taken to impress upon the people of the several Provinces the evil consequences which the destruction of the forests has wrought in other countries, and which,

in some cases, succeeding generations have striven in vain to repair. With us the greed of some and the indifference of all are tending to a similar result; and it is full time that the Dominion Government should sound the note of warning to the Provinces, and take vigorous action in the Territories which are under its immediate control.

I have the honor to be, Sir, Your obedient servant,

> J. H. MORGAN, Forestry Commissioner.

PART VII.

REPORT OF HALF-BREED COMMISSION.

PART VII.

REPORT OF HALF-BREED COMMISSION.

OTTAWA, 1st May, 1889.

To the Honorable
The Minister of the Interior,
Ottawa.

Sir,—I have the honor to report that immediately upon the completion, at Montreal Lake, on the 11th of February last, of the necessary negotiations which Lieutenant-Colonel Irvine and myself were authorized, by Order in Council of the 29th of November, 1888, to make with the different bands of Indians whose hunting grounds are situated in that portion of the North-West Territories lying between the northern boundary of Treaty No. 6 and the northern boundary of the Provisional District of Saskatchewan, and bounded on the east and west by the limits of the timber and land district of Prince Albert, for the surrender by the said Indians of the tract above described, I received, pursuant to the instructions to that effect contained in Departmental letter of the 18th of December last (Ref. 193515 on 138557), applications from Half-breeds to share in the grant of scrip authorized by sub-clause "F" of clause 90 Dominion Lands Act; and, under the powers vested in me by an Order in Council passed on the 14th of December, 1888, I issued scrip certificates to such of the applicants as established to my satisfaction that they were entitled thereto.

At Montreal Lake, which place I left on the 14th of February to return to Prince Albert, I received thirty-six applications, twenty-two of which were made by the legal representatives of deceased Half-breeds, and I issued scrip certificates as follows:— ,

Form A, 2	Certificate	es of \$160 each	\$ 320	00
do A, 12	do	of \$240 "	2,880	
do B, 37	do	amounting to	3,144	44
A and B, 51	do	amounting to	\$6,344	44

At Red Deer Lake one claim was presented which was allowed. In satisfaction thereof I issued a certificate on the Form A for \$240.

Prince Albert was reached on the 18th of February, at which place I remained until the 27th of the same month, when I started out for Green Lake, accompanied by Mr. A. J. McNeill, of the Duck Lake Indian Agency, and arrived at my destination on the 4th of March.

I granted at Green Lake and at the various points on the way thither, scrip certificates to such Half-breeds as had submitted the necessary evidence before the North-West Half-breed Commission in 1887, but whose claims were then reserved, as the claimants were residents on the 15th July, 1870, outside those portions of the Territories which have since been ceded by the Indians under treaty with the Government of Canada.

This was done under the authority above quoted, and in obedience to the further instructions contained in your telegram of the 25th of February, 1889, which reads as follows: "It has been decided to grant scrip to all Half-breeds who submitted satisfactory evidence in support of their claims, notwithstanding their residence in unceded territory at transfer. You may now proceed to Green Lake and deal with all those

cases in relation to which you have the evidence in your own possession. Remainder

will be dealt with from Department direct."

Of these claims seven heads of families and sixteen children, to whom I issued scrip certificates in satisfaction of their claims, to the value of \$4,960, were residing on the 15th July, 1870, within the tract recently surrendered by the Indians; and seven heads of families and fifteen children, to whom I also issued scrip certificates, amounting to \$4,720, were dealt with under the authority given me in your telegram of the 25th of February last, above referred to, which action has since been confirmed by Order in Council. (See Order in Council of 18th March, 1889).

I also received five new applications—two at Green Lake and three at Sandy Lake—two of which I reserved, as the claimants were living on the 15th July, 1870,

in territory which has not yet been ceded by the Indians.

In satisfaction of these claims, twelve of which were preferred by persons who were previously in receipt of Indian annuities, I issued the following scrip certificates:—

Form A, 16	Certificates,	\$ 160	each		\$2,560	00
do A, 27	do	240	\mathbf{do}	••••	6,480	00
do B, 4	do	240	do		960	00
				_		
A and B, 47	do	amo	untin	g to	\$10,000	00

I left Green Lake on the 6th of March to again return to Prince Albert, which latter place I reached on the 10th of that month, and on the 16th of the same month I proceeded to Winnipeg, where I arrived on the 27th of March, having stopped, en route, at St. Laurent and Batoche.

In compliance with the request contained in your message of the 26th of March, 1889, I left Winnipeg for Ottawa on the 2nd of April, arriving here on the 5th.

At Prince Albert I issued the following scrip certificates:-

Form A, 20	Certificates	of \$240 eac	h\$ 480 00
do B, 14	do	amounting	to 1,223 32
A and B 16	do	do	\$1,703 32

The two certificates on the form A, last referred to, were issued in satisfaction claims which were reserved by the Commission in 1887, because the claimants are residing at the transfer in that portion of the Territories recently ceded by the Indians.

At Batoche one scrip certificate was issued on the form B for \$80.

Recapitulation of scrip certificates issued on the forms A and B:-

Form A,	60	Certificates,	amounting	to	\$12,960	00
do B,	5 6	$d\mathbf{o}$	do	••••••	5,407	72
A and B1	16	do	do		\$ 18,367	72

I received altogether evidence in support of fifty-six new claims:-

At Montreal Lake	A 4 3/ +				
Tro micros car rances services	At Monues	l Lake		 •	36
Red Deer Lake 1					
Green Lake 2	$\operatorname{Green}\mathbf{L}$	ake	•••••	 •••••	2
Shell River 3	Shell Ri	ver		 	3
Sandy Lake 2	Sandy J	ake		 	2
Prince Albert 10	Prince A	Albert		 	10
Batoche					

Total	5 6
	==

4

The nature of these claims may be classified as follows:-	
Claims allowed of Half-breed heads of families	4
Claims allowed of children of Half-breed heads of families Claims allowed of legal representatives of deceased Half-breed	14
heads of families	16
Claims allowed of legal representatives of deceased children of	
Half-breed heads of families	18
Claims reserved, as claimants were residents on 15th July, 1870,	
of those portions of the Territories which have not yet been	
ceded by the Indians under treaty	2
Claims requiring further evidence	1
Claims disallowed, as claimants were residents on the 15th July,	
1870, of the United States of America	1
Total	56

The fifty-six applications above referred to, which are herewith enclosed, have all been entered, and the decision arrived at in each case has been recorded in the

register of the North-West Half-breed Commission.

The applications which were reserved at Green Lake in October, 1887, by the North-West Half-breed Commission, and which accompanied Departmental letter of the 18th of December last, are also herewith enclosed, as well as the scrip certificate books referred to therein, and the application which was forwarded to me at Prince Albert under cover of letter of the 24th of January last. (Ref. 196342 on 167747).

To each of these applications, where a certificate for scrip has been issued in satisfaction thereof, a duplicate of such scrip certificate has been attached, and a remark to that effect has been made opposite the respective claim numbers in the

register of the North-West Half-breed Commission.

Five of the claimants, whose applications also accompanied Departmental letter of the 18th December last, already referred to, were absent when I visited the North, and scrip certificates were not, therefore, issued by me in satisfaction of their claims.

I have the honor to be, Sir, Your obedient servant,

R. GOULET.

Commissioner.

PART VIII.

EXPLORATORY SURVEY

OF PART OF THE

LEWES, TAT-ON-DUC, PORCUPINE, BELL, TROUT, PEEL, AND MACKENZIE RIVERS.

 \mathbf{BY}

WILLIAM OGILVIE, D.L.S. 1887-88.

EXPLORATORY SURVEY OF PART OF THE LEWES, TAT-ON-DUC, PORCUPINE, BELL, TROUT, PEEL, AND MACKENZIE RIVERS.

To the Honorable
The Minister of the Interior,
Ottawa.

OTTAWA, 16th July, 1889.

SIR,—I have the honor to submit the following report of my operations on the Lewes or Yukon River, in the season of 1887 (of which a preliminary sketch was published in the Annual Departmental Report for that year), and on the Tat-on-Duc, Porcupine, Bell, Trout, Peel and Mackenzie Rivers during the season of 1888.

I left Ottawa on the 20th of April, 1887, for Toronto, where I remained two days doing some preparatory work in the magnetic observatory having relation to the magnetic observations which I intended to make during the progress of my expedition, and also supervising some changes and repairs of instruments, the chief

object of which was to lessen their weight, and thus facilitate progress.

I had to stop one day in Winnipeg, to obtain an astronomical transit (F. O. 2). On the evening of the 2nd of May I reached Victoria, B. C., where I at once set about making the necessary preparations to start by the boat, which was advertised to leave on the 9th. The vessel did not arrive, however, until the 12th. I then found that she was much overloaded, and it was with some difficulty that I got Capt. Hunter to consent to take my outfit, which weighed in all about six tons, and, under the circumstances, it was a real act of kindness on his part to do so.

Owing to the heavy load, we made slow progress, and it was not until the 18th of May that we reached Fort Wrangell, at the mouth of the Stikine River. Here I parted from Dr. Dawson, whom I arranged to meet at the confluence of the Pelly and Lewes or Yukon River about the 20th of July following. We arrived at Juneau City on the evening of the 19th, remaining there and at Douglass Island until the evening of the 20th. At Douglass Island I had an opportunity of visiting the celebrated Treadwell gold mine and reduction works, containing one hundred and twenty stamps, which have since been doubled in number. The output of this mine, with the smaller number of stamps, was generally estimated at about \$70,000 per month, but no one seemed to know the exact amount.

As the boat was now much behind time she went direct to Sitka, instead of Chilkoot, as usual; thence in succession to Sitka, Killisnoo, Chilkat, and Chilkoot, where I landed on the morning of the 24th of May, and where my work began.

The first news I received on landing was that there was trouble in the interior, on the Lewes River, in the vicinity where I intended to go. A miner, who had recently arrived from the interior, stated that there had been a fight between the Indians and the miners at the mouth of Stewart River. The result of the affair, he alleged, was that four Indians and two white men had been killed, and that the Indians had come up the river as far as the cañon to lie in wait for any white men who might be going into the country. I did not have an opportunity of questioning him, as he had gone to Juneau City the day before I arrived. The rumor seemed to me somewhat improbable; but true or false, it was an unpleasant one to hear, and the only way to verify it was to go and see whether the Indians were hostile or not. Happily the whole story proved to be untrue, as I subsequently learned from the miners in the interior that he had difficulties with them, in consequence of which he was ordered in mid-winter to leave the region, which the miners consider equivalent to a sentence of death. Strange to say, he succeeded in getting out alive, making a distance of upwards ot 500 miles of the most dangerous and difficult travelling. He started in the

month of February, I think, and reached the coast in the month of May. It is reported that on his way out he had more trouble with an Indian whom he hired to accompany him. Another miner named Williams started from Stewart River for the coast in the month of December, carrying a message from Harper, McQuestion & Co., and mail from the miners. This man had the advantage at intervals of the assistance of the miners, a few of whom were scattered along the river in the vicinity of the Teslin-too (the Newberry of Schwatka). At the summit of the coast range he was detained by a snow storm for three days, and the hardships he suffered brought on pneumonia, from the effects of which he died.

It is said by those familiar with the locality that the storms which rage in the upper altitudes of the coast range, during the greater part of the time from October to March, are terrific. A man caught in one of them runs the risk of losing his life, unless he can reach shelter in a short time. During the summer there is nearly always a wind blowing from the sea, up Chatham Strait and Lynn Channel, which lie in almost a straight line with each other, and at the head of Lynn Channel are Chilkat and Chilkoot inlets. The distance from the coast down these channels to the open sea is about 380 miles. The mountains on each side of the water confine the currents of air, and deflect inclined currents in the direction of the axis of the channel, so that there is nearly always a strong wind blowing up the channel. Coming from the sea, this wind is heavily charged with moisture, which is precipitated when the air current strikes the mountains, and the fall of rain and snow is consequently very heavy.

In Chilkat Inlet there is not much shelter from the south wind, which renders it unsafe for ships calling there. Capt. Hunter told me he would rather visit any

other part of the coast than Chilkat.

After landing at Chilkoot the weather continued very wet for three days, so that I could not do anything in the way of commencing the survey, and during the delay myself and party were employed in making preparations for carrying the instruments, provisions and other baggage up to the head of Taiya Inlet, a distance of $20\frac{1}{2}$ miles. This was accomplished by securing the services of two boats belonging to a trader, which were towed to the head of the Taiya Inlet by the United States gunboat, "Pinta," to the commander of which (Capt. Newell) I owe a debt of gratitude for his very obliging and attentive treatment of myself and party.

SECTION I.

EXPLORATORY SURVEY from the Head of Taiya Inlet, through Taiya Pass, and down the Pelly-Yukon River to the International Boundary between Alaska and the North-West Territories of Canada.

On the 30th of May I commenced the survey by connecting Pyramid Island in Chilkat Inlet with Chilkoot Inlet at Haines mission. At this point a Protestant mission was established some years ago; but it is now abandoned, owing, as I was informed, to the very unpleasant conduct of the Chilkoot Indians. I could not learn that they had committed any overt act of hostility, but it appears the missionary tried to relieve the sufferings of a sick Indian child. Unfortunately, the child died, and the father attributed the death to the missionary, and from that time acted in so suspicious a manner towards the children of the latter that he considered it unsafe to remain in the vicinity, and moved into Juneau City.

to remain in the vicinity, and moved into Juneau City.

The teacher of the United States Government school for Indians at Haines mission, Col. Ripinsky, told me he had got into trouble in the same way. A sick Indian to whom he administered medicine at first became much worse, in consequence, apparently, of the treatment, and during this time the patient's relatives walked about in an excited manner, manifesting very unpleasant signs of hostility. Fortunately the man finally recovered, but Col. Ripinsky has no doubt that his life

would not have been safe had he died.

The latitude and longitude of Pyramid Island were determined in 1869 by a United States Coast Survey party, who were sent out to observe the eclipse of the sun 4 [PART VIII]

in the month of August of that year. The position then determined is given in the "Alaska Coast Pilot" as latitude 59° 11′ 43″·0, longitude 135° 27′ 04″·5. The longitude was determined by chronometers, thirteen having been used by the expedition. What point of the island was fixed I could not ascertain, so I took the centre. This island is pyramidal in form, as seen from the south-west or north-east, and about 500 yards long by 200 wide. It is composed of sand and clay, and rises about 80 feet above high tide, being evidently the result of glacial action. At low tide there is very little water on the north side of the island, and it is only a question of a few years until it will cease to be an island altogether, owing to the constant accumulation of drift brought down by the streams flowing into the inlet.

To carry the survey from the island across to Chilkoot Inlet I had to get up on the mountains north of Haines mission, and from there could see both inlets. Owing to the bad weather I could get no observation for azimuth, and had to produce the survey from Pyramid Island to Taiya Inlet by reading the angles of deflection between the courses. At Taiya Inlet I got my first observation, and deduced the azimuth of my courses up that point. Taiya Inlet has evidently been the valley of a glacier; its sides are steep and smooth from glacial action; and this, with the wind almost constantly blowing landward, renders getting upon the shore difficult. Some long sights were therefore necessary. The survey was made up to the head of the inlet on the 2nd of June. Preparations were then commenced for taking the supplies and instruments over the coast range of mountains to the head of Lake Lyndeman on the Lewes River. Commander Newell kindly aided me in making arrangements with the Indians, and did all he could to induce them to be reasonable in their demands. This, however, neither he nor any one else could accomplish. They refused to carry to the lake for less than \$20 per hundred pounds, and as they had learned that the expedition was an English one, the second chief of the Chilkoot Indians recalled some memories of an old quarrel which the tribe had with the English many years ago, in which an uncle of his was killed, and he thought we should pay for the loss of his uncle by being charged an exorbitant price for our packing, of which he had the sole control. Commander Newell told him I had a permit from the Great Father at Washington to pass through his country safely, that he would see that I did so, and if the Indians interfered with me they would be punished for doing so. After much talk they consented to carry our stuff to the summit of the mountain for \$10 per hundred pounds. This is about two-thirds of the whole distance, includes all the climbing and all the woods, and is by far the most difficult part of the

On the 6th of June 120 Indians, men, women, and children, started for the summit. I sent two of my party with them to see the goods delivered at the place agreed upon. Each carrier when given a pack also got a ticket, on which was inscribed the contents of the pack, its weight, and the amount the individual was to get for carrying it. They were made to understand that they had to produce these tickets on delivering their packs, but were not told for what reason. As each pack was delivered one of my men receipted the ticket and returned it. The Indians did not seem to understand the import of this; a few of them pretended to have lost their tickets; and as they could not get paid without them, my assistant, who had duplicates of every ticket, furnished them with receipted copies after

examining their packs.

While they were packing to the summit I was producing the survey, and I met them on their return at the foot of the canon, about eight miles from the coast, where I paid them. They came to the camp in the early morning before I was up, and for about two hours there was quite a hubbub. When paying them I tried to get their names, but very few of them would give any Indian name, nearly all, after a little reflection, giving some common English name. My list contained little else than Jack, Tom, Joe, Charley, &c., some of which were duplicated three and four times. I then found why some of them had pretended to lose their tickets at the summit. Three or four who had thus acted presented themselves twice for payment, producing first the receipted ticket, afterwards the one they claimed to have lost,

[PART VIII]

demanding pay for both. They were much taken aback when they found that their

duplicity had been discovered.

These Indians are perfectly heartless. They will not render even the smallest aid to each other without payment; and if not to each other, much less to a white man. I got one of them, whom I had previously assisted with his pack, to take me and two of my party over a small creek in his canoe. After putting us across he asked for money, and I gave him half a dollar. Another man stepped up and demanded pay, stating that the canoe was his. To see what the result would be, I gave to him the same amount as to the first. Immediately there were three or four more claimants for the canoe. I dismissed them with a blessing, and made up my mind that I would wade the next creek.

While paying them I was a little apprehensive of trouble, for they insisted on crowding into my tent, and for myself and the four men who were with me to have attempted to eject them would have been to invite trouble. I am strongly of the opinion that these Indians would have been much more difficult to deal with if they had not known that Commander Newell remained in the inlet to see that I got

through without accident.

While making the survey from the head of tide water I took the azimuths and altitudes of several of the highest peaks around the head of the inlet, in order to locate them, and obtain an idea of the general height of the peaks in the coast range. As it does not appear to have been done before, I have taken the opportunity of naming all the peaks, the positions of which I fixed in the above way. The names

and altitudes appear on my map.

While going up from the head of canoe navigation on the Taiya River I took the angles of elevation of each station from the preceding one. I would have done this from tide water up, but found many of the courses so short and with so little increase in height that with the instrument I had it was inappreciable. From these angles I have computed the height of the summit of the Taiya Pass, above the head of canoe navigation, as it appeared to me in June, 1887, and find it to be 3,378 feet. What depth of snow there was I cannot say. The head of canoe navigation I estimate at about 120 feet above tide water. Dr. Dawson gives it as 124 feet.

While going over the range the first time I made frequent readings of the mercurial barometer, and left the instrument at the summit for several days, taking readings of it as often as possible. At the same time I took corresponding readings of my aneroid. These readings will be found in the appendix to this report, and from them it will be seen that this particular aneroid is almost as reliable as the

mercurial barometer as far as the altitudes reached would show.

I determined the descent from the summit to Lake Lyndeman by carrying the aneroid from the lake to the summit and back again, the interval of time from start to return being about eight hours. Taking the mean of the readings at the lake, start and return, and the single reading at the summit, the height of the summit above the lake was found to be 1,237 feet. While making the survey from the summit down to the lake I took the angles of depression of each station from the preceding one, and from these angles I deduced the difference of height, which I found to be 1,354 feet, or 114 feet more than that found by the aneroid. This is quite a large difference; but when we consider the altitude of the place, the sudden changes of temperature, and the atmospheric conditions, it is not more than one might expect.

While at Juneau City I heard reports of a low pass from the head of Chilkoot Inlet to the head waters of Lewes River. During the time I was at the head of Taiya Inlet I made inquiries regarding it, and found that there was such a pass, but could learn nothing definite about it from either whites or Indians. As Capt. Moore, who accompanied me, was very anxious to go through it, and as the reports of the Taiya Pass indicated that no waggon road or railroad could ever be built through it, while the new pass appeared, from what little knowledge I could get of it, to be much lower and possibly feasible for a waggon road, I determined to send the captain by that way, if I could get an Indian to accompany him. This, I found, would be difficult to

6 [PART VIII]

None of the Chilkoots appeared to know anything of the pass, and I concluded that they wished to keep its existence and condition a secret. The Tagish, or Stick Indians, as the interior Indians are locally called, are afraid to do anything in opposition to the wishes of the Chilkoots; so it was difficult to get any of them to join Capt. Moore; but after much talk and encouragement from the whites around, one of them named "Jim" was induced to go. He had been through this pass before, and proved reliable and useful. The information obtained from Capt. Moore's exploration I have incorporated in my plan of the survey from Taiya Inlet, but it is not as complete as I would have liked. I have named this pass "White Pass," in honor of the late Hon. Thos. White, Minister of the Interior, under whose authority the expedition was organized. Commencing at Taiya Inlet, about two miles south of its north end, it follows up the valley of the Shkagway River to its source, and thence down the valley of another river which Capt. Moore reported to empty into the Takone or Windy Arm of Bove Lake (Schwatka). Dr. Dawson says this stream empties into Tako Lake, and in that event Capt. Moore is mistaken. Capt. Moore did not go all the way through to the lake, but assumed from reports he heard from the miners and others that the stream flowed into Windy Arm, and this also was the idea of the Indian "Jim," from what I could gather from his remarks in broken English and Chinook. Captain Moore estimates the distance from tide water to the summit at about 18 miles, and from the summit to the lake at about 22 to 23 He reports the pass as thickly timbered all the way through.

The timber line on the south side of the Taiya Pass, as determined by barometer readings, is about 2,300 feet above the sea, while on the north side it is about 1,000 feet below the summit. This large difference is due, I think, to the different conditions in the two places. On the south side the valley is narrow and deep, and the sun cannot produce its full effect. The snow also is much deeper there, owing to the quantity which drifts in from the surrounding mountains. On the north side the surface is sloping, and more exposed to the sun's rays. On the south side the timber is of the class peculiar to the coast, and on the north that peculiar to the interior. The latter would grow at a greater altitude than the coast timber. It is possible that the summit of White Pass is not higher than the timber line on the north of the Taiya Pass, or about 2,500 feet above tide water, and it is possibly even lower than this, as the timber in a valley such as the White Pass would hardly live at the same

altitude as on the open slope on the north side.

Capt. Moore has had considerable experience in building roads in mountainous countries. He considers that this would be an easy route for a waggon road compared with some roads he has seen in British Columbia. Assuming his distances to be correct, and the height of the pass to be probably about correctly indicated, the grades would not be very steep, and a railroad could easily be carried through if

necessary.

After completing the survey down to the lake I set about getting my baggage down, too. Of all the Indians who came to the summit with packs, only four or five could be induced to remain and pack down to the lake, although I was paying them at the rate of \$4 per hundred pounds. After one trip down, only two men remained, and they only in hopes of stealing something. One of them appropriated a pair of boots, and was much surprised to find that he had to pay for them on being settled with. I could not blame them much for not caring to work, as the weather was very disagreeable; it rained or snowed almost continuously. After the Indians left I tried to get down the stuff with the aid of my own men, but it was slavish and unhealthy labour, and after the first trip one of them was laid up with what appeared to be inflammatory rheumatism. The first time the party crossed the sun was shining brightly, and this brought on snow blindness, the pain of which only those who have suffered from this complaint can realize. I had two sleds with me which were made in Juneau City specially for the work of getting over the mountains and down the lakes on the ice. With these I succeeded in bringing about a ton and a-half to the lakes, but I found that the time it would take to get it all down in this way would seriously interfere with the programme arranged with Dr. Dawson, to say nothing

of the suffering of the men and myself, and the liability to sickness which protracted physical exertion under such uncomfortable conditions and continued suffering from snow blindness expose us to. I had with me a white man who lived at the head of the inlet with a Tagish Indian woman. This man had a good deal of influence with the Tagish tribe, of whom the greater number were then in the neighbourhood where he resided trying to get some odd jobs of work, and I sent him to the head of the inlet to try and induce the Tagish Indians to undertake the transportation, offering them \$5 per hundred pounds. In the meantime Capt. Moore and the Indian "Jim" had rejoined me. I had their assistance for a day or two, and "Jim's" presence aided indirectly in inducing the Indians to come to my relief.

The Tagish are little more than slaves to the more powerful coast tribes, and are in constant dread of offending them in any way. One of the privileges which the coast tribes claim is the exclusive right to all work on the coast or in its vicinity, and the Tagish are afraid to dispute this claim. When my white man asked the Tagish to come over and pack they objected on the grounds mentioned. After considerable ridicule of their cowardice, and explanation of the fact that they had the exclusive right to all work in their own country, the country on the north side of the coast range being admitted by the coast Indians to belong to the Tagish tribe, just as the coast tribes had the privilege of doing all the work on the coast side of the mountains, and that one of their number was already working with me unmolested, and likely to continue so, nine of them came over, and in fear and trembling began to pack down to the lake. After they were at work for a few days some of the Chilkoots came out and also started to work. Soon I had quite a number at work and was getting my stuff down quite fast. But this good fortune was not to continue. Owing to the prevailing wet, cold weather on the mountains, and the difficulty of getting through the soft wet snow, the Indians soon began to quit work for a day or two at a time, and to gamble with one another for the wages already earned. Many of them wanted to be paid in full, but this I positively refused, knowing that to do so was to have them all apply for their earnings and leave me until necessity compelled them to go to work again. I once for all made them distinctly understand that I would not pay any of them until the whole of the stuff was down. As many of them had already earned from twelve to fifteen dollars each, to lose which was a serious matter to them, they reluctantly resumed work and kept at it until all was delivered. This done, I paid them off, and set about getting my outfit across the lake, which I did with my own party and the two Peterborough canoes which I had with me.

A word or two about these canoes may not be out of place. They were made by the Ontario Canoe Company, of Peterborough. Both were of special make and somewhat outside of the company's usual style of build. One was 18 feet long, the other 19—both 40 inch beam and 18 inches deep. They were built of basswood, the bottom planks being \(^3\) inch thick and the sides \(^1\) inch. They were extra strong, and higher at the bow and stern than the usual make. When dry they weighed about 140 pounds each, so that two men could without much difficulty carry them. They would each hold two men and 1,400 pounds without being at all overloaded, and could with ease be then driven 4 to \(^1\) miles per hour. I had them furnished with movable canvas decks, which could be fitted on, and made the canoe almost water-tight. These two canoes travelled about 3,000 miles by rail and about 1,000 miles by steamship before being brought into service. They did considerable work on Chilkoot and Taiya Inlets, and were then packed over to the head of Lewes River (Lake Lyndeman), from where they were used in making the survey of Lewes River. In this work they made about 650 landings. They were then transported on sleighs from the boundary on Lewes River to navigable water on the Porcupine.

In the spring of 1888 they descended the latter, heavily loaded, and through much rough water, to the mouth of Bell's River, and up it to McDougall's Pass. They were then carried over the pass to Poplar River and were used in going down the latter to Peel's River, and thence up Mackenzie River 1,400 miles; or, exclusive of railway and ship carriage, they were carried about 170 miles and did about 2,500

8 [PART VIII]

miles of work for the expedition, making in all about 1,700 landings in no easy manner and going through some very bad water. I left them at Fort Chipewyan in fairly good condition, and, with a little painting, they would go through the same ordeal again.

After getting all my outfit over to the foot of Lake Lyndeman I set some of the party to pack it to the head of Bennet Lake. The stream between these two lakes is too shallow and rough to permit of canoe navigation, and every thing had to be

portaged the greater part of the way.

I employed the rest of the party in looking for timber to build a boat to carry my outfit of provisions and implements down the river to the vicinity of the International Boundary, a distance of about 700 miles. It took several days to find a tree large enough to make plank for the boat I wanted, as the timber around the upper end of the lake is small and scrubby. My boat was finished on the evening of the 11th of July, and on the 12th I started a portion of the party to load up the large boat, and go ahead with it and the outfit to the cañon. They had instructions to examine the cañon and, if necessary, to carry a part of the outfit past it—in any case, enough to support the party back to the coast should accident necessitate such procedure. With the rest of the party I started to carry on the survey, which may now be said to have fairly started ahead on the lakes. This proved tedious work, on account of the stormy weather.

In the summer months there is nearly always a wind blowing in from the coast; it blows down the lakes and produces quite a heavy swell. This would not prevent the canoes going with the decks on, but, as we had to land every mile or so, the rollers breaking on the generally flat beach proved very troublesome. On this account I found I could not average more than ten miles per day on the lakes, little

more than half of what could be done on the river.

The survey was completed to the cañon on the 20th of July. There I found the party with the large boat had arrived on the 18th, having carried a part of the supplies past the cañon, and were awaiting my arrival to run through it with the rest in the boat. Before doing so, however, I made an examination of the cañon. The rapids below it, particularly the last rapid of the series (called the White Horse by the miners), I found would not be safe to run. I sent two men through the cañon in one of the canoes to await the arrival of the boat, and to be ready in case of an accident to pick us up. Every man in the party was supplied with a life-preserver, so that should a casualty occur we would all have floated. Those in the canoe got through all right; but they would not have liked to repeat the trip. They said the canoe jumped about a great deal more than they thought it would, and I had the same experience when going through in the boat.

The passage through is made in about three minutes, or at the rate of about 12½ miles an hour. If the boat is kept clear of the sides there is not much danger in high water; but in low water there is a rock in the middle of the channel, near the upper end of the cañon, that renders the passage more difficult. I did not see this rock myself, but got my information from some miners I met in the interior, who described it as being about 150 yards down from the head and a little to the west of the middle of the channel. In low water it barely projects above the surface. When I passed through there was no indication of it, either from the bank

above or from the boat.

The distance from the head to the foot of the canon is five-eighths of a mile. There is a basin about midway in it about 150 yards in diameter. This basin is circular in form, with steep sloping sides, about 100 feet high. The lower part of the canon is much rougher to run through than the upper part, the fall being apparently much greater. The sides are generally perpendicular, about 80 to 100 feet high, and consist of basalt, in some places showing hexagonal columns

The "White Horse" Rapids are about three-eighths of a mile long. They are the most dangerous rapids on the river, and are never run through in boats except by accident. They are confined by low basaltic banks, which, at the foot, suddenly close in and make the channel about 30 yards wide. It is here the danger lies, as

PART VIII

there is a sudden drop and the water rushes through at a tremendous rate, leaping and seething like a cataract. The miners have constructed a portage road on the west side, and put down rollways in some places, on which to shove their boats over. They have also made some windlasses with which to haul their boats up hill, notably one at the foot of the canon. This roadway and the windlasses must have cost them many hours of hard labor. Should it ever be necessary, a tramway could be built past the canon on the east side with no great difficulty. With the exception of the "Five Fingers Rapid" (the Rink Rapid of Schwatka), it appears this is the only serious rapid on the whole length of the river.

Rink Rapid is formed by several islands standing in the channel and backing up the water so much as to raise it about a foot, causing a swell below for a few yards. The islands are composed of conglomerate rock, similar to the cliffs on each side of the river, whence one would inter that there has been a fall here in past ages. For about two miles below the rapid there is a pretty swift current, but not enough to prevent the ascent of a steamboat of moderate power, and the rapids themselves I do not think would present any serious obstacle to the ascent of a good boat. In very high water warping might be required. Six miles below these rapids are what are known as "Little Rapids." This is simply a barrier of rocks, which extends from the westerly side of the river, about half way across. Over this barrier there is a ripple which would offer no great obstacle to the descent of a good canoe. On the easterly side there is no ripple, and the current is smooth and the water apparently deep. I tried with a 6 foot paddle, but could not reach the bottom.

On the 11th of August I met a party of miners coming out who had passed Stewart River a few days before. They saw no sign of Dr. Dawson having been there. This was welcome news for me, as I expected he would have reached that point long before I arrived, on account of the many delays I had met with on the coast range. These miners also gave me the pleasant news that the story told at the coast about the fight with the Indians at Stewart River was false, and stated substantially what I have already repeated concerning it. The same evening I met more miners on their way out, and the next day met three boats, each containing four men. In the crew of one of them was a son of Capt. Moore, from whom the captain got such information as induced him to turn back and accompany them out

Next day, the 13th, I got to the mouth of the Pelly, and found that Dr. Dawson had arrived there on the 11th. The doctor also had experienced many delays, and had heard the same story of the Indian uprising in the interior. I was pleased to find that he was in no immediate want of provisions, the fear of which had caused me a great deal of uneasiness on the way down the river, as it was arranged between us in Victoria that I was to take with me provisions for his party to do them until their return to the coast. 'The doctor was so much behind the time arranged to meet me that he determined to start for the coast at once. I therefore set about making a short report and plan of my survey to this point; and, as I was not likely to get another opportunity of writing at such length for a year, I applied myself to a correspondence designed to satisfy my friends and acquaintances for the ensuing twelve months. This necessitated three days' hard work.

On the morning of the 17th the doctor left for the outside world, leaving me with a feeling of loneliness that only those who have experienced it can realize. I remained at the mouth of the Pelly during the next day taking magnetic and astronomical observations, and making some measurements of the river. On the 19th I resumed the survey, and reached White River on the 25th. Here I spent most of a day trying to ascend this river, but found it impracticable, on account of the swift current and shallow and very muddy water. The water is so muddy that it is impossible to see through one-eighth of an inch of it. The current is very strong, probably eight miles or more per hour, and the numerous bars in the bed are constantly changing place. After trying for several hours, the base men succeeded in doing about half a mile only, and I came to the conclusion that it was useless to try to get up this stream to the Boundary with canoes. Had it proved feasible I 10

had intended making a survey of this stream to the Boundary, to discover more especially the facilities it offered for the transport of supplies in the event of a supplies of the International Boundary being undertaken.

survey of the International Boundary being undertaken.

I reached Stewart River on the 26th. Here I remained a day taking magnetic observations, and getting information from a miner, named McDonald, about the country up that river. McDonald had spent the summer up the river prospecting and exploring. His information will be given in detail further on.

Fort Reliance was reached on the 1st of September, and Forty-Mile River (Cone-Hill River of Schwatka) on the 7th. In the interval between Fort Reliance and Forty-Mile River there were several days lost by rain.

At Forty-Mile River I made some arrangements with the traders there (Messrs. Harper & McQuestion) about supplies during the winter, and about getting Indians to assist me in crossing from the Pelly or Yukon to the head of the Porcupine, or perhaps on to the Peel River. I then made a survey of the Forty-Mile River up to the cañon. I found the cañon would be difficult of ascent, and dangerous to descend, and, therefore, concluded to defer further operations until the winter, and until after I had determined the longitude of my winter post near the boundary, when I would be in a much better position to locate the intersection of the International Boundary with this river, a point important to determine on account of the number and richness of the mining claims on the river.

I left Forty-Mile River for the boundary line between Alaska and the North-West Territories on the 12th September, and finished the survey to that point on the 14th. I then spent two days in examining the valley of the river in the vicinity of the boundary to get the most extensive view of the horizon possible, and to find a tree large enough to serve for a transit stand.

Before leaving Toronto I got Mr. Foster to make large brass plates with V's on them, which could be screwed firmly to a stump, and thus be made to serve as a transit stand. I required a stump at least 22 inches in diameter to make a base large enough for the plates when properly placed for the transit. In a search which covered about four miles of the river bank, on both sides, I found only one tree as large as 18 inches. I mention this fact to give an idea of the size of the trees along the river in this vicinity. I had this stump enlarged by firmly fixing pieces on the sides so as to bring it up to the requisite size. This done, I built around the stump a small transit house of the ordinary form and then mounted and adjusted my transit. Meanwhile, most of the party were busy preparing our winter quarters and building a magnetic observatory. As I had been led to expect extremely low temperatures during the winter, I adopted precautionary measures, so as to be as comfortable as circumstances would permit during our stay there.

A few remarks descriptive of our residence may not be uninteresting.

After clearing away the top soil and excavating some distance into the side of the hill for a foundation, the bottom round of the house was laid and imbedded in the place so cleared; the next round of logs was then put up and fitted in place; it was then rolled off, and on top of the first round was laid a thick layer of moss; the second round of logs was then put back in its place on top of the moss, which was so thick that the second round did not lie on the saddles at the corners, but rode on the moss. This was done with each succeeding round until the requisite height was reached, when the ordinary kind of shanty roof, consisting of poles, was put on. On these was laid a layer of moss about one foot thick, and on this about one foot of clay. In the roof were two ventilators, which could be closed altogether if necessary.

To heat the building a large stone furnace was built, in size 3 by 8 ft.; the front end of this was fashioned into a fireplace, with oven on top for cooking; the other end was formed into a chimney. The structure was a large mass of stones bound together by a tough white clay, which we found in the vicinity, and which baked hard and white, and did not crack with the heat. When this mass was once heated, which it took two days to do, it retained the heat for a long time.

With the weight of the roof and walls the moss between the logs was so pressed that it filled every crevice and almost made a solid wall. During the winter the ventilators were kept open all the time; yet the lowest temperature observed in the house during our stay was 48° Fahrenheit; the average in the morning before the fire was lighted was about 60° Fahrenheit.

After finishing our building I mounted a declinometer and bifilar which were given me by Mr. Carpmael, Director of the Meteorological Service of Canada, and

continued regular observations with them until I left for Porcupine River.

Astronomical Determinations of the Latitude and Longitude at Observatory on the Pelly-Yukon during Winter of 1887-88.

I found the levels furnished for use with the astronomical transit, as made by Fauth, to be useless. Instead of being sealed hermetically they were sealed by a plate bevelled into each end with a ground joint, this plate being cemented in. During the summer the cement softened and allowed the contents to run out. Early in the season I had noticed one of them leaking; I then took every possible precaution to save the other one, but without avail, as they were both empty when I wanted to use them. Fortunately, I had some pure alcohol with me for preserving specimens in; with this I refilled one of the tubes, and as I also had some rubber corks, one of which fortunately fitted the bore of the tubes, I cut it in two and stopped the ends with it. I found this to answer the purpose very well.

Before commencing work with this level I made a determination of the value in arc of its divisions. This I did by setting it on a bar about 12 feet long, on each end of which a metal plate was fixed. In one of these plates a fine slit was made, which was rested on the edge of a knife fixed in a stump; the other plate was placed on the end of a micrometer screw, reading to '0001 of an inch; the bubble was made to traverse the length of its run several times by turning the screw; the difference of height of the movable end was known from the readings of the micrometer, and from the known length of the bar; the angle moved through was easily deduced. I made the first determination when the temperature was 28° Fah. Three determination were made and the mean used as the true value; the three stood as follows, expressed in seconds of arc: 1st, 2"08; 2nd, 1"98; 3rd, 2"03; mean, 2"03. A careful determination made in the same way when the temperature was 41° below zero gave the value in arc 2"41. I interpolated between these values for the different temperatures at the time of the observations.

The reflecting telescope intended for the observation of occultations of stars by the moon having got out of order, owing, I suppose, to the continued damp, cool weather during the season, I had to fit up a tourist's telescope to take its place. Unfortunately of all the occultations arranged for with Mr. King before leaving Ottawa, through the two lunations of October-November and November-December,

of which about sixty would occur here, none were observed.

Soon after getting my transit mounted and adjusted I got a culmination of the moon on the 29th September. I intended this as a check on the survey, and as a basis for the computation of the times of the occultations; but I did not see the moon, nor a star again until November, after both lunations of the programme were over. I then computed a lot of occultations in the next lunation, but was as unfortunate with them as with the others.

In order to get all the data possible to determine the longitude of my observatory I took every moon culmination I could get all through the months of November, December, January and a part of February. To make these as accurate as possible, I observed the following method. A list of stars were selected succeeding each other in right ascension, at intervals of four or five minutes as nearly as possible, and containing ten stars. Their position was such that the moon transited about midway in the group. The list contained, when possible, four moon-culminating stars, two polar stars, and four stars near the zenith. The first half of the group was observed 12

with the transit clamp east, the transit of the moon's limb was then observed, the telescope then turned clamp west and the other half of the stars observed. From the star transits were deduced, by the method of "least squares," the correction to the time of the passage of the moon's limb, and the azimuth and collimation errors of the transit. The collimation and azimuth error were applied with their proper sign to the moon at its transit; thus the right ascension of the moon was known for the place, and from the Ephemeris right ascension at its transit at Washington, or the right ascension at its upper and lower transit at Greenwich, the longitude of the observatory was deduced.

I found the azimuth of the transit remain very steady during the mild weather in the fall; but when the cold weather set in, and especially during one severe spell, it was very unsteady, though, perhaps, not more so than the ordinary form of transit stand would have been. Many of the observations were taken when the thermometer was 40 to 50 degrees below zero, and it must be confessed that such a degree of

cold would try any kind of stand.

It is not to be supposed that the same variation would be found in every other stump that was found in the one upon which my transit was mounted, but it may be of interest to note that the variation of azimuth always had the same direction with a decrease of temperature, and that the direction was reversed when the temperature rose. Another result of a decrease of temperature was the contraction of the stumpstand, which necessitated replacing of the brass plates. With a decrease of temperature the level also changed, but always in a constant direction, which was reversed when the temperature changed again, so that at the same temperature the level reading would be the same. I found the change of level so great that it would in the course of a day run the bubble out of sight, and necessitate a readjustment of both level and azimuth. It is not certain that this variation arose from change in the stump, but it was most probably due to changes in the ground around it; so that the stump was probably as good a stand as I could have had, and saved the carriage of about two hundred pounds into the country and out again. Of all the occultations computed (about one hundred) only three were observed. These are given further on.

I here insert a table of the results of the moon culminations I observed at my observatory. All the culminations observed in 1887 were computed from the British Ephemeris by using the right ascension of the moon's bright limb at upper and lower transit at Greenwich. All culminations observed in 1888 were computed from the American Ephemeris, by using the moon's right ascension at meridian passage at Washington. These were occasionally checked by computing from the hourly Ephemeris. I give date of observation, the number of stars observed, the deduced right ascension of the moon's bright limb, and the resulting longitude, for the purpose of comparison, first giving the observations taken on the moon's bright limb

when crescent, following with those taken when it was waning:

Observations on 1st Limb.

Date.	No. of Stars.	Deduced R. A. of Moon's Limb. h. m. s.	Deduced Longitude in Time. h. m. s.
Sept. 29, 1887	7	23 14 59:47	9 23 35.89
		,	
Nov. 23 "	9	$23 \ 30 \ 40.62$	" 24.19
" 25 "	10	1 02 24:39	" 26·61
Dec. 21 "	5	23 59 02.65	" 28.02
" 22 "	6	0 44 59.11	" 23.73
" 23 "	8	1 30 39.34	$^{"}$ 21.54
" 27 '	6	4 46 14:33	" 27.32
" 29 "	8	6 37 24.78	" 33·16
Jan. 18, 1888	8	$0\ 25\ 46.91$	" 29·15
" 20′ "	8	1 57 41.35	" 30·19
	ſI	PART VIII	

Date.	No. of Stars.			R. A. of Limb.		Deduc tude	ed iu Time.
		h.	m.	8.	h.	m.	s.
Jan. 21, 1888	8	2	44	25.21	9	23	27.50
" 23′, "		4	23	12.90	"	"	37.72
" 26, "	8	7	09	44.15	"	"	30.92
Feb. 23, "	8	7	39	49.33	"	"	32.68
,	Mean				9	2 3	29.47
	Prob	able	erro	r of mean			3.01s.

It would be a waste of time to sum these by weights, having regard to the moon's rate of motion, the number of stars observed, and the probable error of each night's work, as the accuracy of the result depends mainly on the accuracy of the observed transit of the moon's limb. This could be deduced from the observations themselves, but as'I had not time when observing to do this, and have not done it since, I do not consider it worth the time to do it now, as it would affect the mean result very little.

Observations on 2nd Limb.

Date.	No. of Stars.		Deduced R. A. of Moon's Limb.			Deduced Longitude in Time.		
		h.	m.	8.	h.	m.	8.	
Nov. 30, 1887	3	•••			9	23	40.42	
Dec. 1, "	8	6	04	00.16	"	"	44.18	
" 2, "	6	7	00	27.73	"	"	$52 \cdot 24$	
" 3 [′] , "	7	7	57	27.54	"	"	46.07	
"6,"	7	10	46	19.81	"	"	39.96	
" 7. "	4	11	41	28.83	"	"	45.44	
" 2 9′, "	8	6	39	41.95	"	"	39.70	
Jan. 31, 1888	8	12	02	21.99	"	"	44.87	
, ,		ean		•••••	9	23	44.11	
	Pı	robable	erro	or of mean		_	2.81s	

The mean of both is 9h. 23m. 36.79s. in time, or in arc 140° 54′ 11″.8, west of Greenwich. It will be noticed that on the 29th December both limbs of the moon were observed. The moon arrived at opposition that evening a little more than an hour before it transited at my station, so that it was sensibly full on both limbs at the time of my observation. The mean of the longitudes deduced from that night's work agrees very closely with the mean of the two series.

It would seem from the result that in the case of the first limb I anticipate contact of the limb with the wire, and in the case of the second limb I am tardy. If I may judge of the relative value of the separate determinations by my nervous condition at the time of observation, I would give that on the first limb the greater weight, as those observations were taken early in the evening, when my system was in its normal condition; but when observing on the second limb it was much later and I was somewhat wearied and drowsy, there being not enough of the work, nor its regularity sufficient, to accustom me thoroughly to it.

Three occultations were observed; I did not compute the longitude from them, as I had not time. But I always made the preparatory computation twice over, and sometimes three times, so that I had the time of occultation very close, for the longitude used in the computation (9h. 23m. 36s.). I found the computed and the observed time so nearly the same that it was probable the difference was chiefly due to personal error in observation. I was therefore not so anxious to deduce the longitude from them as I otherwise would have been. Mr. W. F. King, Chief Inspector of Surveys, has computed the longitude from one of the occultations, the result of which I give.

December 5, 1887—Occultation of Alpha Leonis. Chronometer time of immersion 1h. 27m. 12.6s. Emersion not visible. Chronometer fast 9h. 31m. 42.51s.

14 [PART VIII]

This occultation was observed in daylight near the horizon, and with a small telescope, so it cannot be called good.

January 23, 1888-Occultation of 75 Tauri. Chronometer time of immersion 12h.

4m. 16.25s. Emersion not visible. Chronometer fast 9h. 33m. 23.42s.

January 23, 1888—Occultation of Alpha Tauri. Chronometer time of immersion 16h. 31m. 07:55s. Emersion 17h. 18m. 49:35s. Chronometer fast for immersion 9h. 33m. 23:81s.; for emersion 9h. 33m. 23:87s.

Mr. King's longitudes in time, computed from the times of immersion and emersion of the last star, are respectively 9h. 23m. 45.28s., and 9h. 24m. 11.22s. In the case of this occultation the immersion was by the moon's dark limb, and there was no difficulty in observing it, but my telescope was much too small to show when the star emerged from the moon's bright limb, and the emersion was not noted until the star stood out clear from the moon, probably a second or more too late, the

effect of which would be to make the resulting longitude too great.

I determined the latitude of a point 60 feet north of my transit stand by setting up very carefully my 4-inch transit in the prime vertical. To insure all possible steadiness I suspended heavy weights from the tension screw of the instrument, so that the foot screws and the rest of the instrument were almost as rigid as if solid. By several trials I very carefully determined the value of a division of the striding level of the instrument, and found it to be 20", and it was sensitive enough to plainly show one-fourth of this, and less than that could be estimated. I used on the telescope the eye-piece of the astronomical transit, which gave me power enough to see distinctly when a star crossed the wires, and yet was not too powerful for proper definition. I used three wires in the telescope, of which the aperture was 1 inch and the focal length 10 inches. I had a reference object fixed west of the instrument about half a mile, consisting of a box with an inch and a half slit in one side of it, which was covered with a piece of white cotton. In the box was placed a candle, the light of which shone through the cotton in the slit, presenting a bright clear mark, without any radiation of light. Just before observing a star transit the instrument was carefully levelled, then pointed on the R.O. and then on the star, and the passage over the wires observed; the level was then read, and the telescope again pointed to the R.O. to see that no movement had taken place in the interval.

On the 24th of October, 1887, I observed the following prime vertical transits of stars east and west of the meridian; η Draconis, west transit, circle south; η Cephei, east transit, circle north. 36 Draconis, west transit, circle north. The chronometer error was determined by a few star transits. When clouds prevented further observations that night, the latitude deduced from the several transits stood

as follows:--

η Draconis 64° 40′ 57″·2. η Cephei 64° 40′ 57″·4. 36 Draconis 64° 40′ 58″·4.

Mean of all 64° 40' 57".7.

January 26, 1888—I got both east and west transits of a Cassiopeæ, but the sky was hazy, and the thermometer was—30°, so that the observation cannot be considered good. The latitude deduced from it was 64° 41′ 06″·4.

January 3, 1888, and February 27 and 28.—I observed, with the dip circle, for magnetic dip, total force, and declination. The values of these at the place will be appended to this report, as will the readings of the declinometer furnished by Mr. Carpmael, Director of the Meteorological Service of Canada. This was read twice a day, the times being those when the needle was at its greatest eastern and western variation for the day. These times were determined by observing its position every hour for about ten days, and were found to be respectively 7h. 30m. a.m.. and 1h. 30m. p.m.

The weather throughout the winter was unusually stormy and snowy, which seriously interfered with the arrangements made before I left Ottawa. In fact it might be said it altogether set them aside; still, the observations I was able to get

will give a fair approximation to the longitude of the observatory, the probable error of the result of all being about three seconds of time, or in land measure about 30 chains, or three-eighths of a mile.

Survey of Forty Mile River, from its Mouth to the International Boundary Line.

After computing the longitude from all the observations I had got up to the 1st February, I took two of my men and my instruments, and started for Forty-Mile River to continue the survey up the same to the International Boundary. After three days tiresome marching through the deep, soft snow, I reached the mouth of Forty-Mile River. Here I remained two days resting and preparing to continue the survey up the river. On the 9th of February I started with the survey from where I had left it in the summer, as already mentioned.

During the progress of this work the weather was cold, and as the days were only four or five hours long the progress was necessarily slow, so that I did not complete the survey to the Boundary until the 12th. The distance from the mouth of the Forty-Mile River up it to the Boundary is, by the river, twenty-three miles. I marked the intersection of the river by the Boundary by blazing trees on both sides and marking on some of the trees the letters "A" and "C" on the west and east sides

respectively, for Alaska and Canada.

The natural features of the ground here afford also a good mark. On the north side of the river two small creeks fall into Forty-Mile River, almost together, and between them there is a sharp rocky mound about 150 feet high. This mound stands where the boundary crosses the river, and from this point one can see northwards up the valleys of the creeks for several miles. This is the first place on the river where such a distant view can be had.

I returned to the post at the mouth of the river, and spent two days with the

traders Harper and McQuestion and the miners who were camped around.

Harper, McQuestion & Co., moved from Stewart River down to this point in the spring of 1887, so as to be where most of the miners were located. On Forty-Mile River, in the season of 1886, coarse gold was found, the first discovered on the Lewes or any of its tributaries. Coarse gold is the desideratum of all gold miners, and as soon as the news of the discovery spread to the other mining camps, where nothing but fine or dust gold had yet been found, they all repaired to the coarse gold diggings on Forty-Mile.

About one hundred miners wintered in the country, most of whom camped at Forty-Mile. A few wintered down at the old trading post built by F. Mercier, and named by him Belle Isle. This post is where Lieut. Schwatka located the International Boundary, but it is about twelve miles below the Boundary by my survey

and observations.

When I was at Forty-Mile River the miners were very anxious to see me, and to know our mining regulations and laws. I explained everything they inquired about as fully as my knowledge and the documents as my disposal would permit. Many of them who were used to the United States system of each mining community making its own by-laws, based on the general mining law of the country, and electing their own recorder to attend to the regulations and see them carried out, thought some of our regulations rather stringent and hard. I heard their statements and answered such of them as I could, and also promised to lay their views before the Department. This I have already done in a report sent by me in the spring of 1888. As this report is of purely administrative import, it is not necessary to quote it here.

During the winter there were many cases of sickness at Forty-Mile, most of

them of scurvy. There were three deaths, only one of which was due to scurvy.

I returned to my quarters on the 17th February, and immediately set the party at work drawing the canoes and instruments, and about four months provisions down to Belle Isle, about fifteen miles down the river from my house. This was to be our starting point for the Mackenzie River.

16

SECTION 2.

Description of the Pelly-Yukon, its Affluent Streams, and the Adjacent Country.

I will now give, from my own observation and from information received, a more detailed description of the Lewes River, its affluent streams, and the resources of the adjacent country.

For the purposes of navigation a description of the Lewes River begins at the head of Lake Bennet. Above that point, and between it and Lake Lyndeman, there is only about three-quarters of a mile of river, which is not more than 50 or 60 yards wide, and 2 or 3 feet deep, and is so swift and rough that navigation is out

of the question.

Lake Lyndeman is about five miles long and half a mile wide. It is deep enough for all ordinary purposes. Lake Bennet is twenty-six and a-quarter miles long, the upper fourteen of which are about half a mile wide. About midway in its length an arm comes in from the west which Schwatka appears to have mistaken for a river, and named Wheaton River. This arm is wider than the other arm down to that point, and is reported by Indians to be longer and heading in a glacier which lies in the pass at the head of Chilkoot Inlet. This arm is, as far as seen, surrounded by high mountains, apparently much higher than those on the arm we travelled down. Below the junction of the two arms the lake is about one and a half miles wide, with deep water. Above the forks the water of the east branch is muddy. This is caused by the streams from the numerous glaciers on the head of the tributaries of Lake Lyndeman.

A stream which flows into Lake Bennet at the south-west corner is also very dirty, and has shoaled quite a large portion of the lake at its mouth. The beach at the lower end of this lake is comparatively flat and the water shoal. A deep, wide valley extends northwards from the north end of the lake, apparently reaching to the canon, or a short distance above it. This may have been originally a course for the waters of the river. The bottom of the valley is wide and sandy, and covered with scrubby timber, principally poplar and pitch-pine. The waters of the lake empty at the extreme north-east angle through a channel not more than one hundred yards wide, which soon expands into what Schwatka called Lake Nares. Through this narrow channel there is quite a current, and more than 7 feet of water, as a 6

foot paddle and a foot of arm added to its length did not reach the bottom.

The hills at the upper end of Lake Lyndeman rise abruptly from the water's

edge. At the lower end they are neither so steep nor so high.

Lake Nares is only two and a half miles long, and its greatest width is about a mile: the water is not deep, but it is navigable for boats drawing 5 or 6 feet of water It is separated from Lake Bennet by a shallow sandy point of not more than 200 yards in length.

No streams of any consequence empty into either of these lakes. A small river flows into Lake Bennet on the west side a short distance north of the fork, and another at the extreme north-west angle, but neither of them are of any consequence in a navigable sense. The former seems to be what Schwatka referred to as Wheaton

River.

Lake Nares flows through a narrow curved channel into Bove Lake (Schwatka). This channel is not more than 600 or 700 yards long, and the water in it appears to be sufficiently deep for boats that could navigate the lake. The land between the lakes along this channel is low, swampy, and covered with willows, and, at the stage in which I saw it, did not not rise more than 3 feet above the water. The hills on the south-west side slope up easily, and are not high; on the north side the deep valley already referred to borders it; and on the east side the mountains rise abruptly from the lake shore.

Bove Lake (called Tagish Lake by Dr. Dawson) is about a mile wide for the first two miles of its length, when it is joined by what the miners have called the Windy Arm. One of the Tagish Indians informed me they called it Takone Lake. Here the lake expands to a width of about two miles for a distance of some three

miles, when it suddenly narrows to about half a mile for a distance of a little over a mile, after which it widens again to about a mile and a-half or more.

Ten miles from the head of the lake it is joined by the Tako Arm from the south. This arm must be of considerable length, as it can be seen for a long distance, and its valley can be traced through the mountains much farther than the lake itself can be seen. It is apparently over a mile wide at its mouth or junction.

Dr. Dawson seems to include Bove Lake and these two arms under the common name of Tagish Lake. This is much more simple and comprehensive than the various names given them by travellers. These waters collectively are the fishing and hunting grounds of the Tagish Indians, and as they are really one body of water, there is no reason why they should not be all included under one name.

From the junction with the Tako Arm to the north end of the lake the distance is about six miles, the greater part being over two miles wide. The west side is very flat and shallow, so much so that it was impossible in many places to get our canoes to the shore, and quite a distance out in the lake there was not more than 5 feet of water. The members of my party, who were in charge of the large boat and outfit, went down the east side of the lake and reported the depth about the same as I found on the west side, with many large rocks. They passed through it in the night in a rain storm, and were much alarmed for the safety of the boat and provisions. It would appear that this part of the lake requires some improvement to make it in keeping with the rest of the water system with which it is connected.

Where the river debouches from it, it is about 150 yards wide, and for a short distance not more than 5 or 6 feet deep. This depth is, however, soon increased to 10 feet or more, and so continues down to what Schwatka calls Marsh Lake. The miners call it Mud Lake, but on this name they do not appear to be agreed, many of them calling the lower part of Tagish or Bove Lake "Mud Lake," on account of its shallowness and flat muddy shores, as seen along the west side, the side nearly always travelled, as it is more sheltered from the prevailing southerly winds. The term "Mud Lake" is however not applicable to this lake, as only a comparatively small part of it is shallow or muddy, and it is nearly as inapplicable to Marsh Lake, as the latter is not markedly muddy along the west side, and from the appearance of the east shore one would not judge it to be so, as the banks appear to be high and gravelly.

Marsh Lake is a little over nineteen miles long and would average about two miles in width. I tried to determine the width of it as I went along with my survey, by taking azimuths of points on the eastern shore from different stations of the survey; but in only one case did I succeed, as there were no prominent marks on that shore which could be identified from more than one place. The piece of river connecting Tagish and Marsh Lakes is about five miles long, and averages 150 to 200 yards in width, and, as already mentioned, is deep, except for a short distance at the head. On it are situated the only Indian houses to be found in the interior with any pre-tention to skill in construction. They show much more labor and imitativeness than one knowing anything about the Indian in his native state would expect. The plan is evidently taken from the Indian houses on the coast, which appear to me to be a poor copy of the houses which the Hudson's Bay Company's servants build around their trading posts. These houses do not appear to have been used for some time past, and are almost in ruins. The Tagish Indians are now generally on the coast, as they find it much easier to live there than in their own country. As a matter of fact, what they make in their own country is taken from them by the Coast Indians, so that there is little inducement for them to remain.

The Lewes River, where it leaves Marsh Lake, is about 200 yards wide, and averages this width as far as the canon. I did not try to find bottom anywhere as I went along, except where I had reason to think it shallow, and there I always tried with my paddle. I did not anywhere find bottom with this, which shows that there is no part of this stretch of the river with less than 6 feet of water at medium height, at which stage it appeared to me the river was at that time.

[PART VIII]

From the head of Bennet Lake to the canon the corrected distance is ninety-five miles, all of which is navigable for boats drawing 5 feet or more. Add to this the westerly arm of Bennet Lake, and the Takone or Windy Arm of Tagish Lake, each about fifteen miles in length, and the Tako Arm of the latter lake, of unknown length, but probably not less than thirty miles, and we have a stretch of water of upwards of one hundred miles in length, all easily navigable; and, as has been pointed out, easily connected with Taiya Inlet through the White Pass.

No streams of any importance enter any of these lakes so far as I know. A river, called by Schwatka "McClintook River," enters Marsh Lake at the lower end from the east. It occupies a large valley, as seen from the westerly side of the lake, but the stream is apparently unimportant. Another small stream, apparently only a creek, enters the south-east angle of the lake. It is not probable that any stream coming from the east side of the lake is of importance, as the strip of country between the Lewes and Tes-lin-too is not more than thirty or forty miles in width at this

point.

The Tako Arm of Tagish Lake is so far, with the exception of reports from Indians, unknown; but it is equally improbable that any river of importance enters it, as it is so near the source of the waters flowing northwards. However, this is a question that can only be decided by a proper exploration. The canon I have already described, and will only add that it is five-eighths of a mile long, about 100 feet wide, with perpendicular banks of basaltic rock from 60 to 100 feet high.

Below the canon proper there is a stretch of rapids for about a mile; then about half a mile of smooth water; following which are the "White Horse" Rapids, which are three-eighths of a mile long, and unsafe for boats.

The total fall in the canon and succeeding rapids was measured and found to be 32 feet. Were it ever necessary to make this part of the river navigable it will be no easy task to overcome the obstacles at this point; but a tram or railway could with very little difficulty be constructed along the east side of the river past the canon.

For some distance below the White Horse Rapids the current is swift and the river wide, with many gravel bars. The reach between these rapids and Lake Labarge, a distance of twenty-seven and a-half miles, is all smooth water, with a strong current. The average width is about 150 yards. There is no impediment to navigation other than the swift current, and this is no stronger than on the lower part of the river, which is already navigated; nor is it worse than on the Saskatchewan and Red Rivers in the more eastern part of our territory.

About midway in this stretch the Tahk-heena River joins the Lewes. This river is apparently about half the size of the latter. Its waters are muddy, indicating its passage through a clayey district. I got some indefinite information about this river from an Indian who happened to meet me just below its mouth, but I could not readily make him understand me, and his replies were a compound of Chinook, Tagish, and signs, and therefore largely unintelligible. From what I could understand with any certainty, the river was easy to descend, there being no bad rapids, and it came out of a lake much larger than any I had yet passed.

Here, I may remark, that I have invariably found it difficult to get reliable or definite information from Indians. The reasons for this are many. Most of the Indians it has been my lot to meet are expecting to make something, and consequently are very chary about doing or saying anything, unless they think they will be well rewarded for it. They are naturally very suspicious of strangers, and it takes some time, and some knowledge of their language, to overcome this suspicion and gain their confidence. If you begin at once to ask questions about their country, without previously having them thoroughly understand that you have no unfriendly motive in doing so, they become alarmed, and although you may not meet with a Positive refusal to answer questions, you make very little progress in getting desired information. On the other hand, I have met cases where either through fear or hope of reward they were only too anxious to impart all they knew or had heard,

and even more if they thought it would please their hearer. I need hardly say that such information is often not at all in accordance with the facts.

I have several times found that some act of mine when in their presence has aroused either their fear, superstition or cupidity. As an instance: on the Bell River I met some Indians coming down stream when I was going up. We were ashore at the time, and invited them to join us. They started to come in, but very slowly, and all the time kept a watchful eye on us. I noticed that my double-barrelled shot gun was lying at my feet loaded, and picked it up to unload it, as I knew they would be handling it after landing. This alarmed them so much that it was some time before they came in, and I don't think they would have come ashore at all had they not heard that a party of white men, of whom we answered the description, were coming through that way (they had learned this from the Hudson's Bay Company's officers), and concluded we were the party described to them. After drinking some of our tea, and getting a supply for themselves, they became quite friendly and communicative.

Again, on the Mackenzie River, while two Indians were coming ashore at my camp, I picked up a telescope to look for a signal across the river. In looking for it I had to point it towards the Indians who immediately turned and fled. Next day I called at the Indian encampment and explained through my interpreter what I had really done. When they understood it, it caused the camp much amusement.

At Fort Good Hope, on the Mackenzie, I heard of an old Indian who had been a great deal on the Hare River, and could give valuable information regarding it. I asked to have him brought in, that I might question him. In the mean time I set about getting an observation for azimuth, and was busy observing when he came. The interpreter asked me what I was doing; I told him. He asked what I was looking up so much for; I said I was looking at a star. As the time was early in the evening, and the sun well up in the sky, he at first doubted my statement, but, finally believing, he explained to the Indians around what I was doing, and pointed out to them where the star was. They looked up in an awed manner, and walked off. When I finished my observation and inquired for the old man, I was told that he was not inclined to see me. I found him, but he refused to answer any questions, saying that there was no use in telling me anything, for when I could see stars during daylight I could just as easily see all the river, and nothing could convince him to the contrary.

I cite these as instances of what one meets with who comes in contact with Indians, and of how trifles affect them. A sojourn of two or three days with them and the assistance of a common friend would do much to disabuse them of such ideas, but when you have no such aids you must not expect to make much progress.

Lake Labarge is thirty-one miles long. For the upper thirteen it varies from three to four miles in width; it then narrows to about two miles for a distance of seven miles, when it begins to widen again, and gradually expands to about two and a-half or three miles, the lower six miles of it maintaining the latter width. The survey was carried along the western shore, and while so engaged I determined the width of the upper wide part by triangulation at two points, the width of the narrow middle part at three points, and the width of the lower part at three points. Dr. Dawson on his way out made a track survey of the eastern shore. The western shore is irregular in many places, being indented by large bays, especially at the upper and lower ends. These bays are, as a rule, shallow, more especially those at the lower end.

Just above where the lake narrows in the middle there is a large island. It is three and a-half miles long and about half a mile in width. It is shown on Schwatka's map as a peninsula, and called by him Richtofen Rocks. How he came to think it a peninsula I cannot understand, as it is well out in the lake; the nearest point of it to the western shore is upwards of half a mile distant, and the extreme width of the lake here is not more than five miles, which includes the depth of the deepest bays on the western side. It is therefore difficult to understand that he did not see it as an island. The upper half of this island is gravelly, and does not rise very high [PART VIII]

21

above the lake. The lower end is rocky and high, the rock being of a bright red color.

At the lower end of this lake there is a large valley extending northwards, which has evidently at one time been the outlet of the lake. Dr. Dawson has noted it and its peculiarities. His remarks regarding it will be found on pages 156-160 of his report entitled "Yukon District and Northern portion of British Columbia," published in 1889.

The width of the Lewes River as it leaves the lake is the same as at its entrance, about 200 yards. Its waters, when I was there, were murky. This is caused by the action of the waves on the shore along the lower end of the lake. The water at the upper end and at the middle of the lake is quite clear, so much so that the bottom can be distinctly seen at a depth of 6 or 7 feet. The wind blows almost constantly down this lake, and in a high wind it gets very rough. miners complain of much detention owing to this cause, and certainly I cannot complain of a lack of wind while I was on the lake. This lake was named after one Mike Labarge who was engaged by the Western Union Telegraph Company exploring the river and adjacent country for the purpose of connecting Europe and America by telegraph through British Columbia, and Alaska, and across Behring's Straits to Asia, and thence to Europe. This exploration took place in 1867, but it does not appear that Labarge then, nor for some years after, saw the lake called by his name. cessful laying of the Atlantic cable in 1866 put a stop to this project, and the exploring parties sent out were recalled as soon as word could be got to them. It seems that Labarge had got up as far as the Pelly before he received his recall; he had heard something of a large lake some distance farther up the river, and afterwards spoke of it to some traders and miners, who called it after him.

After leaving Lake Labarge the river, for a distance of about five miles, preserves a generally uniform width and an easy current of about four miles per hour. It then makes a short turn round a low gravel point, and flows in exactly the opposite of its general course for a mile, when it again turns sharply to its general direction. The current around this curve and for some distance below it—in all four or five miles—is very swift. I timed it in several places and found it from six to seven miles an hour. It then moderates to four or five, and continues so until the Tes-lin-too River is reached, thirty-one and seven-tenth miles from Lake Labarge. The average width of this part of the river is about 150 yards, and the depth is sufficient to afford passage to boats drawing at least 5 feet. It is, as a rule, crooked, and consequently a little

difficult to navigate.

The Tes-lin-too was so called by Dr. Dawson—this, according to information obtained by him, being the Indian name. It is called by the miners "Hootalinkwa" or Hotalinqua, and was called by Schwatka, who appears to have bestowed no other attention on it, the Newberry, although it is apparently much larger than the Lewes. This was so apparent that in my interim reports I stated it as a fact. Owing to circumstances already narrated I had not time while at the mouth to make any measurement to determine the relative size of the rivers; but on his way out Dr. Dawson made these measurements, and his report, before referred to, gives the following values of the cross sections of each stream: Lewes, 3,015 feet; Tes-lin-too, 3,809 feet. In the same connection he states that the Lewes appears to be about 1 foot above its lowest summer level, while the Tes-lin-too appeared to be at its lowest level. Assuming this to be so, and taking his widths as our data, it would reduce his cross section of the Lewes to 2,595 feet. Owing, however, to the current in the Lewes, as determined by Dr. Dawson, being just double that of the Tes-lintoo, the figures being 5.68 and 2.88 miles per hour, respectively, the discharge of the Lewes, taking these figures again, is 18,664 feet, and of the Tes-lin-too 11,436 feet. To reduce the Lewes to its lowest level the doctor says would make its discharge 15,600 feet.

The water of the Tes-lin-too is of a dark brown color, similar in appearance to the Ottawa River water, and a little turbid. Notwithstanding the difference of volume of discharge, the Tes-lin-too changes completely the character of the river

PART VIII

below the junction, and a person coming up the river would, at the forks, unhesitatingly pronounce the Tes-lin-too the main stream. The water of the Lewes is blue in color, and at the time I speak of was somewhat dirty—not enough so, however, to

prevent one seeing to a depth of two or three feet.

At the junction of the Lewes and Tes-lin-too I met two or three families of the Indians who hunt in the vicinity. One of them could speak a little Chinook. As I had two men with me who understood his jargon perfectly, with their assistance I tried to get some information from him about the river. He told me the river was easy to ascend, and presented the same appearance eight days journey up as at the mouth: then a lake was reached, which took one day to cross; the river was then followed again for half a day to another lake, which took two days to traverse; into this lake emptied a stream, which they used as a highway to the coast, passing by way of the Taku River. He said it took four days when they had loads to carry, from the head of canoe navigation on the Tes-lin-too to salt water on the Taku Inlet; but when they come light they take only one to two days. He spoke also of a stream entering the large lake from the east which came from a distance; but they did not seem to know much about it, and considered it outside their country. If their time intervals are approximately accurate they mean that there are about 200 miles of good river to the first lake, as they ought easily to make 25 miles a day on the river as I saw it. The lake takes one day to traverse and is at least 25 miles long, followed by say 12 of river, which brings us to the large lake, which takes two days to cross, say 50 or 60 more—in all about 292 miles—say 300 to the head of canoe navigation; while the distance from the head of Bennet Lake to the junction is only 188. Assuming the course of the Tes-lin-too to be nearly south (it is a little to the east of it), and throwing out every fourth mile for bends, the remainder gives us in arc three degrees and a quarter of latitude, which, deducted from 61° 40′, the latitude of the junction, gives us 58° 25', or nearly the latitude of Juneau City.

To make sure that I understood the Indian aright, and that he knew what he was speaking about, I got him to sketch the river and lake as he described them on the sand, and to repeat the same several times.

I afterwards met Mr. T. Boswell, his brother, and another miner, who had spent most of the summer on the river prospecting, and from them I gathered the following: The distance to the first, and only lake which they saw, they put at 175 miles, and the lake itself they call at least 150 miles long, as it took them four days to row in a light boat from end to end. The portage to the sea they did not appear to know anything about, but described a large bay on the east side of the lake, into which a river of considerable size entered. This river occupies a wide valley, surrounded by high mountains. They thought this river must head near Liard River. This account differs materially from that given by the Indian, and to put them on their guard, I told them what he had told me, but they still persisted in their story, which I find differs a good deal from the account they gave Dr. Dawson, as incorporated in his report.

Many years ago, sixteen I think, a man named Monroe prospected up the Taku and learned from the Indians something of a large lake not far from that river. He crossed over and found it, and spent some time prospecting, and then recrossed to the sea. This man had been at Forty-Mile River, and I heard from the miners there his account of the appearance of the lake, which amounted generally to this: "The Boswells did not know anything about it". It was unfortunate the Boswells did not remain at Forty-Mile all winter, as by a comparison of recollections they might have arrived at some correct conclusion.

Conflicting as these descriptions are, one thing is certain: this branch, if it has not the greater discharge, is the longer and more important of the two, and offers easy and uninterrupted navigation for more than double the distance which the Lewes does, the cañon being only ninety miles above the mouth of the Tes-lin-too. The Boswells reported it as containing much more useful timber than the Lewes, which indeed one would infer from its lower altitude.

Assuming this as the main river, and adding its length to the Lewes-Yukon below the junction, gives upwards of 2,200 miles of river, fully two-thirds of which run through a very mountainous country, without an impediment to navigation.

Some indefinite information was obtained as to the position of this river in the neighborhood of Marsh Lake tending to show that the distance between them was

only about thirty or forty miles.

Between the Pes-lin-too and the Big Salmon, so called by the miners, or D'Abbadie by Schwatka, the distance is thirty-three and a-half miles, in which the Lewes preserves a generally uniform width and current. For a few miles below the Tes-lin-too it is a little over the ordinary width, but then contracts to about two hundred yards which it maintains with little variation. The current is generally from four to five miles per hour.

The Big Salmon I found to be about one hundred yards wide near the mouth, the depth not more than four or five feet, and the current, so far as could be seen, sluggish. None of the miners I met could give me any information concerning this stream: but Dr. Dawson was more fortunate, and met a man who had spent most of the summer of 1887 prospecting on it. His opinion was that it might be navigable for small stern-wheel steamers for many miles. The valley as seen from the mouth is wide and gives one the impression of being occupied by a much more important stream. Looking up it, in the distance could be seen many high peaks covered with snow. As the date was August it is likely they are always so covered, which would make their probable altitude above the river 5,000 feet, or more.

Dr. Dawson in his report incorporates fully the notes obtained from the miners. I will trespass so far on these as to say that they called the distance to a small lake near the head of the river 190 miles from the mouth. This lake was estimated to be four miles in length; another lake about twelve miles above this was estimated to be twenty-four miles long, and its upper end distant only about eight miles from the Tes-lin-too. These distances if correct make this river much more important than a casual glance at it would indicate: this, however, will be more

fully spoken of under its proper head.

Just below the Big Salmon the Lewes takes a bend of nearly a right angle. Its course from the junction with the Tahk-heena to this point is generally a little east of north; at this point it turns to nearly west for some distance. Its course between here and its confluence with the Pelly is north-west, and I may add it preserves this general direction down to the confluence with the Porcupine. The river also changes in another respect; it is generally wider, and often expands into what might be called lakes, in which are islands. Some of the lakes are of considerable length, and well timbered.

To determine which channel is the main one, that is, which carries the greatest volume of water, or is best available for the purposes of navigation, among these islands, would require more time than I could devote to it on my way down; consequently, I cannot say more than that I have no reason to doubt that a channel giving 6 feet or more of water could easily be found. Whenever in the main channel I had reason to think the water shallow I tried it with my paddle, but always failed to find bottom, which gives upwards of 6 feet. Of course, I often found less than

this, but not in what I considered the main channel.

Thirty-six and a quarter miles below the Big Salmon, the Little Salmon—the Daly of Schwatka—enters the Lewes. This river is about sixty yards wide at the mouth, and not more than two or three feet in depth. The water is clear and of a brownish hue; there is not much current at the mouth, nor as far as can be seen up the stream. The valley which, from the mouth, does not appear extensive, bears north-east for some distance, when it appears to turn more to the east. Six or seven miles up, and apparently on the north side, some high cliffs of red rock, apparently granite, can be seen. It is said that some miners have prospected this stream, but I could learn nothing definite about it.

Lewes River makes a turn here to the south-west, and runs in that direction six miles, when it again turns to the north-west for seven miles, and then makes a

short, sharp turn to the south and west around a low sandy point, which will at some day in the near future be cut through by the current, which will shorten the river three or four miles.

Eight miles below Little Salmon River a large rock called the Eagle's Nest stands up in a gravel slope on the easterly bank of the river. It rises about 500 feet above the river and is composed of a light grey stone. What the character of this rock is I could not observe, as I saw it only from the river, which is about a quarter of a mile distant. On the westerly side of the river there are two or three other isolated masses of apparently the same kind of rock. One of them might appropriately be called a mountain; it is south-west from the Eagle's Nest, and distant from it about three miles.

Thirty-two miles below Eagle's Nest Rock, Nordenskiold River enters from the west. It is an unimportant stream, being not more than one hundred and twenty feet wide at the mouth, and only a few inches deep. The valley as far as can be seen, is not extensive, and being very crooked it is hard to tell what its general direc-

tion is.

The Lewes between the Little Salmon and the Nordenskiold maintains a width of from two to three hundred yards, with an occasional expansion where there are islands. It is serpentine in its course most of the way, and where the Nordenskiold joins it is very crooked, running several times under a hill, named by Schwatka Tantalus Butte, and in other places leaving it, for a distance of eight miles. The dis-

tance across from point to point is only half a mile.

Below this to Rink Rapids, as called by Schwatka, or Five Finger Rapids by the miners, from the fact that five large masses of rock stand in mid channel, the river assumes its ordinary straightness and width, with a current from four to five miles per hour. I have already described Rink Rapids; I do not think they will prove anything more than a slight obstruction in the navigation of the river. A boat of ordinary power would probably have to help herself up with windlass and line in high water.

Below the rapids, for about two miles, the current is strong—probably six miles per hour—but the water seems to be deep enough for any boat that is likely to

navigate it.

Six miles below this, as already noticed, "Little Rapids" are situated. They are of no great importance, the westerly half of the stream only being obstructed. The easterly half is not in any way affected, the current being smooth and the water

deep.

Below Rink Rapids about two miles a small stream enters from the east. It is called by Dr. Dawson Tatshun River. It is not more than 30 or 40 feet wide at the mouth, and contains only a little clear, brownish water. Here I met the only Indians seen on the river between Tes-lin-too and Stewart Rivers. They were engaged in catching salmon at the mouth of the Tatshun, and were the poqrest and most unintelligent Indians it has ever been my lot to meet. It is needless to say that none of our party understood anything they said, as they could not speak a word of any language but their own. I tried by signs to get some information from them about the stream they were fishing on, but failed. I tried in the same way to learn if there were any more Indians in the vicinity, but again utterly failed. I then tried by signs to find out how many days it took to go down to Pelly River, but although I have never known these signs to fail in eliciting information in any other part of the territory, they did not understand. They appeared to be alarmed by our presence; and, as we had not yet been assured as to the rumor concerning the trouble between the miners and Indians, we felt a little apprehensive, but being able to learn nothing from them we had to put our fears aside and proceed blindly.

Between Rink Rapids and Pelly River, fifty-eight and a half miles, no streams of any importance enter the Lewes; in fact, with the exception of the Tatshun, it

may be said that none at all enter.

About a mile below Little Rapids the river spreads out into a lake-like expanse, with many islands; this continues for about three miles, when it contracts 24 [PART VIII]

to something like the usual width; but bars and small islands are very numerous all the way to Pelly River. About five miles above Pelly River there is another lakelike expanse filled with islands. The river here for three or four miles is nearly a mile wide, and so numerous and close are the islands that it is impossible to tell when floating among them where the shores of the river are. The current, too, is swift, leading one to suppose the water shallow; but I think even here a channel deep enough for such boats as will navigate this part of the river can be found. Schwatka named this group of islands "Ingersoll Islands."

At the mouth of the Pelly the Lewes is about half a mile wide, and here too there

are many islands, but not in groups as at Ingersoll Islands.

About a mile below the Pelly, just at the ruins of Fort Selkirk, the Lewes was found to be 565 yards wide; about two-thirds being ten feet deep, with a current of about four and three-quarter miles per hour; the remaining third was more than half taken up by a bar, and the current between it and the south shore was very slack.

Pelly River at its mouth is about two hundred yards wide, and continues of this width as far up as could be seen. Dr. Dawson made a survey and examination of this river, which will be found in his report already cited, "Yukon District and North-

ern British Culumbia."

Just here for a short distance the course of the Yukon-Pelly is nearly west, and on the south side, about a mile below the junction with the Lewes, stands all that remains of the only trading post ever built by white men in the district. This post was established by Robert Campbell for the Hudson's Bay Company in the summer of 1848. It was first built on the point of land between the two rivers, but this location proving untenable on account of flooding by ice jams in the spring, it was in the season of 1852 moved across the river to where the ruins now stand. It appears that the houses composing the post were not finished, when the Indians from the coast on Chilkat and Chilkoot Inlets came down the river to put a stop to the competitive trade, which Mr. Campbell had inaugurated, and which they found to seriously interfere with their profits. Their method of trade appears to have been then pretty much as it is now—very one sided. What they found it convenient to take by force they took, and what it was convenient to pay for at their own price they paid for.

Rumors had reached the post that the coast Indians contemplated such a raid, and in consequence the native Indians in the vicinity remained about nearly all summer. Unfortunately, however, they went away for a short time, and during their absence the coast Indians arrived, in the early morning, and surprised Mr. Campbell in bed. They were not at all rough with him, but gave him the privilege of leaving the place within twenty-four hours, after which he was informed that he was liable to be shot if seen by them in the locality. They then pillaged the place and set fire to it, leaving nothing but the remains of the two chimneys which are still standing.

This raid and capture took place on the 1st August, 1852.

Mr. Campbell dropped down the river, and met some of the local Indians, who returned with him, but the robbers had made their escape. I have heard that the local Indians wished to pursue and overtake them, but to this Mr. Campbell would not consent. Had they done so it is probable not many of the raiders would have escaped, as the superior local knowledge of the natives would have given them an advantage difficult to estimate, and the confidence and spirit derived from the aid and presence of a white man or two would be worth much in such a conflict.

Mr. Campbell went on down the river until he met the outfit for his post on its way up from Fort Yukon, which he turned back. He then ascended the Pelly, crossed to the Liard, and reached Fort Simpson, on the Mackenzie, late in

October.

Mr. Campbell's first visit to the site of Fort Selkirk was made in 1840 under instructions from Sir George Simpson, then Governor of the Hudson's Bay Company. He crossed from the head waters of the Liard to the waters of the Pelly. It appears the Pelly, where he struck it, was a stream of considerable size, for he speaks of its appearance when he first saw it from "Pelly Banks," the name given the bank

from which he first beheld it, as a "splendid river in the distance." In June, 1843, he descended the Pelly to its confluence with the main stream, which he named the "Lewes." Here he found many families of the native Indians—"Wood Indians," he called them. These people conveyed to him, as best they could by word and sign, the dangers that would attend a further descent of the river, representing that the country below theirs was inhabited by a tribe of fierce cannibals, who would assuredly kill and eat them. This so terrified his men that he had to return by the way he came, pursued, as he afterwards learned, by the Indians, who would have murdered himself and party had they got a favorable opportunity. Thus it was not until 1850 that he could establish, what he says he all along believed, "that the 'Pelly and Yukon were identical." This he did by descending the river to where the Porcupine joins it, and where in 1847, Fort Yukon was established by Mr. A. H. Murray for the Hudson's Bay Company.

Mr. Campbell then named the river he had discovered and explored from the height of land to the junction with the Porcupine, "Pelly River," and had it delineated and so named on a map of that part of the country, drawn by J. Arrowsmith, the topographer for the Hudson's Bay Company, in 1853.

With reference to the tales told him by the Indians of bad people outside of their country, I may say that Mackenzie tells pretty much 'the same story of the Indians on the Mackenzie when he discovered and explored that river in 1789. He had the advantage of having Indians along with him whose language was radically the same as that of the people he was coming among, and his statements are more explicit and detailed. Everywhere he came in contact with them they manifested, first, dread of himself and party, and when friendship and confidence were established they nearly always tried to detain him by representing the people in the direction he was going as unnaturally bloodthirsty and cruel, sometimes asserting the existence of monsters with supernatural powers, as at Manitou Island, a few miles below the present Fort Good Hope, and the people on a very large river far to the west of the Mackenzie, probably the Yukon, they described to him as monsters in size, power, and cruelty.

In our own time, after all the intercourse that there has been between them and the whites, more than a suspicion of such unknown, cruel people lurks in the minds of many of the Indians. It would be futile for me to try to ascribe an origin for these fears, my knowledge of their language and idiosyncrasies being so limited.

Nothing more was ever done in the vicinity of Fort Selkirk by the Hudson's Bay Company after these events, and in 1869 the Company was ordered by Capt. Charles W. Raymond, who represented the United States Government, to evacuate the post at Fort Yukon, he having found that it was west of the 141st meridian. The post was occupied by the Company, however, for some time after the receipt of this order, and until Rampart House was built, which was intended to be on British

territory, and to take the trade previously done at Fort Yukon.

Under present conditions the Company cannot very well compete with the Alaska Fur Company, whose agents do the only trade in the district, and they appear to have abandoned—for the present at least—all attempt to do any trade nearer to it than Rampart House, to which point, notwithstanding the distance and difficulties in the way, many of the Indians on the Pelly-Yukon make a trip every two or three years to procure goods in exchange for their furs. The clothing and blankets brought in by the Hudson's Bay Company they claim are much better than those traded on their own river by the Americans. Those of them that I saw who had any English blankets exhibited them with pride, and exclaimed "good." They point to an American blanket in contempt, with the remark "no good," and speak of their clothing in the same way.

On many maps of Alaska a place named "Reid's House" is shown on or near the upper waters of Stewart River. I made inquiries of all whom I thought likely to know anything concerning this post, but failed to elicit any information showing that there ever had been such a place. I enquired of Mr. Reid, who was in the Company's service with Mr. Campbell at Fort Selkirk, and after whom I thought, possibly,

26PART VIII the place had been called, but he told me he know of no such post, but that there was a small lake at some distance, in a northerly direction, from Fort Selkirk, where fish were procured. A sort of shelter had been made at that point for the fishermen, and a few furs might have been obtained there, but it was never regarded as a

trading post.

Below Fort Selkirk the Pelly-Yukon River is from five to six hundred yards broad, and maintains this width down to White River, a distance of ninety-six miles. Islands are numerous, so much so that there are very few parts of the river where there are not one or more in sight. Many of them are of considerable size, and nearly all are well timbered. Bars are also numerous, but almost all are composed of gravel, so that navigators will not have to complain of shifting sand bars. The current, as a general thing, is not so rapid as in the upper part of the river, averaging about four miles per hour. The depth in the main channel was always found to be more than six feet.

From Pelly River to within twelve miles of White River the general course of the river is a little north of west; it then turns to the north, and the general course

as far as the site of Fort Reliance is due north.

White River enters the main river from the west. At the mouth it is about two hundred yards wide, but a great part of it is filled with ever-shifting sand bars, the main volume of water being confined to a channel not more than one hundred yards in width. The current is very strong, certainly not less than eight miles per hour. The color of the water bears witness to this, as it is much the muddiest that I have ever seen.

I had intended to make a survey of part of White River, as far as the International Boundary, and attempted to do so; but, after trying for over half a day, I found it would be a task of much labor and time, altogether out of proportion to the importance of the end sought, and therefore abandoned it. The valley, as far as can be seen from the mouth, runs about due west for a distance of eight miles; it then appears to bear to the south-west; it is about two miles wide where it joins the Pelly valley, and apparently keeps the same width as far as it can be seen.

Mr. Harper, of the firm of Harper, McQuestion & Co., went up this river with sleds in the fall of 1872 a distance of fifty or sixty miles. He described it as possessing the same general features all the way up, with much clay soil along its banks. Its general course, as sketched by him on a map of mine, is for a distance of about thirty miles a little north-west, thence south-west thirty or thirty-five miles, when it deflects to the north-west, running along the base of a high mountain If the courses given are correct it must rise somewhere near the head of Forty Mile River; and if so, its length is not at all in keeping with the volume of its discharge, when compared with the known length and discharge of other rivers in Mr. Harper mentioned an extensive flat south of the mountain range the territory. spoken of, across which many high mountain peaks could be seen. One of these he thought must be Mount St. Elias, as it overtopped all the others, but as Mount St. Elias is about one hundred and eighty miles distant his conclusion is not tenable. From his description of this mountain it must be more than twice the height of the highest peaks seen anywhere on the lower river, and consequently must be ten or twelve thousand feet above the sea. He stated that the current in the river was very swift, as far as he ascended, and the water muddy. The water from this river, though probably not a fourth of the volume of the Pelly-Yukon, discolors the water of the latter completely; and a couple of miles below the junction the whole river appears almost as dirty as White River.

Between White and Stewart Rivers, ten miles, the river spreads out to a mile and upwards in width, and is a maze of islands and bars. The survey was carried down the easterly shore, and many of the channels passed through barely afforded water enough to float the canoes. The main channel is along the westerly shore,

down which the large boat went, and the crew reported plenty of water.

Stewart River enters from the east, in the middle of a wide valley, with low hills on both sides, rising on the north side in steps or terraces to distant hills of considerable height. The river, half a mile or so above the mouth, is two hundred

yards in width. The current is slack and the water shallow and clear, but dark

While at the mouth I was fortunate enough to meet a miner who had spent the whole of the summer of 1887 on the river and its branches prospecting and exploring. He gave me a good deal of information of which I give a summary. He is a native of New Brunswick, Alexander McDonald by name, and has spent some years mining in other places, but was very reticent about what he had made or found. Sixty or seventy miles up the Stewart a large creek enters from the south, which he called Rose Bud Creek or River, and thirty or forty miles further up a considerable stream flows from the north-east, which appears to be Beaver River, as marked on the maps of that part of the country. From the head of this stream he floated down on a raft, taking five days to do so. He estimated his progress at forty to fifty miles each day, which gives a length of from two hundred to two hundred and fifty This is probably an overestimate, unless the stream is very crooked, which he stated was not the case. As much of his time would be taken up in prospecting, I should call thirty miles or less a closer estimate of his progress. This river was from fifty to eighty yards wide and was never more than four or five feet deep, often being not more than two or three; the current, he said, was not at all swift. Above the mouth of this stream the main river is from one hundred to one hundred and thirty yards wide with an even current and clear Sixty or seventy miles above the last mentioned branch another large branch joins, which is possibly the main river. At the head of it he found a lake nearly thirty miles long and averaging a mile and a half in width, which he called Mayhew Lake, after one of the partners in the firm of Harper, McQuestion & Co. He explored the lake and the head of the river, but saw only the lower part of the river near its mouth.

Thirty miles or so above the forks on the other branch there are falls, which McDonald estimated to be from one to two hundred feet in height. I met several parties who had seen these falls, and they corroborate this estimate of their height. McDonald went on past the falls to the head of this branch and found terraced gravel hills to the west and north; he crossed them to the north, and found a river flowing northward. On this he embarked on a raft and floated down it for a day or two, thinking it would turn to the west and join the Stewart, but finding it still continuing north, and acquiring too much volume to be any of the branches he had seen while passing up the Stewart, he returned to the point of his departure, and after prospecting among the hills around the head of the river he started westward, crossing a high range of mountains composed principally of shales with many thin seams of what he called quartz ranging from one to six inches in thickness.

On the west side of this range he found a river flowing out of what he called Mayhew Lake, and crossing this got to the head of Beaver River, which he descended

as before mentioned.

It is probable the river flowing northwards, on which he made a journey and returned, was a branch of Peel River. He described the timber on the gravel terraces of the water-shed as small and open. He was alone in this unknown wilderness all summer, not seeing even any of the natives. There are few men so constituted as to be capable of isolating themselves in such a manner. Judging from all I could learn it is probable a light-draught steamboat could navigate nearly all of Stewart River and its tributaries.

From Stewart River to the site of Fort Reliance, seventy-three and a quarter The average width is between miles, the Pelly-Yukon is broad and full of islands. a half and three quarters of a mile, but there are many expansions where it is over a mile in breadth; however, in these places it cannot be said that the waterway is wider than at other parts of the river, the islands being so large and numerous. In this reach no streams of any importance enter.

About thirteen miles below Stewart River a large valley joins that of the river, but the stream occupying it is only a large creek. This agrees in position with what has been called Sixty Mile Creek, which was supposed to be about that distance above 28

Fort Reliance, but it does not agree with descriptions which I received of it; moreover, as Sixty Mile Creek is known to be a stream of considerable length, this creek would not answer its description.

Twenty-two and a half miles from Stewart River another and larger creek enters from the same side; it agrees with the descriptions of Sixty Mile Creek, and I have so marked it on my map. This stream is of no importance, except for what mineral

wealth may be found on it.

Six and a half miles above Fort Reliance the Ton-dag River of the Indians (Deer River of Schwatka) enters from the east. It is a small river about forty yards wide at the mouth, and shallow; the water is clear and transparent, and of a beautiful blue color. The Indians catch great numbers of salmon here. They had been fishing shortly before my arrival, and the river, for some distance up, was full of salmon traps.

A miner had prospected up this river for an estimated distance of forty miles in the season of 1887. I did not see him, but got some of his information at second hand. The water being so beautifully clear I thought it must come through a large lake not far up; but as far as he had gone no lakes were seen. He said the current was comparatively slack, with an occasional "ripple" or small rapid. Where he turned back the river is surrounded by high mountains, which were then covered with snow, which accounts for the purity and clearness of the water.

It appears that the Indians go up this stream a long distance to hunt, but I

could learn nothing definite as to their statements concerning it.

Twelve and a half miles below Fort Reliance, the Chan-din-du River, as named by Schwatka, enters from the east. It is thirty to forty yards wide at the mouth, very shallow, and for half a mile up is one continuous rapid. Its valley is wide and can be seen for a long distance looking north-eastward from the mouth.

Between Fort Reliance and Forty Mile River (called Cone Hill River by Schwatka) the Lewes assumes its normal appearance, having fewer islands and being narrower, averaging four to six hundred yards wide, and the current being more regular. This stretch is forty-six miles long, but was estimated by the traders at

forty, from which the Forty Mile River took its name.

Forty Mile River joins the main river from the west. Its general course as far up as the International Boundary, a distance of twenty-three miles, is south-west; after this it is reported by the miners to run nearer south. Many of them claim to have ascended this stream for more than one hundred miles, and speak of it there as quite a large river. They say that at that distance it has reached the level of the plateau, and the country adjoining it they describe as flat and swampy, rising very little above the river. It is only a short distance across to the Tanana River—a large tributary of the Yukon—which is here described as an important stream. However, only about twenty-three miles of Forty Mile River are in Canada; and the upper part of it and its relations to other rivers in the district have no direct interest for us.

Forty Mile River is one hundred to one hundred and fifty yards wide at the mouth, and the current is generally strong, with many small rapids. Eight miles up is the so called cañon; it is hardly entitled to that distinctive name, being simply a crooked contraction of the river, with steep rocky banks, and on the north side there is plenty of room to walk along the beach. At the lower end of the cañon there is a short turn and swift water in which are some large rocks; these cannot generally be seen, and there is much danger of striking them running down in a boat. At this point several miners have been drowned by their boats being upset in collision with these rocks. It is no great distance to either shore, and one would think an ordinary swimmer would have no difficulty in reaching land; but the coldness of the water soon benumbs a man completely and renders him powerless. In the summer of 1887 an Indian from Tanana, with his family, was coming down to trade at the post at the mouth of Forty Mile River; his canoe struck on these rocks and upset, and he was thrown clear of the canoe, but the woman and children clung to it. In the rough water he lost sight of them, and concluding that they were lost it is said he deliberately drew his knife and cut his throat, thus perishing, while his family

were hauled ashore by some miners. The chief of the band to which this Indian belonged came to the post and demanded pay for his loss, which he contended was occasioned by the traders having moved from Belle Isle to Forty Mile, thus causing them to descend this dangerous rapid, and there is little doubt that had there not been so many white men in the vicinity he would have tried to enforce his demand.

The length of this so called cañon is about a mile. Above it the river up to the Boundary is generally smooth, with swift current and an occasional ripple. The amount of water discharged by this stream is considerable; but there is no prospect

of navigation, it being so swift and broken by small rapids.

From Forty Mile River to the Boundary the Pelly-Yukon preserves the same general character as between Fort Reliance and Forty Mile, the greatest width being

about half a mile and the least about a quarter.

Fifteen miles below Forty Mile River a large mass of rock stands on the east bank. This was named by Schwatka "Roquette Rock," but is known to the traders as Old Woman Rock, a similar mass of rock on the west side of the river being known as Old Man Rock.

The origin of these names is an Indian legend, of which the following is the

version given to me by the traders:-

In remote ages there lived a powerful Showman, pronounced Tshaumen by the Indians, this being the local name for what is known as medicine man among the Indians farther south and east. The Tshaumen holds a position and exercises an influence among the people he lives with, something akin to the wise men or magi of olden times in the East. In this powerful being's locality there lived a poor man who had the great misfortune to have an inveterate scold for a wife. He bore the infliction for a long time without murmuring, in hopes that she would relent, but time seemed only to increase the affliction; at length, growing weary of the unceasing torment, he complained to the Tshaumen, who comforted him and sent him home with the assurance that all would soon be well.

Shortly after this he went out to hunt, and remained away many days endeavoring to get some provisions for home use, but without avail; he returned weary and hungry, only to be met by his wife with a more than usually violent outburst of scolding. This so provoked him that he gathered all his strength and energy for one grand effort and gave her a kick that sent her clear across the river. On landing she was converted into the mass of rock which remains to this day a memorial of her viciousness and a warning to all future scolds. The metamorphosis was effected by the Tshaumen, but how the necessary force was acquired to send her across the river (here about half a mile wide), or whether the kick was administered by the Tshaumen or the husband, my narrator could not say. He was also altogether at a loss to account for conversion of the husband into the mass of rock on the west side of the river; nor can I offer any theory, unless it is that he was petrified by astonishment at the result.

Such legends as this would be of interest to ethnologists if they could be procured direct from the Indians, but repeated by men who have little or no knowledge of the utility of legendary lore, and less sympathy with it, they lose much of their value

Between Forty Mile River and the Boundary line no stream of any size joins the Pelly; in fact, there is only one stream, which some of the miners have named Sheep Creek, but as there is another stream farther down the river, called by the same name, I have named it Coal Creek. It is five miles below Forty Mile, and comes in from the east, and is a large creek but not at all navigable. On it some extensive coal seams were seen, which will be more fully referred to further on.

At the observatory, three miles above the Boundary, a cross section of the Lewes River was measured. It was made on the 28th of November and reduced to the height at which the water stood when I reached that place. Holes were cut in the ice at intervals of 100 feet and the depth of water measured with a pole. The measurements commenced at the easterly shore, and were as follows: at 100 feet from water's edge, depth 10.00 feet; at 200 feet, depth 16.33 feet; at 300 feet, depth 30

23.00 feet; at 400 feet, depth 25.00 feet; at 500 feet, depth 25.50 feet; at 600 feet, depth 21.00 feet; at 700 feet, depth, 16.55 feet; at 800 feet, depth 11.25 feet; at 900 feet, depth 6.25 feet; at 1,000 feet, depth 3.75 feet; at 1,100 feet, depth 3.50 feet; at 1,200 feet, depth 3.50 feet; at 1,300 feet, depth 3.50 feet; at 1,400 feet, depth 3.25 feet; at 1,500 feet, depth 3.75 feet; at 1,600 feet, depth 4.00 feet; at 1,700 feet, depth 5.33 feet; at 1,800 feet, depth 6.80 feet: at 1,900 feet, depth 7.00 feet; at 2,000 feet, depth 10.50 feet; at 2,100 feet, depth 10.25 feet; at 2,200 feet, depth 4.00 feet; at 2,250 feet, water's edge.

At the Boundary the river is somewhat contracted, and measures only 1,280 feet across in the winter; but in summer, at ordinary water level, it would be about one hundred feet wider. Immediately below the Boundary it expands to its usual width, which is about 2000 feet. The area of the cross section measured is 22,268 feet; the sectional area of the Tes-lin-too, as determined by Dr. Dawson and already referred to, is 3,809 feet; that of the Lewes at the Tes-lin-too, from the same authority, is 3,015 feet. Had the above cross section been reduced to the level at which the water ordinarily stands during the summer months, instead of to the height at which it stood in the middle of September when it was almost at its lowest, the sectional area would have been at least 50 per cent. more, and at spring flood level about double the above area.

It is a difficult matter to determine the actual discharge at the place of the cross section, owing to the irregularity in the depth and current, the latter being in the deep channel at the east side, when I tried it in September, approximately 4.8 miles per hour; while on the bar in midstream it was not more than 2.5 miles per hour; and between the bar and the westerly shore there was very little current.

The river above this for some miles was no better for the purpose of cross section measurement. At the Boundary it is narrow and clear of bars and islands for some miles, but here I did not have an opportunity to determine the rate of the current before the river froze up, and after it froze the drift ice was jammed and piled so high that it would have been an almost endless task to cut holes through it.

Taking the sectional area of the deep part alone and the rate of current above stated, and calculating by the approximate formulae used by Dr. Dawson, as given in Trautwine's Engineer's Pocket-Book, p. 562, the discharge in cubic feet per second is 90,864, or about three times that of the Lewes and Tes-lin-too together, as determined by Dr. Dawson. The discharge of the rest of the channel would approximate only 14,000 feet—in all about 105,000 feet. At summer level with an increased sectional area and current it would approximate 60 per cent more, or close to 170,000 feet per second. At high water level it would at least be eight to ten feet deeper, and we can only conjecture what the current would be, but I think it is safe to assume at least 80 per cent. more discharge, which would give us roughly 300,000 feet per second. For the sake of comparison, I give the discharge of the St. Lawrence and Ottawa Rivers, being the mean of the years 1867 to 1882: St. Lawrence, mean 900,000 feet; Ottawa, at Grenville, mean 85,000 feet. The point where cross section was measured is less than seven hundred miles from the head of Lewes River, and from the head of the Tes-lin-too probably eight hundred.

The current, from the Boundary down to the confluence with the Porcupine, is said to be strong, and much the same as that above; from the Porcupine down for a distance of five or six hundred miles it is called medium, and the remainder easy.

On the 22nd September a small steamboat named the "New Racket" passed my camp on her way up to Forty Mile River with supplies; she was about forty feet long and nine or ten feet beam, with about two feet draught. The boat was wholly taken up with engine and boiler, the berths for the crew being over the engine room. The propelling power was a stern wheel driven by two engines of large size for such a small boat. It was claimed for her by her Captain, A. Mayhew, of the firm of Harper, McQuestion & Co., that she could make ten miles an hour in dead water. She was then twenty-two days out from St. Michel's Island, near the mouth of the river. Mr. Mayhew claimed that this was longer than usual, on account of the boiler tubes being out of order and leaking badly, so that it was impossible to keep more than fifty [PART VIII]

pounds pressure, while that generally used was about double. That this was true was apparent from the fact that it took her about five hours to make four miles; and, at one place below my camp, she hung for over an hour without making any progress at all, nor could she pass that point until she stopped and bottled up steam.

After reaching Forty Mile River this boat started up the stream to Stewart River, with supplies for the few miners who intended to winter there, and materials for the Indian fur trade. Some miners who intended to spend the summer of 1888 mining on Stewart River took passage up on her; but after trying for nearly two days it was found impossible, loaded as she was, to make any headway, so she returned, discharged her passengers, and finally reached Stewart River light. Here the owners intended to lay her up and give her a thorough overhauling before the commencement of next season's navigation. Three other steamboats which navigate the river, the "Yukon," the "St. Michel," and the "Explorer," belong to the Alaska Commercial and Fur Trading Company. These boats are small, and carry little or no freight themselves, but tow loaded barges. Their space is entirely devoted to engine and boiler, and they are driven by a stern wheel. Messrs Harper, McQuestion & Co. expected the Alaska Commercial and Fur Trading Company to put a larger boat on the river in the season of 1888; one that would carry one hundred and twenty to two hundred tons of freight, and make five to seven miles per hour up stream on the upper river. The other boats do not make more than three or four miles per hour, and often not that. None of these boats had passed Stewart River while I was there, nor is it probable they have since done so.

From Stewart River to the mouth of the Yukon is about 1,650 miles, and the only difficult place in all this distance is the part near the confluence with the Porcupine, which has evidently been a lake in past ages, but is now filled with islands: it is said that the current here is swift, and the channels generally narrow, rendering

navigation difficult.

During my stay at the Boundary, readings of the barometer were taken twice daily—at 7:30 a.m. and at 1:30 p.m. These readings are complete for the months of October, November, and December, 1887, and January and February, 1888. I have obtained from Mr. Carpmael, the Director of the Meteorological Service, the readings for the same months at Victoria, B.C., Fort Simpson, B.C., and Sitka, Alaska. The readings at Victoria were taken at 8 a.m. and 2 p.m., those at Fort Simpson at 7 a.m. and 2 p.m., and those at Sitka are given as the daily mean. I took no observation to determine the humidity of the atmosphere; consequently in deducing the height of my station above sea level the correction due to the difference in tension of the vapor in the atmosphere at the different places will have to be neglected. Even had we all the data used in determining the differences of height from the differences of barometer readings, it would be little more than a waste of time to employ it in this case, the distances between the stations being so great. The distance between Sitka and the Boundary is about 560 miles in an air line, with a difference of latitude of nearly 73 degrees; Fort Simpson is distant about 760 miles in an air line with a difference of latitude of 10 degrees. The difference in time between Sitka and the Boundary is about twenty-three minutes, and between the Boundary and Fort Simpson forty-two minutes. The readings at the latter place were therefore taken in the morning sixty-five minutes before mine and in the afternoon twelve minutes before.

The temperature of the attached thermometer was recorded with every barometer reading, but the barmometer readings were not corrected for temperature, but entered as read, which will suit every purpose as well. I have used the mean of the barometer readings for the month at each of the two daily observations, corrected for the mean of the temperature readings observed at the same time, and in comparing with Sitka I have used the mean of the two daily readings.

Victoria is distant about 1,240 miles in an air line, with a difference of latitude 163 degrees, and a difference in time of about an hour and ten minutes; the value of a height deduced from differences of barometer readings at this distance and extending only over a few months will not be of any definite value. Even the closest of

B2 [PART VIII]

the points, Sitka, will not under the circumstances give more than a poor approximation, but as they are the best—in fact, the only measures we have at the place—they have to be accepted. Using this determination, and the known height of Bennet-Lake above the sea, I have interpolated for the heights of the several points of interest along the river.

Taking the height due to difference of barometer reading alone, and neglecting all the other terms in the formula employed, the heights deduced from the mean of each month compared with each of the above places would stand as follows:—

-	_		
	Sitka.	Fort Simpson.	Victoria.
	ft.	ft.	ft.
October	864	1,045	1,198
November	843	836	1,061
December	525	610	751
January	224	561	607
February	928	845	1,056
			
Mean	677	77 9	934

My readings have been corrected for the monthly mean reading of the attached thermometor, but not for capillarity, as I had no corrections furnished for that error, and I do not know what the bore of the tube was, as unfortunately it was broken before I could get it home. However, as it was large—apparently about half an inch in diameter—this source of error would not effect the result more than 10 or 12 feet.

These values show the unreliability of barometric measurements of heights when the points are so far apart and the observations extend only over short intervals of time.

One of my thermometers was broken soon after starting, and I had no means of determining the relative humidity of the air, but at my station this was not material during the term of my observations, the temperature being so low. The mean minimum for October was 18°.5; for November —5°.1; for December —33.6°, mean for 1.30 p.m. —27°.6; for January, —25°.3, for 1.30 p.m. —15°.3; for February, —16.8°, for 1.30 p.m. —4°.3.

The means of the two readings at Fort Simpson and Victoria and the mean readings at Sitka, with the means of the readings at my station corrected for temperature,

stand as follows in their order for the months mentioned:-

	Victoria.	Fort Simpson.	Sitka.	Boundary.
October	30.152	29.984	29.777	28.813
November	30.024	29.835	29.812	28.865
December	29.911	29.737	29.661	29.058
January	29.975	29.933	29.546	29.296
February	30.133	29.876	29.987	28.943

From these it would appear that the reading for the month of January was abnormally high at my station; rejecting it, the mean of the other four months compared with Sitka is 790 feet. The mean of the three comparisons is 797 feet.

As Sitka is much the nearest point, the temperatures will be correspondingly nearer those of my station, and the hygrometric conditions nearer to mine than at the other places referred to. I have therefore adopted the mean of the four months—October, November, December, and February—which compared with Sitka gives 790 feet.

The height of the confluence of Yukon and Porcupine Rivers is marked on the manuscript map furnished for my guidance as 412 feet above the sea. It is not stated who is the authority for this; but, presumably, it is Capt. C. W. Raymond, of the United States Corps of Engineers, who spent some time there in the summer of 1869. As this point is twelve or thirteen hundred miles by the river from the sea, and for more than half of the distance the current is said to be pretty strong, it is not

probable that the altitude is less than this. Assuming it as 412 feet, we have a fall of 378 feet between the Boundary and that point: the distance between them is about 200 miles which gives a fall of 110 feet are with in that want of the circumstance.

miles, which gives a fall of 19 feet per mile in that part of the river.

As already stated, the height of the summit of Taiya Pass is 3,378 feet above the head of canoe navigation on Taiya River, and the latter is assumed to be 120 feet above the sea, making the summit 3,498 feet above tide water. The summit is 1,354 feet above Lake Lyndeman, which gives 2,144 feet for the altitude of this lake. Between it and Lake Bennet there is a fall of 12 or 14 feet. This gives the altitude of Lake Bennet as 2,130 feet, which must be within a very few feet of the exact height.

The corrected distance from the head of Lake Bennet to the Boundary is 639.5 miles. Of this 95.4 miles is lake, leaving 544.1 miles of river. Of this 2.7 miles is the canon and its rapids, in which there is a fall of 32 feet. Excluding this we have 541.4

miles of river, with a fall of 1,308 feet.

Assuming the rate of descent to be uniform in this distance we have a fall of 2.41 feet per mile. The rate of descent is, of course, not uniform, but the error in the height of any place, deduced from its distance with this rate of fall, will not be very great.

Proceeding thus we get the altitude of Marsh or Mud Lake, 2,118 feet; the head of the canon, 2,056 feet; the foot of canon, 2,024 feet; the mouth of Tahk-heena River, 1,990 feet; Lake Labarge, 1,959 feet; Tes-lin-too River, 1,873 feet; Big Salmon River, 1,787 feet; Little Salmon River, 1,700 feet; Rink Rapids, 1,556 feet; Pelly River, 1,425 feet; White River, 1,194 feet; Stewart River, 1,170 feet; Fort Reliance, 993 feet; Forty Mile River, 882 feet.

AGRICULTURAL CAPABILITIES OF THE PELLY-YUKON BASIN.

The agricultural capabilities of the country along the river are not great,

nor is the land which can be seen from the river of good quality.

When we consider further the unsuitable climatic conditions which prevail in the region it may be said that as an agricultural district this portion of the country will never be of value.

My meteorological records show over eight degrees of frost on the 1st of August, over ten on the 3rd, and four times during the month the minimum temperature was below freezing. On the 13th September the minimum temperature was 16°, and all the minimum readings for the remainder of the month were below freezing.

Along the east side of Lake Bennet, opposite the Chilkoot or western arm, there are some flats of dry, gravelly soil, which would make a few farms of limited extent. On the west side, around the mouth of Wheaton River, there is an extensive flat of sand and gravel, covered with small pine and spruce of stunted growth. The vegetation is poor and sparse, not at all what one would desire to see on a place upon which he was thinking of settling. At the lower end of the lake there is another extensive flat of sandy soil, thinly clad with small poplars and pines. The same

remarks apply to this flat as to that at Wheaton River.

Along the westerly shore of Tagish Lake there is a large extent of low, swampy flats, a part of which might be used for the production of such roots and cereals as the climate would permit. Along the west side of Marsh Lake there is also much flat surface of the same general character, on which I saw some coarse grass which would serve as food for cattle. Along the east side the surface appeared higher and terraced, and is probably less suited to the requirements of the agriculturalist. Along the head of the river, for some miles below Marsh Lake, there are flats on both sides, which would, as far as surface conformation goes, serve for farms. The soil is of much better quality than any heretofore seen, as is proved by the larger and thicker growth of timber and underbrush which it supports. The soil bears less the character of detritus, and more that of alluvium, than that seen above.

As we approach the cañon the banks become higher and the bottom lands narrower, with some escarpments along the river. At the cañon the bank on the west side rises two hundred feet and upwards above the river, and the soil is light and 34

[PART VIII]

sandy. On the east side the bank is not so high, but the soil is of the same character?

and the timber small and poor, being nearly all stunted pine.

Between the cañon and Lake Labarge, as far as seen from the river, there is not much land of value. The banks are generally high, and the soil light and sandy. At the head of the lake there is an extensive flat, partly covered with timber, much larger and better than any seen above this point. Poplar eight and ten inches in diameter were not uncommon, and some spruce of fifteen and sixteen inches, and many of upwards of a foot in diameter, were also noticed. The soil, however, is light, and the vegetation, especially the grass, thin and poor.

Some miles down the lake an extensive valley joins that of the lake on the west side. This valley contains a small stream. Around this place there is some land that might be useful, as the grass and vegetation is much better than any seen so far.

On the lower end of the lake, on the west side, there is also a considerable plain which might be utilized; the soil in parts of it is good. I saw one part where the timber had been burned some time ago; here, both the soil and vegetation were good, and two or three of the plants seen are common in this part of Ontario, but they had not the vigorous appearance which the same plants have here.

Northward from the end of the lake there is a deep, wide valley, which Dr. Dawson has named "Ogilvie Valley." In this the mixed timber, poplar and spruce, is of a size which betokens a fair soil; the herbage, too, is more than usually rich for this region. This valley is extensive, and, if ever required as an aid in the susten-

ance of our people, will figure largely in the district's agricultural assets.

Below the lake the valley of the river is not as a rule wide, and the banks are often steep and high. There are, however, many flats of moderate extent along the river, and at its confluence with other streams. The soil of many of these is fair.

About forty miles above the mouth of Pelly River there is an extensive flat on both sides of the Lewes. The soil here is poor and sandy, with small open timber. At Pelly River there is a flat of considerable extent on which the ruins of Fort Selkirk stand. It is covered with a small growth of poplar and a few spruce. The soil is a gravelly loam of about eight inches in depth, the subsoil being gravel, evidently detritus. This flat extends up the river for some miles, but is all covered thickly with timber, except a small piece around the site of the fort.

On the east side of the river there is also a large plateau, but it is two or three hundred feet above the river, and the soil appears to be poor, judging from the thinness and smallness of the trees. This plateau seems to extend up the Pelly for some distance, and down the Yukon for ten or twelve miles. As seen from the river, it reminds one of the slopes and hills around Kamloops in British Columbia, and like them, though not well suited to agriculture, might yield fair pasturage should such

ever be required.

A serious objection to it, however, for that purpose, if it is not watered on the surface by ponds, is that the river is difficult of access, as the plateau on the side towards the river is bounded by a perpendicular basalt cliff, which without artificial arrangement would completely bar approach to the water. This cliff is more than two hundred feet high at the confluence, and becomes lower as we descend the river

until, at the lower end, it is not more than sixty to eighty feet high.

Between Pelly and White Rivers there are no flats of any extent. At White River there is a flat of several thousand acres, but it is all timbered, and the surface of the soil is covered with a thick growth of moss, which prevents the frost ever leaving the ground. This has so preserved fallen timber and the foliage of the trees that much of it is lying on the surface nearly as sound as when it fell. On this account the vegetable mould on the gravel is thin and poor. The standing timber also bears witness to the coldness of the soil by its slow and generally small growth. A few trees near the bank, where the sun can heat the soil, are of fair size, but further back they are generally small.

At Stewart River there is another large flat to which the same general remarks are applicable. Thence, to the site at Fort Reliance, there are no flats of any importance. High above the river in some places there are extensive wooded slopes, which,

when cleared, would be well suited for such agricultural purposes as the climate would permit.

At Fort Reliance there is a flat of probably 1,500 acres in extent, but although Messrs. Harper & McQuestion lived there for some years, it appears they never made

any agricultural experiments, believing that they would be futile.

At Forty Mile River there is a flat of about four or five hundred acres in area, on which the soil is of better quality than on many of the other places mentioned. On this Messrs. Harper & McQuestion have erected their dwelling and store houses. They gave it as their opinion that only very hardy roots would live through the many cold nights of the summer months, and that the season is so short that even if they survived the cold they would not attain a size fit for use.

The river is not generally clear of ice until between the 25th of May and the 1st

of June, and heavy frosts occur early in September, and sometimes earlier.

At the Boundary there are two flats of several hundred acres each, one on the west side, the other three miles above it on the east side. Both of these are covered

with poplar, spruce, and white birch, also some willow and small pine.

In making preparations for the foundations of our house at our winter quarters near the Boundary we had to excavate in the bank of the river, and in an exposed place where the sun's rays could reach the surface without hindrance from trees or other shade we found the depth to the perpetually frozen ground to be not more than two feet. In the woods where the ground was covered with over a foot of moss the frozen ground is immediately below the moss. On this the timber is generally small, and of very slow growth, as is evident from the number of annual rings of growth. I have seen trees of only three or four inches in diameter which were upwards of one hundred and fifty years old.

It is difficult to form an estimate of the total area of agricultural land seen, but it certainly bears a very small proportion to the remainder of the country. I think ten townships, or 360 square miles, would be a very liberal estimate for all the places mentioned. This gives us 230,400 acres, or, say 1,000 farms. The available land on the affluents of the river would probably double this, or give 2,000 farms in that part of our territory, but on most of these the returns would be meagre.

Without the discovery and development of large mineral wealth it is not likely that the slender agricultural resources of the region will ever attract attention, at

least until the better parts of our territories are crowded.

In the event of such discovery some of the land might be used for the production of vegetable food for the miners; but, even in that case, with the transport facilities which the district commands, it is very doubtful if it could compete profitably with the south and east.

TIMBER FOR USE IN BUILDING AND MANUFACTURING.

The amount of this class of timber in the district along the river is not at all important. There is a large extent of forest which would yield firewood, and timber for use in mines, but for the manufacture of lumber there is very little.

To give an idea of its scarceness, I may state that two of my party made a thorough search of all the timbered land around the head of Lake Bennet and down the lake for over ten miles, and in all this search only one tree was found suitable for making such plank as we required for the construction of our large boat. This tree made four planks 15 inches wide at the butt, 7 at the top, and 31 feet long.

Such other planks as we wanted had to be cut out of short logs, of which some, 10 to 14 inches in diameter and 10 to 16 feet long, could be found at long intervals. The boat required only 450 feet of plank for its construction, yet some of the logs had to be carried nearly 200 yards, and two saw-pits had to be made before that quantity was procured, and this on ground that was all thickly wooded with spruce, pine, and some balsam, the latter being generally the largest and cleanest-trunked.

These remarks apply to the timber until we reach the lower end of Marsh Lake. On the head of the river, near the lake, some trees of fair size, 12 to 14

inches in diameter, and carrying their thickness very well, could be got, but their

number was small, and they were much scattered.

At the cañon the timber is small and scrubby; below it there were a few trees that would yield planks from 7 to 10 inches wide, but they have been nearly all cut by the miners, many of whom made rafts at the head of Lake Bennet, floated down to White Horse Rapids, and there abandoned them for boats which they then built.

The great bulk of the timber in the district suitable for manufacture into lumber is to be found on the islands in the river. On them the soil is warmer and richer, the sun's rays striking the surface for a much longer time and more directly

than on the banks.

At the confluence with the Pelly, on the east side of the river, there is a grove of spruce, from which some very nice lumber could be made, and on the islands below this much of the same class of timber exists. Near White and Stewart Rivers there is a good deal of nice clean timber, but it is small. It is said there is more good timber on Stewart River in proportion to the ground wooded than on the main river.

Between Stewart River and the Boundary there is not so much surface covered with large trees as on many of the flats above it, the valley being generally narrower, and the sides steeper than higher up the river. This, of course, precludes the

growth of timber.

To estimate the quantity of timber in the vicinity of the river in our territory would be an impossible task, having only such data as I was able to collect on my way down. I would, however, say that one fourth of the area I have given as agricultural land would be a fair conjecture. This would give us two and a half townships, or ninety square miles, of fairly well timbered ground; but it must be borne in mind that there is not more than a square mile or so of that in any one place, and most of the timber would be small and poor compared with the timber of Manitoba and the easterly part of the North West Territories.

At the Boundary Line I required, as has already been explained, a tree 22 inches in diameter at the ground on which to erect my transit. An exhaustive search of over three square miles of the woods there, though showing many trees of convenient size for house logs, and many for small clean planks, showed only one

18 inches in diameter at a distance of 5 feet above the ground.

It may be said that the country might furnish much timber, which, though not fit to be classed as merchantable, would meet many of the requirements of the only industry the country is ever likely to have, viz., mining.

MINERALS.

Under this head I will first mention coal. A thin seam of this was found on Lewes River, about six miles above Five Finger Rapids. This seam was about three feet thick, and at that stage of water was eight or ten feet above the river. It could be traced for several hundred yards along the bank. Dr. Dawson made an examination of this seam, and I quote from his report regarding it: "This exposure includes, within sixty feet of the base of the bluff, at least three coal beds, of which the lowest is about three feet thick. This and the other beds contain some good looking coal, of which a thickness of about a foot sometimes occurs, but the greater part of the material is so sandy and impure as to be useless. The coal has been examined by Mr. G. C. Hoffman, who describes it as a lignite coal, with the following composition:—

Hygroscopic water	6.03
Volatile combustible matter	$36 \cdot 92$
Fixed carbon	$49 \cdot 03$
Ash	$8 \cdot 02$

100.00

Six miles below Five Finger Rapids—at Little Rapids—thin seams of coal were seen in some shale on the east bank of the river. They were unimportant, being only an inch or so thick, but they show a probable continuation of the first mentioned

bed, and a likelihood that a search would reveal an exposure of some value.

No other trace of coal was seen until Coal Creek, five miles below Forty Mile River, was reached. In the drift at the mouth of this creek I picked up specimens of coal much weathered and worn. I made inquiries of the Indians in the vicinity, but they manifested surprise on my showing it to them and burning some of it before They professed entire ignorance of the existence of any such stuff up the creek, and said they had never seen or heard of it, though they must, however, have seen it at Belle Isle, near which place there is some on a creek that comes in from the west. Some of this Messrs. Harper & McQuestion had brought to the post, and burned there, and they had also sent some to San Francisco to be tested.

I made inquiries of the miners and of Mr. Harper, but found that none of them had any personal knowledge of the location of the seam. It appeared, however, that an old man, who had gone out of the country in the fall, had spent part of the summer prospecting on the creek, and though he found no gold he reported abundance of coal, but gave no further particulars. I had several conversations with some of the miners about this coal, and was fortunate enough to enlist the interest of one of them, Mr. James McAuley, of Victoria, B.C. He promised he would some time during the ensuing summer or fall go up the creek and try to find the seam or seams, and communicate the result to me at the first opportunity. This promise he has kept, and in a letter dated at Port Townsend, W.T., 22nd October, 1888, he says:

"I have measured those coal ledges that you desired I should examine in the British possessions. I brought some samples as far as St. Michel's, but they were mislaid. Two of the ledges measure 5 feet and one 7, and there are others much

larger, but I did not have time to examine them."

That is all he says with reference to the coal seams. Although it is not as definite as one would wish, enough is stated to show that there is a large quantity of coal on the creek. He does not say what distance it is up the creek, but the reason for this is plain. When I asked him to make the search he demurred, on the ground that I would publish his reply, and that some one with capital and influence might benefit by his discovery. I told him that if I published his discovery I would give him credit for it, and that he need not be definite in his location, as all that I wished to ascertain was as to the quantity of coal; and on this understanding he consented to make the search.

No other indications of coal were seen in that part of the country. Some of the drift specimens I picked up at the mouth of the creek were sent out for examination; but when they reached Ottawa they were almost reduced to powder, and I have heard nothing of any attempt at assay being made.

METALS FOUND ON THE RIVER.

About two miles up Forty Mile River there are large exposures of a white and a grey limestone, containing many thin seams and pockets of galena. One of the seams as seen on the bank is of considerable extent, but as to its length there is no evidence, as it is all covered with drift. Two specimens were sent out and have been assayed by Mr. G. C. Hoffman, of the Geological Survey, with the following result: Specimen marked II, from Forty Mile, about two and a half miles up, contains: gold, a distinct trace; silver, $38\frac{64}{100}$ ounces to the ton of 2,000 pounds.

Specimen marked III, from exposure on Forty Mile River, about three quarters

of a mile up, contains neither gold nor silver.

Were these seams properly surveyed the former might be found of sufficient

extent and value to warrant development.

38

Specimen marked I, from north bank of Pelly-Yukon River opposite the mouth of Tondac River, about five miles above Fort Reliance, contains: gold, a trace; silver, $3\frac{64}{100}$ ounces to the ton.

Mr. Harper told me he had sent out specimens of the latter ore to San Francisco some years ago, for assay, and that it was pronounced good, but he could not give the value. I did not make an examination of the seam, but it appeared to be extensive. It is of bluish color on the surface, and earthy in appearance.

Specimen marked IIII, from near Station 634 of survey, or near Chan-din-du River, ten or twelve miles below Fort Reliance, contains: gold, a trace; silver, 0.117 ounces to the ton. Nothing was observed at this point to indicate an extensive

quantity of this ore.

It must be borne in mind that these specimens were found by accident. A closer examination of the localities might reveal valuable seams. I have described the specimens found in the order of their value. Though none of them are rich, they show that through an extensive district there are at least indications of wealth. The order in which they were picked up on the river is, I, IIII, and II and III together on Forty Mile River. From I to III is about forty miles in an air line. I was informed that gold and silver-bearing specimens of quartz had been found on Sixty Mile Creek, but I can give no details. I was also informed that a specimen of gold-bearing quartz was picked up some years ago, high up on the side of the bank of Lewes River, opposite the mouth of White River. It was sent to San Francisco and assayed, showing the enormous value of \$20,000 to the ton. This specimen was picked up above high water mark, so that it must have been found at or near its origin, or have been transported there by a glacier, the bank being about 1,200 feet high. No further details regarding this specimen could be learned.

An extensive ledge of gold-bearing quartz is reported on the westerly side of the river, about two miles above Stewart River, but regarding it I could learn nothing definite. It may be a continuation of the same ledge which yielded the

foregoing specimen.

While on Lake Bennet building our boat I found an extensive ledge of quartz, and sent specimens of it out by Dr. Dawson. The assay showed that they contained only traces of gold. The ledge is 60 to 80 feet wide, and can be easily traced on the surface for three or four miles. A small creek cuts through it about a mile

from the lake, and in this creek are found colors of gold.

While we were working at our boat an expert, employed by some California capitalists, came in with an old man who had made a descent of the river the previous summer. The old man and his party were storm-staid on what he called Lake Bennet, and while so delayed he found an enormous exposure of what he thought was gold-bearing rock. He took out specimens of it, and had them assayed at San Francisco. The result was so promising (\$8.80 of gold, and 92 cents of silver to the ton) that he enlisted the interest of some capitalists who sent him out with the expert to locate and test it thoroughly. The old man described the exposure so minutely and circumstantially that one could scarcely disbelieve his statement. They looked for the ledge for some days but could find nothing resembling what he described. They then called upon me and requested my aid. As I was making all possible haste to keep my appointment with Dr. Dawson at Pelly River I was loath to lose time in aiding the search, but, on account of the importance of the matter, and the old man's earnestness and importunity, and influenced further by a certificate of assay which he had, showing the specimens to have yielded the amounts stated (about equal to the celebrated Treadwell mine at Juneau, Alaska, the rock of which he said his mine much resembled), I at last consented.

I spent a day and night searching with him and his associates, but we failed to find anything like what he described. The old man told so many conflicting stories, and seemed to know so little of the lake, that I became convinced he was astray, and had been hoaxed by some one with a piece of the Treadwell rock. I then left them to shift for themselves. The expert took the same view of the matter, and, as he

was in charge of the search, ended it there.

I afterward, on Tagish Lake, saw a place much resembling that described. It is on the south side of the lake and just east of its junction with the Takone arm. I was strongly of opinion that this is the place he referred to, and would have [PART VIII]

examined it to verify my impression, but the wind was too strong and the lake too rough to allow of crossing over.

These are all the indications of ore in situ which I saw or heard of.

The gold heretofore found and worked in the district has been all placer gold. Search was made for it occasionally by us along the lakes and river as we descended, but, with the exception of the colors mentioned at the quartz ledge on Lake Bennet, none was found until after we had passed Lake Labarge, about six miles below which, at a sharp, short bend in the river, we found in a bar many colors to the pan. It may be said generally that colors are found anywhere on the river between that point and the Boundary, and also on all the tributaries which have been prospected.

It is probable that we have not less than 1,400 miles of stream in our part of

the district, upon all of which gold can be found.

About eighteen miles below the Tes-lin-too I saw the first place that had been worked for gold. Here a hut had been erected, and there were indications that a party had wintered there. Between it and Big Salmon River six other locations were met with. One of them, named Cassiar Bar, was worked in the season of 1886 by a party of four, who took out \$6,000 in thirty days. They were working there when I passed in 1887, but stated that all they could get that season was about \$10 per day, and that it was then (3rd August) about worked out. At the time of my visit they were trying the bank, but found the ground frozen at a depth of about three feet, though there was no timber or moss on it. They had recourse to fire to thaw out the ground, but found this slow work.

Two of this party subsequently went down to Forty Mile River, where I met one of them. He was a Swede, and had been gold mining for upwards of twenty-five years in California and British Columbia. He gave me his opinion on the district in these words: "I never saw a country where there was so much gold, and so evenly distributed; no place is very rich, but no place is very poor; every man can make a grub stake (that is enough to feed and clothe him for a year), which is more than I can say of the other places I have been in."

In conversation with Mr. T. Boswell, who, as already stated, had prospected the Tes-lin-too, or Newberry River, in the summer of 1887, I learned that the whole length of that river yielded fine gold, generally at the rate of \$8 to \$10 per day; but as the miners' great desideratum is coarse gold, they do not remain long in a country in which fine gold only is found—generally no longer than is necessary to make a "grub stake," unless the gold is in unusually large quantities. Mr. Boswell therefore went to the lower part of the river, having heard the reports of rich finds.

Stewart River was the first in the district on which mining to any extent was done. In 1886 there were quite a number of miners on it engaged in washing gold, and they all appear to have done fairly well. Their exact number I could not ascertain.

I may say that it is generally very difficult to get any exact, or even approximately exact, statements of facts or values from miners. Many of them are inveterate jokers, and take delight in hoaxing; the higher the official or social position of the person they hoax the better they are pleased. I have several times found that after spending hours getting information from one of them it would be all contradicted by the next one I met. Another cause of difficulty in getting trustworthy information from them is that, in a certain sense, they consider every Government official or agent their enemy, and that he is in the country to spy upon their doings, and find out their earnings, which latter the great majority of them are very averse to have known.

So far as I could see or learn, they do not even disclose to each other their earnings for the season. I met one or two who told me that they had made a certain amount in the season, but on inquiry among the rest these statements were ridiculed and declared untrue. As a rule, they are very generous and honest in their dealings with their fellow men, but a desire for correct geographical or statistical know-40

[PART VIII]

ledge does not actuate very many of them: hence the disagreement and often contradiction in their statements.

I have heard the amount of gold taken from off Stewart River in 1885 and 1886 estimated at various amounts. One estimate was \$300,000, but this must be excessive. The highest amount I heard as representing any one man's earnings was about \$6,000. This may be true, as many agree that \$30 per day, per man, was common on many of the bars on the river, and instances of as high as \$100 per day having been earned were spoken of.

The only mining done on Stewart River was on the bars in the river; the bench and bank bars were all timbered and frozen, so that to work them would entail a resort

to hydraulic mining, for which there was no machinery in the country.

During the fall of 1886 three or four miners combined and got the owners of the "New Racket" steamboat to allow the use of her engines to work pumps for sluicing with. The boat was hauled up on a bar, her engines detached from the wheels and made to drive a set of pumps manufactured on the ground, which supplied water for a set of sluicing boxes. With this crude machinery in less than a month the miners cleared \$1,000 each, and paid an equal amount to the owners of the boat as their share.

Alexander McDonald, who has been mentioned before, reported to me that the gold on the upper river was somewhat coarser than that on the lower, but not enough so as to be called "coarse gold." He seemed to be satisfied with the result of his season's prospecting, and intended spending the next season there.

Many of the miners who had spent 1886 on Stewart River and 1887 on Forty Mile River seemed to think the former the better all round mining field, as there were no such failures there as on Forty Mile, and they declared their intention to

make their way back to the Stewart for the season of 1888.

Forty Mile River is the only river in the district on which, up to the fall of 1888, coarse gold had been found, and it may be said that much of it can hardly claim that distinctive title. The largest nugget found was worth about \$39. It was lost on the body of a miner who was drowned at the cañon. Several other nuggets of much less value have been found, but the number of pieces which one could call "nugget" are few.

The miners term Forty Mile a "bed-rock" creek—that is, one in the bed of which there is little or no drift, or detrital matter, the bottom of the river being bed rock. In many places this rock has been scraped with knives by the miners, in order to

gather the small amount of detritus and its accompanying gold.

Very little of the gold on this creek was found in Canadian territory, the coarsest gold being found well up the river. The river had been prospected in 1887 for upwards of one hundred miles, and gold found all the way up. The great point with a miner is to find where the gold comes from. To do this, he has to reach a point on the river where there is none; then he knows he has passed the source, and will search in side valleys and gulches. The theory seems to be that the gold is stored up somewhere and dribbled out along the river.

Pieces of gold-bearing quartz had frequently been picked up along the river in the shallow drift, but none had been found in place, nor did it appear to me that much search had been made for it. Near the mouth of the river there is an extensive flat of detrital matter through which a couple of small creeks flow. This is all said to be gold-bearing, and, it was thought, would pay well for sluicing. Accordingly, a couple of claimants had staked off claims at the mouth of the creeks, and intended to try sluicing in the season of 1888. I have not heard how the venture succeeded.

During the season of 1887 some miners prospected Pelly River, but I have no information as to their success. Dr. Dawson mentions the fact of their being

there, but does not appear to have got any statistics from them.

Big and Little Salmon Rivers have also been prospected, with the usual result that more or less gold has been found everywhere.

I think it may, with confidence, be asserted that rich finds will yet be made of both coarse gold and gold-bearing quartz. It is not likely in the nature of things that such a vast extent of country should have all its fine gold deposited as sediment, brought from a distance, in past ages of the world's development. If this is not the case, the matrix, from which all the gold on these streams has come, must still exist, in part at least, and will no doubt be discovered, and thus enrich this otherwise gloomy and desolate region.

There are many bank and bench bars along the river which would pay well if sluiced, but there is no convenient or economical way of getting water on them, and there is no pumping machinery as yet in the country. One bank bar of large extent, called Rogers' Bar, just below Old Man Rock, attracted attention in the spring of 1888, and some miners were thinking of getting in an engine and pumps to work it. I made an estimate of the size of engine required for their needs, and computed the probable cost of the plant laid down, but it does not appear that they made any

further move.

This bar is more than fifty feet above the water. It fronts on the river for more than two miles, and is in places nearly two miles deep. It is believed that in past ages the Old Man and Old Woman rocks were connected, and formed a barrier across the river over which there was a cataract. Below this the fine gold remained, while the sand and gravel were in part carried further down. So impressed were some persons with the prospect of rich finds on this bar that they thought of bringing water across from the high level of Forty Mile River, a distance of over thirty miles; but when I went up Forty Mile River to the Boundary I saw that it could not be done without the aid of force pumps, and I explained this drawback to them. This bar is said to yield four to six cents to the pan, which, with plenty of water for sluicing, would pay well, while its large extent would warrant considerable outlay. Doubtless there are many other bars as rich as this one, though not as large.

Platinum is generally found associated with gold. This is particularly the case

on Forty Mile River.

As very few outside of mining communities understand anything of the nomenclature of the craft, or of the methods employed to separate the very small quantities of the precious metal from the baser material with which it is associated,

a short description will not be out of place.

When a miner "strikes" a bar he "prospects" it by washing a few panfuls of the gravel or sand of which it is composed. According to the number of "colors" he finds to the pan, that is, the number of specks of gold he can see in his pan, after all the dirt has been washed out, he judges of its richness. Many of them have so much experience that they can tell in a few minutes, very nearly, how much a bar

will yield per day to the man.

The process of "placer" mining is about as follows: After clearing all the coarse gravel and stones off a patch of ground, the miner lifts a little of the finer gravel or sand in his pan, which is a broad, shallow dish, made of strong sheet iron; he then puts in water enough to fill the pan, and gives it a few rapid whirls and shakes; this tends to bring the gold to the bottom on account of its greater specific gravity. The dish is then shaken and held in such a way that the gravel and sand are gradually washed out, care being taken as the process nears completion to avoid letting out the finer and heavier parts that have settled to the bottom. Finally all that is left in the pan is whatever gold may have been in the dish and some black sand which almost invariably accompanies it.

This black sand is nothing but pulverised magnetic iron ore. Should the gold thus found be fine, the contents of the pan are thrown into a barrel containing water and a pound or two of mercury. As soon as the gold comes in contact with the mercury it combines with it and forms an amalgam. The process is continued until enough amalgam has been formed to pay for "roasting" or "firing." It is then squeezed through a buckskin bag, all the mercury that comes through the bag being put back into the barrel to serve again, and what remains in the bag is placed in a retort, if the miner has one, or, if not, on a shovel, and heated until nearly all the

mercury is vaporized. The gold then remains in a lump with some mercury still held in combination with it.

This is called the "pan" or "hand" method, and is never, on account of its slowness and laboriousness, continued for any length of time, when it is possible to

procure a "rocker," or to make and work sluices.

A "rocker" is simply a box about three feet long and two wide, made in two parts, the top part being shallow, with a heavy sheet iron bottom, which is punched full of quarter-inch holes. The other part of the box is fitted with an inclined shelf about midway in its depth, which is six or eight inches lower at its lower end than at its upper. Over this is placed a piece of heavy woollen blanket The whole is then mounted on two rockers, much resembling those of an ordinary cradle, and when in use they are placed on two blocks of wood, so that the whole may be readily rocked. After the miner has selected his claim, he looks for the most convenient place to set up his "rocker," which must be near a good supply of water. Then he proceeds to clear away all the stones and coarse gravel, gathering the finer gravel and sand in a heap near the "rocker." The shallow box on top is filled with this, and with one hand the miner rocks it, while with the other he ladles in water. The finer matter with the gold falls through the holes on to the blanket, which checks its progress, and holds the fine particles of gold, while the sand and other matter pass over it to the bottom of the box, which is sloped so that what comes through is washed downwards and finally out of the box. Across the bottom of the box are fixed thin slats, behind which some mercury is placed to catch any particles of gold which may escape the blanket. If the gold is nuggety, the large nuggets are found in the upper box, their weight detaining them until all the lighter stuff has passed through, and the smaller ones are held by a deeper slat at the outward end of the bottom of the box. The piece of blanket is, at intervals, taken out and rinsed into a barrel; if the gold is fine, mercury is placed at the bottom of the barrel, as already mentioned.

Sluicing is always employed when possible. It requires a good supply of water with sufficient head or fall. The process is as follows: Planks are procured and formed into a box of suitable width and depth. Slats are fixed across the bottom of the box at suitable intervals, or shallow holes bored in the bottom in such order that no particle could run along the bottom in a straight line and escape without running over a hole. Several of these boxes are then set up with a considerable slope and are fitted into one another at the end like the joints of a stove-pipe. A stream of water is now directed into the upper end of the highest box. The gravel having been collected, as in the case of the rocker, it is shovelled into the upper box and is washed downwards by the strong current of water. The gold is detained by its weight, and is held by the slats or in the holes mentioned; if it is fine, mercury is placed behind the slats or in these holes to catch it. In this way about three times as much gold secured in a given time. After the boxes are done with they are burned, and

the ashes washed for the gold held in the wood.

Unfortunately, on Lewes and Pelly Rivers there is no way of sluicing without the aid of pumps, there being no streams with fall enough to get the necessary current in the sluice boxes.

There is very little reliable information as to the amount of gold that has been taken out of the district since its discovery and development. The following is the

best estimate which I can form on the subject:—

Stewart River was pretty well worked for two seasons, 1885-86, by about forty men, some of whom made at least \$5,000. Assuming that they averaged half that amount, we have \$100,000 as their earnings. Forty Mile River, the only other stream from which any large quantity has been taken, was worked in the summer of 1887 by about three hundred men, many of whom spent only a few weeks on the river, some only a few days. The statement made by those of whom I inquired was that all who worked on the river for any length of time made a "grub stake." Putting this at the lowest value I heard placed on it, \$450, and assuming that two hundred

and fifty men made each this sum, we have \$112,500 as the amount taken out on

this stream. I have heard the sum placed as high as \$130,000.

All the gold taken from the other streams by prospectors would not amount to more than a few thousand dollars, so that it is probable the total amount taken out of the whole district is in the vicinity of a quarter of a million dollars, of which about half was taken out in our territory.

I learned that the prevailing high water interfered very much with the success of the miners in the season of 1888, and that many of them left the country in the fall. It is probable, however, that a few will remain prospecting until something rich is

found.

As Dr. Dawson has reported on the geology of the region along the Lewes, and Mr. McConnell has made an examination of the river from Porcupine River, it is needless to do more than refer to their reports. I may briefy state, however, that the whole course of the river in Canada is through a mountainous country, the rocks of which, as far as seen, are principally granitic, schists, shales, and some limestone, the latter at Lake Labarge. There is also some basalt at the canon and at the confluence with Pelly River.

Just below Coal Creek a range of high mountains comes in from the south-east, and continues down the river past the Boundary. These mountains are composed

principally of limestone, with occasional exposure of shale and sandstone.

While going down the river with the survey I located some prominent peaks by triangulation, and determined their height. Unfortunately, I could not, owing to cloudy weather, get as many as I wished. Those located are shown on my map of the survey. I have named a few of them, as they have not, to my knowledge, been

previously named.

One of them, seen from the south end of Lake Labarge, on the east side, I have named Mount Dawson, after Dr. Dawson of the Geological Survey. Its altitude above the lake was taken from two points on the east side, from which its distance was, respectively, 724.5 and 773 chains. The height as deduced from the observed angles of elevation of the top from each station was, respectively, 3,238 and 3,263 feet. Part of this difference is no doubt due to want of precision in the instrument used, and part to the fact that the same point may not have been sighted on from both stations. The latter height is probably the nearer to the truth. The altitude of the lake I have put at 1,959 feet, which would make the height of the mountain 5,222 feet above the sea.

Another peak near the Boundary I have named Mount Morison, after a member of my party; and another Mount Gladman, after another member. These two peaks are the highest seen from the river in the vicinity of the Boundary. Mount Morison was ascended and its height determined by aneroid barometer, the mean of the readings at starting from and returning to the river being compared with the reading at the top. The difference between the two readings at the river was about fifty feet. The height thus determined was 2,390 feet, which gives the altitude above sea 3,180

feet. Mount Gladman was apparently a little higher.

The only people doing business in the country outside of gold mining were Messrs. Harper, McQuestion & Co. They have been trading at several points on the river pretty constantly since 1873. They occupied Fort Reliance for some years, and in 1886 they established a post at Stewart River to meet the demands of the miners who were working there. They did not anticipate the rush to the country that took place in that year, and their supplies ran short, so that all were for some months on the verge of starvation. Unfortunately, too, scurvy broke out in the camp, and there was much suffering.

In 1887 they established a post at Forty Mile River, whither nearly all the miners had gone, coarse gold having been discovered there during the previous fall. During the winter of 1887-88 they did business at both these posts, Messrs. Harper and McQuestion being in charge at Forty Mile, and Mr. Mayhew at Stewart River. The latter post was kept open principally for the Indian trade, though had there been no miners there it is probable they would have abandoned it. I could not

learn definitely the amount of their sales to the miners in 1887, as it is a delicate question to ask a person who is selling foreign goods in Canadian territory to reveal to a Canadian employed by the Government the amount of his trade. Very likely, had I asked the question, I would have received a short answer, though in every other way I am under great obligation to Messrs. Harper & McQuestion for acts of kindness and attention, both sought and unsought.

A person who had a good idea of the amount of their business during the season estimated their sales at \$60,000, and from facts which came under my own obser-

vation I consider this not far from the truth.

Until the miners visited the country the trade done by this firm was confined to barter with the natives for furs. I understand that they do a sort of commission business for the Alaska Commercial and Fur Trading Company—that is, the company supply goods at a certain advance on San Francisco prices, and deliver them at the trading post at a certain rate per ton. In payment they take whatever pelts have been collected at a certain prearranged price, varying according to the state of the fur market. I understand, however, their freight charges remain constant, and are \$30 per ton for goods paid for in furs, and \$125 per ton for goods paid for in cash, the latter being the goods imported for the use of the miners.

Their prices for goods in 1887 were not exorbitant, although there must have been a fair profit. They were: flour, \$17.50, per hundred pounds; bacon \$40 per hundred; beans, \$18 per bushel; sugar, \$30 per hundred; and tea, \$1.25 per pound. Both of these gentlemen came into the country in the summer of 1872, Mr. Harper crossing the mountains from the Cariboo gold fields in British Columbia, and descending Liard River to the Mackenzie. He went down the latter river and up the Peel, whence he crossed to the waters of the Porcupine, which he descended to

the Yukon; he then went up the latter to White River, where he wintered.

Mr. McQuestion came in at the same time by way of Peace River, trading for a

short time around Lake Athabasca before he descended the Mackenzie.

The principal furs procured in the district are the silver-grey and black fox, the number of which bears a greater ratio to the number of red foxes than in any other part of the country. The red fox is very common, and a species called the blue is abundant near the coast. Marten, or sable, are also numerous, as are lynx; but otter are scarce, and beaver almost unknown.

It is probable that the value of the grey and black fox skins taken out of the country more than equals in value all the other furs. I could get no statistics con-

cerning this trade for obvious reasons.

Game is not now as abundant as before mining began, and it is difficult, in fact impossible, to get any close to the river. The Indians have to ascend the tributary streams ten to twenty miles to get anything worth going after. Here on the uplands vast herds of cariboo still wander, and when the Indians encounter a herd they allow very few to escape, even though they do not require the meat. When they have plenty they are not at all provident, and consequently are often in want when game is scarce. They often kill animals which they know are so poor as to be useless for food, just for the love of slaughter.

An Indian who was with me one day saw two cariboo passing and wanted me to shoot them. I explained to him that we had plenty, and that I would not destroy them uselessly, but this did not accord with his ideas. He felt displeased because I did not kill them myself or lend him my rifle for the purpose, and remarked in as

good English as he could command: "I like to kill whenever I see it."

Some years ago moose were very numerous along the river, but now they are very seldom seen, except at some distance back from it. Early in the winter of 1887-88 the Indians remained around the miners' camps, and subsisted by begging until all further charity was refused. Even this for some time did not stir them, and it was not until near Christmas that sheer hunger drove them off to hunt. One party went up the Tat-on-duc some fifteen or twenty miles, and in a short time was revelling in game, especially cariboo. The other party did not succeed for some time in getting anything, although a large district was searched over, but [PART VIII]

finally went up Coal Creek about twenty miles, and there killed eighteen moose in one day. They brought in two thousand pounds of the meat to the post, and sold it for ten cents per pound to the miners, with whom it was in great demand on account of the prevalence of scurvy in the camp.

A boom in mining would soon exterminate the game in the district along the

river.

There are two species of cariboo in the country; one, the ordinary kind, found in most parts of the North West, and said to much resemble the reindeer; the other, called the "wood cariboo," a much larger and more beautiful animal. Except that

the antlers are much smaller, it appears to me to resemble the elk or wapiti.

The ordinary cariboo runs in herds, often numbering hundreds. It is easily approached, and, when fired at, jumps around a while as though undecided what to do; it then runs a short distance, but just as likely towards the hunter as from him, stops again, and so on for a number of times. At last, after many of them have been killed, the remainder start on a continuous run, and probably do not stop until they have covered twenty or thirty miles. When the Indians find a herd they surround it, gradually contracting the circle thus formed, when the animals, being too timid to escape by a sudden rush, are slaughtered wholesale.

There are four species of bears found in the district—the grizzly, brown, black, and a small kind, locally known as the "silver-tip," the latter being grey in color, with a white throat and beard, whence its name. It is said to be fierce, and not to wait to be attacked, but to attack on sight. I had not the pleasure of seeing any, but heard many "yarns" about them, some of which, I think, were "hunters' tales." It appears, however, that miners and Indians, unless travelling in numbers, or

specially well armed, give them as wide a berth as they conveniently can.

Wolves are not plentiful. A few of the common grey species only are killed,

the black being very scarce.

The arctic rabbit or hare is sometimes found, but they are not numerous. There is a curious fact in connection with the ordinary hare or rabbit which I have observed, but of which I have never yet seen any satisfactory explanation. Their numbers vary from a very few to myriads, in periods of seven years. For about three years one may travel for days without seeing more than a sign of them; then for two years they are numerous, and increase for two years more, until finally the country is alive with them, when they begin to disappear, and in a few months there are none to be seen. If it is an epidemic that carries them off, it is strange that their carcases are never observed in any number.

It appears the martens are also subject to a periodical increase and decrease,

and in this case a satisfactory explanation of the cause is also wanting.

The mountain sheep (Big-horn), and mountain goats exist everywhere in the territory; but, as they generally frequent the sides of the highest mountains, they are seldom seen from the river.

Birds are scarce. A few ravens were seen along the river, and three or four remained in the vicinity of the Boundary all winter. They were generally more active and noisy on stormy days than at other times, and their hoarse croak had a dismal sound amid the roar of the elements.

A few magpies were seen near Nordenskiold River, and a few white-headed

eagles were also noticed.

During the winter, near the Boundary, numbers of small birds, somewhat resembling the "chick-adee," were seen, but they were much larger and had not the same note. Of owls, not a specimen was met with anywhere. Partridges were very scarce, only half a dozen or so of the ordinary kind being noticed; but at the head of the Tat-on-duc and Porcupine ptarmigan were abundant. Wild geese and ducks are plentiful in their season, and of ducks there are many more species than I have seen in any other part of the territory. Most of these were observed on the head of the Porcupine; but, having no means of preserving the skins, I had to come away without specimens. A very beautiful species of loon or diver was met with on the Porcupine. It is smaller than the great northern diver, but marked much the same [PART VIII]

on the body, the difference being principally in the head and neck—the bill is sharper and finer and the head smaller; but its chief distinguishing feature is the neck, which is covered with long, beautiful dun-colored down for more than half its length from the head downwards. I tried to kill one so as to get the skin as a specimen, but after I had fired three times at close range with heavy shot it seemed as lively as if I had not fired at all. I then killed it with my rifle, but the bullet so

tore and mangled the skin that it was useless.

With the exception of a small species, locally called the arctic trout, fish are not numerous in the district. Schwatka calls this trout the grayling, but from the descriptions and drawings of that fish which I have seen this is a different fish. It seldom exceeds ten inches in length, and has fins very large for its size, which give it, when in motion, the appearance of having wings. Its dorsal fin is very large, being fully half the length of the body, and very high. The fish is of a brownish grey color on the back and sides, and lighter on the belly. It is found in large numbers in the upper part of the river, especially where the current is swift, and takes any kind of bait greedily. The flesh is somewhat soft and not very palatable. Lake trout are caught in the lakes, but as far as I saw, are not numerous nor of large size. They take a troll bait readily, and a few were caught in that way coming down the lakes, but the largest did not weigh more than six or seven pounds. Salmon come up, I was assured by several Indians, natives of the district, as far as Lake Labarge, and are never found above it, but Dr. Dawson reports their dead bodies along the river for some miles above the cañon. I mention this to show the unreliability of information received from the natives, who frequently neither understand nor are understood.

On the way down, salmon were first seen twenty or twenty-five miles above Five Finger Rapids. One can easily trace their passage through the water by the slight ripple they make on the surface and, with care, they can be taken by gently placing a scoop net in their way and lifting them out when they enter it. After coming up the river two thousand miles they are poor, and would not realise much in the market. At the Boundary, in the early winter months, the Indians caught some that were frozen in on small streams, and fed them to their dogs. Some of these I saw; they were poor and spent.

I had very little opportunity to learn anything of the language, manners, customs, or religion of the natives on my way through their country, my time with them being so short, and none of the whites whom I met in the district seemed to possess any information upon which I could draw. I got a few items, but as they may or may not be facts, I shall not report them. The statements of every one I met, however, pretty well establish that by one of their laws inheritance is through

the mother.

As far as possible, I have obtained the numbers of the various bands along the river. Beginning at the coast the number of the Chilkoots, as stated by Commander

Newell, was 138 souls, of whom about 40 were full grown men.

As far as I could gather from G. Carmack, who lives with the Tagish Indians, and has one of them for a wife, there are of them about 112 souls all told, but many of these are almost permanently located with the Chilkoots, some of the latter

having Tagish wives.

The Tagish complained bitterly to me, as well as they could, having only a few words of Chinook and English with which to convey their meaning, of the tyranny and robbery of the Chilkoots. Klohk-shun, the Chief of the Tagish, said "Chilkoot all same dog," imitating the snapping action of a dog as he said so. Those who have had any experience with Indian dogs can appreciate the comparison. These people are scattered along the river from the Tes-lin-too up. The only market they have at present for the few furs they collect is on the coast at the head of the Inlet, and they say they are robbed of half their goods on the way there by the Chilkoots. On my way to the summit I met three or four Tagish coming in with two packs of furs, to trade. Meeting me afterwards at the summit, one of them informed me that they were met a short distance outside the village, and one of the packs was taken from

PART VIII

them by force, and the other paid for at forced prices. Much of this talk I have no doubt was intended to create sympathy, and induce charity, as they, like many other Indians, are inveterate beggars; but I have no doubt that they are little more than slaves to the Chilkoots, and are both robbed and swindled most barefacedly.

Below Five Finger Rapids I saw two families of Indians, consisting of ten or twelve souls, very poor looking, and the most stupid I have ever met. Wanting to buy some tea and other stuff from me, they tendered in payment the tin stamps that are put by some manufacturers on plugs of tobacco. These, they signified to us, had been given to them in exchange for furs by the coast Indians. It is possible that they had got them from the Indians on the tobacco, and were trying to swindle me, but I am inclined to think not.

At Stewart River there were two Indian men, two women, and two children. One of the men had picked up a few words of English from the miners and traders the winter before, and, as far as he could be, was very communicative. He informed me that there were about thirty tamilies of Indians up the river twenty or thirty miles, "one day," as he expressed it. They were living on salmon, and had no trouble in catching all they required.

Between Stewart River and Forty Mile River three families were met with, but, as they knew neither English nor Chinook, no information as to their headquarters could be got from them. It is probable they were a part of the band located at Fort Reliance. Mr. Harper informed me that the band at the latter place numbered about twelve families, or, say, 70 souls. At Belle Isle, fifteen miles below the Boundary, David's band is located. It numbers 65 to 70 souls. About one hundred miles below the Boundary, Charley's band has its headquarters. It numbers some twelve families, in all about 66 souls. I came more in contact with the last two bands than with any of the others, as David's band was only twelve miles from my winter quarters for some months, and many of them were frequently in the house with me for a night or two on their way to and from Forty Mile River. A missionary sent over by the Right Rev. Bishop Bompas, who is in charge of the diocese of Mackenzie River for the Church Missionary Society of England, was stationed with David's band all winter.

Some years ago, when Archdeacon McDonald, now in charge of the mission work at Fort McPherson, on Peel River, was stationed at Fort Yukon, and afterwards at Rampart House, Charley's band used to resort to those posts for their trade, and that gentleman taught them to read, and instructed them in the principles of the Christian religion. It is pleasant to be able to testify that they have profited by this instruction, and still retain a loving memory of those times. They hold every Sunday a service among themselves, reading from their books the prayers and lessons for the day, and singing in their own language to some old tune a simple hymn. They never go on a journey of any length without these books, and always read a portion before they go to sleep. I do not pretend that these men are faultless, or that they do not need watching, but I do believe that most of them are sincere in their professions and strive to do what they have been taught is right. They are greedy and selfish in their transactions with whites, but I think much of that is because they have probably never had the sin of undue greed put forcibly before them by their pastor. Their chief, Charley, is a fine specimen of a level-headed, thoughtful Indian, who, up to the time of my departure, at least, did not fail to point out to his people the baneful effect of immoral intercourse with the whites. The majority of the miners, though honorable and generous to a fault in their dealings with the Indians, as far as ordinary dealing goes, have, I am sorry to say, little or no conscientious scruples concerning the moral relations of the sexes, and would not hesitate to take advantage of any weakness in that direction which they might find.

David's and Charley's bands manifested to me a much stronger sympathy for Canada than for the United States. Some of this feeling might be due to policy, for aught I know, but hitherto most of their dealings and all their education have been Canadian. The total number on the river is 482, of whom 136 are below the [PART VIII]

Boundary, leaving 346 domiciled in Canada. It does not appear that any live per-

manently on the upper Pelly or Stewart.

I shall now give a table of distances from Haines Mission on the coast at the head of Chilkoot Inlet to the Boundary. Some distances were given in my interim report published in the Departmental report of 1887, but as they were uncorrected for errors in the survey, I now submit a revised table. The error of the survey is found from the difference of latitude, as deduced from the survey, by measuring on the plan the northing made in each day's work, and applying this northing converted into arc to the latitude of the previous day's last station deduced in the same way, and so on from the starting point, Pyramid Island, to the observed latitudes at Fort Selkirk, and at the Boundary—the former taken by Dr. Dawson, the latter by myself. The error is cumulative, and distributed pretty uniformly, taking both latitude and longitude into account.

DISTANCES FROM HAINES MISSION

	Miles.
Haines Mission to entrance of Taiya Inlet	4.79
Head of Taiya Inlet	20.12
Head of canoe navigation, Taiya River	26.02
Forks of Taiya River	28.50
Summit of Taiya Pass	34.88
Landing at Lake Lyndeman	43.18
Foot of Lake Lyndeman	47.61
Head of Lake Bennet	48.21
Boundary line B. C. and N. W. T. (Lat. 60°)	58.21
Foot of Take Bennet	73.97
Foot of Cariboo Crossing (Lake Nares of Schwatka)	76.56
Foot of Tagish Lake	93.37
Head of Marsh Lake	98.27
Foot of Marsh Lake	117.33
Head of Cañon	143.06
Foot of Cañon	143.68
Head of White Horse Rapids	145.07
Foot of White Horse Rapids	145.45
Tahk-heena River	160.04
Head of Lake Labarge	$173 \cdot 19$
Foot of Lake Labarge	204.34
Tes-lin-too River (Newberry of Schwatka)	236.00
Big Salmon River of miners (D'Abbadie of Schwatka)	269.45
Little Salmon River of miners (Daly of Schwatka)	305.66
Five Finger Rapids (Rink Rapids of Schwatka)	364.95
Pelly River	423.41
White River	519.23
Stewart River	529.03
Fort Reliance	602:32
Forty-Mile River	647.20
Boundary Line	687.55

In the appendix will be found my meteorological observations, which I began to keep regularly on the 1st of August, 1887, and carried on till the 1st of November, 1888, but I will here give some extracts from them. First snow of the season on the mountain tops, 10th September. First snow in the valley, 23rd September. Temperature of river water on 1st October, 38.0°. First ice drifting in river, 21st October. Ice set in river, 15th November. Thickness of ice, 1st December, 14½ inches; 3rd January, 40½ inches; 3rd February, 48 inches; 2nd March, 48½ inches.

A small collection of plants was made along the river, and those obtained above the Pelly were taken home by Dr. Dawson. They have been classified by Prof. J.

Macoun, F.L.S. A list of them, as well as of those collected by himself, Dr. Dawson

gives in an appendix to his report. I take the liberty of extracting from the list, and inserting here those collected by me. Others, not included in this list, from the lower river and the Mackenzie were much damaged by rain. The scarcity of time at my disposal must be accepted as an excuse for my not attending to their preservation.

(1). Anemone multifida, D.C. (cut-leaved Anemone)—Lake Bennet. Common throughout Canada.

(2). Caltha palustris, Linn. (Marsh Marigold)—Chilcoot Inlet. Marshes through-

out Canada,

(3). Silene acaulis, Linn. (Moss Campion)—Lake Lyndeman. On mountains and Arctic regions,

(4). Oxytropis campestris, D.C. (Field Oxytropis)—Lewes River, river gravels,

and rocky banks northward.

(5). Hedysarum boreale, Nutt. (Northern Hedysarum)—Tagish Lake. Common on the prairies and in Quebec.

(6). Dryas Drummondii, Hook. (Drummond's Dryas)—Lewes River. River

gravels in the Rocky Mountains. Lake Superior and Quebec.

- (7). Potentitta fruticosa, Linn. (Shrubby Cinquefoil)—Lake Bennet. Common throughout Canada.
- (8). Saxifraga tricuspidata, Retz. (Three-toothed Saxifrage)—Lake Bennet. Cold rocky banks, the whole forest region.

(9.) Ribes rubrum, Linn. (Wild Red Current)—Chilcoot Inlet. Common in

swamps throughout Ontario.

(10.) Sedum stenopetalum, Pursh. (Mountain Stone-crop)—Tagish Lake. Rocky and other mountains; common.

(11.) Epilobium augustifolium, Linn. (Fire-weed)—Lake Bennet. Common throughout Canada.

(12.) Epilobrium latifolium, Linn. (Broad-leaved willow herb)—Lake Bennet. River gravels in the mountains northward and eastward to Labrador.

(13.) Selinum Dawsoni, C. & R. (Dawsoni Selinum)—Lake Labarge. New to science. Only found by Dawson and Ogilvie. Described in Coulter's Botanical Gazette, Vol. XIII, p. 144, June, 1888.

(14.) Archangelica Gmelini, D. C. (Sea-coast Archangelica)—Chilcoot Inlet.

Common on both Pacific and Atlantic coasts.

(15.) Galium boreale, Linn. (Northern Bed-straw)—Lake Labarge. Common throughout Canada.

(16.) Solidago multiradiata, Ait. (Many-rayed Solidago)—Tagish Lake. High

mountains, and northeastward to Labrador.

- (17.) Solidago Virga-aurea, Linn., Var. Alpina, Bigel. (Alpine Solidago)—Lewes River. Crevices of rocks, Lake Superior and northeastward.
- (18.) Aster Sibiricus, Linn. (Siberian Stav-wert)—Lewes River. River gravels, in mountains.
- (19.) Achillaea Millefolium, Linn. (Yarrow)—Tagish Lake. Common throughout Canada.
- (20.) Arnica latifolia, Bong. (Broad-leaved Arnica)—Lake Bennet, Common in mountains.
- (21.) Loiseleuria procumbens, Desv. (Alpine Azalea)—Chilcoot Pass. Northern mountains and whole Arctic coast.
- (22.) Gentiana Amarella, Var. Acuta, Hook. (Annual Gentian)—Lewes River. Common in woods and prairies throughout Canada.
- (23.) Mertensia paniculata, Don. (Paneled Lungwort)—Lake Bennet. Common in cool woods eastward to Lake Superior.
- (24.) Pentstemon confertus, Var. caeruleo-purpureus, Gray (Prairie Pentstemon)
 —Tagish Lake. Common on the prairie and northward.
- (25.) Chenopodium capitatum, Wat. (Strawberry Blite)—Lake Labarge. Common throughout Canada.

(28.) Alnus rubra, Bong. (Red Alder)—Chilkoot Inlet. A fine tree on the Pacific coast.

(27.) Cypripedium montanum, Dougl. (Mountain Cypripedium)—Lewes River.

South in the mountains through British Columbia.

(28.) Allium Schoenoprasum, Linn. (Wild Chives)-Lake Labarge. River and lake shores throughout Canada.

(29.) Zygadenus elegans, Pursh. (Beautiful Zygadene)-Cañon of Lewes River.

Common on the prairies.

A small zoological collection was also made and sent out by Dr. Dawson. Those specimens collected on the lower river after he left, and on the Mackenzie, I brought out myself. They were all handed to Mr. James Fletcher, F.R.S.C., F.L.S. One of the specimens was given me by Mr. James McDougall, Chief Factor in the Hudson's Bay Company's service, who obtained it near the summit of the Taiva Pass. These specimens are classified as follows by Mr. Fletcher:-

(1.) Papilio Machaon, L., var. Alaska, Scud.—Three miles below summit of Chilkoot (Taiya) Pass (from Mr. McDougall), 15th July, 1886.

(2.) Colias Christina, Edw.—Site of Fort Selkirk, 17th August, 1887.

Those collected on the Mackenzie were:-

(1.) Papilio Machaon, L., var. Alaska, Scud—Fort McPherson (Latitude 67° 26'), 21st June, 1888.

(2.) Pieris Napi, Esper.; Arctic from Byroniae. Oschs., var. Huld.—Fort McPherson (Latitude 67° 26'), 21st June, 1888.

(3.) Anthocaris Ausonides, Bd.—Mackenzie River, 8th July, 1888.

(4.) Colias Christina. Edw.—Fort Good Hope (Latitude 66° 16'), 11th August.

(5.) Vanessa Antiopa. Edw.—Ninety miles above Fort Good Hope (Latitude

65° 20', 19th July; Fort Smith (Latitude 60°).

This collection is small, I confess, but it must be remembered that a person cannot very well do two things at once, and at the times when insects generally are most about—clear, pleasant weather—a surveyor is busiest, and generally all the members of his party are busy too. Often have I seen butterflies and moths that I would have liked to catch, but have been occupied at the time with something which I could not leave, and so have lost the opportunity. Many specimens also of plants that I would have been pleased to collect, had to be passed, because at the time the canoes were in such a position that we could not stop without much trouble. Very few small animals of any description were seen. Of those which were strange to me a specimen of what I think is a shrew-mouse was brought out, and handed over to Mr. Fletcher for classification. I have not heard yet what it is.

SECTION 3.

EXPLORATORY SURVEY FROM THE PELLY-YUKON TO MACKENZIE RIVER BY WAY OF TAT-ON-DUC, PORCUPINE, BELL, TROUT AND PEEL RIVERS.

Having got nearly all my supplies down to Belle Isle, on the 3rd of March I left my winter quarters and started therefor with four of the party. Unfortunately, two of my men were unable to accompany me, having fallen ill. From Belle Isle we proceeded to take the supplies already there down the river to the mouth of the Tat-on-duc, using a miner's camp about five miles above it as a halting place on the way. All winter I had availed myself of every opportunity to induce the Indians to meet me at Belle Isle about the 1st of March, and assist me over to the head of the Porcupine, or farther if possible, but I could get no definite promise from them, and when the appointed time came I did not even know where they were, but supposed them to be up the Tat-on-duc. Meanwhile, I kept on hauling the stuff ahead as fast as circumstances would permit. On the 13th I had all the stuff down to the miner's camp mentioned, a distance of twenty-two miles by the river, but a winter track, which I followed, by cutting off a large bend, shortened this to about fourteen. This track, however, was so rough and wooded that it is doubtful if it much lessened the labor.

The evening of the 13th an Indian came down to the miner's camp to feel around and see what could be made out of my necessities. As I was anxious to cross to the Mackenzie by this route I made him and his associates an offer of \$2.50 a day for each team of dogs with driver, if they would come and transport me, at least to the head of Porcupine, or, as they called it, Salmon River. This amount, though it would be considered low in the more southerly part of our territory, was about twice the amount heretofore paid in that section. He left for home to carry my offer to his companions, promising on his own behalf his support of it. Meanwhile, as there was no certainty that anything would come of this offer, I kept on with the party hauling down to the mouth of the Tat-on duc, and had got nearly half the stuff down there when, on the morning of the 16th, I met nine men and thirty-six dogs on their way to take me, as I understood, to the head of the Porcupine. The rest of that day was spent in cooking for the trip, and fixing things so as to take as little space as possible as the loads would be somewhat bulky. On the morning of the 17th I bade good-bye to the miners with regret, and yet with a thrill of satisfaction that I was now fairly started on the home stretch of my long journey, though over 2,500 miles yet lay between me and the nearest railway, nearly all of which had to be got over by foot or paddle.

Going up the Tat-on-duc I made a compass and track survey as I went along, taking the azimuth of points in the valley, and estimating distances by time and rate of travel. As no member of the Geological Survey staff was likely to pass here for generations, I paid more attention to the geology as I went along than I had heretofore done, and collected specimens of the different rocks I saw. These have

been handed over to Dr. Dawson.

As there are no features of special interest on Tat-on-duc and Porcupine Rivers a detailed description of them will not be necessary. When we were at the mouth of the Tat-on-duc the Indians, as I understood them, spoke of some place on the river where warm water comes out of the ground, and keeps the ice over it very thin. I tried to get them to point it out to me, but they either could not or would not understand me, for I saw nothing corresponding to their description anywhere along the river. For three or four miles from the mouth the valley of this stream is about half a mile wide at the bottom, with some fair timber in places. Then it narrows, and up as far as the forks it partakes more of the nature of a cañon than of a valley. While the valley continues wide the ascent in the river is not very steep, yet steep enough to prevent anything larger than a very small boat ever being taken up it. When the valley narrows the ascent becomes much steeper and gives one the impression of going up a hill. The water evidently freezes to the bottom in many places, as it is continually bursting up at the sides and overflowing the surface of the ice, where it is soon frozen. Hence in the spring the ice in places must be of enormous thickness. About eleven miles up, a creek flows in from the north. If I understood the Indians aright, it comes out of the side of the mountain some distance up; they described the water as being warm where it emerges, this being, perhaps, the place to which they had referred as mentioned above. this is true or not, the water where it enters the river is not frozen, nor is it frozen for some distance below this point. This is the point from which the river takes its name of Tat-on-duc, or in English, Broken Stone River, for here it appears the river is always open, and there are many large masses of rock in the channel. Except on the theory of warm water coming into the river, I cannot account for its being open here at the time I saw it, when almost everywhere else it was frozen, even in places where the current is much swifter and rougher than here, where it is quite tranquil.

The river up to this point averages about two hundred feet in width, but just above the open water described it turns suddenly to the south from an easterly 52

[PART VIII]

direction, and enters a canon. This is one of the grandest sights I have ever seen; the canon is forty or fifty feet wide, and the sides rise perpendicularly, on one side to a height of fully seven hundred feet, and on the other probably five hundred, and then slope off to the sides of high mountains. It is nearly a half mile long, and there is a slight bend near the middle, but not enough to prevent one seeing through it from end to end.

After passing through the cañon the river turns sharply to the east again, and continues in this direction till it reaches the forks, about tourteen miles above the mouth. One of the branches comes from the south-east and the other, the one I went up, from the north-east. The Indians often go up the south branch to hunt. As I understood them, it rises in a high plateau distant two or three days' travel, probably forty miles, and in the same plateau a stream rises which flows to the north, probably into one of the head streams of the Peel. At the forks the precipitous sides of the valley change into easily sloping wooded uplands, with here and there a high peak in the distance. The timber is all small, there being none larger than eight or ten inches in diameter.

The Boundary will cross the river a short distance below the forks. I pointed out to the Indians its approximate position, and made them understand its signi-

ficance, as I also did on the main river.

The Indians' camp was about nineteen miles up the river, and, as I arrived there on Saturday, they wished to remain until Monday. I agreed, and had the pleasure on Sunday of witnessing their religious service, of which I have already spoken. These Indians build their tents differently from any I have seen elsewhere in the Territories. The tent is made of deer skins dressed with the hair on, which are sewed into the proper shape, elliptical on the ground plan, and dome shaped in vertical section. Willows are fixed in the ground, then bent into the proper curves, and fastened together at the top; the deer skin cover is then placed over this framework, and the tent is banked around with snow. There is quite a large opening left in the top for an escape for the smoke; but, notwithstanding this, a small fire keeps it warm. On the ground it is about eighteen or twenty feet long and ten to fourteen wide. The thick coat of hair on the inside hinders the heat reaching the skin so that snow lies on the outside of the tent quite a while before it melts. Generally two or more families dwell in one tent.

The winter clothing of these people is made of deer skins dressed with the hair on, and worn with the hair inside. The pants and boots are made in one piece, and the coat is made in the manner of a shirt. In putting it on it is simply pulled over the head, and the arms passed down the sleeves, so that, when it is on, there is no opening for any wind to pass through, and no part of the body, except the face, is exposed to the atmosphere. In the case of children, sometimes the end of the sleeve is sewed up, so that the hand cannot get out, but this is done only when the child is going out. These people had killed a great many cariboo and moose in the vicinity, but they would not tell me how many.

About twenty-five miles up the river we reach a small canon; the water way is rough, but the sides, though perpendicular, are not high. About four miles above this the Indians report a small lake in a deep valley, which never freezes. They appear to have a superstitious dread of it, saying something about a strong wind always blowing into it, which makes approach dangerous. Around it, they say, many sheep and goats are to be seen, which I suppose can be accounted for by the fact that no one ever hunts there. They pointed out to me the position of the lake as well as they could from the river. It lies in a deep valley at the foot of a very high mountain, which they call Sheep Mountain, the height of which above the river I would estimate at least three thousand five hundred to four thousand feet. From the barometer readings along here, the river is not less than one thousand four hundred feet above the sea, so that this peak is upwards of five thousand feet above sea level. About three miles above this peak another small but very rough canon is passed on the river. Three and a half miles above this there is, on the east bank of the river, a low swampy place, from which

there is an effusion of sulphuretted hydrogen gas. The odor is quite strong for some distance along the river. An Indian gave me to understand that there was much of the same gas escaping at the lake already referred to. If I understood him aright the danger of the lake is due to violent rushes of the gas, which makes men sick, so

that they fall down and roll into the lake.

A short distance further there enters from the east side a creek up which we had to go to avoid an impassable canon on the main river. According to the Indians this canon contains a high waterfall, which it is impossible to pass, and they describe it as the largest and worst canon on the river. We have to ascend this creek about four and a half miles, when we turn off it to the left, going up a narrow valley which lies between two high bald mountains, on the bare sides of which we saw many wild sheep feeding. The mountain on the west side of the pass I have named Mt. Deville; that on the east side, Mt. King. The bed of the creek by which we leave the river is wide and shallow, and the water runs on the top of the ice, thus continually adding to its thickness, till in many places it has the appearance of a small glacier. quite sure there are places on this creek where the ice remains all summer. valley extends eastward several miles, and is surrounded by high mountains. On the south side a curiously formed range skirts the edge of the valley for many miles. It rises sharply from the bottom upwards of two thousand feet to the west, and ends in a table land which seems level southward as far as the eye can reach. On the eastern edge of this table land there stands an immense wall, rising from seven hundred to one thousand feet above it. This wall has the appearance, from where I saw it, of rising perpendicularly on both sides, and its thickness I would judge to be about one third of its height. It is weathered into queer shapes, resembling in places the views of old ruins one often sees. In one or two places there are large holes in it, which are covered with several hundred feet of rock. One of the holes is so large that through it can be seen the plateau beyond. In the bottom of the valley there are many mounds of gravel which seem to have been placed there by glacial There probably was a small glacier in this valley at one time, but it does not appear to have extended any farther down than the river.

At the summit of the pass through the range between this valley and the valley of the main river a magnificent view of the valley is obtained. From this point up the valley is wide, with low sloping sides which end some twelve or fourteen miles up in a large plateau, and beyond this, some twenty miles, the peaks of the Na-hone range break the view to the north. This is one of the grandest views I have ever seen, and the profound stillness and vast solitude impress one as perhaps few other scenes in the world would. The descent from the summit to the river is two and three quarter miles, in which the fall is about five hundred feet, the barometer at the summit standing at 26.80, and at the river at 27.32 inches. This would place the summit of the pass roughly about three thousand feet above the sea Around it are peaks which rise at least two thousand feet above it. Some six or eight miles down the river the Indians pointed out the cañon. The valley appears to end there, the mountains

are so high and bold.

From the pass upwards the river is shallow, and there are places which look like small lakes, where the water overflows and forms large fields of ice, as in other places described above, but on a larger scale. Eight miles above the pass the river turns sharp to the north, and apparently comes from between two high, sharp peaks, the northerly one of which I have named Mt. Klotz. As far as can be seen, it is a field of ice fully one hundred yards wide, and of great thickness. In some places there are hillocks on the ice formed by the water bursting through, and freezing as it overflows. I have no doubt that much of the ice remains through the summer, and may not be wholly melted before the new ice begins to form in the fall, if indeed there is not ice forming during most of the summer months.

Leaving the river, and continuing about a mile up the valley of a small stream coming from the east, we reach the top of a low ridge which forms the water-shed between the waters of the Tat-on-duc and those of a stream which the Indians assured me flows into the Peel. I had much difficulty in understanding this, as I

could hardly believe that the water-shed was so near the Lewes, or Yukon; and it was not until they had drawn many maps of the district in the snow, and after much argument with them, that I gave credit to their statements. I then proposed to go down this stream to the Peel, and to reach the Mackenzie in that way, but at this they were horrified, assuring me as well as they could by word and sign that we would all be killed if we attempted it, as there were terrible cafions on it, which would destroy us and every thing we had; in fact, we would never be heard of again, and they might be blamed for our disappearance. Their statements, in connection with the fact that the barometer stood about 26.50 inches, showing an altitude of over three thousand feet which would have to be descended between there and the Peel, a distance of about one hundred and eighty miles, and probably most of it in the lower part, caused me to decide not to try it. This river has been named by Mr. J. Johnston, Geographer to the Department of the Interior, "Ogilvie River."

It seems improbable that this river runs as the Indians said, but I afterwards procured other evidence, which proves that it does. I may as well present the evidence here. None of the Indians who were with me at its head were ever down the river. What they knew of it they had learned from the Indians they had met at the Hudson's Bay Company's posts on Porcupine and Peel Rivers, where they formerly used to trade. They told me that they learned more about it at Peel River than anywhere else. Afterwards, in the month of June, when going up Eagle River, I met several families of Indians on the way down to La Pierre's House. One of them could speak a little English, and I got from him all the geographical information I could about the country he had just left. I asked him particularly about this river. He confirmed all that the others had said about it, told me he had seen it several times, and that there were some very bad places on it, places where, as he described it, trees passing down would be all smashed to pieces. He stated that the river we were then on—Eagle River—headed in a small lake, from which they floated down in six days. Hence I would judge the distance to be about two hundred miles by the river, but as the part of it I saw-about twenty-seven miles-was very crooked, and they assured me all the river was just as crooked, the distance in an air line would probably not be more than half the river distance, or one hundred miles. This lake was situated in a large swamp in which a small stream formed which flowed southward to the river in question. From the lake to the river, from their statements, I would judge to be twelve or fourteen miles. Afterwards, in conversation with Mr. McDougall, of the Hudson's Bay Company, I learned that he had often heard the Indians at Fort McPherson speak of a river rising near the Yukon and emptying into the Peel, and so impressed was he by their statements that he thought of utilizing it as a route from the Mackenzie to the Yukon or Lewes. Accordingly, in 1872, he got some Indians who knew the locality to accompany him to its confluence with the Peel, about sixty miles above Fort McPherson, but he found the country so rough, and the river so swift and so unsuited to his purpose, that he abandoned all thought of crossing in that way. The Indians had always assured him that he could not get through, but he wanted personal proof, which he got in abundance in less than two days. All this I think shows that the river runs as stated by the Indians. I thought it might be one of the branches of the Porcupine, and at La Pierre's House made inquiries of the Indians, many of whom had been up both branches of that river, but they assured me it was not.

From the plateau at the head waters of the river the valley can be seen running nearly due east for a distance of not less than thirty miles. It is wide and deep. The Indians told me that they sometimes go south-eastward from this point, or, from the head of the valley to the south of this, to the head of the south branch of the Tat-on-duc, and that, after passing the mountains close to the river, the country is undulating, not rocky, and more or less wooded.

At this point the Indians turned back. Nothing that I could say or offer to them would induce them to go any farther with their dogs, and it was with much difficulty that I persuaded two of them to go ahead with one of my men, and make a track as far as the head of the Porcupine. I paid off the men with the dog teams

PART VIII

on the morning of the 22nd of March, when they returned to their families. The other two, with my man, started for the head of the Porcupine, a distance of about fifteen miles. They returned on the 25th, and took their departure for home.

These people have a great dread of a tribe who, they suppose, dwelt at one time in the hills at the head of these streams and still exist somewhere in the vicinity, though exactly where they do not know. While on this plateau they spoke of them in a low tone, as though fearful that they would be heard and be punished for their remarks, which were not at all complimentary. They called this tribe Na-hone; I have generally heard the word pronounced Na-haune by the whites. It appears that they inhabited the head waters of the Liard and Pelly, and were much fiercer than the neighboring Indians. Probably rumors of their aggressiveness have reached these simple and peaceful people, and created this dread, for they do not appear to have ever seen anything to justify their fears, and when questioned they could not tell anything more definite than that some old man among them had seen some indescribable thing on the mountains when he was a boy, or at some other remote date. They described them as cannibals, and living altogether outside, without shelter from the cold, and believed them to be such terrible creatures that they required no cover, but could lie down anywhere to rest, and did not need a fire to cook their food, but ate it raw. They seemed to ascribe to them supernatural powers, for, when I was trying to induce them to go on farther with me, and showed them my rifle, and told them I would shoot any Na-hone who attempted to molest me, they gave their heads an incredulous shake, as if that was too much to expect them to believe. To whatever it is due, this dread appears to be lively, so much so, that I believe only some pressing necessity, such as hunger, would induce them to remain in this locality for any length of time, and then only if they were in strong force.

From the Tat-on-duc to the Porcupine by the track I followed is sixteen and a half miles. Of this distance thirteen is drained by the river flowing into the Peel. Distributed over this thirteen miles are ten small creeks, which unite eight or ten miles down the valley. I did not go down to the junction, but could from some places see the stream formed by their union, and although so near its head, it appeared to be as large as the Tat-on-duc is about midway of its course. This plateau, except for the ravines in which the creeks run, is tolerably flat. It slopes to the east down the river, and is, as far as can be seen, undulating and wooded. The timber is scattered, and stunted in size; but considering the latitude and altitude it is a wonder there is any at all, the former being 65° 25', and the latter more than three thousand feet above the sea. Where the woods are open there is much fine short grass. On the creeks the willows attain a large size, as large as generally seen

in much lower and more southern countries.

From the watershed between this stream and the Porcupine down to the Porcupine there is a descent of four hundred and fifty feet in a distance of a mile and a half. Where the Porcupine is first crossed on this route it is a large creek flowing northward from between two mountains. The valley can be seen for about six miles up, when it turns to the west and goes out of sight. Thes tream flows in a bed of fine gravel, and the volume of water was large for the time of the year. About half a mile below this it enters a lake three or four miles long and upwards of a mile wide. At the lower end of the lake, which lies close under the foot of a lofty range of mountains, the river turns sharp from a northerly to a westerly direction, and in about a mile enters another lake of about the same size as the first one. About two and a half miles below this it enters another lake about two miles long and three quarters of a mile wide. These three lakes I have called the Upper, Middle, and Lower, Na-hone Lakes. Below these the river is twice the size that it is above. It flows in a valley about a mile wide well timbered on the bottom, much of the timber being of a fair size. On some of the flats are found many trees over a foot in diameter, long, clean-trunked, and well suited for making lumber.

About five miles below the lower lake a large branch comes in from the west. Perhaps this should be called the river, as it it is much larger than the branch I came down, both in width and volume of water. It comes from the south-west, and

has quite a large valley which can be seen from the junction of the two streams for a distance of eight or ten miles. The Indians had told me of a large creek down Porcupine River, heading near another creek which flows into the Lewes. They used to go up the latter creek, cross over to the Porcupine, and go down it to fish. From their description and the distance they said it was below the lakes, I first thought this creek to be the one referred to, but afterwards I saw another branch of the Por-

cupine further down, which is probably the one they spoke of.

Between the upper end of the upper lake and the lower end of the middle one there is a fall of two hundred and fifty feet, and between that point and the lower end of the lower lake a fall of one hundred and forty feet. Thence to the forks the fall is very rapid, as much as two hundred feet to the mile in some places. About a mile below the forks I found the fall in the river so slight that our canoes could be used with safety. As the labor of hauling my stuff was very severe, I decided to remain here until the ice broke up and go down in the canoes. Accordingly, on the 10th of April, after having got all the stuff and the canoes down to this point, I had a small hut built with a cotton roof, and here we remained until the 21st of May.

I will now refer briefly to the different kinds of rocks seen along the Tat-on-duc and Porcupine to this point. For the first two or three miles on the Tat-on-duc the rock is a very coarse-grained sandstone; in places it might be called conglomerate. At a place four miles up I saw a small exposure of clay shale, colored with oxide of

iron where exposed to the air.

Ten miles up the rock at the river level changes to limestone, but high up on the hills the sandstone can still be seen, appearing to be the principal constituent of all the mountains in sight. The limestone continues to the head of the river with occasional exposures of clay shale, in some places of carboniferous appearance. one point, twenty miles up, occurred an exposure of it so closely resembling coal that at first sight I thought it was a large coal bed. I tried some of it in a fire. It gave off fumes of burning coal for a few minutes, and then became soft and formed a dark grey mass, somewhat resembling scoria, but soft.

Much of the limestone was stratified, but generally it was very massive, with thin veins of what appeared to be calcite, distributed irregularly, but exhibiting usually the cleavage forms of crystals of that substance. Sheep Mountain for about three thousand feet of its height appears to consist of this rock, while the upper part seems to be a sandstone like that seen further down the river. The curiously weathered wall-shaped rock I have described above also greatly resembled this sandstone, although at the distance from which I viewed it it was impossible to tell with

certainty.

On the Porcupine River the same limestone predominates. It might almost be said that it is the only rock, there being nothing else but one or two exposures of a bright red-colored close-grained rock, with some small rounded fragments of a bluish-colored stone imbedded in it. There is an exposure of this rock on a creek on the east side of the river a mile and a half below the forks. It underlies the limestone, and is not more than two hundred feet above the river at this place. It apparently continues westward under the drift in the valley, for a ledge of it can be seen under water in the river not far from this exposure. Eleven miles below the forks, about a mile up the valley of a creek on the east side of the river, another large exposure of this rock was seen, but not visited, and no more of it was seen below this.

The mountains about the head of the river rise to an average height of about 2,500 feet, with an occasional peak probably 1,000 feet higher. Between the valley of the Porcupine and that of Ogilvie River the mountains are high and serrated, possessing much more the character of a range of mountains than those on the west side of the Porcupine, where the surface has more the nature of a plateau with peaks rising outof it. The range between Porcupine and Ogilvie Rivers I have named the Nahone Mountains, as the Indians considered them the home of that people, as I have

already mentioned.

Looking down the river from my spring camp, on clear days, a lofty peak was visible about twenty or twenty-five miles away. It towered at least one thousand 57

feet above any peak seen near it. I have named this Mount Burgess after the Deputy Minister of the Interior. The top part seemed in the distance to be of different rock from the base. It rose perpendicularly from the débris on the slope, and was weathered into castellated shapes. It may be that a portion of the sandstone seen on the Tat-on-duc has been left on this high peak by denudation. I hoped to be able to get a closer view of it on my way down the river, but when I got down to its vicinity it was hidden by intervening peaks.

While waiting in camp on this river for the ice to break up I employed myself in plotting my survey from the Lewes to this point, and, when the weather permitted, in taking observations for magnetic declination, inclination, and total force. I also took transits of stars over the prime vertical, from which I found the latitude of the place to be 65° 43′ 00″. I tried on several evenings to observe the meridian transit of the moon for longitude, but could get nothing satisfactory, as at that time of year (May) there was twilight all night, and small stars could not be seen, so that I was restricted to first and second magnitude stars, which, unfortunately, on the nights when I could observe the moon, were few and far between. The mean of three transits is 139° 43′ 00″ west of Greenwich, but this may be in error several minutes.

The mean height of the barometer here during May was 27.60 inches, indicating an elevation of about two thousand feet above the sea level.

Notwithstanding the high altitude and latitude, the timber and shrubbery in the bottom of the valley grew as large and strong as on the upper Lewes, in five degrees lower latitude. Surrounding my camp was a timber-covered flat about two square miles in area, on which grew many nice trees upwards of a foot in diameter. Nearly all of these were spruce, but there were also some clumps of cottonwood, the trees in which averaged nearly as large as is the same species along the Athabasca and Peace Rivers. Willows are abundant along the streams, and grow as large as they generally do in other parts of the territory, being not unusually four or five inches thick. A few white birch were seen. No timber was noticed out of the immediate bottom of the river valley.

Owing to the isolation of this district animal life is abundant. Here, for the first time since we entered the Yukon basin, appeared indications of beaver, several of which we saw when spring came, and one we killed. Otter, too, were numerous, and a few marten were seen, but the latter were not plentiful in this vicinity. rabbits were noticed, and the only indications of beasts of prey were a few tracks of fox and lynx. Ptarmigan were numerous. These are very pretty birds in the spring when they are exchanging their winter coat of snowy feathers for their summer garb, their color turning on the neck first from a pure white to a reddish brown. Numberless cariboo wander over the mossy slopes. These animals live on a moss which they find high up on the hill sides in the winter, and lower down in summer. I have seen hill sides on which the snow had been pawed over for upwards of a mile in length and a quarter of a mile in breadth, hardly a square rod of it being missed. The animals stand facing upwards, and pull the snow down towards them, uncovering a patch of their food, which cropped, they pull the snow above into its place, and so on to the top. I killed one of these animals, intending to use it for food, but found it so infested with parasitic larvæ underneath the skin (in every way resembling those found on cattle) that the thought of eating it was revolting. In the spring they are also very poor. Their numbers could not be estimated, as they abound throughout the district.

It does not appear that any Indians have hunted here for many years. Apparently their only visits to the district were in going to the Hudson's Bay Company's posts on the lower part of Porcupine River, and on Peel River, before trading posts were established on the Lewes by Harper, McQuestion & Co.; they used at that time to cross by a creek which I identify as one below this point, to be mentioned in its place, build rafts or skin boats, and float down to Bell River, up which they went to LaPierre's House, sometimes crossing to Fort McPherson. As nearly as I 58

could learn from them, it is seventeen or eighteen years since last they made this

journey.

Moose are very numerous, and seem to be much less fearful of man than in any other place I have seen or heard of. I had been told that in the winter the Indians pursue them on snowshoes, and run them down. This they actually do, but not until the snow is deep. One day I started after a moose intending to run it until I was close enough to shoot, but this I could not accomplish. It could not get away from me, but I could not gain on it. Had my snowshoes been large enough to support me on top of the loose snow I could doubtless have captured it; but often, when gaining fast, I sank above the knee in the deep, soft snow, and fell headlong. Before I could get under way again the animal had a fresh start. At last, having run fully five miles after the brute, I got tired of the unequal contest, and gave up the chase; but not before the moose showed signs of much distress, his tongue hanging out, and being so winded that he stopped whenever I did. I afterwards found that the snowshoes used for the purpose are made specially large, the rule being that the shoe is made the length of the man who is to use it, and about fifteen inches wide; while my shoes, though of that width, were only about two feet long. Had I used a pair of the proper size I have no doubt as to the result, as often, in deep soft snow, the moose have hard work to get along at all. Of course in shallow snow a man would have no chance in the race. In the winter months these animals live on the buds and young twigs of the willows, and such numbers of them had been near where we were camped that all the willows for miles above and below were cropped almost

On 21st May the river near camp was so clear of ice that I thought it must be open all the way. I therefore started, but when I got three miles down I found the river solidly blocked with ice for miles. Here I was compelled to stay until the 28th.

Before continuing the passage down the river I will mention a few facts bearing on the climate. The lowest temperature in the month of April was on the 4th—37° below zero, and for six days afterwards all the minimum temperatures were below 30° below zero. The last time the thermometer registered a minus reading was the 5th May, minus 1°-8. The highest temperature in April was on the 30th—40° above zero. The highest temperature in May was on the 17th, 55°. The first time the snow showed signs of melting was 29th April. The first appearance of insect life was 30th April, when a small fly came out of the river in great numbers, flying about and crawling over the snow. The water in the river began to rise on 6th May. The first geese were heard flying overhead on 8th May; they were flying in a south-westerly direction, as though they had come from the Mackenzie. The common house fly made its appearance the same day. The first swans were heard 11th May. First mosquitoes seen 14th May. First cranes heard 15th May.

On the morning of 28th May we again started in our canoes for the Mackenzie. The river was not yet clear of ice, but sufficiently so to enable us to work along, waiting occasionally for it to move. Ten miles down a very large ice jam was reached, the river being full of ice for about a mile. This had raised the water up into the woods on both sides, so that we could not pack past it, nor could we find camping ground until we went back some distance. Here we were forced to remain the rest of that day. The following morning the jam had moved down so far that, with some difficulty, the dry land could be reached on the east side; so I decided to bring the canoes and equipage to that point and pack everything down to the foot of the jam, about three quarters of a mile. Just when we had finished this the jam burst, and cleared the river, leaving us no better off than if we had waited. The journey was

then resumed.

About six miles below this, or seventeen below the forks, a large creek comes in from the west. This is, I believe, the creek by which the Indians used to come over from the Lewes. Here are many old racks for drying fish, from which I call this creek the "Fishing Branch" of the Porcupine. The waters of this stream are

PART VIII

black in color, and clear, while the waters of the main stream are usually blue,

though at that time turbid.

While descending the river I determined roughly its fall by reading my barometer every half hour or so, and calculating the descent from the difference of readings. In this way atmospheric changes would affect the result but little, as the change could be but small in such short intervals of time, while the descent was quite rapid. There are no dangerous rapids on this river, but it is all swift, running over a bed of lime gravel. The fall barometrically determined, between the forks and the tributary last mentioned, was three hundred and ninety-five feet, but the

greater portion of this was in the upper half of the distance.

Just below the Fishing Branch another extensive jam stopped any further progress for the day. Next day the journey was resumed, but through and over ice for about eight miles, when another impassable jam was encountered. It was piled up until the water filled the whole valley, but by wading, packing and canoeing through the woods it was safely passed. Here I made an ascent of one of the hills bordering the river, and found it to consist of the limestone already mentioned as constituting the bulk of the mountains further up. The timber was much the same, with the addition of some small tamarac, The journey was resumed in the evening. At one point there is a sudden turn in the river, and just below it a rapid which is very rough, but has no rocks in it. This was entered before there was any time to stop, and it had to be run, with no other mishap, fortunately, than one of the canoes filling with water and nearly sinking before we got through.

Twenty miles below the Fishing Branch the river leaves the mountains, the last peak near it being on the west side, and so close that the river runs under its base. This I have called "Mount Dewdney" after the Hon. the Minister of the Interior. It is of the same limestone formation as all the others. No sign of stratification was observed along the Porcupine, nor were traces of organic remains anywhere seen. Mt. Dewdney rises about two thousand five hundred feet above the river, or nearly four thousand feet above the sea, the river here being about one thousand three hundred feet above sea level. The fall from Fishing Creek to the base of this mountain is three hundred feet. As far as can be seen from this point the mountains trend east and west. Those on the east side of the river were apparently not so high, and they gradually sloped off as if another deep valley pierced them at no very great distance to

the east.

From here down the river winds through an undulating and wooded country, the banks being nowhere more than eighty to a hundred feet high, and generally consisting of clay, with occasional exposures of a black shale, which decomposes into a rich black clay. The timber on the uplands, though thick, is not large enough for any other purpose than fuel. This description answers generally for the whole valley down to the mouth of Bell River. In the bottom, close to the river, there are scattered clumps of spruce that would make fair lumber, but not sufficient to induce any one to think of it as an article of trade. About thirteen miles below the mountains a large rock exposure occurs on the east side of the river. It extends for about half a mile, rising three or four hundred feet above the level of the river, and is weathered into fantastic resemblances of old buildings. I have called it Cathedral Rock from its resemblance to some old churches I have seen pictured. The rock appeared to be limestone, but I am not sure. It may have been sandstone, but as it was some distance from the river I did not take the trouble to go to it.

About twenty-five miles below the mountains, and three or four miles to the west of the river, a high, wooded, terraced ridge rises out of the plateau; another one, much the same in appearance, can be seen further west. They appear to be the result of denudation. A smaller one is seen below this about three miles.

About thirty-eight or forty miles below the mountains a large tributary comes in from the south-west, but I noticed no valley in the mountain range out of which it appeared to come. It is probable that it skirts the northern edge of the hills for some distance west, and is fed by small streams issuing from them. Above this tributary the current, though not rough, is generally so swift as to prevent steam
[PART VIII]

boat navigation. Below the junction no difficulty would be found in running steamers of moderate power. What draught the summer stage of water would allow I had no means of determining, but I think a flat-bottomed boat drawing two to two and a half feet could always find water enough. I used to try with my paddle where I had reason to think it shallow, but never found bottom, and, as the banks are flat and low, it seems likely that there is not much variation in the height of the water in this

part of the river.

About a mile and a half below this stream the river is joined by another from the south-east, apparently as large as the one I came down. The average width below the mountains of the river I had followed was from one hundred to one hundred and fifty yards. The width of the other branch is about the same. I afterwards learned that the Indians in the vicinity of LaPierre's House go up this branch to the mountains to hunt. The band that most frequents it was up at its head when I passed, so that I could learn nothing definite about it. The fall from the mountains down to the mouth of this branch is four hundred and sixty feet, one thousand and fifty-five feet in all from the forks above my spring camp, the distance being about seventy-eight miles, and from the Lower Na-hone Lake the fall is about one thousand three hundred and fifty feet in a distance of about eighty-two miles. From this we get the altitude of the confluence of these two large branches as approximately nine hundred

and fifty-five feet.

From this point down the fall is not noticeable by barometer, and the current is very slow-so slow that a head wind of twenty miles an hour would almost drive the bare canoe up stream. Below this to Bell River the river runs through an undulating country, covered with small spruce, white birch, and some cottonwood. The soil is all clay, and if the climate would permit, it would rank well as an agricultural country. There are some exposures of much weathered clay shale along the river. Below the junction of the two branches the river averages from two to three hundred yards in width, with banks twenty to forty feet high. From the junction to Bell River the distance by the survey is about sixty-seven miles; but it must be borne in mind that this measurement does not follow the windings of the river, which would about double it. Sights were taken from point to point in the valley, and the distances estimated. The river is in general very crooked, and there are some large islands in it. The barometer readings were noted at frequent intervals to get the fall in the river; but as the fall was very gradual, not much reliance can be placed on the result obtained in that way. However, I give it for what it is worth. In the last stretch it was one hundred and thirty feet, thus making the altitude of the mouth of Bell River eight hundred and twenty-five feet above the sea. I have a check on this result, which will be given further on.

Bell River enters the Porcupine from the east. At its mouth and as far up as its confluence with Eagle River it is about one hundred yards wide, with low banks thinly wooded. To the north at some distance are high hills, wooded well up the slopes. The Rocky Mountains can now plainly be seen to the east twenty to twenty-five miles away. I got a poor observation for latitude at the mouth, and

found it to be 67° 19'.

For about ten and a half miles the general direction of the river is north-east, it then takes a general south-east direction for nine and a half miles to where Eagle River enters from the south. By mistake I went up this river one day's journey, about twenty-seven miles. Here I met some Indians who had been hunting at its head waters, and were now on their way down to LaPierre's House. The country along it, as far as I went, is flat, and near the river timbered with spruce and cottonwood of the same general character as that on the Porcupine. The soil is generally clay, but occasional sand banks overlie the clay to a depth of fifty to one hundred feet. These banks are few and isolated from each other, and appear as if deposited by a sea, the intervening tracts being afterwards washed away. About six miles from Bell River an exposure of coarse-grained sandstone, much resembling that on the Tat-on-duc was seen, but it is stratified. The strata, however, are thin, not more than a foot in thickness, and much bent. This exposure could be seen

PART VIII

along a bend of the river for two hundred yards only, and rose but ten to fifteen feet above the water. As far as I followed it, this river is very crooked, with a moderate current. Just above the sandstone exposure there was a slight ripple, while another just below it showed shallow water—only three feet. I understood from the Indians that this spot is very shoal in low water, there often being not enough water to float a canoe over it. They described the whole river as much the same in character as the part I saw, and the country along it as generally flat, and all timbered. They say game is plentiful along it. They had gone up in March and hunted until June, when, some of them having made rafts and others skin boats, they came down to dispose of the furs they had captured. To make a skin boat they sew together the necessary number of deer or moose skins, raw, with the hair taken off. A keel is laid down, and willow ribs and frame work of the proper dimensions attached to it. The skin cover is then softened in water, and stretched over it; then, when dry, the skin is well rubbed with melted fat. When the trip for which it was built is over the skins are taken off and used for other purposes.

When I learned from these Indians that I was on the wrong river I at once turned back and reached Bell River at one o'clock a.m., having started at nine. The sun could occasionally be seen down the valley of the river to the north, well above the horizon. The people in this district, in the summer months, do nearly all their travelling and labor during what, in our latitudes, would be the night, of which, at this season of the year, they have none. Their reason is that it is cooler to labor

then, and warmer in the day hours to sleep.

I induced one of the Indians who could speak a little English to accompany me to LaPierre's House. After resting a few hours at Bell River after our long day's labor, we started. On the way we had to break through three ice jams. It surprised the Indians much to see us dash our canoes on a sheet of ice, and often break it in that way. If the ice proved strong enough to carry us we got on it, hauled the canoe across, and embarked again, to repeat the operation on another mass. The ice by this time was generally pretty rotten, but often masses of sound ice upwards of five feet thick were encountered. When one gets into a jam of this kind he has to keep a sharp lookout, lest his canoe be crushed, and often, to save it, he has to jump upon the ice, and haul out his canoe as quickly as he can. We labored hard in this way all day, and reached the House about nine in the night, or rather afternoon, of 6th June. There were many natives here, and our canoes and outfit generally were a great novelty to them. Our Indian's account of how we worked with them through the ice astonished them greatly, and they thought the white man's canoe almost a creature of life and spirit.

June 7, I spent at the House. I intended to determine the latitude, but just before noon the sky clouded, and all I could get was a very poor meridian altitude of the sun, through clouds. This gave me 67° 23′ 41″. I observed for magnetic dip and total force, but not for declination, as I had no means of determining the meridian

reading of the instrument.

A mile above Eagle River, Rock River flows into Bell River from the south-east. It is about fifty yards wide, shallow, and in its bed are many large rocks—hence its name. The Indian with me told me it rose far up in the Rocky Mountains, and that it took many days to reach the head of it. He pointed out from its mouth its general

direction, which is about south-east.

About three miles above Rock River there is a slight rapid, which, however, would not prevent navigation. At this point on the east side of the river is a high rock cliff, consisting, as I supposed, of clay shale; but as Mr. R. G. McConnell, of the Geological Survey staff, passed through here on his way down the Porcupine, he no doubt has examined it, and reported upon it, as well as upon all other rocks in the vicinity.

A short distance below the House, Waters River enters from the north-west. It is a stream about forty yards wide, and appears to have a considerable volume of water. It is said to be forty to sixty miles long, rising in a range of mountains which can be seen from its mouth.

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About five miles above the House in an air line, but much more than that by the river, which is very crooked, Rat River joins from the east. It is a small river—in fact is hardly worthy of the name. On it LaPierre's House was first built, but wood getting scarce it was moved to its present site. Only a short time must elapse before it will have to be moved again, as wood is getting scarce near its present position and has to be hauled some distance. The post here is kept up mainly for the meat it furnishes, the country around it abounding with game. The tongue of the deer or the moose is considered a delicacy, and the Indian generally brings it to the post, as he gets more for it than he would for an equal weight of other meat. The clerk in charge informed me that he had sent away that year thirteen hundred tongues to other posts, so that probably about two thousand animals were killed in this vicinity.

Bell River is named after Mr. J. Bell, of the Hudson's Bay Company, who crossed to it and descended it to the Porcupine in 1842. He also followed the Porcupine below the junction for three days. Porcupine River, I understand, was called so on account of the numbers of that animal that existed in its valley. Why Eagle and

Rat Rivers were so called I did not learn.

The route always travelled from this post to Fort McPherson crosses the mountains in a pretty direct line. There are two routes, one for winter travel and one for summer. The distance between the two points is called about eighty miles, and it

generally takes three days to make the trip.

All the trading outfit for LaPierre's and Rampart Houses has to be brought this way in the winter months on dog sleighs, and the furs and meat received for it have to be taken to Fort McPherson in the same way. From there the furs are sent out by the Mackenzie. This is so costly and slow that in 1872 Mr. James McDougal, (now Chief Factor), then a clerk in the Hudson's Bay Company's service, thought of trying some more convenient and expeditious way. Accordingly he made an exploration and survey of a pass through the mountains to the north of this route, with a view to building a waggon road through it, and using oxen to transport the goods from one waterway to the other. I went through this pass on my way to Fort McPherson, and will describe it in its proper place.

Mr. McDougall, also, in July, 1873, when the water was unusually low, made soundings in Bell and Porcupine Rivers to determine the practicability of steamboat navigation, carefully examining both rivers in places suspected of being shallow. Between LaPierre's House and Yukon River he found five shoal places, where the depth was less than four feet. The depths and localities of these he has kindly furnished me. The first is at Sinclair's Rock—in the rapids I have mentioned as being below LaPierre's House. Here the shallowest place was three feet six inches deep. Next, a short distance below Bell River, in the Porcupine, he found only two feet eight inches. This place he considers could be easily improved. Approaching it, for one hundred yards the water is three feet deep; then occurs rock (sandstone, he thinks), with a depth of water two feet eight inches for ten yards, when it suddenly drops to four feet. The other three places are between Rampart House and the Yukon, and consequently in Alaska. Their depths in the order of descent were, respectively, three feet ten inches, three feet six inches, and three feet four inches. At one of these places there was an island close to one shore and Mr. McDougall naturally took the wider channel to be the deeper, but he afterwards learned that the narrow channel was quite deep.

On the morning of 8th June I started from LaPierre's House to go up Bell River to the pass above mentioned as having been explored and surveyed by Mr. McDougall, having as a guide the Indian I had brought from Eagle River, who had been through the pass once or twice and was supposed to know all about it. I carried on the survey, as on the lower part of the river, by taking compass bearings of prominent points on the river and estimating the distances to them. In this way I made the distance to the point at which we leave Bell River to go through the pass to be about twenty-one miles; yet, owing to the many and long sinuosities of the river and detentions from ice jams, one of which delayed us half a day, it was three days

PART VIII

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before we arrived there. The current is nowhere strong, but there are some shoal places where the heavy ice, fully five feet thick, grounds and piles up until the

accumulated water behind pushes it over.

On the morning of the 12th my guide told me that most likely we would reach the mouth of the creek, which flows from the pass, about dinner time. Judge my surprise, therefore, when a few minutes after starting he pointed to the mouth of a stream almost hidden by willows and alders, and asked if I thought that was the creek in question, and when I said "No," he assured me it was. I could not believe him until I went ashore and found the preparations that had been made by Mr. McDougall to build a storehouse in which to deposit the goods brought through the pass. I may here call attention to the length of time hewn timber in this country will preserve a fresh appearance. Here were trees cut, and sticks hewn in 1872, yet had I been asked what length of time they had been cut I would have answered "A year or so." I noticed the same thing on the upper Porcupine—cuttings there seeming to me to be only a few months old; yet I knew from what the Indians told methat they were quite as many years as I thought months.

The canoes were put into the creek, which is only thirty to forty feet wide. For the first two or three hundred yards the water was deep, and smooth enough to paddle along with ease, but then came the end of our pleasure. The creek for about a mile and a half was one continuous rapid, not dangerous, because there was not enough water to hurt anyone, but so shallow that it would hardly float the canoes when all the men were out of them; so we had to wade in the ice water, while snow was falling, and drag our canoes, with our outfit in them, over the bars and stones in the creek, until at last even that comfort was denied us, for we reached a part of the stream where the ice was still solid, and at least ten feet thick, so that everything had to be packed for nearly a mile, to where the creek was again clear of ice, when we re-embarked and floated up about three miles in a straight line, but certainly twice that distance by the stream. Here everything had to be carried about four miles across the watershed of the pass to a creek which flows into Trout River, a tributary of Peel River. On the summit of the pass are several lakes, which, had they been open, would have reduced our packing to less than half a mile; but the ice was still solid, with only a few pools of open water around the edges.

On the morning of the 15th everything was got across to waters flowing to the Arctic Ocean, but the creek was so full of snow and ice that it did not help us much, and, although it was only three and a half miles to Trout River, the whole day was consumed in getting there. This pass, which I propose to name McDougall's Pass, after the man who first explored and surveyed it, is wide and level, the valley being nearly a mile wide at the bottom, and very flat. It is almost treeless, only a few stunted spruce being found near the lakes, and a few willows on the creeks. Some coarse grass grows in the valley, but when I was there, there was no sign of growth. The distance from Bell River to Trout River I estimate to be fourteen and a-half miles. On the north side of the pass I have named two prominent peaks "Mt. Dennis" and "Mt. Russell."

I may say here that I compared notes of survey with Mr. McDougall, who measured his distance with an error probably not greater than one in a thousand. His survey followed the valley of the pass from bend to bend and cut off many turns in the river, while mine followed the course of the river more closely, and is consequently somewhat longer, the actual difference on the whole distance being about five miles; but when I take off my plot a length corresponding as nearly as possible with a line of Mr. McDougall's survey, I find the difference very slight. Many of his pickets were still standing, with a piece of sod on top of them, as fresh-looking as though they had been planted but one year, instead of sixteen.

though they had been planted but one year, instead of sixteen.

Returning now to the question of altitude, I will calculate the height of the summit of the pass from that of the mouth of Bell River, and compare it, found in

that way, with the altitude deduced from the descent of Peel River.

I have put the altitude of the mouth of Bell River at eight hundred and twenty five feet; allowing a rise of a foot to the mile in that river we get eight hundred and 64 [PART VIII]

fifty feet for the altitude of LaPierre's House. Continuing the same rate to the westend of the pass we got about nine hundred and twenty, the distance by the river being about seventy miles. By barometer readings the difference of elevation between Bell River and the summit of the pass is about two hundred and fifty feet, but this determination is unreliable on account of the length of the time elapsed between the readings at the two places. From the appearance of the slope I would estimate the rise to be not more than two hundred feet, if indeed as much; but, assuming the barometric height as correct, we have eleven hundred and seventy feet as the altitude of the summit. While going from the summit down to Peel River I determined the rate of fall by half-hourly readings of the barometer, as I did on the Porcupine. This gave the fall from the summit to slack water on Trout River as eleven hundred and thirty feet. The last point is seventy or eighty miles from the Arctic Ocean, and probably as many feet above it, thus making the height of the pass about twelve hundred feet, or only thirty feet more than the determination by way of the Porcupine. It cannot be claimed that either determination is correct, or that this close agreement is anything more than chance; yet, it is much more satisfactory to have them so than with a large difference.

From where we enter Trout River by this route to the head of slack water is about twenty-four miles by the river. In this distance the fall is one thousand and ninety feet, but to determine what the grade of a road built on this, by far the steeper side of the pass, would be, we have to assume a nearly straight line, instead of following the bottom of the river valley. This would reduce the distance to about twenty miles, thus giving an average grade of fifty-five feet to the mile on this side of the pass. This is not too great for any kind of roadway which may be built here.

The Indian with me said that both Bell River and Trout River rise far up in the mountains; that he had been several days' journey up both, and that there they were still quite large. He also said that Bell River, a short distance above the pass, is rough, with a generally swift current and many small rapids. Trout River, where we strike it on this route, is about fifty yards wide, shallow, and very swift. The mountains on both sides rise two or three thousand feet above the pass, with many isolated, high, sharp peaks. Most of the rock I saw was granitic; some quartzite is found on the south side of the pass at the summit. Mr. McDougall, who appears to have travelled all through the mountains in this vicinity, told me of an immense dyke which he saw in the hills on the south side of the pass. He described it as bridging a deep and wide ravine, presenting the appearance of an immense wall across it. Three or four miles down Trout River from the pass a small specimen of asbestos was picked up in the drift in the river. In a conversation with Mr. McDougall I mentioned this and asked him if he ever came across any of it in his ramblings through that district. He informed me that not far from the place where I found the specimen there were several veins of it at the foot of the slope on the south side of the river. The rocks seen along the river here are not the rocks usually associated with absestos, but Mr. McDougall's evidence is that of an eye witness.

Ten and a half miles down the river we reach the cañon. Here we are out of the mountains, and the character of the rock along the river changes completely, being here sedimentary. The walls of the cañon are a stratified sandstone, the top strata appearing to be harder than those lower down. There are exposures of this rock all the way down to the foot of the swift water. I never could stop when near an exposure to examine it, as there was always a rapid alongside it, but it resembled in appearance the friable sandstone seen throughout the North-West.

At one place, while I was running past a cliff in a rapid, I saw what seemed to be a coal seam in the face of the cliff. It was three feet or more thick, and extended the whole length of the cliff—about a quarter of a mile. I told Mr. McDougall of this, and he informed me that he had found the same seam, and had taken some of the coal to Fort Simpson, to be tried in the blacksmith's forge there, and it was pronounced a fair quality of coal. The last rock exposure seen in descending the river is just at the foot of the swift water. On the north bank there is a low cliff of

soft red sandstone, much weathered, as well as worn by the water of the river, which shows its softness.

The walls of the cañon, in which the river takes a sharp turn, are about eighty feet high. On the outside of the curve the walls are perpendicular, but on the inside they are not so steep nor so high. It appears as if there had been at one time a fall over this sandstone barrier, since it extends completely across the river valley, and is not more than a hundred and fifty yards thick. Above the canon the river is generally wide and shallow. In many places it is spread over gravelly flats, so that in very low water one could easily conceive the river flowing through without any water being visible. The fall in the ten and a half miles is three hundred and sixty feet. The current is always swift and rough, but there is no danger in navigating it in canoes, excepting a liability to rub the bottom once in a while. The fall is uniform to the cañon, but below it there is a succession of rapids with short intervening stretches of easy water. The fall between the canon and the head of easy water is seven hundred and thirty feet, which, in a distance of fourteen miles, gives fifty-two feet descent to the mile. This would not be at all dangerous over a uniform slope and a smooth bottom, but divide it into two or three rapids, and throw a lot of large rocks into them, and it makes running through them in a small boat exciting, to say the least. Fortunately for us, we got everything through safely, the only inconvenience being that the canoes had to be bailed out at every rapid. It is often said that "it is the unexpected that always happens." This, my experience on this trip verifies in a small way. My canoe had come through all the various vicissitudes and dangers of a thousand miles, and had safely run over this the last rough water it would have ito encounter, but in the last yard it struck on the end of an unseen stick, which fractured the side so that the canoe would have filled in a short time. It was unloaded, the fracture filled with white lead, the side pressed back to its original shape and fixed there by a piece fitted to the inside, and rivetted with wrought nails, and the canoe was again to all intents as good as before.

Mountain goats and big-horn sheep abound in the hills around the pass. While going through I saw how the Indians, by stratagem, sometimes secure cariboo and moose, when the snow is not deep and they are consequently hard to approach. A ravine which is full of snow is selected, and round it, on the lower side, is built a brush fence, which is extended outwards and backwards to the uplands on each side, diverging until the ends are some miles apart. The fence consists merely of crotched sticks stuck into the snow at suitable distances, with poles laid horizontally in the crotches, due care being taken to cut and mark it so that the agency of man in its erection is made very evident. A party then scours the country around the mouth of the trap, all the time gradually approaching it, driving any animals in the vicinity, by noises and other means, between the arms, which the brutes avoid as soon as they see. They are thus gradually driven to the snow pit at the end where they are easily despatched. Had the brutes sense enough they could easily dash through the fence, but they will not approach it.

From the foot of the rapids to Peel River the current is very slow, and about four miles down the river branches, the southern branch spreading out into numerous lakes, in which we were a day paddling around trying to find our way out. In most of them the ice was still floating. Had the Indian taken the north channel we would have saved nearly a whole day in time, but he thought the south channel was the right one until we were lost in it, and then recollected that we should have taken the other one. These channels join again below the lakes and continue on to Peel River.

The surface here is flat and swampy with much good timber. Although this was the most northerly point reached (about 67° 45') the trees on this flat were as large on the average as those seen anywhere else on the survey. The Indian told me they called this part of the river Poplar River, from the fact that much of that wood grows along its banks near the mouth. That poplar grows on it is no very distinguishing feature, so I propose to name it Trout River, from the abundance of trout 66 [PART VIII]

that are caught in it up in the mountains. According to the Indian's story they are

very abundant.

Two streams join Trout River, one a mile below the cañon, and the other just at the foot of the rapids. The first is about as large as Trout River above the confluence. The Indian gave me its name in his language, but it was almost unpronounceable. When translated it was in English "The river that is filled with snow." This name is given because up in the mountains the valley is drifted full of snow in winter, some often remaining until the next winter. He said if we went up the valley we would see the water running under snow arches for long distances. I had seen a similar phenomenon on a small scale for two miles on a creek in McDougall Pass. The river comes from the south, and the trail from LaPierre's House to Fort McPherson crosses it. The other river, called Long Stick River, comes from the north-west, and is not more than eighty feet wide at its mouth.

Peel River was reached on the evening of the 19th June, and on the morning of

the 20th, at eleven o'clock, we arrived at Fort McPherson.

Section 4.

Exploratory Survey from Fort McPherson to Fort Chipewyan by way of Peel and Mackenzie Rivers, Great Slave Lake and River, and Lake Athabasca.

Fort McPherson is built on the east bank of Peel River, some fourteen miles above the point where it divides and joins the Mackenzie delta, which is common to both rivers.

The fort stands on a high bank, consisting of gravel, under which some shale can be seen close to the water. About a mile down the height of the bank decreases from fifty feet or thereabouts to ten or twelve, and consists wholly of alluvial dp osits. The river at the fort is about half a mile wide, with moderate current.

The country surrounding the delta of the Mackenzie has evidently been a part of the Arctic Ocean which has been filled up with deposits brought down by the river.

On this soil the growth of timber is, for the latitude, very large and thick, many spruce of from twelve to fifteen inches diameter occurring along Peel River, as well as along the Mackenzie for some miles up.

At Fort McPherson I at once set about making preparations to resume the micrometer survey and carry it from this point to Fort Chipewyan, on Lake Athabasca, there to connect with my micrometer survey of Athabasca and Peace Rivers. The 21st and part of the 22nd of June were spent in this way.

On the 21st I tried to make some observations for latitude; but as the sun never set I could get only one or two meridian altitudes of first magnitude stars in addition to that of the sun. The instrument used was faulty, so that the result, 67° 26′, cannot be accepted with much confidence, as it may be in error a minute or more.

I observed on the sun, east and west, for azimuth, and that night did what no other Dominion Land Surveyor has, I think, ever done, viz., took the sun's lower or midnight transit agrees the maridian for time.

midnight transit across the meridian for time.

On the 22nd I took a set of magnetic observations, and all the necessary preparations for the survey being completed, started the work at six o'clock that even-

ing, completing about seven miles.

I could find no one around McPherson who knew much about Peel River, and as my own observations were confined to that part of it below the fort, I am not able to say much about it. The distance from the fort to where the river branches into the Mackenzie delta is thirteen miles, and through the delta to Mackenzie River proper, thirty-one and a half miles.

Between Peel River and the Mackenzie about two thirds of the channel in the delta averages more than a quarter of a mile wide; the remainder about one hundred yards. All of it was deep when I passed through, and the Hudson's Bay Company's steamer "Wrigley," drawing five feet of water, finds no difficulty in navi-

gating it.

The banks do not rise more than ten or fifteen feet above the water, and the current is continually wearing away the soft deposit and carrying it down to the lower part of the delta and the Arctic Ocean.

Where we enter the Mackenzie proper the channel is three fourths of a mile wide, but it is only one of four, there being four large islands there. The whole

width of the river cannot be less than three or four miles.

Looking northward down the westerly channel the view is bounded by the sky, and widens in the distance so that one can fancy he is looking out to sea. hardly be so; but, from the altitude of the bank where I stood, added to my own height, the horizon must have been six miles away; and a bank in the channel of equal height to that on which I stood would have been visible twice that distance. Now, if the supposed bank was timbered, as was that on which I stood, it would be visible ten or twelve miles farther, but none was in sight.

From the entrance of the small channel of Peel River to the head of the upper island in the Mackenzie is nine miles. From the west shore to the southerly point of this island is a mile and a quarter; from the island to the east shore the distance is nearly as great, showing the river to be more than two miles wide at this point. However, it gradually narrows, and five miles above this is little over a mile wide, which it averages up to the narrows, about sixty miles from Fort McPherson, or

twenty-eight from where we entered it.

A north wind raises quite a swell here, and the salty odor of the sea air is quite perceptible above the delta.

The banks continue low and the country flat on both sides of the river for some

nine miles above the islands.

The shore on the east side is sloping, while that on the west is generally perpendicular, showing the action of the current, which is wearing into and carrying away portions of it. This form of bank changes into steep shale rock, that on the east being about fifty feet high and that on the west apparently sixty to eighty. Both banks are perpendicular, and gradually increase in height as far as the Narrows, where they are probably one hundred and fifty feet above the water. The easterly bank through the Narrows is almost a sheer precipice to the water, but that on the westerly side is not quite so abrupt.

Red River enters the Mackenzie on its west side just at the foot of the Narrows. It is about two hundred yards wide at its mouth and appears to be shallow. As far as I could learn from persons acquainted with the river, it comes from a flat, swampy

country.

A winter trail crosses from Fort McPherson to the Mackenzie near the confluence of Red River, and the surface of the country along it is said to be covered

with woods, marshes, and ponds.

In the Narrows the Mackenzie is nearly three-fourths of a mile wide for a distance of five or six miles, when it expands to its normal width of a mile or more. In one part of the Narrows there was not more than five feet of water on the west side of the river for some distance out from shore. In low water this becomes bare, and reduces the width of the river to half a mile for a short distance. Hence, this place is called the Narrows. The current here is swift, being not less than four and a half miles per hour. Coming up the river, we turn sharply at this point from . south-east to north-east, but after passing the Narrows we resume the former course.

A few miles above the Narrows the banks change from rock to clay and gravel, and continue generally steep and high as far as Fort Good Hope. In a few places the bank recedes from the river for a short distance, forming a low flat, on which generally grows some fair spruce timber. I noticed that these flats are being eaten away by the action of the current and waves. The greatest extent of level ground I saw is at the site of old Fort Good Hope, on the west side of the river; but, as I came up the east side, I cannot say exactly what the timber there is like, but judging from its appearance at the distance of a mile it is large and long.

From the delta up the river is clear of bars and islands during the stage of water at which I saw it, for a distance of about eighty miles. It then widens to PART VIII

two miles or more, and there are some scattered bars and small islands. The current is uniform, as one would expect in such an immense volume of water, and never exceeds four miles an hour. There are many places where, looking up and down the valley, the view is bounded by a water horizon, and it has more the appearance of a lake than a river.

Wherever possible the width of the river was determined by triangulation. Between the Narrows and Fort Good Hope it is never less than a mile wide and is

often more than two, even reaching three miles at some points.

Since I followed the shore, I cannot speak of the depth of water from personal observation. Capt. Bell, of the Hudson's Bay Company's steamer "Wrigley," informed me that the shallowest water found by him in any part of the river, in what he considered the channel, was eleven feet. But as, when I saw him, he had made only two trips on the lower river, he could not speak very definitely as to its depth. Sir Alexander Mackenzie, who discovered the river and descended to its mouth in July, 1789, had a lead line with which to make soundings; but, in the swift current a short distance above Fort Simpson his lead eaught in the bottom, the line broke, and the lead was lost. I have the depths according to him, and will give them in their proper place. One would expect, in such an expanse of water as this, to find some of it shallow, but it appears from all the evidence I could gather that vessels drawing from eight to ten feet of water would find no difficulty in navigation as far as Great Slave Lake. Although the river is reported to be shallow where it leaves this lake, doubtless a channel could be found affording the draught above mentioned.

No rivers of importance flow into the Mackenzie between Red and Hare Indian Rivers. Sixty miles above Red River a stream one hundred yards wide enters from the north-east. I think this is a river which an old man at Fort Good Hope described to me as one up which a Hudson's Bay Company's officer went many years ago to its source, which he found to be not far from the head waters of Anderson River, which flows into the Arctic Ocean. It would appear from the old man's statement that several trips up it have been made since; but his information was vague, and I afterwards met no one who could give me a reliable account of this

river.

One hundred and thirty miles farther on Loon River enters from the east. This river is from eighty to one hundred yards wide. The person from whom I received my information concerning the last mentioned stream had also explored this one for some distance and gave me the following notes: For eight miles there is good canoe navigation, then a rapid half a mile long occurs, at the head of which is a lake about three miles long and one broad, in which the Indians catch many fish. This is called "Rorrie Lake," and some distance above it is another some two miles in diameter, and called "Round Lake" from its shape. Above this again there is a succession of lakes for many days' travel.

Twenty miles above the mouth of the last mentioned stream, Hare Indian River flows into the Mackenzie on its east side. It is about two hundred yards wide at its mouth, and is said to preserve this width for a long distance. The Indians report that this stream rises in a range of hills on the north-west side of Great Bear Lake, but about its navigability I could learn nothing. There was an old Indian at Fort Good Hope who had been up to the head waters of this river several times; but, because he saw me taking an observation in daylight, and learned that I could see the stars at that time, he would give no information, saying: "A man who could

see stars in daylight could just as easily see the whole river."

Fort Good Hope is built on the east side of the Mackenzie, two miles and a quarter above Hare Indian River, and two below the ramparts. It was originally about one hundred and twenty miles down the river from this point, but was subsequently moved up to Upper Manitou Island, whence it was swept by a flood in 1836. It was then built on its present site. The Hudson's Bay Company has quite a large establishment at this point, consisting of half a dozen houses and some stables. The Roman Catholic Church has a mission here, and their church is said to possess one of the best finished interiors in the country.

Two miles above the fort we enter what is known in the vicinity as the "Ramparts;" though in the more south-westerly part of the country it would be called the "Cañon." Here, for a distance of seven miles, the river runs between perpendicular and occasionally overhanging walls of rock. At the lower end they rise one hundred and fifty feet above the water, but their height decreases as we near the upper end, at which point they are not more than fifty or sixty feet. At the lower end the cañon is nearly a mile wide, but its walls gradually converge until, about three miles up, the width is not more than half a mile, and this continues to the upper end. Sir Alexander Mackenzie when passing through sounded at its upper end, and found three hundred feet of water, which accounts for the fact that, although the cañon is so narrow, the current is not perceptibly increased.

About a mile above the Ramparts there is a rapid when the water is low, but when I passed there was no sign of it. We paddled right over where the worst part is said to be, and noticed nothing but a current somewhat quickened, but not sufficiently so to prevent our ascent with ease. On the east side of the river the rapid is unsafe for small boats during low water, but about two thirds of the way across to the west shore the water is deep and safe. I was told that several travellers, while passing in boats, have tried without success to find bottom with long poles. The rapid is caused by a ledge of rock extending across the river, apparently the upper edge of the rock, through which the Ramparts have been worn. Over this ledge the river simply drops. The Hudson's Bay Company's steamer has

not yet encountered any difficulty in passing up and down.

When on his way down the river, Sir Alexander Mackenzie met some Indians some distance above this place. After confidence had been established by means of presents, he prepared to start onward; and, although his newly made friends told him there was great danger ahead in the form of a rapid or cataract which would swallow him and his party without fail, he continued, they following and warning him of his danger. He advanced cautiously into the Ramparts but could hear or see nothing to verify their statements. At last, when through, they admitted that the only bad water to be encountered was now passed, but that behind the island, just below, was a bad spirit or monster, which would devour the whole party. Failing there, the next island below would surely reveal him. From these statements the two islands have received the names of Upper and Lower Manitou, respectively.

In the fall of 1887 a whale made its way up the river to the Ramparts, remaining there the whole season, and before the river froze over it was often seen blowing. At first the Indians were afraid, but they soon became accustomed to the sight, and shot at the whale whenever it approached the shore. In the spring its dead body was beached by the ice on the west shore seven or eight miles below Fort Good Hope, and the Indians used part of it for dog food. I enquired its dimensions of several who had seen it. They described it as about twice as long as one of their canoes and thicker through than their own height. This would mean a length of from twenty-five to twenty-eight feet. I have often heard it stated that all the channels of the Mackenzie delta are shallow, but the presence of this whale assures us that one of them at least is over six feet deep.

A short distance above the Ramparts a river flows irto the Mackenzie on its west side. I saw it only across the river, but it appeared to be about two hundred yards wide at its mouth. All I could learn about it at the fort was that it came from far up in the mountains.

Above the Ramparts the Mackenzie suddenly expands to over a mile in width. The banks, as a rule, are much lower than they are below, while in some places swamps occur close to the stream, something never noticed below the Ramparts.

Twenty-one miles above Fort Good Hope, Beaver River joins on the west, but as I continued on the east side, I saw only its mouth, which appeared to be one hundred yards wide. An Indian with mesaid that it took its name from the number of beavers formerly found on it. This stream rises in the mountains, but does not seem to be of any importance.

Forty-eight miles from Fort Good Hope, Sans Sault Rapid is reached. This, like the rapid at the head of the Ramparts, is all on one side of the river, which is here a mile and a quarter wide. As I went up the west side, and the rapid was on the other, extending but little more than a third of the way across, I cannot say that I saw anything of it. I heard the roar plainly enough, but saw nothing except a swift current. It is caused by a ledge of rocks extending partially across the river. Capt. Bell reports deep water in the channel at the end of the ledge, and the steamer has no serious trouble in ascending. In very low water it is said that this rock is scarcely covered.

A ridge of hills here extends beyond the river from the Rocky Mountains, occasional glimpses of which can be caught from the water. Just east of the rapids above mentioned a ridge extends eastward from the river for some miles. The highest point in the end nearer the river was triangulated, and the height determined as one hundred and fifty-five feet above the water. To the north and east of this are several peaks, but they are scattered and isolated from each other. On the west side of the river the hills are some distance away. The rock of which these hills are composed is limestone, as far as I observed. I saw some specimens

of clay iron stone, but not in place.

A mile above the rapids a river called Mountain River flows in from the west.

It is from one hundred to one hundred and fifty yards wide, and shallow.

A mile above this again the Mackenzie turns sharply to the east from its southerly direction, and skirts the base of the mountains for six miles. Its course then curves a little to the south, when what might be termed a cañon is entered, in which the river flows for nine or ten miles. The river here averages a mile in width, and is walled on both sides by perpendicular limestone cliffs, rising from one to two hundred feet above the water. On the south side this wall terminates in what is locally known as Wolverine Rock, rising perpendicularly from the water to a height of about three hundred feet. The formation is limestone, the strata of which stand almost on edge, and the water has worn through them in several places, so that one can sail underneath. Above this point the mountains again approach the river for two or three miles, when they suddenly drop almost to the level of the plain. •The banks are there clay and gravel, with an average height of from one hundred to one hundred and fifty feet.

Six and one half miles above Sans Sault Rapids Carcajou River empties its waters into the Mackenzie from the west. It is a large river, being not less than four hundred yards wide at its mouth. An Indian with me stated that this stream was very large and very long, the Indians having ascended it for great distances through the mountains. He pointed out the direction of the valley for some distance above the mouth, and it appeared to run parallel to the Mackenzie for a considerable space; then, turning sharply to the west, to enter the mountains. This river seems to be the largest tributary of the Mackenzie below the Liard.

On the evening of Saturday, 21st July, I met the Hudson's Bay Company's steamer "Wrigler" on her way down to Fort McPherson. She had already been down as far as Fort Good Hope, and had returned with the season's furs. Here I got the

first news from the outside world since May in the previous year. Opposite where I met the steamer is a large island in the river, which the officers of the boat and Mr. Camsill, in charge of the district for the Hudson's Bay Company, named "Ogilvie's Island," requesting me to so mark it on my map, as henceforth it would be known by that name throughout the district.

Ten miles below Great Bear River a stream about one hundred yards wide comes in on the westerly side. I saw it only across the Mackenzie, and got no

information concerning it.

Four hundred and forty-four miles from Fort McPherson brought us to Fort Norman, which is situated on the east bank of the Mackenzie just above the entrance of Great Bear River. This river is from two to three hundred yards wide at the mouth, with a moderate current, but a short distance up becomes shallow and the current increases. The color of the water is a beautiful greenish-blue, although,

PART VIII

when I passed, it was somewhat turbid. It is said by those who have been up on the lake that the water there is very clear.

Between Forts Good Hope and Norman the Mackenzie averages much over a mile in width, and islands are so numerous that there are few reaches of the river without them. Hence, the average breadth of actual waterway is probably not over a mile. I never measured the velocity of the current; but it is nowhere strong, and I estimate that it is never swifter than four miles per hour, except at a few points which will be noticed later on.

On the east side of the river, two miles below Fort Norman, a limestone ridge, known as "Bear Rock," rises one thousand five hundred feet above the water, and maintains this height for some distance northward from the Mackenzie.

After we had passed a point some miles below Sans Sault Rapid, we could occasionally see the main range of the Rocky Mountains. I tried to locate the most prominent peaks in sight by triangulation, but on account of continuous wet weather during the whole summer, I did not succeed as well as I wished, although I continued this work all the way up the river to within a few miles of Fort Simpson. The data thus collected, when placed on my map, will permit an approximate location of the main range for the future maps of the district. In most cases the angular altitudes of the peaks were noted, so that their heights and positions can both be given. At Fort Norman the mountains are not more than twenty miles distant, but just south of that point they turn away from the river, and are not visible for some distance up.

Above Fort Norman the eastern bank of the Mackenzie is generally high, and composed of clay. The current has undermined these banks in many places to such an extent that they are continually falling into the river. This is markedly the case from twenty to forty-five miles above the point named. The current here is very swift, running in many places as much as eight miles an hour

for short distances in passing points.

In 1844 Fort Norman stood twenty-three miles above its present site on the west bank, but when that fort was built I could not learn. During the occupation of this site, one evening the occupants of the fort observed that the water in the river was falling very rapidly, yet retired to sleep, not suspecting any danger. Early in the morning they were roused by finding the water in their houses floating them out of bed. They escaped by means of boats, but all their cattle and other property were carried away. It was afterwards discovered that the fall in the water had been caused by an immense land slide damming the waters of the south branch of the Liard River; and the flood, by its release. The fort was then removed to its present site.

Just above the point where this incident occurred the river expands into what might be called a lake, only that it is filled with islands, and all the water-ways together probably do not amount to much more than a mile in breadth. This expansion is six miles long and four wide. Above this for six miles the current is very swift, the last mile and a half of it running fully eight miles per hour. In this portion the current washes the base of a high clay bank on the west side of the river and is continually undermining it, so that it is unsafe to either walk along the bank or sail close to it in a small boat.

Sixty-five miles, by the survey, above Fort Norman, a large river enters from the west. It is shallow at its mouth, as it is throughout its course, according to the reports of the Indians. The current, they say, is swift. They ascend it a long way in the winter to hunt, and descend in the spring on rafts. How far they go up I could not learn, their unit of distance being the unknown quantity of a day's travel, but they go much farther than on any other tributary of the lower river. This is marked on my manuscript map as "Daha-dined River." It was so called by Sir John Franklin, or, rather, the Indians in the vicinity gave him that as the name. I also obtained the name from some Indians who had travelled it, and they called it "Pecat-ah-zah." This translated means Gravel River, by which name it is known to all the white men in the vicinity, on account of its shallowness and numerous gravel bars.

Nine or ten miles above, on the same side of the river, another stream enters, apparently not more than a hundred yards wide at its mouth. I saw it from the opposite side of the river only, and heard nothing concerning it. A small stream enters the Mackenzie opposite this place, and up its valley, about two miles from the river, was seen a sharp peak rising one thousand to inhundred feet above the water.

About thirty miles farther up on the west side a river discharges a large volume of clear, black water, which rushes bodily half way across the Mackenzie, and preserves its distinctive character for several miles before it mingles with the main stream. The name applied to this river by the people at Fort Wrigley was "La Rivière le Vieux Grand Lac." It is said to flow out of a lake of considerable extent, lying not far from the Mackenzie. Many peaks can be seen up its valley.

Fifteen miles above Gravel River the Mackenzie changes from over a mile in width, with numerous islands, to a stream often not more than half a mile wide, and without islands. This continues up to Fort Wrigley, except that four miles below the fort it is only three eighths of a mile wide for a distance of half a mile. The current here is swift, but not as rapid as at some points farther down stream.

Six hundred and twenty-four and a half miles from Fort McPherson brings us to Fort Wrigley. This post was formerly known as The Little Rapid, but has received the name it now bears in honor of the present Chief Commissioner of the Hudson's Bay Company. Just above the fort there is a swift rush of water over some limestone rock, which appears to extend across the river. On the west side two small islands confine a part of the stream in a funnel-like channel, which, being shallow, causes a slight rapid, and gives rise to the former name of the post. It is said that this channel is sometimes dry during low water in the winter months.

From La Rivière le Vieux Grand Lac to the fort a range of mountains runs parallel to the river on its east side. They are in many places so close to it that the foothills come down to the water, especially near Fort Wrigley, but just above this point they turn away eastward from the river. Above Little Rapid the river again widens to much over a mile, with numerous islands, and retains this width almost to Fort Simpson. The east bank is generally low and often swampy, but the west, although low for a short distance from the river, gradually rises to a height of seven or eight hundred feet. Fifty-eight miles above Fort Wrigley this hill terminates in a bold, high point, and the ridge turns off to the south-west, enclosing a deep, wide valley between it and the mountains, which here approach the river. This range continues south-eastward out of sight. The positions and heights of some of the peaks were determined by triangulation. One of them was found to rise two thousand eight hundred feet and another four thousand six hundred and seventy-five feet above the river.

Three miles and a half from Fort Wrigley, a stream known to the Indians as the "River Between Two Mountains" discharges into the Mackenzie from the east.

Although one hundred and fifty yards wide, it is shallow.

Thirty-nine miles above this, on the same side, Willow Lake River enters. It is a quarter of a mile wide, deep, with a slack current. It is said to flow out of a lake of considerable extent not far from the Mackenzie.

Sixteen miles above this again, on the west side, a river flows in from the south west. I have seen its name spelled Na-hone, but it is spelled by the Rev. Father Petitot, Na-hauner. This stream, as seen from the opposite side of the river, seems about two hundred yards wide; but it is shallow and rough at the mouth, as was ascertained by the noise of its waters being plainly heard across the Mackenzie, here a mile wide. I could get no information as to what it was like for any distance above its mouth; but it pierces the range of mountains to the west, which here come close to the river. The valley thus formed can be seen extending south-westerly through the mountains for many miles.

No streams of any size enter the Mackenzie between this point and the confluence with the Liard. The banks in this stretch are alternately low and swampy, and moderately high, consisting of gravel and sand.

By the survey it is seven hundred and fifty-eight and one half miles from Fort McPherson to Fort Simpson. The latter fort is situate on an island just below the junction of the Mackenzie and Liard Rivers. Above the confluence both streams are apparently of the same size, each being a little under a mile wide. I have no data to calculate the discharge of either; but, if the discharge is in proportion to the area of the drainage basin, the discharge of the Mackenzie would be more than three times that of the Liard. From numerous reports, both verbal and written, it would appear that the Liard may be navigable for light draught stern-wheel steamers up to Fort Liard, which is one hundred and eighty miles above Fort Simpson in an air line. There are places which, in low water, would perhaps be difficult to get over; but they are probably not more frequent than on many other rivers which have been successfully navigated, as soon as the necessity for it has become apparent. Mr. McConnell, of the Geological Survey, came down this river in the autumn of 1887, when the water was probably low, and will be competent to speak conclusively on this subject.

A short distance above the confluence the Mackenzie narrows to an average width of little over half a mile, with a generally swift current. This continues for seventy-five and a half miles above Fort Simpson, and causes this part of the river to be called the "Line," from the fact that large boats cannot be rowed against the current, but have to be hauled by a line attached to them, and pulled by men on shore. This is the common mode of navigation on all the northern rivers where there

are no steamers, as it is less laborious than rowing against a current.

On his way down the river, Sir Alexander Mackenzie sounded near the head of the Line, suspecting from the rate of the current that the water was shallow. On 1st July, 1789, he found fifty-four feet of water here; in a second trial some distance below his lead caught in the bottom, and the united efforts of eight men could not pull the canoe against the current far enough to liberate it. In the struggle the line parted and the lead was lost.

The banks of this part of the river are generally somewhat low, consisting of gravel and sand. A couple of small rivers flow in, but are of no importance. Four miles above the Line a stream called "Rivière la Pêche" joins from the south-west, and is from one hundred to a hundred and fifty yards wide. Some Indians I met

near its mouth reported it as shallow and rapid a short distance up.

At the head of the Line the river widens from a little over half a mile to a mile and a half, and the banks become lower, rising but a few feet above low water. The current is slow, with almost dead water in the bays. The season of 1888 was unusually wet, and the water in the river and lakes correspondingly high; so much so, that the oldest residents in the district remember nothing like it. The following facts may be cited to corroborate this statement. A short distance above Rivière la Pêche there are large meadows where formerly great quantities of hay were cut for the cattle at Fort Simpson. Having looked for, but failed to find these meadows, I inquired as to their whereabouts of some Indians whom I met paddling around shooting along the west shore. They told me that I was then sailing over them. I sounded and found ten feet of water, on 4th September, a season of the year when it might be expected to be almost at its lowest summer level. At Lake Athabasca, a man born in the country and now sixty years of age, built himself a house near the Quatre Fourche, some years ago, at a spot where his past experience justified him in expecting never to be troubled by high water in the lake. But 1888 upset all his calculations, for the water in the lake rose so high that it occupied the lower flat of his house, and he had to camp out part of the season.

With the water at this height the flat shores above the Line were all submerged, sometimes for several hundred yards into the woods, so that I found it impossible to carry on the survey in the ordinary manner. I spent two days experimenting to find if I could not continue the accurate instrumental survey by some other method than that heretofore used, but failed. There are no hills in the vicinity of the river, so that a triangulation was impossible, nor could I find any spots on the shore where cutting trees would enable me to continue the micrometer survey, taking longer

sights than usual, and using of course a longer base rod. I was compelled above this point to abandon the instrumental survey and carry on a mere track survey, taking compass courses, and obtaining the distances from point to point by time and estimated rate of travel. I intended to resume the micrometer survey as soon as the height of the water permitted, expecting to find suitable conditions a short distance up. I had been led to expect that I would soon come to higher banks, but I found no dry bank outside the woods until I reached Little Lake, and there only for a short distance. I found the general state of the shores the same all the way to Great Slave Lake, and along it to the mouth of Great Slave River. I was compelled to continue the compass survey to that river, and up it several miles, before the banks were high enough to permit a continuous micrometer survey. Even then much of the instrumental survey was made in mud so soft that frequently one could not stand without sticks under his feet to prevent his sinking.

Before starting the compass survey I determined the latitude of the last micrometer station, and the error of my chronometer on local time, as well as I could with my instruments, intending to check my work as I went along by frequent latitude and time observations. But the cloudy weather prohibited this, and I got on the lake but one partial observation for time and none for latitude. I took some star transits for time while at Fort Resolution, but was unable to determine the chronometer rate during the interval; so that the observations are not of much value as a check on the distances estimated. There is therefore a break of two hundred and eighty-two miles in my instrumental survey between Forts McPherson and Chipewyan. If the longitudes assigned to Forts Simpson and Resolution on the maps are correct, the error of my compass survey can be discovered by comparing the difference of the longitudes given on the maps with that deduced from the

survey.

The banks for the whole of this stretch are very low and swampy, the soil

mostly sandy, and covered thickly with willows along the shore.

Twenty-six miles above the head of the Line Yellow Knife River enters the Mackenzie from the south, but as the country was all flooded it was impossible to form an idea of its size without ascending it some distance, which I had not time to do. It would appear, however, from the statements of the native with me, that this is the largest tributary of the Mackenzie between the Liard and Fort Providence.

Sixty-two miles from the head of the Line brings us to Little Lake, which is about twelve miles long, and ten or twelve miles wide, being merely an expansion of the river. The southern shores are flat and sandy; but, notwithstanding this, the water when I passed was deep a short distance out. What it is in an ordinary stage of water, I did not learn. Sir Alexander Mackenzie reports making frequent soundings in the lake during the last days of June, 1789. In the lake he found eighteen to thirty-six feet of water, and in the river below the lake, to the head of the Llne, from twenty-four to thirty-six feet.

Above Little Lake, as far as Fort Providence, the river is wide and islands are numerous. Until I passed this point I followed the north shore, and could nowhere see across, so I can only guess at the width; but it cannot be less than two miles,

and is probably three, or more.

Fort Providence is on the north bank of the river, twenty-four miles above Little Lake. At the fort is the usual collection of buildings found at a Hudson's Bay Company's post. The Roman Catholic Church has a mission here. For a few miles above and below the country on the north bank is less swampy than that just passed, the banks being gravelly and rising fifteen to twenty-five feet above the water. Above the post is a slight rapid, which on the Lewes or most other rivers in our territory would not be noticed, being nothing more than a slight acceleration of the current over a gravel bar. When passing down, Sir Alexander Mackenzie sounded there, and found twenty-one feet of water. Opposite the fort is an island a mile or more long, and distant about half a mile from the north shore. Between it and the north shore the river is shallow, the main channel being on the south side of the island. South of this island is another, quite as far from the first as that is

from the north shore, but how far this island is from the south shore I have no idea,

nor could anyone at the post tell me definitely.

A little over four miles above the fort the channel is free from islands for some distance, the average width being about a mile and a half. Seventeen miles above Fort Providence the river expands into a small lake, named Beaver Lake, which is from two to four miles wide and eight long. I was informed that quite a large stream, called Beaver River, flows into this lake on its south side. Above this the channel, although continuing nearly as wide as Beaver Lake, is pretty well filled with islands.

Forty-six miles from Fort Providence we enter Great Slave Lake.

Exploratory Survey from Mackenzie River through Great Slave Lake and River to Fort Chipewyan, on Lake Athabasca.

The shore of Great Slave Lake, between Mackenzie and Great Slave Rivers, is low and flat, nowhere in that distance rising more than twenty or twenty-five feet above the water. Most of it is so low that it was submerged when I passed. The soil seen was all more or less sandy, until we reached the vicinity of the delta of Great

Slave River, at which point it is a rich, black, alluvial deposit.

About eighty-one miles from Fort Providence, Hay River enters the lake. Around the mouth of this stream the soil is sandy, and the vegetation not so abundant as in many other places, but some Indians have located here, and built themselves houses. They generally remain at this point all winter, subsisting on fish and a few potatoes which they raise. One old man seemed more provident than the majority of Indians. Some years ago he got a cow from some of the Hudson's Bay Company's people, and has since so managed that he is now the owner of seven or eight head, evincing a great anxiety to increase the number. His example will go far to encourage others to do likewise. There is no reason why the Indians in this district should not sustain themselves, partially at least, by cattle-raising, as there is fair pasturage along the lake, and meadows must be numerous in the flats away from the shore.

Hay River is from one hundred to one hundred and fifty yards wide, but just at the mouth is a large island, which makes it nearly half a mile across. Some eighty or one hundred miles from the mouth is a fall about eighty feet high. Mr. McConnell visited this point, and can give a fuller and more correct description of it than I can, as my information was derived from a few Indians whom I imperfectly understood. Hay River is only forty or fifty miles from the Peace at Vermilion, and the Indians at the mouth told me that they often ascend it and cross over to that point. They say that between the falls and the "Portage," as it is called, there are three bad rapids; but above them, for a long distance, there is comparatively good water.

One hundred and eight miles from Fort Providence we reach Buffalo River. This stream is about one hundred yards wide at its mouth, with an easy current, indicating a comparatively small volume of water. Around its mouth is a prairie, some forty or fifty acres in extent, on which the Indians have built a house, and

erected racks for fish drying.

Nine miles beyond Buffalo River the shore line is much indented by shallow bays of small area, bordered by low banks of limestone. In ordinary seasons it is probable that there is little, if any, water in these bays, as there were only a few feet in most of them when we sailed through. The limestone formation is exposed at frequent intervals along the shore for eighteen or twenty miles. At one point it was observed to be so strongly bituminous that a fire built on the rock caused it to emit strong fumes of petroleum.

About twelve miles before reaching Fort Resolution we pass Buffalo Creek, a small river which flows parallel to the Great Slave for more than fifty miles. Travellers to Fort Smith with canoes often follow this stream, as it is much shorter than

the crooked and winding Great Slave River.

76

One hundred and sixty-seven miles from Fort Providence, or one thousand and eighty-three from Fort McPherson, brings us to Fort Resolution, on the south shore of Great Slave Lake, near the mouth of Great Slave River. Here the Hudson's Bay Company has the usual trading-station buildings, and the Anglican Church Missionary Society has a small mission. The Roman Catholic Church also has a mission on an island in the lake about two miles from the fort.

At the fort I took magnetic observations as well as star transits to determine the error of my chronometer. I then resumed the micrometer survey, hoping to carry it on without interruption to Fort Chipewyan, connecting there with my survey of the Athabasca River. But, after working seven miles from the fort, I found the shore around the delta of Great Slave River so low and muddy that I was forced to desist, and I had to go up the stream some miles before I found ground dry enough to land on. In this piece I was unable to get even compass bearings, as the channels of the delta are very narrow and crooked. When I reached a point probably seven or eight miles from the lake I resumed the micrometer survey, this time to carry it through without a break to my survey station at Fort Chipewyan.

From the lake, for more than one hundred and sixty miles, the country along

From the lake, for more than one hundred and sixty miles, the country along Great Slave River is low, flat, and somewhat swampy, the banks seldom rising more than a few feet above the water. The river throughout this stretch is very crooked; so that the first one hundred and fifty miles from the lake is nearly three times the air-line distance. Its average width is about half a mile, with a current of from three and a half to four miles per hour, and the river everywhere seemed deep. Afterwards the banks become higher and the soil lighter, and many scarped banks of

gravel from thirty to fifty feet high were seen.

A few miles below Fort Smith the banks rise, and the soil is gravelly, with some poplar timber on it. Seven miles below the fort occurs the only rock seen between here and the lake—a very small exposure of limestone. As we approach the fort the banks continue to rise, until at that point a height of one hundred and sixty feet is reached. At the fort the drift, composed of clay, gravel, and sand, lies on top of granite rock, which, for sixteen miles up, causes many rapids in the river. This is the head of the run of the steamer "Wrigley," the distance from Fort McPherson being twelve hundred and seventy three miles.

Fort Smith is at the lower end of a cart road, along the west side of the river, over which the outfits for the posts in the Mackenzie are hauled from the head to the foot of the rapids mentioned above. The Hudson's Bay Company have a few small buildings, and the Roman Catholic Church has a small mission. The sur-

rounding country is sandy and knolly with small and poor timber.

The survey could not be carried up the river on account of the numerous bad rapids, and was therefore made along the top of the bank from point to point. At every station the angles of elevation or depression of the back and fore sights were noted, and from these the differences in elevation were calculated, and the fall of the rapids determined. The distance from Fort Smith to the landing, about a mile above the head of the rapids, is fourteen and one half miles by the survey line; but as this cuts off two large bends in the river, it is probably two or three miles shorter than the course of the stream. This fourteen and a half miles follows the main windings of the valley, and is probably slightly longer than the cart road, which cuts across country from one landing to the other. From where my survey left the river to where it reached it again, the rise is two hundred and forty-seven feet, of which about two hundred and forty is in the rapids. This seems large, but when we consider the fact that this portion of the river for more than sixteen miles is nearly all rapids, and that the fall is only fifteen feet to the mile, the descent does not appear so great.

All the rock seen in the rapids was granite, with the exception of a small exposure, close to the water's edge, about half way up the rapids, which seemed to

be calcareous sandstone, containing many small masses of gypsum.

From the rapids up to Lake Athabasca, east of the river, the surface is much broken by granite knolls, between which lie small swampy flats. No streams of [PART VIII]

importance enter. On the west side, the country is not so much broken, nor are there so many rock exposures. There are a few small outcrops of limestone, much resembling those seen on Peace River at Peace Point, of which they are probably an extension. It appears to me that the river, from the junction with the Peace to the rapids, follows the line of demarcation between the older granitic and newer sedimentary rocks, as nearly all the rock seen on the west side is sedimentary, while on the east no sedimentary rock is noticed. As we approached Peace River some exposures of granitic rock were seen on the west side. But it is low, and covered with drift, nowhere standing more than a few feet above the water, while on the east side the same rock often rises upwards of eighty feet.

Seventy miles above the head of the portage we leave the main river, which above this point is known as the Peace, and follow a small channel locally known as the River de Rocher. Many people call the main river the Peace all the way down to the lake. Often, when speaking of Great Slave River, I was not understood, and had to explain what river I meant. From above the rapids to where we left the main river. it is from a quarter to half a mile wide. There are one or two slight rapids, which, however, are not sufficient to interfere with its navigation by the steamer which the Hudson's Bay Company have on it. The rate of the current is not more than three

and a half miles per hour.

River de Rocher does not average more than one hundred and fifty yards wide, and the current is easy. There is one small rapid ten miles above Peace River; but it is not bad enough to prevent the descent of canoes or seriously hinder the ascent of the steamer. Thirty-eight miles on this channel, after leaving Peace River, brings us

to Lake Athabasca, and a little over three miles more to Fort Chipewyan.

On the evening of 19th October, I had completed the survey almost to Lake Athabasca, and was confident of reaching the fort with it during the next day, when the ice which had formed along the shores of the lake was blown out of the bays and carried down the river by the current in such quantities that evening that I became alarmed at the prospect of being closed in before morning, and therefore at once started for the lake. When I arrived there about nine o'clock there was a furious snow storm raging, so I had to remain on the shore until the next morning, when I proceeded to the fort. The weather moderated in a day or two, and I completed the survey on 24th October.

In connection with my survey of the Athabasca and Peace Rivers in 1884 I have already reported on the country around Fort Chipewyan and that end of the lake. As it has been visited by so many others, I need not here say more than that the principal features of the surface are granite knolls and swamps, with some ponds.

The timber is pine, spruce, tamarac, and poplar.

NAVIGABILITY OF THE VARIOUS STREAMS AND LAKES.

The Hudson's Bay Company's steamer "Grahame" traverses the waters of Peace and Athabasca Rivers, the former from the falls to the rapid at Fort Smith, and the latter up to Fort McMurray. The distance from Fort Chipewyan to the post at the falls on Peace River is two hundred and twenty-two miles. Mr. McDougall, in charge of the Athabasca district for the Hudson's Bay Company, gave me the following notes from the log of the steamer "Grahame" which is capable of steaming about ten miles per hour in still water. In 1888, during the first trip up, the water was very high, the current strong, and much drift wood floating in the river; the sailing time from Chipewyan to the falls on Peace River was sixty-five hours and five minutes; return, twenty-two hours. In 1887, with much lower water, the time going up was forty-nine hours and twenty minutes.

The distance from Fort Chipewyan to the head of Fort Smith portage is one hundred and two and one half miles. In 1887 the steamer's time from Fort Chipewyan to the landing at the head of the rapids was eight hours and thirty-five minutes; return, eighteen hours and forty minutes. In 1888 the time down was nine hours and thirty minutes, and the return fifteen hours and fifty-five minutes. Mr. McDougall

has throughly sounded this part of the river and assigns it an average depth of twenty-seven feet. At the landing at the head of the rapids the depth in midstream is one hundred and fourteen feet.

The distance across the lake and up Athabasca River from Fort Chipewyan to Fort McMurray is one hundred and ninety-four miles. In 1887 the steamer's time for this distance was thirty-two hours and twenty minutes going up, and nineteen hours and forty-four minutes returning. In 1888 the time was thirty-three hours and

twenty-five minutes up, and seventeen hours down.

I asked Captain Bell, of the steamer "Wrigley," for a statement of the time his vessel took between the various points along the Mackenzie. Just then he had not leisure to take the information from his log, and I had no opportunity afterwards of getting it from him, both of us being too busy to attend to the matter during the short time we were together at Fort Simpson. He told me that the steamer could make ten miles per hour in still water, and that her average speed up stream was six. But it must be borne in mind that in ascending they take advantage of all the easy water possible by keeping close to the shore.

Excepting a short distance at the head of Mackenzie River, where it is doubtful, it is certain that vessels drawing at least seven or eight feet of water can navigate from the delta of the Mackenzie to the rapids on Great Slave River, a distance of one thousand two hundred and seventy-three miles. If the Mackenzie delta also allows that draught, we have about one thousand three hundred and forty

miles of navigable water from the rapids to the Arctic Ocean.

Some notes as to the time during which this great stretch is open to navigation will serve both commercial and meteorological purposes. At all the Hudson's Bay Company's posts a journal is kept of all proceedings at the post, and of every event of note in the vicinity. From these journals can be ascertained the dates of the opening and closing of the river at the respective posts ever since they were built. From the officers at Forts Norman, Simpson, and McMurray, I obtained data which I here submit. The date on which the ice broke up is given in each case, but, as a rule, the river was not clear of running ice until nearly a week later.

FORT NORMAN-LATITUDE ABOUT 65°.

Year.	Ice Broke Up.	First Snow.	First Ice Formed.	River Closed
1872	Not given.	September 28th.	October 7th.	November 8th.
1873	May 17th.	do 28th.	do 21st.	m do 12th
1874	do 25th.	October 15th.	November 2nd.	do 18th
1875	do 24th.	Not given.	October 23rd.	do 9th.
1876	do 19 th.	October 10th.	do 13th.	do 9th.
1877	do 12 th.	September 25th.	do 18th.	Not given.
1878	Not given.	do 28th.	do 22nd.	November 7th.
1879	May 9th.	October 3rd.	do 20th.	do 2nd.
1880	do 22nd.	do 7th.	do 22 nd.	do 12th
1881	Not given.	do 2nd.	do 7th.	do 12th
1882	May 14th.	do 9th.	do 14th.	do 14th
1883	do 11th.*	do 9th.	do 24th.	do 10th
1884	do 28th.	Rest of record lost.		
1885	No record.	No record.	No record.	No record.
1886	do	do	October 18th.	November 13th
1887	May 24th.	September 23rd.	do 5th.	do 8th.
1888	do 19th.			

^{*}River was not clear of ice this year until May 28th.

In the record given below—for that part of the Mackenzie below the mouth of the Liard—it must be borne in mind that the Liard, being a mountain stream and rising in a somewhat warmer climate, opens before the Mackenzie River, which has also the disadvantage of having a large body of still water near at hand in Great Slave Lake.

FORT SIMPSON—LATITUDE 61° 52' N.

Year.	Ice Broke Up.	First Drift Ice.	River Closed.
1876	May 14th. do 8th. do 8th. do 3rd. do 7th. do 13th. do 1st. do 12th. do 2nd. do 13th.	November 4th. do 1st. October 16th. November 12th. do 2nd. October 12th. November 1st. October 28th.* do 11th. do 28th. do 30th.	November 17th. do 28th. do 26th. do 20th. do 26th. do 30th. do 30th. do 18th. do 30th. do 20th. do 25th.

^{*}The first drift ice in the Mackenzie this year was seen November 1st.

The dates of the breaking up of the ice in the Mackenzie above the Liard for the same years are as follows:—

1876	Not given.	1882	May 20th.
	May 19th.	1883	
	do 17th.	1884	do 14th.
1879	do 19th.	1885	do 7th.
1880	do 19th.	1886	do 27th.
1991	do 10th		

The river is always open some time before the lake. In the latter the ice floats around for some weeks before it is sufficiently broken up to pass down the river. In 1888 it was well on in July before the lake was clear enough to enable the steamer to proceed to Fort Smith, but that was an unusually late season. As a rule, I believe, navigation on the lake opens in the last days of June. At Fort McPherson on Peel River, the ice does not generally leave until the 1st of June. On Lake Athabasca the ice goes a little earlier than on Great Slave Lake; but this does not affect the question of the navigability of the Mackenzie, which cannot be reached until Great Slave Lake is clear.

At Fort McMurray, situated at the foot of a long series of rapids on the Athabasca River, I obtained the following notes of the breaking up, drifting, and setting of the ice. This point is in about latitude 56° 40′.

Year.	Ice Broke Up.	First Drifting Ice.	Ice Set, River Closed.	
1878	do 24th. do 25th. do 27th. do 9th. do 16th.	October 27th. do 26th. November 14th. October 14th.* November 1st. October 30th. do 18th. do 23rd.* November 4th. October 22nd. November 3rd.	No record. November 1st. No record. November 12th. do 8th. do 10th. October 28th. November 13th. do 14th. October 24th. November 9th.	

^{*}In these years the river became clear of ice for some time, after which drift ice again appeared, until finally the ice set and closed the river.

During the last two years the Hudson's Bay Company has had another steamer, the "Athabasca," plying on the Upper Athabasca River, between Little Slave River 80

[PART VIII]

and Grand Rapids. Both this steamer and the "Grahame," on the lower river, are flat bottomed stern-wheelers, drawing, when loaded, not more than two and a half to three feet of water. They can each carry about one hundred and forty tons.

I subjoin a table of distances between Fort McPherson, on Peel River, and Fort Chipewyan. The figures given are corrected for all known errors; but that part of the survey which was made by compass and estimated distances, I have no means of correcting at present.

TABLE OF DISTANCES FROM FORT McPHERSON.

IABLE OF DISTANCES 1202 1021 MEGINERSON,	Miles.
Mackenzie River proper	$32 \cdot 1$
Mackenzie River proper	$60 \cdot 1$
A large river entering on the east side, name unknown	$120\cdot 5$
Loon River	$250\cdot 8$
Hare Indian River	$272\cdot 4$
Fort Good Hope	$274 \cdot 7$
Ramparts	$283 \cdot 6$
Beaver River	$295\cdot 7$
Sans Sault Rapids	$322 \cdot 7$
Mountain River	$323 \cdot 3$
Carcajou River	$328 \cdot 0$
Great Bear River	$444 \cdot 0$
Fort Norman	$444 \cdot 2$
Gravel River	$\mathbf{509 \cdot 3}$
Riv. le Vieux Grand Lac	$550 \cdot 5$
Fort Wrigley	$624 \cdot 5$
River between Two Mountains	$628 \cdot 0$
Willow Lake River	$667 \cdot 0$
Ne-hauner River	$683 \cdot 3$
Fort Simpson	$758 \cdot 5$
Head of Line	$829 \cdot 5$
Yellow Knife River	$855 \cdot 6$
Little Lake	$892 \cdot 0$
Fort Providence	$916 \cdot 0$
Great Slave Lake	$962 \cdot 0$
Hay River	$997 \cdot 0$
Buffalo River	
Buffalo Creek	
Fort Resolution	$1,083 \cdot 0$
Fort Smith	$1,273 \cdot 5$
Head of Rapids	1,287.5
Peace River	1,358.9
Fort Chipewyan	1,390 · 0

The upper Peace River is navigable for steamers drawing three or four feet of water; and, with a little improvement at two points, a draught of five to six feet could be utilized. This upper Peace River affords a navigable stretch of five hundred and fifty-seven miles, which, with two hundred and twenty-two miles on lower Peace River, and two hundred on Lake Athabasca, and, say, two hundred on the lower Athabasca, together with the distance given in the above table, gives us two thousand five hundred and sixty-nine miles of navigable water.

From our present knowledge, meagre as it is, I think we may assume that Great Slave Lake affords us at least five hundred miles more, considering its length and its many deep bays. To this we may add two hundred and forty miles on the Liard, and at least sixty on Peel River, thus making a grand total of three thousand three hundred and sixty-nine miles of water in the Mackenzie basin, all navigable, except for eighteen miles, at but two points, one a rapid two miles long on Peace River.

and the other, the Sixteen Mile Rapid on Great Slave River. A thorough knowledge of the two great lakes with all their tributary streams would probably increase this vast length of navigable water by several hundred miles. This does not take into account the Mackenzie delta and the sea near its mouth, of the navigability of which

nothing very definite is known at present.

During July, August, and part of September, I kept a record of the rise and fall of the water in the river, during the hours when I was not travelling. In the evening, when camp was made, a mark was set at the level of the water, and in the morning, the rise or fall was noted. Of course I could not observe the change during the day hours when I was moving. My object was to find approximately when the water fell to its lowest stage, as well as the rate of fall. But, owing to the very wet season, the rate thus determined does not indicate the variation of the water in ordinary seasons. On the lake I kept no record of the rise or fall as the observation would have been difficult, owing to the surf continually beating on the shore. Such a record would be of very little utility, as the depth changes with the direction of the wind, the water being often several feet higher on the shore upon which the wind is blowing than on the other. I found the high water not only a great hindrance to the progress of the work, but also the cause of much additional hardship.

TIMBER RESOURCES.

On the lower Mackenzie, as on the Lewes, the timber large enough for commercial or manufacturing purposes is all in the river valley. On the plains above, the trees are small and unfit for anything except for fuel or the few uses to which trees six or eight inches in diameter can be applied. There is some fine material for lumber on some of the islands in the river, but many are bare with the exception of a few willows. It may, in short, be said that, away from the immediate vicinity of the river, there is no timber of value in the sense in which the term is used in the east, until we get above Fort Wrigley, and then in some places the banks are low, flat, and swampy, with trees much larger than those on the higher lands, many of them being fit to make fairly good lumber. On the flats between Fort Simpson and Great Slave Lake as well as on those adjoining the lake there is also much forest that would yield a large amount of good sized spruce and poplar.

The level country surrounding the lower half of Great Slave River is all well timbered with fine large spruce, equalling in this the lower Athabasca and Peace Rivers, and I think, when the time comes, that here will be found this district's principal supply of lumber. On the high, light soil around Fort Smith, the trees are small and generally of no value except for fuel. Along the river, between the rapids and Lake Athabasca, there are many small areas of flat, swampy ground which

would supply some very fair timber.

It may be said generally of the lower Mackenzie that the timber along it is only sufficient to supply the needs of the immediate vicinity. On the upper river the surplus is not sufficient, and the market not convenient enough to justify manufac-

turing, until existing conditions are greatly altered.

The varieties of trees along the lower part of the river are few, spruce, with a few small tamarac, some small birch, and a few poplar, constituting the bulk of the forest. The spruce far outnumber all the rest. On some of the islands there is much shrubbery, willows and alders growing in profusion in the swampy places; but, in general, the undergrowth is stunted and thin, especially on the uplands.

AGRICULTURAL CAPABILITIES.

Everywhere the Mackenzie basin is quite as capable, so far as quality of soil is concerned, of supporting an agricultural population, as the greater part of the Provinces of Ontario and Quebec. The soil as seen from the river is generally good; and the probability is that it continues so at least as far back from the stream as the woods extend. This extent is said to vary from twenty to forty miles on the east side, where no stream flows in, but, where there are streams, the distance is much greater as the timber follows the valleys. Beyond the fringe of timber we come to [PART VIII]

the so-called barren lands, on which nothing but mosses and lichens grow, and which, except as the pasturage of the musk ox and a few other animals, are practically useless, so far as known at present. On the west side of the river the woods extend to the timber line on the mountains.

Assuming the limits to be as above, the area of the fertile soil can readily be found. Speaking only of that portion of the Mackenzie basin extending from Athabasca Lake to the Arctic Ocean, we have a strip of land nine hundred and forty miles long and something over sixty wide. This gives in round numbers sixty thousand square miles of land, the agricultural capabilities of which we may reasonably discuss. I think the above area is less than that actually wooded, but on the west side much of the surface is probably at such an elevation, being near the mountains, as to be outside the limits of our discussion. Theoretically the points involved are the prevalent temperatures during the growing months, the period of vegetation, and the duration of sunshine.

I do not know of any regular record of temperature having been kept at Fort McPherson, the most northerly point at which any one is permanently settled in the district. The only information on this point which I have is my own record for the last ten days of June while I was camped in the valley near the fort. The lowest temperature during that period was 37°. 3 F. on the 20th, and the mean minimum from the 20th to the 30th was 43° 3 F. The highest observed temperature during the same period was 74° F. at 1.30 P.M. on June 21st, and the mean temperature at that hour for the ten days was 62° F. The lowest of these temperatures would not injure vegetation. The mean minimum for the whole month would be below this, probably two or three degrees, but even that would not arrest vegetable growth. When, in connection with the temperature, we consider the number of hours of sunshine during June and July, it seems evident that Fort McPherson has all the essentials for the successful cultivation of most cereals and vegetables. At this northern point refraction extends the time during which the sun does not set, so that there are twenty-four hours sunshine each day from about June 1st to July 15th. On May 1st the sun is up for seventeen and one half hours, and during August the hours of sunlight vary from nineteen on the 1st to fifteen on the 31st. The total hours of sun are seven hundred and six in May; seven hundred and twenty in June; six hundred and eighty-four in July; and five hundred and twenty-seven in August; in all two thousand six hundred and thirty-seven hours of sun out of the total, day and night, of two thousand nine hundred and fifty-two in the four months. As twilight continues while the sun is less than eighteen degrees below the horizon there is actually no darkness during this period. When the temperature is suitable, vegetation under these conditions thrives to an almost incredible degree, as the following shows. When I arrived at Fort McPherson on June 20th the new buds on the trees were just perceptible, and on the evening of the 22nd the trees were almost fully in leaf.

The mean minimum temperature for the month of July was 45° 4 F. The mean temperature for 1.30 p.m. was 64° 7 F., but on two occasions the thermometer went to 78° in the shade, and ten times to 70°. These temperatures were noted along the river, at different points of course, although during the greater part of the month

my latitude did not change very much.

This combination of favorable temperature and long hours of sunlight promises well for vegetable growth, but there are interfering causes. Unfortunately, snow storms are apt to occur at any time in the year at Fort McPherson. On July 2nd, five inches of snow fell and the thermometer went down to 25° (7° below freezing point), yet, strange to say, the frost did not appear to hurt anything. A north-east wind, continuing for a day or more, lowers the temperature in a few hours from pleasant summer heat to what reminds one of the approach of winter.

As far as I could learn, no attempt at cultivating cereals or roots has been made at Fort McPherson. But at Fort Good Hope some of the people grow potatoes and other garden produce; and, as the difference of latitude is not much over a degree, the same things ought to grow nearly as well at Fort McPherson. The potatoes grown at Fort Good Hope are small, averaging about the size of large hens' eggs.

Those which I tasted were bad, as if they had been frozen; but they were of the previous season's growth, and it was then the middle of July. Even in Ontario potatoes of that age are not very palatable. This tuber appears to have always vitality enough to increase, as at Fort Good Hope they have had no change of seed for several years. This tends to show that the frosts are not very severe during the time the potatoes are growing and ripening. When I passed, the onions, lettuce, and other things planted in the gardens were pretty well advanced, the onion stalks being about as large as pencils. No cereals had been sown, but I think barley would succeed fairly well. I am not aware of any continuous record of temperature at Fort Good Hope; so I cannot say whether the climate at that place is suitable for the growth of plants during June, July, and August. While I was there the days were pleasant and warm and the nights not unpleasantly cool. Nor, if we omit the 2nd of July, when snow fell, did I note anywhere any temperature below freezing during July and August.

It may be said that my observations extended over too great a range of latitude to be of any value in indicating the temperature at any period or any place, as, while they were being taken, we were constantly moving south. This is true. But it must be remembered that in moving south we were leaving the area of constant sunlight and getting to where night has a cooling effect, so that the objection has

not the same weight it would otherwise have.

The statement given below of the duration of sunlight in the months of May, June, July, and August, serves to show that a difference in latitude has not the same effect in changing the summer temperatures of places in high latitudes as it has in more southerly localities. Unfortunately, the records at posts in the district are too few and meagre to either confirm or disprove this theory, and to use the records of such places as Fort Franklin, on Great Bear Lake, and Fort Rae, on Great Slave Lake, is hardly fair. These points are over three hundred miles apart in an air line, and the temperature at either or both may be influenced by the local conformation of the ground, or other unknown causes. However, taking the records at these places, we have the following comparison:—

Mean Temperature	Fort Franklin,	Fort Rae, lat. 62° 40'
during	lat. 65° 12′	lat. 62° 40′
May	35° ·2 Fah.	27° ·7 Fah.
June	51° ·4	51° ·4
July	52° ·0	61° ·2
August		56° ·5

The Fort Franklin data are given in Professor Loomis' Meteorology, published in 1875. He gives as his authority Dove's tables in the report of the British Association for 1847. Who the observer was is not stated, but it was probably Franklin. The Fort Rae statistics were furnished by Mr. Carpmael to the Senate Committee appointed to inquire into the resources of the Mackenzie basin, and cover the same months as those given for Fort Franklin. These statistics, as far as they go, confirm the theory, for the extremes at Fort Franklin differ 16° 8, while at Fort Rae the difference is 33° 5, and the monthly differences at the former place are much less than at the latter.

I have computed the following table which shows comprehensively the different durations of sunlight for the latitudes of Ottawa and Forts Chipewyan, Simpson, Good Hope, and McPherson:—

		Good Hope.	McPherson
58° 43′	61° 52′	66° 16′	67° 26′
H. M. 15 34 17 36 18 44 18 36 16 16 13 52	H. M. 16 05 18 39 19 14 19 02 16 56 14 08	H. M. 17 06 21 04 22 48 22 04 18 16 14 36	H. M. 17 30 24 00 24 00 24 00 19 24 14 44
HOURS. 514 549 530 467	HOURS, 538 570 558 481	HOURS. 592 662 625 519	HOURS. 706 720 684 527
	549 530	549 530 558 467 558 481	549 570 662 530 558 625 467 481 519

The number of hours of sunlight in each month has been obtained from the mean of the numbers at the beginning and ending of the month. This does not give a strictly correct result, as the sun's declination, on which the length of the day depends, does not change uniformly, the daily change in June, when the sun has attained its greatest declination, being small as compared with that in September when the sun is near the equator. Were the light of each day in the period separately computed, the totals would show even more difference in favor of the north. In computing the above table, refraction has not been taken into account, except in the case of Fort McPherson. Allowance for refraction would increase the duration of sunlight at all the other places; but much more in the north than in the south. As the table now stands it assigns to Fort McPherson eight hundred and thirty-two hours, or thirty-four and two thirds days, more sunlight than Ottawa during a total period of two thousand five hundred and fifty-two hours. A better mode of comparison is to reduce the number of hours of sunlight at each place to It stands thus: Ottawa, seventy-five days, five hours; Fort Chipewyan, eighty-five days, twenty hours; Fort Simpson, eighty-nine days, eleven hours; Fort Good Hope, ninety-nine days, twenty-two hours; Fort McPherson, one hundred and nine days, twenty-one hours, and this out of a total of one hundred and twenty-three days.

At Fort Norman the Hudson's Bay Company had a garden planted with turnips, potatoes, and other garden produce. I was at that point during the last days of July, at which time potato vines were from six to ten inches long, and did not promise a good yield. The Roman Catholic Mission had two patches, together about an acre in extent, planted with potatoes. The soil here was much better than in the first patch, being a warm clay loam, while in the other it was nearly all decaying vegetable matter, commonly called "muck." The mission potatoes were much stronger in the vines than the Hudson's Bay Company's, and, at that time, nearly covered the ground. The Anglican missionary had planted a small piece of ground near the river on a sheltered bench below the top of the bank and facing the south. Here the growth was much stronger than at either of the other places. Some barley had been sown in it and was well grown, the stalks averaging from two to two and a half feet high, and the heads being long and just beginning to fill. The growth of grass on this flat is luxuriant, and nettles grow as strong and large as any I have seen elsewhere. Near the

PART VIII

edge of the woods wild vetches grow as long and vigorous as they do near Edmonton. Everyone complained of the cold, wet weather which prevailed during the summer and much retarded vegetation. The Roman Catholic missionary, in charge of the mission here, told me that in twenty years' residence at the place he did not recollect such a cool, damp, cloudy summer.

At Fort Wrigley some slight attempts had been made at cultivation, but I do not consider them a fair test of the capabilities of the place. When I was there, on 15th August, the people were gathering blueberries, then fully ripe and as large and well flavoured as they are in Ontario. Ripe strawberries were found on 9th August ninety miles below this, and a few raspberries soon afterwards. Above Fort Wrigley wild gooseberries and both red and black currants were found in abundance, some of the small islands being literally covered with the bushes. The gooseberries were large and well flavored, and the currants would compare favourably with the same fruit as cultivated in the vicinity of Ottawa, the black currants being especially large and mellow. This was in the middle of August, in latitude 63°.

At Fort Simpson the Hudson's Bay Company has a large plot of ground planted with potatoes, turnips, onions, and other garden produce, such as is generally grown without artificial means in Ontario. On August 24th when I visited this place the growing vegetables looked almost as good as the same kinds seen on the Ottawa market at the same date. Lettuce particularly was very large and fine. There was also a large area of barley which looked well and promised an abundant return if allowed to ripen. The grain was then full and plump and just beginning to harden; but fears were entertained that a frost might come and spoil it. The people there claimed that the prevailing cool, cloudy weather had retarded its growth, as otherwise it would then be out of danger from frost. This cereal has been grown with success at Fort Simpson for many years. I understood that wheat had been tried, but with indifferent success. The garden altogether presented an appearance hardly to be expected at a point eleven hundred and fifty miles farther north than Ottawa. It is situated on an island in the river, and the presence of the large body of water may moderate the climate and account for the fine appearance of the garden. Whether the same favourable result can be attained a mile or more away from the river can only be decided by trial. I am strongly of the opinion that it cannot.

On the high river bank below Fort Providence wild gooseberries and currants were very plentiful, though on the 8th of September they were somewhat over ripe.

At Fort Providence the usual garden produce is grown every year and generally turns out well. Barley is also grown with success; but in 1888 it was, as everywhere else in the valley, much retarded by cool weather. Up to my departure from the post, the lowest temperature, exclusive of 2nd July, was 31° 8 on August 29th. The mean minimum for the month of August was 43°. When I was at Fort Providence the barley was beginning to change color, and, unless a very severe frost came soon after, would ripen. Wheat has been grown here for many years by the Hudson's Bay Company, generally being fairly ripe before it is touched by frost, and sometimes escaping altogether. The wheat is ground in a small hand mill, and the flour used in the ordinary way by the people of the fort. While there I ground a few pounds of the crop of 1887 and had the flour made into a cake, which, though not quite so good as that made from XXXXX flour, was palatable, and would probably sustain life as effectually as any other, those using it appearing as well and strong as could be desired. I brought home a sample of this wheat for your inspection.

At Fort Resolution the Hudson's Bay Company were growing potatoes, turnips, and barley. The first two were of good quality and size; but there would be no yield of the last. The Anglican missionary also had a garden in which were potatoes, cabbage, cauliflowers, turnips, onions, and peas, the latter still green on 21st September. The potatoes and cauliflowers were both good in size and flavor. I was informed that small potatoes were grown in a garden at Fort Rae, situated on a long arm of Great Slave Lake; but, according to report, there is not much land around the lake available for farming, even were the climate suitable, as it is nearly all 86

rock. At Fort Smith nothing of importance from an agricultural point of view had

been done and the autumn frosts were very severe.

Samples of seeds from the Central Experimental Farm were received at all the posts, but too late for planting in 1888. If proper attention is given to them, as I believe it will be at most points, the results will be very interesting and instructive

as a practical test of the capabilities of the country.

In conclusion, I may say that I do not wish to be understood as representing this country as suitable for agricultural operations, as I do not think it is. I have merely presented the results of the attempts which have been made. These results are doubtless much more favorable than might be expected; but how far they would hold good elsewhere than in the immediate vicinity of the river is not known. It is probable that the presence of such a large volume of water, with a temperature of

about 55°, has a beneficial influence on vegetation.

Before that part of our territory will be required for settlement, there will be ample time to determine by experiment exactly what it is worth for agriculture. In looking over the world for countries lying in the same latitude to compare with it, we find Norway extending from latitude 58° to 70° 30', with an area of one hundred and twenty-three thousand two hundred and six square miles, and a population of one million eight hundred and six thousand, nine hundred. Of her territory only about one thirtieth is under cultivation, one fourth being covered with forest, and the rest barren mountain land. But as Norway is exposed throughout its whole length to the Atlantic Ocean, the comparison is hardly apposite. Better suited for comparison is that division of Russia known as Finland, lying between 60° and 70° north latitude, with an area of one hundred and forty-four thousand two hundred and fifty-four square miles, and a population of two million one hundred and forty-two thousand and ninety-three. This shows us that we must not regard the district as altogether useless nor despair of its ultimate occupation to at least the same extent as the countries named. When we take into consideration also the adaptability to settlement of the Athabasca and Peace River valleys, which are parts of the same great drainage basin, we may look forward with confidence to its ultimate occupation by several millions of inhabitants. As I reported on the Athabasca and Peace country in 1884, I will content myself here with quoting from that report an extract relating to the agricultural capabilities of the district drained by these

"All the way down the Athabasca to the lake, the country is (with the exception of a few meadows) thickly wooded, and a great deal of it is swamp and marsh,

interspersed with lakes and ponds.

"A great deal of the soil along the bank is of very fair quality. At Fort McMurray are a couple of small prairies or meadows; the soil is good, and the root

crops and garden produce raised there are generally very good.

"To convert this into an agricultural country, the forest would first have to be cleared, and considerable drainage would be required for a large portion of it, which would render the question of its settlement a problem for the future to determine.

"From Lac La Biche to McMurray is a pack trail, which is occasionally used. It follows the course of Athabasca River, at a distance of from two to twenty miles. Those who have passed over it inform me the country is much the same as that seen along the river-woods and swamps, with a large percentage of marsh or

bog; also quite a number of lakes.
"The country on the west side of the river, as far as I could learn from Indians and the few white men with whom I came in contact who had been over it, was much the same, at least for fifteen or twenty miles back. I could learn nothing definite about anything much farther back than that. The only approach to prairie along the Athabasca is where House River flows into it (a few miles above Grand Rapids), at which point an extensive fire has almost cleared away the forest for a mile or two. It is now covered with a good growth of grass and shrubbery. The soil appears to be very fair—a loamy clay—and were there any inducements to settlers, a few fine farms might be established. A meadow near McMurray is about sixty

PART VIII

acres in extent, from which the Hudson's Bay Company procure their hay. The soil

is said to be good.

"At a point called 'Point Brule,' about ninety-six miles below McMurray, fire has partially cleared off the forest for some little distance from the river. A couple of families of Chipewyan Indians have taken possession of a small portion of it, and done a little cultivation in the way of planting potatoes. Their efforts were necessarily very crude, and the appearance of the crop bore witness of it.

"It is a pity such attempts do not succeed, as one failure does more to dishearten

the natives with agriculture than ten successes would do to encourage them.

"The soil at this point was gravelly clay, and, with ordinary cultivation, should

yield pretty fair crops.

"On the flats near the lake the soil is wholly alluvial; it is rich, but too low and damp for agricultural purposes.

"On the north side of the lake, around Chipewyan, there is little or no soil of

any description, the country being all bare Laurentian rock.

"The Hudson's Bay Company have a garden at the fort of upwards of an acre in extent, and the Episcopal Mission one of smaller area, but the soil is very sandy. The Roman Catholic Mission have a garden also, most of which they obtained by draining a bog.

"In the season of 1883 (which was a favorable one in that district, being free from summer frosts) the Hudson's Bay Company raised about four hundred bushels of potatoes, the Episcopal Mission thirty bushels on a small patch, and the Roman Catholic Mission about five hundred bushels.

"Many of the retired Hudson's Bay Company's servants also have small patches which they cultivate; potatoes and fish being the principal articles of food used during the winter.

"I am sorry to say that, owing to the prevalence of summer frosts, nothing like the above returns were expected by any of the parties above named last summer.

"I believe one or two of the patches owned by Hudson's Bay Company's

retired servants escaped the frost, but the general effects were ruinous.

"Ascending Peace River until Peace Point is reached, the country is mostly low and flat, with many lakes and ponds, like that on the Athabasca. Occasionally a sandy or gravelly ridge is seen, which must have formed a bar in the shallow waters of the great lake which once covered this district. The soil on the flats is good, but, like that on the flats of the Athabasca, it is too low and damp for agricultural purposes. On the north side of the river at Peace Point the country is prairie, with poplar bluffs; and the same extends, I was informed by Indians, through to Salt River, in the Great Slave Lake district. The soil along Peace River at this point is a black, gravelly clay, with a coarse gravel subsoil; and, as nearly as could be learned from Indians, it is pretty much the same all the way through to Salt River, where there is quite an extensive prairie. This prairie was described to me by those who have seen it, as one of the prettiest and best pieces of country in all the northern district. The country along the north side of the river, from Peace Point up to Vermilion, is generally heavily timbered, with occasional parts of open scrubby woods and small patches of prairie. On the south side the open woods and prairie are less frequent, until we reach a piece of scrubby prairie, which begins seven or eight miles below Red River, and reaches to it, and runs back about two and a half or three miles where it merges into the forest. The soil in it is good black, loamy clay, about one foot deep, with a subsoil of fine sandy clay. The Hudson's Bay Company here cultivate two or three acres, and when the summer frosts are not too severe the returns are splendid. This year the crop consisted of potatoes, turnips, and garden stuff, which, notwithstanding the successive and severe frosts of the season, looked very well when I was there (the 22nd August), but Mr. McKenzie feared the yield of potatoes would be small compared with that of last year, which was enormous. Usually a little barley and wheat has been grown there; this year none was sown.

88

"At Vermilion, along the river on the south side, there are about twelve to four teen miles of prairie, with small poplar and scrub, which runs back from the river about three miles. The soil is good black loamy clay, loose and deep, with a gravelly clay subsoil. The Episcopal Mission school at Vermilion, for the teaching of the young in the district, has a farm attached with about twenty acres under cultivation, under the management of Mr. E. J. Lawrence. Last year his crops of potatoes, barley and wheat were splendid; this year the frosts almost destroyed everything. "Mr. Garrioch, in charge of the mission, also cultivates quite a large piece,

"Mr. Garrioch, in charge of the mission, also cultivates quite a large piece, from twenty-five to thirty acres in connection with the mission. The Hudson's Bay Company has an extensive field growing both roots and grain, (wheat and barley); and the Roman Catholic Mission also cultivates some ground. Besides the above farms several others were located last summer by private parties, all of whom seem hopeful for the future. Many of them had been in the country for several years. Here, as at other places mentioned, no one expected to harvest much more than the seed sown, owing to the very unusual season, which was in the early part dry and warm, so that grain sown in April did not germinate until June for want of moisture. In June the weather became very wet, and continued so all the summer, with frosts at frequent intervals. That this summer was unusually severe all were agreed, but all admitted that there was an uncertainty every year. Mr. Moberly, in charge of the Hudson's Bay Company's post here, who had lived in the country for several years, told me his experience for seven years stood as follows: Two years an unqualified success, two years failure such as the present, and three years a fair return.

"Opposite Vermilion, on the north side of the river, there is an extensive tract of prairie and poplar bluff country, which extends from the Peace to the watershed between Peace and Mackenzie Rivers south-westward along Peace River for about forty miles or more, and north-eastward along the river a few miles, until it merges into the country already described. This is said to be a first class country in every way, well wooded and watered, with a rich, deep, black, loamy soil; and if the life of flowers and berries be any indication of freedom from frost this district is favored in this respect, as the berries ripen here when they are killed in the sur-

rounding parts.

"The country south-westward from the end of this tract to Battle River is described as woods and swamps, alternating with patches of prairie and open woods, and from Battle River to the prairie near Dunvegan is generally drier with more

prairie.

"It appears, therefore, that from Dunvegan, on the north side of Peace River, down the river to Peace Point, and thence to Salt River, on the Great Slave, there is a tract of country about six hundred miles in length and forty miles wide of which a large percentage is fit for immediate settlement, and a great deal more could be

very easily cleared.

"Of the country south-east of the Peace, between it and the Athabasca, very little is known. It was described by all whom I met, who had seen any portion of it, as a rolling surface, the ridges heavily wooded with fair timber, and many of the basins containing swamps and lakes of considerable size. Out of one of the latter, Lake Wapisca, Loon River flows into the Peace, and another stream called by the same name into the Athabasca at Grand Rapids. Some of the ridges rise into high hills, and in some of these rock exposures are said to be visible. Whenever the needs of the country make it worth the trouble, timber can be easily floated into Athabasca and Peace Rivers by the numerous streams which enter them from this tract.

"A little north-east of Vermilion, and between twenty and thirty miles from the river, is the west end of Cariboo Mountains. They extend from this point eastward about sixty or seventy miles, and then appear to turn to the north. From a station a little below Vermilion I took the angle of elevation of the highest point I could see in them, and found it to be 0° 55′, so that they must rise between one thousand five hundred and two thousand feet above the river. I saw no white man who had been in these mountains, except on a flying visit in the winter for trading.

PART VIII

and then, of course, the most rugged parts would be avoided, and consequently very little observed of the rocks composing them. The Indians speak of beautiful many-colored stones seen in them. Judging from what they say, I think the rocks are Laurentian, and the 'beautiful stones' may be crystals. I was told they also speak of places on the north side of the mountains which smoke in the winter; but I have noticed that the Indians call all sorts of vapours 'smoke,' and what they call smoke may only be the vapour rising from springs.

"At Dunvegan, notwithstanding the severity of the frosts, the crops are very good both in quality and quantity. When I was there the Roman Catholic missionaries had threshed their grain, samples of which I brought back. The yield was as follows:—fifty pounds of wheat were sown on the 16th April and reaped on the 20th August, and twenty-seven bushels threshed of good clean grain; fifteen pounds of Egyptian barley sown on the 18th April and reaped 20th August, and fifteen bushels threshed, weighing fully sixty pounds to the bushel. The Hudson's Bay Company and Episcopal Mission had not threshed, and could not give their returns; but they were well satisfied with their crops of all kinds. The Rev. Mr. Brick, of the Episcopal Mission, was already using bread when I was there made from wheat of the present year's growth.

"The only settler in all the Peace River country who lives beyond the immediate valley of the river (Mr. Milton, about eleven miles from Dunvegan), lost all his crop by the frosts; fortunately for him, his operations were not very extensive. A company was formed last season, by people interested in that part of the country, to erect a small grist mill in order to encourage settlement there; but the unusual severity of the season caused them to recall the order they had already sent out for the mill. It is much to be hoped that next season will prove more favorable; should it not, it will divert a good deal of attention that is now directed to that part of the country, and of which (aside from the climatic condi-

tions) it is in every way worthy."

FISH.

Fish are numerous in the Mackenzie, the principal species being that known as the "Inconnu." Those caught in the lower river are very good eating, much resembling salmon in taste, being also firm and juicy. The flesh is a light pink in color, but as they ascend the river and become poor, this tint turns white and the flesh gets soft and unpalatable. They average ten or twelve pounds in weight, but have often been caught weighing thirty or forty. They ascend as far as the rapids on Great Slave River, where they are taken in the fall in great numbers for dog-feed, being then so thin that they are considered unfit for human food, if anything else is obtainable. This fish is not fed to working dogs, unless scarcity of other fish compels it. There is a small fish known locally as the "herring," somewhat resembling the Inconnu in appearance, and which does not grow larger than a pound or two in weight. The staple fish of the district, and, for that matter, of the whole North West, is the whitefish. They abound in many parts of the river, but especially in all the lakes discharging into it, and form the principal article of diet during the greater part of the time, as very little food is brought into the country. This fish is caught in large numbers everywhere. At Fort Chipewyan, the Hudson's Bay Company, in the fall of 1888, required thirty-six thousand for the use of the post; the Roman Catholic Mission, twelve thousand; and the rest of the population, at least thirty thousand more. Most of these were caught within three weeks, while I was there. Sometimes they are numerous in one place, and sometimes in another, so that long journeys are often necessary from the place where they are caught to where they are to be used. This necessitates a large number of dogs to haul them home, which is a very poor method, though the only one in use. To overcome this inconvenience Mr. McDougall, at Chipewyan, has built an ice-boat, but has so far met with indifferent success, as the ice has been unusually rough during both of the last two falls.

90

FURS.

As the trade in furs is pretty well known and understood throughout the country, it is not necessary to say very much about it here. I have no statistics to offer in connection with it other than can be derived from published reports on that section of the country. The pelts obtained in the district are essentially the same as those obtained in the rest of the territory, with the addition of the musk ox, the Arctic or white fox, and the blue fox, the first being found only on the barren grounds east of the river and north of Great Slave Lake, and the two last down near the Ocean.

The labor attendant on bringing the skin of the musk ox from the barren grounds where it is killed, is great compared with that connected with securing other pelts; and this will to a certain extent protect them from the undue slaughter which has resulted in the extermination of the prairie buffalo. An Indian gets a little more for a musk ox skin than for a marten pelt, yet he can bring a hundred marten pelts to market with less labor than one ox skin. If he travels far into the barren lands after them, he has so much farther to bring the skin back. So there is a limit he cannot conveniently pass, and beyond this the ox will be unmolested, except occasionally by bands of Indians passing from one lake or district to another.

Moose are now scarce all along the river, as are deer of all kinds.

The wood buffalo which formerly roamed around all the upper waters, is now nearly a thing of the past. A few still remain scattered over a wide district. Could some means be devised to protect them for several years, they would probably soon multiply and become a source of food supply and revenue to the natives. Mr. McDougall, who has for some years past been gathering information concerning the number of these animals and their locality, has kindly given me the following notes. In the winter of 1887-88 on the head waters of Hay River which flows into Great Slave Lake and west of Battle River, a tributary of the Peace, the Indians saw three bands containing seventeen, ten, and four, respectively; they killed five, but Mr. McDougall did not ascertain whether these were in addition to the above numbers. The same winter three bands were seen between Salt River and Peace Point on Peace River, numbering fifty, twenty-five, and about twentyfive, respectively. None of these are reported to have been killed. During the winter of 1886-87, between the north end of Birch and the south end of Thickwood Mountains, distant about one day or thirty miles from Fort McMurray on Athabasca River, one band of about thirteen was seen. Since then five of this band have been killed. Below Red River, a tributary of the Athabasca, and between Birch Mountains and Athabasca River, and ranging down to Poplar Point on the Athabasca, another band said to contain about twenty was seen. Altogether we have only about one hundred and eighty head of wood buffalo in this vast extent of territory. The paucity of their numbers is, to some extent, a protection to them. If they escape epidemics and such a winter as almost exterminated them on the Upper Peace, some years ago, they may possibly increase. Whenever the Indians come across a band they try to exterminate them whether they need them for food or not. They try to drive them into a bog, if one be convenient, and, if they succeed in this, their object is soon accomplished; for the poor brutes mire in the bog and are quickly killed. The Indian feels, after accomplishing a feat of this kind, as if he had won a battle, and never thinks of the reduction in his food supply.

Owing to excessive competition in the outer or southern parts of the district, the supply of fur is gradually decreasing, both in quantity and quality, for the Indians now kill anything they see at any time in the year, knowing that if one will not buy from them another will. I have known them to break into a beaver house in the month of June, after barring all means of exit, and kill both old and young, though the young were hardly able to crawl about. When there was only one trading company in the Territory such things were not only discouraged but punished, by declining to buy out of season, and refusing to give credit to the Indian guilty of such unnecessary destruction. In this way fur-bearing animals were pro-

PART VIII

teeted from extermination. Now, no such check can be applied, and consequently the supply is slowly diminishing, and the only source of food which the Indian possesses, outside of wild fowl and the fish in the lakes and streams, will soon be gone. In fact, it is already gone, to such an extent that he is often starved for the want of means and appliances to hunt or fish with. From this cause many have starved to death in the last two years in the Athabasca district. If the present rate of decrease is maintained in the supply of fur, in a few years it will be but little assistance to the Indian as a means of living. Then he will, as far as possible, remove to the vicinity of the settlements, where the public will have to sustain him, and the only business now pursued in the northern part of the Territory will almost cease. The evil will, to a certain extent, work its own cure; for the stoppage of the trade will allow the fur-bearing animals to increase until it pays white trappers to engage in hunting: once the Indian becomes assured of a living elsewhere he will resort to the hunting field no more.

I would respectfully suggest that some method be devised for restricting the indiscriminate slaughter of fur-bearing animals. For the greater part of this slaughter there is no reasonable excuse, as most of the fur-bearing animals are useless as food, or are never eaten (which is the same thing), and protecting them during the breeding season would entail no hardship on any one. To appoint and pay protective officers would probably cost more than the whole business is worth to the country, and the result would likely be a failure. An alternative would be to lease the country to companies in districts large enough, and for terms long enough to make it an object to them to protect the trade and preserve the fur from extermination. The lessees should also enter into bonds not to accept a skin out of season, or one too young, under a heavy penalty for breach of this condition. It would probably be difficult to prove any such breach, but the fear of the penalty and the profit from protecting the trade would, I believe, accomplish all that is desired.

It is true that such an arrangement as a monopoly seems contrary to the spirit of the times, but the alternative is serious. Objection to such an arrangement on the ground of monopoly has less force when we consider that all the competition is now between one large company and a host of individuals, who, as far as known, make little or nothing out of the trade, and would be much better off on farms or in some

other occupation in the settled districts.

I disclaim any desire to interfere with the private business of others, but I respectfully submit these facts and views for consideration, feeling that it is my duty, though an unpleasant one, to offer these suggestions.

MINERALS.

Coal.

On the Mackenzie, the first coal I heard of was a seam of which Mr. McDougall at Chipewyan told me, and which is situated in the base of the mountain just above Rapid Sans Sault, on the east side of the river. He could not give me any details concerning its extent, more than that he believed it to be about four or five feet thick, and that it was in the limestone rock of the mountain. It this is true, it indicates that this coal is older than the lignite coal of the country, and probably much harder and better. I did not know of its existence until I got to Fort Chipewyan, or I would have tried to have a specimen sent out after me.

About three and a half miles above Fort Norman, on the east bank of the river, two extensive exposures of lignite crop out. The upper one is overlaid by about fifty feet of clay and a few feet of friable sandstone, and is about fifteen feet thick. The other seam is probably forty feet below this; when I was there it was nearly all under water. It is said to be as thick as, if not thicker than, the upper one.

The upper seam has been on fire for over a hundred years, as it was burning when Sir Alexander Mackenzie passed in 1789. The place is locally known as "Le Boucan." The fire extends at present about two miles along the river, not continuously, but at intervals. When I passed it was burning in three or four places.

92

[PART VIII]

After it has burned a certain distance into the seam the overlying mass of clay falls down and, to some extent, suppresses the fire. This clay is in time baked into a red colored rock, in which are found innumerable impressions of leaves of plants. Some specimens of these I brought home, and handed to Dr. Dawson. Traces of this red rock were noticed on the bank fourteen miles below Fort Norman; but no trace of lignite was seen near it, having probably been all burned.

The burning seam appears to be of poor quality, containing much shale and sand, which is converted by the heat into scoriæ. It did not appear to me that it would be difficult to cut off all the burning places, and thus stop the further advance of the fire, which is destroying what yet may be of use. In order to find whether the combustion could be checked I took a shovel at one place and soon had all the burning coal for a short distance completely cut off, so that the fire ceased for a time at that spot. It is a pity that at least an attempt to put out the fire is not made. Many persons in the district have an idea that it is subterraneous, and that the seat of it cannot be reached. This is a mistake, as at the point mentioned I cleaned the fire off from the face of the seam to its base and found underneath no trace of burning. The lower seam appears to be of better quality, there being no shale or sand mixed with it, as far as I could see. Heavy rain detained us here for two days, and we burned a good deal of lignite from the lower seam, as we could not reach the top of the bank to procure wood, and could find only a log or two of driftwood. The coal burned well in the open air, and threw out a much stronger heat than a wood fire. These seams are visible at frequent intervals along the bank for eight and a half miles, after which no trace of them appears for seven miles, where there is another small exposure at the water's edge. This seam appears, from the reports of many travellers, to extend up Great Bear River for a considerable distance. No other traces of coal were observed on the river.

While at Fort Good Hope I noticed that many of the outbuildings and fences were painted with a dull red coloring matter, which, on inquiry, I found consisted of the ashes of wood that had lain in the river for some years. It was said poplar trees yielded the best paint, and that logs that had been in the water long enough were known by the dull blue color of the wood. A sample of the ashes I brought home, and handed to Dr. Dawson. It may be that the color is due to the presence of oxide of iron; if so, this would indicate the existence in the water of iron in solution. But where the iron comes from is a mystery, as none of this peculiar wood was seen or heard of on the upper river. The inference is that the iron occurs far down the river, but whether in the soil or in beds on some of the tributary streams, or

whether it is iron at all, has yet to be determined.

The Indians report very large deposits of mica on the south side of Great Slave Lake, and have brought small samples of it to Fort Resolution. While there I tried to get a specimen, but none was available. It is described as being very abundant.

No other minerals of economic value were seen or heard of, except bitumen. On the way up the first indication of this was seen on Great Slave Lake, in the form of the bituminous limestone which has already been referred to. Tar springs, as they are called in the vicinity, exist on the lake. I do not know of any of them on Slave River, but they abound on the Athabasca from near the delta for over two hundred miles up; and one is reported only a few miles from Athabasca Landing, less than one hundred miles from Edmonton.

The following extract from a report by Dr. Bell, of the Geological Survey, published in the Geological Survey Report for the year 1883, will show the geological

relation and general appearance of this tar:

"That the deposit is of cretaceous age, but rests directly on limestone of the Devonian system. The bedding of the latter undulates gently, while the asphaltic sand lies in thick horizontal layers upon its surface, and in some cases fills fissures in the upper part of the limestone. The asphaltic matter has no doubt resulted from petroleum rising up out of the underlying Devonian rocks, in which evidence of its existence can be detected. In descending Athabasca River it was first observed a few miles above the junction of the Clearwater branch, below which it becomes

[PART VIII] 98

more conspicuous, forming the whole banks of the stream, with the exception of a few feet of limestone at the base, for a distance of many miles. These banks are sometimes about one hundred and fifty feet in height, and frequently maintain an elevation of about one hundred feet for a considerable distance. Except where they have been long exposed to the weather, they generally look as black as coal. A thick tar is often seen draining out of the deposit, and in numerous places on the ground at the foot of either bank, or on terraces lower than their summits, this tar collects in pools, or flows in sluggish streams to lower levels among the peaty materials in the woods. The surface of these accumulations of tar is usually covered with a hardened pitchy crust. The boatmen on the river break through this crust to collect the underlying tar, which they boil down and use for pitching their craft."

In connection with this formation may be mentioned an escape of natural gas which occurs on the river a short distance below Grand Rapids. It comes out of the bank at the water's edge on the west side of the river. There is such a quantity of it that when ignited it will continue burning until the water rises and extinguishes the flame. The boatmen on the river use it to cook their meals. They say the flame sometimes rises to a height of several feet above the ground. It is said to come out of a narrow crevice which runs at right angles to the course of the river at this point and disappears in the water. The boatmen describe the sides of this crevice as bearing a strong resemblance to the tar-bearing sand seen farther down the river. This sand was first noticed by me in my descent of the river in 1884, about thirty-five miles below Grand Rapids; but, according to this statement of the boatmen, it occurs several miles farther up the river.

Tar springs are also reported on Little Slave River, but this I hardly credit as I have been up and down that river twice, and though I saw the place where they are said to exist I did not notice any tar. A tar spring is known near the mouth of Martin River, on Lesser Slave Lake, and specimens from it have been taken into Edmonton. I have heard of another tar spring on the Athabasca, near the mouth of the Pembina. There is also one on Tar Island, near Smoky River, twenty-three miles below where the cart trail crosses Peace River; and another some distance below that. These indications lead to the conclusion that all this vast region is underlaid by a deposit of this material. It appears that it is of little or no value in itself, except in so far as it indicates the existence of petroleum. If it shows the presence of petroleum of good quality we have here probably the largest oil-bearing district in the world, comprising nearly 150,000 square miles; and as the indications are said to extend down the Mackenzie below Lake Athabasca, the above area may be only a part of our northern oil district.

It is a pity that a test well has not been sunk in the vicinity of Athabasca Landing to determine the existence there, and the quality of the tar. If illuminating and lubricating oils and paraffin were found in quantity it would give an impetus to the development of that part of the North West which nothing else could.

When we consider the nearness of the southern limit of this district to the western coast of the continent (by the present trails and the railroads less than one thousand miles) we see that, in supplying our western country and a part of Asia with these products, this district possesses a great advantage. If it were once certain that an outlet could be had by the mouth of the Mackenzie for part of the year, the northern part of this district would, during the four or five months of navigation, have facilities for shipment almost unequalled, as the carriage down the Mackenzie would require very little motive power, only enough to keep the vessels from being beached. If it were found that the sea is not open long enough, or is too uncertain and hazardous, a cargo could be discharged at the foot of McDougall's Pass, and the oil could be pumped over the summit to navigable water on Bell River. True, it would have to be raised over an elevation of twelve hundred feet, involving a pressure on the lower pipes of about three hundred and sixty pounds to the inch; but the cost of the strong pipes required would be counterbalanced by the comparative cheapness of the descent of Mackenzie, Bell, Porcupine, and Yukon Part VIII

Rivers, while from the mouth of the latter it is only about three thousand six hundred

miles to Japan, as compared with about five thousand from San Francisco.

Mr. G. C. Hoffman, Chemist of the Geological Survey, says the tar or maltha, as at present found on the surface throughout a large district on the lower Athabasca, could be utilized for a bituminous concrete for the paving of roads, courtyards, basements, and warehouses, and for roofing. The tar is found combined with fine, colorless, siliceous sand, which constitutes 81.73 per cent. of the mixture.

Last fall a man named McDonald, living at the mouth of Red River on the Athabasca, undertook to dig a well at that place, but found all the soil to be so saturated with tar that he could get down only a few inches. He told me he tried several acres of ground before he could find a suitable place to dig for water. It is possible that a well bored at Edmonton would, at a reasonable depth, tap the formation containing this tar, and it is almost certain that one bored at Athabasca Landing would. A great deal might be said of the value of an oil deposit here; but as those interested in the trade fully understand all that, it is needless to do more than mention the localities in which indications are known to exist, and the facilities for getting to them, for the information of those desiring to test the question.

Large deposits of salt are reported on Salt River, some miles from Fort Smith. I did not have an opportunity of visiting them, but they are described as extensive. The salt is used all over the Peace, Athabasca, and Mackenzie districts, and to the taste is pure. Mr. McConnell, of the Geological Survey, visited the deposits in the fall of 1887, and no doubt will give a full and comprehensive report of

them.

The railroad station nearest to Edmonton is Calgary, on the Canadian Pacific Railway, the distance by the cart trail being about one hundred and ninety-six miles, and air line distance one hundred and seventy-two. All the material brought into Edmonton and also the northern district has to be freighted along this trail, and already the machinery for several steam mills has been hauled over it. The freight rates from Calgary to Edmonton are from one and a half to three cents per pound,

according to the state of the roads and the necessities of the importer.

From Edmonton, by the existing trail, to Athabasca Landing is a distance of ninety-six miles, the direct distance being about ten miles less. The freight rate between these points is about two cents per pound. The Hudson's Bay Company hauls all the trading outfits for the posts north of Edmonton over this route, and the machinery for three steamboats has passed over it. In 1887 and 1888 there was a portable saw-mill at Athabasca Landing, with which to saw lumber for the construction of the steamer Athabasca. Had there been a drill there at the time a test well could have been sunk at very slight cost.

The steamer Athabasca runs down the river one hundred and sixty-eight miles to the Grand Rapids. Between this and Fort McMurray there are eighty-three miles of rapids, on which the Hudson's Bay Company has a line of boats capable of carrying about ten tons each. From Fort McMurray there is almost unbroken easy navigation to the Arctic Ocean. The steamer also goes up the Athabasca to Little Slave River, sixty-eight miles from Athabasca Landing, and up the latter stream several miles. From the head of steamboat navigation on Little Slave River it is about sixty miles to Lesser Slave Lake, and about sixty along it to Lesser Slave Lake post; thence seventy-six miles by cart trail to Peace River Landing.

THE NATIVES.

On the Mackenzie I did not stay long enough to learn much about the Indians in the district, nor did I see many of them. While we were in the delta of the river nine large boats loaded with Esquimaux from the coast passed on their way up to Fort McPherson to do their trading for the season. These people come up from the coast in skin boats, made, it is said, of whale skin put around a wood frame. These boats present a very neat appearance, and are capable of carrying about two tons each. Whale oil is one of the articles they bring in for sale. The Esquimaux are reputed to be great thieves, and to require close watching. For this reason

PART VIII

they were not encouraged to remain when they called on us. Moreover, as they are not very cleanly in person, their presence is not desirable. They were formerly very aggressive toward the Indians on the lower part of the river, frequently coming up and robbing and sometimes killing them. Many years ago they received a severe chastisement for this from the combined whites and Indians, and since that have been guilty of no very aggressive act, though they are inclined to be overbearing when they have the advantage in numbers. It is said that murders are frequent amongst themselves; and, as in most savage tribes, retribution is the prerogative of the kin of the murdered. Missionaries have tried to do something toward their moral improvement, but hitherto without very much effect. Many of them still hunt with the bow and arrow and spear, as it is not considered wise to trust them with gun and ammunition.

Through the kindness of the Hudson's Bay Company's officers I was furnished with the following census, taken in 1881, of the inhabitants in the vicinity of each post. At some of the posts I learned the number now living there, and in every case, when comparison was made between the census of 1881 and the number now living, it was found that the figures had decreased; but as the later count was hurried and necessarily imperfect, I will not give the figures, and only mention the fact that they are not increasing. This is also the opinion of all the people in the district to

whom I spoke on the subject.

The following table, from the census of 1881, includes, besides the Mackenzie Basin proper, Rampart House, on the Porcupine, and LaPierre's House, on Bell River:—

WHITE POPULATION.

Place.	Men.	Women.	Boys.	Girls.	Total.
Rampart House LaPierre's House and Fort McPherson. Good Hope Norman Liard, Liard River Nelson, do Simpson Providence Rae Big Island	2 11 8 2 7 5 14 13 8 5	1 6 4 2 4 3 6 14 4	1 12 6 1 4 5 9 8 8	2 9 8 4 5 3 10 7 6 8	6 38 26 9 20 16 39 42 26 26
Totals	75	48	63	62	248

INDIANS.

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Rampart House	80	68	73	65	286
La Pierre's House	36	41	25	39	141
McPherson	93	87	95	76	351
Good Hope	178	142	132	131	583
Norman	74	76	58	46	254
Liard	46	47	75	48	216
Nelson	44	42	66	57	209
Simpson	130	136	124	110	500
Providence	92	106	142	116	456
Rae	128	147	188	152	615
Esquimaux at McPherson	80	100	80	90	350
Totals	981	992	1,058	930	3,961

The Rev. Father Grouard, Roman Catholic missionary at Chipewyan, who is well acquainted with all the country around Peace River and the lakes, gave me the [PART VIII]

following as the approximate numbers of the Indian population at the places mentioned. They are all in the Hudson's Bay Company's District of Athabasca:-

Resolution Fort Smith Chipewyan Fond du Lac Vermilion, Peace River McMurray	200 500 250 300
Total	1,700

I have no means of determining the Indian population in the Peace River District. which includes the Lesser Slave Lake valley; but, from my knowledge, having been there twice, I would not place the number at more than seven or eight hundred all

The Indians on the lower Mackenzie not having come much in contact with whites except the missionaries and the Hudson's Bay Company's officers, have retained more of their primitive simplicity and truthfulness of manner than the Indians on the Peace and Athabasca. The native population on the Mackenzie did not appear to be as much mixed with white blood as that on the Peace and Athabasca; but, as I have not seen as much of the people on this as on the latter two rivers, such may not be the case.

At every point where I came in contact with the natives they were obliging and kind, but like all Indians I have met they expect to be well paid for it. course is much better than to have them display no feelings but those of extreme selfishness, and still expect all the kindness and attention one can bestow on them.

FROM FORT CHIPEWYAN TO EDMONTON.

As soon as the ice on the rivers was strong and the snow sufficiently deep I took my departure from Fort Chipewyan for Edmonton. I took three dog teams with me as far as Point Brulé on Athabasca River, from which place I sent back one of them, the other two going with me to Fort McMurray. I left Fort Chipewyan in the early morning (four o'clock) of the 27th of November, and travelled by way

of Quatre Fourches Channel and Lake Mammewa.

On the way across Lake Athabasca to the Quatre Fourches one of the men (Morison) dropped through the ice and had a very narrow escape from drowning. During the journey I made a rough survey of the channels and Lake Mammewa, which will enable me to lay it down on our maps better than has heretofore been done. I arrived at Fort McMurray on the afternoon of the 3rd of December. Here I had a day's rest, both men and dogs having much need of it. I left Fort McMurray on the morning of the 5th, taking the Hudson's Bay Company's winter trail to White Fish Lake, and having the assistance of two of their dog teams which were going across to the Long Portage.

From White Fish Lake I came south-easterly over an Indian trail, never before travelled by white men, to Heart Lake; thence to Lac la Biche; and thence by horses and sleighs to Victoria, on the Saskatchewan River. From Victoria to Edmonton wheels had to be used. I arrived at Edmonton on the evening of 23rd December, and after transacting some business there I left by waggon for Calgary on the morning of the 25th. I reached Calgary on the morning of the 29th

and left on the morning of the 30th, arriving in Winnipeg on the 31st.

On the way from Fort McMurray to Lac la Biche I kept up a survey of my track, rough, it is true, but on plotting it I find that it agrees with the latitudes of the terminal points within three or four miles, though these latitudes are uncertain. This will fill a gap in our maps, as heretofore nothing certain was known of that region.

After spending some days in Toronto in connection with my magnetic work, I arrived in Ottawa on the 15th January, since when I have been busy preparing my maps and returns.

MAGNETIC OBSERVATIONS.

I give the results of the magnetic observations taken during the expedition. The declination was determined with a six-inch needle in a box which could be attached to the dip circle. It was made from the Surveyor-General's design, and suited the purpose very well, saving the trouble of carrying a compass. The total force was determined each time with two weights, thus giving two independent determinations, and the quantity given is the mean of these. Very seldom they differed by more than a unit in the second decimal place. The value is given in British units, but is computed and entered in the record book in both British and C. G. S. units. At Fort Good Hope I had the good fortune to meet an old French Canadian who went down the river in the spring of 1844 with Captain Lefroy (now General Sir J. H. Lefroy), when he went to that place to determine the magnetic elements. He showed me the post which Captain Lefroy had set up to observe on, and I placed my tripod over it. That was the only place at which Captain Lefroy observed where his position and mine were exactly the same.

While determining the declination at the Boundary Observatory on the Lewes River I took simultaneous readings of the needle and the declinometer, with which readings of the declination were taken twice daily during my stay there. This will afford a very close determination of the declination at this point. As most of the results are deduced from but one observation, their value is doubtful, especially in the case of the declination. The latitudes and longitudes given in my magnetic record on the Lewes and Pelly are deduced from the survey, and are correct to within a very few seconds of arc. Those between the Pelly and Mackenzie are only approximate; and those on the Mackenzie are those given by Captain Lefroy in his "Diary of a Magnetic Survey of a portion of the Dominion of Canada, executed in the Years 1842–1844." At one or two of the points I was unable to determine the declination, not being able, on account of clouds, to find the true astronomical azimuth

of a reference object.

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Place.	Date.	Latitude.	Longitude.	Declination.	Dip.	Total Force.
Appendix to the first of the fi	1887.	0 /	Q /	0 /	0 / \	
Lake Lyndeman	June 25	59 47 1	135 04 8	32 16.8	77 05.1	12.969
Marsh Lake		60 21·1 60 42·3	134 17:2	32 46 1	77 32.5	13.076
Cañon Lewes River	Aug. 7	62 04 5	135 04·1 136 04·0	30 55 2 33 54 8	77 43 9	12.884
Fort Selkirk.	do 18.	62 47 6	137 24 9	34 17 0	78 16·4 79 08·6	13·068 13·049
White River.	do 26.	63 11 9	139 37 8	34 27 9	78 19 4	12.950
Stewart River		63 22 3	139 28 5	33 52 8	78 36 6	12 933
Forty-Mile River		64 25.5	140 31.7	35 01 1	78 46 2	12 885
	1888.			30 01 1	10 10 2	12 000
Boundary	Jan. 3.	64 41.0	140 54.0	Not read.	78 49 9	13.002
do	Feb 27	64 41.0	140 54 0	35 45 3	78 49 4	13.012
_ do	do 28	64 41 · 0	140 54 0	35 47 5	78 49 4	13.018
Porcupine River	May 16	65 43 0	139 40.0	37 44 3	79 57 3	13.053
, do	_do 20	65 43 0	139 40 0	37 23 7	79 52.4	12.962
La Pierre's House		67 23.0	Unknown.	Not read.	81 24 7	12.998
McPherson		67 26 0	134 57:0	46 00 8	81 48 9	13 205
Good Hope	July 13	66 16 0	128 31.0	41 30 9	82 18 4	13.264
Norman	do 29	64 54 3	125 43 1	33 39 0	82 00 5	13 350
Mackenzie River	Aug. 5 do 27	64 26·7 61 52·0	125 03·3 121 25·2	41 34·6 37 42·3	81 56 1	13 360
Simpson	Sept. 20	61 10.5	113 46 5	38 19.9	81 19 2	13.501
Chipewyan		58 43.0	111 18.7	27 15 3	82 09·1 81 21·8	13.680
do		58 43 0	111 18.7	27 09.5	81 21 8	13·708 13·729
do		58 43.0	111 18.7	27 17 9	Not obs	
		00 10 0	10.	2, 11 3	1100 008	erved.
	1		<u> </u>	1	l	

In 1843 and 1844 Captain Lefroy observed at Forts Chipewyan, Resolution, Norman, and Good Hope. At Chipewyan his observations extended throughout the winter. His values there are: declination, 28° 45″.8; dip, 81° 36″.8; force, 13.885. At Resolution his declination was 37° 12′.5; dip, 82° 44′.4; force, 13.956. At Simpson; declination, 38° 00′.4; dip, 81° 52′.2; force, 13.808. At Fort Norman: declination not observed; dip, 82° 34′.3; force, 13.653. When he was there, Fort Norman was up the river from its present site, about midway between the place of my observations of 29th July and 5th August. At Fort Good Hope; declination not observed; dip, 82° 55′.9; force 13.681. At Fort Simpson Sir J. H. Lefroy's observations extended from 26th March until 25th May. The bi-daily readings of my declinometer at the Boundary for the months of November, December, January, and February are appended, and will serve to show the fluctations in, and the limit of the range of, the declination.

METEOROLOGICAL OBSERVATIONS.

In my meteorological observations, which are given in the appended tables, the barometer readings are recorded as read, and the temperature of the attached thermometer is always given, so that the temperature correction can be made at any time. After I left the Boundary on Lewes River the barometer readings are those of my aneroid, and the temperatures given with them are the temperatures of the air in which the barometer was exposed. Before leaving the Boundary I determined the effect on the aneroid of change of temperature. I give the readings, from which it will be seen that this particular instrument, at least, is pretty well compensated for temperature:

January 18th, 1888, temperature in house, 64° Fah.	
Mercurial barometer, corrected for temp., 30.158; aneroid	$30 \cdot 215$
Outside temperature.—41°0 Fah.; aneroid	$30 \cdot 120$
Range of temperature, 105°; range in aneroid	0.095
Correction for each degree of change in temperature	0.0009
A second and better trial on the same day resulted thus:	
In house, mercurial barometer, corrected for temperature	$30 \cdot 149$
do aneroid do	$30 \cdot 200$
Outside, aneroid do	$30 \cdot 121$
Inside temperature 68°; outside—31°·5; range 99°·5:	
Range in aneroid	0.079
Correction for change in mercurial barometer	0.003
Corrected range in aneroid barometer	0.076
Correction for each degree of change in temperature	0.000763

This, so far as ordinary changes of temperature are concerned, is less than the

probable error of reading the instrument, and may be neglected.

Before I began to keep the regular daily record I took, whenever I had an opportunity, simultaneous readings of the mercurial and aneroid barometers; and as such readings were taken while I was passing over the summit of the Taiya Pass we have the means of finding the value of the readings of this instrument up to an altitude of 3,400 feet. I give the corrected readings of the mercurial barometer, with no dates, for the sake of brevity, but the readings are entered in order of time:—

Mercurial	in. 29·149	28·779	in. 28·741	in. 28·334	in. 27 537	in. 26 289	in. 26·2 3 5
Aneroid	29 · 150	28.795	28.750	28 · 325	27 · 500	26 · 295	26.225

These comparisons might be extended, but I think the above are sufficient for the purpose intended, viz., to show the reliability of the aneroid which I used. In the column headed "water change," the figures show the rise or fall in inches, the arrow denoting whether the water is rising or falling. Except on Sunday, the change during the night was alone noted, the average interval being about ten hours. The record for the last twelve days of October was given me by the Ven. Archdeacon Reeve, of Chipewyan, who, during his stay at that place, kept a daily meteorological record for the head office at Toronto.

No regular record of the appearance and brilliancy of the aurora was kept during my stay at the Boundary. Nothing unusual was noticed in this connection, except its appearance two or three times in daylight. The first time I saw this phenomenon my attention was drawn to a long, thin, streamer-like cloud: as the air was perfectly calm it excited my curiosity and I watched it closely, noticing all the fluctuations in intensity, sudden increase and decrease in extent, and quickly shifting movement of the aurora. It was noticed again on two or three occasions and observed closely, to determine whether or not it was aurora, but always with the same result. It could have been nothing else. It was of about the brilliancy or pale aurora when seen at night, although the sun at the time was well above the horizon. Several members of the party observed all these appearances as well as myself. This phenomenon has been seen by several others. (See Encyclopædia Britannica, Vol. III, pages 90-91).

As to the aurora making an audible sound, although I often listened when there was a very brilliant display, and despite the profound stillness which is favorable to hearing the sound, if any sound occurs, I cannot say that I ever even fancied I heard anything. I have often met people who said they could hear a slight rustling sound whenever the aurora made a sudden rush. One man, a member of my party in 1882, was so positive of this that, on the 18th November, when there was an unusually brilliant and extensive display, I took him beyond all noise of the camp, blindfolded him, and told him to let me know when he heard anything, while I watched the play of the streamers. At nearly every brilliant rush of the auroral light he exclaimed: "Don't you hear it." All the time I was

unconscious of any sensation of sound.

A phenomenon which I never saw elsewhere or heard of was observed twice in the month of February, first on the 19th, and again on the 29th. This was green clouds. The display on the 19th was extensive and very beautiful; that on the 29th not so much so. This phenomenon was seen in the morning, just before sunrise, and on both occasions the sun was covered with downy, white clouds, while there was a very slight fall of minute ice crystals, accompanied by a much higher temperature than usual. The color was a brilliant emerald green, fringed on the lower side with yellow, which, as the sun gradually rose, encroached on the green, until the clouds were all yellow. This color changed to orange and red after the sun had risen above the horizon. The first time the green color lasted about a quarter of an hour; the second, only a few minutes. It is probable that the form of the snow crystals in the air produced abnormal refraction and made the green rays of the

spectrum conspicuous. Some of the miners who had been in the country during the winter of 1886-87 told me of the fall of a very large ærolite. None of them had made any note of the date, but all agreed it was two or three days before Christmas, 1886, about the hour of ten in the evening. The flash of light from it was described as very brilliant, making the interior of their ill-lighted huts as bright as mid-day. The report which followed its striking the earth was spoken of as terrific, and this was followed by a rumbling, crashing sound, as of rocks falling, which continued for some seconds after the report. I received accounts of this occurrence from two points, twenty-two miles apart. At these places the impression made was about equally intense. will give an idea of its size, as well as of the distance away at which it must have struck, as at both places it appeared in the same direction. On the 17th of February, 1887, I was on my way from Forty Mile River to my winter quarters, and accompanying me was a miner who had witnessed the flash and heard the report of the erolite. About nine miles above my destination we stopped and had some 100 PART VIII

lunch. Just as we were starting again a tremendous explosion was heard, followed by a rending, crashing sound, as though the side had been torn out of a mountain and had fallen from a great height. The explosion appeared to shake the ice on which I was standing, and so near did it seem that I thought, if it were not for the snow that was falling thickly at the time, that the catastrophe would be seen on the

mountain side, only a mile or so away.

The miner, who was at the time engaged in arranging the harness on his dogs, instantly exclaimed: "That's one of them things." The direction the sound came from was about north-east. On my arrival at camp I found three miners there who had come up from Belle Isle, and they, too, heard the report and the rending and crashing of rocks. It appeared to them quite as loud as it did to us, and the direction from which the sound came was north-east. At the time we were over fifteen miles apart; hence, the source of the sound must have been a very long distance from both points. The time at which the explosion was heard was 1h. 10m. p.m., local time.

It would be ungrateful in me to close this report without acknowledging the kindness and attention of all with whom I came in contact on my travels. On the coast, the United States officers showed me personally every possible attention and kindness, and did all in their power to assist me in difficulties. In the interior the miners were not less attentive and thoughtful, and the traders, Messrs. Harper & McQuestion, were more than kind, giving me much valuable advice, often when it was against their own pecuniary interest to do so, and aiding me in my dealings with the natives to the best of their power. To the missionaries, both Protestant and Roman Catholic, on the Mackenzie River, I owe much for their hospitality and disinterested advice and assistance. To the officers of the Hudson's Bay Company, both myself personally, and the party generally, owe much for their readiness everywhere to assist us all they could. I can truthfully say that their kindness and assistance were disinterested and genuine, if aiding me often without being asked, and certainly with no pecuniary profit to themselves or the Company, is any proof of it.

To the four men who accompanied me through the whole journey I would here return thanks for their cordial co-operation and spirited readiness to do their duty at all times and in all places. They were called on to toil for long hours and under conditions more disagreeable and hazardous than fall to the lot of many; yet they never flinched, even when their lives were in danger. Their names deserve to be recorded here: they are William T. Morison, of Ormstown, Quebec; Charles T. Gladman, Peterborough, Ontario; F. F. Sparks, Winnipeg, Manitoba; and Frank G.

Parker, Waterville, Quebec.

The total result of the expedition has been in round numbers nearly 1,900 miles of accurate instrumental survey, and a very close approximate determination of the position of the International Boundary Line on Pelly-Yukon and Forty Mile Rivers. In addition to this about eight hundred miles of partially instrumental survey was made, which, when plotted, proves more accurate than I expected. Of this, between five and six hundred miles was over country previously unknown and untravelled by white men. The knowledge gathered by this expedition will enable us to almost complete the map of the extreme north-west portion of our Dominion, as it will serve as a skeleton on which to adjust aright the mass of disjointed information we already possess.

I have the honor to be, Sir, Your obedient servant,

> WILLIAM OGILVIE, Dominion Land Surveyor.

DECLINOMETER READINGS—The readings are taken to the nearest tenth of a division.

The value of a division in arc is 2' 1.4".

_	Nove	mber.	Dece	mber.	Jan	ıary.	Febr	uary.
Day.	7:30 а.м.	1:30 р.м.	7:30 а.м.	1:30 р.м.	7:30 а.м.	1:30 р.м.	7:30 а.м.	1:30 P.1
	285 · 0	900.0	(900.0)	(900:0)	900-0	004.0	040.0	205.1
1	280.0	266·0 268·0	(269·0) (270·0)	(268·0) (270·0)	268·0 273·0	264·0 265·0	$269 \cdot 0 \\ 273 \cdot 5$	265 · 6
2	280 0	272.5	276.0	268.0	272.0	269.0	273 5	263
1	282 0	271.2	273.5	269 0	273.8	270.0	274·2	260 (
2 3 4 5	285 2	303.2	274.5	267.5	274 5	271.6	$\begin{array}{c} 274 & 2 \\ 275 & 0 \end{array}$	268
6	317 8	327 · 0	274.0	262.0	274.0	272.5	272.0	270
7	321.0	314.2	274.0	267 0	282.0	269.0	270.5	270
6 7 8 9	312.0	304.0	268.0	267 5	273.5	273.0	275.5	260 .
9	286 2	289.0	270.0	268.0	275.3	272.5	279.0	270 8
10	299.0	294.0	271.0	268.5	275.0	270.0	280.5	269
11	284 0	287 · 0	270.0	269.0	276.0	265.0	279.0	272
12 13	280 0	281 0	270.0	264.0	273.5	269.5	280.0	270
13	278.9	271.5	265.5	259.0	275.0	269.0	272.0	268
14	277 5	271 5	268 2	264.0	288.0	265.0	271 2	266
15	278.0	271.0	272.0	264.0	278.0	270.0	272.0	268
16	278.0	273 0	260 0	257 0	273.0	270.0	301.0	266
17	280 2	267 0	314 0	259 5	271 5	270.0	288 0	276
18	284 0	270 0	271 0	260.0	272.0	268.0	278 0	249
19	280 5	274 0	270.0	264.0	270.0	265.5	281 0	267
20	267 0	251.5	276.0	265.0	272.0	269.0	282 0	264
21	331 · 0	269 · 0	272.5	266 0	276.0	262.0	276.0	267
22	296.0	270.5	273.0	269.0	274.0	265 0	284.0	262
23	274.0	271.0	272.0	267 0	291.0	263.0	274.5	266
24	(269.0)	(260.0)	269.0	264 0	287.0	266.0	279.0	267
25	(271.0)	(269.0)	272.2	269.0	280 0	265 5	275.0	270
26	(273.0)	(272.0)	276.0	268.0	282.0	268 · 0	278.5	268
27 28	(274.0)	(272.0)	290 0	268.0	270.6	259.5	276.0	270
28	(273.0)	(272.0)	278.0	266.0	275.0	262 9	282.0	267
29	(273.0)	(272.0)	269.0	262 0	272.0	262 · 0	280.2	269
30	(268.0)	(268.0)	273.5	259.5	270.0	268 0		
31			270.0	262.0	278.0	258.0		ł

NOTE.—During the last days of November and the first part of December, the fibres suspending the magnet had stretched so much that the bottom of the mirror attached to it touched the bottom of the box, and it could not move freely. These defective readings are put in brackets.

As the north end of the magnet moved to the east, the reading increased, and vice versa.

METEOROLOGICAL Record for the Month of August, 1887.

Day.	Min. Tempera- ture.	Bar- ometer.	Attached Ther- mometer.	Remarks.	Day.	Min. Tempera- ture.	Bar- ometer.	Attached Ther- mometer.	Remarks.
	0	in.	0			٥	in.	•	
1 2 3 4 5 6 7 8 9 10	23·7 42·0 21·6 49·0 32·5 42·0 31·0 53·7 38·8 32·7 42·0	27 · 691 27 · 856 27 · 936 27 · 913 28 · 054 28 · 152 28 · 230 27 · 830 28 · 142 28 · 286 28 · 393	52·5 50·0 53·5 55·0 42·5 51·0 60·0 57·0 44·0 58·5 48·5		18 19 20 21 22 23 24 25 26 27 28	38·0 44·0 45·3 39·0 47·0 32·3 41·2 40·5 46·0 43·6 31·3	28·417 Out of do do 28·763)	
12 13 14 15	44·0 41·8 38·7 43·2	28 · 434 28 · 440 28 · 468 28 · 366	52·0 56·0 56·0 50·0		29 30 31	33·0 43·8 44·5	28 387	40.0	
16 17	42·0 48·0	28·417 28·437	50·0 55·0		Avera	ge 39·9	28 · 269	51 5	

Note.—This record began 15 miles below Lake Labarge and ended 66 miles below Stewart River.

METEOROLOGICAL Record for the Month of September, 1887.

Day.	Min. Tempera- ture.	Bar- ometer.	Attached Ther- mometer.	Remarks.	Day.	Min. Tempera- ture.	Bar- ometer.	Attached Ther- mometer.	Remarks.
	0	in.	0			ó	in.	۰	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	44·7 46·0 38·8 45·0 45·3 36·0 42·5 34·0 37·0 40·0 27·0 28·0 28·0 31·0	28·862 28·857 28·868	55 0 56 5 32 0		17 18 19 20 21 22 23 24 25 26 27 28 29 30	28·0 24·0 31·4 27·6 21·6 21·5 29·6 25·7 24·8 26·4 24·6 36·3 18·8 27·3	29 150 28 975 28 917 29 913 29 917 28 930 28 991 28 736 28 826 28 528 28 440 28 543 28 910 28 728	31 0 38 0 41 0 31 0 24 0 23 3 32 3 31 0 34 0 31 0 30 0 24 0 30 0	

Note.—First snow in the valley on 23rd inst. Temperature of river water on 30th inst. = 40°

METEOROLOGICAL Record for the Month of October, 1887.

Day.	Min. Tempera- ture.	Bar- ometer.	Attached Ther- mometer.	Remarks.	Day.	Min. Tempera- ture.	Bar- ometer.	Attached Ther- mometer-	Remarks.
	0	in.	0			0	in.	0	
1	25.0	28.684	28.5	i	18	31.0	28.498	33.5	
$ar{2}$	23.5	28.827	27.4	1	19	23.0	28.919	24.0	1
2 3	24.0	28.702	28.0	ļ	20	26.0	29 124	28·ŏ	İ
4	26 2	28 625	29.5		21	19.2	29.364	21 8	
5	21.5	28.981	28.7	}	22	14.5	29.627	17.2	
6	10.8	28 979	12.0		23	4.5	29 430	9.0	1
7	18.6	28 605	23 5		24	4.0	28.978	6.0	
8	29.1	28.745	31.7		25	6.5	28.701	12.0	1
9	23.5	29.175	24.0		26	16.5	28:387	23.5	
10	23 1	28.935	28.5		27	13.0	28.527	64.0	
11	25.0	29.097	27.0	1	28	6.8	28 260	70.0	
12	17.8	29.068	19.0	j.	29	8.8	28 564	68.0	
13	24 1	28.452	27.0		30	4.8	28 913	70.0	
14	23.8	28.529	27.0		31	13.0	28 813	70.0	
15	18.9	28 759	26.0				ļ	ļ	
16	24 0	28 555	37.5		Aver	age. 18·5	28 813	31.2	11
17	24.5	28:389	25.0	1				1	1

NOTE.—First ice running in river on 21st inst.

METEOROLOGICAL RECORD for the Month of November, 1887.

Day.	Min. Tempera- ture.	Barom- eter, 7.30 A. M.	Attached Ther- mometer.	'Barom- eter, 1.30 p.m.	Attached Ther- mometer.	Day.	Min. Tempera- ture.	Barom- eter, 7.30 A.M.	Attached Ther- mometer.	Barom- eter, 1.30 p.m.	Attached Ther- mometer.
٠,	۰	in.		in.			o	in.	۰,	in.	0
1	- 1.5	28 931	67.0	28 933	77.0	17	1 0	28 739	67.5	28.894	68.5
1 2 3	— 0·5	29.061	68.0	28.964	71.0	18	- 0.5	29.024	.63.0	28.948	66.0
	16.0	28 300	66.0			19	12 5	28 820	60 5	28.910	67 0
4 5 6	14.5	28 356	61.0	28.415	68.0	20	— 2 ·0	29 154	59.0	29.189	63.0
5	-1.0	28.679	65.0	28.672	76.0	21	-12.8	29:047	61.0	29.030	64.0
6	2.8	28 475	64.0	28.520	79.5	22	10.5	28:927	64.0	28.997	58.5.
7	-17.5	28 655	66.0	28 650	73.0	23	10.0	29.345	71.5	29.548	75.0
8 9	- 2.2	28.626	65 0			24	-18.5	29:649	69.0	29.623	68:0
	-4.0	28 479	62.5	28 486	71 0	25	-17:0	29.521	68.0	29 471	71:0
10	20.8	28 711	55.0	28.803	72.0	26	- 5.0	29:288	67:0	29.230	70.0
11	-22 ·5	29.000	63 5	29.020	71.5	27	$-\frac{1.0}{1.0}$	29.159	72.5	29.136	64.0
12	-14 0	28 827	61.5	28:850	73.0	28	3.0	29.075	70.0	29.054	60.0
13	-10.5	28 664	61.8	28.692	70.5	29	5.0	29 374	70.5	29.427	68.0
14	-24.1	28.884	59.5	28.952	70.5	30	16.5	29.524	65.5	29.499	67.0
15	-10.8	28.980	60.0	29:030	68:0	A	5:1	28 940	64.6	28.993	60.5
16	- 0.2	28 926	64.0	28.856	75.0	Aver	age-5.1	20 940	04 0	20 993	69.5

Note.—Ice set in the river on the 15th inst., at 10 p.m.

104

METEOROLOGICAL Record for the Month of December, 1887.

Day. Minimum Temperature.	1.30 Р. М.	Barometer, 7.30	Attached Thermometer.	Barometer, 1.30 P.M.	Attached Thermometer.	Day.	Minimum Tem- perature.	1.30 Р.М.	Barometer, 7.30 A.M.	Attached Thermometer.	Barometer, 1.30 P.M.	Attached Thermometer.
1 -16·0 2 -27·0 3 -42·5 4 -41·0 5 -43·5 6 -46·3 7 -48·0 8 -47·3 9 -45·5 10 -30·0 11 -15·0 12 -30·5 14 -33·5 14 -33·5 15 -28·0 -52·2 17 -51·0	-24·0 -38·0 -36·0 -41·0 -42·5 -40·0 -42·5 -32·0 -18·0 -7·0 -29·0 -37·0	in. 29:357 29:561 29:680 29:587 29:331 29:185 29:267 28:795 28:347 28:834 29:103 28:449 28:599 29:062 29:173	67·0 62·0 67·0 57·0 59·0 62·0 61·0 57·0 63·5 63·0 57·0 63·5 61·0 59·0 68·0 60·0	in. 29 363 29 603 29 544 29 29 544 29 259 29 259 29 250 28 547 28 399 29 000 28 430 28 820 28 806 29 119 29 277	73·0 70·0 66·0 64·0 62·0 61·5 63·0 67·0 69·0 64·0 61·5 66·0 71·0 63·0 63·0	18 19 20 21 22 23 24 25 26 27 28 29 30 31	-55 1 -23 0 -6 0 * 3 5 -27 0 -38 0 -41 1 -26 5 -23 0 -41 0 -44 5 -32 1 -10 5	9 -42·5 -14·0 10·5 -6·0 -36·5 -21·0 -37·5 -40·0 -41·5 -10·5 -27·6	29.716	57·0 61·5 63·0 61·5 57·0 52·0 58·5 55·0 63·0 59·5 55·0 55·0 65·0 60·0	in. 29·557 29·200 28·650 29·025 29·247 29·365 29·337 29·224 29·716 29·678 29·326 28·883 28·556	62·0 68·0 64·0 62·5 66·0 60·0 63·0 62·0 64·0 59·0 65·0 64·0

^{*} At 7.30 a.m. thermometer read 3.5.

METEOROLOGICAL Record for the Month of January, 1888.

Day.	perature.	Barometer, 7.30 A.M.	Attached Thermometer.	Barometer, 1.30 P.M.	Attached Thermometer.	Day.	Minimum Tem- perature.	1.30 Р.М.	Barometer, 7.30 A.M.	Attached Thermometer.	Barometer, 1.30 P.M.	Attached Thermometer.
2	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	29·777 29·627 29·784	57·0 66·0 64·0 68·0 65·0 66·0 66·0 66·5 66·0 65·5 66·0 65·5 66·0 62·5 63·0 62·5 63·0	in. 28 '764 29 '237 29 '513 29 '265 29 '302 29 '289 29 '333 29 '432 29 '289 29 '100 30 '107 30 '190 30 '004 29 '679 29 '559 29 '914 30 '198	67·0 70·0 75·0 76·0 76·0 78·0 70·0 69·0 65·0 68·0 68·0 68·0 69·5	18 19 20 21 22 23 24 25 26 27 28 29 30 31	o -51·0 -33·8 -27·0 -33·3 -37·0 -32·5 -46·0 -20·3 -36·0 -20·3 -36·0 -53·5 -53·0 -53·5	C -33·8 -22·0 -20·0 -32·0 -31·5 -14·5 -23·7 -22·5 -38·5 -38·5 -15·3	in. 30·279 30·071 29·784 29·410 29·276 29·120 28·819 28·661 28·341 28·341 28·937 29·309	57:0 58:8 62:0 59:0 59:0 57:5 58:8 56:0 56:0 52:0 48:0 52:0 60:9	in. 30·265 30·048 29·743 29·671 29·440 29·260 29·089 28·819 28·597 28·689 29·053 29·031 29·409	67·5 64·2 67·2 67·0 63·6 67·0 65·4 66·0 65·4 66·0 66·0 66·0 61·0

^{*} At 7.30 a.m. thermometer read 1.0.

METEOROLOGICAL Record for the Month of February, 1888.

Day.	Minimum Tem- perature.	1:30 г.м.	Barometer, 7:30 A.M.	Attached Thermometer.	Barometer, 1:30 P.M.	Attached Ther- mometer.	Day.	Minimum Tem- perature.	1:30 в.м.	Barometer, 7:30 A.M.	Attached Thermometer.	Barometer, 1:30 P.M.	Attached Thermometer.
•	0	· o,	in.	0	in.	0		0	0	in.	0	in.	0
2 3 4 5 6 7 7 8 9 10 11 12 13 14 15	-52·7 -39·5 -22·5 -18·5 -9·8 -6·1 1·0·5 -4·5 -26·8 -47·0 -44·5 -24·2	-39·5 -7·5 -16·5 -9·7 -5·7 -5·5 -7·0 16·0 -14·0 -4·5 -31·5 -8·0 -24·5 -24·5 -25 -25 -25	29 · 757 29 · 379 29 · 539 29 · 553 29 · 223 28 · 947 28 · 656 28 · 993 28 · 981 29 · 025 29 · 025 29 · 085 29 · 085 28 · 758	51·0 55·5 63·5 54·5 54·5 60·0 61·7 59·0 63·0 56·0 56·0 58·0 61·5	29·749 29·415 29·480 29·290 28·896 28·774 28·996 29·030 29·050 29·050 29·050 29·354 28·883 28·883 28·805	59·0 64·5 69·0 65·6 67·0 66·0 67·0 71·0 67·0 71·0 69·0	17 18 19 20 21 22 23 24 25 26 27 28 29	-15·0 -3·8 3·8 -6·5 -10·2 -16·0 -21·0 -2·0 -11·0 -10·0 11·2 -16·8	- 0·5 14·0 5·5 -5·5 -5·4 -14·5 -11·0 -4·0 15·5 9·3 18·0 24·2 -4·3	28·817 28·712 28·451 28·677 28·709 28·844 29·274 29·039 28·777 29·325 29·305 29·140	65·0 62·0 77·0 64·5 62·0 64·0 67·0 65·0 64·0 68·0 70·0	28·773 28·699 28·540 28·856 28·683 28·940 29·373 29·112 28·920 28·974 29·364 29·364 29·364	66·0 74·0 74·0 71·0 71·0 72·0 72·0 73·0 70·0 73·0 74·0

^{*} At 7:30 a.m. thermometer read 10.5.

METEOROLOGICAL Record for the Month of March, 1888.

Day.	Min. Tempera- ture.	1:30 р.м.	Barometer, 7:30 A.M.	Tem- perature.	Barometer, 1:30 P.M.	Tem- perature.	Barometer, Evening.	Temper- ature.
	0	o	in.	0	in.	0	in.	0
$\frac{1}{2}$	$-2.3 \\ 3.0$	21·2 23·5	29·328 29·197	65·0 66·0	29·240 29·170	78·0 74·0		
3								<i>,</i>
4 5	-10.0							
6								
7 8								· · · · · · · · · · · · · · · · · · ·
9	—43 ·0		29:380	40.0				
10	-49.7		29 · 480	25.0				
11	-52.7		29·200 28·960	28·0 30·0				
$\frac{12}{13}$	47·0 25·0		29.080	40.0				
14	-30.7		29.020	30.0				
15	-11.0		28 780	40.0				
16	- 0.5		28:710	40.0			28:640	10.0
17 18	-1.5 -16.0		28 680 28 360	10·0 16·0	At Noon.		28 500 28 300	14·0 20·0
19	-16 0 - 6·7		28.610	00.0	28 · 480	0.0	28 200	00.0
20	-3.0		28 220	3.0	27.940	1.0	27 400	20.0
21	6.0		27 300	6.0	27 070	20.0	26.440	15.0
22	-15.7		26 · 420	15.7	26.500	26.0	26 500	- 5.0
23	-13.2		26 440	-13.0			26.440	3.0
24	2.0		26:480	2:0	26.710	30.0	26.640	20·0 15·0
25	6·6 3·0		26 · 740 26 · 480	6·0 13·0	26 710 26 440	30.0	26 · 640 26 · 540	16.0
26 27	- 0.7		26 590	6.0	26 660	30.0	26.710	18.0
28	-15.0		26 960	-10.0	26.940	22.0	26 820	20.0
29	17.0		26 800	20.0		l 	27.600	15.0
30	-16.2		27 160	10.0	27 · 090	20.0	27 070	25.0
31	22.0	,	26 940	26.0	26.900	40.0	26.860	25.0

Note.—Barometer temperatures taken from atmosphere in ordinary way.

All readings from the 3rd of March to the 10th of April, inclusive, were taken while on the move from the Yukon to Porcupine River.

Barometer readings taken with an aneroid barometer.

METEOROLOGICAL Record for the Month of April, 1888.

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Day.	Minimum Tem- perature.	1:30 г.м.	Barometer,	Tempera- ture.	Barometer, 1:30 P.M.	Tempera- ture.	Barometer, Evening.	Tempera- ture.
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	7 · 0	30·5 31·5 18·0 7·0 2·0 5·0 22·0 23·0 9·0 16·0	26 · 93 26 · 96 26 · 92 26 · 34 26 · 36 26 · 36 26 · 36 26 · 92 27 · 06 27 · 23 27 · 35 27 · 55 27 · 82 27 · 68 27 · 68 27 · 68 27 · 68 27 · 68 27 · 68 27 · 78 27 · 78	12·0 -25·0 -10·0 -20·0 -15·0 7·0 -4·0 -4·0 -15·0 -15·0 -15·0 -15·0 -10·0 -8·0 -7·0 -10·0 -8·0 -10·0 10·0 30·0 30·0 30·0 30·0 30·0 30·0	26 · 98 26 · 59 26 · 96 27 · 08 27 · 46 27 · 64 27 · 64 27 · 69 27 · 69 27 · 68 27 · 80 27 · 86 27 · 74 27 · 74 27 · 74 27 · 74 27 · 74 27 · 76 27 · 76 27 · 69 27 · 69	20·0 11·0 17·0 20·0 20·0 20·0 26·0 26·0 20·0 30·0 30·0 34·0 30·0 30·0 32·0 32·0 32·0 30·0	27 · 01 27 · 10 26 · 72 26 · 49 26 · 64 26 · 64 26 · 66 27 · 00 27 · 10 	6·0 10·0 0·0 12·0 0·0 10·

Notes.—Barometer temperatures taken from atmosphere in ordinary way.

All readings from the 12th of April to the 27th of May, inclusive, were taken at a stationary camp at the head of Porcupine River.

Barometer readings taken with an aneroid barometer.

METEOROLOGICAL Record for the Month of May, 1888.

Day.	Minimum Tem- perature.	1:30 р.м.	Barometer, 7:30 A.M.	Temperature.	Barometer, 1:30 P.M.	Tempera- ture.	Barometer, Evening.	Tempera- ture.
	0	0	in.	. 0	in.	0	in.	0
1	19.7	51.2	27 · 42	30.0	27 35	45.0	$ 27 \cdot 27 $	46.0
2	28.0	34.0	27 · 23	30.0	27 26	40.0	27.30	30.0
3	9.0	1 1	27 36	16.0			27.40	30.0
4	6.0	27.5	27 44	20.0	27 · 49	30.0	27 49	30.0
5	— 1 ·8	32.0	27 25	20.0	27 18	35.0	27 12	35.0
6	16.8	45.5	27 20	30.0	27 27	40.0	27:31	40.0
7	9.3	46.0	27 · 33	25.0	27 33	45.0	27.30	40.0
8	17.8	46.0	27 · 29	30.0	27 · 28	40.0	27 26	40.0
9	12.7	42.0	27 26	30.0	27 26	44.0	27 26	30 0
10	22.5	43.0	27 30	32.0	27 30	44 0	27 30	40 0
11	18.0	37.0	27.34	30.0	27 · 35	44.0	27 40	30.0
12	21.5	36.0	27 47	30.0	27 49	40.0	27.46	36.0
13	20.0	39.0	27:45	30.0	27.48	40.0	27.55	36.0
14	21.5	43.0	27.78	36:0	27.83	44.0	27.97	32.0
15	16:3	54.0	28:04	40.0	28:03	50.0	28.00	36.0
16	$16.3 \\ 17.3$	52·0 55·0	27 90 27 64	40·0 30·0	27 82	56.0	27.74	36.0
$\begin{array}{c} 17 \\ 18 \end{array}$	21.0	48.0	27 84 27 80	40.0	27 68	60·0 50·0	27 72	40.0
19	29.0	35.5	27.70	36.0	27:80	36.0	27.77	40.0
20	15·5	40.0	27.78	32.0	27·78 27·75	40.0	27·79 27·69	25 0 36 0
20 21	15.0	41.0	27 56	32.0	27.53	40.0	27 46	40.0
$\frac{21}{22}$	21.0	44.0	27 52	40.0	27 53 27 51	44.0	27 48	30 0
23	23.5	32.0	27 46	33.0	27 48	32.0	27 45	28.0
$\frac{23}{24}$	21.0	36.0	27.50	26.0	27.54	38.0	27 49	25.0
$\frac{24}{25}$	17.0	39.0	27 47	31.0	27 50	39.0	27 52	30.0
26 26	31 0	48 0	27 68	44.0	27 . 67	48 0	27 68	43.0
27 27	33.0	50.0	27 92	48.0	27.94	50 0	27.92	43.0
28	31 0	54.0	27 97	40.0	28.06	54.0	27 99	41 0
29 29	29 2	53.0	27 93	35.0	27.90	53.0	28 03	40.0
30	26.2	51.5	27.95	36.0	27.98	56.0	28.28	50.0
31	28.2	43.5	28:41	48.0	28.60	44.0	28.71	41.5
91	202	100	20 41	100	20,00	1 11 0	20 11	41.0
			11	<u> </u>	11	1	11	<u> </u>

Notes.—Barometer temperatures taken from atmosphere in ordinary way. Barometer readings taken with an aneroid barometer.

METEOROLOGICAL Record for the Month of June, 1888.

Day.	Minimum Tem- perature.	Barometer,	Tem- perature	Barometer, 1:30 P.M.	Tem- perature.	Barometer, Evening.	Tem- perature.	Tempera- ture, 1:30 P.M.
						_	_	
	0	in.	1	in.	0	in.	0	0
1	29.1	28.82	46.0	28.88	56.0	28.91	40.0	56.0
2	25.5	28 94	42.0	29.00	42.0	29 12	40.0	42.5
3	20.3	29.12	32.0	29.15	46.0	29.14	52 0	52.0
4	17.0	29 20	35 0	29 27	52.0	29 29	37.0	52.0
5	18.3	29.32	32.0	29 31	56.0	29.30	50.0	56.0
6	22.0	29.28	40.0	29.14	58.0	29.07	40.0	60.0
7	32.0	28 87	40.0	28.82	50.0	28.88	49.0	50.0
8	33.0	28.99	40.0	29.00	50.0	28.99	46.0	52.0
9	27.3	29.09	70.0	29.06	52.0	28.99	40.0	52.0
10	25.0	28.90	56.0	28 87	70.0	28.86	70.0	68.0
11	30.6	28.79	40.0	28.80	60.0	28.84	35.0	62.0
12	21.7	28.91	37.0	28.83	45.0	28.87	34.0	48.0
13	22 4	28.88	34.0	28.83	40.0	28.79	31.0	42.0
14	15.6	28.56	40.0	28.56	50.0	28.45	48.0	50.0
15	17.0	28.37	45.0	28.36	50.0	28.40	38.0	50.0
16	25.3	28.42	38.0	28 57	60.0	28.98	30.0	60.0
17	31.0	29.06	58.0	29.06	60.0	29.09	52.0	60.0
18	33.0	29 18	48.0	29.70	62.0	29.81	48.0	62.0
19	32.0	29 94	50.0	29.96	62.0	29.98	52.0	60.0
20	37.3	30.02	50.0	30.02	70.0	30.00	60.0	72.0
21	47.0	30.10	60.0	29.96	74.0	29.86	60.0	74.0
22	48.0	29.86	62.0	29.83	71.0	29.87	50.0	71.0
23	40.0	29.87	60.0	29.88	70.0	29.91	45.0	71.0
24	42.0	29.99	56.0	30.01	70.0	30.08	50.0	54.0
25	43.0	30.12	54.0	30.14	58.0	30.10	53.0	58.0
26	43.0	30.12	60.0	30.01	56.0	29.96	52.0	56.0
27	42.0	29.99	42.0	29.93	50.0	29.86	64.0	56.0
28	42.3	29.85	42.0	29 86	54.0	29.86	48.0	54.0
29	42.0	29.79	55.0	29.84	56.0	29.84	49.0	56.0
30	50.0	29.86	55.0	29.85	58.0	29.84	43.0	58.0

Notes.—Barometer temperatures taken from atmosphere in ordinary way. Barometer readings taken with an aneroid barometer.

METEOROLOGICAL Record for the Month of July, 1888.

D	Min.	1:30 р.м.			Barometer	Readings.			Water
Day.	Tempera- ture.	1:50 P.M.	7:30 а.м.	Tempera- ture.	1:30 р.м.	Tempera- ture.	Evening.	Tempera- ture.	Ch.
_	0	0	in.	0	in.	0	in.	0	in.
1	34.5	63.0	29.84	60.0	29.80	63.0	29.74	48.5	3.0 +
2	34.0	36.0	29.83	42.0	29.88	36.0	29.90	38:0	7.0+
3	25.0	54.0	29.95	44.0	29.95	50.0	29.94	47:0	1.6+
4	38.5	68.0	29.99	46.0	29.98	68.0	29.95	50.0	1.0+
5	34.2	69.0	30.02	61.0	29.86	69.0	29.99	50.0	1.5 +
6	35.0	70.0	30.00	61.0	30.01	70.0	29.97	51.0	2.2+
7	48.0	72.0	30.00	56.0	29.96	72.0	29:89 29:65	54·0 55·0	1.5+
8	50.8	68.0	29.81	62.0	29·70 29·50	68.0	29 65	55.0	1·0 + 3·4 +
9	51.4	68.0	29·58 29·48	60·0 52·0	29 50	48.0	29 44	48.0	3.5+
10	48.0	48.0		58.0	29 52	70.0	29 62	48.0	
11	46·0 46·0	70·0 68·0	29·78 29·80	64.0	29 82	68.0	29 62	52.0	6.9+
$\frac{12}{13}$	40 0	78.0	29.74	60.0	29.76	72.0	29.80	60.0	2·3 + 0·5 +
14	52.0	78.0	29 74	65.0	29 70	72.0	29.72	62.0	1.5+
15	50.0	68.0	29.80	66.0	29.76	70.0	29.68	52.0	2.7 *
16	43.6	69.0	29.82	60.0	29.68	70.0	29.72	58.0	7.0 *
17	48.5	70.0	29.72	62.0	29.68	70.0	29.61	52.0	2 0 *
18	52.0	61.0	29 69	60.0	29.70	60.0	29.73	60.0	0.7 *
19	48.6	67.0	29.86	63.0	29.89	65.0	29.91	54.0	5.0 *
20	48.0	72.0	30.00	60.0	29.98	70.0	29.96	61.0	36 0 *
21	49.5	76.0	30.04	54.0	30.02	76.0	30.00	60.0	2.1+
22	52.0	66.0	30.02	510	30.02	66.0	30.02	58.0	16.0+
23	50.5	70.0	30.05	60.0	29.98	70.0	29.94	60.0	13.0 +
$\frac{20}{24}$	51.7	68.0	29.94	61.0	29.91	68.0	29.86	62.0	6.0+
25	54.0	62.0	29.82	62.0	29.82	62.0	29 83	55.0	3.0+
26	46.7	55.0	29.87	54.0	29.87	55.0	29.96	50.0	4.6+
27	44 0	58.0	30.06	50.0	30.06	58.0	30.07	48.0	1.0+
28	45.0	51.0	30.06	56.0	29.98	70.0	29.86	58.0	1.0 *
29	44.0	75.0	29.75	65.0	29.62	75.0	29.58	58.0	3.0+
30	52.0	62.0	29.60	58.0	29.64	62.0	29.68	50.0	5 0 +
31	42.0	45.0	29.70	43.0	29.80	45.0	29 84	45.0	2.0+

-Barometer temperatures taken from atmosphere in ordinary way. Total fall 18.2. Barometer readings taken with an aueroid barometer.

^{*} Rise. + Fall.

METEOROLOGICAL RECORD for the Month of August, 1888.

Day.	Min. Tempera-	1.30 р.м.			Barometer	Readings.			Water
Day.	ture.	1.30 P.M.	7.30 а.м.	Tempera- ture.	1.30 р.м.	Tempera- ture.	Evening.	Tempera- ture.	Ch.
	٥	0	in.	0	in.	0	in.	0	in.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	33 2 3 34 0 0 0 49 0 5 0 0 49 0 5 0 0 5 49 0 0 5 5 49 0 5 5 49 0 5 5 49 0 6 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 6 0 7 45 0 6 0 7 45 0 6 0 7 45 0 6 0 7 45 0 6 0 7 45 0 7 7 45 0 7 7 45 0 7 7 45 0 7 7 7 7 45 0 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	64·0 68·0 70·0 68·0 76·0 66·0 58·0 60·0 52·0 66·0 68·0 70·0 70·0 72·0 84·0 86·0	29 · 98 29 · 97 29 · 80 29 · 71 29 · 96 29 · 95 29 · 95 29 · 95 29 · 86 29 · 80 29 · 70 29 · 40 29 · 20 29 · 34 29 · 34 29 · 34	48 0 52 0 58 0 59 0 51 0 50 0 44 0 50 0 45 0 52 0 61 0 52 0 60 0 52 0 60 0 55 0	29 98 29 91 29 66 29 80 29 85 29 71 30 05 29 80 29 54 29 90 29 87 29 69 29 68 29 58 29 13 29 13 29 12 29 44 29 40	64 · 0 68 · 0 70 · 0 68 · 0 76 · 0 58 · 0 50 · 0 52 · 0 66 · 0 66 · 0 70 · 0 72 · 0 84 · 0 66 · 0 66 · 0	29 97 29 82 29 62 29 87 29 82 29 80 30 00 29 75 29 86 29 86 29 86 29 68 29 68 29 68 29 50 29 30 29 30 29 46	49 0 48 0 56 0 52 0 55 0 50 0 50 0 55 0 55 0 55 0 55 0 56 0 57 0 58 0 59 0 60 0 60 0 60 0 60 0	0.0 0.5 3.7 2.1 0.6 1.5 1.7 0.6 0.0 0.6 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
22 23 24 25	36·5 40·0 42·0 46·0	70·0 68·0 70·0 72·0	29·52 29·47 29·42 29·44	40.0 50.0 50.0 60.0	29:48 29:48 29:46 29:47	72·0 68·0 69·0 70·0	29·46 29·48 29·44 29·44	52·0 52·0 60·0 61·0	1·4+ 0·9+ 1·0+ 0·6+
26 27 28 29 30	45·0 44·0 46·5 31·8 32·7	66.0 55.0 68.0 62.0 68.0	29 · 42 29 · 36 29 · 24 29 · 52 29 · 57	60°0 55°0 48°0 40°0 40°0	29·34 29·33 29·30 29·60 29·45	65.0 55.0 66.0 62.0 68.0	29·35 29·30 29·36 29·59 29·50	62·0 50·0 50·0 45·0 52·0	1.0+ 0.5+ 0.5+ 0.6+ 1.0+
Avera	37·0 ge 43·0	68.0	29.56	52.0	29.56	66.0	29.50	53.0	29.0+

Notes.—Barometer temperatures taken from atmosphere in ordinary way. Barometer readings taken with an aneroid barometer.

^{*} Rise. + Fall.

METEOROLOGICAL RECORD for the Month of September, 1888.

-								
Day.	Min. Tempera- ture.	Barometer, 7.30 A.M.	Tempera- ture.	Barometer, 1.30 p.m.	Tempera- ture.	Barometer, Evening.	Temperature.	Water Ch.
	· · · · · ·	in.	0	in.	0	in.	0	in.
_		l I		i	20.0	II.	***	.1
1	41.5	29:30	45.0	29:36	68:0	29:40	56.0	0.0
2	46:0	29.53	68.0	29·67 29·56	66·0 68·0	29:60	50.0	1.0+
3	42:0	29·54 29·23	55·0	29 56 29 15	68.5	29·46 29·05	55.0	0.0
4	47 0 51 0	29 23	53.0	28.97	67.0	29 05	56 0 55 0	1.0+
5 6	47.6	29.10	48.0	29.14	62.0	29 04	52 0 52 0	0.5+
7		29 10	54.0	29 14	62.0	$29.21 \\ 29.27$	50.0	0.6+
8	51 · 0 52 · 0	29 20	53.0	29 20	61.0	29 32	50.0	0·5+ 0·7+
9	49.0	29 30	52.0	29 32	60.0	29 32	50.0	0.6+
10	48.0	29 40 29 52	50.0	29 42	55.0	29 40	50.0	1.0+
11	47.0	29 32	50 0	29 01	56.0	28.96	54.0	0.6+
12	47.0	29.10	48.0	29 01	61.0	28.97	52.0	0.7 +
13	48.0	29.06	49.0	29.08	64.0	29.11	52.0	0.8+
14	37.7	29.17	42.0	29.20	65.0	29.22	51.0	0.5+
15	44.0	29.16	49.0	29 10	70.0	29.01	56.0	031
16	56.0	28.98	62.0	28 95	78.0	28.92	55.0	
17	51.5	28.79	54.0	28.81	72.0	28.29	62.0	
18	52.0	28 87	56.0	29.94	60.0	29.16	50.0	
19	37.0	29.28	38.0	29.19	62.0	29.05	55.0	
20	44.0	28.88	50.0	28 87	66.0	28.87	56.0	
$\frac{20}{21}$	51 0	28.91	52.0	28.94	62.0	29.02	50.0	
$\frac{21}{22}$	38 0	29.10	42.0	29.25	58.0	29.31	45.0	
23	35.0	29.35	40.0	29.50	48.0	29.65	46.0	II
$\frac{23}{24}$	33.3	29.59	33.3	20 00	100	29.31	50.0	0.7+
$\frac{21}{25}$	42.5	29.42	44.0	29 61	48.0	29.60	44.0	0.5+
26	30.8	29 62	40.0	29.63	54.0	29.60	40.0	0.8+
27	29 2	29.54	40.0	29.61	52.0	29 66	40.0	0.5+
28	35 0	29.76	44.0	29.66	50.0	29.61	46.0	
29	40.0	29.16	43.0	28 96	54.0	28.90	50.0	
30	37.0	29 28	40.0	29.46	52.0	29.45	37.0	
Aver	rage 43.7	29 · 24	46.8	29.28	61.0	29 · 22	50.5	11.0+

Notes.—Barometer temperatures taken from atmosphere in ordinary way. September 16th, temperature of lake water, 53.5°. September 30th, temperature of lake water, 48.2°. Barometer readings taken with aneroid barometer.

[†] Fall.

METEOROLOGICAL RECORD for the Month of October, 1888.

Day.	Min. Tempera- ture.	Barometer, 7.30 A.M.	Tempera- ture.	Barometer, 1.30 p.m.	Tempera- ture.	Barometer, Evening.	Tempera- ture.	Water Ch.
	0	in.	0	in.	0	in.	0	in.
1	37 · 0	29.23	42.0	28.99	54.0	28.98	44.0	
2	38.0	29.00	38.0	29.20	56.0	29.22	45.0	
3	37 · 5	29.18	40.0	29.17	52.0	29.15	45.0	
4	43.0	29.16	45.0	29 14	50.0	29 00	40.0	
5	36.3	28.97	40.0	29.00	56.0	29.02	50.0	
6	39.0	29.00	42.0	28.95	62.0	28.90	50.0	
7	41.0	28.88	60.0	28.84	64 0	28.82	47.0	
8	40.0	28.88	43.0		[.	29.00	45.0	2.0+
9	39.0	29.06	44.0	29:09	42.0	29.18	40.0	íl
10	33.0	29 · 24	40.0	29 26	40.0	29.34	37.0	0.5+
11	33 0	29.34	38.0	29.42	38.0	29.37	36.0	0.2+
12	32.3	29.36	33.0	29.37	39.0	29.34	34 0	<i></i>
13	31.6	29.29	33.0	29.28	45.0	29.26	38.0	il
14	32.0	29.24	34.0	29 22	35.0	29.34	30.0	
15	23.0	29.44	26.0	29.52	34.0	29.50	30.0	
16	26.5	29.51	28.0	29.41	35.0	29 · 26	51.0	
17	27 · 0	29.16	28 0	29.16	33.0	29 · 20	30.0	
18	27.0	29.36	27.0	29.42	32.0	29 42	30.0	//
19	25.0	29.14	26.0	29.06	34.0	28.98	30.0	
20	31.5	28.88	32.0					ii
				28 996	36.0	29.024	34.0	
21	20.8	29.020	47.0	28.992	39.0	28 880	37.0	
22	27 · 0	28.882	58.0	28 846	41.0	28 848	27.0	: .
23	24.6	28.796	51.0	28 828	32.0	28.858	33.0	
24	30.8	28.838	52.0	28 866	35.0	28.828	33.0	
25	27.0	28.768	51.0	28 812	35.0	28 · 842	35 0	
26	27 · 0	28.914	51.0	29.056	37.0	29.192	27.0	
27	36.0	29.170	51.0	29.144	31.5	28 982	33 0	II
28	31 0	28.760	53.0	29 064	31.0	29 194	32 0	
29	24 5	29 206	57.0	29 126	33.0	29 021	32.0	
30	30.0	28 950	51.0	29.074	31.0	29.182	30.0	
31	28.9	29.108	50.0	29.032	31.0	28.954	31 0	
Aver	age 31.6	29.088	42.0	29.111	40.4	29.099	36.7	2.7+

Notes.—Barometer temperatures taken from atmosphere in ordinary way.

Temperature of river water on the 7th inst., 51°; on the 4th, 43°; and on the 17th, 38°.

All below the line were got from Rev. Mr. Reeve at Chipewyan.

Barometer readings taken with an aneroid barometer.

^{*} Rise.

REPORT

OF THE

POSTMASTER GENERAL

FOR THE

YEAR ENDED 30th JUNE,

1889.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:
PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.

1890.

To His Excellency the Right Honourable The Lord Stanley of Preston, Governor General of Canada, &c., &c.

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honor to present to Your Excellency the Report of the Canada Post Office for the Fiscal Year ended the 30th June, 1889.

All of which is respectfully submitted.

JOHN HAGGART,

Postmaster-General

OTTAWA, 10th January, 1890.

SCHEDULE.

Accompanying this Report are the following Documents therein referred to:-

1 0 0 1					_		
	Ontario.	Quebec.	Nova Scotia.	New Brunswick.	Manitoba and N. W. Territories.	British Columbia	Prince Edward Island.
	-						
	Page.	Page.	Page.	Page.	Page.	Page.	Page.
Post Office Revenue and Expenditure of the Dominion, for the year ended 30th June, 1889. See page 1.							
Post Office Revenue and Expenditure for the several Provinces of the Dominion during same period	2	3	4	5	6	7	8
Mail Subsidie ⁴ , &c., paid through Post Office Department. See page 9.							
Detail of all payments made and charges incurred for ordinary mail transportation during the year ended 30th June, 1889		49	72	90	104	113	117
Charges for conveyance of mails by water during same period	46	69	87	101		115	121
Charges for conveyance of mails by railway during same period	47	70	88	102	111	116	121
Charges for making and repairing mail bags during same period	48	71	89	103	112	116	121
Salaries in Post Office Inspectors' Offices (including Railway Mail Service)	122	145	157	161	166	170	172
Salaries in City Post Offices organized by Department	131	150	159	163	167	170	172
Account of travelling expenses incurred in the service of the Post Office Department for the said year	173	174	175	175	176	176	177
Account of sums paid in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department for the said year	178	181	183	184	185	186	187
Account of sums paid for Rents and Taxes on account of the Post Office Department for the said year	188	188				188	
Report, in detail, of the expenditure of the Department for Stationery, Printing and Advertising for the said year	189	191	192	193	194	195	195
Account of sums paid for miscellaneous disbursements on account of the Post Office Department for the said year		199	201	202	203	204	· 205
Showing the Money Order Offices in operation, the number and amount of orders issued and paid the commission thereon; gross postal revenue; and compensation, salary and allowances paid, to the Postma-ter at each office, respectively, during year ended 30th June, 1889 15—B		219	224	228	231	233	234

SCHEDULE—Concluded

SCHEDULE—Concluded.	
	Page
Statement of Post Office Savings Bank transactions during year ended 30th June, 1889, and of total amount due to depositors at the latter date	235
Analysis of the Money Order business of the Dominion for year ended 30th June, 1889	236
Statement showing losses sustained in collecting Post Office Revenue and conducting Money Order and Savings Bank systems in Dominion of Canada brought to account during year ended 30th June, 1889	237
Report of all cases occurring within the year ended 30th June, 1889, of abstraction from, or loss of, letters containing money, sent through the Post Office in Canada; showing the particulars of each case, and stating the result of the proceedings instituted therein by the Department	239
Recapitulation	270
Statement of Dead Letters:— Table I, showing the total numbers of letters of all kinds received, and the disposition made of them Table II, showing the number of letters received containing money or other articles of value, and the disposition made of them	272

ERRATA IN DETAILS OF MONEY ORDER COMMISSIONS.

Page 218, add Kingston, 10c., making \$44,294.09.

Page 227, add Halifax, \$100, making \$13,046.42.

Page 223, add East Selkirk, 9c., making \$4,298.21.

Post Office Department, Ottawa, 2nd January, 1890.

To the Honorable John Haggart, Postmaster General.

Sir,—In submitting the usual Returns of the business of the Post Office in Canada during the year ended 30th June, 1889, I have the honor to report that the increase in the number of Post Offices in the Dominion was 167—the total number now in operation being 7,838—as against 7,671 last year.

571 miles have been added to the mail routes and the annual travel now amounts to 25,756,678 miles.

The mails conveyed between Canada, Japan and China are steadily increasing in importance, and it is evident that the advantages of this route to Europe via. Canada are becoming more generally known and appreciated. A mail recently received at Vancouver contained upwards of 4,000 letters from all parts of China and Japan for Europe, besides a large number for Canada and the United States.

The Post Office Act of last Session increased the limit of weight of a single rate letter from half an ounce to an ounce. The rate upon Drop letters was at the same time fixed at 2 cents per ounce. The rates upon Miscellaneous matter were also readjusted, in order to secure uniformity and to remove certain anomalies which previously existed. The charge for the registration of a letter, parcel, book or other articles of mail matter was also made uniform, and fixed at 5 cents for all classes of matter. The frequent delay consequent upon the prepayment of a wrong registration fee will no longer take place.

Through the courtesy of the Imperial Post Office an arrangement has been made by which parcels may now be received from, or forwarded (via England) to all countries with which the United Kingdom has established a Parcel Post. The steady increase in the number of parcels received and sent shows that the facilities afforded by the Parcel Post System are becoming more generally known and more largely availed of.

Negociations are in progress for an exchange of Parcels between Canada and Japan and between Canada and the Leeward Islands.

The following tables show the operations of the Department during the period covered by the statements.

TABLE showing the Number of Post Offices, Extent of Mail Travel, Number of Letters and Newspapers, &c., in the Dominion of Canada, for the Year ended 30th June, 1889.

						·				i
	Number of Closed Parcels for the United Kingdom.	8,500	1,300	2,400	006	200	006	,	1,200	15,400
y Post in 18	Number of Parcels by Parcel Post.	288,000	122,000	21,000	30,000	5,000	9,000	000	23,000	504,000
s, &c., sent b	Number of Books, Circulars, Number of of Closed Patterns Parterns by Parcel for other Miscellaneous Articles.	11,137,000	4,553,000	486,000	318,000	83,000	123,000	000	000,666	17,053,000
Estimated Number of Letters, Fost Cards, Newspapers, &c., sent by Fost in 1889.	Newspapers and Periodicals. Number Posted otherwise than from Office of Publication.	6,121,000	4,136,000	702,000	530,000	106,000	191,000	000 601	409,000	12,269,000
, Fost Card	Free Letters.	2,908,000	437,000	146,000	127,000	29,000	26,000	900	143,000	3,872,000
of Letters,	Registered Letters.	2,084,000	824,000	198,000	146,000	37,000	65,000	200	793,000	3,649,000
ated in umber	Regis- Post Cards. tered Let- ters.	12,671,000 2,084,000	3,811,000	1,266,000	813,000	143,000	131,000	000	000,026	19,355,000
Estim	Letters.	49,887,000	22,437,000	6,721,000	5,173,000	1,114,000	2,126,000	900	9,210,000	92,668,000
Extent of Mail Service.	1889. Annual Mail Travel, in Milés.	12,040,459	5,433,443	3,112,295	2,193,156	513,285	797,814	000 000 1	1,000,220	25,756,678
Extent of 1	1889. Number of Miles of Post Route.	18,589	11,799	8,567	5,317	1,291	4,870	- 66) 0,402	56,835
	1st November 1889. — Number of Post Offices.	2,971	1,423	1,399	1,085	315	144	346	155	7,838
	Provinces and Territories.	Ontario	One pec	Nova Scotia	New Brunswick	Prince Edward Island	British Columbia	Manitoba	North-West Territories	Total

Railway Mail Service has been established on the line of the Canadian Pacific Railway between Agnes, in the Province of Quebec, and Mattawamkeag, in the State of Maine, a distance of 160 miles, thus forming a direct connection between the Eastern Townships of Quebec and the Province of New Brunswick, and largely diminishing the time required for the transmission of correspondence between Montreal and the Western portions of the Dominion and St. John and Halifax.

A Mail Service by Railway has also been established between Chatham, New Brunswick, and Fredericton, by the Northern and Western Railway, thus affording the means of direct postal intercourse between the Northern Counties of New Brunswick and the Capital of the Province.

Additional service has also been given over several small sections of existing railways, making a total of $355\frac{1}{8}$ additional miles of Railway Mail Service.

Mails are now carried over 11,510½ miles of Railway in Canada.

STATEMENT of distance travelled daily with Mails, on each Railway in Canada, in October, 1889.

Name of Railway.	Actual length of Railway in Miles.	Daily Serv velling Po	Daily Service by Bags in charge of Company's Servants.	
		Postal Cars on Road.	Travelled in Miles.	Distance in Miles.
Intercolonial Halifax and Annapolis Western Counties Cumberland Railway and Coal Company Prince Edward Island New Brunswick and Prince Edward Island Albert Elgin Branch Shore Line (formerly Grand Southern) New Brunswick and Canada Kent Northern Chatham Branch Northern and Western Caraquet Quebec and Lake St. John. Grand Trunk Quebec Central Massawippi Hereford Vermont Central (in Canada) Canadian Pacific:— In Ontario and Quebec In Manitoba and North-West. In British Columbia Great Northern Canada Atlantic Pontiac and Pacific Junction. Thousand Islands Kingston and Pembroke Napanee, Tanworth and Quebec Bay of Quinte. Central Ontario Canada Southern Erie and Huron	922 116 67 32 $208\frac{1}{2}$ 36 48 27 $82\frac{1}{2}$ $312\frac{1}{4}$ 27 9 108 65 177 $2,915\frac{1}{3}$ 138 38 617 68 $2,587\frac{1}{3}$ $1,606\frac{1}{4}$ $650\frac{1}{2}$ 2 104 28 4 104 $361\frac{1}{2}$ 67	11 1 1 1 3 3 2 44 2 1 1 1 1 2 2 25 9 4 1 1 2 2 3 3	3,120 260 134 234½ 96 562 562 354 7,199 286 76 140 5,041½ 3,074½ 1,284 156 127 208 112	905 142
Manitoba and North-Western. North-West Coal and Navigation Company Esquimalt and Nanaimo	206 109 78	1	149½	228 218
_	11,510½	121	$23,742\frac{9}{20}$	15,369

RAILWAY MAIL SERVICE.

Since the Return of last year, for October, 1888, Mail Service has been put on 355½ miles of additional Railway Lines, as follows:—

Name of Railway.	Places between which Railways have been opened since October, 1888.	Miles.	Total.
Grand Trunk	Fredericton, N.B., and Chatham Junction, N.B Ste. Martine Junction, Que., and Valleyfield, Que. Simcoe, Ont., and Port Rowan, Ont. Cookshire, Que., and Sawyerville, Que. Agnes, Que., and Mattawamkeag, Maine. Glenannan, Ont., and Wingham, Ont. Leamington, Ont., and Comber, Ont. Langenburg and Saltcoats	$19 \ 17\frac{1}{3} \ \ 160 \ 4\frac{1}{2} \ 13\frac{1}{5}$	$ \begin{array}{c} 108 \\ 36\frac{1}{3} \\ 6\frac{1}{10} \end{array} $ $ \begin{array}{c} 164\frac{1}{2} \\ 28\frac{1}{5} \\ 26 \end{array} $ $ \begin{array}{c} 355\frac{1}{8} \end{array} $

Comparative Statement of Railway Mail Service in October, 1889, and October, 1888.

Data	Miles of Railway in operation	Daily Se Postal		Daily Service by Bags in	Total Distance Travelled.		
Date.	on which Mails are carried.	No. of Postal Cars on Railways.	Distance Travelled. Miles.	charge of Company's Servants.	Daily.	Yearly.	
In October, 1889 In October, 1888	11,510 1 11,251 ³ / ₄	121 120	$\substack{23,742\frac{9}{20} \\ 22,924\frac{7}{10}}$	$15,369 \\ 13,919\frac{3}{5}$	$\begin{array}{c} 39,111\frac{9}{20} \\ 36,844\frac{3}{10} \end{array}$	$12,241,883\frac{1}{27}$ $11,532,265\frac{9}{10}$	
	2583	1	8173	$1,449\frac{2}{5}$	$2,267\frac{3}{20}$	709,61718	

A considerable reduction has taken place in the weekly average of Letters and Newspapers delivered by Letter Carriers under the Free Delivery System, owing no doubt to the increase in the rate of postage upon Drop or City letters and the attempts made to establish private deliveries. The illegal character of these private deliveries having been pointed out to the parties engaged therein, they have, it is belived, been entirely discontinued; and the Free Delivery by Letter Carriers will no doubt now return to its normal condition.

FREE DELIVERY BY LETTER CARRIERS.

ESTIMATE of the Weekly Averages of Letters and Papers delivered by Letter Carriers, under the Free Delivery System, taken in October, 1889.

							Letter Carriers		
Office.	City Letters.	Registered Letters.		Total Letters.	News-papers.	Total Letters and Newspa- pers.	Number Employed in Actual Delivery.	Total Number Employed, including Superintendents and Sorters.	
Halifax	5,880	204	11,558	17,642	9,409	27,051	13	16	
Hamilton	9,919	599	24,570	35,088	16,122	51,210	30	32	
Kingston	6,042	279	9,696	16,017	7,669	23,686	8	9	
London.	4,157	583	21,452	26,192	10,247	36,439	20	24	
Montreal, including Hochelaga, Point St. Charles, St. Jean Baptiste and St. Gabriel.	42,582	2,327	60,958	105,867	39,214	145,081	61	72	
Ottawa	11,776	671	17,762	30,209	19,573	49,782	24	26	
Quebec and St. Sauveur	11,969	882	25,615	38,466	16,775	55,241	19	21	
St. John	3,058	192	14,612	17,862	9,391	27,253	13	15	
Toronto.	94,770	6,346	162,464	263,580	66,315	329,895	74	88	
Victoria	639	28	2,832	3,499	2,461	5,960	4	4	
Winnipeg	3,554	227	9,303	13,084	8,879	21,963	13	16	
Totals	194,346	12,338	360,822	567,506	206,055	773,561	279	323	
Totals in 1888	211,156	14,512	355,981	581,649	212,855	794,504	289	336	
Increase			4,841						
Decrease	16,810	2,174		14,143	6,800	20,943	10	13	

Upon the above Averages the Total Annual Delivery would be :-

- 	Letters.	Newspapers.	Total Letters and Newspapers.
In 1889	29,510,312	10,714,860	40,225,172
In 1888	30,245,748	11,068,460	41,314,208
Decrease in 1889.	735,436	353,600	1,089,036

In the Statement of Receipts and Issue of Postage Stamps, &c., it will be observed that the Stamps on hand at the close of the last year very largely exceeded the number carried over from the previous year. It was thought prudent to carry a much larger stock than usual, owing to the removal of the establishment of The British American Bank Note Co. from Montreal to Ottawa and the probable delay in procuring stamps during such removal.

Owing to the change in the System of accounts which went into operation on 1st July, 1888, the issue of Postage Stamps, Cards, &c., can no longer be given by Provinces. The total value of the issue for the year ended 30th June, 1889, was \$2,973,507, that for the previous year was \$2,728,026—showing an increase for the present year of \$245,481.

STATEMENT of Receipts and Issue of Postage Stamps, Post Bands, Post Cards and Stamped Envelopes, for the Year ended 30th June, 1889.

RECEIPTS.

DENOMINATIONS.	Stamps on hand from last year.	Received from manu-facturers.	Surplus on transactions of the year.	Returned by Post- masters unfit for use.	Returned by Post- masters fit for use.	Total number of stamps, &c., to be accounted for.	Amount to be accounted for.
1 cent. 1 do 2 do 3 do 5 do 6 do 10 do 12½ do 15 do 2 do Registered 5 do do Post Bands 1 cent Cards 2 do P. U 2 cent Reply Cards 1 do Envelopes 3 do No. 1 Envelopes 3 do No. 2 do	135,800 5,851,000 1,348,600 11,627,000 509,300 652,200 275,650 607,150 137,750 1,135,850 41,750 108,700 2,215,082 23,896 56,746 30,058 19,618 31,452	475,000 40,300,000 3,050,000 58,100,000 2,250,000 800,000 100,000 1,862,500 662,500 485,000 61,000 60,500 16,000 97,500 118,000 125,138,000	200	2,234 41,627 16,035 48,326 9,805 1,730 482 488 312,644 4,479 24,542 2,206 1,738 2,927 2,694 1,123	200 62,900 26,100 117,800 7,950 3,250 100 31,350 4,650 1,500 77,658 4,097 2,447 4,064 3,420 1,900 349,386	613,234 46,255,527 4,440,735 69,893,326 2,777,055 1,457,180 376,232 607,638 138,060 3,054,013 721,544 599,679 18,873,282 91,199 121,431 197,049 123,232 152,475	\$ cts. 3,066 17 462,555 27 88,814 70 2,096,799 78 138,852 75 87,430 80 37,623 20 75,954 72 20,709 00 61,080 26 36,077 20 7,495 983 188,732 82 1,823 98 2,428 62 2,561 63,75 4,066 655 5,107 91 3,321,181 49 3

STATEMENT of Receipts and Issue of Postage Stamps, &c.—Concluded.

ISSUE.

1 do	Issued to Post. Issued to Post. 188.60 189.70 188.60 189.70 189	Suspense items.	Stamps destroyed 2,234 41,627 16,035 48,326 9,805 1,730	75,300 5,340,300 225,400 4,028,400 166,550 560,850	Total num stambs, & 46,255,527 4,440,735 69,893,326 2,777,055 1,457,180	\$ cts. 3,066 17 462,555 27 88,814 70 2,096,799 78 138,852 75 87,430 80
10 do 12½ do 15² do 2 do Registered. 5 do do Post Bands. 1 cent Cards. 2 do P. U 2 cent Reply Cards. 1 do Envelopes 3 do No. 1 Envelopes 3 do No. 2 do	235,650 100,350 2,808,400 514,700 530,400 18,062,100 54,500 103,900 147,000 99,300 112,600 137,689,300	100	482 488 310 24,313 12,644 39,479 24,542 2,206 1,738 2,927 2,694 1,123 232,703	140,100 607,150 37,400 221,300 194,200 29,800 786,640 34,493 15,793 47,122 21,238 38,752	376,232 607,633 138,060 3,054,013 721,544 599,679 18,873,282 91,199 121,431 197,049 123,232 152,475	37,623 20 75,954 75 20,709 00 61,080 26 36,077 20 7,495 984 188,732 82 1,823 98 2,428 62 2,561 63,5 4,066 65 5,107 91 3,321,181 49 5

Value of the issue during the year, to 30th June, 1889 (which cannot be now given in Provinces), \$2,973,507.

The total stamp issue of the previous year was \$2,728,026, showing a comparative increase in issue for the present year of \$245,481.

The increase in the amount of the registration fee from 2 cents to 5 cents authorized by the Post Office Act of 1889 has been followed by the introduction of the improved system of registration, or rather of the treatment of registered correspondence, framed in strict accordance with the instructions given by yourself, admirably detailed in the accompanying memo from Mr. M. Sweetman, Chief Post Office Inspector:—

Post Office Department, Canada. Chief P. O. Inspector's Office Ottawa, 2nd Nov., 1889.

Memo, for Postmaster General:-

In accordance with your instructions, I beg, very respectfully, to submit the following statement in reference to the working of the hand-to-hand delivery of Registered Mail Matter, and other improvements recently introduced.

The new system was entered upon on the 1st of August last, and since that date all Registered Matter, passing from one office to another, via Railway, has been forwarded in charge of the Railway Mail Clerks. No Registered Matter is now included in through Mails despatched in charge of Train Baggagemen, as formerly, except in a few unimportant cases on railways where Postal Cars are not in use.

The Railway Mail Clerks are required to commence and end their trips, not at the Railway Station, but at the Post Offices, at either end of their routes. Before leaving the Post Office, at the commencement of a trip, they check the Registered Articles entered on the Letter Bill, with the addresses on the Registered Articles which they receive for despatch by their routes. For this Registered Matter they give a receipt to the Despatching Postmaster, in a book which is kept for the purpose, and it is the duty of the Railway Mail Clerks to enclose the Registered Matter in a special bag provided for the purpose, for the safety of which they are held personally responsible.

Wherever practicable, whether at Junction Stations or at Crossing Stations, the Railway Mail Clerks make a personal transfer of the Registered Matter passing from one Postal Car route to another. In some cases, however, owing to close connections, and lack of time, a personal transfer is impracticable; but in such instances the bags containing Registered Matter are accompanied by "Transfer Bills," which are signed by the Despatching Clerk, the person making the transfer, and the Receiving Clerk. It is also required, in these cases, that, where more than one Railway Mail Clerk is on duty, the closing and opening of Registered Bags shall be witnessed by two Clerks.

The Railway Mail Clerks accompany their Mails to the Post Offices at the end of their trips, and obtain receipts for the Registered Matter they deliver.

There is no personal transfer of Registered Mail Matter at the way or Intermediate Stations on a Postal Car route, as that would entail a large additional expenditure, out of all proportion to the general results which would be secured thereby. It is not anticipated, however, that any special difficulty will arise in this connection. I may add that the personal transfers, already arranged for, include all the more important points and places.

The advantages of the new Registered Letter System may be summed up as

follows, viz.:—

1st.—It affords increased security to the Registered Mail Matter, in transit, by concentrating the valuable portion of the Mails, and thus enabling those whose duty it is to handle it to keep closer watch and guard over it than was practicable when it was placed in several separate bags for Post Offices and Postal Cars. The new method already indicates that increased care and attention are bestowed upon the treatment of Registered Mail Matter.

2nd.—In the event of a loss, at one of the more important points, there will be little room for doubt in respect to where the responsibility lies: if the person who last receipted for it is unable to show how it was disposed of, he becomes liable for the loss. It is confidently expected that the number of losses of Registered Articles

will be largely reduced in the future.

I may further add that with the introduction of the new system for the treatment of Registered Matter opportunity has been taken to make general the following additional plans for giving increased security to ordinary Letter Matter, and for expediting the opening and sortation thereof. Instead of making up separate bags for the several principal offices on a given line of Railway, in which all the Mail Matter therefor is enclosed, the separate bag system, as far as possible, has been abandoned, and the letters for each office are now tied up in face-slipped

packages and placed in the bags sent to the Railway Mail Clerks.

The general result of the new method is that an intermediate office now receives from the Railway Mail Clerk one Letter Bag, containing Registered and Ordinary Letters, and a separate sack, or sacks, containing Newspapers and printed Matter,—instead of several bags, made up at various offices, each bag containing Registered and Ordinary Letters, and Newspaper Matter. This not only affords increased security to Registered and Ordinary Letters; but it also largely reduces the number of bags, locks and labels, which have hitherto been required, and lessens the work, and shortens the time, in closing or making up the out-going Mails. The advantages in this connection are as follows:—

1st.—It enables City Postmasters to apportion the work of distribution in such a manner as to secure the handling of the Registered Matter, Ordinary Letters, and

Newspapers, each in its own particular branch or section of the Office.

2nd.—It facilitates the sortation, and delivery, in large offices, by enabling the clerks to enter upon the distribution of the Mail Matter immediately on receipt of the Mails, without waiting, as formerly, for the opening and emptying of a large number of Mail Bags, and the somewhat tedious process of separating the several classes of Mail Matter.

3rd.—The outgoing Mails can be closed more rapidly, and more time can be afforded to the public for posting letters.

4th.—It reduces, to a considerable extent, the liability to commit errors in the

closing or making up of mails.

With respect to the new method for the treatment of Registered Matter, the only disadvantage is in the shape of delay on lines of railway over which Mails are conveyed, each way, twice daily—once in the Postal Cars, and again in the Baggage Car—affording only one despatch for Registered Matter, instead of two despatches as formerly—consequent upon sending Registered Matter by the Postal Cars only. As set forth in a former Report, there are some offices, Registered Matter for which will necessarily be delayed from twelve to twenty-four hours, by being held over for despatch by Postal Cars. These detentions occur, chiefly, in Western Ontario, say from Toronto westward; but, so far as I am aware, no complaints have been received from the public. It is probable that, in such instances, Registered Matter is now being posted at hours convenient for despatch by the Postal Car trains.

The time is not far off when the question is likely to be presented for consideration, whether double Postal Car services should not be introduced upon some of the railway lines west of Toronto—not on account of the Registered Matter alone—but in view of the increase in al! classes of Mail Matter which cannot be so satisfactorily provided for by the despatch of through bags, between the principal offices, in the charge of baggagemen.

In response to a circular letter, recently issued to Post Office inspectors and City Postmasters, on the subject of the recent changes adverted to herein, most of the replies received are favorable, and while, in a few cases, the reports are less favorable, it is obvious that the arguments advanced generally, in respect of delay, are more

than met by the advantages pointed out by the majority.

The introduction of the changes above mentioned, affecting so large a number of Post Offices, and Postal Cars, will necessarily require careful watching, and perhaps more or less re-adjustment, in order to secure the measure of efficiency aimed at, within the shortest possible space of time. The use of uniform Registered Letter Package Envelopes of the best possible description, and of a special Registered Letter bag, all of which are now in course of preparation, will add materially to the safety of Registered Articles, and with the other plans introduced for the careful and systematic treatment of this valuable class of Mail Matter, will secure the most satisfactory results.

M. SWEETMAN, Chief Post Office Inspector.

The number of Registered Letters which passed through the mails of the Dominion during the year ended 30th June, 1889, is estimated at 3,649,000. The number of registered letters estimated to have passed by mail in Canada since 1882 is as follows:—

In	1883	2,659,000
"	1884	3,000,000
	1885	, ,
"	1886	3,400,000
	1887	
	1888	, ,
	1889	

During the year ended 30th June, 1889, there were 243 case of abstraction of contents or portions of contents from, or loss of registered letters containing money sent through the mails of the Dominion.

The contents (or portions thereof) in 62 of these cases were, after careful investigation into the circumstances of each case, made good by the officers held responsible for the loss; 66 letters were stolen whilst in the custody of the Post Office or from mails *en route*, the contents of which were not recovered.

In 32 cases the contents wholly, or in part, were alleged to be missing but no satisfactory evidence to account for the alleged discrepancy was obtainable; 21 letters were contained in mails or packages stated not to have been received at the offices for which they were intended; and 47 letters were accidentally destroyed during the course of post.

DEAD LETTERS.

893,298 letters, circulars, post cards &c., passed through and were dealt with in the Dead Letter Branch of the Canada Post Office during the year, as shown by the following classification.—

Dead Letters originating in Canada returned as unde-	
livered by the British Post Office	9,194
Dead Letters originating in Canada returned as unde-	,
livered by the United States Post Office	98,844
Dead Letters originating in Canada returned as unde-	,
livered by British Colonies and Foreign Countries	1,141
	109,179
Less,-Registered Letters included therein and trans-	,
ferred to registered class	2,270
•	100 000
Dood Tottom sinculars most sands he waterward from	106,909
Dead Letters, circulars, post cards &c., returned from	CCO = 40
Canada Post Office	660,540
Dead Letters registered being found to contain value	16,347
Letters, circulars, post cards, &c., sent to the Dead	
Letter Office for special reason, such as insufficient	
address, non-payment of postage, &c	$109,\!502$
	$893,\!298$
,	

From communications which have appeared in the Press during the past year there is reason to suppose that a good deal of misapprehension exists with respect to the treatment in the Department of Dead or Returned letters. It may, therefore, be as well to state that letters or packets which cannot be delivered to the person addressed are returned from every Post Office daily, weekly, or monthly, according to the importance of the office, to the Dead Letter Office, from which they are at once sent back to the writer.

No letters which have failed of delivery are destroyed which can be returned to the writers; and in cases where the contents are valuable, or the letter itself appears to be of importance, a record is kept and the letter retained for at least twelve months awaiting a claimant.

In addition to the foregoing, it may also be observed that what are termed "Request Letters," that is, letters passing within the Dominion sent in covers or envelopes having printed thereon a request from the sender that the letter, if not delivered or called for at the office addressed within a certain time specified in the request, may be returned to his address, as printed in the said request, are returned to the writer direct as requested.

PRINTING AND SUPPLY.

The operations of this branch of the Department have increased of late years to such magnitude that it is thought some details of the work performed may be of interest to the public. The following statements are submitted accordingly:

Summary of the cost of Printing, Stationery, Mail Bags, Dated Stamps, Scales and Weights, and Miscellaneous Articles, supplied to the Department at Ottawa, and to the different Provinces of the Dominion, through the Printing and Supply Branch, Post Office Department, from 1st July, 1888, to 30th June, 1889.

	\$	cts.	\$	cts.
Printing, binding, &c. Stationery			58,407 14,695	
Mail bags, labels, &c. do repairing	9,65) 08		
Mail locks, keys, lead seals, &cdo repairing	2,643 32-	3 75 4 04	14,299	24
Street letter-boxes			2,967 307 1,808	00
Dated stamps, seals, stamping ink-pads, &c., &c. Material for letter-carriers' uniform Making up do do	3.75	 3 11	6,234	
Water-proof coats, capes, helmets, fur caps, &c. Boots, moccasins, &c.	2,058 2,43	3 40		
Miscellaneous			/ 12,461 412	
Total			111,593	95

STATEMENT shewing the balance in Stock 30th June, 1888, the balance carried forward 30th June, 1889, and the number and value of Forms, Envelopes, Books, Labels, &c., and reams of Writing Paper obtained for and issued to the Postal Service generally through the Printing and Supply Branch, from 1st July, 1888, to 30th June, 1889.

	Forms.	Envelopes	Books.	Cards and Labels.	Writing Paper.	Value.
					Reams.	\$ ets.
Balance in stock, 30th June, 1888	2,130,720 12,299,399	$911,202 \\ 2,647,580$	13,414 32,818	239,219 $2,862,629$	$121\frac{1}{4}$ $223\frac{3}{4}$	10,708 04 58,407 64
Total	14,430,119	3,558,782	46,232	3,101,848	345	69,115 68
Issued to the Department at Ottawa do different Provinces	373,058 11,646,060		2,990 29,433	24,463 2,677,877	47 3 96	3,746 93 51,836 65
Total Issue	12,019,118	2,161,721	32,423	2,702,340	1433	55,583 58
Obsolete articles, destroyed	141,123	71,678	897	744		976 02
Balance in stock, 30th June, 1889	2,269,878	1,325,383	12,912	398,764	2011	12,556 08

STATEMENT shewing the balance in stock, 30th June, 1888, the balance carried forward, 30th June, 1889, and the number and value of articles of Stationery obtained and issued to the Postal Service generally, through the Printing and Supply Branch, from 1st July, 1888, to 30th June, 1889. cts. 43 97 46 4 49 53 8 VALUE. 21014,69514,906 11,738 14,687 218 10,167 10,294 10,20589 127 Miscellaneous. 13 2,865 2,878 2,616 2,858 8 Sealing wax and gum arabic (lbs.). $13,151\frac{1}{4}$ $12,904\frac{1}{2}$ 2463 5423 12,959 Twine (lbs.). 1,8721,828 1,293 1,779 93 Ink (bottles), mucilage (bottles), &c. Pens (boxes), penholders, lead pencils and leads for pencils (boxes). 13,814 13,814 11,869 13,814309,150 298,850 309,150 Tags, cards, labels, &c. 132,12 1013 $1,134\frac{3}{4}$ $1,151\frac{3}{4}$ $1,008\frac{3}{4}$ 1,140wrapping paper (reams). Writing, blotting and 38,875 68,324 1,500 108,699107,199wrappers. Envelopes and paper 1,449 1,444 1,045 1,445 400 Books, almanaes and Balance in Stock, 30th June, 1888..... Issued to the Department at Ottawa. Different Provinces Balance in Stock, 30th June, 1889 X Received from Stationery Office. Total Issue.... Total... ф

STATEMENT in detail, shewing the number and cost of Mail Bugs and Bug Labels, supplied through the Printing and Supply Branch, to the Department at Ottawa and to the different Provinces, from 1st July, 1888, to 30th June, 1889.

	pu	888 8	cs and	pur	MAIL I	Bags Rei	PAIRED.	
	Leather mail bags and satchels.	Cotton duck mail bags and satchels.	Jute newspaper sacks and linen mail bags.	Reversible leather and other labels.	 Leather.	Cotton duck and satchels.	Jute newspaper sacks.	VALUE.
								\$ cts.
Department at Ottawa		51						34 50
Ontario	62	2,241	3,373	2,857	4	1,908	4,000	7,325 44
Quebec	62	1,219	398	1,668	2	1,151	4,978	4,287 47
Nova Scotia	20	582	54	180	16	27	29	558 85
New Brunswick	11	461	99	741	8	24	11	643 21
Manitoba, &c		150	36	401	1	51	53	304 14
British Columbia		256		133		9		206 06
P. E. Island		62		100		58	51	107 94
Total	155	5,022	3,960	6,080	31	3,228	9,122	13,467 61

Mail bags and labels are not kept in stock (except 500 newspaper sacks for Montreal and 500 newspaper acks for Toronto to meet emergencies) but are ordered from the contractors direct, from time to time, as required.

STATEMENT shewing the quantity and value of Stamping Materials, Scales and Weights, &c., &c., in Stock, 30th June, 1888, and ordered and issued through the Printing and Supply Branch, from 1st July, 1888, to 30th June, 1889; also the quantity and value of the same on hand, 30th June, 1889.

	Dating, Rating and other Stamps.	Brass Crown Seals.	ng ions	Tins of Stamping Ink, &c.	Type for Dated Stamps.	Wooden and other Bag Labels.	Letter and Parcel Scales and Weights	Mail Locks, Keys, Lead Bag Seals, &c.	Street Letter Boxes, &c.	Miscellaneous.	Value	·.
Balance in Stock, 30th June, 1888	1,985 2,884 4,869 2,928 1,941	$\frac{352}{352}$	876	298 508 377	$ \begin{array}{r} 5,302 \\ 10,300 \\ \hline 15,602 \\ 12,717 \\ \hline 2,885 \end{array} $	16,669 16,669	676	17,339 303,923 321,262 306,001 15,261	36 43 29	98	\$ 3,906 12,062 15,969 12,574 33,944	77 61 70

STATEMENT shewing the quantity and value of Material, &c., for Letter Carriers' Uniforms in Stock, 30th June, 1888, and ordered and issued through the Printing and Supply Branch, from 1st July, 1888, to 30th June, 1889; also the quantity and value of material remaining in Stock 30th June, 1889.

	Мат	MATERIAL.		MATERIAL. GARMENTS.			tons,	oats	Summer &c.	bber			
	Overcoat Cloth.	Cloth & Serge for Tunics and Trousers	Overcoats.	Tunics.	Trousers.		Waterproof Co and Capes.	Cloth Caps, Sun Helmets, &c.	Leather and Rubber Boots & Moccasins	Miscellaneous.	Value.		
										•	\$	cts.	
Balance in Stock, 30th June, 1888	$\frac{30\frac{3}{4}}{345\frac{1}{4}}$			432	541	5,727 2,880	367 83	457 793		$\frac{235}{243}$	2,734 12,519		
Total	376	3,006	144	432	541	8,607	452	1,250	714	578	15,254	27	
Issued during the year	358	951	143	431	540	1,842	145	675	712	369	11,536	09	
Balance	18	2,055	1	1	1	6,765	307	575	2	209	3,718	18	
Sold	18	2,055				6,320	3				1,544	28	
Balance in Stock, 30th June, 1889			1	1	1	463	304	575	2	209	2,173	90	

REVENUE AND EXPENDITURE.

The gross Postal Revenue of the year ended 30th June, 1889, was, as shewn by the annexed statements, \$2,984,222,60, an increase of only \$27,621 over the gross revenue of last year; but, as stated in the report of last year, the changes made in the system of accounting last year make it very difficult to say how far the diminution of revenue for the year ended 30th June last is due to an actual falling off in the receipts for the year, and how much to forestalling of the revenue of this year by forcing collections at the close of the last financial year, which would otherwise have been included in the revenue of the year now under review.

The expenditure for the same period was \$3,746,040.42, leaving a deficiency of \$761,817, as compared with \$854,845 in 1887 and \$911,031 in 1886.

Of this expenditure, however, an amount of \$51,232,32 for transit rates on mail matter for and from Canada, passing through the United States for other countries, from 1st April, 1886, to 31st December, 1887, and a sum of \$27,796 for transit rates on similar matter to 31st December, 1888, is included, the whole of the former amount, and one-half of the latter properly belongs to the expenditure of previous years and would have been so included had the accounts with the United States been adjusted in time. A further sum of \$51,030 was paid to the Intercolonial and Prince Edward Island Railways, being for arrears due on previous accounts.

The transfer to the Finance Department of several subsidies for steamboat service heretofore charged against the Post Office made it necessary to close up the several accounts to 30th June (the Finance Department only taking over the services from the 1st July) for these subsidies, and added about \$5,000 to the expenditure of the Department under the head of Steamboat Service.

Allowance being made for these items of what may be termed extraordinary expenditure, it will be found that the increase in the ordinary expenditure of the Department has not been greater than the increased facilities afforded to the public will justify; and it must be remembered, that in connection with the Post Office service, reduction of expenditure can only be effected by a diminution of convenience. The Department has to pay the market price, be it high or be it low, for all ordinary mail service, inasmuch as contracts are let by public advertisement and the service awarded to the lowest bidder, as provided by law.

The cost of Railway Mail Service is fixed by Statute.

No large increase in the revenue can be anticipated so long as the Department has to carry vast quantities of printed matter at a very heavy cost, without receiving any remuneration in return.

MONEY ORDERS.

On the 30th June, 1888, there were 944 post offices in Canada authorized to transact Money Order business; to these were added during the past fiscal year 59, and of such offices 7 were discontinued, leaving on the 30th June, 1889, the total number of 993 Money Order Offices in operation.

The total number of money orders issued during the year was 673,813, of the value of \$11,265,919.95, being an increase in number of 42,845 and in amount of \$349,302.12 over the year ended 30th June, 1888, and 98,914 in number and \$936,925.44 in amount over the issue of the year 1887.

466,879 of the money orders issued during the past year, amounting to \$8,692,418.91 were payable within the Dominion; and 206,934, representing \$2,573,501.04, were payable in other countries or British Colonies.

Compared with last year, the increase in the amount of local issues is \$171,643.13 and in orders payable abroad \$177,658.90; the increase in money orders issued by other countries and paid in Canada amounts to \$30,933.29.

The total amount received from the Public for Commissions on the 673,813 orders issued during the past year was \$89,377.63, of which sum \$25,513.11 was allowed Postmasters of other than city offices for their share of commission on local orders issued and foreign orders paid, leaving an excess of receipts over expenditure, being the net revenue from fees on money orders, of \$53,864.52.

The Money Order Convention concluded with Japan on the 30th June last came into force on the 1st of October, and gives satisfactory indications that the arrangement will be found to be a great public convenience and materially assist in creating a trade between Japan and Canada.

A copy of the Convention is appended to this report, and in connection therewith it may be remarked that conventions for the direct inter change of money orders have been made between Canada and ten other countries, and money orders may now be procured in Canada for remittances to 73 foreign countries and British possessions, while seven years ago the only countries upon which money orders could be obtained were four, viz., the United Kingdom, British India, the United States and Newfoundland.

The Money Order Offices in operation on the 30th June, 1889, numbered 993; an increase of 46 during the year, the distribution being as follows:—

Ontario	$\bf 524$
Quebec	160
Nova Scotia	136
New Brunswick	94
Prince Edward Island	10
Manitoba	23
North-West Territories	20
British Columbia	26

993

The accompanying Tables (on preceding pages) exhibit the Money Order transactions, both domestic and foreign, up to the 30th June, 1889. It will be seen that the interchange of Money Orders with other countries was as follows:—

C	Issued in	Canada.	Payable in Canada.		
Country.	Number.	Amount.	Number.	Amount.	
		\$	1	\$	
*United Kingdom	79,297	1,033,331	22,397	364,657	
United States	118,017	1,391,743	74,851	1,261,103	
France	2,621	31,719	723	13,833	
Germany	2,909	30,929	415	10,518	
Italy	1,227	32,044	41	1,654	
Switzerland and Roumania	284	3,255	126	2,460	
Belgium	737	15,876	166	4,937	
Newfoundland	1,439	24,055	2,597	63,814	
Jamaica	58	1,101	538	19,847	
Australasian Colonies and New Zealand	345	9,448	557	14,121	
Totals	206,934	2,573,501	102,411	1,756,944	

^{*}Including all those British Possessions and a few foreign countries, between which and Canada ther not a direct Money Order Exchange.

a. This increase in the cost of management arises from the exhibition, for the first time, as a charge against the Money Order System, of the salaries of Clerks in City Post Offices, engaged exclusively in Money Order duties; also, from the preliminary expenses incurred in organizing Money Order Exchange with a number of additional Countries, as stated in the Report for the year ended 30th June, 1883.
b. Including the amount of the Void "Orders of all previous years. Henceforward the "Void" Orders are brought to account each year in this column.
c. Including payment for services partly chargeable to preceding year.
* Under the recently introduced system of accounts, these items can no longer be given separately.

TABLE showing the Amount of Money Order transactions between the Dominion of Canada and other Countries, year by year, from 1st July, 1867, to 30th June, 1889.

AUSTRALASIAN COLONIES, AND NEW ZEALAND.	Amount of Money Orders.	\$ 4,051 4,051 4,051 13,525 13,525 14,121
AUSTR COLC A NEW Z	Amount of Money Orders.	\$3.854 0.5773 0.6669 0.6669 0.6669
	stabto VanomA Money Orders. Canada.	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
JAMAICA	Amount of Money Orders issued in Canada.	\$ \$ 2777 696 696 11,035 11,035 11,101
w- LAND.	stabro VanoM to tunomA sbanaO ni aldayaq	\$\$\\ \pi_{\text{7.77}}\$\\ \pi_
NEW- FOUNDLAND.	erebrO Vene of Money Orders is Canada.	\$\$ 8.8 8.9 9.9 9.9 9.9 9.9 9.9 9.9 9.9 9.9
IUM.	Amount of Money Orders ansals.	*: ***********************************
Ввістим	Amount of Money Orders issued in Canada.	**************************************
KLAND	Amount of Money Orders, askans in Canada.	\$ 25,000 1 1,000 1 1,300 1 1,300 1 1,300 1 1,0
SWITZERLAND AND ROUMANIA	erebro VenoM of Money Orders.	88 2804 3,704 3,920 3,920 3,520 3,520
LY.	Amount of Money Orders payable in Canada.	\$ 2592 6592 651, 1, 517 1, 654
ITALX	Parabat Orders of Money Orders.	\$ \$ 11.1482 53.0.637 47.8 33.044 83.0
GERMANY, DENMARK, WEDEN AND NORWAY.	Amount of Money Orders, payable in Canada.	\$ 5,612 7,447 7,447 9,782 19,782 10,518
GERMANY, DENMARK, SWEDEN AND NORWAY.	erebrO venoM of momA. sbansO ni bensai	\$ 16100 16100 23,039 29,425 39,737 30,929
FRANCE.	Amount of Money Orders, payable in Canada.	\$
FRA	Amount of Money Orders is sessed in Canada.	\$ 16,724 116,720 20,409 27,077 31,719
NGDOM.	Amount of Money Orders payable in Canada.	8, 87, 437 110, 538 110, 538 110, 538 1121, 644 1142, 301 1171, 487 1171, 487 1171, 487 1171, 487 1171, 487 1171, 487 1171, 487 1170, 481 1170, 48
Uитер Кі	standary Orders of Money Orders.	\$ 389,796 387,092 415,303 415,305 414,376 651,501 661,501 661,501 681,501 681,501 681,501 681,501 681,501 682,822 430,686 5550,501 682,822 4763,446 982,822 4762,446 982,822 4762,446 4762,
	Amount of Money Orders, page of the canada.	\$ 156.134 207.8839 246.556 308.256 494.637 1,003.359 959,691 820.046 861.347 1,283,094 1,283,094 1,283,094 1,283,094
UNITED STATES.	srebrO venoM to stromA. ssaads tit beussi	\$ 212,135 276,821 338,264 335,264 335,266 420,094 781,093,548 1,128,240 1,262,382 1,26
	Year ended 30th June.	1872 1876 1877 1877 1877 1877 1877 1877 1877

* Nine months business only, from 1st October, 1883. + Eight months business only, from 1st November, 1884.

‡ Including Money Orders payable in several countries that have no direct exchange of Money Orders with Canada.

POST OFFICE SAVINGS BANK.

During the fiscal year 30 new Savings Bank Offices were opened, making 463 as the total number in operation on the 30th of June.

The following figures show the volume and increase of business as compared with the previous year:—

	1888		1889.	Iı	ncrease.	Percentage of Increase.
Number of offices. do deposits Amount of do Number of withdrawals Amount of do Number of new accounts. Open accounts on 30th June. Balance due do	\$ 433 155,978 7,722,330 78,229 7,514,071 37,515 101,693 20,689,032	95 95 95 **	463 166,235 7,926,634 84,572 7,532,145 38,049 113,123 23,011,422	\$\$ \$\$ \$\$	30 10,257 204,304 6,343 18,074 534 11,430 2,322,390	7 68 3 8 01 15 11 101

^{*} This amount includes \$1,085,979 transferred from the closed Agencies of the Dominion Government Savings Bank, and \$841,921 the accrued interest for the year.

The average amount of each deposit was \$47.67, and of each withdrawal, \$89.06; and the average balance at the credit of each depositor's account on the 30th of June was \$203.41. The rule limiting the amount which may be annually deposited to \$300 has, since its adoption in 1887, been rigidly enforced.

In accordance with the policy of the Government adopted in 1888, of closing, as the circumstances in each case might suggest, the agencies of the Dominion Government Savings Bank and of placing the depositors' accounts under the management of the Post Office Savings Bank, the following transfers have been effected:—

Agency.	Date of Transfer.	No. of Accounts Trans- ferred.	Amount.		
New Westminster, B.C. Digby, N.S. Moncton, N.B. Hillsborough, N.B. Quaco, N.B. Windsor, N.S.	Aug. 1, 1888 Sept. 1, 1888 Nov. 1, 1888 Jan. 1, 1889	571 772 288	\$ cts. 217,385 10 151,691 27 293,279 85 76,425 90 20,341 31 544,241 39 1,303,364 82		

The number of claims to moneys left by deceased depositors, in which the evidence admitted of settlement, was 748. Fourteen of the cases required reference to the Minister of Justice.

As in former years, a tabular statement is appended, showing the growth and Progress of the Post Office Savings Bank since its establishment in 1868.

STATEMENT of the Business of the Post Office Savings Bank, Canada, year by year, from 1st April, 1868, to 30th June, 1889.

	So l	pe	76-	de-	ئ ۾ ق ٿ	dur-	Ę	-ų	p	ac- ont ng	pa	ė v	Cost of M	aintainin	og the Po	st Office Sav	ings Bonle	3 o 1 o	nt o
PERIOD.	Number of Post Office Savings Banks at close of period.	Number of deposits received during period.	Total amount of deposits 1 ceived during period.	Average amount of each coposit received during riod.	Amount of depositors accounts transferred from Dominion Government Savings Bank during period.	Number of withdrawals duing period.	Total amount withdrawn during period.	Average amount of each with- drawal during period.		Number of depositors' accounts transferred from Dominion Government Savings Bank during period.	Number of accounts closed during period.	Number of accounts remaining open at close of period.	penses of Man- int, including s, Compensa- Postmasters, ion, Printing, ery, &c.	rage cost of each ansaction, viz: of ch Deposit or With-awal.	ntage of Cost of nagement to Bal- ce due to Deposi-	Losses sustained.	Interest allowed to Depositors.	Total Amount standing to the credit of all Open Ac- counts, inclusive of Inter- est allowed, at close of period.	Average amount standing to credit of each Open Account at close of period.
		-	\$	\$	8	*	\$	\$					\$	\$		8	\$	8	8
Three months ended 30th June, 1868	81	3,247	212,507	65.44		166	8,857.48	53.35	2,146		44	2,102	8,389.43				939.37	204,588.89	97.33
Year ended 30th June, 1869	213	16,653	927,885	55.71		4,787	296,754.35	61.99	6,429		1,319	7,212	5,808.14	0.23_{10}^{4}	0.67		21,094.72	856,814.26	118.80
Year ended 30th June, 1870	226	24,994	1,347,901	53.93		9,478	664,555.51	70.11	7,823		2,857	12,178	8,128.12	$0.20 \frac{5}{10}$	0.51		48,689.08	1,588,848.83	130.41
Year ended 30th June, 1871	230	33,256	1,917,576	57.66		15,148	1,093,438.86	72.10	9,424		4,449	17,153	11,108.40	0.20	0.44		84,273.68	2,497,259.65	145.59
Year ended 30th June, 1872	235	39,489	2,261,631	57.27	•••••	19,325	1,571,665.19 206,900.00	81.33	10,846		6,940	21,059	12,242.34	0.20_{10}^{1}	0.39		116,174.55	3,096,500.01	147.04
Year ended 30th June, 1873	239	44,413	2,306,918	51.94		22,159 1,641	1,925,999.32	86.91	11,995		9,528	23,526	15,093.78	0.22_{10}^{7}	0.47		126,932.88	3,207,051.57	136.32
Year ended 30th June, 1874	266	45,329	2,340,284	51.63		24,248 1,566	2,086,243.42 382,400.00	86.04	12,048		10,606	24,968	14,442.71	$0.20\frac{7}{10}$	0.45		126,273.31	3,204,965.46	128.36
Year ended 30th June, 1875	268	42,508	1,942,346	45.69		24,637	2,041,879.04	82.88	10,516		11,190	24,294	12,539.59	$0.18\frac{7}{10}$	0.42		120,758.06	2,926,090.48	120.44
Year ended 30th June, 1876	279	38,647	1,726,204	44.66	,	23,127	1,783,257.97	77.11	10,218		10,097	24,415	14,662.14	0.23^{7}_{10}	0.53		110,116.08	2,740,952.59	112.27
Year ended 30th June, 1877 \dots	287	36,126	1,521,000	42.10		21,643	1,525,682.98	70.49	8,971		9,312	24,074	15,149.13	0.26_{10}^{2}	0.57		104,067.86	2,639,937.47	109.60
Year ended 30th June, 1878	295	40,097	1,724,371	43.00		21,065	1,486,158.73	70.55	10,058		8,597	25,535	15,266 08	0.25	0.55	6,126.67	103,834.29	2,754,484.03	107.87
Year ended 30th June, 1879	297	43,349	1,973,243	45.52		22,326	1,475,048.79 258,400.00	66.07	10,755		8,845	27,445	16,100.03	$0.24 \substack{5 \\ 10}$	0.51		110,912.56	3,105,190.80	113.14
Year ended 30th June, 1880	297	56,031	2,720,216	48.55		26,043	1,820,213.16	69.89	14,407		10,487	31,365	19,134.14	$0.23 rac{3}{10}$	0.49		136,075.47	3,945,669.11	125.80
Year ended 30th June, 1881	304	71,747	4,175,042	58.19		28,398	2,072,289.15	73.56	18,731		10,491	39,605	23,223.99	$0.23^{\frac{2}{10}}$	0.37		184,904.81	6,208,226.77	156.75
Year ended 30th June, 1882	308	97,380	6,435,989	66.09		35,859	3,461,619.31	96.53	25,778		13,920	51,463	29,245.68	$0.21\frac{9}{10}$	0.31	391.00	291,065.07	9,473,661.53	184.08
Year ended 30th June, 1883	330	109,489	6,826,266	62.35		45,253	4,730,995.39	104.54	27,127		17,531	61,059	31,180.03	$0.20^{\frac{2}{10}}$	0.26		407,305.17	11,976,237.31	196.13
Year ended 30th June, 1884	343	109,388	6,441,439	58.88		56,026	5,649,611.13	100.84	26,562		20,939	6,682	34,168.95	$0.20 \frac{6}{10}$	0.26		477,487.46	13,245,552.64	198.63
Year ended 30th June, 1885	355	116,576	7,098,459	60.89		59,714	5,793,031.84	97.01	27,591		20,951	73,322	35,751.23	$0.20\frac{3}{10}$	0.24		539,560.51	15,090,540.31	205.81
Year ended 30th June, 1886	392	126,322	7,645,227	60.52		62,205	6,183,470.60	99.40	29,103		21,555	80,870	41,358.11	0.21_{10}^{9}	0.24	a 341.49	607,075.38	17,159,372.09	212.18
Year ended 30th June, 1887	415	143,076	8,272,041	57.81		65,853	6,626,067.51	100.62	31,874		22,585	90,159	43,661.25	$0.20^{\frac{9}{10}}$	0.22	a 150.00	692,404.57	19,497,750.15	216.26
Year ended 30th June, 1888	433	155,978	7,722,330	49.51	217,385.10	78,229	7,514,071.78	96.05	37,515	723	26,704	101,693	44,348.93	0.19	0.21		765,639.15	20,689,032.62	203.44
Year ended 30th June, 1889	463	166,235	7,926,634	47.67	1,085,979.72	84,572	7,532,145.56	89.06	38,049	2,962	29,581	113,123	51,954.46	0.20_{10}^{7}	0.22		841,921.79	23,011,422.57	203.41

^{*} The figures in smaller type in these two columns exhibit further withdrawals not paid to depositors in cash, but at their request paid over to the Finance Department to be inscribed in their names in Dominion Stock. The amount of Dominion Stock held by P. O. Savings Bank depositors, having, as shown, passed out of the Books of the Post Office Savings Bank, does not appear in this Statement.

The fluctuations in the expenses of management, and the average cost of each transaction,—where not explained by variations in the amount of business and the number of transactions,—are mainly attributable to payments in one year for services not

wholly chargeable to that year.

(a) The result of burglaries at three country Post Offices.

†‡ The amounts in small figures in these columns represent the amount and number of accounts transferred from the Government Savings Banks.

The lamented decease of Mr. John Cunningham Stewart, Financial Comptroller of the Department, who died on the 26th December, 1888, was a severe blow to the service. Cut off in the prime of manhood at a time, when to all human appearance, he had before him a long career of usefulness and just as he was bringing into practical operation those changes in the accounting branches of the Department to the consideration and elaboration of which he had so thoroughly devoted himself, his loss could not but be severely felt, and he will long be remembered in the Post Office as one to whom duty was ever the first consideration, and the welfare of the service the goal of his ambition.

Another important change in the staff of the Department took place on the 1st July last, from which date Mr. John Dewé, Chief Post Office Inspector, who, for more than half a century, had occupied a leading position amongst the chief officers of the Post Office, retired to enjoy that rest and relaxation so richly due to long and faithful service.

Mr. Dewé has been succeeded as Chief Post Office Inspector by Mr. Matthew Sweetman, for many years Post Office Inspector at Toronto.

It has been well remarked that both in the United Kingdom and in the United States, the introduction of women into the Civil Service, whilst in no way lessening its efficiency, has tended to improve the morals of the service, and to introduce a courtesy in the conduct of business which men working by themselves are too apt to despise. Several of the young ladies recently appointed to the Post Office service have shewn remarkable aptitude in acquiring a knowledge of their duties.

In conclusion, I feel that it is only a duty which I owe to the officers of the Department generally, to express my sincere thanks for the hearty co-operation I have at all times received from every member of the staff, whether at headquarters or in the Provinces.

WILLIAM WHITE,

Deputy Postmaster-General

Convention for the Exchange of Money Orders between the Post Office Department of the Dominion of Canada and the Department of Communications of the Empire of Japan.

ARTICLE I.

There shall be a regular exchange of Money Orders between the Dominion of Canada and the Empire of Japan.

ARTICLE II.

The amounts of orders, in both directions, shall be expressed in Canadian currency, and, on account of the frequent fluctuations in the rate of exchange between the two countries, it is agreed that all amounts shall be converted into their proper equivalents by the Japanese Post Office: that is to say, the sums received by the Japanese Post Office for Orders drawn on Canada shall be converted at the time of issue into Canadian currency at the current rate of exchange; and the amounts of Orders drawn in Canada on Japan shall, in like manner, be rendered by the Japanese Post Office into the currency of Japan, at the current rate of exchange on the day of the arrival of the exchange list.

ARTICLE III.

The maximum amount for which a Money Order may be drawn in either country upon the other shall be Fifty dollars.

ARTICLE IV.

No Money Order shall contain a fractional part of a cent.

ARTICLE V.

The amounts of Money Orders shall be deposited by the remitters, and paid to the payees in gold coin, or in any other legal money of the same current value.

However, in case there should be in circulation in either country, a paper currency of legal tender, but of less value than gold, the Administration of that country shall have the right to receive and employ the same in its relations with the public, taking into account the difference of value.

ARTICLE VI.

The Post Office Department of Canada and the Department of Communications of Japan shall each have power to fix, from time to time, the rates of commission to be charged on all Money Orders they may respectively issue. This commission shall belong to the issuing Postal Administration, but the Post Office Department of Canada shall pay to the Department of Communications of Japan one-half of one per cent ($\frac{1}{2}$ of 1 per cent.) on the amount of orders issued in Canada and payable in Japan; and the Department of Communications of Japan shall make a like payment to the Post Office Department of Canada for Money Orders issued in Japan and payable in Canada.

ARTICLE VII.

No Money Order shall be issued unless the applicant furnish, in full, the surname, and at least the initial of one Christian name, both of the remitter and payee (or the corresponding names in the case of natives of Japan); or the name of the firm or company who are the remitters or payees, together with the address of the remitter and that of the payee. If, however, any applicant for a Money Order shall tender the name of either the remitter or payee at greater length, such particulars shall be received, and the list shall be made out accordingly.

xxxii

ARTICLE VIII.

The service of the Postal Money Order system between the two countries shall be performed exclusively by the agency of the Offices of Exchange. On the part of Canada the Office of Exchange shall be Victoria, B. C., and on the part of Japan, Tokio

ARTICLE IX.

The particulars of all Money Orders drawn in Canada upon Japan shall be entered at the Exchange Office, Victoria, B.C., in a list similar to the form marked "A" (in the appendix), in which shall be shown the amount of each Order in Canadian currency, which list, after having received the impression of the Victoria date stamp, shall be forwarded to the Department of Communications (Direction of International Correspondence) at Tokio, where it shall be impressed with the date stamp of the Department, and where the requisite arrangements for effecting payment of the Orders shall be carried out. In like manner, the particulars of Money Orders drawn in Japan on Canada shall be entered at the Department of Communications (Direction of International Correspondence) at Tokio, in a list similar to the form marked "B," in which shall be shown the amount of each Order in the money of both countries, which list, after having received the impression of the date stamp of that Department, shall be forwarded to the Exchange Office of Victoria, where it shall receive the impression of the date stamp in use, at the Office, and where the necessary arrangements for effecting payment of the Orders shall be carried out.

Each list, as well as the entries in the list, despatched shall be numbered consecutively 1, 2, 3, 4, 5, &c., in an unbroken series, in the order of despatch, and the receipt of each list shall be acknowledged, on either side, by means of the first

subsequent list forwarded in the opposite direction.

Such list shall be transmitted whenever there are Money Orders to be advised from either country to the other, and, in order to prevent inconvenience in case the original list should be lost, each office shall forward by the following mail a duplicate

of the list sent by the preceding mail.

The Orders issued in Canada during the quarter ending 30th June of each year, which may arrive at the Office of Exchange at Victoria in the following quarter, shall be entered on lists supplementary to the last list of the month of June, and, in like manner, the Orders issued in Japan during the quarter ending 30th June, of each year, which may arrive at the Exchange Office of Tokio in the following quarter, shall be entered on lists supplementary to the last list of the month of June.

ARTICLE X.

As soon as the list of the despatching office shall have reached the receiving Office of Exchange, the latter shall make out internal Money Orders in favor of the payees for the amounts specified in the list, and shall forward them, free of postage, to the addressees, or to the offices of destination, in conformity with the regulations existing in each country for the payment of Money Orders.

When the lists shall show irregularities which the receiving office shall not be able to rectify, that office shall demand an explanation from the despatching office which shall give such explanation with as little delay as possible. Pending the receipt of the explanation, the issue of domestic Money Orders for payment relating

to the entries found to be erroneous in the list shall be suspended.

One copy of each Exchange List shall be returned by the receiving Exchange Office to the despatching Exchange Office, but before returning such copy, the receiving Exchange Office shall enter therein the names of the respective offices of payment of the Orders enumerated in the list, and, in the lists from Canada returned by the Japanese Office, the latter office shall also enter the amount of each Order in Japanese money, according to the conversion made by it.

ARTICLE XI.

The Orders issued by each country on the other shall be subject, as regards payment, to the regulations which govern the payment of domestic orders in the country of destination. It is agreed that all Money Orders paid in either country shall be retained in the country in which they are paid.

ARTICLE XII.

When it is desired that any error in the name of the payee or remitter shall be corrected, or that the amount of a Money Order shall be repaid to the remitter, application must be made by the remitter to the Postal Administration of the country in which the order was issued. Duplicate orders shall only be issued by the Postal Administration of the country on which the original Orders were drawn, and in conformity with the regulations established, or to be established, in that country.

ARTICLE XIII.

Repayment, whether of an original or by means of a duplicate Order, shall not be made to the remitter until it has been ascertained, through the Postal Administration of the country where such Order is payable, that the Order has not been paid, and shall not be paid in the Office of payment.

ARTICLE XIV.

Orders which shall not have been paid within twelve calendar months from the month of issue, shall become void, and the sums received shall accrue to, and be at the disposal of, the country of issue.

The Department of Communications of Japan shall, therefore, enter to the credit of Canada, in the quarterly account, all Money Orders entered in the lists received

from Canada, which remain unpaid at the end of the period specified.

On the other hand, the Post Office Department of Canada shall, at the close of each month, transmit to the Department of Communications of Japan, for entry in the quarterly account, a detailed statement of all Orders included in the lists despatched from the latter office which, under this article, become void.

ARTICLE XV.

At the close of each quarter an account shall be prepared at the Department of Communications, Tokio, showing, in detail, the totals of the lists containing the particulars of Orders issued in either country during the quarter, and the balance

resulting from such transactions.

Two copies of this account shall be transmitted to the Post Office Department of Canada at Ottawa, and the balance, after proper verification, shall, if due by the Department of Communications of Japan, be paid at New York, in Canadian currency, at the same time that it transmits the account, and, if due by the Post Office Department of Canada, it shall be paid at the same time that it returns the accepted copy of the account by means of a Bill of Exchange on Yokohama, for as much in the legal currency of Japan as can be obtained, at the market rate, for the balance due Japan in Canadian currency.

For this quarterly account forms shall be used in exact conformity with the

patterns, C, D and E, in the appendix.

If, pending the settlement of an account, one of the two Postal Administrations shall ascertain that it owes the other a balance exceeding Five thousand dollars (\$5,000), the indebted Administration shall promptly remit the approximate amount of such balance to the credit of the other.

ARTICLE XVI.

The Postmaster General of Canada and the Minister of Communications of Japan shall be authorized to adopt any additional rules, if not repugnant to the foregoing, xxxiv

for the greater security against fraud, or for the better working of the system generally. All such additional rules, however, must be communicated to the Postal Administration of the other country.

ARTICLE XVII.

Should it appear that Money Orders are used by mercantile men either in Canada, or in Japan, for transmission of large sums of money, the Canadian or Japanese Postal Administration, as the case may be, shall have the power of increasing the commission, and even of wholly suspending, for a time, the issue of Money Orders.

ARTICLE XVIII.

This Convention shall come into effect on the 1st October, 1889 (1st day of 10th month of 22nd year of Meiji), and shall continue in force until twelve months after either of the contracting parties shall have notified to the other its intention to terminate it.

Done in duplicate and signed in Ottawa on 27th day of June, 1889, and in Tokio on 16th day of 5th month of 22nd year of Meiji.

(Sd.) JOHN HAGGART, Postmaster General of the Dominion of Canada. $\left\{ \widetilde{L.S.} \right\}$

(Sd.) S. GOTO,

Minister of State for Communications of Japan. $\left\{ \widetilde{L.S.} \right\}$

			Arrived	F	ASSAGE.	į	Number	FREIGHT		Control of the Contro		Arrived		Passac	E.	N	
STEAMSHIP.	CAPTAIN.	Left Liverpool.	at Halifax.	Days.	Hours.	Minutes.	of Passengers.	United States.	Canada.	Left Halifax.	•	at Liverpool.	Days.	Hours.	Minutes.	Number of Passengers.	REMARKS.
ouver atian a a ian on nesian ouver atian a ssian on nesian inion nian a ssian on ouver vian aa	Wylie Lindall Richardson. Gibson Ritchie Williams. Wylie Lindall Richardson Gibson Barrett Williams Wylie Cross Richardson Gibson Barrett Williams Wylie Cross Richardson Gibson Barrett Lindall Satchie Lindall Stephen Gibson Richardson.	do 15 do 22 do 29 do 29 do 20 do 27 dan. 4 do 10 do 24 do 31 Feb. 7 do 14 do 21 do 28 Mar. 7 do 14 do 21 do 28 Apr. 4	Nov. 18 do 28 Dec. 2 do 9 do 16 do 24 do 31 Jan. 5 do 17 do 20 do 27 Feb. 4 do 13 do 19 do 25 Mar. 2 do 9 do 17 do 24 do 30 Apr. 9 do 13 do 20	9 9 9 9 8 10 10 8 13 9 9 10 11 11 10 8 8 9 9 8 8 10 8 8 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10	4 12 20 9 23 2 12 4 9 13 9 3 3 17 5 7 11 6 18 3 17 0 21 9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	167 80 170 98 160 83 71 90 92 101 77 80 192 116 239 137 316 381 921 876 649 628 709	Tons. 455 2 210 10 371 3 455 69 108 292 295 494 50 469 480 291 262 234 51 351 57 238 5,247	Tons. 1,478 1,410 1,417 1,571 1,590 1,373 1,690 1,473 1,848 1,912 1,900 2,065 1,939 2,292 2,065 1,939 2,158 1,518 1,518 1,518 1,524 1,725 1,189 38,636	Dec. 1 do 8 do 15 do 22 do 29 Jan. 5 do 19 do 25 Feb. 2 do 9 do 16 do 22 do 8 do 16 do 22 do 30 Apr. 5 do 13 do 20 do 30 May 3	J	Dec. 10 do 16 do 24 do 31 an. 7 do 14 do 27 eb. 6 do 12 do 18 do 15 do 30 do 30 Iay 9 do 13	8 7 8 8 8 7 8 8 8 7 11 9 8 8 10 10 9 9 8 8 8 11 8 8 8 1206	6 19 10 20 15 17 5 18 7 10 20 16 0 18 3 19 13 0 17 8 6 19 9	30 0 0 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	96 134 133 47 79 38 57 78 54 34 63 57 60 32 54 41 57 40 121 79 51 35 77	The bulk of this steamer's homeward cargo was loaded at Portland. do

RETURN of Passages, Number of Passengers and Cargoes of the Steamships of the Allan Line, under Contract for the Conveyance of Mails from Liverpool to Quebec, and from Quebec to Liverpool, from 18th April, 1889, till 22nd November, 1889.

				Passage.	assen-	FRE	пент.			Passage.	assen-	BAR	RELS AND	SACKS.		ter.			j.			Meats.		ols and		Boards		Bulk.	
STEAMSHIP.	CAPTAIN.	Left Liverpool.	Arrived at Quebec.	Days. Hours. Minutes.	Number of I	Quebec and East.	Montreal and West.	Left Quebec.	Arrived at Liverpool.	Days. Hours. Minutes.	Number of F gers.	Ashes.	Flour and Oatmeal.	Apples.	Bushels Grair	Packages Butte	Boxes Cheese.	Tierces Beef.	Packages Lar	Barrels Meat	Boxes Meat.	Boxes Canned	Cases Leather	Packages Spools Spoolwool.	Cases Splints.	Pieces, Deals, and Logs.	Sundries.	Total Barrel	Remarks.
Circassian	Ritchie	April 18 do 25 May 2	April 29 May 4 do 12	10 14 0 8 18 0 9 11 0	812 999 630	Tons. 201 95 78		do 16	. <u>.</u>	8 6 55	287	20	1		69,451		479 1,642			25 80	335 221	630	53	63 76	451	3,968 12,569	171 250	23,916	851 bundles handles.
†Buenos Ayrean Vancouver	ScottLindallRichardsonWilliamsRitchie	May 9 do 16	May 19 do 27 June 2 do 10 do 18	8 15 50 9 7 40 9 12 30 8 10 37	662 722 282 832 442	78 127 43 126 48	1,123 1,916 1,081 2,245 1,077	May 23 do 30 June 6 do 13 do 20 do 27	do 8 do 15 do 23 do 28 July 7	9 10 0 8 16 25 9 5 0 9 4 30 7 21 30 9 21 30	267 160 110 371	20	1,058 1,235		62,782 38,335 46,009 32,236 43,220 40,506	450	59 7,047 7,049 10,864 15,073 5,134	294 297 201 65	1,000 93	8	246 1,127 1,400 2,151 2,013 1,227	1,000 300 320 250	6 57 41 62 30	66	150	13,068 38,060 1,591 27,461 8,859 2,569	11 39 200 47 225 145	26,477 24,877 20,806 29,279 26,014	587 head of cattle. 100 tons phosphates. 510 blocks.
Vancouver Sardinian Circassian Parisian	Lindall Richardson Barrett	do 13	do 24 July 1 do 7 do 17	8 23 20 10 6 20 9 15 0 8 4 12 9 1 15	660 392 307 577 370	64 107 79 134 160	1,133 1,696 1,870 2,238	July 4 do 11 do 18 do 25 Aug. 1	do 13 do 21 do 27 Aug. 3 do 11	8 13 5 8 22 0 9 2 0 8 8 20 9 11 30	374 229 102 290	15	2,200 200 3,934 2,504		51,124 33,936 30,049 46,179 42,699	78 1,612 701 671 994	9,053 6,064 6,385 10,302 8,338	95	65	55 23 60 7	1,227 294 1,991 1,475 4,754 1,221	750 695 200	5 19 62 39	66	470 57 631	18,503 8,678 17,039 5,051	145 14 194 32 121 20	16,296 26,725 19,107 21,466 25,723 17,826	3,123 shooks.
Vancouver Sardinian Oregon Parisian	Lindall Richardson Williams	do 18	do 27 Aug. 4 do 11 do 16 do 25	7 18 30 8 20 0 9 8 30 7 18 36 9 8 23	278 371 196 534 349	149 57 92 31 98	1,138 1,880 1,768 1,981 1,388	do 8 do 15 do 22 do 29 Sept. 5	do 18 do 25 Sept. 1 do 7 do 15	7 18 50 8 23 0 9 5 30 8 1 30 9 23 0	230 120 55 310	10 10	125 575 2,150 8,606		35,500 43,977	100 694 178 197	20,647 12,309 7,278 4,472 8,348			- 1	3,227 1,600 784 896 1,064	306	86 25	516 29	448	16,795 1,196 16,909 8,182 2,240	10 267 2 252 284	32,721 21,144	901 bags oil cake; 130 tons phosphates 348 bags oil cake. 1,123 bags oil cake.
Sardinian Circassian Parisian Polynesian	Ritchie	do 22 do 29 Sept. 6 do 12 do 19	do 31 Sept. 7 do 14 do 21 do 28	8 20 40 8 10 0 8 11 0 8 3 0 8 21 35	520 384 320 631 · 288	238 64 81 75 99	2,033	do 12 do 19 do 27 Oct. 3 do 10	do 21 do 28 Oct. 6 do 11 do 19	8 2 20 8 18 0 8 22 0 8 4 0 8 18 30	256 151 151 366 188	11	2,333 1,175 8,524	70 911 403 1,260 2,742	36,156 30,752 28,657 53,995 30,047	100 160 183	8,579 8,553 6,686 21,757 14,961		1,000	31	1,769 1,855 1,418 2,114 2,306	500 1,250 1,200 30	6 46	3,921 56	550 82 152	31,427 2,874 3,765 219	94 29 3 60 37	29,736 20,100 22,225 27,233 21,090	100 tons phosphates. 80 casks oil. 336 packages furs.
Sardinian Oregon Parisian Polynesian	Williams Ritchie	do 17 do 25	Oct, 5 do 14 do 20 do 25 Nov. 5 do 10	8 17 14 10 12 30 10 2 0 7 18 25 11 0 30 9 6 20	392 233 124 391 170 251	129 79 56 84 147 48	1,856 1,309 2,076 2,421	do 17 do 24 do 31 Nov. 7 do 15 do 22	do 25 Nov. 2 do 9 do 16 do 24 Dec. 2	8 8 15 8 20 30 9 16 0 8 11 9 9 2 30 8 20 0	98 58 258 142	9	2,481 10,087 775	3,853 6,491 5,294 8,765 5,532 9,631	38,343 32,253 51,248 30,100 24,506 40,301	162 1,335 6 587 200	8,302 10,465 3,225 5,314 13,166 13,521	250			1,817 1,129 131 236 351 230	500 39 60	1		631	18,742 15,309 2,543 2,577 7,895	33 56 62 33 95 701	29,845 22,072 23,768 26,575 20,985 28,870	240 bales hops.
				265 2 37	13,119	2,867	-l			256 10 49		.		44,952	1,189,236	8,708	255,072				37,382	8,377	744	4,879	5,837	288,089	3,487	693,880	- vo sates nops.
Ave	rage passage Wes	stward		9 3 24		Average	passage I	Eastward		8 20 14															<u>'</u>		1		1

^{*} Damaged in collision with SS. "Cynthia" off Longue Pointe, 22nd May, and docked at Quebec for repairs. + Took home mails intended for "Polynesian."

‡ Glasgow.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF THE DOMINION OF CANADA, FOR THE YEAR ENDED 30th JUNE, 1889.

DOMINION OF CANADA.

REVENUE.

Balances due by Postmasters on old revenue account to 30th June, 1888 These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which, amounting to \$162,978.45, was brought to account as a separate item in the Post Office statement of last Year.			\$	cts.
			75,264	77
Postage stamps, post cards, &c., sold. Postage paid in money, on letters. Postage paid in money, on newspapers. Postage collected by Letter Carriers. Transit postage from Great Britain. Rents of letter boxes and drawers. Other miscellaneous receipts. Commissions received on Money Orders. Profit in exchange on Money Order business with other Countries. Void Money Orders, that is, Money Orders issued between 1st July, 1886, an	d 30th J	 	2,769,987 16,107 860 225 3,374 21,530 1,725 89,377 1,686	12 56 02 11 62 29 92 63 24
1888, payment of which had not been claimed up to 30th June, 1889			4,083	32
Gross Revenue			\$2,984,222	60
Gross Revenue Deductions from Revenue.	s	cts.	\$2,984,222	60
	\$ 623,011 14,864 2,566 705 3,754 79,028 3,900 2,914	cts. 75 1 07 5 15 5 55 1 15 6 32 9 90 1 16 6 05		
Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements Amount paid for the redemption of postage stamps Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business Cost of remittances to the United States on Money Order business	\$ 623,011 14,864 2,566 705 3,754 79,028 3,900 2,914 185 32,788	cts. 75 107 515 555 15 655 15 605 84	763,718	94

DOMINION OF CANADA.

EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

	\$	cts.
Conveyance of mails by land	740,206	
do steamboats, &c	107,765	
do railways	924 425	
Making and repairing mail bags and locks	17,273	54
Total Mail Service	\$1,789,670	42
Salaries paid by cheque	099 617	60
Travelling expenses.	16,692	24
Tradesmen's bills	74,627	
Travelling expenses Tradesmen's bills Rents and taxes.	1,780	
Stationery, printing and advertising.	66,010	
Stationery, printing and advertising. Other miscellaneous disbursements paid by cheque.	44,922	25
Total Expenditure by Cheque	\$2,982,321	48

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF ONTARIO, FOR THE YEAR ENDED 30th JUNE, 1889.

PROVINCE OF ONTARIO.

REVENUE.

Balances due by Postmasters on old revenue account to 30th June, 1888 \$3,375 8. These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which was	\$	cts
brought to account as a separate item in the Post Office statement of last Year	20,833	. 59
Postage stamps, post cards, &c., sold Postage paid in money, on letters	1,553,991	
Postage paid in money, on letters	8,919	90
Postage paid in money, on newspapers	. 469	33
Postage collected by Letter Carriers. Transit postage from Great Britain	1,894	70
Rents of letter boxes and drawers	. 5,120	63
Other miscellaneous receipts	730 44,294	
Commissions received on Money Orders	946	75
Void Money Orders, that is, Money Orders issued between 1st July, 1886, and 30th Jun	е,	• •
1888, payment of which had not been claimed up to 30th June, 1889	2,292	68
Gross Revenue	\$1,639,493	58
DEDUCTIONS FROM REVENUE. \$ ct	s.	
Salaries, forward allowances, allowances towards rent, fuel and light, and		
compensation to Postmasters on Money Order business)	
Discount to Stamp Vendors 7,917 7		
Mis-sent and dead letters		
Amount paid for the redemption of postage stamps		
Transit rates on mail matter passing through the United States for other		
Countries, from 1st April, 1886, to 31st December, 1888	5	
Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887	a .	
Balance of commission paid to other countries on Money Order business 1,636 1		
Cost of remittances to the United States on Money Order business		
		36
Balances still due by Postmasters upon old revenue account, on 30th June, 1889 6,742 2	421.3U4	
Balances still due by Postmasters upon old revenue account, on 30th June, 1889 6,742 2 Net Revenue	421,304 \$1,218,189	

PROVINCE OF ONTARIO.

EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

	\$	cts.
Conveyance of mails by land	273,547	10
do steamboats, &c.	8,539	65
do railways	447.657	
Making and repairing mail bags and locks.	9,390	
Total Mail Service	\$739,134	- 08
Salaries paid by cheque		
Travelling expenses		
Tradesmen's bills	40,515	
Tradesmen's bills Rents and taxes	375	
Stationery, printing and advertising	34,143	66
Stationery, printing and advertising. Other miscellaneous disbursements paid by cheque	25,096	
Total Expenditure by Cheque	\$1,314,344	75

W. H. SMITHSON,
Accountant.

WILLIAM WHITE.

Deputy Postmaster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF QUEBEC, FOR THE YEAR ENDED 30th JUNE, 1889.

PROVINCE OF QUEBEC.

REVENUE.

Balances due by Postmasters on old revenue account, to 30th June, 1888 These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which was brought to account as a separate item in the Post Office statement of last	\$16,637	70	*	ets
Year	5,002	24		
Ostage stamps, post cards, &c., sold		-	21,639 $584,957$	
Ustage paid in money, on letters		. 1	3,939	
Ostage paid in money, on newspapers			216	
Ustage collected by Letter Carriers		. 1 .		
Transit postage from Great Britain Sents of letter boxes and drawers	· · · · · · · ·	• • • •	712 6,915	
Other miscellaneous receipts.			456	
ommissions received on Money Orders		. [11,405	89
rofit in exchange on Money Order business with other Countries		. 1	356	02
Void Money Orders, that is, Money Orders issued between 1st July, 1886, and 1888, payment of which had not been claimed up to 30th June, 1889	30th Ju	ine,	862	15
Gross Revenue		1-	0001 401	
0.1055 250 10140			\$631,461	62
DEDUCTIONS FROM REVENUE.		cts.	\$031,401	62
DEDUCTIONS FROM REVENUE.			\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business.	\$	ets.	\$631,461	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business		ets.	\$631,461	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business	\$ 99,827 3,752 530	32 76 23	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements.	\$ 99,827 3,752 530 146	32 76 23 50	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Wis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps.	\$ 99,827 3,752 530	32 76 23 50	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Fransit rates on mail matter passing through the United States for other Countries, from 1st April 1886, to 31st December. 1888.	\$ 99,827 3,752 530 146	32 76 23 50 63	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Fransit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Fransit rates on mail matter passing between Newfoundland and the Domin-	\$ 99,827 3,752 530 146 792 16,685	ets. 32 76 23 50 63 64	\$631,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Siscount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Fransit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Fransit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887.	\$ 99,827 3,752 530 146 792 16,685 823	cts. 32 76 23 50 63 64 61	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. dis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Dalance of commission paid to other Countries on Money Order business.	\$ 99,827 3,752 530 146 792 16,685 823 615	ets. 32 76 23 50 63 64 61 27	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Fransit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Fransit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Salance of commission paid to other Countries on Money Order business.	\$99,827 3,752 530 146 792 16,685 823 615 39	32 76 23 50 63 64 61 27 07	\$031,401	62
DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. dis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Dalance of commission paid to other Countries on Money Order business.	\$ 99,827 3,752 530 146 792 16,685 823 615	32 76 23 50 63 64 61 27 07	132,865	

PROVINCE OF QUEBEC.

EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

	\$	cts.
Conveyance of mails by land	152,739	
do steamboats, &c	28,747	
do railways. Making and repairing mail bags and locks	191,463 4,980	
Total Mail Service	\$377,931	
Salaries paid by cheque Travelling expenses. Tradesma's bills	257,528	
Stationery, printing and advertising. Other miscellaneous disbursements paid by cheque.	13,963	
other miscellaneous disbursements paid by cheque	10,304	63
Total Expenditure by Cheque	\$683,201	44

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF NOVA SCOTIA, FOR THE YEAR ENDED 30TH JUNE, 1889.

PROVINCE OF NOVA SCOTIA.

REVENUE.

\$ c	\$11,600 22 1,026 82	Balances due by Postmasters on old revenue account to 30th June, 1888 These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which was brought to account as a separate item in the Post Office statement of last Year
12.627	1,020 02	1 Carl
209,362 5 718 8 63 4		Postage stamps, post cards, &c., sold Postage paid in money, on letters Postage paid in money, on newspapers Postage paid in money, on rewspapers
254 9		Postage collected by Letter Carriers Fransit postage from Great Britain.
1,725		Rents of letter boxes and drawers
119		Other miscellaneous receipts
13,046		Commissions received on Money Orders
127 4		Profit in exchange on Money Order business with other Countries
000	30th June,	Profit in exchange on Money Order business with other Countries
308 4		1888, payment of which had not been claimed up to 30th June, 1889
\$238,355		1888, payment of which had not been claimed up to 30th June, 1889 Gross Revenue
		• • •
	-	Gross Revenue Deductions from Revenue.
	\$ ets.	Gross Revenue DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and
	-	Gross Revenue Deductions from Revenue.
	\$ ets.	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters.
	\$ cts. 64,487 17 803 61 141 44 26 30	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements.
	\$ cts. 64,487 17 803 61 141 44	Gross Revenue. Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps.
	\$ cts. 64,487 17 803 61 141 44 26 30	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888
	\$ cts. 64,487 17 803 61 141 44 26 30 283 65 5,971 50	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Domin-
	\$ cts. 64,487 17 803 61 141 44 26 30 283 65 5,971 50 294 75	Gross Revenue. Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887.
	\$ cts. 64,487 17 803 61 141 44 26 30 283 65 5,971 50 294 75 220 19	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business
	\$ cts. 64,487 17 803 61 141 44 26 30 283 65 5,971 50 294 75 220 19 13 98	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888 Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business Cost of remittances to the United States on Money Order business
	\$ cts. 64,487 17 803 61 141 44 26 30 283 65 5,971 50 294 75 220 19	Gross Revenue. DEDUCTIONS FROM REVENUE. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business

PROVINCE OF NOVA SCOTIA.

EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

	\$	ets.
Conveyance of mails by land	122,126	16
do steamboats, &c	13,808	
do railways	52,102	
Making and repairing mail bags and locks	585	90
Total Mail Service.	\$188,623	3 15
Salaries paid by cheque	64,393	3 41
Travelling expenses.	1,374	
Tradesmen's bills	0,940	
Rents and taxes	5,895	74
Stationery, printing and advertising	2,994	28
out misotaneous disputsoments paid by eneque.		
Total Expenditure by Cheque	\$269,226	3 49

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Fostmaster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF NEW BRUNSWICK, FOR THE YEAR ENDED 30th JUNE, 1889.

PROVINCE OF NEW BRUNSWICK.

REVENUE.

Balances due by Postmasters on old revenue account to 30th June, 1888 These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which was brought to account as a separate item in the Post Office statement of las		\$	ets.
Year	2,492 08	~ 444	~0
		5,444	: 93
Ostage stamps, post cards, &c., sold		146,211	
Ostage paid in money, on letters.		384	
Ostage paid in money, on newspapers			96
Ostage collected by Letter Carriers		225	
ransit postage from Great Britain		178	
Rents of letter boxes and drawers		1,503	71
ther miscellaneous receipts		79	94
ommissions received on Money Orders.		7,129	
rofit in exchange on Money Order business with other Countries			00
oid Money Orders, that is, Money Orders issued between 1st July, 1886, an	d 30th June		
1888, payment of which had not been claimed up to 30th June, 1889		215	53
Gross Revenue		\$161,487	56
DEDUCTIONS FROM REVENUE.	\$ cts.		
Alarica forward allowers allowers towards mont firel and light and			
Balaries, forward allowances, allowances towards rent, fuel and light, and	40,225 50		
compensation to Postmasters on Money Order business.	1.083 79		
Discount to Stamp Vendors			
dis-sent and dead letters	138 54		
ther miscellaneous disbursements	27 50		
mount paid for the redemption of postage stamps	198 16		
ransit rates on mail matter passing through the United States for other			
Countries, from 1st April, 1886, to 31st December, 1888	4,171 40		
ransit rates on mail matter passing between Newfoundland and the Domin-	1		
ion of Canada, from 1st April, 1886, to 31st December, 1887	205 90		
Dalance of commission paid to other Countries on Money Order business	153 81		
	9 76		
Jost of remittances to the United States on Money Order business	9 10 :		
Jost of remittances to the United States on Money Order business			
Ost of remittances to the United States on Money Order business Balances still due by Postmasters upon old revenue account, on 30th June, 1889	2,525 32	48,739	9 68

PROVINCE OF NEW BRUNSWICK.

EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

•	\$	cts.
Conveyance of mails by land	55,058	
do steamboats, &c	15,4/8	
do reilways	94.734	
Making and repairing mail bags and locks.	1,039	08
Total Mail Sarvice	\$166.311	19
Salaries paid by cheque. Travelling expenses. Trademore in bills.	74,994	
Travelling expenses.	941	
		93
Rents and taxes		
Stationery, printing and advertising	4,885	81
Rents and taxes Stationery, printing and advertising Other miscellaneous disbursements paid by cheque.	3,011	. 63
Total Expenditure by Cheque	\$254,110	

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,
Deputy Postmaster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF MANITOBA AND THE NORTH-WEST TERRITORIES, FOR THE YEAR ENDED 30TH JUNE, 1889.

PROVINCE OF MANITOBA AND THE NORTH-WEST TERRITORIES. REVENUE.

	16	\$	cts.
	52		
• • • • • • • •	• • • •		
	• ••]	96	10
] .	919	28
	• • • • •		
		106	
1 30th Ju	ane,		
		256	87
		\$196,146	21
		\$196,146	21
s	cts.	\$196,146	21
		\$196,146	21
	cts.	\$196,146	21
\$ 41,765 764	cts. 57 59	\$196,146	21
\$ 41,765 764 166	cts. 57 59 85	\$196,146	21
\$ 41,765 764 166 87	cts. 57 59 85 00	\$196,146	21
\$ 41,765 764 166	cts. 57 59 85 00	\$196,146	21
\$ 41,765 764 166 87 236	57 59 85 00 16	\$196,146	21
\$ 41,765 764 166 87	57 59 85 00 16	\$196,146	21
\$ 41,765 764 166 87 236 4,971	ets. 57 59 85 00 16	\$196,146	21
\$ 41,765 764 166 87 236 4,971	ets. 57 59 85 00 16 40	\$196,146	21
\$ 41,765 764 166 87 236 4,971 245 183	cts. 57 59 85 00 16 40 39 31	\$196,146	21
\$ 41,765 764 166 87 236 4,971 245 183	cts. 57 59 85 00 16 40 39 31 66	\$196,146	21
\$ 41,765 764 166 87 236 4,971 245 183	cts. 57 59 85 00 16 40 39 31 66		
\$ 41,765 764 166 87 236 4,971 245 183	cts. 57 59 85 00 16 40 39 31 66	\$196,146 53,093	
3	5,121	5,121 52	5,121 52 10,934 174,483 1,372 56 212 2,198 173 6,351 1 30th June,

PROVINCE OF MANITOBA AND THE NORTH-WEST TERRITORIES. EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

•	\$	ets
Conveyance of mails by land	79,147	92
do steamboats, &c		21 14
Total Mail Service.	\$156,616 79,154	27 51
Salaries paid by cheque Travelling expenses. Tradesmen's bills.	927 4,576	50 17
Rents and taxes	4,847 1,453	' 59
Total Expenditure by Cheque	\$247,575	5 87

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF BRITISH COLUMBIA, FOR THE YEAR ENDED 30th JUNE, 1889.

PROVINCE OF BRITISH COLUMBIA.

REVENUE.

Balances due by Postmasters on old revenue account to 30th June, 1888 These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which was brought to account as a separate item in the Post Office statement of last	, ,	24	\$	cts.
Year	721	46		
Postage stamps, post cards, &c., sold. Postage paid in money, on letters. Postage paid in money, on newspapers. Postage collected by Letter Carriers		• • • • •	23	
Transit postage from Great Britain. Rents of letter boxes and drawers. Other miscellaneous receipts.			85 3,190 155	5 93
Commissions received on Money Orders			6,129 42	63 63 69
Void Money Orders, that is, Money Orders issued between 1st July, 1886, ar	id 30th J	une,		
1888, payment of which had not been claimed up to 30th June, 1889	· • • • • • • • •	• • • • •	103	3 37
1888, payment of which had not been claimed up to 30th June, 1889 Gross Revenue	· • • • • • • • • • • • • • • • • • • •	• • • •	\$83,074	
	· • • • • • • • • • • • • • • • • • • •	• • • •		
Gross Revenue Deductions from Revenue.				
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and	\$	cts.		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business	\$ 13,694	cts.		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business Discount to Stamp Vendors	\$ 13,694 354	cts.		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business	\$ 13,694 354 357	ets.		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other	\$ 13,694 354 357	cts.		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888.	\$ 13,694 354 357	ets. 46 45 76 25 05		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Domin-	\$ 13,694 354 357 194 95	ets. 46 45 76 25 05 00		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887.	\$ 13,694 354 357 194 95 2,000	cts. 46 45 76 25 05 00 76		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business	\$ 13,694 354 357 194 95 2,000	ets. 46 45 76 25 05 00 76 81		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887.	\$ 13,694 354 357 194 95 2,000 98 73	cts. 46 45 76 25 05 00 6 81 68		
Gross Revenue Deductions from Revenue. Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors. Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business. Cost of remittances to the United States on Money Order business.	\$ 13,694 354 357 194 95 2,000 98 73	ets. 46 45 76 25 05 00 76 81		1 36

PROVINCE OF BRITISH COLUMBIA.

EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

	\$	cts.
Conveyance of mails by land.	44,783	
do steamboats, co	39,449	39
do railways	40 010	94
Making and repairing mail bags and locks.	252	
Total Mail Service	\$124,496	56
Salaries paid by cheque	30 819	95
Travelling expenses	7 4900	
Tradesmen's bills Rents and taxes.	1,905	
Rents and taxes	450	
Stationery, printing and advertising.	1,527	
Stationery, printing and advertising. Uther miscellaneous disbursements paid by cheque.	1,312	
	1,012	~1
Total Expenditure by Cheque	\$161,784	73

W. H. SMITHSON,
Accountant.

WILLIAM WIIITE,

Deputy Postmuster-General.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE POST OFFICE DEPARTMENT OF CANADA, IN THE PROVINCE OF PRINCE EDWARD ISLAND, FOR THE YEAR ENDED 30TH JUNE, 1889.

PROVINCE OF PRINCE EDWARD ISLAND. REVENUE.

Balances due by Postmasters on old revenue account to 30th June, 1888 These balances, owing to the new system of accounting for the revenue, were further increased by a supplementary quarter; the revenue from which was brought to account as a separate item in the Post Office statement of last	\$ 714	17	\$	cts.
Year	1,137	18		
Postage stamps, post cards, &c., sold	•••••		1,851 30,240 103	55 02
Postage paid in money, on newspapers		1	3	55
Postage collected by Letter Carriers Transit postage from Great Britain Rents of letter boxes and drawers.			36 876	60
Other miscellaneous receints		- 1		57
Commissions received on Money Orders Profit in exchange on Money Order business with other Countries Void Money Orders, that is, Money Orders issued between 1st July, 1886, and			1,020	
1888, payment of which had not been claimed up to 30th June, 1889		ше,	44	28
Gross Revenue			\$34,204	
			φυ 1 ,201	24
DEDUCTIONS FROM REVENUE.	\$	cts.	ψυ1,201	24
			ψ01,201	24
Salaries, forward allowances, allowances towards rent, fuel and light, and	\$	cts.	ψ 01,2 01	1 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business	\$ 8,216 187	ets.	<i>фо</i> т, 20т	1 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business	\$ 8,216 187 15	ets. 43 10 60	<i>фо</i> 1,201	1 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters. Other miscellaneous disbursements.	8,216 187 15	ets. 43 10 60	<i>ф</i> 01,201	1 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Missent and dead letters Other miscellaneous disbursements. Amount paid for the redemption of postage stamps	8,216 187 15	ets. 43 10 60	ψ0*,20*	. 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888.	8,216 187 15	43 10 60	ψ 0 *,20*	. 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters Other miscellaneous disbursements. Amount paid for the redemption of postage stamps Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1836, to 31st December, 1888 Transit rates on mail matter passing between Newfoundland and the Domin-	\$,216 187 15 40	cts. 43 10 60 71	ψ υ *,20*	. 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888 Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887	\$,216 187 15 40 857	cts. 43 10 60 71 13	ψυ τ ,201	. 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1836, to 31st December, 1888. Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887. Balance of commission paid to other Countries on Money Order business	\$,216 187 15 40 857 42	cts. 43 10 60 71	ψυ τ ,201	. 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters. Other miscellaneous disbursements. Amount paid for the redemption of postage stamps. Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1886, to 31st December, 1888 Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887	\$,216 187 15 40 857 42	cts. 43 10 60 71 13 30 60 01	ψυ τ ,201	. 24
Salaries, forward allowances, allowances towards rent, fuel and light, and compensation to Postmasters on Money Order business. Discount to Stamp Vendors Mis-sent and dead letters Other miscellaneous disbursements. Amount paid for the redemption of postage stamps Transit rates on mail matter passing through the United States for other Countries, from 1st April, 1836, to 31st December, 1888 Transit rates on mail matter passing between Newfoundland and the Dominion of Canada, from 1st April, 1886, to 31st December, 1887 Balance of commission paid to other Countries on Money Order business. Cost of remittances to the United States on Money Order business.	\$,216 187 15 40 857 42 31	cts. 43 10 60 71 13 30 60 01	9,879	

PROVINCE OF PRINCE EDWARD ISLAND. EXPENDITURE BY CHEQUE, FROM PARLIAMENTARY APPROPRIATION.

	\$	cts.
Conveyance of mails by land. do steamboats, &c.	12,802 1,742	
do railways	21,337	55
Making and repairing mail bags and locks	675	82
Total Mail Service	\$36,557	89
Travelling expenses	162	79
Salaries paid by cheque Travelling expenses Tradesmen's bills Rents and taxes	896	75
Stationery, printing and advertising Other miscellaneous disbursements paid by cheque.	746 749	13
Total Expenditure by Cheque	\$52,077	86

W. H. SMITHSON, Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

Memorandum of Special Mail Subsidies and Steamship Subventions disbursed through the Post Office Department, during the Fiscal Year ended 30th June, 1889.

N.B.—These amounts are not paid from the Parliamentary Appropriation for the Post Office Department, but from the special vote for Mail Subsidies and Steamship Subventions, and are brought into the Public Accounts under that heading.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amour	nt.
Yearly subsidy to Montreal Ocean						8	cts.
Steamship Co.— Halifax and Liverpool, via Mo-	1			l		•	000.
ville (winter)	Andrew Allan	2,530	1	1			
Quebec'and Liverpool, via Mo-	do	2,650	1	}12 mos	s. (to Mar. 31, '89)	126,533	33
Steam communication on the Mus-		2,000	1)			
koka Lakes—	l .						
Ahmic Harbor, Burk's Falls and Gravenhurst, &c	M & N Nov Co	250	0 3 6	Googon	1888	4,102	50
bleam communication on Lakes	MI. 66 11. 11 av. 00.	250	2, 3, 0	Season,	1000	4,102	- 50
Turon and Superior—		100	_	١.,		0.500	
Collingwood & Sault Ste. Marie Owen Sound & Sault Ste. Marie	C. I. S. Transit Co.		$\frac{2}{2}$	do do		$\begin{array}{c} 2,500 \\ 2,500 \end{array}$	
or team communication with the Mag.			_	40		2,000	. 00
dalen Islands—	1						
Pictou, Magdalen Islands, Grand Entry, &c	I Holliday	180	1	do		10,958	34
ream communication between Hali		100	1			10,000	01
fax and St. John, vid Yarmouth— Halifax and St. John. vid Yar	·i					ĺ	
mouth and inturmediate ports	Varmouth SS Co	292	6	do		7,500	00
oteam communication between Port	;					,,000	••
Mulgrave and East Bay, C.B.— Port Mulgrave, East Bay and	1	İ				1	
North Sydney, &c	B.d'Or S. Nav. Co	185	6 & 3	do		7,000	00
North Sydney, &cSteam communication between Cape						1	
Canso and Port Hood, via Port Mulgrave—			İ				
Port Mulgrave to Canso, &c.,							
steam communication between Port	R Macdonald	95	6 & 2	do		5,000	00
"ugrave or Picton Railway Ter	• 1						
unities and Cheticamp &c (the	NI .	ĺ				1	
Local Government having granted a similar amount)—	l I						
Pictou, Port Hood, Mabou			[
Margara and Chatigamn	F W Frager	117	1	do		2,000	00
Steam communication between Hali- fax and St. Pierre—							
Halifax, Cape Breton and St.		1		ļ		1	
Steam communication between	AF. SS. Co	439	F'tly.	12 mos.	(to Mar. 31, '89).	2,000	00
Grand Manan. N.B., & Mainland-	-	1					
Grand Manan, St. John and St.	m c 131				_		
Stephen	E. Gaskill	75 & 50	1	12 do	do	4,000	00
United States and Victoria, B.C.	-			ļ			
Victoria, B.C., and San Fran	-						
cisco, U.S	Goodall & Per-		1	10 do	(to June 30, '89).	14,700	
Steam communication between	. !		1	20 40	(00 0 une 50, 65).	14,100	, 00
Prince Edward Island & Mainland Charlottetown B. F. J. Shadia	-						
Charlottetown, P.E.I., Shediac N.B., and Pictou, N.S.	P.E.Isl'dS.N.Co	60 & 45	4&6	12 do	(to Mar. 31 '80)	10,000) ((1
, = =====				(13	1-2 1.200.1 172, 00).	<u>-</u> -	
			Ì			\$198,794	17

W. H. SMITHSON,
Accountant

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

Detail of all payments for Mail Transportation in Ontario made within the year ended 30th June, 1889.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
				•	\$ ct
Aberarder and Railway Station	D. N. Sinclair	. 1	6	12 months	40 00
Aberdeen and Durham	L. Elvidge.	11	3	12 do	. 73 00
Aberdour and Railway Station	G. Christie	12 151	6 3	12 do	. 70 00 103 33
Abington and Winona	J. Williams.	151	3	8 do do .	159 33
Aboyne and Elora	J. T. Taylor	$1\frac{1}{2}$	6	9 do (to Dec. 31, '88)	
Aberdour and Railway Station Abington and Canfield Abington and Winona Aboyne and Elora do do	T. Godfrey	11/2	6	3 do from do	. 17 50
		5 5	$\frac{2}{2}$	6 do (to Sept. 30, '88) 6 do from do .	. 37 50 . 37 50
Acton and Knatchoun. do do Acton and Speyside. do do Addae and Maguire. Addison and Bell's Station	E. J. Lanorill	5	2	6 do (to Sept. 30, '88)	
do do	T. Wilson	5	2	6 do from do .	37 50
Adare and Maguire	A. Tod	$2\frac{1}{2}$	3	12 do	. 50 00
Addison and Bell's Station	H. S. Moffatt	81/2	6	12 do	
Adelaide and Strathroy	J. Harris	81	6	12 do	. 240 00 425 00
Adolphustown and Napanoo	J. H. Roblin	14 25	6	12 do	585 00
Adolphustown and Napanee Agincourt and Railway Station Agincourt Station and L'Amaroux	W. Lawton	1 20	1 .	12 do	30 00
Agincourt Station and L'Amaroux.	R. H. Madill	4	3	12 do	. 100 0
Agincourt, Canadian Pacific Railway and Midland RailwayAhmic Harbor and Parry Sound		-		10 1	405.0
way and Midland Railway	W. Lawton	32 ⁸	12 3	12 do	
Ahmie Harbor and Parry Sound	S. Poul	1	3	12 do	. 614 0
Ahmic Lake and Spence	J. McCartney	9	ĭ	12 months	
Ailsa Craig and Railway Station	S. Hey	l l	6	12 do	
Ahmic Lake and Spence. Ailsa Craig and Railway Station. Ailsa Craig, Denfield and Ry. Station Air Line Junction and Ry. Station	J. Orr	6	6&12	12 do	
Air Line Junction and Ry. Station	M. Grisdale	94	6 3	12 do	
Alberton and Tynden	R Dunham	7	6	12 do	
Albion and Railway Station	O. D. Elliott	1		12 do	
Albion, Castlederg and Mount Wolfe	S. J. Snell	6&5	6&3	12 do	
Albuna and Cottam	E. S. Irwin	$6\frac{1}{4}$	2	12 do	. 72 7
Air Line Junction and Ry. Station Albert and Marysville. Alberton and Lynden. Albion and Railway Station Albion, Castlederg and Mount Wolfe Albuna and Cottam. Albury and Rednersville do do Aldboro' and Rodney Aldershot and Waterdown Alexandria and McCrimmon Alexandria and Railway Station Alexandria and St. Raphael West. Alexandria and Vankleek Hill.	J. T. Rose	4	3 3	9 do (to Dec. 31, '88) 3 do from do	. 56 2
Aldboro' and Podnov	N Grav	6	6	3 do from do . 12 do	. 18 7 . 144 0
Aldershot and Waterdown	J. Simmons	3	12	12 do	
Alexandria and McCrimmon	D. McCrimmon.	9	6	12 do	
Alexandria and Railway Station	A. J. McDonald.	1	24	12 do	
Alexandria and St. Raphael West.	J. McDougall	17	6	12 do	
			6 6	12 do 12 do	
Algoma Mills and Railway Station	H. F. McQuire	1	6	Season 1888-89	
Alfred and Montebello Algoma Mills and Railway Station Allanburg and Railway Station Allandale and Holly Allandale and Painswick Allandale and Railway Station Allen Park and Hampden Allen Park and Lamlash	W. Livingston	1	12	12 months	
Allandale and Holly	W. Amstrey	3	6	12 do	
Allandale and Painswick	W. Thompson	31		12 do	
Allen Deels and Hampiden	H Rvers	5	36	12 do	
Allen Park and Lamlach	E. Earls	5	3	12 do	110 0
Allenford and Owen Sound	T. N. Williamson	135		12 do	
Allenford and Railway Station	. J. Dean		12	12 do	
Allenford and Saugeen	. W. Gilbert	11	6	12 do	
Allenford and Skipness	J. Davidson	4	6	12 do	
Allen Park and Hampden Allen Park and Lamlash Allenford and Owen Sound Allenford and Railway Station Allenford and Saugeen Allenford and Skipness Allensville and Catching Post. Allensville and Utterson Allenwood and Elmvale. Allenwood and Elmvale.	do	4	9 3	12 do	
Allenwood and Elmvale	J. G. Dickinson.	6	3 3	12 do	. 110 0
Alliston and Elm Grove. Alliston and Railway Station.	. do	3	3	12 do	. 45 0
Allisonville and Consecon	. G. Pine	8	3		
Alliston and Elm Grove	S. Berridge	14r. t	. 6 12		
Alliston and Kailway Station	. T. Langley	9	$\begin{bmatrix} 12 \\ 6 \end{bmatrix}$		
Alliston and Rosemont Alloa and Edmonton	W. Goulding.	6	3	12 do	
wild Editionion	D. Burk	10) 9	12 do	140 0

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.	
•							\$ ets.
Alma and Railway Station		82	12 3	12 12		ths	116 00 130 00
Almonte and Clayton	A. Barnett	10&12	6	12	do		225 00
Almonte and Railway Station Almonte and West Huntley	E. Dowdall	12	24 3	$\frac{12}{12}$	do		164 11
Alport and Bracebridge Alsfeldt and Railway Station	H. F. Bickmore.	4	3	12	do		196 00 117 00
Alsfeldt and Railway Station Althorpe and Maberly	H. Ziegler	$\frac{1\frac{1}{4}}{9}$	6 2	12 3		(4- Till - 90 200)	100 00
do do	J. W. Morris	. 9	$\frac{2}{2}$	9		(to June 30, '88). from do	22 50 63 36
Allumaton and Pailway Station	A. Menzies	1		12	do		96 72
Allvinston and Railway Station Amaranth Station and Ry. Station.	J. Lacon	1	$\frac{12}{6}$	12 12	do		85 00 40 00
Amberley and Kincardine	J. Bayne	14	6	12	do		298 00
Amberley and Kintail	T. Elson	6	6	2	do	10 dys.(from Jan. 22, '89)	38 23
Amberley and Lochalsh	J. McLennan	4	3	6		(to Sept. 30, '88).	42 00
Amberley and Lurgan	J. McGrindle	$\frac{4\frac{1}{2}}{10}$	3 6	12 12	do	• • • • • • • • • • • • • • • • • • • •	80 00 400 00
Amherstburg and Oxlev	A. Elliot.	19	6.	12	do		475 00
Amherstburg and Railway Station. Amherstburg and Windsor	A. Fox	1	12	12	do		218 40
Amiens and Lobo	R. Sharpe	18 12 1	3&6 3	$\begin{array}{c} 12 \\ 12 \end{array}$	do		391 75 116 96
Amigari and Railway Station	A. B. Hurrell	_ \	12	12	do		65 00
Ancaster and Hamilton	J. Anderson	7 15	$\frac{12}{2}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do do	• • • • • • • • • • • • • • • • • • • •	224 00 250 00
Angus and Essa Centre	J. M. Coulson	6	$\bar{2}$	12	do		80 00
Angus and Ra Iway Station Anson and Railway Station	W. J. Smith	50 7748	$\frac{12}{6}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do		60 00
Ansonia and Thessalon	J. B. Dobie	8	1	3	do	(to June 30, '88).	$\begin{array}{c} 25 & 00 \\ 16 & 25 \end{array}$
Anten Mills and Railway Station Antioch and Grassmere	J. McLaughlin	$10^{\frac{1}{2}}$	$\frac{6}{1}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do		110 00
Appin and Glen Willow	J. M. Cameron	$5\frac{3}{4}$	3	3	do	(to June 30, '88).	52 00 22 50
do do	J. Reilly	53	3	9	do	from do	67 50
Appleby and Railway Station	J. Prescott	41	$\frac{3}{6}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		100 00 82 00
Appledore and Railway Station	O. B. Arnold	21/3	2	12	do		64 48
Appleton and Carleton Place Appleton and Railway Station	J. G. Munro	4\\\4\\\\4\\\\\4\\\\\\\\\\\\\\\\\\\\\\	$\begin{array}{c} 12 \\ 12 \end{array}$	6	do	(from Oct. 1, '88) (to Sept. 30, '88).	147 21 157 50
Apsley and Cheddar	T. Eastland	21	1	12	do		180 00
Apsley and Lasswade. Apsley and Peterboro'	do do	11 40	$\frac{1}{3}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do		52 00
Apto and Phelpston Station	H. O'Neill	6	6	12	do		550 00 180 00
do do	R. S. Weagant T. Archer	9	3	3	do	(to June 30, '88).	28 00
Archville and Ottawa	C. M. Garrow	13	6	12	do	from do	84 00 80 00
Ardagh and Colden Valley	J. Driver	9	1	3	do	(to June 30, '88).	17 50
Ardagh and Golden Valley	J. W. Babcock.	5	$\frac{1}{6}$	$\frac{3}{12}$	do	do	6 25 75 00
Arden and Tamworth	do	$20\frac{1}{2}$	3	12	do		190 00
Ardtrea and Orillia. Arkona and Keyser.	W J Evans	9 5 1	2 2	$\begin{array}{c} 12 \\ 12 \end{array}$	do do	• • • • • • • • • • • • • • • • • • • •	$160 00 \\ 75 00$
Arkona and Thedford	W. Hester	71	6	12	do	************	140 00
Arkona and Watford	F. Hooper	12	6 2	12 6	do	/to Sont 90 200)	450 00
do do	W. F. Sithes	$\frac{3^{3}}{3^{3}}$	2	6	do	(to Sept. 30, '88). from do	25 00 35 00
Armadale and Unionvilledo do	J. Webber	$\frac{3\frac{3}{4}}{5\frac{1}{4}}$	3	3	do	(to June 30, '88).	25 00
Armow and Kincardine	MR Hemingway W. Shier	11	3 3	9 12	do	from do	$\begin{array}{c} 67 \ 11 \\ 170 \ 00 \end{array}$
Armstrong's Mills and Guelph	G. Armstrong.	8	2	12	do		75 00
Arnott and Railway Station Arnprior and Fitzroy Harbor	W. G. Murray	128	$\begin{array}{c c} 12 \\ 6 \end{array}$	12	do	(to Dec. 31, '88)	60 00 258 75
do do	H Somerville	19	6	3	do	from do	68 50
Amprior and Railway Station	H. Hatton	202	24	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		174 72 275 00
Arthur and Fergus	J. Moriarty	12		12	do		275 00 223 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.			Amount.
A-41							\$ cts.
Arthur and Metzdo do	R. J. Williams.	6 6	2 2			hs (to Oct. 31, '88) from do	46 66 33 33
Arthur and Monck	W. Hamilton	13	2	12	do		170 00
Arthur and Railway Station Arva and Ballymote.	J. Buschlen	3	24				125 00 65 00
Ash and Railway Station	W. H. Dorland.	15	6		do		35 00
Ash and Railway StationAshdad and Railway Station	S. Felletor	4	3	12	do		25 00
Ashdad Railway Station and Sheedy Ashdown and Bear Cove	H. Bishton	9 <u>1</u> 8	3		do	(from Mar. 1, '89)	12 50 40 00
Ashdown and Turtle Lake	A. H. Ashdown.	61	1	12	do		60 00
Ashdown and West Grove	M. E. West	4	1 6				40 00
Ashgrove and Georgetown Ashley and Rockford Station	G Follis	11	-				225 00 50 00
Ashton and Prospect Ashton and Railway Station.	W. Burrows	111*	3	12			235 00
Atherley and Railway Station	H. S. Conn	2	$\frac{6}{12}$				100 00
Atherton and Delhi	G. C. Wilson	1 3	2	12 9	do	(to Dec. 31, '88).	160 00 33 75
do do	A Wilson	1 3	2	3	do	from do	11 25
Athlone and Tottenham. Attercliffe and Railway Station	S. E. Turner	17	6 12		do		220 00
Atwood and Mitchell.	J. McKov	17	6				78 24 432 00
Atwood and Railway Station	D. Gordon	1	6	12	do		52 00
Auburn and Blyth, &c	W. J. Moore	6 & 9½ 6 & 12	6 8 3	$\frac{2}{10}$	do	(to May 31, 88) from do	62 33
do do Aughrim and Bothwell	R. J. Armstrong	10	6			from do (to Dec. 31 88).	330 62 216 75
do do	W. McAlpine.	1 10	6	3	do	from do	62 2 5
Aughrim and Mossidedo do	J. McCabe	6	3	9	do	(to Dec. 31, 88	63 00 25 00
Auguston and Horning's Mills	W. August	3	2	12	do		23 00
Aultsville and Bush Glen	G. Bush	9	2	12	do		00 00
Aultsville and East Williamsburg Aurora and Railway Station	D. W. Doan	$\begin{vmatrix} 3 \\ \frac{1}{2} \end{vmatrix}$	6 24		do		72 00 120 00
Aurora and Schomberg	H. Isaacs	15	6	9	do	(to Dec. 31, 88).	336 00
do do	E. Ashberry	15	6	3	do	(from do	112 00
Avening and Railway Station	J. Pingle		$\frac{3}{12}$		do		150 00 120 00
Avon. Putnam and Railway Station	L A. Kinnee	6	6&12	12	do		350 00
Avonry and Wilkesport	J. Burden	$\frac{2\frac{1}{2}}{7}$	2				. 40 00
Aylmer and Dorchester Station	R. Learn	20	6				40 00 400 00
Aylmer and Dunboyne	W. S. Pierce.	31	6	12	do		500 00
Aylmer and Railway Station Aylmer and Seville	R. C. Wright	4	24 2				312 00 48 00
Ayr and Railway Station	W. Hilborn	1 1					199 04
Ayton and Railway Station	H. Ringel	3	12	12	do	· · · · · · · · · · · · · · · · · · ·	90 00
Baby's Point and Port Lambton	W.H. McDonald	1	3	12	do		50 00
Daden and Wellesley	C. Harefeld.	1 0	6	12	do		350 00
Badgeros and McIntyre Bagot and Burnstown	N. D. McKinnon	$\frac{3^{3}}{5}$	3			(from Sept. 1, '88)	35 00
Paulsville and Railway Station	III McChiaig	1 4			do	(to Sept. 30, '88).	40 00 50 00
Jaia and Glen Orchard	N. Orchard	8	2	6	do	(to Sept. 30, '88).	51 60
~ala and Sahanatian	I. White	8 9	$\frac{2}{1}$		do do	from do	16 15
		1			do	••••	50 00 50 25
~~uantrae and Railway Station	IR HIII	1 4	12	12	do		60 00
Ballantyne's Station and Ry. Station Ballinafad and Georgetown	LI W MCKEE	6	2 6		do		26 00 250 00
~aunvilla and South March	P Orchard	4	2	12			40 00
~ usalli terove and Ronglon Ralla	LI Conn	l h	2 2	12	do		85 00
Balsam Lake and Victoria Road Bamberg and St. Agatha	H' Walter	h.			do do		72 00 72 00
~ unity and Haldana Hill	I Rarrit	b	1	3	do	(to June 30, '88).	6 25
= all Dirv and Shrucodala	l do	. h	1	9	do	from do	33 75
Bancroft and Cheddar	D II Coment	21	1 7	12	do		125 0 0

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Banda and Scarlet Hill Banks and Collingwood Bannockburn and Railway Station. Bardsville and Falkenburg Barkaway and Germania Barkerton and Commanda Barkerton and Commanda Barkerton and Commanda Barkerton and Railway Station do do Bark Lake and Brudenell do do Bark Lake and Murchison do Bark Lake and Rockingham Barrie and Hillsdale Barrie and Hillsdale Barrie and Street Letter Boxes Barrie and Street Letter Boxes Barrie and Wharf Barriefeld and Kingston Barrie Island and Gore Bay do Bar River and Garden River Barryale and Railway Station Basin Depot and Eganville Bath and Railway Station Battesu and Railway Station Battesu and Railway Station Battersea and Kingston Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Railway Station Battesu and Bracebridge Baysville and Clinton Bayfield, Seaforth and Ry. Station Bayside and Belleville Baysville and Bracebridge Baysville and Maple Ridge Baysville and Maple Ridge Baysville and Morley. Beachburg and Westmeath Beachville and Embro. Beamsville and Canaan Bearbrook and Canaan Bearbrook and Canaan	do J. D. Carveth E. Lennox W. Johnson S. McEwen C. Bard S. McCord R. Barrett N. McEachern M. Corkery T. Cuthbertson J. Billings J. Taylor B. Reynolds T. Culbertson C. Davis G. G. Smith W. H. Crosby M. Murphy W. H. Crosby J. Ryan H. L. McLean W. N. Runnalls J. Evoy P. Barry R. Reeves W. Aylesworth A. Stevenson W. Bourchier A. Ferguson A. Cooper R. Beattie D. Hay W. H. Cook W. B. Wemp F. Sander G. F. Marsh J. Garrison L. Williams F. M. Williams F. M. Williams F. M. Carswell, ir H. A. O'Brien J. B. Grobb R. Bowden J. B. Grobb R. Bowden	6½ 2½ 2½ 16 12 15 150 yd 49 36 16 16 8 5 5 11 9 7 6 6 19 r. t. 3	1 1 1 6 12 6 12 3 1 . 6 6&12 6 3 1 1 1 1 2 2 6 6 6 6 1 1 1 1 1 1 1 1 1 1	6 months (to Sep. 30, '88) 6 do from do 12 do 12 do 12 do 12 do 13 do 14 do 15 do 16 do (to Dec. 31, '88) 16 do from do 17 do 18 do 18 do (to Dec. 31, '88) 19 do 10 do (to Sept. 30, '88) 10 do from do 11 do (to Sept. 30, '88) 11 do from do 12 do 12 do 13 do (to Sept. 30, '88) 14 do from do 15 do 16 do (to Sept. 30, '88) 17 do (to Sept. 30, '88) 18 do from do 19 do (to Sept. 30, '88) 19 do (to Sept. 30, '88) 10 do (to Sept. 30, '88) 11 do from do 12 do (to Mar. 31, '89) 12 do (to Mar. 31, '89) 13 do (to June 30, '88) 14 do (to June 30, '88) 15 do (to June 30, '88) 16 do (to Season, 1888. 17 do (to June 30, '88) 18 do (to June 30, '88) 19 do (to June 30, '88) 10 months (to Jan. 31, '89) 2 do from do 11 do (to Season, 1888. 10 months (to Jan. 31, '89) 2 do from do 12 do (to Season, 1888. 10 months (to Jan. 31, '89) 2 do from do 12 do (to do (to do (to (to (to (to (to (to (to (to (to (t	\$ cts. 25 00 25 00 170 00 170 00 170 50 60 00 48 00 48 00 75 00 395 00 25 00 47 50 47 50 95 00 205 92 250 00 205 92 250 00 20 75 75 00 9 166 75 00 20 148 00 332 31 46 96 139 48 50 00 202 50 305 00 205 92 250 00 20 00 148 00 31 00 31 00 31 00 31 00 41 67 8 33 140 00 117 50 180 00 140 00 225 00 200 00 100 00 200 00 100 00
Beaverton and Railway Station Becher and Wallaceburg. Beckstead and Dunbar. Bedford Mills and Newboro'. Beechwood and Seaforth do do Beeton and Railway Station. Belfast and Lanes.	A. Hamilton J. R. McDonald. A. G. Colquhoun J. Woodman J. J. McKenna G. K. Holland H. E. Kinsey J. Mullin.	5 13 6 6 6 4 4	12 2 12 2	12 do	42 00 150 00 70 00 116 00 70 00 63 75 21 25 95 00 80 00
Belfast and St. Helen's. Belfountain and Railway Station Belgrave and Bushfield. Belgrave and Marnoch Belgrave and Railway Station. Belle River and Byrnedale. Belleville and Albert College	P. Porterfield S. Morley	$ \begin{array}{c c} & 6 \\ & 3\frac{3}{4} \\ & 5\frac{1}{2} \\ & 1\frac{1}{2} \end{array} $	$egin{array}{c} 2 \\ 3 \\ 12 \\ 1 \end{array}$	12 do	150 00 75 00 75 00 60 00 132 00 55 00 25 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
							\$ cts
Belleville and Belleville Station	H. W. Cronk	14	12	10	mon	ths 11 dys. (from May 21, '88)	64 71
Belleville and Bridgewater	J. Campbell, jr.	30	6	12		• • • • • • • • • • • • • • • • • • • •	800 00
Belleville and Madoc. Belleville and Railway Station	W. Wooley H. W. Cronk	$\frac{27}{1\frac{1}{4}}$	$\frac{6}{24}$	$\begin{array}{c} 12 \\ 12 \end{array}$		*	460 00 312 00
Belleville and Sidney Crossing	W. Vandervoort	$6\frac{1}{2}$	2	12			80 00
Belleville and Street Letter Boxes. Belleville and Wallbridge.	H. W. Cronk	5	12 3	$\begin{array}{c} 12 \\ 12 \end{array}$			250 00 110 00
Bell Ewart and Lefroy Station	A. Munro	.1	12	3	do	(to June 30, '88)	20 00
do do	F. McKav	1	12	9	do	from do	60 00
Bell Ewart and Roach's Point Belmont and London	T. Ellis	13	6			1888	70 76 145 00
Belmont and Railway Station	J. Evans	1	12	12			69 00
Belton and Railway Station	J. Gibson	1	12	12			40 00
Belton and St. Ives. Belwood and Craigsholme	J. Hanna	9 4 3	$\frac{2}{3}$	$\begin{array}{c} 12 \\ 12 \end{array}$			117 76 60 00
Delwood and Dracon	l do	71	2	12			71 00
Belwood and Railway Station Bendale and Woburn	do	1 1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12	12	do	// TD 91 300)	65 00
do do	A Yeoman	$\frac{2}{2}$	6	9	do	(to Dec. 31, '88). from do	60 00 20 00
Benmiller and Goderich.	J. Miller	6	3	12	do		150 00
Benoit's Mills and Nosbonsing	E. Benoit	6	3	7	do	18 days (from Aug. 14, '88)	31 52
Bensfort and South Monaghan	E. Stirton	5	3	12	do	Aug. 14, 66)	75 00
Bentpath and Dresden Berkeley and Glascott	J. McLachlin	6	2	12	do		50 00
Berkeley and Railway Station	R. English	6	6	$\begin{array}{c} 12 \\ 12 \end{array}$			84 00 80 00
Derlin and Crosshill	J. T. Wilford.	164	6	12			390 00
Berlin and Glen Allan	T. Hunt	24	6	12		• • • • • • • • • • • • • • • • • • • •	317 00
Berlin and Street Letter Boxes Berlin and West Montrose	H. Bachman	143		12 12		• • • • • • • • • • • • • • • • • • • •	200 00 375 00
Berriedale and Denville	J. A. Crawford	5	3	6	do	(from Oct. 1, '88)	58 50
Berriedale and Hartfell	J. Duke	8	2	6	do	from do	74 50
Berriedale and Railway Station Bethany and Railway Station	U. M. Kelly	11/2	$\frac{3}{12}$	$\frac{6}{12}$		from do	19 50 90 00
Bethany and Railway Station. Bethel and The Corners.	J. Robinson	1 4	6	6	do	(to Sept. 30, '88).	16 25
do do	R. Kobinson	1 1	6	6		from do	20 00
Dickford and Railway Station	F. W. Johnson.	1100 vd	$\frac{6}{12}$	12 8 ·	ob ob	(from Aug 1, '88)	350 00 20 00
Big Point and Dover South	A. Cheff	71	2	12	do		57 50
Billings Bridge and Ottawa Binbrook and Glanford Station	S. Davidson	3 5	6	12 9	do	(to Dec. 31, '88)	150 00 133 50
do do :	A. Wickett	5	6	3	do	from do	44 50
Dinkham and Erin	W. Wansborough	41	2	12	do	*	70 00
Birdsalls and Railway Station Birds Creek and Hybla.	A. Sutherland	$\frac{1}{5}$	$\begin{array}{c c} 6 \\ 1 \end{array}$	$\frac{12}{12}$			4 00 35 00
Birr and Devizes &c	J. Goulding	5 & 7	6 & 2	3		(to June 30, '88).	67 50
do do	J. Lambourne.	5 & 7	6 & 2	9	do	from do	165 00
Biscotasing and Railway Station	P. J. Finjan	150 tt	12 12	9	do	(to Dec. 31, '88) from do	11 75 3 85
Bishop's Mills and Prescott	C. W. Knapp	16	3	12	do	1	255 00
Bissett's Creek and Railway Station	J. H. Dickson C. Carmichael	20 yd.	12		do	(to Dec. 31, '88)	7 50 2 50
Black Bank and Lisle	N. Duffin	10	3	$\frac{3}{12}$	do	from do	200 00
Diackfilm and Orleans	R. Dagg	3	3	12	do		50 00
Black Creek and Railway Station Black's Corners and Laurel.	II. H. Allen		12	12 12	do		62 40 32 00
PidCK Kiver Bridge and Picton	(+ Victimre	74	3	12			98 00
Plackstock and Cadming	U W Kobertson) 2余	6	12	do		100 00
Blackstock and Purple Hill. Blackwater and Railway Station	W. Bartlev	4	$\frac{2}{24}$	12 8		(to Nov. 20. 288)	55 00 41 73
do do :	I Duddy	1 1	24	4		(to Nov. 30, '88).	20 87
Diackwell Station and Ry Station	P Wellington, in	1 2	2	12	do		26 00
Blair and Railway Station. Blairhampton and Minden.	LI Kananaw	7 7	5	$\frac{12}{12}$			20 00 52 00
	I TT . LPICULL		, 1	144	uU		02 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ cts
Blairton and Havelock	M. J. Peters	8 9	3 2	12 months 1 296	141 68
Blairton and Wariston	A. Church		11	5 do (from Nov. 1, '88 12 do	41 66 28 00
Blenheim and Leamington	J. J. Minnis	$38\frac{1}{2}$	6	12 do	. 1,195 00
Blenheim and Morpethdo do	M. C. Dexter	10 10	6	3 do (to June 30, '88) 9 do from do .	
Blenheim and Railway Station	J. M. Burk	34		3 do (to June 30, '88)	. 18 75
do do Blenheim and Rondeau	G. A. Breeze	3	12	9 do from do . 12 do	
Blessington and Shannonville	P. McKenny	5	3 & 6	12 do	
Blind River and Railway Station	G. A. Butterfield	1	6.	5 do (from Nov. 1, '88	23 40
Blind River and Thompson	W. E. Bateman.	13	$\frac{1}{12}$	12 do	
Bloomfield and Railway Station Blount and Glen Cross	W. Woods	$2^{\frac{7}{2}}$	3	12 do	
Bluevale and Railway Station	J. Gardner	3	12	12 do	. 139 00
Blyth and Railway Station Bobcaygeon and Lindsay	L. H. Shane	$22^{\frac{1}{2}}$	24 6	12 do	
Bobcaygeon and Peterboro'	W. H. Bottum.	22	6	12 do	
Bobcaygeon and Peterboro' Bogart and Chapman Bognor and Woodford	T. Meraw	7	3	12 do	
Bornholm and Brodhagen	W. D. Korke	6	3 3	12 do	
Bornish and Sable	A. McDonald	3	2	12 do	
Borromee and Orleans	A. Chartrand	4	1	12 do	. 25 00
Boskung and Minden Bosworth and Riverbank		14	1 2	12 do 12 do	
Botany and Thamesville	P. M. McBravne			12 do	1 27 77
Bothwell and Clachan	A. McArthur	6	3	12 do	
Bothwell and Florence			6 2	12 do 12 do	
Boulter and Combermere	J. Lynch	18	3	12 do	
Boulter and CombermereBoulter and L'Amable	M. McLean	221	3	9 do (to Dec. 31, '88)	. 226 50
do do Bourdeau and Sprucedale	E. J. Lume	241	3 2	3 do from do 4 do (from Dec. 1, '8	
Bowesville and Railway Station Bow ing Green and Laurel	P. Nelligan	2	3	12 do	. 49 48
Bow ing Green and Laurel	J. Davis	$3\frac{1}{2}$		9 do (to Dec. 31, '88'	44 43
Bowling Green & Laurel Ry. Station Bowmanville and Cæsarea	K. Banks	$\begin{array}{c} 5 \\ 22 \end{array}$	6	3 do from do	
Bowmanville and Courtice				12 do	-1
Bowmanville and Tyrone	J. Moore	7	6	12 do	. 143 00
Bracebridge and Fraserburg do do	J. Clark	12 12	1 1	9 do (to Dec. 31, '88 3 do from do	60 00 19 25
Bracebridge and Muskoka Falls			3	12 do	. 85 80
Bracebridge and Point Kaye	C. Kaye	20	2	Part of seasons 1887-8	
Bracebridge and Port Carling	C McCully	21	2	and 1888-89 Part of season 1888	
Bracebridge and Railway Station	$\mathbf{F.\ Sander} \dots$. 1	1	12 months	. 75 00
Bracebridge and Wharf	do	6	12	Season 1888	
Brackenrig and Port Carling	F. J. Davidson	4	$\begin{vmatrix} 2\\2 \end{vmatrix}$	do	
Bradford, Bond Head and Newton	۱ ا	i			
Robinson.	J. McDermott	9 & 6	6 & 12	6 months (to Sep. 30, '8	3) 162 50
Bradford and Newton Robinson Bradford and Railway Station	do	9	6 24	6 do from do 12 do	
Bradshaw and Brigden	W. Bradshaw	5	2	12 do	. 65 00
Braeside and Railway Station	. J. Gillies	7.6	12		
Brae Lake and Uplands Bramley and Catching Post	. W. J. Taylor	84	$\frac{1}{12}$	12 do	
Brampton and Huttonsville	C. Brooks	4	3	12 do	. 88 00
Brampton and Nortonville	J. Norton	3	3	12 do	. 50 00
Brampton and Railway Station Brandy Creek and Railway Station	A. J. Hood		12 6	12 do	
Brantford and Harley			6		
Brantford and Langford	W Reed	. 8	6		
Brantford and Mohawk, &c		14-4-1	3 & 6		. 270 00

16

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ ct
rantford and Simcoe	W. P. Croome	24	6	12 months (less fine)	848 00
trantford and Street Letter Boxes.	A. D. Clement	$3\frac{3}{4}$	12	9 do (from July 1, '88)	234 00
rave Crossing and Railway Station	C. Bray	20 yds	2 3	12 do	7 50 60 00
readalhana and Vankleek Hill	C. Camppen	5 9	3	12 do 12 do	170 00
rechin and Dalrymple	S Luck	5 <u>1</u>	3	12 do	100 00
rechin and Railway Station	do	2	12	11 do	90 00
rentwood and Railway Station	J. O'Connell	18		12 do	50 00
reslau and Weissenburg	A. Hoch	8	6	12 do	250 00 49 2
rewster and Parkhill	F. Gratton	16 16	3	3 do (to June 30, '88). 9 do from do	111 7
do do Brigden and Railway Station	S. Gratton			12 do	86 0
Bright and Washington, &c	A. Gatzka	6 & 1	$\begin{array}{c} 12 \\ 6 & 12 \\ 6 \end{array}$	12 do	239 0
Brighton and Campbellford	P. Richards	20	6	12 do	384 0
Srighton and Lovett	W. Bate	$6\frac{1}{2}$	6	12 do	195 0 40 0
Frisbane and Coningsby	J. W. Burt	4	2	12 do	45 0
Britton and Hammond	M. A. Alexander	$1\frac{1}{2}$	3 6	12 do	60 0
Britton and Railway Station Prockville and Morristown	D H Lyon	24	6	12 do	325 0
Brockville and Railway Station	J. Cavanagh	ī	7	12 do (less fine)	86 2
do do	W. Curry	1	18	12 do	210 6
Prockville and Sherwood Springs.	W. Kilmury	8	1	12 do	40 0 100 0
Brockville and Street Letter Boxes	J. McKenny	39	as req	. 12 do	100 0
Frockville and Westport	land	44	6	12 do	984 0
brockville-C. P. Ry. and G. T. Ry	J Cavanagh	20 vds			370 (
ronte and Railway Station	J. McDonnell	1	12	12 do	125 2
Stonto Station and Palarmo	A. Coffee	. 3	6	12 do	190 0
Smoke and Manion	J. Conlen	7	1	12 days (to April 12, '88).	6 9
Brooke and Wemyss	B. McKeracher	2	2	11 months 18 days (from April 13, '88)	48 3
Brookeria Station and Dr. Station	M Topp	2	6	12 months	50 0
Brookfield Station and Ry. Station Stockholm and Owen Sound	J. Mills	2	3	12 do	75 (
Brookholm and Shouldice	T. Skinner	. 1 7	1	12 do	50 (
Prooklin and Railway Station	. к. р. нау		12	12 do	70 (
Protherston and Newbridge	. M. Droulers	. 4	2 6	12 do	45 (137)
Brougham and Markham	S. G. Reesor	13	6	6 do from do	200 (
do do	J. Scott	12	6		400 (
Brougham and Whitby Brown Hill and Ravenshoe Station	J. Brown	80rod	12		30 (
Brucefield and Railway Station Bruce Mines and Cloudslee Bruce Mines and Cockburn Island	. W. Dixon		12		106
Bruce Mines and Cloudslee	. N. McEwan	. 5	1		10
Bruce Mines and Cockburn Island	. C. Hendrickson	42	1	Part of seasons 1887-88 and 1888-89	216
Bruce Mines and Desert	J. Robinson	. 16	1		
do do	R. E. Muller	. 16	1		62
Bruce Mines and Port Finlay	. C. Hendrickson	. 22	2		156
Bruce Mines and Railway Station.	. J. Hicks	. 2	6		58
	1	ļ	1	Nov. 15, '88 2 months (from Feb. 1, '89)	
Bruce Mines and Rydal Bank	F Reprett	. 9			
Brudenell and Castile Brudenell and Emmett	E. Ring	. 13		12 do (and arrears)	
runner and Railway Station	J. Attridge		a e	12 do	30
Brunswick and Railway Station	. L. C. Patterson	· 1	8 6		
Srussels and Cranbrook	P. McDonald	.i b			
Brussels and Railway Station Bulger and Bulger's Corners	T. Cormon	· 8&	12 12	2 12 do	1 40
Surford and Catheort &c	R. French	. 8 &	3 8	3 12 do	. 174
Burgess Corners and Douglas	W. Whitelaw	. 5	-	i 12 do	. 147
Burford and Cathcart, &c Burgess Corners and Douglas Burgessville and Newark	. M. Springer	. 5			. 120
do do	. J. Heath				90 130
Burgessville and Oriel	W. B. Somervill	.e 8	1 1	3 12 do 2 12 do	49
Burgessville and Railway Station. Burk's Falls and Chetwynd	I A Rumohr			6 do (from Oct. 1, '88	
~ u.a. s raiis and Unetwynd	J. A. Crawford	.ા ે	1	6 do (to Sept. 30, '88)	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
				1007.00	\$ cts
Burk's Falls and Dunchurch	D. McMillan	29	3	Part of seasons 1887-88 and 1888-89	140 00
Burk's Falls and Hartfell		$15\frac{1}{2}$	$\frac{2}{12}$	6 months (to Sept. 30, '88)	86 50 153 75
Burk's Falls and Railway Station Burlington and Port Nelson	W. Bamford	11/2	6	12 do	90 00
Burlington and Railway Station	H. Bray	$1\frac{1}{2}$ $1\frac{1}{2}$		6 do (to Sept. 30, '88). 6 do from do	43 64 45 00
do do Burlington Beach and Ry. Station.	J. Hughes		12&3	Part of seasons 1887-88,	
Burlington Station and Zimmerman	•	9	6	and 1888-89	51 60 280 00
Burnahy and Railway Station	W A Kinnard	2	3	12 do	50 00
Burnbrae and Railway Station Burnbrae and Stanwood	A. T. Donald	5 11 1	6 2	12 do	159 00 98 00
Burnley and Castleton	D. Welton	8	3	12 do	120 00
Burnstown and Springtown Burnt River and Rettie's Station		5	3 6	6 do (from Oct 1,'88).	40 00 80 00
Burritts Rapids & North Montague	J. A. Ormond	7	1	12 do	52 00
Burys Green and Fells Station Byng Inlet and French River	J. Fell J. Lamondin	$egin{array}{c} 2rac{1}{2} \ 25 \end{array}$	ftnly.	12 do	46 80
		65	2	and 1888-89	72 00 530 00
Byng Inlet North and Parry Sound Byron and London	do J. Charles	6	6	12 months	160 00
Cahore and Chrysler	G S Johnstone	4	3	12 do	62 00
Caistorville and Winona Calabogie and High Falls	J. Williams	20	3	4 do (to July 31, '88).	81 66
Calabogie and High Falls	T. Dillon	7	$\frac{1}{6}$	12 do	43 08 58 00
Calder and Railway Station	. H. G. Jones	2	2	12 do	55 00
Calderwood and Railway Station. Caldwell and Caledon			3 6	12 do 12 do	80 00 186 25
Caldwell's Mills and Ry. Station	. W. Reid		- 1	12 do	40 00
Caledon and Railway Station	N. Patterson	11	18 6	12 do	81 00 410 00
Caledonia and Conboyville	. S. Arrell	6	2	12 do	70 00
Caledonia and North Seneca Caledonia and Railway Stations	F. Dawson P. McMullen	3	6 36		112 00 159 12
Caledonia and Six Nations	. J. A. Beaver	4	$\frac{2}{3}$	12 do	57 50
Caledonia Springs and L'Orignal do	I. Lalonde	9 9	3	6 do (to Sept. 30, '88). 6 do from do	77 50
do do Callander and Railway Station	J. Lacombe	9	3 6	Season 1888	
Callander and Wisawasa	. R. W. Graham .	2	3	12 do	78 00
Cambray, Lindsay and Ry. Station Cambray and Lindsay	R. Moffatt	8&10 9			150 00 135 00
Cameron and Railway Station	. J. Bryson	1 3	3 12	12 do	120 0
Camerontown and Railway Station Camerontown and Summerstown.	n E. Cameron	200yd			
Camilla and Granger	. W. Dynes	6	$\frac{1}{2}$ 2	12 do	78 0
Camilla and Whittington Camlachie and Hillsborough	T. Sanderson R. Blain	9		12 do	
Campbellcroft and Railway Station	n A. Smith				35 0
Campbell's Cross, Cheltenham and Railway Station	. A. Campbell	1&21r	t 12&	6 12 do	339 0
Campbellford and Godolphin	. C. Aggett	5			68 0
Campbellford and Railway Station	gan		12		
Campbellville and Railway Station Campbellville Station and Nassa	n S. R. Lister	1	$\frac{12}{8}$ 6	12 do	50 0
gaweya	. J. Easterbrook.	5			
Campbellton and West Lorne Campden and Rosedene	. J. Martin	. 6			
Camperdown and Changing Post.	. J. Barclay	. 4 rod	s 12	12 do	10 0
Canboro, Canfield and Warner Canfield and Railway Station	. I. Swavze	6 & 2	4 6 cc	3 12 do	
Canning and Paris Station	H. Oliver] 4		12 do	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.
						\$ cts.
Cannington and Pefferlaw	G. Newson	10	3		nths	174 00
Cannington and Railway Station	R. J. Harwood W. Cassidy	1	24 24	6 do	to Sept. 30, '88).	30 00 30 00
Cape Croker and Colpov's Bay.	W. D. Bell	152	2	3 dc	(to June 30, '88).	50 00
Cape Rich and Meaford	E. Cross R. Cox	15 10	$\frac{2}{2}$	9 do	from do	150 00 120 00
Carden and Horncastle	R. Cowan	4	2	9 dc	(to Dec. 31, '88)	37 50
do do	G. Sharp	13	$\frac{2}{3}$	3 do	from do	12 50 200 00
Cardinal and Railway Station	W. Stitt	13	14)	73 00
Cargill and Railway Station	C. W. Keeling	3	12			96 00
Carleton Place and Railway Station Carleton West and Railway Station		85	36 12)	374 40 62 50
Carlingford and Sebringville	R. Crawford	81/2	3	12 de		148 16
Carluke and Hamilton	W. Young	131	6)	400 00 110 00
Carmunnock and Monkton	A. Campbell	14	12)	60 00
Carp and Elm	N. Smith	3	3	6 de	(to Sept. 30, '88).	37 50
do do Carrville and Patterson	J. Gilchrist	$\frac{3}{2\frac{1}{2}}$	3 6		o from do o (to Feb. 28, '89)	37 50 73 33
Carryille and Sherwood	do	2	6	1 de	from do	6 66
Cartier and Railway Station. Carsonby and North Gower.	C. Landers	20 ft.	12		· · · · · · · · · · · · · · · · · · ·	10 00 61 25
Carswell and Railway Station	D. Carswell	$\frac{31}{3}$	$\frac{2}{2}$		· · · · · · · · · · · · · · · · · · ·	53 00
Carthage and Tralee	B. Donagen	2	3	12 de	·	40 00
Cashion's Glen and Cornwall Cashtown and Creemore	J. J. Cashion	13	3		· · · · · · · · · · · · · · · · · · ·	250 00 100 00
Casselman and Crysler	B. Coriar	11	6	12 de		197 00
Casselman and Railway Station Cassels and Railway Station	R. A. Castleman	81	12			25 00 207 48
Castleford and Railway Station	J. Warnock	2	6	12 de	· · · · · · · · · · · · · · · · · · ·	200 00
Castlemore and Kleinburg Station	R. Douglas	14 r.t.	6	3 de	to June 30, '88).	66 00
Cataract and Railway Station	J. Hugill, jr		$\begin{array}{c c} & 6 \\ 12 \end{array}$		o from	187 50 65 00
Cayuga and Deans Station.	E. Wigg	12	6	12 de		87 36
Cayuga and Gypsum Mines Cayuga, Deans and Railway Station	M. Thompson	35)	115 00 230 00
Cayuga and Kohler	J. Booker	43	6 & 12 3))	. 80 00
Cavuga and Unner	J. Everets	12	3	12 de	·	145 00
Cecebe and Steamer. Cedar Dale and Railway Station	W. A. Coleman	1 T	3 25		n 1888n	21 50 125 00
Cedar Hill and Pakenham	S. Connerv	53	23)	80 00
Centralia, Crediton and Railway Station	•	61	12	12 de		200 00
Centralia and Mooresville	R. Handford	$\frac{6\frac{1}{4}}{3\frac{3}{4}}$	6))	200 00
Centreton and Grafton	W. Roberts	131		12 de		163 00
Centreville and Tamworth. Chaffey Locks and Elgin	M. Dovle	8	6 2	1 do	o (from Mar. 1, '89)	13 82 70 00
Chalk River and Railway Station	T. Field	$2\frac{1}{6}$	12	12 de	· · · · · · · · · · · · · · · · · · ·	100 00
Chandos and Clydesdale Chantry and Philipsville	H. Caldwell	5 53	1 6			30 00 150 00
Unableau and Railway Station	JT. A. Austin.	1	12	12 de	o	75 00
Onapman and Stoco	A. Chapman	3		12 de	•	78 00
Charing Cross and Comber &c	G. Robb) 4 <u>.</u>	3 & 6	12 do		56 00 474 00
Unaring Cross and Dovles	M. Doyle	44	2	12 de		55 00
Charing Cross and Railway Station. Charleston and Farmersville.	J. Hunter	1 1	12 2	12 de		72 00 70 00
Charlinch and Novar	L. Robinson	$\frac{9\frac{3}{4}}{9\frac{1}{4}}$		12 de		100 00
Charlinch and Novar Chatham and Dover South	G. W. Bourdeau.	6	6	12 de	o	199 00
Qualinam and Iruzin	(I) Prime	1 2	3	12 de		50 00 120 00
Chatham and Louisville	J. R. Reid	3	36	12 de	0	327 60
Chatham and Street Letter Boxes. Chatham and Van Horn	1P. O. Flynn		18	9 de	o (from July 1, '88)	311 43 70 00
viam and van nom	. (J. Zink		1 2	12 de	0	10.00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
							\$ ets.
Chatham and Williams		9	2			ths	80 00
Chatsworth and Chesley Chatsworth and Durham		$\frac{23\frac{3}{4}}{20}$	3 6	$\frac{9}{12}$	do	(from July 1, '88)	292 50 435 00
Chatsworth and Mooresburg		17	3	3		(to June 30, '88)	54 75
Chatsworth and Railway Station Chatsworth and Strathavon	D. Rae	$8^{\frac{1}{2}}$		$\begin{array}{c} 12 \\ 12 \end{array}$			124 80 136 00
Chatterton and Foxboro		$\frac{31}{3}$		12	do		50 00
Cheapside, Jarvis and Ry. Station.	L. Brown	16	6 & 12	7	do	(to Oct. 31, '88)	173 83
do do Cheddar and Gooderham	W. Atkinson J. Ridley	$\begin{array}{c} 16 \\ 19 \end{array}$	6 & 12 1	6	do	from do (to Sept. 30, '88)	187 08 97 50
do do	W M. Patterson	19	1	6	do	from do	75 00
Cheddar and Wilberforce		8	$\frac{1}{3}$	$\frac{3}{12}$		(to June 30, '88)	10 00 25 00
Cheney and Kearney	L. Perron	$\frac{1}{5}$ 6	1	12			25 00
Chepstowe and Dunkeld Station	C. Mullin	$\frac{2^{1}}{c}$	6	$\frac{12}{12}$			130 00 37 00
Cherry Valley and Point Petre Cherry Valley and Salmon Point	J. M. Bently	6 6		12			44 48
Cherrywood and Whitevale	M. R. Summer-	0.1		10	,		05.00
Chesley and Coverley	feldt P. Kildil	$\frac{3\frac{1}{2}}{6\frac{1}{2}}$	3	12 6	do	13 days (to Oct.	95 00
		02				13, '88)	51 92
Chesley and Railway Station Chesley and Scone	T. R. Reid	13		12 8	do	15 days (broken	80 00
		12		0	uo	period)	28 00
Chesterville and Connaught	P. Jordan	5	2	12	do		80 00
Chesterville and Moorewood do do	H. Dillabough	8 8	6	9		(to Dec. 31, '88) from do	106 50 35 50
Chesterville and Morrisburg	R. Casselman	181	1	6	do		
do do	M. Brown & C. L. Casselman.	181	6	2	do	9 days (to Dec.	
	i	102		İ		9, '88)	80 84
do do Chesterville and Railway Station	J. Marselis	181		3 10		22 days (from do)	
Chestervine and Rahway Station	1. Johnston	1	12	10	цo	18 days (from May 14, '88)	
Chevalier and Stoney Point	O. Marion	1	12	12	do		100 00
Cheviot and Riversdale	W. J. Sheppard	3 6	12 12	$\frac{12}{12}$	do		65 00 500 00
Chiselhurst and Hensall	T. Murdock	4	2	12	do		70 00
Christie's Corners and Heckston Christina and Mount Brydges	J. Van Allan	2½ 4	2 2	5 12	do do		
Churchill and Lefrov Station	J. Sloan	21		12	do		220 00
Churchville and Railway Station.	T. A. Fogarty	1	$\frac{6}{2}$	12 12	do		
Clareview and Erinsville	J. Cossar.	2	6	12	do do		
Clandebove and West McGillivray	W. McKann	7		12	do	// To est too	189 00
Claremont and Ry. Stationdo do	E. Derusha	2	12 12	9	do do		94 00 26 95
Claremont and Stouffville	J. Sellars	19 r.	6	12	do		313 00
Clarence Creek & Thurso Ry. Station Clarence Creek and the Lake		8 5	6 2		do do		
Clarke and Kendal	S. J. Morgan			12	do		181 52
Clarke and Railway Station	do J. Pethick	5			do		150 40
do do Clarksburg and Heathcote	S. C. Rowe	5		3 12	do	from do .	68 53 188 00
Clarksburg and Redwing	J. S. G. Conklin			4	do		48 33
do do Clarksbur and Thornbury Station		13			do do		144 66 123 00
Clarkson and Railway Station	W. W. Clarkson		12	12	do		25 00
Clavering and Railway Station	$A. Bennett \dots$)	12		do do		
Clayton and Rosetta	P. Guthrie	6 14	3	12			
Clear Creek and Cultus	E. Tanslev	5	2	12	do		65 00
Clevelands and Craigie Lea	J. C. Walls	6 & 3	$\begin{bmatrix} 2 & 1 \\ 2 & 2 \end{bmatrix}$		do do	(to Dec. 31, '88)	
Clifford and Lakelet			6	12	do		

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.
						\$ cts.
Clifford and Mount Forest	C. Hunt	14	2		nths (to Oct. 31, '88)	75 83
Clifford and Railway Station Clinton and Railway Station	K. M. Walton.	4 4 4	12 48	12 de		100 00 374 40
Clinton and Summerhill	G. M. Kilty	4	2)	50 00
Clontarf and Formount	J. R. McDonald	8	3	12 d		156 00
Clover Hill and Cookstown	H. Coleman	21 21 & 61	6 3	9 d	o (from July 1, '88) o (to June 30, '88).	94 59 56 75
Clover Hill, Cookstown and Egbert Cloyne and Denbigh	do J. Flake	28	2)	410 00
Cloyne and Harlowe	B. Clark	12	2	12 d	· · · · · · · · · · · · · · · · · · ·	154 69
Cloyne and Scouten	D. A. Spencer	13	6 3		/fnorm Tom 1 200\	440 00
Cloyne and Snyder Depot Cobble Hill and Evelyn	M. Barber, ir	3 5 1			o (from Jan. 1, '89)	8 75 49 48
Cobden and Railway Station	J. Ross	1	12	12 d		50 00
Cobden Station and Eganville	C. W. Boland	18	12		O	304 00
Coboconk and Fenelon Falls Coboconk and Lorneville	C. Bowins	16 28	3 6		O	234 00 975 00
Coboconk and Minden	T. Leary	24	6		O	575 00
Cobourg and Harewood	W. Wellwood	16	6	12 d		448 00
Cobourg and Roseneath	11. McGutcheon.	20	6 12	12 d 9 d	o (from July 1, '88)	595 00 150 00
Coe Hill Mines and Faraday	W.Sykes (to pay) G. Orr	8	1	12 d		40 00
Goe Hill Mines and Glen Alda	I. A. Rosebush	73	1	12 d		60 00
Coe Hill Mines and Railway Station	R. H. Wadding-	,	12	10 4		50 00
Coe Hill Mines and Rose Island	J. McKee	6	12	12 d		51 50
Coe Hill Mines and The Ridge	J. McGregor	7	ī	12 d		40 00
Colborne and Dundonald	G. Goodrich	7	6	12 d		135 00
Colborne and Hastings. Colborne and Lakeport.	J. S. Yeomans .	$\frac{25}{2\frac{1}{2}}$	12	13 d	o (to June 30, '88).	200 00 175 00
Olborne and Warkworth	J. S. Veomans	$1\overline{6}^2$	6	9 d	(from July 1, '88)	300 00
Coldwater and Eady	J. F. Moffit	3	3	12 d) .	75 00
Coldwater and LoveringColdwater and Railway Station	do	6	$\frac{2}{24}$	12 d 12 d	o o	90 00 200 00
Coleman and Railway Station	S. A. Coleman	1	6	12 d		60 00
Collingwood and Gibraltar	J. Glenn	10	1		o	52 00
Collingwood and Railway Station Collingwood & Street Letter Boxes.	D. Darroch	8	36 18	12 d 9 d		250 00 150 00
Collin's Bay and Railway Station.	J. J. Losee	38			o (from July 1, '88)	42 00
Collin's Inlet and Killarney	1D. Lamorandière	18	1	12 d	0	153 40
Colpoy's Bay and Wiarton.	L. Hyatt	3	6		0	115 00
Colwell and Railway StationComber and Railway Station.	H. Whatley.	, XCS	12 6		0 0	62 40 74 88
Comber and Windfall	T. Strang	9	2	12 d	0	100 00
Compermere and Eganville	M. Furlong	35	6		0	300 00
Combermere and Maynooth Comet and Vereker	D. Green	25 4	$\frac{1}{2}$	12 d 12 d	o	250 00 80 00
Commanda and Loring	R. W. Brooks	26	ī		0	150 00
Commanda and Restoule	A. O. Smith	9	1		o	75 00
Connor and Palgrave Station Conroy and St. Paul's Station	J. Fleming	7	$\frac{6}{2}$		o	219 00 60 00
Consecon and Railway Station	IC. A. Weeks	9	12		0	93 60
900kstown and Railway Station	H Coleman	1 +	12	12 d	0	75 00
Cook's Mills and Railway Station. Cooksville and Railway Station.	G. McDonald	1	12 12		o (from Feb. 1, '89).	15 00 150 00
COOKSVIlle Station and Sheridan	d. Jenkins		6		o o	
COOKSVILLE Station and Summerville	P. McLaughlin, .	1 6	6	12 d	0	225 00
Cooper and Madoc. Cooper and The Flats.	J. Best	11 5	3		0 0	195 00 75 00
do do	W (20)way	l h	2 2 2		o (to $\mathbf{Dec. 31, '88}$) o from \mathbf{do}	17 50
Coopers Falls and Lewisham	J. G. Taylor	12		9 d	o (to Dec. 31, '88).	90 00
Copetown and Orkney	W. J. Tryon	12	2	3 d	o from do	30 00
Copleston and Petrolia	D. Barnard	3 5	6		o o	
Corbetter and D. 1	T. Combott	30 rds	6		0	35 00
Corbetton and Railway Station Corinth and Railway Station	o. Corpeu	oo ras	1		o (to Dec. 31, 88).	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ cts.
Corinth and Railway Station			12	3 months (from Jan. 1, '89)	19 50
Cornwall and Railway Station	A. Lalonde	1 7	$\frac{1}{3}$	12 do	$13 00 \\ 195 00$
Cornwall and St. Andrews, West Cornwall and Street Letter Boxes	D. McCracken	ļ '	12	9 do (from July 1, '88).	175 50
do do	D. McGillis		12	9 do from do	175 50
Cornwall and Tayside	D. D. McKera- cher	24	3	12 do	349 00
Cornwall Centre and Milleroches	D. McKav	$2\frac{1}{3}$	3	12 do	68 00
Corson's Siding and Head Lake			3	12 do	175 00
Corunna and Railway Station Corwhin and Nassagaweya	P. Little	23	$\frac{12}{6}$	12 do	76 00 48 00
do do	P. McLaren.	2	6	6 do from do	48 00
Cotswold and Elora	T. Bilton	23	6	3 do (to June 30, '88). 9 do from do	117 50 315 00
Cottesloe and Norwood				9 do from do 12 do	75 00
Coulson and Orillia.	J. O'Connor	16	6	19 do (loss fina)	396 72
Courtland and Port Rowan		19	$\frac{6}{12}$	12 do (less line)	575 00
Courtland and Railway Station Courtwright and St. Clair Branch	do	4	12	12 do	80 00
Station	W. A. Cathcart.	ł	İ	12 do	63 50
Railway Station	do	13	12	12 do	76 00
Cowal and Iona Station	G. McCallum	$\frac{4\frac{1}{2}}{6}$	2 2	6 do (to Sept. 30, '88). 12 do	22 50 79 00
Craigie Lea and Gregory	J. C. Walls	5	ĩ	Part of season 1888-89	12 50
Craigleith and Railway Station	A. Fleming		6	12 months	48 00
Cranbrook and Moncrieff Cranston and Railway Station	J. McDonaid	4	$\frac{1}{6}$	12 do	27 00 140 00
Cranworth and Portland	R. Hart	51	1	12 do	25 00
Crawford and Elmwood	D. McRae	9	3	12 do	150 00
Credit Forks and Railway Seation Creemore and Lavender	R. M. Lackie	7	12 3	12 do	62 40 135 00
Creemore and Railway Station	A. Gillespie	1 1		12 do	96 00
Cressey and Picton	C. Storms	19	3	12 do	300 00
Creswell and Junction	do	. 1	$\frac{6}{12}$	Special trips	$\begin{array}{cccc} & 1 & 25 \\ & 15 & 00 \end{array}$
Crewe and Dungannon	M. Shakleton	5		12 do	26 00
Crinan and West Lorne	A. McIntyre	44	2	12 do	75 00
Crofton and Rossmoredo	J. Martin	9	6	3 do (to June 30, 88). 9 do from do (less fine)	49 75 202 25
Crossland and Phelpston	J. Mahoney	5	2	12 do	75 00
Cruickshank and Owen Sound	L. Philips	8	3 3	12 do 12 do	87 00 100 00
Crysler and Wales	S. E. Onderkirk.	6 23	6	12 do	499 00
Cumberland and Railway Station	J. Winser	21	12	12 do	137 50
Currie's Crossing and Railway Station	W D Smith	1	6	12 do	60 00
Curry Hill and River Beaudette	M. C. Curry	$\frac{1}{5}$	3	8 do (from Aug. 1, '88)	66 67
Cushing and Little Rideau Cyprus and Novar Station	J. Little	41/2	0	12 do	170 00
Cyprus and Novar Station	G. Poucher	2	3	12 do	62 00
Dacre and Esmonde	P. Curry	6	2	12 do	60 00
Dacre and Gratton	A. J. Morrow	6	2	2 do (to May 31, '88)	11 67
Dacre and Griffith	C. Jamieson	20 22	3	12 do 12 do	200 00 375 00
Dacre and Renfrew Dale and Ross Mount	J. Lill	4	2	12 do	50 00
Dalkeith and Glen Robertson	W. T. Robinson.	8	6	12 do	196 00
Dalston and Orillia D'Arcy and Howe Island			6 2	12 do	548 00 60 00
Darrell and Railway Station. Dartmoor and Sebright.	S. Duncan	20 rods	6	12 do	10 00
Dartmoor and Sebright	A. Dunn	101	3	9 do (from July 1, '88)	52 50
Dashwood and Parkhill Davenport and Fairbank	D. McComb	$\frac{16\frac{1}{2}}{2\frac{1}{2}}$	6	12 do	439 00 64 00
Davenport and Railway Station	J. Green	50 yds	12	9 do (to Dec. 31, '88).	7 50
do	W. Rountree	50 yds	12	3 do from do	5 00

			T .			
Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.
		 			·	
Davenport—C. P. Railway and N &						\$ ets.
N. W. Railway Davenport—Midland Railway and	G. T. Railway Co	50 yds	12	12 months		80 00
Northern Railway Davis' Mills and Pembroke	S. McElroy W. J. Leech	8	1	Special trans	sfero Dec. 31, '88)	5 00 33 75
_ do do	R. Davis	8	1	3 do fron	n do	33 73 11 25
Dawn Mills and Dresden Day Mills and Thessalon	L. Philips W Harris ir	15	2 s, 1 w			148 00 116 00
Decewsville and Railway Station	C. Hagney	300 yd	12	9 do (to]	Dec. 31, '88).	37 50
do do Deemerton and Mildway	J. Heaton	300 yd		3 do from 9 do (to l	do Dec. 31, '88).	15 00 75 00
do do	A. Knenemann	$2\frac{1}{2}$	6	3 do fron	ı do .	22 50
Deerhurst and Gilford	M. Kneeshaw R. Baynes			3 do (to 3	June 30, '88).	25 00 75 00
Deer Lake and Leafield	J. F. McMillan.	5	.1	3 do (to	June 30, '88).	6 00
Delaware and London Delhi and Lynedoch, &c	J. Charles	12	6 & 12			250 00 149 00
Deloro and Railway Station	M. O'Connor	1 14	5			96 00
Delmer and Tilsonburg	J H Vounce	41	3 2			115 00
Demorestville and Fish Lake Denbigh and Griffith	W. H. Blakely.	12	1			46 00 62 00
Penbigh and Plevna	G. P. Stein	23	2	12 do		250 00
Denfield and Duncrieff Denfield and Railway Station	J. Edwards	6 rods				125 00 38 00
Dereham Centre and Mount Elgin.	W. Short	3	2	12 do		58 00
Derrynane and Kenilworth Desert Lake and Sydenham	J. Hayes W. Snook	$\begin{array}{c c} & 5\frac{1}{2} \\ & 11 \end{array}$	$\begin{array}{c c} 2 \\ 1 \end{array}$			60 00 69 00
Deux Rivières and Railway Station. Dewe and Parry Sound	T. Legge		12	12 do		100 00
Dewe and Parry Sound Dexter and Sparta	J. Wright	11 41	1 4	Season 1888.		26 75 85 00
Diamond and Kinburn	D. McMillan	4	3	12 do		80 00
Dickinson and Railway Crossing. Dirleton and Fitzroy Harbor.	L. E. Wood	$\frac{3}{7\frac{1}{4}}$	3 2			70 00 60 00
Dixon's Corners and Dundala	LI E Tuttle	4	3	12 do		75 00
Dixon's Corners & Pleasant Valley.	W. Baxter D. Gilmer	10 ₄ 10 ₄			Sept. 30, '88).	67 00 67 00
Dobbinton and Railway Station	J. Douglas				u (10	95 00
Dobbinton Railway Station and Wil-	- [43	9	12 do		110.00
Doe Lake and Spence	M. Gilmour	. 14	3 2			110 00 100 00
Doe Lake and Utterson	N. Hanes	. 32	3			800 00
Dolsen and Railway Station Dominionville and Morrisonville	R. Morrison	$\begin{array}{c c} & 3 \\ 2 \end{array}$	$\frac{1}{2}$			25 00 45 00
Don and Toronto	A. Hogg	1 8	6	12 do		360 00
Donegal and Railway Station Doon and Railway Station	J. H. Thompson	4				$120 00 \\ 20 00$
Dorking and Newton Douglas and Grattan	B. Donegan	13	6	12 do		300 00
Douglas and Grattan Dovercourt and Yorkville	M. B. McFarlane T. Handcock	7 . 44	6		m. June 1, '88)	58 33 125 00
Downeyville and Omemee	B. Downey	5	6	12 do		160 00
Downsview and Railway Station Drayton and Glen Allen	J. E. Clarke	10	6		Sept. 30, '88).	$\begin{array}{c} 75 & 00 \\ 162 & 00 \end{array}$
_ do do	W. Stubbs	. 10	6	6 do from		145 00
Drayton and Railway Station Dresden and Railway Station	R. Hall	$\frac{1}{2}$	24			149 00 136 00
Drew and Railway Station	W. Cardwell	2^{0}	6	5 do (fro	m Nov. 1, '88)	29 16
Dromore and Greenside Dromore and Holstein	R. Legatt	. 2	2	12 do		40 00
Drum and Pontypool. Drumbo and Railway Station	H. Byres	2	2	6 do (to	Sept. 30, '88).	215 00 35 00
Drumbo and Railway Station	W. H. Burgess.	. 10 n +	12	12 do		160 00
Drumquin and MiltonDrysdale and Kippen	J. Brisson	. 10	3			300 00 146 00
Duart and Palmyra, &c	J. C. Gordon	. 82	6 & 12 6 & 12	9 do (to	Dec. 31, '88)	225 00
do do Dublin and Farquhar	J. Kay	111			n do	86 25 238 00
•	2	3				

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.	
•							\$ cts	
Dublin and Railway Station	J. Williams J. Myers	1	24 24	31		ths (to June 30, '88) from do	37 44 79 56	
Dufferin and Kingston Mills	S. Donaldson.	34	3	12	do	nom do	40 00	
Dufferin Bridge and Emsdale Dufferin Bridge and Waubamick	W. Brooks	26	3	12	do		589 00	
Dufferin Bridge and Waubamick Dumblane and Paisley	T. W. Quinn	$\frac{26}{5\frac{1}{2}}$	$\frac{1}{3}$	12 12	do do		193 00 130 00	
Dunbar and Grantley	J. C. Munro	52	3	12	do		70 00	
Dunbarton and Frenchman's Bay	1	8	13	12-	do		125 00	
Station	do	18	6	12	do		76 00	
Duncan and Heathcote	A. McKeown	5.	1	12	do		44 00	
Dunchurch and Glenila Dundalk and Hopeville	W. McAmmond.	7 1 9	2 3	12 12	do		90 00 123 24	
Dundalk and Kingscote	J. Phelan	12	2	12	do		129 76	
Dundalk and McIntyre	A. Stewart	131	3	4	do	(to Dec. 31, '88)	66 67	
do do Dundalk and Maple Valley	N. D. McKinnon	$\frac{13\frac{1}{2}}{12\frac{1}{2}}$		3	do	from do (to Dec. 31, '88)	50 00 127 50	
do do	J. McKenzie	$12\frac{1}{3}$	3	3	do	from do	42 50	
Dundalk and Railway Station	G. W. Parsons	_ [8	24		do		90 00	
Dundas and Hamilton Dundas and Sheffield	P. Humphrey	5 14	6	$\begin{array}{c} 12 \\ 12 \end{array}$	do		125 00 449 00	
Dunkeld and Railway Station	J. B. Ischirhart	. <u>ş</u>	6	12	do		90 00	
Dunmore and Spence's Corners	L. McIntomony.	3	3	12	do		60 00	
Dunnville and Railway Station	M. Culleton	18	18	$\begin{array}{c} 12 \\ 12 \end{array}$	do		100 00 490 00	
Dunnville and Selkirk	L. Durham	12	6	12	do		312 00	
Dunrobin and South March	P. Orchard	18 r.t.	3	12	do		150 00	
Dunrobin and Woodlawn	W. H. Wilson	4 14	6	12 12	do do		70 00 390 00	
Duntroon and Railway Station	J.I. Russell	1	12	12	do		156 48	
Durham and Flesherton Station	T. A. Harris	14	6	12	do		316 17	
Durham and Railway Station, Durham and Walkerton	G. Crittenden	16	12	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		60 00 297 00	
Dwight and Huntsville	G. F. Marsh	$13\frac{1}{2}$	2	12	do		195 60	
Dyers Bay and Lion's Head	W. Channon	16	2	12	do		273 00	
Eagle and West Lorne	J. Martin	41	12	12	do		198 89	
Ealing and The Gore	r. Ackland	$\frac{3}{71}$	3	12 12	do do		55 00 160 00	
Eastman's Springs and Hawthorne. Eastman's Springs and Railway	S. Millions	$7\frac{1}{2}$	3	12	do		100 00	
Station	R. J. Keyle	1	12	12	do		40 56	
Eauclaire and Railway Station	W. Mackey	10 vds	12	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		40 00 21 00	
Eberts and Railway Station Eden Mills and Guelph	R. Middleton	16	6	12	do		288 00	
Eden Valley and Main Post Road.	W. Trumble	1	3	9	do	(to Dec. 31, '88)	22 50	
do Edgar's Mills and Railway Station.	R. Nugent	1	3 6	3 12	do do	from do	12 50 40 00	
Edgeley and Thornhill Station	A. Winger	22	6	12	do		124 80	
Edgington and Trout Lake	J. H. Holton	8,	1	12	do		85 00	
Edmonton and Railway Station Edwardsville and Molesworth	W. Goulding	42	$\frac{6}{2}$	12 2	do	16 days (to June	30 00	
Edwardsvine and Molesworth	D. Doughecu	1		-	ao	16, '88)	15 87	
Egan Creek and L'Amable		6	2	12	do		52 00	
Eganville and Golden Lake Eganville and Pembroke	S. Sunstrum, sr.	12 26	$\begin{bmatrix} 2\\2\\3 \end{bmatrix}$	12 12	do do		144 00 334 00	
Righart and Changing Post	H. A Gibson	3	6	9	do	(from July 1, '88)	56 2 5	
Egerton and Mount Forest	W. Hunter	161	6 6 10	12	do		300 00	
Eglington, Toronto and Yorkville Egmondville and Seaforth	J. Henary	420012	6	12 6	do do	(from Oct. 1, '88).	360 00 40 00	
Egremont and Mount Forest	W. Hunt	3	4	7	do	(to Oct. 31, '88)	40 83	
Elcho and Smithville	H. Hunsburger.	8	2 2	12 12	do	• • • • • • • • • • • • • • • • •	104 00	
Elder's Mills and Railway Station.	M. Wright	7		9	do do	(to Dec. 31, '88).	88 00 37 50	
do do	A. McKinnon	1	6	3	do	from do .	12 50	
Eldorado and Empey	L. Empey	3	1	6	do	(from Oct. 1, '88).	15 00	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.	
						\$ cts	
Elford and Essex Centre	I. Elford	$4\frac{1}{2}$	1	12 mo	nths	50 00	
Elia and Railway Station	S. T. Brooks	20 - 4	6 6	$egin{array}{ccc} 12 & \mathrm{dec} \ 12 & \mathrm{dec} \ \end{array}$		75 00	
Elizabethville and Port Hope Elliott and Manion	T. Roberts J. DeWitt.	32 F. t.	2	12 de 12 de		490 00 50 00	
Ellisville and Seelv's Bay	J. MacMillan	5	2	12 de	o	55 00	
Elmbank and Malton	I. Sanders	25 r.t.			o	367 00	
Elmwood and Malcolm Elmwood and Railway Station	A. A. Kerr	$\frac{21}{1}$			o	59 00 50 00	
Elora and Inverhaugh	R. Ariss	41			0	60 00	
Clora and Pentland	P. C. Fleming	5		12 de	o	60 00	
Elora and C.V. Railway Station	T. Biggar	1/2	12	12 de	o	75 0 0	
Elora and W. G. & B. Railway Station	M Salvidge	1	36	12 d	ο	137 48	
Elora and Salem	J. R. Wissler	1		12 d		40 00	
Elphin and McDonald's Corners	J. Brownlee	6	2		o (to Sept. 30, '88).	28 50	
Elsinore and French Bay Emberson and Port Sydney	H. Shannon	5 12		12 d	0	40 00 90 00	
Embro and Harrington, &c	W. Vannatter	12	26 & 30		0	340 00	
Emery and Railway Station	J. Watson	1		12 d		50 00	
Emmett and Wilno	J. O'Grady	5	1	12 d		50 00	
Emsdale and Fern Glen Emsdale and Railway Station	C. H. Elliott	6	2 5	12 d 6 d		80 00 19 50	
oh oh	do	34	12		o from do	31 24	
Enfield and Oshawa	W. J. Fisher	14	3		o	124 80	
Ennis and Loretto	J. O'Leary	$\frac{31}{c}$			0	50 00	
Ennismore and Frankhill Ennismore and King's Wharf	I C Leary	6 9	$\frac{1}{2}$		0 0	60 00 100 00	
Enterprise and Trafford	M. Whelan	9	ī	12 d	0	45 00	
Enterprise and Trafford Enterprise and Verona Enterprise and Wilkinson	N.,T.&Q.Ry.Co.	10	6		o (from Jan. 1, '89).	50 60	
Enterprise and Wilkinson	C. Lockwood	8 154	6		0 0	80 00 300 00	
Epping and Flesherton	G. Mathewson	155			o (to Dec. 31, '88). o from do		
Epping and Meaford	W. J. Cann	14	6		0		
Erbsville and Waterloo	J. Simmermach'r	5	1		0	45 00	
Erie and Jarvis Erin and Guelph	A. Finch	5 20	6		0		
Erin and Railway Station	R. Wood	1	12		0	50 0	
Erinsville and Napanee.	J. Grange	21	6	12 d	.0	475 0	
Erskine and Markdale	J. McKeen	6	2		o (to Sept. 30, '88).		
Eskdale and Tiverton	J. S. Lougheed	6 5	2 3		o from do	25 0 90 0	
Essex Centre and Gesto	R. Hamilton	61			lo	139 0	
Essex Centre and Learnington	C. Wigle	22	12		0	704 1	
Essex Centre and Railway Station.	T. Rush	16	18		o (to June 30. '88).	117 0 21 2	
Essonville and HaliburtonEthel and Railway Station	W. Spence	1 4	6		0		
Ettrick, Ilderton and Rv. Station.	J. McRae	6 82		12 d	o	175 0	
Evelyn and London	M. Barber, ir	13	6		o	335 8	
Everett and Railway Station Exeter and Kirkton	W. M. Lockhart.	12	12 6		lo lo	60 0 375 0	
Exeter and Railway Station	C. Snell		24		o and extra trips		
Exeter and Sarepta	W. Reynolds	7	3	12 d	lo		
•	i		3	12 d	lo	29 6	
Fairfield East and Fairfield Station Fair Valley and Warminster	R. C. Hipwell	110	3		lo		
Pairview and Stratford	W. Bell	9	3	12 d	lo	156 0	
Falkenburg and Mail Catching Post	\mathbf{M} . Moore		6		lo		
Falkenburg and Ullswater Falkland and Paris	do W T Walker	3	3 3	Deaso	on 1888	168 0 50 0	
Farewell and Kenilworth	W. L. Morrison	. 6			lo		
Farewell and Wagram	do .	. 3	2	12	lo	34 0	
Fargo and Lundy	IA. W. Palmer.	300 7	2		lo		
Fargo and Railway Station Farmersvile and Mallorytown	S L Hogeboom	300 yo	6		lo (to Dec. 31, '88).		
do do	do .	13		1 7	do from do	100 0	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
Farmersville and Plum Hollow	V. W. O. Sher-					. \$ cts
Farquhar and Lumley Farran's Point and Osnabruck	J. Potton	$\begin{array}{c} 6 \\ 4\frac{1}{2} \end{array}$	2 2		onthslo	58 00 62 50
Centre	C. Stata	6,	6		do	97 00
Fawkham and Mail Catching Post.	W. Carrick	23	6	12	lo	73 00 125 00
Fawn and Mail Catching Post	J. M. Smith A. Gaudaur	1/2	3	6 6	lo (to Sept. 30, '88). lo from do	20 00
Felton and Russell	C. York	4	2	12 c	lo	17 00 50 00
Fenaghvale and St. Amour Fenelon Falls and Railway Station.	M. Poirier	$2\frac{1}{2}$	12 12		lo	25 62 80 00
Fergus and Living Springs	F. J. Armstrong.	6	2	12 c	lo	75 00
Fergus and Railway Stations Fergus and Shiloh	J. C. Morrow T. Hamilton	13	12 2		lo lo	250 00 150 00
Ferguson's Falls and Perth	T. Haley	18	6	12	lo	390 00
Fernhill and Poplar Hill	D. R. Owen R. Jancowski	41/3	$\frac{3}{12}$		lo	100 00 65 00
Feversham and Flesherton	G. Park	14	6	12 c	lo	375 00
Feversham and Lady Bankdo do	J. Poole	5 5	1	9 6	lo (to Dec. 31, '88). lo from do	37 50 10 00
Fingal and Port Talbot	J. Brown	7	3	12 c	lo	125 00
Fingal and St. Thomas	G. Penwarden J. Church	7 31	6 6 & 12		lo	149 00 190 00
Fingerboard and Sonva	T. Moase	$2\frac{f}{2}$	3	12 d	lo	80 00
Fish Creek and Granton Fisherville, Nelles'Corners and Rail-		5	2	12 c	lo	60 00
way Station	J. Mehlenbacher		6 & 12	9 6	lo (to Dec. 31, '88).	119 25
do do Fleetwood and Franklin	W. Stacy	$\frac{4\frac{1}{2}}{2}$	6 & 12 4		lo from do	34 25 70 00
Flesherton and Railway Station	P. Munshaw	$1\frac{3}{4}$	24	12 d	lo	156 00
Flesherton and Vandeleur Flesherton Ry. Station and Priceville	J. Warling J. Watson	$\frac{6\frac{1}{2}}{4}$	$\frac{3}{6}$		lo 19 dys(from Sept.	90 00
		1			12, '88)	55 11
Fletcher and Railway Station Flinton and Madoc	R. Simmons	19	$\frac{12}{6}$		o (to Dec. 31, '88).	45 00 555 75
	R. E. Jones	19	6	3 d 12 d	o from do	131 25
Florence and OakdaleFlorence and Rutherford	J. Conbrough	6		12 d	o	55 00 100 00
Flower Station and Railway Station do do	G. W. White	青	$\begin{array}{c} 12 \\ 12 \end{array}$	9 d	o (to Dec. 31, '88).	7 50
Fontbill and North Pelham.	J. A. McQueen	10	3		o from do	$\begin{array}{c} 3 & 75 \\ 220 & 00 \end{array}$
Fordwich and Newbridge	W. Chapman	41 & 8	2 & 6		0	159 72
Forest and Ravenswood	P. McCallum . 1	9	3	12 d	0	112 00 100 00
Forest and Railway Station Foresters' Falls and Ry. Crossing.	P. Smith P. R. Pounder &	400 yd	6	12 d	о	43 68
	Co	17			o (to Apr. 30, '89).	563 33
Fort Erie and Garrison Road	J. Hershey	4 11			o (to June 30, '88).	20 00 360 00
Fort Erie and Railway Stations Fort William and Railway Station.	C. McVicar	4	12	12 d	o	250 00
Fort William West and Ry. Station. Fournier and Routhier	A. McLaren J. O. Poirier	-6		12 d 12 d	o	$120 00 \\ 189 00$
Fowler's Corners and Peterboro'	A. Tully	$\frac{7\frac{1}{2}}{7\frac{1}{2}}$	2	3 d	o (to June 30, '88).	26 00
do do Foxmead and Railway Station	A. R. Reid	$\begin{bmatrix} 7\frac{1}{2} \\ 1\\ 16 \end{bmatrix}$	$\begin{bmatrix} 2 \\ 6 \end{bmatrix}$	9 d 12 d		67 50 30 00
Franconia and Perry Station	A. Clark	7	6	12 d	o	137 00
Frankford and Railway Station Frankford and Stockdale	H. S. Bowerman	2		${}^{12}_{12} \;\; { m d}$		78 00 36 00
Franklin and Railway Station	J. Hadden			12 d		70 00
Frank's Bay, North Bay and Sturgeon Falls	J. M. Smith	15 w 20 s	2	12 d	о	70 00
Franktown and Railway Station Frankville and Railway Station	W. Lightbody	$1\frac{1}{2}$	12	12 d	ο ο	150 00
Frankville and Rallway Station Freeborn and Peffer's Crossing	J. Freeborn	00rods	$\begin{bmatrix} 6 \\ 6 \end{bmatrix}$	12 d 12 d		239 00 30 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ ets.
Freeland and Webster's Corners	J. W. Preston	1	3	12 months	1
Freelton and Mountsberg	B. Johnson	31/2	3	12 do	90 00
Freeman and Railway Station	IR. B. Freeman.	16 11	30 6	12 do	93 60
Frome and Railway Station Fullarton and Gowrie	W. H. Woodlev	3	3	12 do	
Fuller and Thomasburg	M. Mitts	41/2	2	12 do	48 00
Fyfield and Teeswater	A. Gibson	5	2	12 do	60 00
Galbraith and Middleville	R. J. Penman	$6\frac{1}{2}$	2	12 do	52 00
Galt and Glen Morris	D. Munro	7	6	9 do (to Dec. 31, '88) 3 do from do	
do do	W. Colom	15	3	3 do from do . 12 do	
Galt and Railway Stations	G. Hancock		24	12 do	
Gamebridge and Railway Station Gananoque and Seely's Bay	S. McDougall	1 1 1 2	12	12 do	115 00
Gananoque and Seely's Bay	W. Kenny	14	2	12 do	
Gananoque and Street Letter Boxes	E. Keating	1 4	12	12 do	
Gananoque and Wilstead	R S Bradley	413		12 do	
Gananoque Station and Willets-	-	_	i		
holme Garden River and Railway Station.	I. B. Greenizan.	4	2	12 do	60 00
•	ham	1 1	3	Season 1888-89	
Garnet and Railway Station Garrison Road and Ridgeway	T. Sullivan	10 - 8	12	12 months Tule 1 200	
Tarry liwen lengen and liwen	!	1		9 do (from July 1, '88	108 75
Sound	N. Lemon	10&13	3	12 do	369 00
Gelert and Railway Station	W. F. Ritchie	1 +	12	12 do	. 50 00
Gelert Station and Minden	D. J. Hartle	$7\frac{?}{2}$	12	1 do (from Mar. 1, '89	24 96
Georgetown and G. T. Ry. Station	Watson	34	6	28 days, (to April 28, '88	4 80
Georgetown and N. & N.W. Ry. Sta-	McCollum &	1			
Georgetown and Salmonville	Watson	e 2	18	12 months	
Georgina Island and Sutton West.	C. Biggange	6 8	$\begin{vmatrix} 6 \\ 2 \end{vmatrix}$	12 do	
Germania and Uffington Road	W. Stamp		3	12 do	
Gilbert's Mines and Picton	A. I. Ryckman.	101	3	12 do	. 120 00
Gilford and Railway Station Gilmour and Railway Station	J. A. Blain	00 (1)	24	12 do	
Gladstone and Harriettsville	J. Caverly	20 ft.	$\begin{vmatrix} 12 \\ 6 \end{vmatrix}$	12 do 12 do	
Glammis and Pinkerton Station	J. McKeenan	9	6	12 do	
Glamorgan and Millbrook	K. Kennedv	6	2.	12 do	. 78 00
Glandine and Railway Station	E. Pogue	2,	3	12 do	
Glanford Station and Ry. Station	H. Clark	7	6	3 do (to June 30, '88) 9 do from do	
Glanford Station and Sinclairville	J. R. Wilson	102	3	3 do (to June 30, '88)	38 75
de de	l do	1 12	3	9 do from do	. 139 50
Glanmire and Millbridge	J. Lummiss, sr	8	$\frac{1}{6}$	12 do	
Glastonbury and Kaladar	A A Dunham	43	2	12 do	
Glen Annan and Railway Station	A. Anderson	Į	12	12 do	40 00
Glenarm and Woodville	H. Ferguson	22 r.t.	6	6 do (to Sept. 30, '88)	. 149 50
_ do do	J. H. Pethick	122 r.t.	6	6 do from do .	. 175 00
Glenburnie and The Corners	W. Shurtleff	1	$\begin{array}{c c} & 6 \\ 12 \end{array}$	12 do	
Glencairn and Railway Station Glencoe and Kilmartin	W. Grieve D. B. McIntvre.	1 1 4 1 4	3	12 do	1
Glencoe and Strathburne	J. Smith	21	6	12 do	
Glencolin and Springfield	S. T. Young	3	3	12 do	. 80 00
Glendale and White Oak	U. Flawn	24	$\frac{3}{2}$	12 do	
Glen Farrow and Wingham Glen Eden and Mount Forest	C Hunt	6 5	6	12 do	
Glen Huron and Railway Station.	J. Hamilton	11		12 do	
Clarit IT	A W Sinclair	212	ĭ	3 do (to June 30, '88	
Glenila and Loring	A. W. Silician.				
Glen Major and Myrtle Glenmeyer and Kinglake	$ \mathbf{W.~R.~Derby} $	7	6	12 do	. 224 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.	
•					\$ ets.	
Glen Millar and Trenton	O. Weston	$3\frac{1}{2}$	6	12 months	100 00	
Glenmore and Maitland		9 8	3 2	12 do	145 00	
Glen Orchard and Redwood		3	í	12 do	69 00 10 50	
Glenrae and Railway Station	S. Rae	50 yds	12	12 months	20 00	
Glen Robertson and North Lan- caster	M. Besner	25	6	12 do	300 00	
Glen Robertson and Ry. Station	W. T. Robinson.	1 28		12 do	60 00	
Glen Robertson and Ste. Anne de				10 1	442.00	
Prescott	G. T. Iveson	7 20 vds	6 3	12 do	115 00 30 00	
Glen Roy and Munro's Mills	M. Munroe	4	3	12 do	88 63	
Glenshee and Lynedoch.	O. Jones		6	12 do	300 00	
Glen Smail and SpencervilleGlenvale and Sharpton	G. D. Hann	3 3	2 2	12 do	50 00 60 00	
Goderich and Kintail		14	6	12 do	349 00	
Goderich and Lucknow		23	6	12 do	398 00	
Goderich and Railway Station Godfrey and Westport	do M Grady	1 20	24	12 do	149 76	
Goldfield and South Finch	M. McLean	21	3	12 do	246 00 55 00	
Goldsmith and Learnington	G. B. Reid	10	3	12 do	125 00	
Goldstone and Railway Station Gooderham and Kinmount			6 2	12 do	99 84	
Gooderham and Ursa	S. Kettle	6	í	12 do	225 00 30 00	
Goodstown and Richmond	T. H. Mills	3	2	12 do	29 50	
Goodwood and Railway Station	M. Chapman	8	$\begin{array}{c c} 12 \\ 12 \end{array}$	12 do	60 00	
Gore Bay and Little Current	H. May	50 &35		Part of Seasons 1887-88	50 00	
Gore Bay and Long Bay		1		and 1888-89	400 00	
	son	10	1	12 months	75 00	
Gore Bay and Meldrum Bay	R. T. Hall	58	1	12 do	365 00	
Goring and Rocklyn	J. Lunan.	25 r.t.	6	12 do	50 00 380 00	
Gorrie and Railway Station	. H. J. Besanson.	. 14	12	3 do (to June 30, '88).	40 00	
do do Gorrie and Seaforth	do	$\frac{14}{285}$	6 & 12		92 59	
Goulais Bay and Sault Ste. Marie.	A. McAulev	$\frac{26^2}{26}$	6	12 do	520 00 234 00	
Gowanstown and Kurtzville	M. Mennear	. 5	3	12 do	97 00	
Gowanstown and Railway Station.	H. Markle	3	6	12 do	58 00	
Gowanstown and Wallace Grafton and Railway Station	G. Lumley	1		12 do	100 00 89 72	
Grand Valley and Monticello Grand Valley and Peepabun	H. Hills	11	7 2	12 do	110 00	
Grand Valley and Peepabun do do	. W. Osbourne J. Loree	3 1 31		6 do (to Sept. 30, '88).	25 00	
Grand Valley and Railway Station	S. McDonald	1 12	12	6 do from do . 12 do	18 50 39 00	
Grassett's Station and Michipicoter	ı		İ			
River. Grassy's Corners & Smithville Road	. W. Spence		2	12 do	288 00	
Gravenhurst and Leg Lake			2	12 do	35 00 52 00	
Gravenhurst and Port Carling	C. McCulley	28	2	Part of Season 1888-89	25 55	
do do Gravenhurst and Railway Station.	W. Foreman	. 30	2	Balance of do	134 00	
Gravenhurst and Uffington	J. Doherty	114	24	12 months	249 60 194 0 0	
Gravenhurst and Walker's Point	. W. Walker	14	ĭ	Part of Seasons 1887-88	134 00	
Gravenhurst, West Gravenhurs				and 1888-89	63 00	
and Wharf	. W. McDivitt	2w.1s.	6	12 months	140 00	
Greenbank & Blackwater Junction	n W. Taylor	. 61	6	3 do (to June 30, '88).	46 25	
Green Bay and Little Current	E. Dusty	61			123 75	
Greenfield and Railway Station	A. McDougall	$\begin{array}{c c} & 12 \\ & 1 \end{array}$	$\frac{1}{24}$	12 do	$\begin{array}{c} 70 \ 00 \\ 125 \ 00 \end{array}$	
Green Point and Picton	. C. Revnolds	. 12	. 1	14 days (to April 14, '88).	1 96	
do do Green River and Railway Station.	I do	. 12	2	Balance of season '88-'89	70 00	
Green River and Railway Station	F. Burgess	1		12 months	100 00	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ cts.
Greenview and Monteagle Valley	J. Poff	6	1	12 months	50 00
Gregory and Port Carling	W. Gregory		ļ	Special trip.	1 50
Gregory and Port CarlingGrenfel and Railway Station	H. Parr	21/2		12 months	60 00
Gresham and Paisley	R. Cruickshank.	20	2	12 do	160 00
Griffith and Matawachan	J. M. McCollom	10 8	1 12	12 do	52 00 399 00
Grimsby and SmithvilleGrimsby Park and Railway Station.	N. Phelps	1		Special trips	38 00
Grimston and Keady	R. Keys	4	2	12 months	50 00
Groveton and Spencerville	J. McAuley	3	2	12 do	48 00
Guelph and HamiltonGuelph and Ponsonby	J. Herriman	$\begin{array}{c c} 31\frac{1}{2} \\ 12 \end{array}$	6 3	12 do	1,000 00
Guelph and Street Letter Boxes	J. D. Johnstone.	5	13	12 do	225 00 250 00
Gunter and Railway Station	J. H. Gunter	6	2	12 do	. 80 00
Guthrie and Oro Station	D. Livingstone.	3	2	9 do (from July 1, '88)	36 00
Guthrie and Steel	J. Steele	3	2	3 do (to June 30, '88).	12 00
Hagersville and Railway Station	J. Fleming	1 1	36	12 do (less fine)	139 00
Hagersville and Springvale	J. Holbrook	4	6	12 do	120 00
magersville, Selkirk and Railway					
Station. Hagersville, Selkirk and Railway	L. Brown	14	6	7 do (to Oct. 31, '88)	150 50
Station	M. Hess	14	6	5 do from do .	130 42
Haliburton and Kennaway	J. E. Holmes	25	ĭ	3 do (to June 30, '88).	58 75
do do	do	38	1	9 do from do	213 75
Haliburton and Railway Station	J. F. Young	1,2		12 do	50 00
Haliburton and Wicksteed	J. H. Anderson	10 13	$\begin{vmatrix} 1 \\ 3 \end{vmatrix}$	12 do	40 00
Hamilton and Lowville	D. Harris	19	6	12 do	235 00 403 00
Hamilton and North Barton	A. W. Swazie	21	6	12 do	50 00
Hamilton and Railway Stations	C. Armstrong	11 & 1		12 do	1,158 00
Hamilton and Stony Creek	G. Gibbons	7		12 do	250 00
Hamilton and Street Letter Boxes. Hampton and Solina.	E B Cryderman	$2\frac{1}{4}$	$rac{ ext{As req}}{3}$	12 do	825 00 50 00
Danover and Railway Station	W. Reid	1		12 do	89 72
Harkaway and Markdale	J. Logan	7	1	12 do	52 00
Harley and Hatchley Station	B. Powell			12 do	75 00
Harley and New Durham Harlock and Seaforth	K. Cavin	5	6 3	12 do	132 00
Turiock and Seaforth	1. Nenans	17	3	1 do 18 days (to May 18, '88)	48 28
do do	do	13	3	10 months, 13 days (from	10 20
Hamilton 1 Grad	a D			May 18, '88)	243 08
Harrisburg and St. George Harrisburg and Troy	M O Bilow	4	6	Special trip	5 00
Tarrisburg and Weir	E. Williamson	21	3	12 do	200 00 45 00
Harriston and Railway Station Hartford and Waterford	C. H. Ward	1 & 1	12&24	12 do	224 64
Hartford and Waterford	W. A. Slaght	10	6	12 do	225 00
Hartsmere and Herman	J. Bremner	81		7 do (to Oct. 31, '88).	26 83
do do	J. O'Brien	$\frac{8\frac{1}{2}}{7}$		5 do from do . 12 do	37 50 217 00
Havelock and Railway Station	A. V. Fuller	7	18	9 do (to Dec. 31, '88)	117 50
. do do	do	50 vds	18	3 do from do	13 86
Havelock and Tilton	M. J. Peters	6,	3	12 do	138 00
Hawkestone and Railway Station Hawkesville and Macton	W. Houges	$7^{\frac{1}{4}}$	$\frac{12}{6}$	12 do	43 98
Hawtrey and Northfield Centre, &c.	J. W. Hainer		6 & 12		156 00 394 00
Hawtrey and Railway Station	C. J. Treffrev	16		12 do	25 00
Hay and Railway Station	A. Walper	1		12 do	100 00
nay Bay and Napanee	N. Outwater	19		12 do	189 00
Hayburn and Parma	E. Young	$\frac{2}{3\frac{1}{2}}$		12 do	50 00
Haysville and New Hamburg	\mathbf{R} . C. Tve	$\frac{3\frac{5}{4}}{3\frac{1}{3}}$		12 do	116 00 144 00
nazledean and Stittsville	A. Abbott	$3\frac{7}{2}$	3	12 do	75 00
Deather and Walkers	D. McIntvre	3	2	12 do	40 00
Henfryn and Railway Station Henry and L'Orignal	A. J. Selwood	$\frac{1}{16}$ $4\frac{1}{2}$	6 3	12 do	40 00
and Donghah	9. Tessier		3	12 do	65 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ cts.
				1.0		•
Hensall and Railway Station	J. Sutherland	‡	12		nths	99 84
Hensall and Rodgerville Hensall, Zurich and Ry. Station	T. Murdock	61	$\frac{6}{12}$	12 do		120 00 320 00
Hepworth and Railway Station	T. Kemp	'8	12	12 do	(less fine)	158 00
Hereward and Railway Station	D. Brown	$4\frac{1}{2}$	6	12 do		128 00
Hewitt and Marshville Station	J. B. Hewitt	104	6 2	12 do		45 00 108 75
Hiawatha and Peterboro'do	O. A. Cragg	12 11	$\frac{2}{2}$		(to Dec. 31, '88)	36 25
Hickson and Railway Station	L. Elsley	16	12	12 do		20 00
Highgate and Railway Station	D. Teetzel	1	12	12 do		144 00
Highgate and Turin	do	5	8 12			90 00 93 60
Hillier and Rosehall	R. McCartney	$\frac{1}{2}$	3	12 do		106 00
Hillman and Leamington.	R. Manery	6	ž	12 do		75 00
Hillsburgh and Railway Station	J. Carmichael	$7\frac{1}{2}$	6	12 do		80 00
Hillsburgh Station and Marsville.	J. Hanna		6 3			325 00 240 00
Hillsdale and Moonstone Hinch and Newburgh	B. Lewis.	13 6		12 do		70 00
Hintonburg and Mechanicsville	H. Lapointe	ĭ		12 do		25 00
Hoath Head and Owen Sound	M. Dealy	7		12 do		60 00
Hockley and Mono Centre	R. Colwell		6	12 do		370 00
Holland Centre and Lily Oak Holland Centre and Ry. Station	C. Price	$\frac{4\frac{1}{2}}{1}$	$\begin{array}{c} 1 \\ 24 \end{array}$	12 do		40 00 110 00
Holland Landing and Rv. Station	W. Luck	16	24	12 do		74 88
Holly Park, King and Nobleton	D. O. Crossley	$10\&4^{\S}_{4}$	6 & 3	12 do		368 00
Holmesville and Porter's Hill	A. Knox	4	3	12 do	1	75 00
Holmesville and Railway Station Holstein and Murdock	G Pollock	4	$\frac{12}{3}$	12 do		$\frac{50}{74} \frac{00}{72}$
Holstein and Nenagh.	T. Stephenson	81	6	12 do		234 00
Holstein and Railway Station	S. Seaman	3	12	12 do		53 00
Holt and Mount Albert	J. Roseman	3	6	12 do		125 00
Honeywood and Horning's Mills do do		9	3 6	6 do		62 50 99 00
Hoodstown and Huntsville	J. F. Hanes	101	2	9 do		89 82
dodo	G. A. Hutchins.	9^	2		from do	30 00
Hopetown and Lanark	W. Maguay	7	3 1	12 do		75 00 55 00
Hopetown and White Hopeville and Swinton Park	J. Martin	12	2	12 do		50 00
Horning's Mills and Shelburne Sta-	1	1 -	_			
tion.	J. Ostic	6	6	12 do		170 00
Horning's Mills and Singhampton	J. Richards	18 16	$\frac{3}{2}$	$\begin{array}{c c} 6 & do \\ 3 & do \end{array}$		$\begin{array}{c} 127 \ 50 \\ 33 \ 75 \end{array}$
Housey's Rapids and Washago do do	S. C. Tyler	16	2	9 do		93 75
Howe Island and Kingston	J. O'Brien	14	3	12 do	and arrears	255 29
Humber and Weston	C. R. Dade	1 X	6	12 do		300 00 30 00
Humber Bay and Railway Station.	W. F. Duck	150yds	12 12	9 do		10 00
Humberstone and Railway Station.	D. Stapf		24	12 do		156 25
Huntsville and Railway Station	D. Kernaghan	3	12	12 do		124 80
Huston and Railway Station	R. Kirkby	1	12 3	12 do		50 00 96 00
Huston and Trecastle	L. McNames	4	3	12 do		40 00
	1		1			
Indian River and Ry. Station	M. Guerin	5	3	12 do		80 00
Ingersoll and Lakeside	W. Brock	16	6 2	12 do		475 00 59 00
Ingersoll and Peebles	E. Grav	$\frac{6\frac{1}{2}}{32}$	6	12 do		855 00
Ingersoll and Rv. Station	J. Shannon	3	12	12 de		112 32
Ingersoll and Street Letter Boxes	W. McKim	1	18	9 do	(from July 1, '88)	123 00
Inglewood and Ry. Station	J. Graham	\$	12 6			52 00 356 92
Inkerman and Iroquois Innerkip and Ry. Station	G. Hotson	23	12		· · · · · · · · · · · · · · · · · · ·	108 00
Innisfil and Stroud	T. W. Boyes	3	6	6 de	(to Sept. 30, '88).	57 50
do	E. Taylor		U	6 de	o from do	57 50
International Bridge and Ry. Station			24	12 do	·	150 00
	3	U				

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.	
					\$ ets	
Inverhuron and Tiverton Invermay and Ry. Station	H. Cameron	3 3	$\frac{3}{12}$	12 months	70 00 156 00	
Inwood and Ry. Station	J. M. Courtright	25 yds^4	12	12 do	30 00	
tona and Rv. Station	W. Fletcher	2	12	12 do	125 00	
Irena and ŘowenaIrish Creek Station and Merrickville	D. Crozier	3 9	$\frac{3}{6}$	12 do	80 00 300 00	
Islington and Rv. Station	T. Musson	1	6	12 do	93 60	
Lvy and Thornton	J. Graham	45	6	6 do (to Sept. 30, '88).	75 00	
$\operatorname{Ivy} \operatorname{Lea} \operatorname{and} \operatorname{Lansdown} \ldots$	T. Brown J. Ivey	$\begin{vmatrix} 4\frac{1}{2} \\ 4 \end{vmatrix}$	$\begin{array}{c c} 6 \\ 2 \end{array}$	6 do from do 12 do	59 50 53 75	
Jackfish Bay and Rv. Station	S. A. Eakins	1	12	12 do	50 00	
Jaffa and Orwell	W. Faunt	3	2	12 do	45 00	
Janetville and Pontypool	R. Gillis	29 r. t.	6 8 94	12 do	475 00	
Jarvis and Ry. Station Jefferson and King Station	G. Harper) 9 1	6 & 24 6	12 do	218 40 320 00	
Jellyby and Ry. Station	A. Wing	300 y's	3	11 do (from May 1, '88)	22 91	
Jermyn and Lang	A. C. Brown	4	3	9 do (to Dec. 31, '88)	56 25	
do Jocelyn and Marksville	C. Young	4 121	3	3 do from do 12 do	• 90 00	
Jockvale and Manotick	J. Fermoyle	5	3	12 do	100 00	
Johnson's Mills and Zurich	D. Spencer	4	2	12 do	49 00	
Jones Falls and Moretondo do	A. Scott	3 3	$\frac{2}{3}$	3 do (to June 30, '88). 9 do from do	18 75 49 00	
Jordan and Pelham Union	H. N. Crosby	4	2	9 do from do	60 00	
Juddhaven and Port Carling	A. Thomson	14	1	Bal. of season 1887-88	9 50	
Jura and Thedford	F. E. Judd	14	1	Part do 1888-89	40 00	
	J. McCordic	$7\frac{1}{2}$	3	12 months	111 40	
Kagawong and Perivale	T. N. Pierce	13	1	12 do	72 00	
Katrine and Catching Post	J. Mawhinney	11/8	6	12 do	124 80	
Katrine and Orange Valley Kearney and Emsdale Station	A. J. O'Neil	6	$\frac{1}{3}$	12 do	40 00 110 00	
Aearney and Ravensworth	J. C. Harvey	7	í	12 do	40 00	
Aearney and Sand Lake	J. Hunter	8	1	12 do	45 00	
Keene and Ry. Station Keith and Tupperville	R Killing	$\frac{1\frac{1}{2}}{1\frac{1}{2}}$	$\frac{12}{2}$	12 do	119 00 45 00	
reldon and Shelburne.	W. Brown	$9\frac{1}{2}$	$\frac{2}{2}$	12 do	100 00	
Aells and Powassan Station	H. Anderson	83	1	12 do	60 00	
Kelso and Christie's Crossing Kemble and Wolseley	D. Smith	ا ا	6	12 do	40 00	
Kemptville and Merrickville	C. W. Putnam	18	1 6	12 do	40 00 550 00	
Kemptville and Merrickville. Kemptville and Ry. Station	W. Dickinson	ĺ	18	12 do	271 44	
Temptville and South Gower	A. W. Tomkins	11	3	12 do	173 00	
Kenilworth and Petherton Kenilworth and Railway Station	C. J. Gordon	$\frac{3}{\frac{1}{2}}$	$\frac{6}{12}$	12 do	125 00 80 00	
Nenmore and North Branch	P. A. Harrison.	42	6	12 do	75 00	
Kenney and Mitchell Road	J. Kennev	$\frac{2^{1}}{2}$	2	12 do	80 00	
Kent Bridge and Thorncliffe Keswick and Roach's Point	J. Cake	3	$\frac{2}{6}$	12 do 9 do (from July 1, '88)	50 00 86 25	
Chiva and Shinka	W. Holt, ir	2	2	12 do	39 48	
Allegrie and Whitfield	J Maw	41/2	2	3 do (to June 30, '88).	12 50	
do do Killaloe and Ruby	J. Gallagher	$\frac{4\frac{1}{2}}{7}$	$\frac{2}{2}$	9 do from do	37 50	
Killarney, Little Current and Mani-	o. Italikiii	•		12 do	90 00	
towaning	McLaughlin &			j		
	Riddell	25 & 24	1&2	5 do 21 days (broken	E00 ==	
Killyleagh and Thornton	J. Hicks	3	2	period)	500 77 39 76	
Millimanagh and Mono Road Station	H. McTaggart	3	3	12 do	81 75	
Allmarnock and Smith's Falls	W. G. Hallidav.	81	2	12 do	105 00	
Kilworthy and Railway Station Kilworthy and Mail Catching Post. Kilworthy and Sparrow Lake	G A Lehman	100 ft. 200 vd	6	6 do (to Sept. 30, '88).	7 50	
Parting and Man Catching Post.	A Wienelso	200 ya	6 2	6 do from do . 12 do	15 00 60 00	
Kimball and Railway Station	A. WELLICKU					

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.	
							\$ ets.	
Kimball and Seckerton			2			ths	60 00	
Kimball and Wabuno Kincardine and Port Elgin			6	$^{12}_{12}$			150 00 617 00	
Kincardine and Railway Station	J. Harkin	1 1	30	12			300 00	
Kincardine and Walkerton	P. McColl	. 28	6	12	do	(less fines)	569 00	
King and Railway Station Kingarf and Kinloss	T. Harker	4	$\frac{6}{2}$	$\frac{12}{12}$			50 00 60 00	
Kinghurst and Mooresburg	J. A. King	. 51	2	6		(from Oct. 1, '88)	26 00	
Kingscourt and Railway Station	J. Pelkey	. 4	3	12	do		39 00	
Kingsmill and Mapleton Kingsmill and Railway Station	L. Johnson	. 40 r'de	$\frac{6}{12}$	$\frac{12}{12}$			163 00 43 84	
Kingston and Newboro'	R. W. Copeland	. 41	6	12			1,094 00	
Kingston and Newburg	H. Finkle	. 27	6	3	do	(to June 30, '88).	150 00	
do do Kingston and Perth Road	U. H. Finkle	. 27	6	12	do	from do .	450 00 437 00	
Kingston and Portsmouth	W. Wilson	. 21	12	3		(to June 30, '88).	56 25	
Kingston and Portsmouthdo do do	T. C. Wilson		12	9	do	from do .	168 75	
Kingston and Kingston Station Kingston and Street Letter Boxes	do	. 2	6 24	12 12	do		31 20 345 00	
Kingston Station and Railway Sta-				12	ao		(FE) 00	
tion	A. Campbell	. 100 y.	12	5	do	24 days (to Jan.	22.00	
Kingsville and Oxley	A Elliott	. 10	3	12	do	31, '89)	23 99 120 00	
Kingsville and Pelée Island	H. T. Lidwill.	.1 20	i	6		(See water service)	285 00	
Kinkora and Sebringville	F. J. Collins	. 12	3	12	do		160 00	
Kinloss and Lucknow do do	R. Lithco J. Brownscombe	10	6 6	6	do	(to Sept. 30, '88). from do .	137 50 100 00	
Kinlough and Westford	A. W. Haldenb	y 31		12	do	from do .	40 00	
Kinmount and Minden	H. Workman	. 12	6	3	do		50 00	
do do	D. J. Hartle	$\begin{array}{c c} & 12 \\ \hline 7 & \end{array}$	6	12	do do		100 00 35 00	
Kinmount and Mount Irwin Kinmount and Railway Station	J. Wilson	1 4	12	12	do		40 00	
Kippen and Railway Station	R. Mellis	.	12	12	do		99 84	
Kirkwall, Rockton and Valens Kleinburg and Railway Station	J. Harper	. 15r.t.3			do do		195 00	
do do	J. Cairns			3	do		112 50 37 50	
Klock's Mills and Railway Station.	J. B. Klock	.1 1	12	12	do		10 00	
Knapdale and Newbury	J. Macdonald	6 5	$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$		do do		40 00	
Kolapore and Ravennado do	do	1 5	3		do		17 33 43 33	
Kossuth and Preston	N. Sohrt	. 5			do		70 48	
Lafontaine and Penetanguishene	1			12	do		110 48	
Lake Charles and Oxenden					do			
Lakefield and Lakehurst	J. Record	. 19	3		do	(to Dec. 31, '88).	195 00	
do do Lakefield and Railway Station	A. Johnston		$\frac{3}{12}$		do do			
Lake Opinicon and Perth Road					do		136 00	
Lake Talon and Railway Station	F. McDonald.	. 100 vd	6		do	(and arrears)	25 00	
Lalonde and PlantaganetLambeth and Raper	. W. H. McKay.	5 4	$\frac{1}{2}$		do do		16 67 48 00	
Lambton Mills and Ry. Station	J. Lvnn	. 4		12	do		162 00	
Lammermoor and Watson's Corner	s;W. Gibson, jr.	. 7	1	12	do		45 00	
Lanark and McDonald's Corners. Lanark and Middleville			3 6		do do	(to Sept. 30, 1888)	97 00 170 00	
Lanark and Perth			6		do		64 00	
Lanark and Watson's Corners	. J. McFarlane	. 7	3	6	do	(from Oct.1, 1888)	45 00	
Lancaster and Martintown Lancaster and South Lancaster	. J. Baggallay	$\begin{vmatrix} 12 \\ 1 \end{vmatrix}$	6 12	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		327 50 125 00	
Lang and Railway Station	. A. Colville	. 1	12		do		90 00	
Langside and Lucknow	. J. McDonald	. 6	2	9	do	(to Dec. 31, 1888)	75 00	
do do Langstaff and Thornhill	. F. Greer	. 6	2 6		do do		22 50 15 00	
do do	H. Horne	12			do		4 00	
Langton and Marston	ITS T	. 5		12	do			

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ cts.
Lansdown and Sand Bay	W. H. Fodey do	81 81	$\frac{2}{3}$	5 mont	hs (to Aug. 31, 88)	43 33 63 70
do do Lansdown and Tilley	H. Bradley	31			from do	30 00
Larkin and Stoco	D. G. Larkin	6		12 do		50 00
La Salette and Railway Station Latimer and Wolf's Corners	B. S. Wartman	$\overline{1}^{6}$			2.1.2.1.1.1.1.1.1.1	60 00 70 00
Laurel and Railway Station	J. Davis	1 <u>1</u>	6	9 do	(to Dec. 31, 1888)	69 32
Lavant and Watson's Corners Lavant Station and Plevna	A Browning	13 23	3			100 00
Lawrence Station and Ry. Station.	H. J. Watts	23 5	6	12 do 9 do	(to Dec. 31, 1888)	390 00 116 32
do do	A. Widdifield	5_	6	3 do	from do	38 12
Learnington and Railway Station.	L. Wigle	$13^{\frac{3}{4}}$	24	5 do 12 do	(from Nov. 1, '88)	20 83 340 00
Leaskdale and Sunderland Station. Lebanon and Moorefield	J. Sinclair	8	$\frac{6}{3}$	12 do 12 do		150 00
Leinster and Roblin	F. Paul	7	2	12 do		67 00
Leitrim and Railway Station Lemieux and Riceville	H. Cowan	9 6 1	$\frac{3}{1}$	12 do 12 do		198 24 38 00
Lemonville and Stouffville	J. McConnochie.	$\frac{0_{\frac{5}{2}}}{5\frac{1}{2}}$		12 do 12 do		181 25
Lemonville and Stouffville Leskard and Newcastle	J. M. Jackson	10	6	12 do		300 00
Leskard and New Park	R. Fuller	$\frac{4}{6}$				52 48 46 00
Letter Kenny and Rockingham Lidcote and Railway Station	S. Duncan	11/3	$\frac{1}{2}$	12 do 12 do		30 00
Lily Lake and Manitowaning Lime Bank and Manotick Station	H. McLaughlin.	7	1	12 do		70 00
Lime Bank and Manotick Station	F. Hardy	$\frac{3\frac{1}{2}}{4}$		12 do 12 do		60 00 78 00
Lime Lake and Marlbank Linderwood and Presqu'Isle	G. Shaw	5	i			40 00
Lindsay and Midland Ry. Station	B. Gunigle	$\frac{1}{2}$	36	12 do		320 00
Lindsay and Victoria Ry. Station	H. Workman	$5^{\frac{1}{2}}$	12 18	12 do 12 do		70 00 250 00
Lindsay and Street Letter Boxes Lindsay and Sturgeon Point	G. Crandall	4	10	6 do	(See water service)	75 00
Linton and Lloydtown	W. Rolling.	$3\frac{3}{4}$	6	12 do		142 50
Linwood and St. Jacob's	F. A. Baker	12	$\frac{6}{3}$	12 do 6 do	(1-81 20 1000)	398 00 300 00
Lion's Head and Wiarton do do	C. Williams	55 55	3	6 do	(to Sept. 30, 1888) from do	175 00
Lisbon and Welleslev	P. Glebe	2	2	12 do		60 00
Lisburn and Ripley		$\frac{2\frac{1}{4}}{2\frac{1}{4}}$	$\frac{2}{2}$	6 do	(to Sept. 30, 1888) from do	$12 00 \\ 12 50$
do do Lisgar and Trafalgar Station	W. J. Marshall.	1	6	12 do	from do	73 52
Lisgar and Trafalgar Station Lisle and Railway Station	R. Wade	Į g	12	12 do	<u>.</u>	50 00
Listowel and Molesworth	S. Lougheed E. Terry	11	6 6	9 do 3 do	(to Dec. 1, '88) from do	$187 \ 11 \ 62 \ 00$
Listowel and Railway Station	C. Hacking	3 & 3	18&12	12 do	(less fine)	225 00
Little Britain and Railway Station.	H. Wills	2	12	12 do		100 00
Little Britain and ValentiaLittle Current and Massey Station.	J. Moffatt	$\begin{array}{c c} 5\frac{1}{2} \\ 26 \end{array}$	3	12 do 4 do	16_days (from	77 00
- Title Current and Massey Station.	W. Teters	20	1	1 40	Nov. 15, '88).	580 00
Little Current and Sault Ste. Marie	W. H. Plummer	169	1		e of season '88	422 00
Little Current and Sheguindah Little Current and Sudbury	W. Caughill	8 76	2 2		1888	50 00 250 00
Little Rapids and Thessalon	J. B. Dobie	3	ī		(from July 1, '88).	19 50
Littlewood and Tempo	W. H. May	3,	2	12 mont	ths	40 00
Loch Garry, Maxville and Railway	J. McKitchie	81	3	6 do	(from Oct. 1, '88).	72 00
Station	A. J. Kennedy	11 & 1	6	12 do		494 00
Station						20.00
Lockton and Centreville Station	R. Storie D. Horan, jr	1 1	6	12 do 12 do		60 00 95 00
Londesborough and Railway Sta-		*		12 do		
tion	J. Bell	1 5		12 do		156 00
I am d	H Kevs	1	24	12 do		140 00
London and London East	J. R. Curd	11	19	9 do	(from July 1 '88)	60.00
London and London East London and London West London and Lucan	J. R. Curd J. Judge	161 161	6	9 do 12 do	(from July 1, '88).	60 00 399 00
London and London East	J. R. Curd J. Judge A. M. Conway	161 21	6 3	12 do 12 do		

33

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.	
London and C. P. Railway Station.	T. R. Parker	1	6	12 months	\$ cts.	
London and Street Letter Boxes	Hendrie & Co M. O'Meara	1 1	24 12	12 do	200 00 78 00	
Longford Mills and Railway Station Longford Station and Rama	W. Thomson J. McPherson.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	24 6	12 do 12 do		
Long Lake and Mountain Grove Londsdale and Marysville	J. Bender J. Whiteman	7 4	2 3	12 do	84 00 100 00	
L'Orignal and Railway Station Lorimer Lake and McKellar Lorneville and Railway Station Lowbarks and Boulton Ditch Cross-	C. Morison	3 8 4	6 1 12	12 do	60 00	
ingLowville and MiltonLucan, McGillivray and Railway	W. Griffith	$7^{\frac{3}{4}}$	6 6	12 do	80 00 200 00	
Station Lucan and Railway Station Lucknow and Railway Station Lyn and Railway Station Lyndhurst and Seeley's Bay Lynn Valley and Railway Station Lynnville and Railway Station do McCready and Newbury McDonald's Corners and McLaren's	J. Hodgins W. Porte W. Mellis J. Baird W. D. Witherell E. Edmonds A. A. Stewart W. Axford D. Ross	3 1 1 8 2 1 2 1 2 1 5	18 6 30 6 6 12 6 6 2	12 do	46 80 312 00 62 40 168 00 25 00 49 50 49 50	
Depot McGregor and Railway Station McIntyre and Flesherton Road McKenzie, Lake and Maynooth McLean and Mountain Grove Maberly and Railway Station Mackie's Station and Railway Sta-	S. Burns F. A. Reaume D. C. McFarlane J. Cannon D. C. McLean J. Morrow	$ \begin{array}{c c} 11 \\ 1\frac{1}{4} \\ 13 \\ 8 \\ 1 \end{array} $	6 12 6 1 1 6	6 do from (Oct. 1, '88 12 do	49 92 35 00 88 00	
tion Mackie's Station and Rapides des	J. Dunlan	븀		12 do	24 96	
Joachims Macville and Railway Station Madoc and C. O. Railway Station do Madoc and Midland Railway Station Madoc and Queensboro'. Magnetawan and Nipissing. do Magnetawan and Seguin Fall's. do Maidstone and Railway Station Malakoff and North Gower Mallorytown and Rockfield. Mallorytown and Rockfield. Mallorytown and Rockport. Mallorytown and Railway Station. do do Malta and Severn Bridge Malton and Sandhill. Malvern and Scarboro' Junction. do Manchester and Railway Station Manchester and Railway Station Mandamin and Vyner Manilla and Railway Station	do J. Archdekin R. S. Allt do S. Barnum W. Wiggins C. Thedorf A. McLachlan A. Best H. Irwin T. Moran A. Johnston G. E. Andrews J. Herbison J. Dickey B. Burnham G. Richardson T. Whyte S. Scales J. Gibson R. Bell J. Amsbary T. Carrick E. Z. Yerex J. Milne	8 34 34 21 21 4 5 5 5 12½ 4 12 21r.t. 23§r.t.	6 & 12 12 6 3 3 3 3 12 3 6 & 3 2 2 3 & 6 6 6 6 6 6	12 do 12 do 3 do (to June 30, 1888 9 do from do 12 do 6 do (to Sept. 30, 1888 6 do from de 9 do (to Dec. 31, 1888 3 do from do 12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do 13 do (to Sept. 30, '88 6 do from do 12 do 12 do 14 do 15 do 16 do (to Feb. 28, 1889 1 do from do 12 do 13 do 14 do from do 15 do 16 do from do 17 do 1888 1 do (to June 30, 1888 3 do (to Sept. 30, '88) 4 days (to Nov. 4, 1888) 1 do 4 days (to Nov. 4, 1888)	55 00 78 00 177 50 62 40 200 00 374 50 374 50 216 00 72 00 124 80 71 25 75 00 80 00 173 00 60 00 19 50 68 75 321 00 314 32 34 16 108 00 132 00 55 00 55 00	
do do	do	1/2	6	1888 4 months 26 days (from Nov. 5, 1888)	ı	
	34	Į.			, 0001	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amonnt.
							\$ cts
Manitowaning and Providence Bay	N. McLaughlin.	34	2			ths	379 00
"Adiotick and Railway Station	T McCorkiii	$3\frac{1}{2}$	6	$\frac{12}{12}$	do	•••••	62·40 50 00
Mansewood and Railway Station Manver's Station and Railway Sta-	i	8	U	12	uo	•••••	50 00
Lion	H McChillough	$\frac{1}{4}$	6	12	do		38 99
Maple and Purpleville Maple and Railway Station Maple	J. Rupert	14r.t.	12	$\frac{12}{12}$			219 00 136 00
"44Dle Island and Whitestone	H+. Wontgomerv	10	1	12	\mathbf{do}		40 00
		21	1	12			80 00 57 50
Maple Lake and Minden Maple Lodge and Railway Station. Mar and Red Bay. Markdale and Railway Station do do	G. Windsor	$\begin{array}{c c} 1\frac{1}{4} \\ 7 \end{array}$	$\frac{3}{2}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do		57 90 77 00
Markdale and Railway Station	A. Turner	, 1	24	3	do	(to June 30, 1888)	22 25
Mortaldo do	W. J. Manley	2003	24	9	do		66 75
do do	T. Edward	8&9 <u>1</u> 8&9 <u>1</u>	2&3 2&3	9	do	(to Dec. 31, 1888) from do	111 75 31 75
Markham and Railway Station	F C Percy	1,	24	12	do		156 00
Talksville and Tenhy Rav	IR P Hiller ir	13	1	12			65 00
Marmore and Pailway Station	N. Burley	8 24	$\frac{6}{12}$	$\frac{12}{12}$	do		195 00 125 00
Marmora and Stirling. Marmora and Wariston Marshvilla and Railway Station	do	$1\tilde{6}^2$	6	12	do		400 00
Marmora and Wariston	J. A. Allen	9	1	7		(to Oct. 31, 1888)	29 16
Marshville and Railway Station Mattawa and Railway Station	W. McOuet	$\frac{3\frac{1}{2}}{1}$	5 12	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		130 00 132 91
"AXVIIIa and Railway Station	III A WeArthur	1		12	do		75 00
"AXVIlle and Riceville	1V. Leger	15	6	6	do		156 50
do do Maynooth and Ormsley	W H Meteoite	$\frac{17\frac{1}{2}}{31}$	6	6 12	do	from do	223 50 $1,100 00$
Meadowvale and Railway Station.	C. W. Switzer	1 18		12			118 56
Meadowvale and Railway Station. Meaford and Owen Sound	J. F. Leaven	20	6	12	do		150 00
Meaford and Railway Station Meaford and Walter's Falls	IM Paul		24 2	12 12	do		100 00 200 00
"" Clinome and South River	IW Adams	15	2	12	do		288 00
**************************************	: A Hiccore	3	2	12	$\mathbf{d}\mathbf{o}$		40 00
Melancthon and Railway Station. Melbourne and Middlemiss		1 1	6 6	12 12	do		68 64 129 75
**************************************	I M Carty	4		12			50 00
***CUSSS and Catabing Post	H Magon	1 2	12	12	do		24 00
***CIVIIIA I 'rogg and Railway Station	H Scott	,4	6 3	$\frac{12}{12}$	do		30 00 120 00
Merivale and Ottawa. Merrickville and Railway Station.	M. Fitzgerald	9		10		18 days (from	120 00
	1	1 -	1	1		May 14, '88)	` 74 96
Merritt and Varney	J. G. Wilson	5 5	6	$\frac{12}{12}$			75 00 119 48
Midland and Penetanguishene Stn Midland and Railway Station				12			120 00
"Alluman and Railway Station	(Harringer	1 4	12	12			90 00
Milford and Picton. Milford and Point Traverse.	(E. H. Ininaille	10	$\begin{array}{c c} 6 \\ 2 \end{array}$	$\frac{12}{12}$	do		140 00 75 00
"IIIDank Station and Morningdale	<u> </u>	1 -		12	ao	• • • • • • • • • • • • • • • • • • • •	15 00
Willis	. W. Strachan	5	12	9		(to Dec. 31, '88).	206 25
Millbridge and Railway Station	J. R. Ferguson.	5	$\frac{12}{6}$	$\frac{3}{12}$		from do .	68 75 100 00
TAUDITOOK and Street Letter Roy	w williams	1 3	6	12			50 00
"Hillbrook and Mount Pleasant	l.i MicLean	1 X	6		do		263 00
Millbrook and Railway Station Mille Roches Station and Moulinett		1	30 12		do do		280 80 120 00
"" Illington and Unterprove Station	OLA P MICLIONALO	11 34	3		do		74 00
			12 & 1	3 12	do		130 00
"LUVERTON and Railway Station	W H Dorland	1 1	12		do	•••••	124 80 225 00
Milverton Ry. Station and Toppin Mimosa and Orton			6 3		do do		72 00
			1	12	do		149 00
Minesing and Railway Station	J. Young	2	6				84 24 120 00
Minesing and Railway Station Minesing and Russellton Mitchell and Railway Station	W. W. Hicks	6	$\frac{3}{24}$		do do		149 76
Mitchell and Russeldale	J. Cole	8	6	12	do		175 00

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Name of Route,	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Mitchell's Bay and Oungah	W. H. Dean R. Lang D. McIntosh J. Thompson T. Sanderson J. N. Sharpe J. Judge A. Welstead J. Morrison	$egin{array}{c} 8_1^2 \\ 8_2^2 \\ 8_2^1 \\ 3_1^2 \\ 6_2^1 \\ 25 \ \mathrm{r.t.} \\ 9 \\ 1_0^2 \\ 1$	2 3 3 3 1 6 6 6 6 3 12 12	12 months	\$ cts. 120 00 125 00 60 00 40 00 30 00 568 52 343 00 4 00 120 00 50 00
Moose Creek and Moulinette Moose Creek and Railway Station Morewood and Railway Station Morpeth and Thamesville Morrisburg and Waddington, U.S. Morrisburg and West Winchester	T. D. Stark. T. Dorey J. Cochrane R. S. Walters. W. J. Murphy. L. Bellinger J. S. Ross. W. Mortimer J. I. Hobson J. Pettapiece	$\begin{bmatrix} 20 \\ 18 \\ 18 \\ 15 \\ 3 \\ 17 \\ 17 \\ 6 \\ 10 \\ \end{bmatrix}$	6 12 6 6 6 6 6 1 12 3 6 6	12 do	493 00 37 50 398 00 242 00 50 00 337 50 112 50 15 00 60 00 150 00
Mountain Grove and Ry. Station Mount Albert and Railway Station Mount Albion and Rymal Station Mount Forest and Railway Station Mount Horeb and Reaboro. Mount Sherwood and Ottawa Mull and Railway Station Muncey and Railway Station Murilla Station and Ry. Station Murilla Station and Silver Mountain Murray and Railway Station Murvale Station and Railton	A. McDonald. J. Roseman J. Roseman J. H. Coyne. W. Elliott. A. Ardley. N. Watson A. McGregor. J. McLean. McKenzie Bros. C. N. Sherriff J. O'Reilly.	100 y. 21/2 & \$ 5 3 15rods 24 1 41	12 12 3 12&24 3 6 6 12 6 & 12 3 12 & 12	12 do	20 00 74 00 96 00 168 64 100 00 275 00 50 00 35 00 112 49
Nepigon and Railway Station Neustadt and Railway Station	W. Burgmann. W. R. Derby. S. Spillett. G. Bogart. P. E. R. Miller. J. D. Naphan. J. Shanahan. J. Wrinkle. N. Flanagan. L. P. Siegmann	6 13 11 11	6 12 6 18 3 1 6 6	12 do	30 00 60 00 40 00 56 25 90 00 49 12 260 25 87 50 19 25
Newboro and Smith's Falls. Newbury and Wardsville. Newcastle and Orono. New Dublin and Railway Station. do New Edinburgh, Ottawa and Stree Letter Boxes. New Flos and Phelpston. Newholm and Port Sydney. New Lowell and Railway Station.	J. W. Preston J. Wilson J. M. Jackson J. A. Brown N. E. Brown t J. W. Proctor D. Gallagher D. Ferguson R. Paton	24 3 5 3 3 7 6	6 12 6 3 3 3 3 1 1 12 12	12 do	149 00 155 00 16 25 48 75 160 00 23 33 35 00 24 00
Newmarket and Pine Orchard Newmarket and Railway Station. Newmarket and Sutton West New Sarum and Railway Station. Niagara and Niagara Falls Niagara and Railway Station do do Niagara and St. Catharines	C. Ganton J. Bogart C. Newburn G. W. Cloes W. J. Sheppard R. Warren do J. Bishop.	22	3 5 24 6 12 6 12 12 12 12	12 do	119 00 892 00 156 00 525 00 60 00 20 00

36

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amou	ınt.
_						\$	cts.
Niagara Falls and Railway Station do do do Niagara Falls and Suspension Bridge	l do	‡ ‡			nths		52 00 8 67
U. 8	oh !	1 2	6	12 mor	ths		34 00
NIDIssing and Powassan Station.	J. Steele	12	3	3 do	(to June 30, '88.) from do		57 50 72 50
do Nipissing Junction and Ry. Stations	M. H. Ritchie	1 & 16	6 & 12	12 do		12	24 96
Nithburg and Stratford Nixon and Railway Station	H. Kumpt	10	6	IIZ do			00 00 56 26
+Noner and Railway Station	. Lemon.	17(X) vd	12	12 do			25 00
Normandale and Vittoria. North Augusta and Ry. Station	S. Ottley	4			• • • • • • • • • • • • • • • • • • • •		38 00
North Bay and Railway Station	W. McDonald	4 1	$\begin{bmatrix} & 6 \\ 3 & 12 \end{bmatrix}$				00 00
North Bruce and Queen Hill	D. McKinnon	$2^{\frac{3}{4}}$	3				80 00
North Buxton and Railway Station Northcote and Renfrew	G. B. Shreve	14	$\frac{12}{2}$)		40 00 30 00
North Gower and Railway Station.	A. Haggins	8]	6	12 do		19	98 00
North Keppel and Owen Sound North Valley and Osnabruck Centre	J. J. Barnes	$\frac{21}{4}$	3 3	12 do)		40 00 60 00
North Williamsburg and Strader's	W. N. Dulloar	4	,,	12 GC	,	,	,0 00
Hill Norval and Railway Station	W. C. Strader	5	1 6	12 do			26 00 81 25
Norwich and Railway Station	J. Lawrason	$\frac{1\frac{1}{2}}{3}$		12 do	(from June 1, '88).		85 00
Norwood and Midland Rv. Station	E. Gould	6	12	3 do	(to June 30, '88).		50 00
Norwood and O. and Q. Ry. Station Norwood and Round Lake.	do	$15^{\frac{1}{2}}$	20 1	12 do			56 30 80 00
Norwood, Warkworth and Midland	1	i	1	Ì	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	30 00
Railway Station	E. Gould	16&6	6	9 do			75 00
Nosbonsing and Railway Station Nottawa and Pretty River Valley	M. Gillies	6	6 2	12 do			80 00 60 00
Nottawa and Railway Station	G. Gemmell	3	12	12 do	·		88 00
Novar and Railway Station Novar and Swindon	R. W. Nicholls.	$\frac{1}{5}$	$6\&12 \\ 2$	12 do			45 24 52 00
Vakland and Windham Centre, &c.	J. Aspden	13	6 & 12	12 de		4:	20 00
Oak Leaf and SopertonOakville and Trafalgar	C. W. Murphy.	$\begin{vmatrix} 2\frac{1}{2} \\ 4 \end{vmatrix}$	6	12 do			50 00 25 00
Oakwood and Railway Station	W.H. McLauch		0	12 de	<i> </i>	4	25 66
Odessa and Railway Station	lin	$1\frac{1}{2}$		12 do			93 60 50 00
Udessa and Violet	ID. Shea	5 6	12	12 de			16 00
Ohsweken and Tuscarora.	J. Porter	31		12 de			00 00
Oil City and Railway StationOil City and Wheeler.	J. Ferguson	67	12	7 do			54 30 00 00
Oll City, Oil Springs and Ry, Station	J. W. Cates	1 25	12	5 de	o (to Aug. 31, 88)	1	12 50
Oil Springs and Railway Station Oldcastle and Railway Station	do	200 y's	12 3	7 de 12 de			54 30 40 00
Ulinda and Ruthven	J. Hill	1 24		12 de			60 00
Oliver's Ferry and Railway Station.	J. G. McLeod	6,	2	12 de			00 00
Oliver's Ferry and Railway Station.	J. Tremain	51		12 de			40 00 60 00
Omemee and Railway Station	R. Grandv	1	24	12 de	0	2	50 00
Ompah Station and Railway Station Oneida and Railway Station	A. Wright	20 yds	3 6	12 de	_	1 4	12 00 25 00
Onondago and Railway Station	L. Buckwell	. 1	6	12 de		1	09 20
Tangeville and Railway Station.	R. Mann	اً۔ أ	42		0		29 31
Orangeville and VanatterOranmore and Spence	W. J. Glover	5 5		12 de			88 00 75 00
Orillia and Grand Trunk Rv. Station	ı W. Jackson	. 1		12 d	o (less fine)		97 77
Orillia and Northern Ry. Station Orillia and Sebright	A. Fraser	.1 3	24	12 d	` '		.23 30 30 00
Orleans and Ottowa	H Dunnis	1 12	6	12 d		2	80 0 0
Ormsby and Railway Station Ormsby and Thanet.	G. Jarman	5		12 de	o	1	50 00
do do	M. Wurnhy	. 1					60 00 17 50
Oro Station and Railway Station	A. Douglas	J		12 d		i	55 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amour	at.
							\$	ets
Orton and Railway Station	W. Mooney	1 8	12			ths		00
Orwell and Railway Station	F. Sutherland	$\frac{1}{2}$	12 12			(to Dec. 31, '88)) 00) 25
do do Osceola and Stafford OsgoodeStation andRailway Station	D. Childerhose	82	3			from do	140	
Osgoode Station and Railway Station	J. Buckels	40 yds	6	12	do			00
Osgoode Station and Russell Osgoode Station and West Win-	P. Levia	$21\frac{1}{2}$	6	12	do	• • • • • • • • • • • • • • • • • • • •	480) ()(
chester	A. Campbell	22	6	12			625	
Oshawa and Raglan	W. H. Thomas	9	6	12		(f Tl 1 200)	360) 00 3 78
Oshawa and Street Letter Boxes Ossian and Sarnia	do F. B. Rudd	9 15ફ્રે	12	9 12		(from July 1, '88).	344	
Oso Station and Zealand	W. Armstrong	3_2^{1}	2	12	do		45	00
Ottawa and Post Office Department	E. Batterton	1 8	18	12	do		551	. 20
Ottawa and C.A. and C.P. Railway Stations	B. D'Arpentigny	1	18	12	do		756	66
Ottawa and Railway Station	P. McKenna	1	As req	12	do		3,100	39
Ottawa and Exhibition Grounds Ottawa and Richmond	W. Goodwin	20	6			tripsths	$\begin{array}{c} 13 \\ 725 \end{array}$	3 50
Otterville and Railway Station	P. Mitchell	1		12				28
Oungah and Wallaceburg	D. McLean	11	6	12	do		300	
Overton and Roblin	W. M. Paul	$\frac{3\frac{1}{2}}{1}$	$\frac{2}{24}$	$\frac{12}{6}$		(to Sept. 30, '88).	$\frac{60}{125}$) () () ()
Owen Sound and Railway Station do do	W. Bridgett	1	24	6		from do .	100	
Owen Sound and Street Letter Boxes	E. Miller		18	12	do		235	
Owen Sound and TaraOxenden and Wiarton		$\frac{20\frac{1}{2}}{3}$	6	$\begin{array}{c} 12 \\ 12 \end{array}$			$\frac{548}{120}$	
Oxford Station and Railway Station			. 3	12				3 00
Paisley and Railway Station	S. Cruickshank	1	24	12			131	
Paisley and Vesta Pakenham and Panmure	do	$\frac{16\frac{1}{2}}{20}$	6	$\frac{12}{12}$			$\frac{390}{279}$	
Pakenham and Railway Station	R. Clark	1 1		12			171	
Palmer Rapids and Rockingham	W. Mahon	8	1	12				00
Palmer Rapids and Wingle Palmerston and Railway Station	J. Wingle	6	36	$\begin{array}{c} 12 \\ 12 \end{array}$			45 170	5 00 5 00
Paris and Railway Station	C. L. Newell	1	30	9		(to Dec. 31, '88).	253	
do do	H. Oliver	1	36	3		from do .		2 40
Paris and Street Letter Boxes Parkdale and Railway Station	W. Grav	j	12 24	$\frac{9}{12}$	do	(from July 1, '88)		2 00
Parkdale—G. T. Rv. and C. P. Rv.	do	1 1	'l a	12	do			00
Parkersville and Mail Catching Post	T. H. Osborne.		6	1		(from Mar. 1, '89).		2 08
Park Head and Railway Station Parkhill and Railway Station	G. Mathers	1 1	6 & 12 12	12 6	do	(to Sept. 30, '88)		1 58 2 50
do do	G. Simpson	. l	12	6		from do .	42	2 50
Parkhill and Strathroy	W. Fletcher	18	3 6	$\begin{array}{c} 12 \\ 12 \end{array}$			350 490	
Parry Sound and Rosseau	W. R. Hamilton	25 144		12	do) 00
Patillo and Railway Station	D. Coutts	. 1	6	12	do			5 00
Pearceley and Sundridge Pelee Island and Pelee Island East.	T. G. Pearce	8	1 1	$\begin{array}{c} 12 \\ 12 \end{array}$			$\begin{array}{c} 65 \\ 100 \end{array}$	5 00
Pembroke and Railway Station		11	24	12		(less fine)	398	
Pendleton and Railway Station	H. Roy	17	6	12	do		500	00
Penetanguishene and Ry. Station	C. Charlebois	1 11	- c	12	do	(to Sept. 30, '88.) (0() (0(
Peninsula Harbor and Ry. Station.	do	1 -9	31	6		from do .		7 50
Penville and Tottenham	S. Rogers	19 r. t.	6	12	ďο		199	9 00
Perch Station and Railway Station.			6	$\begin{array}{c} 12 \\ 12 \end{array}$	do		50 285) () S ()
Perm and Rosemont	W. G. Cameron	14		3		(to June 30, '88).		10
Perth and Playfairdo do do	G. C. Mills	14	6	9	do	from do .	300	00
Perth and Railway Station	J. Allan	ો ફે	29	12 12	do		$\begin{array}{c} 271 \\ 185 \end{array}$	
Perth and Stanleyville Perth and Tennyson	W. Devlin		1	12				1 O
Perth and Westport	A. P. Palmer	23	2	12	do		175	5 00
Petawawa and Railway Station	S. Devine J. Buller	14	35 & 60	12	do	(less fine)		00

38

Name of Route. Name of Contractor. No of Trips Per Week.	D. 1	
Contractor.	Period. Amo	ount.
	8	ets.
Peterboro' and Street Letter Boxes. H. C. Rogers 12 9 mont		50 00
reterboro' and Warsaw	(to Sept. 30, '88)	38 00
D do do		38 00
- Cours and St. Agatha. II. Raiser 2 6 12 do		398 00 125 00
Petrolea and Railway Station P. Barclay 1 24 12 do		00 00
etrolea and Willson Croft J. L. Wilson 4½ 2 12 do		75 00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		46 80 00 00
Picton and Ry. Station		.00 00
119708 2 18 112 00		204 00
Picton and Solmesville H. Goodwin 17 ⁴ 6 12 do Picton and Street Letter Boxes T. Shannon (to 12 9 do	(from July 1, '88).	58 50
pay)	(Iromouly 1, 60).	30 30
Picton and West Lake. J. Hicks. 8 2 & 3 12 do		94 48
		60 00 65 00
Time Grove and Woodbrigde F. Karls 11 6 12 do		42 00
Finkerton and Ry. Station	(to Sept. 30, '88)	60 00
\mathbf{p} do do J. Connor $2 \mid 6 \mid 6$ do		47 50
Fointeaux Pins and Sault Ste. Mariel H. Wood 9 1 1 12 do		00 00 55 00
Unt Edward and Sarnia B' Symington 2 6 12 do		56 00
Tomona and Pricavilla D Black 5 9 19 do		70 00
Pond Mills and Ry. Station J. Gilmore 3 3 12 do Pontypool and Ry. Station T. H. Williamson 10 12 9 do		75 00 60 00
	from do	17 50
Poplar Grove and Rydal Bank W. R. Smyth 13 1 12 do		04 00
bortage du Fort and RossD. McLaren 3 3 12 do		70 00
Of Arthur and Silver Mountain G Levins 40 1 1 11 do		250 00 320 83
Fort Burwell and Port Rowan H A Aker 18 6 12 do	4	75 00
Port Carling and Falkenburg Station	/f D 1 200\	00.00
Fort Cockburn and Trout Lake H Frager 1 4 2 Season		96 00 25 00
5 YU COIDOTHA AND KY Station W Lewis 1 424 & 1212 mon		48 96
+ Uff Coldwell and Ry Station R Jackson 50 ft 19 2 do	(from Jan. 1, '89).	2 50
Port Dalhousie and Ry Station F W Smith 1948 2019 do		46 80 94 38
		01 00
* Of Dover and Victor W. R. Reid 44 3 112 do		75 00
		109 58 172 00
*VILTINIAN and Richard's Landing M. McLonnan 2 2 Neason	1888	40 50
Fort Franks and ThedfordA. Kimmerlev 6 3 3 month	ıs (to June 30,'88).	31 25
	from do	86 25 200 00
Fort Hope and Street Letter Boyes J. Caldwell 41 12 12 do		200 00
Fort Lambton and Ry Station W H McDonald I 12 12 do		50 00
Port Maitland and Stromness H. Siddall 2 3 12 do Port Perry and Ry. Station W. M. Jamieson 1 18 12 do		70 00
Port Perry and Scurger J Burks 7 9 19 do		74 00
Ferry and Shirley II Espin. 5 2 12 do		80 00
5 9 U Letty and Dynhage M. Lwony 12 6 12 ac		80 00
Port Perry and Whitby L. Sebert Special Port Robinson and Ry. Station B. Buckner 24 9 month		10 00 12 50
	from do	35 00
3 Ort Rowan and Simcoe II. W Fick 21 6 12 do		90 00
Fort Severn and Wauhashene II Hanly 5 3 12 do		.56 00
Stanley and R.v. Station M. Payne. \ \ \ 24 \ \ \ \ \ 20 \ \ \ \ \ \ \ \ \ \ \ \ \	i	60 00
Bort Sydney and Utterson. H. G. Ladell 25 6 12 do		56 48
		46 80 578 24
Property 1 To City 1		40 40
39		

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Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Prescott and Street Letter Boxes Prescott and Throoptown,	pay). W. J. Reynolds. P. Bulger. F. C. Cornell. C. Kress. P. D. Henry. C. Fallis. F. Freeman. J. M. Burk. J. Crockford. J. N. Logan.	16 16 8 10 4 1 1 2 3 7 6 5	18 2 2 6 12 6 12 6 3 2 1	9 months (fromJuly 1, '88) 3 do (to June 30, '88) 9 do from do 12 do	\$ cts. 108 00 33 25 74 60 330 00 600 00 156 00 50 00 121 25 50 00 45 00 35 00
Quinn and Tilbury Centre	l	5 5	3 3	9 do (to Dec. 31, '88) 3 do from do	84 36 37 50
Reaboro and Railway Station Read and Shannonville Redickville and Singhampton Red Rock and Railway Station Renfrew and C. P. Ry. Station do do Renfrew and K. & P. Ry. Station	W. D. Smith R. Hancock W. D. Smith G. Laing P. McKenny J. Richards N. Flanagan J. Smith D. Brownlee J. Smith J. Rousselle W. Renton W. Blanchard W. Young W. R. Proctor J. Palmer T. H. Stapledon W. Taylor J. Dennahowe L. S. Hancock P. W. Anthony A. House L. House D. McInnes S. Irwin H. Parry J. H. Peters H. Jordan A. Sedore R. Shields R. Russell A. Campbell W. H. McIntyre J. Harber A. Humphrey G. Barber	34 34 11 32 19 32 19 55 11 33 34 6 4 21 300 y's 32 30 rds.	6 3 6 24 24 12 12 12 6 3 6 2 2 12 2 6 6 6 12 2	12 do Special trips	52 00 14 00 37 50 112 50 70 00 225 00 97 50 58 75 56 16 234 00 34 32 31 30 78 00 55 00 237 12 1 00 23 33 78 00 149 76 74 88 15 00 248 00 25 00 125 00 12 00 36 00 20 00 84 00 178 00 178 00 178 00
Rosseau and Shannon Hall		$\begin{array}{c c} & 4 \\ & 12\frac{1}{2} \\ & 22 \end{array}$	3 1 6	Part of seasons 1887-88 & 1888-89	22 00 78 00
Rossport and Railway Stationdo do do Rouge Hill and Toronto Round Plains and Waterford Rowan Mills & Walsingham Centre.	P. A. Leitch R. H. Crew B. H. Rammage	50 yds 17 4 7	12 6 3	1888-89. 6 do (to Sept 30, '88). 6 do from do 12 do 12 do 12 do	180 83 7 50 7 50 399 00 95 00 114 00

40

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.
						\$ cts.
Russell and South Indian Railway	J. D. Mathers	50 yds	12	12 months		10 00
Station.	R. Young	10	6	12 do		225 00
St. Catharines and Street Letter	D GL L			e 1. (. D.	- 91 200)	156 50
Boxes do do	P. Sniels		As req do	6 do (to De 3 do from		78 25
Mr. Catharines and Welland Station	IIVI. Ireson	1	24			230 80
St. Eugène and Vankleek Hill	X. Proulx	10	6	12 do		290 00
St. George and Railway Station	M. Brockbank	1	24	12 do		160 94
St. Josephim River Ruscom, and	II .		c	10 do		195 00
Railway StationSt. Lawrence and Wolfe Island	J. Bacon	$\frac{3}{12}$	$\begin{array}{c c} & 6 \\ & 1 \end{array}$	12 do 12 do		135 00 75 00
St. Ola and Railway Station	P P Clark	2		12 do		50 00
St. Patriols and Railway Station	B. Pavement	1 4	3	6 do (to Se	ot. 30, '88)	24 00
St. Patrick and Changing Post	J. Langdon	Í	3	6 do from	do	19 00
St. Patrick and Changing Post St. Paul's Station and Ry. Station.	A. Thom	10	12			62 40
Nt. Thomas and Railway Stations	A Boughner	1	72		nes)	539 88
St. Thomas and SpartaSt. Thomas and Street Letter Boxes	W. Gregory	11	6	12 do		185 00
St. Thomas and Street Letter Boxes	s F. E. Ermatin	-1	12	9 do (fr'm	July 1, '88)	127 67
St. Thomas and Talbotville Royal.	J Wait	3			uly 1, 66)	120 00
Vauowa and Sehricht	. J. H. Vanviack	. 1 - 60%				31 20
Sand Point and Railway Station	IE. De Renzy			12 do		156 00
5andwich and Windsor	TA. G. Kennedy.,	. 2	6	9 do (to De	ec. 31, '88)	130 50
do do	IS. Page	. 1 2			do	45 00
Sarnia and Port Huron, U.S	. J. P. Dawson	. 2	12	12 do		150 00 93 60
Sarnia and Railway Station.	. J. J. Ross	. 100 ye	12 12		c. 31, '88)	62 50
Sarnia and Street Letter Boxes	F A Dawson	· · · · · ·	12	3 do from		28 50
Oauble Falls and Wiarton	H. Crandon	. 12	2	12 do		119 00
Daugeen and Railway Station	. T. Lee	. .	18&2	12 do		137 64
Sault Ste. Marie and Rv. Station.	. M. C. Pim	: -	6	4 do 16 d		
Sault Ste. Marie and Sault Marie	, T. T. T.				7. 15, '88).	35 10
U.S. do do	. R. T. Pim	$\begin{array}{c c} & 1 \\ & 1 \end{array}$		Season 1888 Part of seasons		131 42
do do .	. W. Turner		2 12	1888-89		165 91
Sault Ste. Marie and Thessalon	W. H. Plummer	. 60	1	Part of season		72 00
Saurin and Railway Station	D. A. Cooper		1 12			20 00
OCurether and Railway Station	D. R. Bruce	. 1100 v	d 12	12 do		25 00
Ocotch Blook and Railway Station	J. McKenzie	1 1	6			78 00
Scotia and Catching Post Scotten and Railway Station	J. Bucke	•	$\frac{3}{4}$ 6 12			62 40 30 00
Seaforth and Railway Station	S Dickson	•	1 04	10 40		187 20
. Wealforth Vorns and Ry Station	ID. Hav.	1 12	4 6 & 1	2 3 do (toSe	pt. 30, '88)	
Geagrave and Railway Station	. E. Wanes	.1		12 do		69 88
Sebringville and Railway Station.	II. R. Paton	.		12 do		90 00
Ocely and Wiman	M Trueman	1 6		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ept. 30, '88)	14 00
do do	. J. Fowler	. 6	. 1	$egin{array}{cccccccccccccccccccccccccccccccccccc$	ct. 31, '88)	2 33
er pent River and Ranway Station	i. G. McDonaid		4 6		. '89)	20 10
Severn Bridge and Railway Station	n. J. H. Jackson.	.1	1 24			
Onamrock and Sheedy	M. Sheedv	. 1 7	2	12 do		102 67
Shamrock and Whelan	S. Whelan	. 1 7	' 2	12 do		50 00
Ollanty Ray and Railway Station	J. Graham	- 1				60 00
~Uarbot Lake and Railway Station	n IVI AVerv	1	$\frac{1}{4}$ 24	40	extra trips	148 40 124 80
Shelburne and Railway Station Sherkston and Railway Station	R W Shark		1 29			50 00
			<u>:</u> ا آ	140		1
Shrubmount and Vivian	F. Stevens		3 3			
Shrubmount and Vivian	. J. Smith	. 16 r.	t. 3	12 do		146 00
~ and Railway Stations	Н. нап	1 &	2: 14	3 do (toJ	une 30, '88	55 3
do do	H W Pursel	1 1 87.	2 13	9 do fron	1 do	165 60
Skye and Railway Station Smith's Falls and Railway Station	H. McLean	.			• • • • • • • • •	
	i in Carlev	1	$\frac{1}{2}$ 2^{4}	l 12 do		.1 175 0

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period,	Amount.
Smith's Falls and Railway Station	J. M. McLaren	1 1		10 m	onths 18 days (from	\$ cts.
•				ļ	May 14, '88)	88 19
Smithdale and Railway Station Smithville and Wellandport	J. Wilson	i 9 [*]	12	12 c	lo lo	30 00 269 00
Snake River and Railway Station	G. Douglas	31			lo	96 24
Snake River and Railway Station Snyder and Railway Station Solway and Walkerton	D. McIntyre	$\begin{vmatrix} 1\frac{1}{4} \\ 6\frac{1}{2} \end{vmatrix}$		9 6	lo (to Dec. 31, '88)	125 00 111 75
do do Sombra and Marine City, U.S	J. McCallum	$\frac{6\frac{1}{2}}{2}$	3	3 0	lo from do	36 00 36 00
Sombra and Railway Station	do	1	12	12 d	lo	50 00
Sombra and Thornyhurst	H. G. Waybrant	l G	6		lo lo	60 00 185 00
Sombra and Wilkesport. Sonya and Railway Station	A. Black	38			lo	40 00
South Casselman and Railway Sta-	J. St. Denis	1	6	12 6	lo	25 00
South Indian and Railway Station	J. K. Meredith.,	1 8	12	12 d	lo ,	50 00
South March and Railway Station South River and Railway Station	W. Holditch	151	$\begin{array}{c} 6 \\ 6 & 12 \end{array}$	12 d	lo lo	400 00 87 00
Spanish River and Spanish River	1	{				
Station			$\frac{1}{6}$		lo	99 44 18 75
ob ob	W. H. Spencer A. Carmichael	15			lo (to Dec. 31, '88)	56 25
do do Springfield and Railway Station	J. Dennis	13			$egin{array}{cccccccccccccccccccccccccccccccccccc$	18 75 88 00
Sprinford and Railway Station	T. McMehan	3	6 & 12	12 0	lo	200 00
Springville and Railway Station do do	W. Bidgood	3	6	3 6	lo (to Dec. 31, '88) lo from do	97 50 34 50
Spry and Stokes Bay Stanleydale and Yearleys	G. Myles	$\begin{bmatrix} 6 \\ 2\frac{1}{4} \end{bmatrix}$	3	$\frac{12}{12}$	lo	130 00 39 00
Stayner and Railway Station	W. B. Sanders	8			lo (to Dec. 31, '88,	
do do	E. B. Sanders	1	24	3 6	$less\ fine)$ lo from do	71 50 24 00
Stayner and Sunnidale	J. Sherrick	74	3	12 d	lo	159 96
Stayner and Vanvlack	C. Tytherleigh	13	$1 \frac{1}{12}$		lo lo	74 00 80 00
Stewart Station and Railway Station	R. Jackson	50 ft.	12	1 0	lo (to Dec. 31, '88)	0 83
Stirling and Railway Station Stittsville and Railway Station	S. Mann	120 v's	12 6		lo (less fine) lo	57 40 21 84
Stokes Bay and Tobermorey	M. Belrose	26	1 3	12 c	lo	224 00
Stony Creek and Woodburn Stony Lake and Warsaw	H. Bell	13 r.t. 12	1		lo lo	116 48 75 00
Stouffville and Railway Station	J. E. Addison M. Yake	1	30 30	6 6	lo (to Sept. 30, '88). lo from do	50 00 39 00
Strathallan and Woodstock	R. Langdon	14	6	12 d	lo	385 00
Stratford and Railway Station Stratford and Street Letter Boxes	A. Hirst	3	48 19		lo lo	360 18 391 20
Strathroy and Street Letter Boxes	H. McColl	<i>.</i>	18	9 0	lo (from July 1, '88)	37 50
Streetsville and Railway Station Stromness and Railway Station	G. Latimer	2	30 12		lo (to Sept. 30, '88).	125 00 62 60
do do Stroud and Railway Station	H. Siddall	2	12	6 6	lo from do	60 00
Sturgeon Bay and Railway Station.	J. Playfair	1 1	$\begin{array}{c} 12 \\ 12 \end{array}$		lo lo	120 00 80 00
Sturgeon Falls and Railway Station	J. Stillar	1	12		lo	75 00
Sudbury and Railway Station Sunderland and Railway Station	N. Steffins	1 1	$\begin{array}{ c c c }\hline 12\\24\\ \end{array}$	12 d	lo lo	120 90 59 48
Sundridge and Railway Station Sundridge and Vavasour	J. Carter	3	6 & 12		lo lo	52 20 64 00
Sutton West and Railway Station	W. D. Townley	1 1	12	12 6	lo	100 00
Sutton West and Vachell	do	14 r.t.	2 3		lo lo	120 00 95 00
Sydenham and Wilmur	W. D. Waters	7	2	12 d	lo	100 00
Sylvan and Widder	W. Kandall	3	6	12 d	lo	140 00
Talbotville Royal and Tempo					lo	50 00
Tara and Railway Station	\mathbf{J} . Hamilton 4		12	ITZ C	lo	118 92
		-				

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
Tavistock and Railway Station	G. Matheson	18 19 19			onths	\$ cts.
Teeswater and Railway Station The Brook and South Indian Railway Station.	W. Zinger T. Lefebvre	10		12 d	0 15 days (to Nov	104 17
3	A. Lefebvre	10			15, 1888 o 15 days (from	118 33
Thedford and Railway Station The Grove and Railway Station Thessalon and Railway Station	J. G. Brown T. A. Robinson.	300yd. 3	6 12 6		Nov. 16, 1888).	75 00 50 00 50 00
Thessalon and Wharncliffe Thompsonville and Railway Station	W. Taggart	17	1		Nov. 16, 1888). o (from June 1, '88)	70 20 75 00
Thornhill and Railway Station	W. T. Brown J. Thompson	$1\frac{1}{3}$ 12	12 6 6		o o	110 00 187 20 250 00
Thornton and Railway Station. Thorold and Railway Station Thwaites and Railway Station	R. Power J. Dale	3		12 d 12 d	o	59 48 187 20 20 00
Tilbury Centre and Railway Station Tilsonburg and Railway Station	M. Hudon	$2^{\frac{1}{2}}$		$egin{array}{ccc} 12 & \mathrm{d} \\ 12 & \mathrm{d} \end{array}$	o ,,.	96 00 118 56 93 75
do do Tioga and Railway Station Toronto and Railway Station	W. Parker G. Fitzsimmons.	1	12	3 d 12 d	o from do	34 65 45 00
do do do do		1 1	& 48 24&30 26&48	6 d	o (to Sept. 30, '88). o from do o from do (less	
Toronto and Street Letter Boxes	A. J. Pratt J. Hendry		As req	12 mc	fine)al triponths	469 38 0 50 3,400 00
do do Tottenham and Railway Station Townsend Centre and Waterford Toyes Hill and Winchester Springs Trenton and Railway Station	J. B. McQuigg	3 3	12 3 3	12 mo 12 d	al service	16° 00 69 00 75 00 60 00
Trenton and Wooler Tuftsville and North Hastings Junc-	Bros H. Sharp	91	30 6		o	312 00 175 00
tion Tupperville and Railway Station. Turnerville and Railway Station. Tuscarora and Railway Station. Tweed and Railway Station. Tweedside and Winona. Tyrconnell and Wallacetown.	S. Tufts J. J. Suttor. W. Turner. S. J. McKelvey. W. J. Bowell	4	6 6	12 d 12 d 12 d 12 d 4 d	o	20 00 24 96 25 00 109 20 156 00 26 00 105 00
Uffington and Vankoughnet	J. Meyers J. Lynes J. Hyde	9 61 1	2	12 d 12 d 12 d	o	40 00 80 00 45 00
Uphill and Victoria Road Uptergrove and Railway Station. Utopia and Railway Station. Utterson and Railway Station. Utterson and Windermere. Uttoxeter and Wanstead. Uxbridge and Railway Station. Uxbridge and Victoria Corners.	way G. Sharp T. Mulvihill P. Connor E. Hanes. N. Hanes N. K. Nesbitt J. Kinmerly	12 12 15 6 15 6 15 15 15 15 15 15 15 15 15 15 15 15 15	24 12 12 2 3 24	12 d 12 d 12 d 12 d 12 d 12 d 12 d 12 d	o from do to to to to to to to to to to to to to to to	160 00 180 00 50 00 125 20 200 00 100 00 90 00
Vandecar and Woodstock Vankleek Hill and Railway Station Varney and Railway Station	W Lawlor	12	3 6 12	12 c	lo lo	624 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	The state of the s	Period.	Amount.
Vars and Railway Crossing	S T Cheney	1	12	4 mor	nths 19 days (from	\$ cts.
•	•		ļ	Nov	. 12, 1888)	. 11 57
Vasey and Waverlydo do do	J. Fraser J. Loney	4	3 3		ths (to Dec. 31, '88) from do	75 00 22 25
Ventnor and Railway Station	G. A. Henderson	$5\frac{1}{2}$	6	12 do		130 00
Verner and Railway Station Victoria Harbor and Ry. Station	J. L. Michaud	\$	12 24	12 do 12 do		20 00 115 00
Villa Nova and Railway Station	M McAlpine	1	6	12 do		50 00
Villiers and Railway Station Vine and Railway Station	W. Weir V. P. Kelcev	2 1 18	$\frac{3}{12}$	12 do 12 do		74 88 56 00
Victoria and Walsh	S. Ottley	4	3 & 6			115 50
Vivian and Railway Station	N. L. McCor- mack	1 8	12	12 do	•••••	60 00
Waldemar and Railway Station	D. Jenkins	1	12	12 do		64 00
Wahnapitae and Railway Station	D. McLaren	4	12	12 do		37 56
Wales and Railway Station Walkerton and Railway Station		11	$\begin{array}{c} 12 \\ 24 \end{array}$	12 do 12 do		90 60
Walkerton and Wroxeter	T. Sage	22	6	12 do		312 00 483 00
Walker's and Railway Station Walkerville and Windsor	J. Greaves	$2^{\frac{1}{8}}$	$\begin{array}{c} 12 \\ 12 \end{array}$	12 do 12 do		30 00
Wallaceburg and Railway Station	J. McDougall	- 	24	12 do		120 00 75 00
Wallacetown and Railway Station	C. McGregor	$\frac{2\frac{1}{5}}{1\frac{1}{5}}$	$\frac{12}{2}$	12 do 12 do		156 00
Waller and Harney's Crossing Walnut and Watford	P.E. Willoughby	6	$\frac{2}{2}$	12 do		30 00 100 00
Warwick and Railway Station Washago and Railway Station	J. Smith	8	$\begin{array}{c} 6 \\ 24 \end{array}$	12 do 12 do		195 00
Waterford and Railway Stations	H. Dochstader	2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	12	12 do 12 do		156 00 93 88
Waterloo and Railway Stations	F. Sars	2,	30	12 do		400 00
Waubashene and Railway Station Waverly and Railway Station	T. French	98	24 6	12 do 12 do		$\begin{array}{c} 60 & 00 \\ 275 & 00 \end{array}$
Webbwood and Railway Station	J. McLandress.	3	6	3 do	(from Jan. 1, '89)	19 25
Weidman and Railway Station Weldon and Railway Station	J. E. Weldon	50 ft.	$\frac{12}{6}$	12 do 12 do	*************	15 00 40 00
Welland and C. S. Railway Station.	J. McQueen	17	12	12 do		99 84
Welland and Welland Ry. Station do do Welland and Street Letter Boxes	O. H. Garner	3	24 24	9 do 3 do		89 30 43 12
Welland and Wellandport	pav)	15				80 00 395 00
Wellington and Railway Station	M. Pettit	1	12	12 do		65 00
Wellman's Corners and Ry. Station Wemyss and Railway Station Wendover and N. N. Mills Railway	R. Ritchie	2 1	3 6	12 do 12 do	••••••	75 00 15 00
Station	J. B. Malette J. Barrowelough	$\frac{3}{1\frac{1}{2}}$	6 6	12 do 12 do		170 00 93 60
West Toronto Junction and Railway Station	J. Kirkwood	1	12 12	12 do	18 days (to Sept.	75 00
•				30, 1	888)	28 64
do do Westport and Railway Station	A. Kendrick	$\begin{array}{c c} 1 \\ 20 \end{array}$	$\begin{array}{c} 12 \\ 6 \end{array}$	6 do 5 do	from do (to Feb. 28, '89).	37 50
ob ob	J. H. Whelan	20	6	1 do	from do	205 00 41 00
Vestwood and Railway Station Whitby and Railway Station	J. S. Comstock J. Scott	21 1 2 3 1	$\frac{6}{18}$	12 do 12 do		125 00
Whitechurch and Railway Station	H.D. Henderson.	1 3	12	12 do		102 28 80 00
Whitefish and Railway Station White River and Railway Station	H. Smith W. E. McLauch-		6	4 do	(from Dec. 1, '88)	10 30
Viarton and Railway Station	lin L. Post	18.034-10		12 do 12 do		30 00
Vilbur Station and Railway Station	T. B. Caldwell	1 2	e	12 do		$125 00 \\ 25 00$
Wilton Grove and Railway Station. Windsor and Detroit, U.S	P. Murray	$\frac{1}{4}$	$\begin{array}{c} 6 \\ 24 \end{array}$	12 do 12 do		30 00
Vindsor and Railway Station	do	1	24			500 00 219 00

Detail of all payments for Mail Transportation in Ontario, &c.—Concluded.

Name of Route. Name of Route. Name of Signature of Route. Name of Route. N		
Contractor. Sign of Land	oun	t.
	\$с	ts.
Wingham and C.P. Railway Station W. Black. 5 6 3 months 19 days (to July	95	oe.
do do do 3 19, 1888)	37	
Wingham and G. T. Ry. Station D. Campbell. 3 24 12 months. July 20, 1888)	39 199	
Wolverton and Railway Station S. Claus	114	
Woodbridge and Railway Station F. Earls 24 12 do	72	00
Woodslee and Railway Station	156	
Woodstock and Railway Stations. J. A. McKenzie. 1 & \frac{1}{3} 12&24 12 do Woodstock and Street Letter Boxes A. McCleneghan	320	3 0
(to pay)	172	50
Woodville and Railway Station H. Ferguson 3 24 12 do	150	00
Wroxeter and Railway Station	72	
Wyebridge and Wyevale Station. N. McRae 5 6 12 do	134	
Wyevale and Railway Station W. T. Stewart 16 12 do Wylie and Railway Station J. Lyons 2 3 12 do	30	
	62 20	
Tyton Station and Railway Station G. Scatcherd 8 12 12 do	20	w
Yarmouth Centre and Ry. Station. G. A. Parlee ½ 6 12 do	100	00
Zephyr and Railway Station. J. N. Dafoe. 3 6 12 do	159	00
Suspension Bridge Tolls W. G. Swan, Superintendent	40	00
Total \$273,	547	10

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

DETAIL of all payments for Mail Transportation in Ontario, made within the Year ended 30th June, 1889. CONVEYANCE OF MAILS BY STEAMBOATS AND SAILING VESSELS.

	Amount.	\$ cts. 2,297 89 200 00 1,200 00 200 00 200 00 200 00 75 00 75 00 75 00 75 66 8,539 65
	Period.	12 months (and extra service). Season 1888. 12 months. Season 1888. 6 months (See land service). 6 season 1888 do do do do 1 year 11 months (to 30th June, '88)
1	Distance No. of Trips per Week.	6 & 6 & 6 & 6 & 6 & 6 & 6 & 6 & 6 & 6 &
	Distance in Miles.	2,650 s. &
	Name of Contractor.	seronto Navigation Coonsand Islands Railway Coonsand Islands Railway Codorn Lidwell Crandell Cozens. W. Gauthier F. Gildersleeve.
	Name of Route.	Deseronto and Picton. Grananoque and Clayton, U.S. Kingston and Clayton, U.S. Kingston and Thousand Island Park, U.S. Kingsville and Pelee Island. Kingsyalle and Pelee Island. Michipicoten Island and Sault Ste. Marie. Niagara and Toronto. Niagara and Toronto. Outer Hope and Charlotte, U.S. Port Hope and Charlotte, U.S. and the United Kingdom, not covered by the Allan contract. Allan contract.

WILLIAM WHITE,
Deputy Postmaster-General.

W. H. Smithson,
Accountant.

N.B. --For Special Mail Subsidies and Steamship Subventions, see page 9.

DETAIL of all payments for Mail Transportation in Ontario, made within the Year ended 30th June, 1889. CONVEYANCE OF MAILS BY RAILWAYS.

Name of Railway.	Distance in Miles.	No. of Trips per Week.		Period.	The state of the s	Amount.
			And the second s			·s cts.
Bay of Quinte Railway and Navigation Co Canada Atlantic Railway (within Ontario). Canada Southern Railway. Canadian Pacific Railway (within Ontario)*.	79 3473 1,8563	79 12 12 12 13 15 15 15 15 15 15 15 15 15 15 15 15 15	12 month 12 do 12 do	12 months (to 31st March, 1889) 12 do (to 31st May, 1889) 12 do (to 31st March, 1889)		730 00 7,748 48 32,934 55
Central Ontario Railway Erie and Huron Railway Connect Trans.	104 67 2.445	over different sections of the line	12 do 12 do 12 do	ල ල ල ල		125,514 88 5,472 48 4,243 20
Leanington and Pembroke Railway Leanington and St. Clair Railway Napanee, Tamworth and Quebec Railway Thousand Islandorth and Quebec Railway	104 15 284 2	over different sections of the ne	<u> </u>	සි දි දි දි දි		259,065 74 7,189 73 138 00 3,889 96 730 00
				Total	:	\$447,657 02

* This does not include the service between St. Polycarpe and Smith's Falls, see Quebec.

W. H. Smithson, Accountant.

WILLIAM WHITE, Deputy Postmaster-General. Detail of all payments for making and repairing Mail Bags, Mail Locks, &c., in Ontario, made within the year ended 30th June, 1889.

Tradesmen's Names.	Particulars of Disbursements.	Amount.
R. S. Montgomery. E. Chanteloup. Smith & Egge Manufacturing Co. Miller Lock Co. G. Bailey. Pritchard & Andrews. L. W. Shannon. Tackaberry & Wigmore. Tackaberry & Loughrey. T. Thompson. E. H. Roberts. G. Bailey. Tackaberry & Loughrey. G. Bailey. Tothompson. G. Bailey. Postmaster, Sundridge T. Thompson. G. Bailey. G. Bailey. G. Bailey. G. Bailey. Control of the Market State Sta	Brass mail locks for do Mail bag locks and keys for do Repairing brass mail locks for do Mail bag labels for do Stencilling mail bags for Post Office Inspector, Kingston Repairing mail bags for do London	1,165 50 920 50 45 25 30 25 150 20 374 85 2 64 19 50 35 56 215 88 35 70 2 50 28 65 2 25 1,125 24 78 90 77 90

WILLIAM WHITE,
Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF QUEBEC.

Detail of all payments for Mail Transportation in Quebec, made within the Year ended 30th June, 1889.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount
bbotsford and Pauline	A Tamion	9	9	 0 man	41 /£ 4 1	8 et
	}	İ	3	1	ths (from Aug. 1,	60 (
botsford and Railway Station bereorn and Railway Station	D. Sharkey E. R. Shepard	3	$\frac{12}{12}$	12 do 12 do		75 (40 (
cton Vale and Railway Stationcton Vale and St. Théodore	C. P. Ry. Co	77	12			
d'Acton	A. Laplante	4		12 do		100 (48 (
d'Acton	D. Larivée	4 3	6 12	4 do 7 do	5 d's(toAug.5, '88) 26 dys.(from do .	52 1
damsville and Railway Stationdderley and St. Pierre Baptiste	P. A. Drolet	3	3	12 do	20dys.(from do .	45 (
			1	12 do 12 do		39 7 25 C
gnes and Railway Station	J. S. Wilson	1 3	12	12 do		36 (
gnes and Nadeau's Crossing. gnes and Railway Station. gnes and Ste Cécile de Whitton. gnes and St. Samuel de Gayhurst. gnes and Three Lakes. ird, Clarenceville and Miranda.	A. Loubier	9	$\frac{3}{2}$	12 do 12 do		96 (120 (
gnes and Three Lakes	H. W. Albro	10	1	12 do		49 (
ard, Clarenceville and Miranda llan's Corners and Cairnside	M. J. Burwort	6 & 4		12 do 12 do		96 (52 (
Ilan's Corners and Rv. Station.	do	1	6	12 do		40 (
uard Settlement and Nouvelle	T. Keavs	$\frac{3}{7}$	$\frac{1}{2}$			20 (85 (
llumette Island and Pembroke mqui and Railway Station	T. Ross	60 yds	12	12 do		48 (
ncienne Lorette and Champigny. ncienne Lorette and Ry. Station.	G. Dufresne	400 976	6 12		(from Sept. 1, '88) (to Aug. 31, 1888)	35 (33)
ncienne Lorette and Sub-Office	(4. Dufresne.	3	6	5 do	do	25 (
nderson's Corners and Dewittville nge Gardien and Railway Station.	J. Anderson P. Laioie	4	$\frac{2}{12}$	12 do 12 do	• • • • • • • • • • • • • • • • • • • •	63 7 50 0
ngeline and St. Alphonse de	1	1	_	1		
Granby	O. Boisvert	4	1 -	12 do 12 do		78 (60 (
ngers and Railway Station nnesley and North Onslow	P. Killoran	4	1	12 do	• • • • • • • • • • • • • • • • • • • •	27 3
ntoinette and Lost River	C. Boon	22	$\begin{array}{c c} 2 \\ 2 \end{array}$		• • • • • • • • • • • • • • • • • • • •	150 (56 (
ntoinette and St. Jovite	J. Bélanger	15	3	12 do		68
rmstrong Ry. Station and Sorel	J. Léveillé	.3	12	6 do	15 dys. (to Oct.) 15, 1888)	40 :
rthabaskaville and Chester	J. Coté	8	6	12 do		156 (
rthabaskaville and Victoriaville rthabaskaville, Victoriaville and Railway Station rundel and Rockway Valley scot Corner and Railway Station.	P. Bergeron	25	12	12 do	• • • • • • • • • • • • • • • • • • • •	90 (
Railway Station	T. Perreault	1 & 21	6&12	12 do	• · · · · · · · · · · · · · · · · · ·	58 (
scot Corner and Railway Station.	A. Stacev	9	12	12 do	••••••	30 (50 (
scot Corner and Westburyston Station and Railway Station.	J. P. Woodrow.	42	3	LZ UU	••••••	50 (
ston Station and St. Leonard	A. Ouellette	120 y 's	6	12 do	•••••	20
d'Aston	N. Doucette.		6	12 do	#** *** ****	237
ston Station and St. Sylvère thelstand and Powerscourt	P. C. McGinnis.	$\frac{5\frac{1}{2}}{2}$	3	6 do	(from Oct. 1, '88). (to Sept. 30, '88).	40 (24)
do do	A. Montgomery.	2	3	4 do	(from Dec. 1, 88).	16
ubert Gallion and St. George, Beauce	W. M. Pozer	2	6	12 do		35
vignon and Matapedia	A. Gallant	7	6	6 do	(to Sept. 30, 1888)	72
do dovoca and Pointe au Chêne	L. Bloquière J. McCallum	7 7 7	6 3	6 do 12 do	from do	82 (108 (
voca and Pointe au Chêne	C. E. Cartier	6	2	12 do		74
ylmer and Ottawa	A. M. Holt.	9	12 12	12 do 6 do	(to Sept. 30, '88).	40 (247 :
ylmer and Ottawa	do	1	30		(from Oct. 1, '88)	124
agotville and Chicoutimi			١.		s 1888	

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Bagotville and Grande Baie				Season 1888.	\$ ets. 58 50 20 00
Bagotville and WharfBaie des Pères and Lake Témisca-	.]	1 8	İ		
mingue	B. Huot	3		12 months	30 00 40 00
Baldwin's Mills and Barnston Barachois de Malbaie and Wharf	W. K. Baldwin.	5 4		12 do	84 00 70 85
Bassin du Lièvre and Ry. Station	F. X. Nanaville.	1 3	6	12 months	66 00
Batiscan and Railway Station Batiscan and St. Pierre les Becquets	T. Laguerre	11	12 6	12 do	100 00 45 00
do do	F. Maguy	3	6	9 do from do	112 50
Beauce Junction and Jersey Mills	T. Lessard	26 1 261		6 do (to Sept. 30, '88). 6 do from do	257 50 339 00
do do Beauce Junction and Ry. Station	V. Bilodeau	60 yds	12	12 do	25 00
Beauce Junction and St. Joseph Beauharnois and Caughnawaga			6	Special trips	10 50
	_	1 -	2	Dec. 20, 1888).	249 37
Beauharnois and Laberge	E. Rapin	5 3	6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	50 00
Beauharnois and Railway Station	O. Duquette	12	24	Dec. 21, 1888). 3 do 11 dys. from do .	25 16 34 94
Beauharnois and St. Étienne de Beauharnois	do	5	6	9 do (from July 1, '88)	121 50
Beauharnois and St. Louis de Gonzague		10	6	3 do (to June 30, '88).	49 50
Beauharnois and Valleyfield				8 do 20 days (to Dec.	
Beaupré and St. Féréol	F. Michel	7	3	20, 1888) 12 do	142 93 100 00
Beaurivage and Parkhurst	J. Machell	3	6	12 do	58 00
Beauvoir and Ste. Marthe				12 do	50 00 249 00
Bécancour and Ste. Gertrude Bécancour and St. Grégoire.	N. Vigneault	. 9	6	12 do	197 19
Bécancour Station and Inverness Bedford and Pearceton	J. Briggs	. 81	$\begin{bmatrix} 7 & 7 \\ 6 & 6 \end{bmatrix}$	12 do	312 00 210 00
Beebe Plain and Railway Station.	C.H.McClintock	(]	12	12 do	75 00 100 00
Beech Grove and Quyon Bellerica and Railway Station	J. M. Pritchard	. 5		12 do	20 00
Bell Mount and Otter Lake Belœil Village and St. Hilaire Village	. G. Palmer	. 6	1	12 do	30 00 150 00
Bennett and Maple Grove	J. Bennett	. 3	3	12 do	50 00
Beranger and DunhamBergerville and Quebec	S. Cook	. 4	6	12 do	50 00 90 00
Bersimis and Moisie	. P. C. Dupuis	. 280	4	Season 1888-89	755 00
Bersimis and Sault au Cochon Berthier (en bas) and Ry. Station.	. S. Miller	. 26 . 24	$\frac{2}{12}$	12 months	550 00 78 00
Berthier (en haut) and Isle Dupas.	. P. Moreau	. 2	3	12 do	60 00
Berthier (en haut) and Ry. Station Berthier and Sorel	i		el	12 do	197 45 444 00
Bic and Railway Station	1	1 1	7 w (12 do	23 09
Bic and St. Valérien de Rimouski.	. J. Moisan	. 3	<u> 6</u>	12 do	100 00
Birchton and Railway Station	J. A. McNeight	1		3 do (to June 30, '88). 9 do from do	6 50 19 50
Birchton and Sand Hill	. D. M. Caswell.	. 4	3	12 do	54 00
Birchton and Sawyerville Bishop's Crossing and East Dudswel	I.H. R. Bishop	6 3		12 do	260 00 40 00
Bisson and Railway Station	F. Hamanne	. 50 yd:	s 12	12 do	40 00
Bisson and Saints Anges	. A. Querry	. 4		12 do 12 do	90 00 60 00
Blanche and Thurso Blanchet and St. Lambert	M. McAndrew.	. 16	3	12 do	180 00
Blanfold and Stanfold	N. Brulé	. 9	6 4	12 do	20 00 116 74
Blue Bonnets and Railway Station	A. Doré	.1	6	12 do	52 00
Bois de Filion and Ste. Thérèse de	a!	1	1 .	ł	

<u> </u>							
Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period. ,	Amount.
	í	l		1			§ cts.
District	~ ~			1		_	*
Bois Franc and Mattawa		40	1	12	mon	ths	375 00
Bolton Centre, Knowlton and Knowlton Landing	C Piec	9	6	12	da		475 00
Bolton Forest and Eastman	C. J. Fortin	2	3	4	do	19 dys (from Nov.	410 00
Solion Polest and Bastman	io. o. Fortin	-		, x	uo	12, 1888)	19 29
Bolton Forest and Railway Station.	do	1	6	6	do	8 days (to Oct. 8.	20 4.
·	<u> </u>		1	i .		1888)	13 56
Bolton Forest and Railway Crossing	do	38	6	1	do	2 days (to Nov.	0.00
Bonaventure Island and Percé	D Dosov	3	3	12	do	11, 1888)	3 69
Booth and Dumoine			1	12	do		60 00 300 00
Bordeaux and Railway Station	G. Picard.	1	$1\overline{2}$	12			10 00
Bordeaux and Railway Station Bordeaux and Sault au Récollet	Z. Berard	23	6	12			120 00
Boscobel and Roxton Falls	W. Hackwell	. 8	1	12	do		30 00
Botreaux and Ormstown	O. Bergevin	41		12			42 00
Boucherville and Railway Station.	A. Bemeur	133 yd	12	9	do	(to Dec. 31, '88).	54 00
Boulogne and St. Eugène de Gran- tham	I Rondony	43	3	3	do	/to Tuno 20 '99)	18 00
	G. Tanguay			9	do	(to June 30, 88) from do	54 00
Bourg Louis and Railway Station	P. Russell	32	6	12	do		75 00
Boynton and Fairfax	R. Towle	413	3	12			75 00
Boynton and Railway Station	J. Crosbie	1		12			25 00
Brigham and Farnham Centre	P. E. O'Connor	. 2	6	12			80 00
Brigham and Railway Station Bristol and Railway Station	J. Harrison	- 5	12 6	12 12		• • • • • • • • • • • • • • •	48 00
Bristol Mines and Elmside				12			$\begin{array}{ccc} 125 & 00 \\ 75 & 00 \end{array}$
Britannia Mills and Railway Station	H. Guilbert.	60 vds		12			20 00
Britonville and St. Sauveur	J. Hamilton	. 8	3	12			100 00
Brome and Railway Station	E. S. Chapman.	. 1	6	12	do		60 00
Brompton and Brompton Falls	H. Addison	4	3	12	do		80 00
Brookbury and Robinson	R. Rowe	5 3	2	12			48 00
Broughton and Railway Station Broughton Station and East Brough-	J. Stewart	. 3	3	12	ao		45 00
ton	L. Beaudoin	53	6	12	do		150 00
Broughton Station and Ry. Station.	J. McGee	50 vds	12	12			24 00
Broughton Station and Sacré Cœur							*
de Marie	J. Vallière, jr.	6	6	1	do	(to April 30, '88).	11 17
Broughton Station and West	M D	61	e	10	.1.	1	140.00
Brownsburg and Mount Maple	J. Warwiok	$6\frac{1}{3}$		12 12	do		$\begin{array}{c} 140 & 00 \\ 24 & 00 \end{array}$
Bryson and Portage du Fort	J. Murtagh	8	6	12	do		200 00
Bryson and Railway Station	R. M. Ritchie.	. 5	12	2		(to May 30, '88)	32 50
dodo	J. Murtagh	5	12	10	do	from do	162 50
Buckingham and High Rock	C. W. Pearson.		6s. 3w.	12	do		565 11
Buckingham and Railway Station Buckland and St. Lazare	! do .	14 & 4 15	12	12 6		(to Sept. 20. 200)	97-00 70-00
do do	L. Kemner	15		6	do	(to Sept. 30, '88).	97 50
Buckland and St. Magloire	P. Tanguay	18			do		177 00
Buckland and St. Magloire Bulwer and Railway Station	A. Sanborn	00		12	do		20 00
Burnside and St. Hermas Station	J. Wood	. 3	; 3	4	do	(to July 31, '88).	18 66
Consumer of D. T. Gutt. Com		l	i.				
Cacouna and Railway Station (via St. Arsène)	J. B. Beaulieu.	. 5	19	19	do	,	250 00
Cacouna and Railway Station	do .	$2\frac{1}{2}$	12	Se	ยอ	1888	35 42
Caldwell and Railway Station	R. Horner	$\tilde{1}^2$		12	mon	ths	50 00
Calumet and Railway Station	H. Burch	100 y's	12	12	do		26 00
Calumet and St. Rémi d'Amherst	L. Champagne.	. 39		9		(from July 1, '88)	210 00
Calumet Island and Collfield	J. E. Cahill			7		(to Oct. 31, 1888).	70 00
Calumet Island and Campbell's Bay Calumet Island and Dunraven	C Barralou	$\frac{1\frac{1}{2}}{5}$		5	do	(from Nov. 1, '88)	34 44
Campbell's Bay and Railway Station	P. McNally	. 5 40 vds		12 9	do	(from July 1, '88)	78 00 7 50
Campbellton and Paspebiac	A. Cyr	. 88	6	12		(less fines)	3,871 00
Canterbury and Scottstown. Cantley and Kirk's Ferry.	R. Groom	4	2	12	do		42 00
Cantley and Kirk's Ferry	M. Reid	. 3		12	do		85 00
Cartley and Lucerne	R. Blackburn.	.1 19	1	12	do		125 00

Name of Route.	Name of	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
	Contractor.	Dista	No. 6			
6 . T						S ets.
Cap à L'Aigle and Murray Bay Cape Cove and Wharf	F. Savard	$\frac{3}{1}$		Season	1888	60 50 71 00
Capelton and Railway Station	S. L. Spafford		12	3 mos	s. (from Jan. 1, '89)	10 00
Can Magdeleine and Ry Station	O Tourin	5		12 do		180 00
Cap Rouge and Quebec	H. C. LaRue	9 14				199 00 90 00
Cap Santé and Les Ecureuils	P. Pagé	41				150 00
Cap Santé and Portneuf	E. Marcotte	5	6	12 do	·	150 00
Carillon and Lachute	M. Campeau	101		12 do	3 days (to Oct.	320 00
Carillon and Vaudreuil Station	-	1 251	i	1	13, 1888) 26 days (broken	40 50
	1	~	U	0 00	period)	663 75
Casault and Railway Station	J. Quellet	2			nths	40 00
Castlebar and Danville				12 do		150 00° 35 00°
Caughnawaga and Wharf					o (from Oct. 1, '88). o 20 days (to Dec. 20, 1888)	63 37
Caughnawaga Ry. Station and Cha-		1			20, 1000)	00 01
teauguay				3 de	11 days (from Dec 21, 1888)	55 91
Causapscal and Railway Station	R. A. Blais	150 y's		12 de		50 00
Cayood and Danford Lake Cedar Hall and Railway Station	G. Tanner	60 240		12 do		52 00 12 00
Cedar Han and Railway Station	E. Bissonnette	oo yas	12			
Cedars and Railway Station Chambly Basin and Railway Station	G. E. Mayrand	1 1	12			80 00
Chambly Canton and Ry. Station.			12)	
Chambord and Dablon			3	9 do		52 50 43 75
do do	C. Gagnon	9	6	9 de		262 50
do do Chambord and Roberval	A. G. Matte	11	6	12 de		263 09
Chambord and Railway Station Champigny and Railway Station	J. Bilodeau	1	12		/f G (1 100)	148 80
Champlain and Railway Station	J. Abel	$\frac{1}{2}$	12 12	7 do		46 67 90 00
Channay and Piopolis	F. Poulin	9	1	6 de		25 00
dodo	P. B. Keens	9	1	6 de	from do .	30 00
Chantelle and Rawdon	A. Morin	17 21	3 3			210 00 345 00
Chapeau and Fort Coulonge	o. G. 1 oupore	21	3	12 00	, <i>.</i>	343 (1)
liam	A. S. Maloney	22	6&3	12 de		499-00
Charlemagne and L'Assomption	J. Belhumeur	9	6			250 00
Charlemagne and Montreal Charlesbourg and Charlesbourg West				12 do		475 00 25 00
Charlesbourg and Quebec Charteris and North Clarendon	do	5	2	12 de		
Charteris and North Clarendon	J. Ralph	3	1		o (to Oct. 31, '88)	
do do Chartierville and La Patrie	do A Labbé	3 9	3 2			
Chatboro' and St. Philippe d'Argen	-	"	1	12 (,	10 00
teuil	W. Douglas	2!				39 00
Charillon and St. Zéphirin	U. Castonguay	20 velo	3			
Chaudière Curve and Ry. Station. Chaudière Mills and Ry. Station.	do l	1 31	.! 6	12 de	O	20 00 100 00
Chaudière Station and Ry. Station.	. A. McTeer	300 yd	6	12 de		35 00
Chaumont and St. Agapit	T. Paquet	3	3	12 de	o	40 00
Chelsea and Old Chelseado	G Edmonds	1 13				37 50 15 00
Chelsea and Ottawa	R. Hastev	9	6			50 00
Chemin Taché and St. Cyprien	G. Dallaire	6	1	12 de		35 00
Chemin Taché and St. François Xavier de Viger	O Trombles			12 de	•	en no
Cheneville and Namur.	F. Farant	6 9	3			60 00 130 00
Cheneville and Papineauville Station	ı H. W. Raby	. 23	6	12 de	o	230 00
Cherry River and Magog	R. A. Buzzell	4	3	12 de		100 00
Chester and North Ham Chicoutimi and Grande Baie	U. Gobeil	13	3 6			120 00 156 00
Sandounin and Change Date,			0	1 0 G	(Hom Oct. 1, 88)	190 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ ets.
Chicoutimi and Hebertville	D. Simard A. Lavoie N. Laforge	10 50 2	6 6 6	12 de 6 de 12 de	nths (less fines)	662 50 284 96 655 00 80 00 57 75
Chûte aux Iroquois and L'Annon-	J. Demers	16	1	12 mo	nths	75 00
Chûte aux Iroquois and St. Jovite Clairvaux and St. Paul's Bay	E. Gauthier	$ \begin{array}{c c} 20 \\ 7\frac{1}{3} \\ 13\frac{1}{2} \end{array} $	3	12 de 12 de	D	180 00 72 00 156 00
Clapham and Inverness Clarenceville and Lacolle Ry. Station Clarenceville and Wolfe Ridge Coaticook and Canaan, U.S	do	4 4 19	$\frac{3}{2}$	12 de 6	o o (to Sept. 30, '88)	240 00 40 00 90 00
do do	M. Triney	19	2	6 d	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	98 08
Coaticook and North Coaticook do do Coaticook and Rock Island	J. Meade	$\begin{array}{c} 1\frac{1}{3}\\1\frac{1}{2}\\20\end{array}$	12 12 6	9 d 3 d	o (to June 30, '88) o from do o (to June 30, '88)	12 50 59 79 118 75
do do Coaticook and St. Malo	H. A. Channelle. C. Breault	30	6 2 12	12 d	o from do o	337 50 380 00 40 00
Coleraine Station and Sandborn Coleraine Station and Wolfstown	F. Hagerty N. Roy	14 9	3	12 d	o o	196 00 128 00 50 00
Collfield and Railway Station Como and Oka			6		o o 26 dys. (broken period)	53 10
Compton and Martinville Compton and Ste. Edwidge Compton, Coaticook and Ste. Ed-	G. Boulay	6 10	6 3		onths	200 00 87 50
widge	J. Hurteau	10 & 9			o (from Nov. 1, '88) o 15 dys. (to Oct. 15, '88)	125 00 21 66
Contrecœur and Varennes	H. Handfield	18	6	5 d	o 17 dys. (from Oct. 15, '88)	258 69
Cookshire and Island Brook Cookshire and Railway Station Cooper's Corners and La Guerre Corbin and Frontier	S. J. Osgood T. Cooper	1	12 12 12 6	$egin{array}{ccc} 12 & \mathrm{d} \\ 12 & \mathrm{d} \end{array}$	o	225 00 52 00 96 00 60 00
Côteau du Lac, Coteau Landing and Railway Station	N. Deguire	3 & 3	12 & 6	12 d	o	130 00
Côteau Landing and Ry. Station Côteau Landing and Ste. Zotique Côteau Station and St. Clet	O. D. Prieur	$\begin{array}{c}2\\2\frac{1}{2}\\6\end{array}$	19 6 6	12 d	odo (to June 30, '88)	200 00 60 00 50 00
do do Côte St. Louis and Mile End	J. Lalonde M. Hotte	6	6	9 4	do from do do (to July 31, '88)	150 00 17 33
Côte St. Michel and Montreal Côte St. Michel and St. Léonard de Port Maurice		11	3		do do do do	40 00 13 33
Côte St. Paul and Railway Station. Covey Hill and Vicars	E. Latour	1 2	12 6	12 12	do do	96 00 52 00
Cowansville and Railway Station Craig's Road Station and Frechette. Craig's Road Station and Railway	J.E.O'Halloran. N. Fréchette	1 1	12		do	72 00 50 00
Station	N. Fournier		İ .	1	do	20 00
vester EastCranbourne and CuldaffCranbourne and Frampton	W. Wilson V. Lacroix		3 3	12	do do do	590 00 67 48 120 00
Cross Point and Ste. Anne de Res- tigouche	C. Guay	101	6 2		dodo (to Dec. 31, '88)	100 00 63 00
	J. Hume	10		3	do from do do	19 00 50 00
Dablon and Railway Station	G. Larouche		3	3	do (from Jan.1, '89)	6 25

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	The same of the sa	Period.	Amount
		t T				8 c
Dalesville and Edina	P. McArthur W. Watchorn		6	12 12 12	dodo	30 180 44
worth	M. Meilleur	9		12 12	do do	42 60
Oalhousie Mills and Peveril Oanby and Railway Station	S. D. McGee	50 yds		12	do	12
Oanford Lake and Kazubazua	H. Heeney	9		12	do	90 123
Danford Lake and Otter Lake Danville and Railway Station	R. M. Gibson.	18	$\frac{1}{6}$	$\frac{12}{12}$	do	34
Janville and Ste. Camille	M. Pamchaud	47	3	12	do	250
Danville and St. George de Windsor	J. Godbout	10	3	12	do	120
Danville and South Ham	L. A. Turcotte	24	3	12	do	370
O'Auteuil and Kingsey Falls Delisle and St. Joseph d'Alma	J. D. Morin	$\frac{6\frac{1}{2}}{8}$	$\frac{2}{2}$	12 $ 12 $	do	80 104
Dell and Scotstown	M. J. McDonald	$5\frac{1}{2}$	1	1	do (from Mar. 1, '89)	4
Denison's Mills and Richmond East	J. R. Denison	7	2 3	12	do	125
Dequen and Railway Station Derby Line, Rock Island, Stanstead		2	3	3	do (from Jan. 1, '89)	12
and Railway Station	H. A. Channell.	$1\frac{1}{2}$	24	12	do	180
Deschambault and Railway Station Desjardins and Railway Station		100 2/2	$\begin{array}{c c} 12 \\ 12 \end{array}$	$\frac{12}{12}$	do	99 20
esjardins and Railway Station		100 y s	12	12	do	75
illonton and Eastman	F. P. Dufresne.	3	3	12	do	63
Israëli and Railway Station	J. E. Rheault	120 y's	12	12	do	32 60
Dixville and Railway Station Domaine de Gentilly and Gentilly.	D. Beauchesne	92		$\frac{12}{12}$	do	45
Porval and Railway Station	D. Descary	3		12	do	100
Oouglasburg and Napierville	P. Paré	2	3	4	do (from Dec. 1, '88)	13
Oouglastown and Wharf Ooyle and Sheenboro	U. Kennedy J. Rush	$\frac{1}{12}$	As req		ason 1888	$\begin{array}{c} 42 \\ 70 \end{array}$
Drummondville and Melbourne	D. Cusson	24	6	12	do	579
rummondville and Ry Station	J F Picotin	13	12	12	do	48
Prummondville and St. Cyrille de Wendover	S Guèvrement	5	6	12	do	148
Ouclos and Wakefield	S. T. Gatignal.	15	2	12	do	95
Ouclos and Wakefield	C. Lothrop	21	12	12	do	200
Oufresne's Mills and Ste. Christine.	H. Legrand	$\frac{2\frac{1}{3}}{2\frac{1}{3}}$	3	$\begin{vmatrix} 3 \\ 9 \end{vmatrix}$	do(to June 30 '88) do (from do	$\frac{7}{30}$
Oufresne's Mills and S'th Durham.	J. O. Dufresne.	4	6	12	do	50
Sunboro, Scotsmore and Railway	TR TR C	01.0		10	3 -	125
Station	J. Tvo	25 & 2	12	$\frac{12}{12}$	do	100
Ounham and East Dunham	J. Call	31/2	6	12	do	115
Ounham, Stanbridge East and Stan- bridge Station	J. H. Martin	13 & 7	6	12	do (less fine)	365
				10		co.
Cardley and Railway Station Last Angus and Linda	D. B. Hall	1 11	6 3	$\frac{12}{12}$	do	60 41
ast Angus and Railway Station	F. P. Buck	. 100 yd	12	12	do	16
ast Angus and South Dudswell	E. F. Orr	4	3		do	60
ast Arthabaska and Larochelle do do	L. Boulanger D. Boulanger	4	3 3	6	do (to Sept. 30, '88). do from do	25 30
ast Arthabaska and St. Fortunat.	P. Juneau		3	12	do	235
last Arthabaska and Stanfold	D. Luneau	. 5	6	6	do (to Sept. 30, '88).	97 49
do do Last Clifton, Sawyerville and	T. Roux	1 3	0	U	go nom uo	70
Canaan, U.S.	W. W. Sawyer.		2 & 1	12	do	250
Last Farnham and Railway Station.		$\begin{array}{c c} & 1 \\ & 1 \end{array}$	6	$\begin{array}{c} 12 \\ 12 \end{array}$	do do	80 20
do do Cast Magdala and Lyster			1	12	do	26
Lastman and Railway Station	T. Perdue		6	6	do (to Sept. 30, '88).	27
dodo	E. J. Esty	.1	12	2	do 9 dys. (to Dec. 9,	11

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Eastman and Railroad Station	S. Daignault	1	12	3 months 22 dys. (from	8 cts. 29 36
East Templeton and Perkins	C. Robitaille	9	2	Dec. 10, '88)	100 00
East Templeton and Ry. Station Echo Vale and Railway Station	P. Devost	1	$\begin{array}{c c} 12 \\ 12 \end{array}$	12 do	110 00 18 00
Echo Vale Railway Station and	ì	1	1		
Piopolis	J. Francœur, jr	$\frac{81}{39}$	6	12 do	$\begin{array}{c} 240 & 00 \\ 52 & 50 \end{array}$
Egypte and St. Ephrem d'Upton	E. Chaput	81		12 do	168 00
Elgin Road and Railway Station Elmside and Railway Station	R. Cambrell	$\frac{1}{3\frac{1}{2}}$		12 do	30 00 125 00
Emileville and St. Pie	M. Gauthier, jr	1	6	12 do	40 00
Escuminac and Fleurant Esquimaux Point and Lourdes du		8	1	12 do	25 00
Blanc Sablon	J. V. LeGreslev.	420		1 trip.	350 00
Esquimaux Point and Moisic Etchemin and Lévis	C. Ahier	125	12	Season 1888-89.	420 00 245 00
Etchemin and St. Jean Chrysostôme.	A. Pichet	3	6	12 do	112 00
Etchemin and South Quebec	P. E. Bourassa	4	6	12 do	100 00
Farnboro' and West Shefford	J. Enright	21/2	3	12 do	52 00
Farndon and Railway Station Farnham and Magenta	S. Paquette	22 yds 5	12	12 do	25 00 50 00
Farnham and Railway Station	L. S. Choquette.	1	24 & 36	12 do	119 07
Farnham and StanburyFarrelton and Stagsburn	P. Beattie	8	2	12 do	80 00
Father Point and Rimouski	P. Beaulieu	61		12 do	40 00 140 00
Fleuriau and Ste. Luce	A. Caron	18	3	12 do	180 00
Fontenelle and Gaspé Basin. Fonteney and Melbourne	J. Stanley	8 6	$\frac{1}{2}$	12 do	32 00 48 00
Fort Coulonge and Railway Station.	J. G. Bryson	1 3		12 do	70 00
Fortierville and St. Jean des Chaillons	J. B. Fortin.	91	3	12 do	75 00
Fortin and Matane. Foster and Railway Station.	N. Fortin	6	1	12 do	30 00
Foster and Railway Station Fox River and Grande Grève	C. B. Inglis	20	12	12 do	32 00 285 00
Fox River and Ste. Anne des Monts.	J. Philibert	107	2	12 do	1,111 41
Frampton and Ste. Hénédine Frampton and Springbrook	J. Audette	13	6	12 do	250 00
Franklin Centre and Hemmingford.	C. McGinnis	16		12 do	60 00 410 00
Franklin Centre and Huntingdon	J. Paulman	16		1 do (to Apr. 30, '88)	37 08
do do Franklin Centre and Starnesboro	F. W. Bates	16		11 do from do 12 do	385 00 64 00
Frelighsburg and North Pinnacle	G. C. Chadburn.	65		12 do	89 48
Frelighsburg and St. Armand Sta-	A. Shelters	10	6	12 do	389 75
· Frelighsburg and Sweetsburg	A. Pickle	135	6	12 do	339 00
Frost Village and Waterloo Fulford and Waterloo	G. Moynan	$\frac{2\frac{1}{2}}{4}$		12 do	94 00 60 00
				10 1	
Galson and Gould	M. L. McIver F. Z. Delisle	5½ 4		12 do	42 00 48 00
			1		
Gasparine and Holton.	T. Jacques	38		12 do	73 32 34 00
gaspe basin and Gaspe bay South.	9. II. IMEH	1 22	3	12 do	60 00
Gaspé Basin and Grande Grève	A. G. Annett	15		12 do	230 00
Gaspé Basin and Percé	J. Davis	1 1	Asreq	12 do (less fine) Season 1888.	1,201 00 60 00
Genoa and St. Hermas	[J. Gordon	31	2	12 months	48 00
Georgeville and Knowlton Landing.	C. A. Rexford	10		8 do (see water service) 12 do	52 00 260 00
Georgeville and Magog Georgeville and Magoon's Point Georgeville and Stanstead Junction	A. Magoon	51	2	12 do	52 00
Georgeville and Stanstead Junction. Geraldine and Stockwell	W. H. Rediker.	13		12 do	335 00 26 00
Glengyle and Railway Station	G. Morrison	50yds.	0	12 do	10 00

Name of Route.	Name of Contraçtor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					S ets.
Glen Iver and Sherbrooke	J. McIver	$\frac{7\frac{1}{2}}{2}$		12 months	
Glen Robertson and Mongenais Gould and North Hill	D. W. McDonald	$\frac{8}{4\frac{1}{2}}$	6 2	15 days (to Apr. 15, '88). 12 months	
Gould and Red Mountain	C. Smith	5^{-}	2	12 do	40 00
Gould and ScotstownGould Station and Railway Sta-		$7\frac{1}{2}$	6	12 do	220 00
tion	R. H. Cowan	1	12	12 do	40 00
Granboro and Granby	G. Vittie	6	3	12 do	114 00
Granby and MiltonGranby and Railway Station	E. Caroline	$\frac{9}{\frac{1}{3}}$	$\begin{array}{c c} & 6 \\ 12 \end{array}$	12 do	
Granby and Shefford Mountain	E. Deslauriers	83	3	12 do	
Grande Baie and L'Anse St. Jean.	R. Gagnon	54	2	12 do	230 00
Grande Baie and St. UrbainGrand Cascapedia and New Rich-	A. Fortin	63	3	5 do (from Nov. 1, '88	222 08
mond	W. Robertson	41/2		12 do	80 00
Grandes Coudées and Jersey Mills.		14	3	12 do	180 00
Grande Ligne and Mount St. Nicholas	S. Boissonneault	21	3	11 do (to Feb. 28, '89).	36 66
Grand Métis and Métis Point	W. E. Page	6	6	3 do (to Sept. 15, '88).	59 25
Grand Métis and Railway Station	do	3	12	12 do	150 00
Grande Mère and Lac à la Tortue Grande Mère and Ste. Flore	T Maheuy	$\frac{2\frac{1}{2}}{4}$	6	12 do 9 do (from July 1, '88	60 00 103 50
Grandes Piles and La Tuque.	P. Chandonnet	72	1	12 do	237 00
Grandes Piles and Ste. Flore	T. Maheux	7	6	3 do (to June 30, '88).	34 50
Grand River and Wharf	I. A. Boudin	4 2 3		Season, 1888	54 00 50 00
Green River and St. Antonin		$\frac{51}{3}$	6	12 do	
Green River and St. Modeste	C. Chouinard	5	6	12 do	
Greenshields and St. Cyr Green Mount and Thorne Centre	G. McDowell	$\frac{4\frac{1}{2}}{6}$	$\frac{1}{3}$	12 do	
Grenville and Lost River	A. McPhee.	19	2	12 do	
Grenville and Railway Station	J. A. Wiliamson	1½	6	12 do	48 00
Grindstone Island and House Har- bor, &c		6	1	9 do (from July 1, '88	36 00
Grondines and Railway Station	L. Coté	$3\frac{1}{2}$		12 do	192 00
Hadlow Cove Road and St. David					
de Lévis	J. Halle	1		12 do	
Hallerton and Hemmingford Halverson and Masham Mills	J. Moore	4 ² / ₄ 11	3	12 do	
Hardwood Flat and Robinson	S. W. Tracy	$3\frac{1}{2}$		12 do	26 00
Harvey Hill Mines and West Broughton		3	6	6 do (to Sept. 30, '88).	40.00
do do	J. McGee	3	6	6 do (to Sept. 30, '88). 6 do from do	
Hathaway and Railway Station	W. Cosgrove	$1\frac{1}{2}$	6	12 do	50 00
Hatley and Railway Station Heathton and South Barnston	B. Martin	$\frac{3!}{2}$	6	12 do	125 00 40 00
Heathton and South Barnston Hebertville and Metabechouan	E. Girard	$12^{\frac{1}{9}}$	3	10 do (from June 1, '88,	
				less fine)	306 75
Hebertville and St. Joseph d'Alma.	C. Hebert	$12_{_2}$	12	10 do (from June 1, '88') 12 do	
Hedleyville and St. Roch de Québec Helena and White's Station	P. Tallon	43		12 do	62 60 145 83
- do	T. Salen	4	6	5 do from do	61 25
Hemison and St. Malachie Hemmingford and Roxham	T. Smith, jr	3 6	$\frac{1}{2}$	12 do	
Henrysburg and Lacolle	G. Giroux	81		12 do	
Henrysville and Stanbridge Station	P. Girard	8	6	12 do	189 00
Heyworth and Railway Station High Rock and Notre Dame du Laus	D. Wincent	$\frac{1}{29}$		12 do	60 00 256 50
High Rock and Poltimore	J. H. Bonsall		3s. 2w.	12 do	75 00
Hochelaga and Longue Pointe	N. Richard	$3\frac{3}{4}$	6	10 do (from June 1, '88	208 33
Hochelaga and Montreal Holland's Mills and Chalifoux Point	G. Gowan	$rac{2rac{1}{2}}{2rac{1}{2}}$	18	12 do	459 52 60 00
Holton and Ste. Clothilde de Cha-	1				
teauguay	C B Borgovin	2	3	12 do	34 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
House Harbor and Magdalen Islands Howick and Railway Station Howick and St. Chrysostôme	L. Parent T. Hebert	30	1 12 6	Season, 1888	\$ ets. 26 25 49 00 240 00
Hull and Ottawa. Hull and Street Letter Boxes. Hunterstown and Louiseville. Huntingdon and Railway Station.	ney	2 17 ½	12 12 6 12	6 do (from Oct. 1, '88) 10 do (from June 1' '88) 12 do	50 00 120 40 370 00 70 00
Inverness and Kinnear's Mills Inverness and Leeds Inverness and New Ireland Iron Hill and Sweetsburg Island Brook and New Mexico Isle aux Coudres and St. Paul's Bay Isle aux Coudres and Wharf do do Isle aux Grues and Montmagny Isle Bizard and Ste. Genevieve	J. Quan J. McKeage J. Jamieson W. Moffat W. H. Taylor J. Dufour E. Dufour T. A. Pelletier N. Lebel E. Roussin	$\begin{array}{c} 91\\ 12\\ 17\\ 8\\ 4\\ 9\\ 6\\ \cdots\\ 6\\ \frac{1}{2} \end{array}$	3 6 3 3 3 2 2 2	12 do	115 00 355 00 178 00 120 00 52 00 340 00 78 75 3 00 225 00 50 00
Isle Perrot and Ste. Anne de Bellevue. Isle Verte and Notre Dame de L'Isle Verte Isle Verte and Railway Station Isle Verte and St. Paul de la Croix.	J. Montpetit T. Fraser L. A. Bertrand.	5½ 6 1 10	6 1 12 2	12 do	156 00 50 00 80 00 100 00
Jersey Mills and Marlow. Johnville and Railway Station. Joliette and Railway Station. Joliette and St. Liguori.	M. Cahill. C. Smith. J. Mirault. O. Robichaud. M. Riopelle. L. Belleville. F. Perreault.	13 8 9 9	3	12 do	230 00 28 00 544 00 73 50 112 50 285 00 72 00 105 00
Kamouraska and Railway Station. do do do Katevale and North Hatley	N. Pelletier		12 12 3	12 do	300 00 150 00
Katevale and Railway Station Kazubazua and Lake St. Mary Kazubazua and Venosta Keith and Robinson Kelso and Trout River Ry. Station Kildare and St. Alphonse Kingsey Falls and Lorne Kingsey Falls and Robson Kinnear's Mills and Leeds Knowlton and Railway Station Knowlton and St. Etienne de Bolton	X. B. Léveillé. J. McCaffrey. J. McLennan D. McFarlane G. E. Trudeau M. Morin. H. Gagnon H. F. Goff S. N. Courtney	5 7 89 39 12 4 7 9	1 & 2 1 3 6 3 12 2 3	7 do 4 dys (to Nov. 4,	33 32 75 00 50 00 96 00 144 00 156 00 230 00 60 00 160 00 72 00
La Baie and Nicolet. La Baie and St. Zéphirin La Baie and Yamaska. Labarre and Métabechouan Labarre and St. Joseph d'Alma La Beauce and Railway Station La Beauce and St. Elzéar L'Acadie and Railway Station L'Acadie and Railway Station Lachevrotière and Railway Station Lachevrotière and Railway Station Lachine and Lachine Rapids Lachine Locks and Railway Station	do do E. Girard. C. Hebert J. B. Gregoire J. Racine G. Tremblay r E. F. Poirier A. Lapierre V. Portelance D. Dunberry F. X. Gariepy	8 24 12 12 12 3 6 4	$egin{array}{cccccccccccccccccccccccccccccccccccc$	12 do	220 00 750 00 32 50 33 33 50 00 80 00 34 60 160 00 144 00 12 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
Lachine Rapids and Ry. Station	D. Dunberry	2	6	6 m	onths (from Oct. 1, '88)	\$ cts. 50 00
Lachine Station and Letter Box					do	30 00
Lachute and Lachute Mills	J. Fish	1	12	12	do	62 00
Lachute and Lakefield				12	do	74 00
Lachute and Railway Station	J. Chambore	145			dodo	36 00 103 00
Lachute and Shrewsbury Lac Masson and St. Jérôme	M Piché	$\frac{145}{22}$	$\frac{2}{3}$		do	250 00
Lac Masson and Ste. Lucie de Don-	i	1				200 00
caster	N. Forget	10	3		do	156 00
			3	6	do (to Sept. 30, '88).	24 00
do do Lacolle and St. Bernard, Sud	J. Clarkson	$\frac{3}{2}$	3		do from do	24 00° 30 00
Lac Rond and Namur	B. Corbeil	7	ĭ		do	40 00
La Décharge de la Rivière à l'Ours			_		40	10 00
and la Fourche des Chemins		6	1		do	36 00
Lac Aylmer and Lake Weedon	A. Gagnon	12	6		go	179 00
Lac Beauport and QuebecLac Etchemin and Langevin	I. Moroior	$\frac{13}{12}$	2 6		dodo	150 00 290 00
Lac Etchemin and Ste. Rose de	12. Merciel	12		12	uo	290 00
Watford		12	1	12	do	50 00
Lac Etchemin and Standon	J. Fortin	12	6		do	270 00
Lac St. Joseph and Railway Station	R. Sisson	100	12	12	do	24 00
Lac Témiscamingue and Mattawa	E. J. Smith	130 s.,	1	12	do ob	1,363 64
Lake Témiscamingue and North	1	110 W .		12		1,505 04
Témiscamingue	A. McBride	26	1	12	do ob	200 00
Lake Weedon and Railway Station.	F. Brière	60 yds			do	24 00
Lamartine and Railway Station	P. Cloutier		4		do	50 00
Lambton and Railway Station Lambton and Stornoway	E Rélangor	$\begin{vmatrix} 14 \\ 9 \end{vmatrix}$	6 6		do	$\begin{array}{c} 375 & 00 \\ 212 & 00 \end{array}$
Lambton and Valletort	N. Boutin	8	6		do	194 48
Landreville and Ormstown		4	2		do	50 00
Land Villa and Railway Station	C. Lavallé	2	6		do	48 00
L'Annonciation and Nominingue	V. Martineau	12	1 6	12	do	80 00
Lanoraie and Railway Station do do	N. Delisle	6	6	6	do (to Sept. 30, '88). do from do	44 76 44 74
L'Anse à Giles and Railway Station		2	6		do	76 25
L'Anseàla Cabane & Magdalen Islds	W. Cormier	81	1	Seas	on 1888	40 00
L'Anse au Foin and Tremblay	E. Harvey	8	4	4 m	onths (to July 31, '88)	52 00
do do	F. Tremblay		4 6		do from do	104 00
La Petite Rivière, Que., & Ry. Stat'n La Petite Rivière St. François and		1 5	U	12	do	35 00
St. Cassien des Caps.	P. Bouchard	7	6	12	do ob	200 00
La Plaine and Kailway Station	C. Gauthier	11	12	12	do oh	12 00
La Présentation and St. Hyacinthe.	A. Lamarre	4	. 12	2 0	do (from Feb. 1, '89)	11 66
La Presentation and St. Hyacinthe. L'Assomption and Railway Station.	H. Auger	6	$\frac{6}{12}$.		do	200 00 41 66
L'Assomption and St. Sulpice	I. Royal	$\begin{array}{c c} 4\frac{1}{2} \\ 5 \end{array}$	6		do (to May, 31, '88).	175 00
Laurentides and Railway Station	J. M. V. Latour		12		do	75 00
Laurentides & St Calixte de Kilkenny	D. Thouin	10	3	9 (do (to Dec., 31, '88).	112 50
do do Laurel and Lost River	P. Chartrand	10	3		do from do	30 00
Laurel and Lost River	M. McCluskey	6 2	1 12		do	36 0 0 100 00
Lauzon and Lévis Lauzon and St. Joseph de Lévis	E Ruel	14	10		do	140 00
Laval and Quebec	T. Keough	174			do	100 00
Lavaltrie and Railway Station	A. Laviolette	8	6	12	do	192 00
Lawrenceville and North Stukely	C. Colin	4			do	100 00
Lazy Brogan and New Richmond Leeds and St. Sylvester	R. Brash	45 9	$\frac{6}{3}$		do 8dys(toJly28,'88) do	$\frac{208}{110} \frac{00}{00}$
Lennoxville and Millby.	A. Aldrich				dodo	124 00
Lennoxville and Millby Lennoxville and Railway Station	E. W. Abbott	, i			do	101 00
Lennoxville—C. P. Ry. Station and	!					
G. T. Ry. Station	do	25 yds	12	4	do 11 days (from Nov.	40.00
Leopold and Shrewsbury	A Thompson	6	. 9	19	21, 1888)	18 00 60 00
Leopoit and our noung		•	4	14		00 00
	58	•				

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
L'Epiphanie and Railway Station do do	E. Leblanc	34	12 6	12 months	100 00 6 20
L'Epiphanie and St. Jacques	G. Forest	$12\frac{1}{2}$	6	12 do	325 00
L'Epiphanie and Ste. Julienne.	T. Belle	18 8	2&3	12 do	$\frac{480\ 00}{75\ 61}$
L'Epiphanie and Ste. Julienne Les Eboulements and Settrington Les Eboulements and Wharf	J. Dufour.	3	3	Part of season 1888	38 00
do do Les Escoumains and Sault au Cochon	r. remplay	$\frac{3}{35}$	$\operatorname{Asreq}_{\mathfrak{A}}$	Balance of season 1888	232 50 675 00
Les Escoumains and Tadousac	F. Brisson	27	4	12 do (less fine)	478 00
Lévis and Quebec	H. Martin	ı	12&18		387 50
do do	E. Guay			Special service	$18 00 \\ 100 00$
do do	A. Vézina			do	4 00
Lévis and Grand Trunk Ry. Station do do	J. Rouleau			do	18 00 1 00
Lévis and Intercolonial Ry. Station do do	H. Martin	4	24	12 months	90 00
do do do do do do	A. Bilodeau F. Bégin			Special trip	0 50 0 50
Lévis & Quebec Central Ry. Station.	F. Bégin	· · · · · · · · · · · · · · · · · · ·	12	12 do	45 00
Lévis & Quebec Central Ry. Station. Lévis and St. Michel Levis & South Quebec Ry. Station.	M. Guay	15	6	12 do	$\begin{array}{c} 245 & 00 \\ 3 & 50 \end{array}$
Levis—G.T.Rv.Station & Q.C.Statu	do			do	0 50
Levis—G.T.Ry.Station & Q.C.Statu Levis, I.C.Ry.Statu.&G.T.Ry.Statu	D. Pouliot		1	do	0 50
Levis and Street Letter Boxes Levis and Sub-Office	M. Gagnon E. Bédard	1		12 months	331 25 200 00
Lavis and Three Rivers	P. Genest	92	6	12 do	2,580 00
Lineboro' and Railway Station Liniere and Metgermette	J. Wood	13	$\frac{12}{2}$	12 do	16 00 97 00
L'Islet and Railway Station	. M.E. Ballantyne	23	12	12 do	140 00
do do L'Islet Station and St. Cyrille	do	21	$\frac{12}{2}$	3 do (to June 30, '88). 3 do do	
Longueuil and Montreal	. P. Racine	1		Special trips	5 00
Longueuil and Railway Station	. G. Brissette	1 8	$\begin{array}{c} 24 \\ 12 \end{array}$	6 mths.15dys(to Oct.15'88 5m. 16 dys. from do	75 27 34 18
do do Lorette and Railway Station	L. Richard	2	12	12 months	
Lorne and Railway Station	. E. D. Adams	200 y's	12	12 do	40 00
Lotbinière and Rivière Boisclair Louiseville and Nancy	R. Caron	6	$\frac{3}{2}$	12 do	75 00 45 00
Louiseville and Railway Station	. P. Lefebvre		12	12 do	99 0
Louiseville and Ste. Ursule Lourdes and Somerset	T B G Nadeau	1 5			220 0 50 0
Low and Maniwaki	. W. Brooks	. 54	3	12 do	1,700 0
Low, Maniwaki & North Wakefield Luskville and Railway Station	d do	154 & T			
Maddington Fulls and Ry Station	- M. Crochetière.	. 1 4	1 6	12 do	80 0
Magog and Railway Station	L. N. Allard		$\frac{1}{4}$ $\frac{12}{6}$		
Malmaison & Notre DamedeStanbg Maniwaki and Montcerf	P. Paradis				
Maniwaki and River Joseph	. T. White	8		40 1	54 0
Mansonville and Railway Station. Mansonville and Vale Perkins	. W. B. Manson	$\begin{array}{c c} 2 \\ 5 \end{array}$			
Mansonville R. Statn. & West Potto	n M. L. Elkins	. 3	² 3	12 do	1
Maple Grove and Richardville	. J. Neagle	. 7	3	3 12 do	. 96 0
Maple Grove, Ste. Sophie de Megar tic and Somerset	T. Dubois	. 20	3	12 do	. 250 0
Maple Grove and Wolfstown	K. Boulanger	. 0	$\frac{1}{2}$ 2	2 12 do	. 75 0
Maple Leaf and Sawyerville Maple Ridge and Railway Station	. W. G. Planche.	. •	$\begin{bmatrix} \frac{1}{4} & 3 \\ 12 & 12 \end{bmatrix}$		
Marbleton and Railway Station	O. Cote	. 3	12 12	2 12 do	
Maria and Maria East	. J. Beijold	. 1	5		. 75 (
Marlow and U. S. Boundary Line do do	G. D. Thompso	n 14		3 9 do (to Dec. 31, '88) 3 do from do .	
Maradon and Notre Dame des Boi	s C Demers	. 14	F. 3	3 12 do	. 225 (
Marsden and Railway Station	J. D. Morrison	. 9	d 15	2 12 do	. 24

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					& atu
25 1 1 1771 1 1 1	TD MD 11		. 0	in a si	\$ ets.
Marsden and Whitwick	J.K. McDonald. J. G. Bell	3 40 ft		12 months	36 00 3 33
Mascouche and Mascouche Rapids.	G. Alexander	31		12 do	75 00
Mascouche and Railway Station		14		12 do	79 00
Masham Mills and Wakefield Masson and Railway Station	P. Bertrand	7	1	12 do Special service	50 00 1 40
Mastigoche & St. Gabriel de Brandor	J. O. Henault	9	1	12 months	36 00
Matane and Railway Station Matane and Ste. Anne des Monts	W. Pelletier	32		12 do	494 00
Matane and Ste. Anne des Monts Matapedia and Railway Station	J. Labrie	57 200 v's	1 3 12	12 do	790 00 3 75
do do	E. Dorion	1200 V 8	12	11 do from do	41 25
Matapedia and Runnymede	J. Lawlor	12	- 1	12 do	70 00
Melbourne and New Rockland Melbourne and Richmond Station				12 do	250 00 100 00
Melbourne and Upper Melbourne.	N. Coburn	1	3	12 do	100 00
Melbourne and Waterloo	S. Jamieson	33		12 do	500 00
Metabechouan and St. Gédéon Methot's Mills and Ste. Agathe	. I. Duchaine J. Fournier	! 8	3 & 6 6	12 do	262 50 45 00
do do Methot's Mills and St. Flavien	L. Ratté	8	6	9 do from do .	135 00
Methot's Mills and St. Flavien	J. Fournier	4	6 6	3 do (to June 30, '88). 9 do from do	31 25
do do Mille Isles and St. Jérôme	L. Ratté T. Campbell	12	2	9 do from do 3 do (to June 30, '88)	93 75 30 00
do do	. T. Taylor	12	3	9 do from do .	91 50
Millstream and Railway Station.	. J. P. Lavoie	10 yds	12	11 do 11 days (to Mar.	17.00
Minton and North Hatley	A. E. Fish	21	3	11, '89	17 00 52 00
Minton and North Hatley Mirabel and St. Hermas Station	. A. Lamarche	1	3	1 do (to Aug. 31, '88).	3 00
do do	. do	1.5	6	7 do from do .	32 66
Mongenais, Ste. Justine de Newton and Railway Station	J. Marleau	3 & 14	6 & 12	2 11 do 15 dys. (from Apr.	
•				16, '88).!	180 16
Mont Carmel and Railway Station Montebello and Railway Station	R. Lavoie	3		12 do	65 00 40 00
Montfort and Morin Flats	M. Boulaire	6		12 do	52 00
Montmagny and Railway Station.	. L. P. Gendreau	. 1	12	12 do	120 00
do do Montmorency Falls and Quebec	C. Larcher	$\frac{1}{8}$	12	12 do	100 00 280 00
Montreal and Mount Royal Vale.				7 do (from Sep. 1, '88)	140 00
Montreal and Notre Dame de Grâc	e do	. 32		5 do (to Aug. 31, '88).	75 00
Montreal and Outremont Montreal and Canadian Pacific Rail		. 3	6	12 do	40 00
way Station	. C. A. Dumaine		§ 60 & 96	3 12 do	2,165 85
Montreal Receiving Houses and	D. Konnada		10	12 do	9.070.00
Street Letter Boxes	P. Kennedy H. Munier	21			3,978 82 1,000 00
Montreal and St. Gabriel de Mont	5-		1		,
real	P. Doyle	. 2	18	12 do	250 00
Maurice	. J. Gervais	. 8	6	8 do (from Aug. 1,'88)	186 66
Montreal and Sault au Récollet				12 do	150 00
Montreal and Varennes	. H. Dubois	. 15	6	5 do 17 dys. (from Oct. 15, '88)	277 17
Mont St. Nicholas and Ry. Station	T. Girard	. 24 yd	s 12	1 do (from Mar. 1, '89)	2 00
Montreal and Wharf	. C. A. Dumaine	. 1	12	Season 1888	118 30
Moore's Station and Railway Statio Morehead and Railway Station	W. Clarke	. 1	$egin{array}{c c} & 12 \\ 12 \\ \end{array}$		12 00 10 00
Morin Flats and St. Adolphe d	e	1			
Howard	H. Paquet	9	1 6	12 do	
Murray Bay and St. Agnes	. J. Savard	. 9		12 do	
Murray Bay and St. Paul's Bay	. A. Bouchard	. 30	6	12 do	1,170 00
Murray Bay and Tadousac Murray Bay and Wharf	. J. Gaudreault .	. 42		12 do	
Murray Bay River & St. Paul's Ba Napierville and Stottville	y A. Coté	37	6	6 months (to Sep. 30, '88)	365 00
Napierville and Stottville			6	12 do	140 00
	6	0			

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ ets.
Neigette and Ste. Flavie Station	N. Beaulieu	$6\frac{1}{2}$	3	12 months	80 00
New Armagh and St. Sylvester Newbois and Scott Junction		$\frac{4\frac{1}{2}}{9}$		12 do	50 00 300 00
New Carlisle and Wharf	T. Caldwell	3	Asreq	Season 1888	55 00
New Glasgow and Railway Station.	F. Langlois	1 4	12	12 months	52 00
Newport and Paspebiac	W. P. Ramier	32		12 do (less fine)	1,076 00
Newport and Percé	I. Jesson sr	35		12 do (less fines) Season 1888	1,289 20 55 00
Newport Point and Wharf	ob !	1 1	Asreq	do	47 00
Nicolet and St. Grégoire	J Page	8	12	12 months	374 00
Nicolet and Ste. Monique	H. Beaudry	8 20	6 3	12 do	150 00 195 00
Normandin and St. Félicien North Georgetown and Ry. Station.	L. Turcot.	20	6	12 do	40 00
North Hatley and Railway Station.	B. Le Baron	· į	6	12 do	30 00
North Nation Mills and Ry. Station	D. Landriau	37	6	12 do	100 00
North Onslow and O'Connell	J. Murphy	7	2	7 do 8 dys. (from Aug.	48 26
North Onslow and Quyon	W. Richardson.	7	3	24, '88)	100 00
North Sutton and West Brome	O. Sweet	2	3	12 do	50 00
North Wakefield and Ottawa				12 do	509 60
North Wakefield and Rupert Norton Creek and St. Rémi	I B Boyer	$\begin{bmatrix} 5\\91 \end{bmatrix}$		12 do	80 00 187 50
do do				3 do (to Dec. 31, 66).	74 50
Notre Dame des Anges & St. Ubalde	X. Marcotte	11	3	12 do	94 00
Notre Dame de Rimouski & Ry. St'r		1	6	3 do (to June 30, '88).	10 00
do do Notre Dame du Laus and St. Gérard	\mathbf{A} . Parent	1 1	6	9 do from do	30 00
de Montarville	B. Grenier	37	1	12 do	240 00
Notre Dame du Portage and Rail	-!				
way Station Old Lake Road and Ry. Station	A. Nadeau	7	6	12 do 12 do	139 00 25 00
Ormstown and Railway Station			12	12 do	96 00
Otter Lake and Shawville	. C. R. Morrison.	24	3	12 do	275 00
Otter Lake and Thornby	. J. Hill	7	2	12 do	87 00
Painchaud and Somerset	J. O. Huard	4	3	12 do	75 00
Papineauville and St. Amédée	. R. Robinson	7	2		52 00
Paspébiac and Wharf	P. D. Loisel	4	Asrec	Season 1888	56 50
Pauline and St. Césaire Percé and Wharf	T. E. Flynn	5		4 months (to July 31, '88) Season 1888	20 00 55 50
Pierreville and St. Elphège	. J. Boivin	7	6	12 months	190 00
Philipphurg and St Armand Rail	_!	1	10	10 1	947 00
way Station	T Mathews	23 vd	$\frac{12}{12}$	12 do	245 00 30 00
Pointe aux Orignaux & River Ouell	e J. B. Hudon	35 yu	6	12 do	50 00
Pointe aux Trembles and Quebec.	. F. Voyer	22	6		598 00
Pte. aux Trembles & R. des Prairie			6	12 do	172 50
Pointe Bleue and Roberval Pointe Claire and Railway Station	E Lanthier	5	3 6		85 00 38 99
Pointe du Lac and Railway Station		. 1 -	12		80 00
Pointe Gatineau and Ry. Station.	, T. Gagnon	. 1	12	12 do	120 00
Pointe Sèche and St. Paschal	A. Desjardins.	. 11			120 00
Point St. Peter and Wharf Pont de Maskinongé & Ry. Statio	. P. Bond	1	Asred 12	Season 1888	44 40 50 00
Pont de Maskinongé and St. Justi	n E. M. Chapde	-	3	12 monuis	00 00
	laine	. 5	6	12 do	240 00
Pont Rouge and Railway Station.		- -	$egin{array}{cccccccccccccccccccccccccccccccccccc$		
Pont Viau and Pont du Sault	J. Denis T. Bélanger.]	4: 1Z 2 6	6 do from do 12 do	44 00
Portage du Fort and Ry. Station .	D. M. Rattray.	. 7	18	12 do	312 00
Port Daniel and Wharf	J. Lawrence	. 5	3	Season 1888	64 80
Port Lewis and St. Anicet					
Portneuf and Railway Station Quebec and Railway Stations	. F. Marcone		12&1		

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					8 cts
Quebec, St. François and St. Jean d'OrléansQuebec, St. John Suburb and Street	A. Maranda	27		12 months	495 00
Letter Boxes	M. Martel	$\frac{2\frac{1}{3}}{11}$		12 do	315 00 646 36
Quebec and St. Sauveur de Quebec. Quebec and St. Tite des Caps	J. Tremblav	$\frac{14}{33}$		12 do	1,140 00
Quebec and St. Sative in de Quebec. Quebec and Spencer Cove. Quebec and Wharf.	A. Flanagan	5,		12 do	220 00
Quebec and Wharf	C. Hough	1	12&24 12	Season 1888do	1,659 37 120 00
unedecand Stonenam	•) . COTTIVAL	172	2	12 months	145 00
Quinnville and Templeton	J. Gahagan	$6\frac{1}{2}$	1	12 do	40 00
Quyon and Railway Station	W. Richardson.	1	6 3	12 do	75 00
Radford and Shawville	J. A. Armstrong L. Munn	$\frac{3}{2}$	6	12 do	50 00 40 00
Randboro' and Sawyerville	A. McDougall	20	3	12 do	350 00
Rawdon and St. Liguori	P. U. Morin	, ,,	6	6 do (to Sept. 30, '88).	99 50
do do Reedham and Robertson Station	E. Rowan	9	6	6 do from do 12 do	73 50 30 00
Repentigny and St. Paul L'Ermite.			6	12 do	80 00
Ricards and St. Herménégilde		1	2	12 do	30 00
Richmond East and St. Cyr	R. E. Dyson	$\frac{61}{15}$	1	3 do (from Jan. 1, '89)	12 50
Richmond East and Sydenham Place Rigaud and St. Rédempteur		$\frac{15}{6\frac{1}{3}}$	6 3	12 do	375 00 84 00
Rimouski and Railway Station	L. Lavoie.		12	12 do	107 66
Rimouski and Ste. Blandine.	A. Prémont	1 9	1	9 do (to Dec. 31, '88).	37 50
do do	P. Proulx	19		3 do from do 8 do (to Nov. 31, '88).	15 00 200 00
Ripon and Thurso Railway Station.	G. Dalaire	18	6	4 do from do	133 33
Rivière à l'Ours and Tremblay	J. B. Gaudin	18	1	12 do	78 00
Rivière à Pierre and Railway Station do do	L. St. Onge J. S. Murphy	120 yd	12 12	6 do (to Sept. 30, '88). 6 do from do	10 00 10 00
Rivière aux Pins and St. Gabriel Station	F Armetrong	63	2	12 do	52 00
River David and Railway Station			i	12 do	60 00
Rivière du Loup and Edmunston	J. Turner	79	6	12 do	3,000 00
Rivière du Loup and Ry. Station	M. L. Marchand	14		12 do	761 28
Rivière du Loup and Wharf River Gilbert and River Gilbert	L. I. Finyer	45	Asrec	Season 1888	60 00
Gold Mines	J. L. Lachance	31		3 months (to June 30, '88).	35 0 0
do do	J. Quirion	31	6	9 do from do	105 00
Rivière Noire and Railway Station. Rivière Noire and St. Valère de Bul-	_			_	20, 00
strode	do N Anctil	$\frac{4\frac{1}{2}}{5}$	$\frac{6}{12}$	12 do	160 00 200 00
Rivière St. Marguerite and Tadousac	L. Dechenes		1	6 do (to Sept. 30, '88).	
do do	J. Brisson	21	ī	6 do from do	62 50
Rivière Trois Pistoles and Railway Station.	J. G. Seton	3	12	12 do	50 00
Robertson Station and Sacré Cœur de Marie	J. Vallière ir	6	6	11 do (from May 1,'88). 12 do	122 89 25 00
Robertson Station and Ry. Station. Roberval and St. Prime	S. Maurice	10 yas	3	12 do	40 00
do do	J. Fradet	10	6	9 do from do	240 00
Robinson and Railway Station Rock Forest and Railway Station	L. Pope		12 6	4 do 26 dys. (from Nov	
	1	1)	5, '88)	12 95 52 00
Rock Forest and Suffield Rougemont and Railway Station	do J. Bachelder	15	$1\frac{3}{12}$		52 00 52 00
Roxton East and Roxton Falls	E. Dalphe		2	11 do (from May 1,'88).	36 66
Roxton Pond and South Roxton	A. Naiser	3	6	12 do	90 00
Russeltown and Vicars	C. Struthers	2	Asre	6 do (to Sept. 30, '88). Season 1888	30 00 56 00
Ste. Adèle and Ste. Agathe	R. Charbonneau	122	6	12 months	230 00
Ste. Adèle and St. Jérôme	E. Beauchamp	. 17	6	9 do (to Dec. 31, '88).	337 50
do do ,	G. Valiquette	17	6	3 do from do	112 50

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amou	nt.
			ł				\$	cts.
St. Adrien and Wotton				12 n	non	ths		00
St. Agapit and Railway Station Ste. Agathe and St. Jovite			12	$\frac{12}{12}$	do			00
Ste. Agnès de Dundee and Railway	!			i		İ		
Station	T. Rowley	$23\frac{1}{3}$	6 6	$\frac{12}{3}$	do	(to June 30, '88).		00
do do	A. Donais	235		9	do	from do		00
do do St. Aimé and Yamaska	H. Salvas	65		12	do			00
St. Alban and Railway Station St. Alexandre de Kamouraska and		5	6	12	do		104	00
Railway Station	R. Fortin	400 yd	12	12	do		40	00
St. Alexandre d'Iberville and Rail-		1	12	10	do		70	
way Station	A. Gagné	. 24		6		(to Sept. 30, '88).		00
do do	A. Rousseau	24		6	do	from do		00
St. Alexis des Monts and St. Paulin St. Alphonse and Ste. Béatrix	J. B. Drolet E. Biovel	10	3 & 6	$\frac{12}{12}$	do			82
St. Alphonse and St. Côme	A. Labine	12	2	12	do			00
St. Anaclet and Railway Station	O. Couture	23		6	do	(to Sept. 30, '88).		00
St. André and Railway Station	C. Rousseau E. Michaud	$\frac{2\frac{1}{2}}{4\frac{1}{2}}$		6 12	do	from do		50 00
Ste. Angèle de Laval and Railway		1 -	1					
Station	M. B. Désilets	1 1	12	12	ďο		24	00
Ste. Angèle de Monnoir and Rail- way Station	B. Loiselle	7	12	12	do		48	00
St. Anicet and White's Station			6	12	\mathbf{do}			00
Ste. Anne de Bellevue and Railway Station	A St Donie	1	6	2	do	29 days (to Sept.		
Ste. Anne de la Pérade and Rail-		1		1	ao	30, '88)	7	70
way Station	J. U. Marcotte	1	12	12	do			00
Ste. Anne de la Pérade and St. Prosper.	J. Cossette	7	6	12	do		108	00
Ste. Anne la Pocatière and Railway		i	1	1.2	uo		100	00
Station. Ste. Anne la Pocatière and St.	J. O. Ouellet	1	12	12	do		211	25
Onésime	C. Dubé	6	3	9	do	(to Dec. 31, '88).	44	25
do do .	C. Ouellet	6	3	3		from do		75
Ste. Anne des Plaines and Railway Station	D. D. Gandatta	l h	12	12	ďο		20	00
Ste. Anne de Sorel and Sorel	E. Latraverse	36		12				00
St. Anselme and Railway Station	F. Lamontagne.	1	12		do			00
St. Anselme and Ste. Claire St. Antoine and St. Appollinaire	J. H. Lambert	7 5	3	$\frac{12}{12}$	do			00
St. Antoine and St. Denis	A. Lacroix	1	6	12	do			00
St. Arsène and VigerSt. Athanase and Railway Station.	O. Gagnon	6,	6 24	12 5		(40 A 21 200)		00
do do	H. Mailhot	1	24	7		(to Aug. 31, '88). from do		67
St. Aubert and Railway Station	C. Dubé	1\frac{1}{2}		12	do		59	00
St. Aubert and St. Pamphile St. Augustin and Railway Station	A. Lavery	31 1 1		12 12				00
St. Augustin Railway Station and		1	"	12	uo		50	00
Ste. Monique	D. Léonard	2	6	12	do		78	00
Ste. Barbe and St. Stanislas de Kostka.	N Lemieux	41	2 & 3	12	do	`	58	11
St. Barnabé and St. Elie	E. Lacerte	9	6	12	do			00
St. Barnabé and Yamachiche	F. Menanson		6	12	do			00
St. Barthélemi and Railway Station St. Bazile and Railway Station				$\frac{12}{12}$	do			00
St. Bazile le Grand and Ry. Station	E. Lalumière	7,	6	12	do			00
St. Bazile Station and Ry. Station. St. Bonaventure and St. Guillaume	C. A. Delage	120 yd	6	12	do	(f T 1 200)		00
d'Upton	o. Lavance	12	3	10	ao	(from June 1, '88)	(2	50
Ste. Brigide and Railway Station	J. Donnelly	3	6	12	do		110	00
Ste. Brigitte des Saults and Ste. Monique	H St Pierre	13	Q	12	do		150	00
		3	. 0	14	(II)		100	wi

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amour	ıt.
GU D 10: XX X							8	ets.
St. Bruno and Ste. Julie de Ver- chères	A. Hébert		6	12	mon	ths	140	00
St. Bruno and St. Paschal			1	12	do			00
St. Camille and Sherbrooke St. Casimir and Railway Station	L. Manseau	$\frac{26}{43}$	$\frac{1}{12}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do		216	00
St. Casimir and St. Ubalde	J. Soular	11	3	12	do		145	
Ste. Catherine and Railway Station	P. Julien	1	6	12				00
St. Célestin and Railway Station St. Césaire and Railway Station	D. Arseneau	11		$\begin{array}{c} 12 \\ 12 \end{array}$	do			00
St. Charles and Railway Station	E. Bilodeau.	: 5	16	12				00
St. Charles and St. Marc	H. Desjardins	1}	7	12				00
Ste. Claire and St. Malachie St. Clément and St. Eloi	P. Turgeon	10	6	$\frac{12}{12}$	do do		190	00
Ste. Clothilde and Victoriaville	P. Lavigne	18	6	12			214	
St. Columbin and Ste. Scholastique	\mathbf{M} . Phelan	9	6	12	do		325	50
St. Constant and Railway Station. Ste. Cunegonde and Railway Station	O. Robert	14		$\frac{12}{12}$	do			48
St. Cuthbert and Railway Station.	D. Langevin	3		6	do	12 days (broken	100	00
-		1	,	1		period)	36	81
St. Cuthbert Station and Railway		200 - 1		10			10	
StationSt. Cyr and Richmond East				12	do	(to Dec. 31, '88)		00 50
St. Cyrille and Railway Station	J. B. Cloutier	$7\frac{1}{2}$	2	9		(from July 1, '88)		00
St. Damase and St. Hyacinthe	J. Vigneux			12	do			00
St. Damase de Rimouski and Rail		-	9	12	al a		υ n	-00
way Station	A. Langiois	7		12	do		60	00
Gabriel de Brandon	L. Peltier	6		12	do		190	00
St. Denis and Railway Station	S. Dionne	4		12				00
St. Didace and St. Norbert St. Dominique and St. Hyacinthe.	L. Lauzon	16 <u>3</u>		$\frac{12}{12}$	do do			00
St. Dominique des Cedres and Rail	- rightau			12	do		200	00
way Station.	S. Trottier	2	3	12	do		36	00
St. Donat de Montcalm and St Théodore de Chertsey	W Andrin	27	1	12	do		135	00
St. Edward and St. Michel	F. Coupal, ir	43		12	do			00
St. Eloi and Railway Station	P. Langelier	3	6	12	do			00
Ste. Emelie de l'Energie and St	(1 (1)	12		1	٦	/6 T-11 2001	140	50
Jean de Matha Ste. Emélie de l'Energie and St	G. Clermont	1.2	2	9	αo	(from July 1, '88)	142	50
Michel des Saints	A. Basinais	33	2	9	do	do	300	00
St. Ephrem d'Upton and Ste	AT DU	_		10	,		1.15	•
Hélène de Bagot	N. Bilette	7	6	12	do		145	(H)
	H. P. Blair	10	2	12	do		234	00
Ste. Eulalie and Railway Station.	E. Prince	4	6	12	do		102	50
St. Eustache and Railway Station. St. Eustache and St. Joseph du	J. M. Goulet	360 ya	6	12	do		45	00
Lac	J. B. Laurin	11	3	12	do		150	00
		1:	-	1				
St. Evariste de Forsyth and Rail	-!	1			do		524	79
St. Evariste de Forsyth and Rail way Station	$ \mathbf{F. St. Pierr}e$	26	6	12	(10)		~	. ~
St. Evariste de Forsyth and Rail way Station	$ \mathbf{F. St. Pierr}e$	1		à	,			
St. Evariste de Forsyth and Rail way Station	F. St. Pierre R. Bellegarde	7	6	12 12 12	do do		100	
St. Evariste de Forsyth and Rail way Station. St. Evariste de Forsyth and St Honoré. St. Fabien and Railway Station. Ste. Famille and St. Pierre d'Or	R. Bellegarde J. D'Anjou	7	6 12	12 12	do do		100 48	00
St. Evariste de Forsyth and Rail way Station St. Evariste de Forsyth and St Honoré St. Fabien and Railway Station Ste. Famille and St. Pierre d'Or léans	R. Bellegarde J. D'Anjou A. Maranda	7 1 8	6 12 3	12 12 12	do do		100 48 120	00
St. Evariste de Forsyth and Rail way Station. St. Evariste de Forsyth and St Honoré. St. Fabien and Railway Station. Ste. Famile and St. Pierre d'Or léans. St. Félicien and St. Prime.	R. Bellegarde J. D'Anjou A. Maranda P. Rousseau	7 1 8 9	6 12	12 12	do do do do		100 48 120 118	00 00 00
St. Evariste de Forsyth and Rail way Station St. Evariste de Forsyth and St Honoré. St. Fabien and Railway Station Ste. Famille and St. Pierre d'Or léans St. Félicien and St. Prime. St. Félicien and Ticonabé St. Félix de Valois and Railway	F. St. Pierre R. Bellegarde J. D'Anjou A. Maranda P. Roussean O. Perreault	7 1 8 9 5	6 12 3 3 2	12 12 12 12 12 9	do do do do	(to Dec. 31, '88)	100 48 120 118 45	00 00 00 00
St. Evariste de Forsyth and Rail way Station. St. Evariste de Forsyth and St Honoré. St. Fabien and Railway Station. Ste. Famille and St. Pierre d'Or léans. St. Félicien and St. Prime. St. Félicien and Ticonabé. St. Félix de Valois and Railway Station.	F. St. Pierre R. Bellegarde J. D'Anjou A. Maranda P. Rousseau O. Perreault S. Tessier	7 1 8 9	6 12 3 3 2	12 12 12 12	do do do do		100 48 120 118	00 00 00 00
St. Evariste de Forsyth and Rail way Station. St. Evariste de Forsyth and St. Honoré. St. Fabien and Railway Station. Ste. Famile and St. Pierre d'Or léans. St. Félicien and St. Prime. St. Félicien and Ticonabé St. Félix de Valois and Railway Station. St. Félix de Valois and St. Jean de	F. St. Pierre R. Bellegarde J. D'Anjou A. Maranda P. Rousseau O. Perreault S. Tessier	7 1 8 9 5	6 12 3 3 2 6	12 12 12 12 9	do do do do	(to Dec. 31, '88)	100 48 120 118 45 480	00 00 00 00 00
St. Evariste de Forsyth and Rail way Station. St. Evariste de Forsyth and St Honoré. St. Fabien and Railway Station. Ste. Famille and St. Pierre d'Or léans. St. Félicien and St. Prime. St. Félicien and Ticonabé. St. Félix de Valois and Railway Station. St. Félix de Valois and St. Jean de Matha. Ste. Flavie and Railway Station.	F. St. Pierre R. Bellegarde J. D'Anjou A. Maranda P. Rousseau O. Perreault S. Tessier E. Lessard P. Chouinard	7 1 8 9 5 13 8	6 12 3 3 2 6 6	12 12 12 12 12 9	do do do do	(to Dec. 31, '88)	100 48 120 118 45	00 00 00 00 00
St. Evariste de Forsyth and Rail way Station. St. Evariste de Forsyth and St Honoré. St. Fabien and Railway Station. Ste. Famille and St. Pierre d'Or léans. St. Félicien and St. Prime. St. Félicien and Ticonabé St. Félix de Valois and Railway Station. St. Félix de Valois and St. Jean de Matha.	F. St. Pierre R. Bellegarde J. D'Anjou A. Maranda P. Rousseau O. Perreault S. Tessier E. Lessard P. Chouinard	7 1 8 9 5 13 8 3	6 12 3 3 2 6 6 12	12 12 12 12 9 12	do do do do do do	(to Dec. 31, '88)	100 48 120 118 45 480 200 191	00 00 00 00 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Period.	Amou	nt.
							8	cts.
St. François, Montmagny, and Rail-	F C Poulst	11	e	10		1	=0	2 00
way StationSt. François-Xavier de Brompton	ı)	$1\frac{1}{2}$		į		ths	(2	2 00
and Windsor Mills St. François-Xavier de Viger and	J. Levesque	4	2 & 3	12	do		87	7 50
Viger	J. Plourde	6	3	9		(to Dec. 31, '88).		50
do do St. Fredéric and Railway Station	J. Baillargeon	$\frac{6}{2}$	3 6	$\frac{3}{12}$	do	from do		3 50 0 00
St. Frédéric and St. Sévérin de			. 9	12	do			
Beaurivage. St. Gabriel Station and Railway Station	r. n. rante	6	3	12	αo		100	0 00
Station	A. W. Landrigan	10 yds 3	6 6	$\frac{12}{12}$				6 00 9 00
Ste. Geneviève de Batiscan and			. 0	12	uo			
Railway StationSte. Geneviève de Batiscan and St.		4	12	12	do		149	9 00
Stanislas	A. Despins	8	6	12	do		147	5 00
St. George East and St. Prosper de Dorchester	J. Parent	11	1	12	do		54	4 01
St. Germain de Grantham and Rail-	.			1				
way Station St. Gervais and Railway Station	F. Roy	$\frac{1}{1}$ 5 $\frac{1}{2}$	12	$\frac{12}{12}$				0 00 - 6 00 -
St. Gervais and St. Lazare	IJ. Bélanger	1 6	6	12	do			9 00
St. Gervais and St. Nérée St. Guillaume and Railway Station	A. René	9	$\frac{3}{12}$	$\frac{12}{12}$				5 00 - 0 00 -
St. Guillaume and St. Pie de Guire	. E. Poirier	. 113	3	12	do		140	0 00
Ste. Hélène and Railway Station. Ste. Hénédine and Railway Station	. J. B. Bérubé		$\frac{12}{12}$	$\frac{12}{12}$				8 00 - 0 00 -
St. Henri and Railway Station	T. Couet			12				0 00
St. Henri and St. Isidore	. A. Samson	10			do			2 00
St. Henri and St. Lambert St. Henri de Montréal and Railway		10	6	12	do		199	9 00
Station	A.J. Bissonnette	1	24	12				0 00
St. Henri Station and Ry. Station St. Hermas and Railway Station.	G. Demers		12	$\frac{12}{12}$	do do			5 00 0 00
St. Hilaire Station and Ry. Station	. F. Martin	100 yc	36	12	do			0 00
St. Hilaire Station and St. Jear Baptiste de Rouville	1	1	1	12	do		150	6 00
St. Hilaire Station and Sorel	J. B. Faneuf	33		12			1,09	
St. Hubert and Railway Station	$. \mathbf{F.} $ Robert $$		7	12	do			0 00
St. Hugues and St. Hyacinthe do	A. Guertin	14 14	± 6	6		(to Sept. 30, '88). from do		$\begin{array}{ccc} 2 & 50 \\ 7 & 50 \end{array}$
St. Hugues and St. Marcel	. P. Gaumond	7	6	3	do	(to June 30, '88).	4	6 00
St. Isidore and Railway Station	T. Forcier	7,	6 12	9	do do	from do (to June 30, '88).	13	4 25 8 00
do do	. J. Primeau	. 1	12	9		from do		4 00
St. Isidore Junction and Ry. Station St. Janvier and Railway Station	i F. Baillargeon	17 yd	12	$\frac{12}{12}$	do			6 00
St. Jean de Dieu and Trois Pistole	s E. Rousseau	14	12	12	do do			00 08 8 00
St. Jean de Matha and St. Miche	1!							
des Saints St. Jean Port Joli and Ry. Station	J. B. Robitaille. G. Poitras	45	$\frac{2}{12}$	$\frac{3}{12}$	- do - do	(to June 30, '88).		64 75 60 00
St. Jérôme and Railway Station	E. Marchand	1 7		12				2 00
St. Jérôme and Ste. Thérèse	. J. Ouimet $$. 14	6		do			00 00
St. Joachim and Warden St. John's and Railway Stations			12&2	$\frac{12}{12}$	- do - do			8 00 8 17
St. John's and St. Luc	. M. Marsan	. 6	3	12	do		8	80 00
St. John's and Sabrevois					do			8 00 8 00
St. Joseph de Sorel and Sorel St. Louis de Gonzague and Railway	y	. 13	6	12	do			
Station	. H: Laberge	. 1	12	9	do	(from July 1, '88)	5	6 25
St. Louis de Gonzague and St. Tim othé Station			.1	Sn	ecial	trip		4 50
	1		11 10	110				
Ste. Louise and Railway Station Ste. Luce and Railway Station	. A. Anetil	$\frac{1}{2}$	<u>b</u> 12			ths		$\begin{array}{c} 0 & 00 \\ 2 & 72 \end{array}$

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ ets
Ste. Madeleine and Railway Station St. Malachie and Standon Ste. Marie de Monnoir and Railway	N. Hebert	13	12 6		nths	$\frac{24}{176} \frac{00}{00}$
Station Ste. Marthe and Vaudreuil Ste. Martine and Railway Station. Ste. Martine Railway Station and	M. Bessette D. Rochon G. Marchand	15 2 3	6 12	12 do 12 do		49 00 540 00 70 00
St. Urbain St. Mathias and Village Richelieu St. Mathieu and St. Simon St. Moïse and Railway Station	O. Darche A. D'Anjou	3		12 do		130 00 140 00 79 00 90 00
St. Moïse Station and Ry. Station St. Narcisse and Trois Rivières	J. Vaillancourt.	60yds. 19	12 6 6	12 do 9 do	(to Dec. 31, '88).	24 00 330 00 88 25
St. Norbert and Railway Station St. Ours and St. Roch de Richelieu. St. Pacôme and Railway Station	S. Carpentier J. B. Paquette A. Hudon	$\begin{array}{c} 9\\ \frac{1}{2}\\ 1\frac{7}{2} \end{array}$	6 6 12	12 do 12 do 12 do))	290 00 25 00 112 00
St. Patrick and Railway Station. St. Paul du Buton and St. Pierre Montmagny St. Paul's Bay and Ste. Tite des Caps		Ì	12 3	12 do	11 dys. (to Sept. 15, '88)	135 00 190 00
St. Paul's Bay and St. Urbain St. Paul's Bay and Wharf	T. Fortin C. Bouchard	9	6 3 As rec		(from July 1, '88)	1,248 00 124 89 316 00
St. Philippe de Laprairie and Rail- way Station. St. Phillippe de Néry and Railway	F. C. Larose	1/5		1	nths	47 00
Station do do St. Phillippe Railway Station and	S. Fletcher	93	12 6	İ	(to Dec. 31, '88).	40 00 210 00
Stonefield. Ste. Philomène and Railway Station St. Pierre les Becquets and Ste. Sobbie de Lépred	J. B. D'Amour.	9 2½ 12	6 6	3 do 12 do		70 00 $145 00$ $125 00$
Sophie de Lévrard. St. Pierre Montmagny and Railway Station.	N. Samson	2	12	12 de		95-00
Ste. Placide and St. Scholastique St. Pie and Railway Station. St. Polycarpe and Railway Station	F. Lavergne	13½ 14 12 13½	12 12	12 do		300 00 38 00 52 00 180 00
St. Polycarpe and St. Télesphore St. Raphaël and Railway Station St. Raymond and Railway Station St. Régis and Cornwall	P. Gauthier	6	6	12 do 12 do	o (to Dec. 31, '88).	72 00 40 00 45 00
	J. Angus J. B. Boyer	$\frac{6}{2}$	2 12	3 do 3 do	from do (from Jan. 1, '89)	15 00 24 50 396 00
St. Robert and Railway Station Ste. Rose and Railway Station St. Samuel de Gayhurst and Val	L. Poirier A. E Léonard					100 00 72 00
letort	L. Tanguay		2 24	12 de	·	50 00 196 00
Ste. Scholastique and Ry. Station. St. Sebastien and Venice St. Simon and Railway Station Ste. Sophie de Lacorne and Railway	A. Gratton A. T. Hunter J. B. Martin	$3\frac{3}{2}$	12 2	12 do 12 do 12 do		40 00 48 00 48 00
Station. St. Stanislas de Kotska and Valley	M. Levesque		12	12 de	i	48 00
field. Ste. Thècle and Ste. Tite. Ste. Théodosie and Verchères. Ste. Thérèse and Railway Station.	F. Boutet L. N. Handfield F. Boismenu	9 6 2	3&6 3	12 do 12 do 12 do))	250 00 110 82 78 00 80 00
St. Timothée and Railway Station St. Tite and Railway Station	G. Lahaie	6	6	12 de		13 70 139 00
St. Valentin and Stottville St. Valier and Railway Station	A. Belanger] 3		12 do	to June 30, '88).	72 00 24 00

Name of Route.	Name of Contractor.	Distance in in Miles.	No. of Trips per Week.	Period.	Amount.
	and the second s				8 cts
St. Valier and Railway Station	J. Corriveau	3	6	9 months(fromJuly 1, '88)	
Ste. Victoire and Sorel	H. Paulhus	9	3	12 do	140 00
St. Vincent de Paul and Ry. Station Savage's Mills and Railway Station	C. E. Germain	3	12 6	12 do	47 98 48 00
Sayabec and Railway Station	H. Boulay	60 yds	12	12 do	18 00
Scott Junction and Railway Station Scotstown and Railway Station	G. Garon	60 yds	$\begin{array}{c} 12 \\ 12 \end{array}$	12 do	50 00 40 00
Scotstown, La Patrie and West		ì			
Ditton.	J. B. Brousseau.	9&3 21	3&6 6	12 do	180 00 390 00
Shawenegan and Three Rivers Shawville and Railway Station	W. McGuire	1 21			75 00
Sheffington and West Shefford Rail-				4 1. 7 1 (4. 4 7	
way Station	A. Potvin	4	6	4 do 5 dys. (to Aug. 5, '88)	
do do	do	$2\frac{1}{2}$	6	4 do 26 dys. (to Dec.	!
do do	J. Harris	2&4	6&12	31, '88) 3 do from do	
Sherbrooke and Post Office, Exhibi-		i	1		
tion Building Sherbrooke and Railway Station	K. A. Biron J. J. Foss	1	36	Special trips	3 00
				trips)	200 33
Sherbrooke and Stoke Centre Sherbrooke, Sherbrooke East and		$9\frac{1}{2}$	2	12 do	104 00
Street Letter Boxes	R. A. Biron	1	18&7	12 do	350 00
Sherrington and Railway Station	B. Vautrin	$\frac{2\frac{1}{3}}{1\frac{1}{3}}$		12 do	100 00 42 00
Sillery Cove and Spencer Cove Smith's Mills and Railway Station.	W. T. Knight	15		12 do	16 00
Sorel and Railway Station	'P. Lavallee	3		12 do	120 00
do do South Durham and Valcourt	J. Lavallée T. A. Fee	15	3	Special trips	2 50 187 20
South Ham and Railway Station South Quebec and Railway Station.	A. Vallée	91	6	12 do	300 00
South Quebec and Railway Station. South Stukely and Railway Station.	J. Ritchie	200 yd	36	12 do	150 00 48 17
Spring Hill and Railway Station	M. A. McLean.	1 2	12	9 do (to Dec. 31, '88).	30 00
do do	D. J. Morrison.	1 1	12	3 do from do	15 00
Spring Hill and Stornoway Stanfold and Railway Station	P. Nadeau	9 24 vds	6 12	12 months	300 00 25 00
Stanstead Junction and Ry. Station	J. T. Jenkins	60 yds	12	12 do	30 00
Staynerville and Railway Station Stoneham and Tewkesbury	J. M. Dorion			12 do	12 00 50 00
Stornoway and Tolsta	A. Morrison	$\begin{array}{c c} 7\frac{1}{2} \\ 4 \end{array}$	1 -	12 do	40 00
Stornoway and Tolsta	P. Fitzpatrick	Å	6 12	7 do 4d's (to Nov. 4, '88) 12 do	
Sutton and Railway Station Sutton Junction and Ry. Station	A. W. Westover.	10		12 do	60 00 30 00
Sweetsburg and Railway Station	G. T. Batchelder		12	12 do	64 00
Tadousac and Wharf	P. Marquis	1	As rea	Season 1888	46 80
Terrebonne and Railway Station	E. Brière	4	6	12 months	80 00
Terrebonne and Railway Station. Thetford Mines and Ry. Station. Three Rivers and Railway Station. Three Rivers and Street Letter	S. Blondeau	150 yd	31 & 37	12 do	30 00 444 36
Three Rivers and Street Letter		1 2	0100		
Boxes.	J. P. Marineau.	15	18	10 de	300 00
Three Rivers and Valmont Trahan's Mills and Weedon Station	A. Trahan	19		12 do	75 00
Trahan's Mills and Weedon Station Tring Station and Railway Station.	E. Vallée	10 yds	12	12 do	40 00
Trois Pistoles and Railway Station.	do		12 12	12 do	40 00
_				15, 1888)	11 33
Trois Saumons and Railway Station	D. Gaumona	2	6	12 do	68 00
Valcartier and Railway Station	J. McBain	6,	6	12 do	185 00
Valleyfield and Railway Station do do	L. Leduc	¥ ¥		11 do (to Feb. 28, '89). 1 do from do	
do Street Letter Boxes	D. Dion	1	12	12 do	72 00
Valois and Railway Station	P. G. Valois	∄80 yd	12	12 do	50 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amoun	t.
							s	ets.
Varennes and Railway Station	A. Malo	300 yd	12	61	nont	hs 15 days (to Oct. 15, 1888)	32	50
Verchères and Railway Station	W. L. Forget	1	12	6	do	do		00
Verchères and Railway Station Versailles and Railway Station	T. Lacombe	30 yds	12	12	do			00
Victoriaville and Railway Station	T. Foisy	1	12	5	do	(to Aug. 31, '88).	13	33
Village des Aulnaies and Railway				1				
	J. B. Sirois	5.	12					
Village Richelieu and Ry. Station.	N. D. D. Bessette	1	12					00
Vincennes and Railway Station	M. Dessureault.	3		12			150	
Vinton and Railway Station	W. Gilchrist	1	6	12	ao	•••••	78	90
Walker's Cutting and Ry. Station.	P. D. Pánin	190 vd	12	12	do		19	00
Warden and Railway Station	A Borry	46 rds	12	12				00
Warwick East and Railway Station	P Johnson	180 vd	6	9		(to Dec. 31, '88).		50
do do	E. Martel	180 vd	6	3		from do		50
Waterloo and Railway Station				12				
Weedon Centre and Ry. Station		2	6	12			156	00
Weedon Station and Ry. Station	N. Tanguay	60 yds	6	1	do	(to April 30, '88).	1	67
West Brome and Railway Station	N. Scott	3	12	12	do			-00
Westbury Basin and Ry. Station			12	12				50
Wickham West and Ry. Station	M. Leonard	1 6	12	12	do		32	00
ar 111 15 5 5 5	D. Di.			1.0	,			. 00
Yamachiche and Railway Station				12				00
Yamaska and Railway Station	L. H. Latteur	50 yds	12 12	$\frac{12}{12}$				00
Yamaska East and Ry. Station	L. Levenie	Ten Aq	1.2	12	ao	• • • • • • • • • • • • • • • • • • • •	30	
						Total	\$152,739	80
						20002		

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

DETAIL of all payments for Mail Transportation in Quebec, made within the Year ended 30th June, 1889. CONVEYANCE OF MAILS BY STEAMBOATS AND SAILING VESSELS.

WILLIAM WHITE, Deputy Postmaster-General.

W. II. SMITHSON,
Accountant.

DETAIL of all payments for Mail Transportation in Quebec, made within the Year ended 30th June, 1889.

	WAYS.
	Y RAIL
(AILS B
	OF M
	CONVEYANCE OF MAILS BY RAILWAYS.
1	CONV
2	

nebec). 35 Nuebec)* 765	With varying frequency over different sections of the line.	i ë	\$ cts. 1,965 60 1,421 48
107 & 68	the line. 6 & 12	Ą	49 410 07
	With varying frequency over different sections of the line	දු ද	4,902 08 4,902 08 67,720 12
OGrand Trunk Railway (within Quebec). OGreat Northern Railway Intercolonial Railway (within Quebec). S With var	With varying frequency over different sections of	Special trips with British Mails12 months (to 31st March, 1889)	4,212 149
International Railway 69 L'Assomption Railway 34 Montreat and Sorel Railway 45 Portiac and Pacific Junction Railway 68 Quebec Central Railway 143 Quebec and Lake St. John Railway 177		15 do (to 30th June, 1889, & arrears) 3 do (to 30th June, 1889) 10 do (to 31st March, 1889) 12 do (to 31st March, 1889) 13 do (to 31st March, 1889) 14 do do do do do do do do do do do do do	22,267,50 861,12 20,833 2,125,16 7,138,56 5,627,85
		Total	\$191,463 23

WILLIAM WHITE, Deputy Postmaster-General.

W. H. Smithson,
Accountant.

Detail of all payments for making and repairing Mail Bags, Mail Locks, &c., in Quebec, made within the Year ended 30th June, 1889.

Tradesmen's Names.	Particulars of Disbursements.	Amount.
R. S. Montgomery. E. Chanteloup. Smith & Egge Manufacturing Co. Miller Lock Company. G. Bailey. Pritchard & Andrews. P. O'Donoghue. Postmaster, Bersimis. P. O'Donoghue.	Brass mail locks do Mail bag locks and keys do do do Repairing brass mail locks do	8 cts 1,872 12 806 74 335 75 17 50 15 00 124 50 89 27 3 90 6 25 1,708 81 1 00
	Total	\$4,980 84

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF NOVA SCOTIA.

Detail of all payments for Mail Transportation in Nova Scotia, made within the year ended 30th June, 1889.

	•					
Name of Route.	Name of Route.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.
	1				1	\$ cts
Abercrombie and New Glasgow	R. Dunbar	5	. 2	12 mor	ths	68 00
Acadia Minos and Ross Divor	I W Davison	1.1	3	112 do		197 48
Acadia Mines and Londonderry Strado do do do Addington Forks and Keppoch Advocate Harbor and Apple River. Afton and Bayfield.	J. M. Bigny	23		9 do	(to Dec. 31, '88).	157 50
do do	A. J. Gough	$2\frac{3}{4}$	24	3 do	from do	43 75
Advocate Harbor and Apple River	J. Campbell	7	$\frac{1}{6}$	12 do)	60 00 345 00
Afton and Bayfield	T. W. Taylor	23	6		·	97 00
Arton and Davneid Road Ry, Station	TML COHHOL	3	12	12 do	·	65 00
Afton and Guysboro' Intervale	A. Chisholm	15	1			55 00
Albert Bridge and Horns Road	H. Horn	4	$\frac{1}{3}$	12 do	(A., There 91, 200)	20 00
Alderney and Petit de Gratdo do do	do	21	3	3 do	(to Dec. 31, '88) from do	37 50 15 62
Alder Point and Little Bras d'Or	S. Plant	6	1	12 do		35 00
Alder River and Main Post Road. Alton and Railway Station Amherst and Amherst Point	J. Chisholm	1	12	12 de	·	12 00
Alton and Railway Station	T. Lindsay	75 yds	6		·	20 00
Amherst and Amherst Point	I. B. Stewart	$\frac{4\frac{1}{2}}{6}$	3	12 do		67 00
Amherst and Fenwick	E Channan	6	1	12 do		32 00 40 00
Amherst and Hastings	K. Hunter	20	3			210 00
Amherst and Little River	G. A. Purdy	$22\frac{1}{2}$	2	12 do		240 00
Amherst and Railway Station	M. Hillson	1	$\mathbf{A}\mathbf{s}\operatorname{req}$	12 do		405 44
Annapolis and Dalhousie West	J. Gormley	16	1	6 do	(from Oct. 1, '88)	50 00
Annapolis and Digby Annapolis and Granville Ferry	K. H. Hardwick	21	: 6	12 do		396 00
			6	12 do		250 00
Annapolis and Liverpool	G. & E. Stailing	67	6	12 do		2,399 00
Annapolis and Perott Settlement	N. Dargie	9	1			45 00
Annapolis and Liverpool	A. W. Corbitt	1 2	12	12 do		112 00
Annapolis and Saw Mill Creek	K. Harris	$\frac{3\frac{1}{2}}{31}$	3	12 do	(to Sept. 30, '88).	70 00 70 00
Annapolis and Stoddart's Antigonishe and Arisaig, &c	McDonald &	31	1	o do	(w sept. 50, 60).	70 00
Tringottime unit Tribuig, tee	Gillis	7 & 10	2 & 1	12 de)	145 00
Antigonishe and Brophy's	H. Dunn	14	2	6 do	(to Sept. 30, '88).	80 00
do do	T. Brophy	14	2	6 do		66 00
Antigonishe and Cloverville	J. Thompson	$\frac{5}{13}$	$\frac{1}{2}$	12 do	(to Nov. 30, '88,	40 00
Antigonishe and Cross Roads Onlo.	1. MCAnnis	. 10	-	1 0 do	and extra trips)	84 20
Antigonishe and Georgeville	R. McDonald	44 r. t.	4	12 do		398 00
Antigonishe and Georgeville Antigonishe and Lower West River	T. McAnnis	$3\frac{1}{2}$	2	4 do	(from Dec. 1, '88)	17 33
Antigonishe and Railway Station	W. G. Cunning-	1	10	10 1	ı	05.00
Antigonishe and Sharbrooke	ham	40	12 3	12 do		95 00 1,119 28
Antigonishe and Sherbrooke Antigonishe and Williams' Point	D. McDonald.	$\frac{20}{2}$				40 00
Antigonishe Harbor (South Side) and			_	1		
Lower Settlement, South River	J. Kiely	41/2	2		·	100 00
Anthony's Line and Scotch Village	S. Cochran	111 r. t.	2			55 00
Antrim and Gay's River	J. H. Taylor	16 r. t.	$\frac{2}{6}$			55 00 50 00
Antrim and Gay's River. Apple River and East Apple River, Arcadia and East Chebogue. Ardness and Lismore. Ardoise Hill and Newport Station.	W. W. Coffin	4	2	12 do		40 00
Ardness and Lismore	A. McDonald	3	3	12 de		50 00
Ardoise Hill and Newport Station.	M. Harvey	19 r. t.	3 & 2		·	131 25
Argvie and Argvie Head	IA. J. MICKEISON		1 3		• • • • • • • • • • • • • • • • • • • •	40 00
Argyle Sound and Lower Argyle	A. Murphy	$\frac{3\frac{1}{2}}{5}$	1 4	12 do	1888	19 00 50 00
Arichat and Lennox Ferry	A McDonald	3	3		nths	87 50
Arichat and Petit de Grat	C. Lenoir.	4	6	12 do		70 00
Arichat and West Arichat	A. McDonald	3	6	Season	1888	25 00
Ashfield and Whycocomagh	H. McDonald	6	1		iths ,	24 00
Athol and Railway Station	E. Donkin	61 - +	12	12 do		100 00 30 00
Audum and Greenwood	G. W. Eaton	լս <u>ա</u> յ ք. ն. _։)	, ,	ira uu		90 W

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
						•	\$ cts
Auburn and Railway Station Auld's Cote and Railway Station Avondale Station and Railway Sta-	H. McMullan	$1\frac{1}{2}$		12	do	hs	43 00 50 00
tion	A. F. Robertson. J. B. Newcomb.	$1\frac{1}{2}$	-	12	do	• • • • • • • • • • • • • • • • • • • •	25 00 100 00
tion	do M N Gravas	12 yds. 60	$\begin{array}{c c} 12 \\ 1 \end{array}$				30 00 224 00
Aviesford and Harmony	A. D. Nichols	20 r. t.					57 00
Aylesford and Morden	J. Redgate	22 r. t.	2	12	do		130 00
Aylesford and Railway Station Baccaro and Port La Tour	C. A. Williamson	; ;	$\frac{12}{2}$			• • • • • • • • • • • • • • • • • • • •	60 00 39 00
Back Meadows and Poplar Hill	G. Clark	4	2				40 00
Baddeck and Big Bras d'Or	W. McDonald	26	3	12	do		529 00
Baddeck and Grand Narrows	F. H. S. McNeill	15	1			/A., A 91 200\	65 72
Baddeck and New Campbellton do do		30	3 3			(to Aug. 31, '88). from do	166 25 248 26
Baddeck and Rear Baddeck Bay Baddeck and Upper Settlement,	M. A. McKay	8	1				52 00
Baddeck Riverdo do	A. L. McLean D. L. Morrison.	16 16	$\frac{2}{2}$		do do	(to July 31, '88). from do	21 00 46 48
Baddeck and Upper Settlement, Middle River Baddeck Bay and Plaister Mines	A. G. Crowdis.	19 4	$\frac{2}{2}$				143 00 27 00
Baddeck River, North Branch, and Forks Baddeck	A. H. Buchanan	$\frac{2!}{16\&5}$	3 & 2		do do		28 00 160 00
Bailey's Brook and Railway Sta	-	-		10			
Baker Settlement and Greenfield			3&1				125 24 115 00
Balmoral Mills and The Falls			3	$\tilde{12}$			
Banks Broad Cove and Strathlorne Barney's River and Marsh	G. Campbell	18 r. t.	1 1		do do		15 00 38 90
Barney's River and Railway Station	D R McKenzie	! e _i 4∤	6	12	do		133 88
Barrington and Port Clyde	O. L. Davison .	. 30 r. t.	6			(to Jan. 31, '89).	260 00
_ do do	J. K. Hogg	. 30 r. t	. 6		do	from do	55 00
Barrington and Pubnico Beach	J. McComisky.	$\begin{array}{c c} 22 \\ 4 \end{array}$	6		do	(from Jan 1, '89).	456 00 400 00
Barrington and Yarmouth Barrington and Shelburne Barrington Passage and Cape Sable	e	;	6	3	do	do	118 7
Island	T. W. Robertson	1 1	6		do		275 0
Barr Settlement and Shubenacadie Barrio's Beach and Big Tracadie	B Boudrot	e 32 r. t . 4		$\frac{12}{9}$	do	(to Dec. 31, '88).	97 0 37 5
do do	A. F. Bowden.	. 4			do	from do	
Barss' Corner and Chesley's Corner	. A. Tretheway	. 17 r. t			ďο		
Barss' Corner and Mahone Bay			$\frac{1}{12}$		do		
Barton and Railway Station Basin River Inhabitants and Lowe		. 3	12	12	ao	* * * * * * * * * * * * * * * * * * * *	115 0
River Inhabitants	J. A. McCarthy		2		do		28 0
mara's Island	. E. McNamara	. 2			do		45 0
Battery Hill and New Gairlock Battery Hill and Railway Station.		. 8	$\frac{1}{2}$ $\frac{3}{12}$		do do		120 0 60 0
Baxter's Harbor and Sheffield Mill	s W. E. Harris	7	2 1		do	(to Sept. 30, '88	
do do .	. do	. 9			do	from do	29 5
Bay St. Lawrence and Ingonish	. D. McLeod	40		$\begin{vmatrix} 12 \\ 9 \end{vmatrix}$	do do	(to Dec. 31, '88)	430 0
Bay St. Lawrence and Meat Cove.	. H. McDonald				do	from do	12 0
Bear Cove, Cheticamp & Metegha Bear River, West Side, and Dee	n G. L. Comeau .	4	2	6	do	from Oct. 1, '88	20 0
Brook, &c Bear River, West Side, and Digby	J.H. McClellan	a 5 & 6	6 10 & 6,3 &		do do		
	iv. mrcolenana.	. 1 10	∣∪,ວ⊄	4 14	uo		. 73 0

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
					;	\$ ets.
Beaver Bank & Middle Sackville, &	L. L. Hamilton.	13 r. t.	6 & 3	6 mon	ths (to Sept. 30, '88)	147 24
do BeaverBank and North BeaverBank	R. Emmerson	13 r. t. 8	6 & 3		from do	137 50
Beaver Bank and Railway Station.	D. Hallisev	12 vds	12		•••••	80 00 93 00
Beaver River Corner & Cedar Lake Bedford Basin and English Corner	A. Porter	18 r. t.	1	12 do		40 00
Bedford Basin and English Corner.	N. Melvin	91	3			154 00
Bedford Basin and Railway Station Beechmont and North West Arm.	G. K. Ball	100 ya	42	12 do	(to Sept. 30, '88).	130 00 19 00
do do	M. McLeod	4	2		from do	13 50 12 50
Belmont and Debert Station	C. McDermond.	15 r. t.	2	12 do		104 00
Belmont and Railway Station Berwick and Buckley's	S. C. Parker	201 1 2	$\frac{12}{2}$			120 00
Berwick and Morristown	E. Nichols	14 r. t.	î			110 00 40 00
Berwick and Railway Station	E. C. Foster	3	; 6	12 do		50 00
Berwick Ry. Station & Harborville	G. Collins	113				100 00
Berwick Ry. Station and Somerset. Big Intervale, Margaree and Mar-	G. W. Kinsman.	23	4	12 do		70 00
garee Forks	D. Campbell	17	3	12 do		175 00
garee Forks Big Island and Merigomishe. Big Lorraine and Sydney.	D. Cameron	16	2			77 50
Big Lorraine and Sydney	R. Martin	31	3 & 1			300 00
Big Marsh and Maryvale Big Pond and Rear Ben Eoin	A Gillis	$\frac{3}{6}$	1			16 00
Big Pond and Salem Road	H. D. Munro	12	$\frac{1}{2}$	1		25 00 68 00
Big Port LeBear and Sable River.	G. Harding		1	12 do		90 00
Big Tracadie and Mattie	E. Coty	8	1			40 00
Big Tracadie and Railway Station. Birchtown and Churchover	J. J. Gregory	100 ya	12 1	12 do	(to Dec. 31, '88)	40 00
Birchtown and Clyde River	F. G. Nicoll	29	3		from do	18 00 100 00
Bishopville and Hantsport	R. E. Bishop	6	2	12 do		80 00
Black Rock and Parrsboro'	M. Phinney	6	1	12 do		42 00
Blanchard Road and New Glasgow Blanche and Cape Negro		14	$\frac{2}{2}$	12 do 9 do	(to Dec. 31, '88).	160 00 30 00
do do	M. Slate		$\frac{2}{2}$	3 do	from do	12 50
Blandford and Hubbard's Cove	J. Zink :	17	3	3 do	(to June 30, '88)	70 00
do do Blandford and Tancook Island	W. A. Mitchell.	17	$\frac{3}{1}$	9 do 12 do	from do	202 50
Blomidon and Canning		71	6			38 00 199 04
Blomidon and Lower Blomidon	A. Kennedy	$2\frac{?}{2}$	2	12 do		25 00
Bloomfield and Main Post Road	H. R. Jones	_ §	12	12 do		25 00
Blue Rock and Lunenburg do do	do	5 5	$egin{array}{c} 1 \\ 2 \end{array}$	2 do 4 do	(to May 31, '88). (to Sept. 30, '88).	6 66 9e ee
do do	do	5	ĩ		from do	26 66 20 00
Boom and Lower Washabuck	H. Campbell		2	12 do		298 00
Boom and WhycocomaghBoulardarie and Little Bras d'Or	H. McDougall	15 20	$\begin{smallmatrix}&&1\\3&\&&2\end{smallmatrix}$	12 do 12 do		51 00
Boulardarie and Point Clear				12 do		289 00 76 36
Boylston and Milford Haven Bridge	J. R. Atwater	3	12	10 do	(from June 1, '88)	83 33
Boylston and Pirate Harbor	A. Hull	50 r. t.		12 do		395 00
Brazil Lake and Railway Station Brenton and South Ohio	I. Crosby	4		12 do 12 do		20 00
Bridgetown and Dalhousie West	L. A. Dickie	28 r. t.	ì	6 do	(from Oct. 1, '88)	20 00 45 00
Bridgetown and Grenville Ferry	B. Reed	14	3	3 do	(to June 30, '88).	48 50
do do Bridgetown and Lawrencetown	J. E. Reed	14	3		from do	145 50
Bridgetown and Middletown		17		12 do 12 do	************	$\begin{array}{c} 75 \ 00 \\ 147 \ 00 \end{array}$
Bridgetown and Parker's Cove				12 do		149 48
Bridgetown and Railway Station	F. Crosskill	1	12	12 do		100 00
Bridgewater and Halifax		91 56		12 do 12 do		4,550 00
Bridgewater and Lawrencetown Bridgewater and Mill Village	F. Baddos	37		12 do 12 do		396 00 470 00
Bridgewater and New Canada	W. T. Cronin		1	12 do		70 00
Bridgewater and Pleasant River	J. Whitman	10		12 do		239 00
Bridgewater and Shelburne Brighton and Railway Station		89		12 do 12 do	• • • • • • • • • • • • • • • • • • • •	4,840 40
Briley's Brook and Railway Station.			6		• • • • • • • • • • • • • • • • • • • •	150 00 40 00
	74					20 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount	·•
							\$ c	ets.
Brookfield and Forest Glen Brookfield and Pleasant River	W. S. Hamilton.	13 r.t. 8				ths	65 (
Brookfield and Railway Station	J. Graham						116 C 120 C	
Brookfield and Upper Stewiacke	J. J. Brenton	18		12	do		524 7	72
Brookland and Salt Springs Brooklyn and Yarmouth	W. Gray	3 4					24 (40 (
Brown's Brook and Halfway River					uo		40 (<i>J</i> U
Station	S. S. Brown	4 51	1				40 (
Brown's Mountain and Marshy Hope Brulé and Denmark Road	J. W. McLeod.	32	3	11	do	(from May 1, '88)	25 (45 8	
Brulé and Forbes	J. Forbes	2	1	12	do		30 (00
Buckfield and Main Post Road Buckley's and Kentville	M. Wynet	1 34½	$\frac{1}{5}$	3	do	(from Feb. 1, '89) (to June 30, '88).	1 6 125 (
do do	E. H. Fuller	$34\frac{1}{2}$	5	9	do	from do .	313 5	
do do Burlington and Victoria Harbor	W. H. Clem	16 r.t.	1			(to Sept. 30, '88).	18 8	
do do Burntcoat and Noël	A. B. Hall L. A. O'Brien	10 F. 6.	$\frac{1}{3}$	$\frac{6}{12}$	do	from do .	19 7 52 6	
Cain's Mountain and McKinnon's	1	_			_			
HarborCaledonia Corners and Malaga Gold	D. McKenzie	3	1	12	do	• • • • • • • • • • • • • • • • • • • •	20 (00
Mines	H.J. McClelland	9	3	3	do	(from Jan. 1, '89)	40 (00
Caledonia Corner and West Cale-		i	3	10	_		05.4	^^
donia		3	3	12	do	******	85 (UU
Mines	M. Chivers	5	3	12	do		75 (00
Caledonia, St. Marys, and Upper	D. M. Camaron	6	1	6	do	(to Sept. 30, '88).	16 (ഹ
CaledoniaCambridge Station and Condon	ı.l		1 -		uo	(10 Sept. 30, 30).	10 (w
Settlement	J. Caldwell	10½r.t.	1	12	do		45 (00
Cambridge Station and Railway Station	A Neily	50 vds	12	12	do		26 (00
Camden and Truro	E. Logan	9	2	$\tilde{12}$			80	
Cameron Settlement and Pictou Road	D. M. Camaran	99 - +	2&1	e	do	/from Oct 1 '99\	44	۲۸
Canaan and Kentville	A. Bishop	6	6	6 9	do	(from Oct. 1, '88) (to Dec. 31, '88).	123	
do	J. B. DeWolfe	6	6	3	do	from do .	43	25
Canaan and Tusket	A. Hurlburt	26 r.t. 91	1 2	$\begin{array}{c} 12 \\ 12 \end{array}$			70 67	
Canard and Lower Canard	E. H. Lockwood	2~	12	12	do		125	
Cannes and River Bourgeoise	C. Sampson	22	3 6	$\begin{array}{c} 12 \\ 12 \end{array}$			54	
Canning and Kentville	W. West	5	6	12			280 150	
Canning and MedfordCanning and North Medford	B. Weaver	4	1	12			20	00
Canning and Port William Station	J. L. Bishop	7 16	6 3	$^{12}_{12}$			247 176	
Canning and Scott's Bay Canoe Lake and Gaberouse	A. Munro	4	1	12	do		20	
Canso and Guysboro	G. W. Scott	31 34	6 6	6	do	(to Sept. 30, '88). from do .		
Cape George and Georgeville	L. McIsaac	20 r.t.	1	12		nom do .	597 40	
Cape Le Ronde and Rocky Bay	C. Doyle	3	2	12	do		30	
Cape Negro Island and North East Harbor	J R King	3	2	12	do		55	00
Cape North and Dingwall	J. McPherson.	41		12	do		38	
Cape Sable Island and Clarke's		20 r t	a	12	do		200	Δ0
Harbor		201.6.	"	12	do	•••••	392	w
Musquodoboit	A. Burnett	8	3	12	do		156	
Carroll's Corner and Elmsdale Catalone and Catalone Gut	J. Carroll	191		12 12	do		64 24	
Catalone and Little Lorraine	H. McIntyre	122	3	12	do		149	
Catalone and New Boston	J. McDonald	. 4	2	12	do		29	00
Centreville and Hall's Harbor Chance Harbor and Pictou Landing.	D. Cameron	18 r.t.	$\begin{vmatrix} 1 \\ 1 \end{vmatrix}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		110	
Chapman Settlement and Head of	f	1	1 .	1	_		1	
Amherst	J. Greeno	5	1	12	do		25	00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ cts
Chebogue Point and Yarmouth Chelsea and Pleasant River	W. Cain	12 r.t.	3 1	12 months	117 00
Chester and Kentville	J. L. Bishop	46	2	12 do	40 00 650 00
Chester and Windsor	J. Keizer	35	2	12 do	370 00
Cheverie and Kennetcook	W. Sanford	8 17	1 6	12 do	38 00
Cheverie and Newportdo	R. M. Wilcox	17	6	6 do (to Sept. 30, '88). 6 do from do	170 00 257 50
Cheverie and Walton	J. W. Morris	12	3	9 do (to Dec. 31, '88).	116 25
do	R. Pratt	12 31	3	3 do from do .	43 75
Chignecto and Maccan	M. B. Harrison.	7	1	12 do	140 00 28 00
Chipman's Brook and Lakeville	C. N. Porter		2	12 do	80 00
Christmas Island and East Bay	J. McAdam	29	3	12 do	387 92
Churchville and Mountville Churchville and New Glasgow	J. Urquhart	3 6	$\frac{1}{3}$	12 do	20 00 74 00
Claremont and River Philip	M. Chapman	3	2	12 do	29 00
Clark's Harbor and The Hawk	R. W. Stephens.	31/2	6	9 do (from July 1, '88)	43 50
Clark's Road and Louisburg	A. McLean	44	1 3	12 do	39 00 58 00
Dementsford and Clementsvale Doverdale and Middle Stewiacke	W. W. Winton.	7	2	12 do	60 00
lyde River and Gunning Cove	J. K. Hogg	21	3	9 do (to Dec. 31, '88).	176 40
llyde River and Upper Clyde River	R. Sutherland	25	1	12 do	91 00
logmogun River and Kennetcook. Coldbrook Station and Ry Station.	J. Reynolds	5 60 vde	1 12	12 do	16 00 28 00
Coldstream and Gay's River	C. Gav	5	1	12 do	30 00
Collegeville and Lochaber	T. J. Sears	1 1 2	3	12 do	50 00
Comeauville and Railway Station	A. P. Theriau	$\frac{2}{2}$	12 3	12 do	140 00
Concession and Railway Station Conquerall Bank and Conquerall		2	3	12 do	50 00
Mills		5	1	12 do	40 00
Corberrie and Weymouth Bridge	A. Melanson	14	2	12 do	136 00
low Bay and Mira Gut	J. Martell	20 r. t. 26 1	1 6	12 do 12 do	75 00
Cow Bay and Sydney	R. Martin	3	2	12 do	$\begin{array}{c} 400 \ 00 \\ 25 \ 00 \end{array}$
Cranton Section and North East					20 00
Branch Margaree		$2\frac{1}{2}$	3	12 do	30 00
Cross Roads Country Harbor and Goshen	J. G. Sinclair	10	1	12 do	35 48
Cross Roads Country Harbor and	or G. Billolan			40	90 40
Guysboro'	E. H. Carritt	24	3	9 do (to Dec. 31, '88).	285 00
Cross Roads Ohio and Ireland Cross Roads Ohio and James River		5	1	6 do (from Oct. 1, '88)	13 00
Station	C. J. McLean	9	2	8 do (to Nov. 30, '88).	52 99
do do	H.A. McDougall	10	6	4 do from do	98 66
rouse Town and Petite Rivière	O 11:14	9	1	10 4-	80.00
Bridge	C. E. Turnbull	17 r. t.	i	12 do	20 00 47 00
Cummings' Mountain and Sunnybrae	D. McIntosh	3	1	12 do	20 00
	11 34 17	7.1		10 1	
Dalhousie Settlement and Durham. Dartmouth and Halifax	H. McKay	11	19	12 do	$\begin{array}{c} 73 \ 00 \\ 112 \ 76 \end{array}$
Dartmouth and Montague Gold		_	-	12 00	112 (0
Mines	F. W. Cooper	7	3	12 do	120 00
Dartmouth and South East Passage	J. A. Shiers	18 " 6	1	12 do	52 00
Dartmouth and West Chezzetcook.	G. Hamilton	36	6	12 do	150 00 779 00
Dean and Shubenacadie,	T. Cox	36	6	6 do from do .	550 00
Debert Station and Folly Mountain	R. English	17%		12 do	285 36
Debert Station and Masstown	C. G. Fraser	12 12	3	12 do	62 00
Delop's Cove and Granville Ferry Dennistown and Judique	A. Gillis	$\frac{12}{7\frac{1}{2}}$		12 do	60 00 30 00
Descouse and Lennox Ferry	N. McDonald	3	6	12 do	167 00
Jeggonga and Rocky Ray	do	3	2	12 do	30 00
do do	C. Doyle	3	2	1 year, 10 months (to Mar.	90.00
*	76	1	i	31, '88—Special service)	20 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amou	nt.
							*	cts.
Devon and Goffs. Digby and Railway Station	T. Cox	51 200 vd	$1 \\ 12$	12 12	mon	ths		00
Digby and Thorneville	H. Sederquist	. 8	2	12				00
Digby and Westport Digby Wharf and Railway Station.	G. &. E. Stailing	200 vd	6	$\begin{array}{c} 12 \\ 12 \end{array}$			1,199	00
Doherty Creek and Street's Ridge.	T. Wilkinson	10	3	12	do		119	00
Dover East and Peggy's Cove Dufferin Mines and Salmon River.	A. Gallagher	31	2 3	$\frac{12}{12}$				00
Dunmaglass and McArra's Brook	A. McGillivray.	3	$\frac{3}{2}$	12	do		50	00
East Bay and McAdam's Lake	J. McDonald	6 1	2	1 11		(to Apr. 30, '88). from do		25
East Bay and Sydney Mines East Chezzetcook and Head of Chez		19	6	12	do		696	00
zetcookEastern Harbor and Little River	•	1	1	12	do		25	00
Cheticamp Eastern Harbor and Pleasant Bay			$\frac{2}{1}$	7 12	do	from Sept. 1, '88.		58
Eastern Harbor and Port Hastings.	W. P. Fynn	101	6	6	do do	(to Sept. 30, '88).	3,550	00
do do East Jeddore and Jeddore Oyster	H. A. Archibald	101	6	6	do	from do	3,550	00
Ponds	D. Mitchell	31/2	2	12	do		72	00
ampton	E. Brown	6		12				00
East Margaree and Post Road East Mines Station and Folly Vil-		2	6	12	do	• • • • • • • • • • • • • • • • • • • •	65	00
lage	D. L. Urquhart.		12	12	do			00
East Mines Station and Ry. Station. East Mountain and Valley Station.	G. E. Johnson	20 yas	$\frac{6}{2}$	12 9	do do	(from July 1, '88)		00
East River, St. Mary's and Green's Brook	M. Green	51	1	12	do			
East River, Sheet Harbor and West	;	-		1		• • • • • • • • • • • • • • • • • • • •		00
River, Sheet Harbor	J. H. Dimoek	4	3	4	do	15 days (to Aug. 10, 1888).		50
East Side Pubnico Harbor and		101		10		· · · · i		
Forbes' Point East Side Ragged Islands and	J. McComisky	101	3	12	do	• • • • • • • • • • • • • • • • • • • •	183	00
Lewis Head	G. Craig	6	1	6	do	15 days (to Oct. 15, 1888).	32	50
East Side Ragged Islands and				ير ا				
Wall's Corner East Southampton and Ry. Station.	W. P. Hupman. W. F. Lewis	$\frac{3}{1}$	$\frac{2}{12}$	$\frac{5}{12}$	do do	16 days from do		32
Eastville and Upper Stewiacke	S. Ellis	10	6	12	do	• • • • • • • • • • • • • • • • • • • •		00
Economy Point and Main Post	J. F. Vance	1	6	12			80	00
Eel Creek and Linden			$\begin{vmatrix} 2\\3 \end{vmatrix}$	$\frac{12}{12}$	do			00
Ellershouse and Newport	D. Harvey	6	2	3	do	(to June 30, '88).	21	. 25
do do Ellershouse and Railway Station	W. Woodroff	6 50 vds	$\begin{array}{c} 2 \\ 24 \end{array}$	9		from do (to Dec. 31, '88).		00
do do	J. McDonald	150 vds	24	3	do	from do		50
Elmsdale and Nine Mile River Elmsdale and Railway Station	J. Urquhart	80 vds	$egin{array}{c} 1 \\ 12 \end{array}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do do			80
Emerald and Main Post Road	P. Tompkins	31	1	12	do		20	00
Enfield and Oldhamdo do do	J. Mulally A. Meagher	3	6	3	do do	(to June 30, '88).	13	75 25
Enfield and Railway Station	H. F. Donaldson	20 yds	12	12	do	from do	50	00
Enfield and Renfrew Englishtown and Ingonishe	J. McKenzie M. Morrison	34	$\frac{1}{2}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do			00
Erinville and Roman's Valley	P. E. Farrell	7	1	12	do		20	80
Eureka and Railway Station Fairview Station and Rockinghan	ı.i	ł	12	12	do	•••••	50	00
Railway Station Fairview Station and Rockingham	J. McDonald	Į.	3	3	do	(to June 30, '88).	16	25
Railway Station	E. McDonald	1 2	3	9		from do		75
Falkland and Herring Cove	7. Hayes	7 3 7	' 2	12	do		45	00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
							* cts
Falkland Ridge and Springfield	D. D. Starratt	5	1	12	mon	ths	29 48
Falmouth Station and Ry. Station. Falmouth Station and Upper Fal-	W. Armstrong			12	do		47 00
mouth	L. Aker	10 r. t.	3	12	do	,	116 00
False Bay Beach and South Head Cow Bay	H. Spencer	7	1	5	do	(to Aug. 31, '88).	18 75
do do .	do		1	7	do	from do	33 74
Farmington and West Branch River Philip	M. Chapman		3	12	do		150 00
Fauxburg and Lunenburg Fifteen Mile Stream and Trafalgar.			$\begin{array}{c} 1 \\ 1 \end{array}$	12 6	do	(to Sept. 30, '88).	65 00 52 00
do do	J. Nelson	16	i	6	do	from do	71 50
Fletcher's Station and Wellington Station		3	6	12	do		75 00
Folly Lake and Railway Station	N. McPherson	100yds	12	12	do		40 00
Fort Lawrence and Railway Station Fort Lawrence and Upper Fort	;	1 -	12	12	do		100 00
Lawrence	M. Chapman	$\frac{2\frac{1}{2}}{5\frac{1}{3}}$	3 1	$\frac{12}{12}$	do do		60 00
Fouchie and Gaberouse	W. McDonald	12	3	12	do		25 00 $210 00$
Four Mile Brook and West River	J. Morrison	$\frac{30}{5\frac{1}{3}}$	$\frac{3}{2}$	$\frac{12}{12}$	do		299 00 24 00
Fox Harbor and Pugwash	F. Tuttle	115	3	6	do	(to Sept. 30, '88).	63 74
do do Framboise and North Framboise	S. P. Borden A. McQueen	$\frac{11\frac{1}{2}}{5}$	$\frac{3}{1}$	6 12	do	from do	75 00 30 00
Fraser's Grant and Heatherton	A. McDougall	5	1	12	do		46 00
French River and McGrath's Mountain		6	1	12	do		28 00
French Vale and North-West Arm. Gaberouse and Gaberouse Barachois	B. Gouthro	7 113	$\frac{1}{2}$	12 4	do do	(from Dec. 1, '88)	27 00 4 00
Gaberouse and Gull Cove	A. Hardy	4	1	12	do		20 00
Gaspereaux and Gaspereaux (circular	•	26	3	12	do		370 36
route)	R. Westcott	19 r. t.	1	12	do		63 00
Gaspereaux and Newtonville	do W. A. Benjamin	4 21/3	$\begin{array}{c c} 1 \\ 3 \end{array}$	12 12	do do		20 00 51 00
do do Georges River and Little Bras d'Or	E. A. Davison	$2\frac{1}{2}$	$\frac{3}{1}$	$\frac{2}{12}$	do do	(from Feb. 1, '89)	7 50
Georgeville and Glebe Road	M. McDougall	15 r.t.	1	12	do		32 00 55 00
Gilbert Cove and Railway Station. Gillander's Mountain and Middle	L. N. Thibeau	. 34	12	12	do	• • • • • • • • • • • • • • • • • • • •	144 00
River	C. McLennan		1	12			20 00
Glen Bard and Railway Station Glendale and Mabou			$\frac{2}{2}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		30 00 393 00
Glendale and River Inhabitants	3		9	12	do		
Bridge	W. McDonald	14	3 3	12	do		230 00 40 00
Glenelg and Upper Cross Roads St. Marys	J. McGroth	4	3	12	do		42 48
Glenelg and Waternish	K. McKenzie	4	1	12	do		20 00
Glengarry and Port Hood	S. Campbell	8	1	12	do	•••••	48 72
Vallev	A. McKav	27 r.t.	3	12	do		235 44
Glengarry Station and Ry. Station. Glen Margaret and Head of St.	D. Granam	100ya	12	12	do	• • • • • • • • • • • • • • • • • • • •	50 00
Margaret's BayGlen Margaret's and Peggy's Cove	G. Dauphin	12	6	12 6	do	(to Sept. 30, '88).	340 00
do do	J. Miller, sr	9	6	6	do	from do	101 24 104 00
Glenshee and Merigomishe	D. Campbell	9	1 2	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		75 00 49 00
Goldenville and Sherbrooke	M. McGrath	$2\frac{1}{2}$	6	12	do		135 00
Gore and Maitland	M. Tucker J. Trider	20 27	3	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		375 00 350 00
Gore and Mount Uniacke	J. Murphy	41 r.t.	3	9	do	(to Dec. 31, '88).	222 75
do	J. M. Hennesy .		1 3	1 0	uo	from do	80 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ cts
Gore and Shubenacadie (via Blois Rd) Gore and Shubenacadie (via North		-		l	onths	119 00
Salem)	$\mathbf{A}. \ \mathbf{Manson} \ \dots$	42 r.t.	1		lo (to June 30, '88).	127 00 10 00
do do	i do	7	2 3	9 (o from do	60 00
Goshen and St. AndrewsGrand Anse and Grandique Ferry	A. McDonald	3	6	9 0	do (to Dec. 31, '88).	147 96 72 75
do do Grandique Ferry and Lennox Ferry	N. McDonald	3	6	3 0	lo from do	23 50 600 00
Grandique Ferry and West Arichat	N. McDonald	10	6	6 0	lo (to Sept. 30, '88).	245 00
do do Grand Lake Station and Ry. Station	A. McDonald G. Nichols	100 vd	$\frac{6}{12}$		lo from do	245 00 20 00
Grand Narrows and Grand Narrows		1	,		_	
Grand Pré and Long Island	A. Fullerton	21	$\frac{1}{3}$		lo lo	25 00 80 00
Grand Pré and Railway Station Grand Pré and Wellbrook	A. Borden	$2^{\frac{1}{2}}$	12		lo	100 00 20 00
Grand River and St. Peters	A. Morrison	17	6	12 c	do	600 00
Granton and Westville	W. A. Piggott	7 17	6		do do	99 00 367 08
Great Village and Londonderry Station		İ	12		_	
Great Village and Lower Five		i	12		do	300 00
IslandsGreen Cove and Ingonishe	J. W. Davison	$\frac{29\frac{1}{2}}{6}$	6 2		do (to Dec. 31, '88).	620 00 37 50
_ do do	M. Timmons	6	2	3 0	do from do	12 00
Greenfale and Malignant Cove Greenfield and Middlefield			$\frac{1}{2}$		do (to June 30, '88). do do	5 00 12 00
do do Greenfield and Valley Station	J. E. Tibert	5	2	9 0	do from do	36 00
Green Hill and Westville	R. McCaul	6	2 3	9 6	do (from July 1, '88)	52 48 84 00
Green's Creek and Lower Stewiacke Greenville and Westchester	A. Bigelow	30 r.t.	$\frac{1}{2}$		dodo	80 00 110 00
Greenville Station and Head of	1		_		_	
Wallace Bay, North Side Greenville Station and North Green-	J. Dotten	. 17	3	12	do	188 00
villeGreenville Station and Ry. Station	G. Rushton	5	1		do	26 00
Greenville Station and Wallace	B. Betts	17	6	12	do do	60 00 280 00
Grosses Coques and Ry. Station	A. C. Melancon.	1 4	12 3		do do	240 00 100 00
Grosvenor and Ry. StationGuysboro' and Heatherton	D. D. Harrington	26	6		do	1,378 00
Guysboro', Tor Bay and New Har- bor	J. Tory	20&7	4&2	12	do	390 50
Guysboro' and Salmon River Lake Settlement			3	3 (46 25
Hainsville and North Range Corner	W. H. Hains	2	2	12	do (from Jan. 1, '89) do	31 00
Half Island Cove and Port Felix do do	A. F. Ehler	26r.t. 28r.t.	$\frac{2}{2}$	6 6	do (to Sept. 30, '88). do (to Dec. 31, '88).	57 50 32 06
_ do do	W. Digdon	28r.t.	3		do from do	41 25
Halfway River Station and Harrison Settlement	W. Harrison	7	2	12	do	82 48
Halfway River Station and Ry Sta-	I Davison		10	10		co oo
Halifax and Lower Prospect	G. H. Slaughn	-1	ĺ	12 (do	60 00
Halifax and Prospect	white	$22\frac{1}{2}$	$\frac{1}{2}$		do (to Sept. 30, '88).	84 00 95 00
do	J. Walsh	21	2	6	do from do	62 50
Halifax and Ry. Station Halifax and Sambro Halifax and West River Sheet Har-	P. Scallion	212	As req		dodo	1,000 00 165 00
bor. Halifax Post Office and Wharf	H. W. Quinn	80			doon 1888-89	1,387 60 342 00
do do `	A, Conlon	. 2	Asrea	Seas	on 1888	82 00
do do	Sundry persons.		٠	Spec	ial strips	2 50

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
•							\$ et
Hansford and Streets Ridge						hs	200 00
Hansford and West Hansford Hantsport and Lockhartville		$\frac{1\frac{1}{2}}{3}$	$\frac{2}{3}$	$\frac{12}{12}$			25 00 74 00
Hantsport and Ry. Station	S. H. Mitchner	1		12			68 00
Harbor au Bouche and Ry. Station. Harmony Mills and Westfield	V. Levangie	$\frac{1}{2}^6$		12	do		78 00
Head of Indian Harbor Lake and	R. Johnson	4	1	12	do		25 00
Sherbrooke	M. McGrath		3	12	do	,	224 6
Head of Jeddore and West Jeddore do	A. W. Day J. A. Blakeney	6	$\frac{2}{2}$	6		(to Sept. 30, '88). from do	37 50 37 50
Head of River Hébert and River			2	0	uo	nom do	01 0
Hébert		5	3	12	do	·	120 0
Head of South River Lake and Salmon River Lake Settlement		15	1	12	do		37 80
Head of Tatamagouche Bay and	1	1	_				
Tatamagouche	W. Dobson	5	3	$\frac{12}{12}$	do		117 0 140 0
Heatherton and Summerside	D. Boudroit	3	1	12			27 7
Hebron and Ry. Station	C. Cahan	1 4	12	12			50 0
Hectanooga and Ry Station Hedgeville and Main Post Road	H. Holmes	ooyas 1	$\frac{12}{2}$	12 12			40 0 21 0
Hemford and Pleasant River	J. Venot	7	1	12	do		30 0
Holland Harbor and Port Hillford. Hopewell and Melrose	G. Flick	3	3	$\frac{12}{12}$			40 0 768 9
Hopewell and Ry. Station	J. Gunn	321	1 40	12			85 0
Hopewell and Trafalgar	J. McDonald.	18	3	12	do		140 0
Horton Landing and Ry. Station Hubbard's Cove and Mill Cove			12	12		service	$\begin{array}{c} 75 \ 0 \\ 2 \ 5 \end{array}$
Indian Point and Mahone Bay			i	12 1	mon'	ths	30 0
Iron Ore and Sunnybrae	J. McDonald	4	1	12	do	• • • • • • • • • • • • • • • • • • • •	25 0
Isaac's Harbor and Isaac's Harbor East Side	S McMillan	4	3	12	do		26 4
Isaac's Harbor and Melrose	M. H. Grant	28	3	12	do		$2\overline{28} \ 0$
Isaac's Harbor East Side and New Harbor		12		12	do		74 8
Jackson's and West Branch River		12	1	12	ao		140
_ Philip	M. Chapman	61	3	12	do		62 8
James River and James River Sta- tion	J Chisholm	3	2	12	do		50 0
James River Station and Railway	J. McDonald	100y's	12	12	do		60 0
Station	1	Ì		10	_ اد		0# 0
Jauvrin's Harbor and West Arichat Johnson's Crossing and Ry. Station			$\frac{2}{12}$	$\frac{12}{12}$	do		85 0 50 0
Jordan Bay and Shelburne	A. Morrison				do		138 0
Judique and Upper South-West		11	1	12	do		50 0
Kempt and New Grafton	L. Kathrens	31		12	do	**************	28 0
Kempt Head and Upper Kempt		1			٦.	/f T. 1 200)	
Head Kennetcook Corner and Noël	J. A. O'Brien.	20 r. t.	$\frac{1}{2}$	$\frac{3}{12}$	do	(from Jan. 1, '89)	$\begin{array}{c} 6 \ 2 \\ 72 \ 0 \end{array}$
Kennington Cove and Louisburg	J. McLean	. 6	1		do		40 0
Kerrowgare and Sunnybrae			9	12	do		46 0
Kentville and Railway Station	J. E. Eaton	200 v's	$\frac{2}{24}$	12	do		150 0
Kewstoke and Whycocomagh	A. McQuien	7.	1	12	do		35 0
Kingston Station and Melvern Sq. Kingston Station and Ry. Station	W Gates	31 r. t	6	$\frac{12}{12}$	do		$\frac{322}{98} \frac{6}{0}$
Kingston Station and Ry. Station.	A.C. Vanbuskirl	100 y	12	12	do		36 0
Kingston Station and Rhodes	T. Walker & J		1	10	. ا ر		40.0
Kingston Station and Tremont	Randall	14 r. t	$\begin{array}{c c} 2 \\ 2 \end{array}$	12 12	do do		$egin{pmatrix} 40 & 0 \\ 125 & 0 \end{bmatrix}$
Kolbeck and Oxford				12	фo		52 0
T TT T1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I. A. Simiti	1					
LaHave Island and West Dublin	J. Remby	. 5	1	12	do	••••••••••	85 0
LaHave Island and West Dublin. Lake Ainslie South Side and Lewis Mountain	J. Remby	. 5		12 12	do	•	16 0

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
Lake Annis and Railway Station. Lakelands and Railway Station. Lake Ramsey and New Ross. Lakevale and West Lakevale. Lanesville and Lower Stewiacke. Lapland and Newcomb Larry's River and Port Felix Lawrencetown and Mineville Lawrencetown and Mount Hanly,&c Lawrencetown and Railway Station Lawrencetown and Torbrooke. Lawrencetown and West Inglisville	J. E. Brown G. Ross A.J. McGillivray R. J. Pollock S. Demon C. DeYoung J. Conrad J. Balcom H. T. James J Balcom	5 3		12 de 12 de 12 de 12 de 12 de 12 de 12 de 12 de	(to Dec. 31, '88)	\$ cts. 20 00 60 00 40 00 48 00 33 75 51 00 100 00 24 00 110 00 74 00 75 00 105 00 30 00
Lawrencetown and West Lawrence- town Leamington and Spring Hill Mines. Leitche's Creek and Upper Leitche's		4	1	12 do		20 00 17 48
Creek Lewis Bay and Marion Bridge	M. Beaton P. McDougald D. J. McKeagan		$\begin{array}{c}1\\3\\3\\2\end{array}$	12 do 3 do 9 do 6 do	to June 30, '88). from do . do 15 days to Oct. 15,	25 00 47 25 173 25
Lingan and Sydney Linwood and Railway Station Little Bass River and Pleasant Hills Little Bras d'Or and Long Island	R. R. Elliot	35 r. t. 2 5	6 6 2	12 do 12 do 12 do		54 16 299 00 84 58 45 00
Main Little Bras d'Or and Point Aconi. Little Harbor and New Glasgow Little Harbor and Reidway. Little Judique and Rear Little Ju-	N. O'Handley D. J. Walker P. Grant	6 7 6 4	1 1 3 1	12 do 12 do 12 do 12 do		50 00 50 00 74 00 20 00
dique Little River and Oxford Liverpool and Milton Liverpool and Port Medway Liverpool and Western Head Loch Broom and Railway Station Loch Lomond and Red Islands Loch Lomond and Sterling	H. S. Smith., J. F. Putnam. A. L. West. A. A. Shand. R. McLeod. M. McKenzie. J. Patterson.	4 3 13 7 100 y's 15	1 2 12 3 3 2 2 1	12 de 12 de 12 de	o	20 00 47 00 100 00 360 00 149 00 15 00 98 80 29 00
Loganville and West Branch River John Louisburg and South Louisburg Lourdes and Railway Station Lovat and West River Lower Caledonia, South Side, and	S. Williamson M. McRury A. McDonald J. W. Fraser	2 2 1 5	12	12 de 12 de 12 de 12 de	· · · · · · · · · · · · · · · · · · ·	60 00 50 00 50 00 109 00
Pictou RoadLower Cove and Maccan	H. Chisholm W. Higgins L. McDonald G. H. Lewis J. W. Brodrick	21½r.t. 16 16 6 13 4	2 6 6 2 6 1	10 de	from do	37 50 490 00 104 33 40 00 340 00 19 00
her's Grant	W. McCurdy	$2\frac{1}{2}$	3	12 de	·	39 00
quodoboit HarborLower Onslow and TruroLower River Hebert and MaccanLower River Inhabitants and Port	A. Daggett C. Carter	$\begin{array}{c} 14 \\ 22 \text{ r.t.} \\ 9\frac{1}{2} \end{array}$	3	12 do 12 do 12 do	·	70 00 220 00 141 08
HawkesburyLower Ship Harbor East and Main	A. Blair	13	3	12 do	·	165 00
Post RoadLower South River Station and St.		2	3	9 do	(from July 1, '88)	22 50
AndrewsLower Stewiacke and Ry. StationLower Stewiacke and Ramsay	W.J. Boomer	5 1 5	12))	195 00 72 50 25 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.			Amour	nt.
T (1) 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		_					_	ets.
Lower Stewiacke and Wittenburg do do Lower Wentworth and Wentworth	E. H. McGregor.	8 23 r.t.	2 & 1	3		from do		$\begin{array}{c} 00 \\ 25 \end{array}$
Station	B. Stevens	8	. 3	12	do		69	00
Jeddore	L. Blackenev	3	1	12	do		20	00
Harbor	N. D'Entremont. E. Mason	7 5		12 12	do do		124 40	00 00
North River. McCarthy's and Spry Bay. McPherson and Pinedale Mabou and Mabou Harbor Mouth Mabou and Sight Point Mahone Bay and Northfield do do do Main-à-Dieu and Scatarie Island Maitland and Noël. Maitland and Shubenacadie Malagash Point and Wallace. Malagawatch and River Dennis Malagawatch and West Bay. Malignant Cove and Merigomishe Manganese Minesand Valley Station	A. McCallum P. Flaherty J. McDonald D. McDonald A. McQuarrie A. Lohnes A. C. Zuricker M. McCuish J. Woodworth A. S. Smith A. McLinnis K. McKenzie A. McLeod M. McNeil J. Irving	5 16 16 16 9 12 20 30 r,t.	3 2 2 1 1 1 1 6 6 3 2	11 12 12 12 16 6 12 12 12 12 12 12 12 12 12 12	do do do do do do do do	(from May 1, '88) (from Feb. 1, '89) (to Sept. 30, '88) from do	7 40 28 51 47 49 150 274 800 90 69 205 894	00 00 00 00 48
Margaree Forks and Upper Settlement Middle River	T. Coady. N. McDaniel. R. Woodbury. J. Redgate. D. Lamond. W. Marshall A. McDonald D. Forbes. A. Patriquin N. Bishop. W. McDonald J. W. Dunn. E. E. Sheehan. F. Geddry.	18 18 22 r.t. 14 5 15 100 y's 4 9 20 4 1 5 5 1 4	$\begin{array}{ c c c }\hline & 2 & \\ & 2 & \\ & 3 & \\ & 1 & \\ & 12 & \\ & 3 & \\ & 1 & \\ & 1 & \\ & 6 & \\ & 1 & \\ & 12 & \\ \end{array}$	6 6 12 12 12 12 12 12 12 12 12 12 12 12 12	do do do do do do do do do	(to Sept. 30, '88) . from do	65 65 149 59 33 97 30 32 40 374 38 96	00 00 00 32 00 00 00 00 00
River Gold Mines Middle Musquodoboit and Murchy-	1	14	2	12	do		115	00
ville		5	2	12	do			00
comb Corner	G. McLeod	9		12	do	• • • • • • • • • • • • • • • • • • • •		00
Middleton and Port George	L. McLeod W. H. Nixon do W. Mosher R. G. Anderson. J. Gullivan G. L. Colter G. Ross	4 4½ 13 r.t. 8 8 8		3 9	do do	(to June 30, '88). (to Dec. 31, '88). from do (to June 30, '88) from do	81 39 22 93 60 40	50 75 36 50 75 00 00
Monk's Head and Pomquet Chapel. do do Mooseland and Tangier Morden and Victoria Harbor Moser's River and West River Sheet Harbor	J. M. Prest S. Balcom J. H. Dimock	3 25	2 3 1 1 3	$egin{array}{c} 3 \\ 9 \\ 12 \\ 12 \\ 7 \\ \end{array}$	do do do	(to June 30, '88). from do 16 days, (from Aug., 16, '88)	33 50	50 75 00 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.			Amount.	
							*	cts.
Mountain Road and River John Mount Cusack and Sydney Mount Denison and Ry. Station	H. Cusack M. J. Shaw	3 7 1	2 1 6	12 12 12		ths		00 00 00
Mount Thom Settlement and Salt Springs.	A. McKay	6	2	12	do		70	00
Mount Uniacke and Oland	W. Allen J. Patriquin C. G. Oland E. Pentz	22 r. t.	3 3 2 2	6 6 6 6	do do	(to Sept. 30, '88). from do (to Sept. 30, '88). from do	30 60	00 00 00 00
Mount Uniacke and Ry. Station Musquodoboit Harbor and Petpes-	J. McLaren	135 y's		12	do		•	00
wick Harbor. Musquodoboit Harbor and Pleasant Point.	-		3	12	do			00
Nappan Station and Ry. Station New Campbellton and New Harris. New Campbellton and North Sydney	A. C. Barry D. Morrison	75yds.		12 12 12 12				00 00
New Cumberland and West LaHave Ferry New Edinburgh and Weymouth	H Corkum	9½ r. t.	1	12	do		38	48
Bridge. New Glasgow and Pictou Landing. New Glasgow and Railway Station. New Glasgow and Thorburn	J. W. Church do F. Love	9 5	6	$^{12}_{\ 9}_{\ 12}_{\ 12}$	do do do	(to Dec. 31, '88)	55 234 437 200	48
New Glasgow and Trenton	A. M. Fraser J. W. Church		6	9 3 12	do	(to Dec. 31, '88). from do	90	75 00
Newport and Newport Landing Newport and Newport Station Newport and South Raydon	J. Weir W. Gibson J. W. Hennesey.	17 r. t. 5 24	6 1	$\frac{12}{12}$ $\frac{12}{12}$	do do		225 190 73	00 00 00
Newport and Upper Newport Newport and Walton Newport Station and Ry. Station New Ross and Stoddart's	E. A. Bancroft. L. H. Sweet	10½ 20 12yds.	$\begin{bmatrix} 1\\6\\24\\2 \end{bmatrix}$	12 12 12 12	do		778	00
New Ross and Vaughan's. Newville and Railway Station do do Noël and Shubenseadie	C. W. Young D. P. Young J. W. Singer	20yds. 20yds. 32	$\begin{array}{c c} 2 \\ 12 \\ 12 \\ 1 \end{array}$	12 9 3 12		(to Dec. 31, '88) from do	139 7	50 50
North End Lochaber and West Side	J. Murray	14	6	12	do		284	00
North Range Corner and Ry. Station North Range Corner and South Range	C. B. McNeill	3 3	$\begin{bmatrix} & 3 \\ 12 \\ & 2 \end{bmatrix}$	$12 \\ 12 \\ 12$	do do		60	00
North River Bridge and South Gut St. Ann's	A. G. Morrison	14 3	2 3	6	_	(from Oct. 1, '88).	54	08
North Side Grand Narrows and South Side Grand Narrows North Sydney and Port Hastings North West Arm and Rear Ball's	do do	87	6	12 12	do do		400 5,005	00 04
Norwood and Railway Station Nyanza and West Side Middle	D. A. Saunders.	100 y's		12 12	do do		30	00
Oakfield and Railway Stationdo do do	J. Ferguson H. D. McLeod	16r t	. 19	$egin{array}{c} 9 \\ 6 \\ 6 \\ 12 \\ \end{array}$	do	(from July 1, '88) (to Sept. 30, '88). from do .	20 20	25 00 00 00
Old Bridgeport Mines and Main	S. Deyarmond	74	2	12	do		110	00
Post RoadOnslow Station and Railway Station	A. McCurdy	. 1	6 12	$\begin{array}{c} 12 \\ 12 \end{array}$				00

Detail of all payments for Mail Transportation in Nova Scotia, &c.—Con'd.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					\$ ets.
Outer Island Port Hood and Port			1		Ψ Cus.
Ovford and Railway Station	W. D. Smith	. 3	3	12 months	30 00
Oxford and Railway StationOxford and Rockly	J. A. Fraser	$\begin{array}{c c} . & 3\frac{1}{2} \\ . & 11 \end{array}$	12	12 do	400 00 11 25
αο αο	A. Cameron	. 11	Î	3 do do	10 00
do do Paradise Lane and Railway Station	W. E. Burnside	. 10	1	9 do from do	67 50
Paradise Lane and Roxbury	W. Gormley	7	1 1	12 do	60 00 35 00
Parrsboro' and Partridge Island	J W Janka	. 2	6	12 do	100 00
Parrsboro and Railway Station	do	1 45		12 do	50 00
Parrsboro and Three Sisters Parrsboro and Two Islands	T. W. McKay	$\frac{45}{64}$	$\frac{6}{2}$	12 do	1,166 64 65 00
Pictou and Pictou Island	J. Currio	19	ī	12 do	255 00
Pictou and Pictou Landing. Pictou and Railway Station.	G. J. Christie			3 do (from Jan. 1, '89).	58 75
Pictou and River John	W. Gammon	20	36	12 do	225 00 475 00
do do (via Shore)	D. M. Geldert	29	2	12 do	350 00
Pictou and Truro Pictou and West River Station	W. Gammon	. 50	3	12 do	895 00
do do	do	951	3	4 do (to July 31, '88) 8 do from do	$103 \ 00$ $228 \ 37$
Pictou and Wharf	D. Flynn.	Į		Season 1888-89	27 60
Piedmont Valley and Ry. Station. Pine Tree and Railway Station	J. McDonald	1 1	3	12 months	15 00
Pirate Harbor and Railway Station	P Poorlog	1 I	$\frac{3}{12}$	12 do 12 do	60 00
Pleasant Valley and Rv. Station	L. Craio	11		12 do	80 00 50 00
Fivington and Railway Station	. I. Worner	1 2	12	12 do	140 00
Point Edward and Sydney. Pomquet Chapel and Ry. Station	C. Duong	8 2	$\frac{1}{6}$	12 do 12 do	40 00
Point Acadie and Railway Station	V Thibadaan	0.1		12 do	70 00 150 00
Port Beckerton and Port Hillford Porter's Lake and West Chezzet-	G. S. Tavlor	. 8~	1	12 do	52 00
cook	G E Ormon	3	3	12 do	40.00
Port Hastings and Port Hawkes.		i		12 do	40 00
bury. Port Hastings and Railway Wharf.	A. McDonald	$3\frac{1}{2}$		12 do	220 00
Fort Hastings Railway Wharf and	l .	1	12	12 do	156 00
Port Hawkesbury and Ry. Wharf	A. McDonald	31	Asreq	42 trips	42 00
do do do	do	4	12	12 months	156 00
Port Hawkesbury and Steamer	A. A. Beaton	3	As req	Season 1888do	26 60
Fort Hawkesbury and Sydney	J. Morrison	100		do 12 months	15 00 $5,724 88$
Port Hawkesbury Railway Wharf and Point Tupper.]	-,
Port Hood and Port Hood Island	J Smith	1 11	Asreq	Season 1888	67 80
Port Joli and St. Catherines River	T Dobomboom	$\hat{6}^2$	ī	12 do	24 00· 40 00
Port Matoon and South West Port	C mi / ·		_		
Matoon Port Mulgrave and Ry. Wharf	R Tritos	4	$\begin{array}{c c} & 1 \\ 12 \end{array}$	12 do	25 00
Port Philip and Pugwash	G King	43	3		80 00 60 00
Port Royal and West Arichat Port Williams and Port Williams	A. McDonald	3		12 do	100 00
Station	J. I. Bishon	1	6	12 do	. 50 50
Port Williams and Town Plot	E. Burbidge	$\frac{1}{2\frac{1}{2}}$		12 do	70 56 55 00
Fort Williams Station and Railway		-		40	00 00
Station Port Williams Station and White	F. E. Forsyth	12yds.	24	12 do	62 60
Rock Mills	W. O. Bishop.	41	3	3 do (to June 30, '88).	16 75
Port Williams Station and White	_	-		(== = =================================	16 75
Rock Mills Preston and Main Post Road	J. L. Bishop	41	3	9 do from do	50 25
Princeport and Truro	J. Yuill	16 r. t.	6	12 do	$\begin{array}{c} 60 \ 00 \\ 68 \ 02 \end{array}$
do do	J. D. Nelson	16 r. t.	6	9 do from do	180 00
Pugwash and Thompson's Mills Quinan and Tusket	J. R. Lamy	171		12 do	461 88
Comment toller I used	L. Forter	12	2	12 do	90 00

Detail of all payments for Mail Transportation in Nova Scotia, &c.—Con'd.

		. ≘	of Trips r Week.		
	37	0	定章		
NT (T)	Name	s in	E &	T	
Name of Route.	of	ta e	0	Period.	Amount.
	Contractor.	Distance Miles.	No. o per		
		1	4		
					_
_					\$ cts.
Rear Black River and West Bay	M. Morrison	16 r. t.	1	6 months (to Sept. 30, '88)	19 24
D. dodo	do	4	2	6 do from do	35 00
River Bourgeoise and River Tear	J. Murphy	3	6	12 do	119 00
Riversdale and Weymouth Bridge River Hebert, West Side, and Shulie	D. R. Sabine	10	1 3	12 do 12 do	40 00
River Inhabitants Bridge and West	D. Danu	1.4		12 do	273 00
Bay	P. McFarlane	5	6	12 do	145 00
Bay	J. McLeod	13	6	12 do	400 00
Niver John and Welsford	D. McGillivray.	3	3	5 do (from Nov. 1, '88.)	16 66
River Philip Station and West					
Branch River Philip	M. Chapman		6	12 do	180 00
Riversdale and Railway Station Riversdale and Upper Kemptown	B. A. Wall	13	12	12 months	44 00
Rockingham and South Ohio	I F Allen	$\begin{array}{c} 8\frac{1}{2} \\ 20 \end{array}$	$\frac{2}{3}$	12 do	163 20 225 00
Rockingham Station and Ry. St'n	T Payne		1	12 do	40 00
Roman's Valley and St. Andrews	W. A. McDonald	$15^{\frac{1}{12}}$	3	12 do	177 00
Round Hill and Railway Station.	C. E. Spurr.	1 1		12 do	50 00
Ot. Andrews and Vernal	L. Cameron	5	2	12 do	53 00
ot. Peters and West Bay	A. McDongall	28	3	12 do	285 00
Sable River and Swansburg	W. Herkins	101	3	5 do 17 days (from	
Salem and Yarmouth	A Dain	2	6	Oct. 15, '88)	91 66
Salmon River and Sheet Harbor	A. Dam	2	0	10 do (to Jan. 31, '89)	37 50
Passage	W C Wambold	73	2	12 do	128 56
Salt Springs Station and Rv. Stat'n	J. W. Black	20 vds	$1\overline{2}$	12 do	20 00
Salt Springs Station and Ry. Stat'n Sandford and Yarmouth.	N. L. Trefry	20 r.t.	2	12 do	123 72
Sand River and Shulle	E. J. White	7	2	1 do (to April 30, '88).	9 58
do do		7	3	6 do (to Oct. 31, '88).	82 50
do do	do	13	$\frac{2}{12}$	5 do from do	47 91
Saulnierville and Railway Station. Scotch Village and Woodville.	1. Saumer	10 r t	12	12 do	100 00 45 00
Shad Bay and (White's) Pr'spe't R'd	C. Christian	2	2	3 do 27 dys. (to July	40 00
and Day and (Willies) IT spectre	C. Chi isulan	ļ	-	27, '88)	4 85
do do	do	2	4	8 do 4 dys. (from July	- 00
Shelburne and Upper Ohio	W. G. Swines-		_	28, '88)	20 35
Shelburne and Yarmouth	burg	36 r.t.	1	12 do	78 00
Sherbrooke and West River, Sheet	O. S. Davison	70	6	9 do (to Dec. 31, '88)	$1,425\ 00$
Harbor	J. Cumminger	60	3	12 do	800 00
Ship Harbor Lake and Ship Harbor			1		000 00
Lake (Circular Route)	J. W. Webber	23 r.t.	1	12 do	100 00
Shubenacadie and Railway Station.	A. Kirkpatrick .	100 yd	30	12 do	100 00
Six Mile Brook and West River	J. McKay		2	12 do	30 00
Six Mile Road and Wallace Grant. Skye Mountain and Whycocomagh.	A. C. Nichelson	5 6	$\frac{3}{1}$	12 do 12 do	60 00
Sluice Point and Surette Island	N Surette	2	1	140	30 00 25 00
Sluice Point and Tusket	W. D. Van-	. "	1	12 do	20 00
	Norden	6	1	12 do	51 00
Southampton and Railway Station.	J. Megeny	3	12	12 do	115 00
South Branch and Upper Stewiacke	C. P. McCulloch	19 r.t.	3	12 do	100 00
South Farmington and Ry. Station.	D. E. McGregor	11.	12	12 do	70 00
South Gut, St. Ann's, and Tarbut South Harbor and White Point	A. G. Morrison.	14	$\begin{vmatrix} 2 \\ 2 \end{vmatrix}$	6 do (to Sept. 30, '88).	54 08
South Merland and Tracadie	M. Dolorov	9 8	1 1	12 do	95 00
South Ohio and Railway Station	W Crosby	1 8		12 do	34 00 40 00
South West Margaree and Upper	11. Closby	8	12	12 do	. 40 00
Margaroo	I S McDonald	4	2	12 do	34 48
Spring Hill Junct'n and Rv. Station	J. A. Dunn	1	12	12 do	40 00
Spring Hill Mines and Ry. Station.	M. C. Cooper		18	9 do (to Dec. 31, '88)	101 25
do do	I.I. Anderson	1 2	18	3 do from do	45 00
Spring Hill Mines and Windham		_	_	10	00.0-
Hill Stellarton and Railway Station	A. A. Senurman	7	200	12 do	80 00
Strathlorne and Whycocomagh	N McMillan	49 r.t	30	12 do	225 00° 250 00°
Tatamagouche and Waugh's River.	J. Lombard.	12 r.t.	3	12 do	140 00
	8		, 3	, au (10)	110 00
	0.	•			

DETAIL of all payments for Mail Transportation in Nova Scotia, &c.—Con'd.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amou	nt.
						\$	cts
Tatamagouche and Wentworth St'n	A. Purdy	20	6	12 mo	nths	440	00
The Falls and West New Annan	\mathbf{D} . C. Byers	9	3	12 do			3 00
Thompson's Mills and Westchester.	F. J. Purdy	13		12 do			00
Thorburn and Merigonishe Station do do			6	6 do			00
	F. Love	5 5	6	6 do) 50) 00
Torbrooke and Tremont	P. Delorev	1 2	12	12 do) 00
Trafalgar P. O. (old site) and Trafalgar P. O. (new site)		-					
Truro Railway Station and Street		1	2				6 00
Letter Boxes	J. G. Miller		60 & 18	5 do	(to Aug. 31, '88).	75	6 00
Letter Boxes	C. B. Archibald.		60 & 18		from do	233	33
Tupperville and Railway Station	D. S. Chipman	4	12				00
Tusket Wedge and Yarmouth do			3	2 do			25
Upper Musquodoboit and West		12	-			166	66
River Sheet Harbor	J. A. Logan	26		12 do			3 00
Upper Newport and Woodville	E. Sweet	13	1	12 do			3 00
Valley Station and Railway Station Waterville and Railway Station	M. Johnson	70 y's	$\begin{array}{c} 12 \\ 12 \end{array}$		· · · · · · · · · · · · · · · · · · ·		00
Waterville and South Waterville	F Parrigh	10 y s	12	$\begin{array}{ccc} 12 & \mathrm{do} \\ 12 & \mathrm{do} \end{array}$			00 (
Waverley and Windsor Junction	J. Otto	3		12 do			00 (
Wentworth Creek and Windsor Wentworth Station and Railway	J Trider er	$2\frac{1}{2}$		12 do			00
Station	A. Barclay	135 v's	12	12 do		60	00
Westbrook and Railway Station Westbrook Mills and Railway Sta-	J. C. Taylor	1	12	12 do			00
tion	S. Roscoe	1	12	12 do		100	00
West Merigonishe and Railway Station	J R McDonald	1	6	12 do		40	00
west river and westville	J. Munro	9	š	3 do			00
West River Station and Railway Station	D C		10	10 1.			
Westville and Railway Station.	J. Granam	75 y's	$\frac{12}{24}$	12 do 12 do) 00) 00
Weymouth and Railway Station	C. D. Jones.	1		12 do			00
Weymouth Bridge and Railway		-2				100	
Station	G. J. Hoyt	1 1		12 do			00
Wilmot and Railway Station	E. Cumminger	1		12 do			00
Windsor and Railway Station Windsor Junction and Railway Sta-		2	24	12 do		280	00
tion Windsor Junction—I. C. Ry. and	P. Hessian	18	36	12 do	• • • • • • • • • • • • • • • • • • • •	80	00
W. & A. Ry	do	20 y's	6	12 do		60	00
Windsor Junction—I. C. Ry. and W. & A. Ry.	W Houleant	90	c	10 4		20	
Wolfville and Railway Station	G V Rond	20 y's	$\begin{array}{c} 6 \\ 24 \end{array}$	12. do			00
Woodbourne and Railway Station	T. J. Christican	13					00
Woodbourne and Railway Station Yarmouth and Railway Station	A. Bain	13		12 do		149	
Yarmouth and Street Letter Boxes.	A. J. Hood	2	12	9 do	(from July 1, '88)		00
					Total	\$122,126	16

WILLIAM WHITE,
Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

DETAIL of all payments for Mail Transportation in Nova Scotia, made within the Year ended 30th June, 1889.

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Amount.	\$ cts. 5,500 00 28,600 00 228 60 2,100 00 100 00 500 00 1,218 00 500 00 1,218 00 219 51 867 66
Period.	6 12 months (to March 31, 1889, and extra trips). 2 Season 1886. 1 & 6 do do do do do do do do do do do do do
No. of Trips per Week.	1 & rtnight
Distance in Miles.	17 53 26 & 40 50 400 520 520 232 232 232 117 75 & 108 40, 30 & 25
Name of Contractor.	G. E. Corbitt W. H. Cook Bras d'Or Steam Navigation Co. J. F. Phelan & Son, Agents F. D. Corbett & Co. A. C. Ross Anglo-French Steamship Co. F. W. Fraser Bras d'Or Steam Navigation Co. F. W. Ardonald F. Macdonald F. Armouth Steamship Co.
Name of Route.	Annapolis and Digby. Barrington Passage and Yarmouth East Bay, Ctrand Narrows and Sydney. Halifax and Boston, U.S. (half of postage collected). J. F. Phelan & Son, Agents Halifax and Sydney and Sydney Halifax and St. Pierre Halifax and St. Pierre Halifax and St. Pierre Halifax and St. Pierre Halifax and St. Pierre Halifax and St. Pierre Halifax and St. Pierre Port Mugrave and Port Hood, &c. Loort Mulgrave and Port Hood, &c. Port Mulgrave Arichat and Canso, &c. R. Macdonald Yarmouth and Boston, U.S. (portion of postage colly armouth Steamship Collected).

N.B.—For Special Mail Subsidies and Steamship Subventions, see page 9.

W. H. SMITHSON,
Accountant,

WILLIAM WHITE, Deputy Postmaster-General.

\$ cts. 33,810 00 3,344 64 8,261 76 \$52,102 32 5,793 60 Amount. DETAIL of all payments for Mail Transportation in Nova Scotia, made within the year ended 30th June, 1889. (to 30th June, 1889, and arrears)..... (to 31st March, 1889)....... 12 months (to 31st March, 1889)... Total....Period. qo ф ခုခ မှ ф CONVEYANCE OF MAILS BY RAILWAYS. 2 2 With varying frequency over different sections of the No. of Trips per Week. Distance 196 130 328 29in Miles. Eastern Extension Railway (including ferriage). Intercolonial Railway (within Nova Scotia).... Windsor and Annapolis Railway Co..... Name of Railway. Cumberland Railway and Coal Co.. Western Counties Railway Co... 88

WILLIAM WHITE, Deputy Postmaster-General.

W. H. Smithson,
Aecountant.

Detail of all payments for making and repairing Mail Bags, Mail Locks, &c., in Nova Scotia, made within the Year ended 30th June, 1889.

Tradesmen's Names.		Particulars of	of Disburs	${f sements.}$		Amoun	ıt.
						*	cts.
S. & H. Borbridge	Mail bags, l	abels and rep	airs for Po	st Office Depar	tment.	528	79
E. Chanteloup	Mail locks a	and keys for		do		15	75
Miller Lock Co	do	do		do	••]	7	80
Smith & Egge Manufacturing Co	do	do		do	• .	3	50
T. Forhan & Co	Repairing n	ail bags for H	ostmastei	r, Halifax		15	66
H. B. Fidler	do		do	do		14	40
		Total				\$585	90

WILLIAM WHITE,

Leputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF NEW BRUNSWICK.

Detail of all payments for Mail Transportation in New Brunswick, made within the year ended 30th June, 1889.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ cts.
Acadie, Acadie Siding and Railway	G T	10		10.		00.00
Station	J. M. Kennedy	10 16	$\frac{2}{12}$		nths	99 00 40 00
Albert and Elgin	J. Garland	26	1	12 d	o	208 00
Albert and Harvey Bank	R. Smith			Specia	do	2 50 0 50
do do Albert and Hopewell Hill	N. C. Atkinson.				d	0 50
Albert and Lumsden	B. W. Filmore	7	1		nths	28 25
Albert and Point Wolfdo do	J. Fletcher A. Copp	20 20	6		o (to Sept. 30, '88).	233 50 295 04
do do do do	R. C. Atkinson	20	6	6 d	o from do ys (to Oct. 10, '88)	33 00
Albert and Railway Station	do	1214	12	12 mo	nths	75 00
Albert Mines and Railway Station. Aldouane and Richibucto	P. Richard	84	$\frac{12}{2}$	12 d 12 d	o o	30 00 46 48
Alexander's Point and Lameque	C. Chiasson		1	9 d	o (from July 1, '88)	18 75
Alexander's Point and Miscou Light	.[ļ		l		
House	C. Vibert		$\frac{2}{3}$		o o	285 00 150 00
Alexandrina and Notre Dame	A. L. Hébert	4	1		0	20 80
Alexandrina and Notre Dame Alison and Moncton Allandale and Poquiock	W. T. Jones	9	1	12 d	0	55 00
Allandale and Poquiock	D. Connelly	6 4	1 1	$\begin{array}{cc} 12 & \mathrm{d} \\ 12 & \mathrm{d} \end{array}$	o	35 00 26 00
Anagance and Corn Hill	S. L. Stockton.	6	2		.0	68 00
Anagance and Elgin	E. A. Robinson.	18	2	12 d	.0	144 00
Alma and Hastings. Anagance and Corn Hill Anagance and Elgin Anderson and Upper Sackville. Andover and Fort Fairfield, U.S. Andover and Roilway Station	D. Wheaton	22	1	19 d	o (from July 1, '88)	69 75
Andover and Fort Fairneld, U.S Andover and Railway Station	J. C. McCluskev	7	$\frac{2}{12}$		o (to Dec. 31, '88)	96.00 37.50
do do	J. A. Perlev	1	12		o from do	12 50
Annidale and English Settlement Apohaqui and Case Settlement	J. H. Langley	4	2	12 d	o	47 00
Apohaqui, Collina and Pearson's	G. Z. Parlee	11 14	1	12 d	lo	50 00
Aponaqui, Comma una 1 curson s		& 17	3 & 2	12 d	lo	177 12
Apohaqui and Erb Settlement	H. E. Sinnott	. 4	1		lo ,	44 20
Apohaqui and Railway Station Armstrong and Waterford	J. A. Smnott	100ya.	12		o (and arrears) lo	73 95 45 72
Armstrong's Brook and Jacquet			1	12 0		40 12
River Station	W. Barclay	1	12	12 d	lo	50 00
Armstrong's Brook and River Loui-	do	3	6	12 d	lo	175 00
Armstrong's Corner and Round Hill		20	2		lo lo	175 00 230 00
Aroostook Junction and Railway	d.	1		1		
Station	D. B. Hopkins.	$2^{\frac{1}{8}}$	12		lo	50 00
Aroostook Portage and California.	D. Murchison	2	1	12 d	lo	25 00
Back Bay and St. George	A. J. Seely	11	3		lo	224 88
Bairdsville and Beaconsfield	H. Baird	11	1		o	55 00
Baie Verte and Baie Verte Road	1		2	7 d	lo 17 dys(from Aug. 15, 1888)	25 00
Baie Verte and Railway Station	A. C. A. Wells	1	12	7 d	o do	37 50
Barachois and Lower Abougoggin.	H. Gallang	11	1		lo	44 48
Baie Verte and Railway Station Barachois and Lower Abougoggin. Barnaby River and Railway Station Bartibog and Chatham. Bartlett's Millsand Railway Station	M. McDonald	12	12 1		lo lo	30 00 40 00
Bartlett's Millsand Railway Station	J. Bartlett	12			lo	90 00
Bass River and South Branch Bath, Johnville and Kilfoil	J. A. Campbell.	16	3	12 d	lo,	269 00
Bath, Johnville and Kilfoil	G. Giberson	8 & 31	2 & 1	12 d	lo	85 00
Bath and Railway Station Bathurst and Bathurst Village	S. P. Melangon	12	12		lo	60 00 29 25
			6		lo (to Sept. 30, '88).	487 50
Bathurst and Kallway Station	S. P. Melanson.	Z	18	12 d	o (and extra trips).	132 57
do do	do 9	1 2	1 3	12 d	lo	39 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amou	nt.
D. 11 (37'11) 11 (1'	T N' 1					,	*	cts
Bathurst Village and Dumfries Bathurst Village and Dunlop Bathurst Village and Tête à Gauche	do	9	1	9	do	ths (to June 30, '88) (from July 1, '88).		75 86
River (south side) Bathurst Village and Youghal Bay du Vin and Chatham Bay du Vin and Point Escuminac Bay du Vin Mills and Upper Bay	H. Sinclair E. Nowlan	$\frac{3}{25\frac{1}{2}}$	$\begin{bmatrix} 1\\3\\2\\2 \end{bmatrix}$	12 12 12 12			50 221	48 00 72 00
du Vin Bayfield and Port Elgin	W. Dickins	5 15&20	1 3	$\frac{12}{4}$	do do	15 days (to Aug.	40	00
Bayfield, Port Elgin and Spence	J. H. Trenholm.	24&7	2&1	4	do	15, '88)		50 75
Bayfield and Railway Station	-	11/2	6	7	do	17 days (from		87
Bayside and St. AndrewsBear Island and Scotch Lake	J. Sinnett	4	$\frac{2}{1}$	$\frac{12}{12}$	do do		$\frac{100}{27}$	00
Beaufort and Highlands	T. Harvey	9	3	9	do	(to June 30, '88). from do	82	50 50
Beaver Dam and Rusagornis Beaver Harbor and Black's Harbor. Beaver Harbor and Pennfield Ridge	F. Elridge	4	$\frac{1}{1}$	$\begin{array}{c} 12 \\ 12 \\ 12 \end{array}$	do			00
Belledune and Belledune River Belledune and Railway Station	D. McCurdy S. Chalmers	4	12	12 12	do do		75 80	00
Belleisle Creek and Norton Station. Belliveau Village and St. Joseph Belyea's Cove and Heustis Landing	S. Bourgeois	7 7 2	$egin{array}{c} 2 \ 2 \ 2 \end{array}$	12 12 12	do		70	00
Benton and Railway Station Beresford and Railway Station	A. J. Teed $J. Aubé$	50 yds 100 yd	12 6	12 12	do do		20	00
Biggar Ridge and Foreston Birch Ridge and Red Rapids Black Crook and Chatham	C. Roberts	4 4 6	1 1 4	12 12 12	do		35	00
Black Lands and River Charlo Black Point and New Mills	W. Cook P. Devereux	3	3	$\begin{array}{c} 12 \\ 12 \end{array}$	do			00 00 96
Black Rock and Three Brooks Blackville and Coughlan. Blackville and Shinnickburn	D. Coughlan	$\frac{1\frac{1}{2}}{4}$	2 1 1	12 12	do		25 26	00
Blackville and Underhill Blair Athol and Dalhousie	do	18 2 17	3 1	12 2 12	do	(from Feb. 1, '89).		67 00
Blakely and Enniskillen Station Bloomfield and Railway Station Bloomfield Ridge and Boiestown Bloomfield Station and Central	J. Blakely N. Wetmore	3 10 ³	$\begin{array}{c}2\\12\\1\end{array}$	12 12 12	do do		45 56	00 00 00
	N. Wetmore T. W. Kierstead	$\frac{3_{2}^{1}}{18}$		$\frac{12}{12}$	do do			00 00
Bocabec and St. AndrewsBoiestown and Parker's Ridge	P. McLaughlin J. W. Parker	9 5	1	$\frac{12}{12}$	do do		195 25	00 00
Bon Accord and Kincardine Bonny River Station and Elmcroft. Bonny River Station and Railway	G. F. Williams	5 6	$\frac{2}{1}$	12 12	do			00 00
StationBoudreau Village Rockland and		4	12	12	do		24	00
Rockland Station Boundary Creek and Ry. Station Boundary Creek and Steeve's Moun-	J. Sutherland R. B. C. Weldon	1 & 4g		12 12	do do		232 30	04 00
tain Bourgeois, Grandique and Poirier's. Breadalbane and New Mills Railway	do R. Poirrier	$4 & 2^{\frac{31}{2}}$		12 12	do do			00 00
Station . Brigg's Corner and Sheffield . Bristol and Highlands . Bristol and Railway Station .	H. L. Bailey J. Tooev	1 38 11	2	12 12 12 9	do do mont do	ths	340 197	00
do Brownsville and Stewarton Buctouche and McLaughlan Road.	J. J. Hayward A. McGregor	5 16 & 30	12 1	3 12	do do	from do	11 25	75 25 84
nuctouche and McLaughian Road	1. Roberts 91	10 0(20)	z	12	do		180	00

Name of Route.	Name of Contractor.	Distance Miles.	No. of Trips per Week.		Period.	Amount
						s et
Suctouche and Richibucto	. T. Roberts	. 18			hs	$228 \ 0$
Buctouche and St. Castin	. L. Sawyer	. 63		12 do	(f.'- T 1 200)	30 0
Buctouche and St. Jean Baptiste Buctouche and Shediac	J. D. Weldon	$egin{array}{c} \mathbf{d} & 1_{2}^{1} \ 22 \end{array}$	6	10 do 12 do	(fr'mJune1,'88)	$\begin{array}{c} 25 \ 0 \\ 494 \ 0 \end{array}$
Bull Moose Hill and Springfield	. W. E. Benson	. 5	1	12 do		15 6
Sumfrau, Mineral and Ry. Station	A. J. Kearney.	. 5 & &	1 & 12			70 0
Burnt Church and Church Point Butternut Ridge and Carsonville	H F Price	15		12 do 12 do		40 0 93 0
Butternut Ridge, New Canaan and	d:	1		i		90 (
Forks	. A. Perry			12 do	,,	128 (
Sutternut Ridge and Ry. Station.	. A. E. Killam	· 4	6	12 do	(and arrears)	51 t
Caledonia, Turtle Creek and Rail	l-					
way Station	. G. D. Reed	. 17 & 4	2	12 do	!	97 !
Calhoun and Railway Station Cameron's Mills and St. Louis d		. 2	12	12 do	•••••	25 (
Kent.	. A. Babineau	. 10	2	12 do		95 (
Campbell Settlement and Lowe Southampton	r	1		10 1	i	
Campbellton and Railway Station.			13	12 do 3 do	(to June 30, '88,	45 4
Still boottom time that hely known			1	1	& extra trips)	52 2
do do .	. G. Cumming	. 1	13	9 do	from do and	
Campo Bello and Wilson's Beach.	I Brown	. 7	1	12 do	extra trips	124 4
Janaan Station and Ry. Station			12			75 (20 (
				12 do		80 (
Canaan Station and Sweeneyville. Canobie and Clifton	W. Glendinning	3.	1	12 do		30 (
Canterbury and Woodstock Canterbury Station and North Lak	J. W. Scott	n 12 n 22	$\begin{vmatrix} 2\\2 \end{vmatrix}$	12 do 12 do		148 (250 (
Canterbury Station and Ry. Station				12 do		50 (
Cape de Moselle Creek and Railwa Station	v	1		12 do		
Cane Tormentine Railway Statio	n l	•	12	12 do		25 (
and Ice Boat House.	W. A. Wells	. 3	1	Season 1	1888	191 (
do do . do do .	J. B. Allen			Special	trips	4 (
Caraquet and Lower Caraquet	. A. Lantaigne.	. 4	3		hs	34 (
Caraquet and St. Simon	. J. R. LeBouti	1-1				
Caraquet and Shippigan.	lier	9 20		12 do		30 (
Caraquet and Tracadie	P. Thériault	20	6 & 3	3 do 12 do		67 5 344 6
Carleton and St. John	. D. O'Connell	. 1		12 do		138
Carleton and Street Letter Boxes.	W. Lane	.1	12	12 do		78 (
Carlisle and Lower Windsor Central Blissville and Frederictor		. 2	3	12 do		48 (
Junction	. J. Shehan	. 4	2	12 do		53
Central Hampstead and Hibernia.		. 3	2	12 do		40
Central Waterville and Temperanc Vale		. 5	1	12 do		90.4
Centreville, Florenceville, Tracey	's!	1		12 uo		30 (
· Mills and Greenfield	. W. Jewett	. 2, 4, (3			
Centreville and Florenceville Rail way Station	1_1		2,3 &6			76
Centreville, Tracey's Mills and	d N. Boyer	. 5	6	9 do	(fromJuly1,'88)	55
Greenfield	. G. Gregg	. 2, 12 &	τ		! !	
Chambers' Settlement and Foster	's	6	3 &			86
Croft	J. McShane	. 4 8 5	1	12 do		28 (
Chance Harbor, Lepreaux an	d	. 4 a t	1	12 do		50 (
Little Lepreaux	. U. J. Hope	. 19 &	1 2 &	5 12 do		241
Chapman and Little Shemogue	. C. R. Oulton.	! 3	2	6 do	(from Oct. 1, '88)	17
Charleston and Middle Simonds	M. Mulhern	11		12 do		50
Charlo Station and Upper Charlo. Chatham and Douglasfield	T King	$\begin{array}{c c} \cdot \cdot & 25 \\ \cdot \cdot & 5 \end{array}$		12 do 12 do		59
Chatham and Kouchbouguac	. 11年 - 安田隆	n. 26		12 do 12 do		$\frac{20}{258}$

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
					8 cts
Thatham and Newcastle	J. Fisher J. Ward Robertson & Mc-	1	24	Special trip	$\frac{1}{200} \frac{00}{00}$
do do	Callum Ferguson & Mc-	52	6	3 do (to June 30, '88)	320 00
	Callum	52	2 & 1	9 do from do 3 do (to June 30, '88).	960 00 12 50
Chelmsford and Doyle's Brook Chelmsford and South Nelson	J. Casev	. 10	2 & 6	3 do do	24 78
Chipman and Harley Road Chipman and Weldford.	J. D. Brown	5 40	1	12 do	35 00 58 00
do do	D. Robertson	40	1	9 do from do	176 25
Church Hill and Riverview	W. H. Jones	$\frac{2}{6}$	2	12 do	26 00 59 00
Clarendon Station and Ry. Station.	G. S. Lacy	102	6	12 do	40 00 244 00
Clifton and Grey's Mills Clifton and Land's End,	O. M. Flewelling	22	2	12 do	272 80
Clinch's Mills and Gooseberry Cove	J. Ferguson	4	2	12 do	65 00 30 00
Clinch's Mills and Little Musquash Clinch's Mills and Railway Crossing	C. F. Clinch	1	12	12 do	17 75
Clover Hill and Sussex Valedo do Coal Branch Station and Ry. Station	J. McLaughlin.	15	$\frac{2}{2}$	3 do (to June 30, '88) 9 do from do	39 00 96 98
Coal Branch Station and Ry. Station	J. T. Swift	100 yd	12 2		30 00 44 00
Coal Creek and Coal Mines Coal Creek and Upper Coal Creek	M. E. Weaver	4	1	12 do	25 0
Cocagne and Cocagne CapeCocagne and Notre Dame	J. S. Lucas	4	$\frac{1}{2}$	12 do	17 8 70 0
Coldbrook and Railway Station	JP. O'Neil		12	3 do (from Jan. 1, '89)	7.5
Cole's Island and Narrows Cole's Island and New Canaan	D. H. Marr	12	3		155 0 25 0
do do	. A. Corey	-23	1	9 do from do	73 5
College Bridge and Railway Station Collina and Springfield	D. F. Richard J. Kellier	14 & 10	12		56 2 42 0
Cormier's Cove and St. Joseph	D. A. Cormier	2	1 2	12 do	30 0
Corn Hill and Petitcodiac Cox's Point and Cumberland Bay.	T. H. Brans	11 & 7	1	12 do	52 0
Cross Creek and Stanley	combe	5 2	1 1		20 8 22 5
Curryville and Railway Station	J. A. Beaumont	. 2			30 0
Dalhousie and Point la Nim			3		45 0
Dalhousie and Railway Station Dalhousie Junction and Ry. Station	H. A. Johnson	1	24 12	9 do (to Dec. 31, '88)	248 8 18 7
do do .	. W. Jamieson	.1	12	3 do from do	13 (
Dalhousie and Wharf	P. Bronev	8	4 2		32 7 83 (
Debeck and Railway Station	. A. Harron	. 1		12 do	30 (
Doaktown and Shinnickburn Donegal, Waterford and Sussex Val	e F. C. Buchanan	18	1 & 2	12 do	
Dorchester and Fairview	. A. Crossman	. 3	1	12 do	26 (65 (
Dorchester and Railway Station	S. W. Tingley .		1 24	12 do and extra trips	439 6
Dorchester and Rockport	, J. Reid	. 12	3s, 2v		159 (20 (
Dorchester and Woodhurst Dorchester Crossing and Ry. Station	n P. L. Belliveau.	·) :	1 2	2 12 do	8 (
Dorn Ridge and Mouth of Keswic Donglastown and Newcastle	k W. H. Pugh	. 14	2		
Dover and Moncton	. W.A.McFarlan	e 10	2	2 12 do	124 (
Downeyville and Springfield Downeyville and Tooleton	W. Kellier V. Vanwart	. 11 &	$3 \begin{vmatrix} 2\\4 \end{vmatrix}$		80 (
Dovle's Brook and South Nelson	. W. Gorman	.! lõ	2 &	1 7 do (to Jan. 31, '89)	89
Doyle Settlement and River Louiso Dumbarton Station and Rv. Statio	n T. Hayes, jr n T. Irvin	. 30 yd	$\begin{array}{c c} & 1 \\ \hline s & 12 \end{array}$	3 do (to June 30, '88).	12 (
Dumbarton Station and Ry. Statio	. W. Saunders		8	6 do (from Oct. 1, '88).	10 (
Dumbarton Station and Rolling Dar Dundee and Shannon Vale	n do	20 & 5	2		

	_ ,	•	.E o	1			
Name of Route.	Name of	Distance Miles.	f Trip Week.	! !	Period.	Amou	
Name of Route.	Contractor.	rta Ele	No. of 7 per W	l i	1 eriod.	Amou	111
		Ξ×	žĒ		:		
						*	c
ungiven and Memramcook	E. Toole	4	1	12 mor	nths	25) (
upey's Corner and St. André de Shediac	R. Hébert	$3\frac{1}{2}$	1	12 do		18	٠.
dgett's Landing and Hillsborough		2	6		(to Sept. 30, 88).	45	
dmundston and Grand Falls dmundston and Mouth of St				12 do		1,395	
francis	. do	37	3		(to May 31, '88). ' from do	83 428	
dmundston and Upper Madawask	a D. Sirois	3		12 do		24	
el River Crossing and Ry. Station	W. McNair	16	12			40	
lgin and Prosser Brook	G M Killam	$\frac{13}{2}$	4)	$\frac{192}{39}$	
Imsville and Railway Station	. J. H. Dver		6		·	40	
migrant Road and Port Elgin	E. D. Silliker	12 & 2Ĭ	3		17 dys (from Aug. 15, '88)	91	1
nnishore and Grand Falls	. C. O'Regan	3_{2}^{1}		12 de		30	
nniskillen Station and Ry. Station	n B. McAloon	1	· 6	12 de	• • • • • • • • • • • • • • • • • • • •	25	5
airhaven and Lord's Cove airhaven and Steamer	T. McLaughlin.	10	3s., 2w 3s., 2w	12 de)	195 100	
airville and Railway Station	C. J. Tilton	1				75	
enwick and McKnight	. G. E. McKnight	14	2	12 dc		i	
enwick and Shebaerouson's Point and Intersection o	f Simpson	12	2	12 de		33	3
Caraquet and Chatham Route	. W. Ferguson	3	6	12 de) :	31	1
latlands and Railway Station.	d. Steeves.	1 1)	50	
lorenceville and Railway Station. lorenceville East and Riverbank.	W. McMullin	1 4)	185	
lume Ridge and Magaguadavic	M. Noonan	6)	56 30	
orks and Ida	. E. Kierstead	41		12 de		28	
our Falls and Ortonville	W. Downing	11				79	
redericton and Hanwellredericton and Lower St. Mary's.	P. Lacy	10 6		12 do 12 do)	59 90	
rederiction and Marysville	T. B. Dunphy	4)	320	
redericton and Marysvilleredericton and Nasonworth	S. K. Nason	91	1	12 de		52	
redericton and Newcastle	. R. Swim	105	3	6 dc	(to Sept. 30, '88).	736	
do do redericton and Railway Station.	J. Rae			$egin{array}{ccc} 4 & \mathrm{d} \mathrm{d} \mathrm{d} \mathrm{d} \mathrm{d} \mathrm{d} \mathrm{d} \mathrm{d}$		982 178	
redericton and St. Mary's Ferr	y ;	1		_	•• /		
(No. 1). redericton and St. Mary's Ferr (No. 2). redericton and Stanley.	.: do y	4		12 de	!	30	
rodoriaton and Stanley	T B Dunnby	33		12 do	•	30 163	
redericton and Street Letter Boxe	s A. S. Phair	99			(from July 1, '88).	67	
redericton and Wharf	. P. D. McKenzie	<u> 1</u>		Specia	l trips		$\dot{2}$
redericton and Wisely					s. (from June 1, '88).	4]	
redericton and Woodstock, East. redericton and Woodstock, West.	P. H. Raineford	70 63	2))		
redericton Junct'n and Ry. Statio	n J. Shehan	25 vds	24	12 de		40	
rench Village and St. John	. D. O'Connell	15&17	1	12 do)	136	6
agetown and Mouth of Nerepis	. S. Cameron	451 s.,	3	12 de)	698	ñ
agetown and Narrows	. F. E. Wilson	19	3	12 de		270	0
agetown and Upper Gagetown	. G.W. Allingham	1 8		12 de	·	100	
agetown and Welsford	W Hamilton	28	3	12 de 12 de			
agetown and White's Cove ailey and Thomas Galland's	J. White	13	2	12 de 12 de		250 30	
Saspereau Station and Ry. Station			6	12 de		40	
aythorne and Tabusintac	. E. McCallum.	. 4	1	12 de	·	30	0
illespie and Grand Falls Portage	J. McCallan	2	1	12 de		2	
Hadstone and Kintore	. 1. watt	. 8				120	0 5
Classville and Ruther Glen	E D Martin	. 5	1	12 de	o		

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Goose Creek and Shepody Road	T. Provantt	13	,	12 months	8 cts.
Gouldville and Memramcook	J. F. Richard	$2\frac{1}{2}$	-2	12 do	32 08
Grafton and Woodstock				12 do	48 00 32 50
Grande Anse and Mizonettc			$2 \mathrm{s.1} \mathrm{w}$		75 00
Grand Bay and Railway Station	D. Hamm	8		12 do	20 00
Grand Falls and Railway Station do do	J. J. Kelly	Ĭ	12	2 do from do	$\begin{array}{c} 62 \ 50 \\ 12 \ 50 \end{array}$
Grand Falls and Undine	F. Petit	13&11		12 do	121 75
Grand Harbor and White Head	E A Daggett		2 s.1 w	12 do	$2,700 00 \\ 94 00$
Grand Manan and Seal Cove	G. E. Tatton	12	3 & 2	12 do	119 00
Great Shemogue and Little Cape Great Shemogue and Shediac	J. S. Leger,	$\frac{4}{24}$. 1	12 do	25 00
Great Shemogue and Upper Sack-	1. 11. Henera	24	. 0	1 0 do (Hom Oct. 1, 88)	200 00
ville	D. Wheaton		1	3 do (to June 30, 1888)	23 25
Green Point and Petit Rocher Halcomb and Lyttleton			1	12 do	35 00 39 00
Hammond Vale and Shepody Road	W. Fowler	12		12 do	104 00
Hampstead and Wickham	J. S. VanWart	$\frac{2}{1}$	$\frac{2}{6}$	12 do	40 00 40 00
Hampton and Urquhart's	J. McLauchlan.	13	2	12 do	130 00
Hardingville and Quaco Road				12 do	29 00
Harewood and Salisbury	W. Craig	$22^{\frac{1}{2}}$		12 do	$\frac{48}{274} \frac{00}{00}$
Hartland and Railway Station	A. Nevers	Ĩ		12 do	45 00
Harvey and Midway	L. F. West			12 do	37 00 32 50
Harvey and Waterside	R. Smith	11		12 do	120 00
Harvey Bank and Hillsboro' Harvey Bank, Harvey and Ry. Sta-	C. Peck			Special service	42 50
i ion	R. Smith	1	6	9 months (to Dec. 31, 88)	52 50
Harvey Bank and Railway Station. Harvey Station and Magaguadavic.	W. B. Wells	18	$\frac{6}{2}$	9 do	$\frac{22}{149} \frac{50}{00}$
Harvey Station and Ry. Station	D. Glendinning.			12 do	30 00
Harvey Station and Yoho	R. McLaughlin.	8	1	12 do	28.76
Hartfield Point and West Scotch Settlement		4	1	3 do (to June 30, '88)	5 50
do do .	W.A.S. Perkins.	4	1	9 do from do	16 50
Head of Millstream and Perry Set- tlement	B. B. Hayes	5	1	12 do	30 00
Head of Millstream and Sussex				10 1	
Vale	J. Gillis	19 1	6	12 do	175 00 50 00
Head of Tide and Robinsonville	D. Duncan	19		12 do	85 00
Heron Island and New Mills do do	W. Maxwell	3	1	3 do (to June 30 '88) 9 do from do	$\begin{array}{c} 6.75 \\ 24.00 \end{array}$
Hillsborough and Lower Cape	J. Bray	9	6	6 do (from Oct. 1, '88)	100 00
Hillsborough and Moneton Hillsborough and Railway Station.	R. L. Blake	16	6 12	Special service	63 00 19 50
do do	R. E. Steeves		12	9 do (from do	58 50
Hillsborough and Rose Vale	H. J. Stevens	13	3	12 do	140 00
Hillsdale and Mackville	R. Brewing	17		12 do	23 68 240 00
Hopewell Cape and Railway Station.	J. Bray	. 3	12	6 do (to Sept. 30, '88).	100 00
do do Hopewell Hill, Hopewell and Rail	W. E. Calhoun.	3.	5 6	6 do from do	45 00
way Station	C. L. Peck	. 1	6 & 12		80 00
Hopewell Hill and Memel Hopper and Salisbury	. W. Hunt	. 17 &c 5		12 do	50 00
Hoyt Station and Juvenile Settle	•!	1		12 months	82 00
ment.	J. E. Patterson.	. 12 & 9	2	12 do	75 88
Hoyt Station and Railway Station. Indian Mountain and Moneton	A. W. Mesereau A. M. Bonnell	. 14		12 do	50-00 78-00
Indian Mountain and Moneton Indiantown and St. John	W. McLaughlin	. 2		3 do (to June 30, '88 &	
) 5	i	extra service)	59 00

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
				1			8 ets.
Indiantown and St. John Inkerman and Pockmouche	D. O'Connell		12	6 r		hs from July 1, '88 (to Sept. 30, '88).	117 00 13 50
Inkorman and Railway Station	do	3	6	6		from Oct. 1, '88).	22 50
Irishtown and Shediac. Jenkins and Thornetown	C. Sullivan	20		12 12	do do		126 00 38 00
Jolicure, Westmoreland Point and		ì					30 00
Railway Station	C. Wry	7&1	6 & 12	7	do	17 dys (from Aug.) 15, '88)	140 62
Jordan Mountain and Newtown				12	do		38 00
Keats and Petiteodiac Kerry and New Ireland Road	F. Doherty	1 ă	: 1	$\frac{12}{3}$		(to June 30, '88).	$\begin{array}{c} 117 & 00 \\ 6 & 25 \end{array}$
do do	J. Garland	5	1	12	do	from do	37 11
Keswick Ridge and Millville Kilburn and Kintore	D. Watt	6	3	12			295 16 80 00
Kilburn and Railway Station Kingsclear and New Market	B. Kilburn	1		$\frac{12}{12}$			25 00 36 00
Kingston (Kent) and Railway Sta-	}	1					
tion. Kingston (Kent) and Richibucto	E. Harnett	. 1	12	12	do		100 00
Village	P. McCaie	. 1 4		12			60 00
Kingston (Kings) and Perry's Point. Kingston (Kings) and Rothsay	S. Cosman	$\frac{2!}{10}$		12 12			35 00 449 00
Knoxford and Upper Knoxford	J. McLaggan	. 4	1	9 3		(to Dec. 31, '88)	19 50
do do Kouchibouguae and Kouchibouguae	R. Longstaff	. 4	1	3	ao	from do	6 50
Beach	J. Potter, jr	9 20	$\frac{2}{1}$	12 12			60-00 65-00
Kouchibouguac and Richibucto	P. Wood	. 12	6	3	do	(to June 30, '88).	66 25
do do Lake George and Prince William	J. McLane	. 12	6	9	do	from do	217 50
Station	W. Nichol	. 22	2	9	do	(to Dec. 31, '88).	142 50
do do Lakeview and Narrows	P. Carr	$\frac{22}{3}$	2 3	$\frac{13}{12}$	- do	from do	39-25 50-00
Lakeville Corner and Newcastle			1				
CreekLandry and Pockmouche	M. Landry	$\begin{bmatrix} 28 \\ 5 \end{bmatrix}$	$\frac{2}{1}$	$\frac{12}{12}$			172 00 23 00
Lawrence Station and Railway Sta-	.[!	1 10	10			
tionLedge and St. Stephen	J. Green	200 yc		$\frac{12}{12}$	do do		
Légère and Portage River	L. Mauzerall	. 2		12 9	do do		30 00
Lepreaux and Pocologan Lepreaux and Railway Station	∃H. P. Reynolds	. 1	12	12	do		
Lewis Mountain and Petitcodiac Lime Hill and Junction of Spring	W. W. Price	12&1	3 1	12	do		72 80
Hill Road	T. Scribner	. 2		12			
Lincoln and OromoctoLittle Lake and Tracey Station	A. E. Bulley	. 4		$\frac{12}{12}$			65 00 58 00
Little Salmon River Mills and	l						
Shepody RoadLoch Lomond and St. Martin's							80 00 100 00
Long Point and Springfield	\mathbf{W} . Kellier	. 7 & 10	1	12	do		35 44
Long Settlement and Woodstock Lower Brighton and Woodstock	J. R. Tupper J. Downey	25		12 12			200 28 100 00
Lower Nappan and Point au Car.	D. Loggie	$\cdot \mid 5$	2	3	do	(to June 30, 88).	13 50
do do . Lower Southampton and Norton	A. McKnight	. 5	2	9	do	from do .	35 61
Dale Lower Turtle Creek and Turtle	. J. C. Munro	. 10	2	12	do	• • • • • • • • • • • • • • • • • • • •	88 48
Creek	. G. A. Fillmore.						
Lower Woodstock and Speerville. Lyttleton and Red Bank	A. W. Hay	. 6	1	$\frac{12}{19}$		(to Dec. 31, '88)	58 20 60 00
14 y voic voin and fred Dank	. 129. 11. 1 OZET				40		
do do McGinley and Memramcook	. E. Somers	. 5		$\frac{3}{12}$			

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amou	nt.
						II I	ş	ets
Maplehurst, Upper Kent and Rail-	A A Hawthorne	2 & 1	9 & 19	19 r	nant	hs	7	5 00
way Station	G. Russell	3				,118,		90
Maplewood and Millville	H. Palmer	5		12	do		2	1 00
Martin's Head and Salmon River Marysville and Peniac	W. J. Davidson							00 0
Marysville and Peniac	P. McClusky	4 5						0 00 8 00
Meadows and Railway Station	G. F. Beach	20 vds						0 00
Memramcook and Railway Station.	S. C. Charters	1 3	24	12	do		10	0 00
Milford and Railway Station Milledgeville and St. John	J. Irvine	15						5 00
Milledgeville and St. John	D. O'Connell	7 % 6	2					5 00
Millstream and Mountain Dale Millstream and Mount Hebron	G D Kenwick	1 & 0						628 108
Milltown and St. Stephen	J. & E. Kevs	2						8 48
Milltown and Upper Mills	J. M. Macdonald	3	1	12				00
Miscou Harbor and Wilson's Point.			2 s 1 w					0.36
Mispec and St. John	D. O'Connell	9	1					9 76
Moncton and O'Neill Moncton and Railway Station	J. McQuade	15	$\frac{1}{36}$	$\frac{12}{12}$				9 00 0 00
Moncton and Stony Creek			1					2 00
Moncton and Street Letter Boxes			12	12				0 00
Moncton and Upper Coverdale	E. L. Goodall	14	2	12	do		10	5 00
Moneton Road and Shediac		6	1	12	do		4	0 00
Monument Settlement and Rich- mond Corner		27 8-20	2	12	do		15	6 00
Moore's Mills and Railway Station.	A. Connick	100 vs.	12	12				$\frac{0}{2}$
Mount View and Upper Sackville	J. Wheaton	3		12				ō 00
Mountville and Railway Station	J. Wilbur	100 ys.	. 12	12	dο			0 00
Mouth of Nerepis and Railway				1				
Station				12				0.00
Musquash and Railway Crossing Narrows and Norton Station			$\frac{12}{3}$	$\begin{array}{c} 12 \\ 12 \end{array}$				6 09 5 00
Narrows and Upper Gaspereaux			3	12	do			5 00
Narrows and Wickam			3	3		14 days (to July		
				1		14, 1888)		1 76
do do Nashwaak and Stanley	G. W. Day	24	3	8		17 days from do		9 19
Nashwaak and Stanley Nauwigewauk and Railway Station	W W Dodgo	. 10	$\frac{1}{12}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do			$\frac{62}{5}$ $\frac{00}{00}$
Nerepis Station and Ry. Station	D. McKenzie	1	12	12	do			00 00
Nerepis Station and Round Hill	D. W. McKenzie	12	1	12	do			0 00
Newcastle and Railway Station	J. Fisher	. 1	24	12		(and extra trips)		7 72
Newcastle and Red Bank			3	12	do	(from Wal. 1 200)		8 50
Newcastle and Renous Bridge Newcastle and Sevogle			1	6	do	(from Feb. 1, '89) (to Sept. 30, '88.		l5 83 12 00
	J. C. Brown		i	6	do	(from do	7	$\frac{2}{2}$ 50
Newcastle and South Nelson		2	6	12	do			99 00
Newcastle Letter Box and Railway			!	1			1	
Station	J. Fisher	. 1	6	12	do			31 28
New Mills and Railway Station Newtown and Sussex Vale	A. McNair	19.8-16	12	$\frac{12}{12}$	do			19-88 14-48
Nictau and Riley Brook	E. P. Ross	6		12	do			80 00
Nixon and Turtle Creek	G. Wilson	. 4	1	12	do			20 00
North Forks of Salmon Creek and		1	_					
Salmon Creek		. 4	1	12	do		1	37 40
North River Platform and Railway Station	T Jones	• ;	12	12	do	, ,		25 00
Notre Dame and Poirier			1	12	do			30 00
		1 .		1.0	,		1 .	
Oak Bay and Railway Station	K. W. Wilson.	. 3	12	$\frac{12}{2}$	do	/A. J 90 '99\		55 OC
Oakham and Thornetown do do	E. Perry	. 3	$\frac{2}{2}$			(to June 30, '88). from do .		7 50 31 80
Oak Hill and St. Stephen		. 22	1		do	from do .		59 O(
Oak Point and Round Hill	T. Harrison		$\hat{6}$			1888		30 00
Oakville and Richmond Corner	L. S. Purinton.	. 10	1	12	mon	ths	1	30 00
Oromocto and Waasis Station			- 6	12	do			10 00

Oromocto and Woodsidedo do doOromocto, Sheffield, Upper Gage-			l .			
do do		12	.)	6 mont	n (toSept. 30, '88)	8 ets 43 25
town and Swan Crook		18	$ ilde{2}$	6 do		54 50
town and Swan Creek Ossekeag and Upperton		& 12	6 & 3 2			$\frac{344}{180} \frac{28}{00}$
Painsec Settlement and Railway Station.	F Raldn	1	9	12 do		27 00
Paquetville and Pockshaw Passekeag and Railway Station Passekeag and Sherlock	R. Cushing G. R. Campbell.	13 <u>½</u> 150 y's	3 12	3 do 12 do	(to June 30, '88).	37 50 50 00 32 50
Pearson's and Starkeys. Pennfield Ridge and Ry. Station.	J. H. McLeod	9 & 12	2	12 do		150 00 60 00
Penobsquis and Roxburgh do do	W. Haslam J. J. Haslam	21 21	2	9 do 3 do	(to Dec. 31, '88). from do	144 30 44 37
Perth Centre and Ry. Station Prrth Centre and Riley Brook Perth Centre and Tilley	·W. Inman	64&8	$\begin{bmatrix} 12 \\ 2 & 1 \\ 2 \end{bmatrix}$	12 do	(andextraservie),	50 00 601 20 127 18
Petersville and Welsforddo do do	J. Burton	10	2	3 do	(to June 30, '88).	25 00 72 00
Petersville Church and South Clones Petit Rocher and Railway Station.	J. Chittick, sr J. Morrison	4	$\frac{1}{12}$	12 do 12 do		30 00 75 00
Pioneer and Woodstock		6	$\frac{3}{2}$		(to June 30, '88).	297 00 9 87 30 00
Pleasant Ridge and Rolling Dam Station			2		(from Jan. 1, '89)	18 75
Pocologan and New River Railway Station Pointe du Chêne and Ry. Station	J. Knight	6,	2		(to June 30, '88).	12 50 25 00
Pollett River and Railway Station. Port Elgin and Railway Station.	T. W. Colpitts	100 y's	3	12 do	and 17 days (from	19 48
Port Elgin and Shediac	C. L. Gautreau. J. H. Trenholm.	35 24	3 2	6 mont	15, 1888) hs(to Sept. 30, '88) and 17 days (from	25 00 200 00
Port Elgin, Westmoreland Point		100 1	re 10		15, 1888)	92 72
and Railway Station Prince of Wales and Ry. Crossing	4		1	(from	ths and 14 days Aug. 14, 1888) ths	150 00 31 00
Prince William Station and Railway Station	W. G. Hatch			12 do		50-00
Prince William Station and York Mills		3	2	12 do		93 00
Renous Bridge and South Renous. Reynolds and South Nelson	B. Reynolds	. 7		12 do		42 00 50 00
Richibucto and Railway Station Richibucto and Weldford	L. J. Wathen.	. 27	6	12 do		75 00 737 00
River Charlo and Railway Station. River Louison and Sunnyside Riverside and Railway Station	J. Millar	7	1	1		65 00 46 00 24 00
Rockland Station and Ry. Station. Rockport and Sackville	J. Sutherland A. Tower	. 300 y'i . 16	12	12 do 12 do		30 00 65 00
Rogerville and Rogerville, East Rogerville and Vienneau	J. Hache F. McCaill	. 100 y/s		12 do 12 do 12 do		25 00 42 65 35 00
Rolling Dam Station and Railway Station. Rosedale and Upper Woodstock. Rusagornis and Waasis Station.	W. Goodill W. E. Hoyt	8 & 6 3	2		(from July 1, '88).	30 00 80 00 40 00
St. Andrews and Railway Station. St. Andrews and Wharf	J. Cummings			i	(and arrears)	80 75

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amou	nt.
St. Croix and Vanceboro' Railway						8	ets.
Otation	A. W. Sears	1	6	12 mou	ths		5 00
St. George and Railway Station St. Isidore and Tracadie	M. Parks P. LeBreton	1 11		12 do 12 do			1 50 3 00
'1. John and Grand Southern Rail-				1		•	
St. John and Intercolonial Railway	J. Moulson	1	6	.12 do		125	5*00
Otation	D. O'Connell	1	30	12 do	(and extra trips).	432	92
St. John and New Brunswick Rail- way Station	do	. 1	36	12 do	do	571	L 47
John Wharf and Ry Station.	Sundry persons		·	Special	trips	11	L 40
St. John and St. Martin s	A. E. Mallery D. Peacock	30		12 mon 12 do	ths	1,076	5 4 0) 00
26. John and Street Letter Royes	D O'Connell		18	12 do		489	90
St. Joseph and Railway Station St. Leonard Station and Van Buren,	J. E. Gaudet	1	12	12 do		84	1 00
0.8	W C Hammond	1		12 do			00
St. Martin's and Salmon River. St. Norbert and West Branch.	D Gallant	: 9 5	3 & 2				5 21 7 48
'' Olehhen and Calais 1. S	. I At H. Kawa	1		12 do			00
Railway Station	J. Green	1	. 6	12 do		69) 00
Stephen and New Brunswick			:	1			
Railway Station St. Stephen and Wharf.	do	. 1		12 do 12 do	(and extra trips).		2 02 1 20
Sackville and Intercolonial Ry. St'n	J. A. Bowes	1	24		(to Sept. 30, '88,		
a do do	J. J. Wheaton	1	24	6 do	and arrears from do		3-36) 00-
Sackville and N.B. & P.E.I. Ry. St'n	N. B. & P. E. I.		10				
	Ry. Co	i i	12	4 do	17 dys (to Dec. 31, 88).	9	37
Sackville and Second Westcock	C. Doo	8 5				49	9 00
Sackville and Upper SackvilleSackville and Wood Point	E Snowden	i b	1				3 72 4 48
Pallsbury and Railway Station	G W Gayner	600 ya	24	12 do		150	00 (
Salt Springs and Titusville		6	2	12 do		56	5 00
and Point Escuminac RouteShediac and Railway Station	H Sargent	1,					00
"Publish Road and Railway Station"	G Rodgerson	1}	42 3				3 40 3 00
" Pubbigan and Shippingan Island :	.I. (±000011))	12	2 s 1 w			60	00
South Bay and Railway Station. South Nelson and South Nelson Road	W Gorman :	100 yd 3	$\frac{12}{2}$	3 do	(from Jan. 1, '89)		00 3 17
Spruce Lake and Railway Crossing. Spruce Lake Station and Ry. Station	d. Rohmson	$\frac{1}{1^2}$		12 do		30	00
"Maniev and Williamshurg	T Sansom	$\frac{16}{6}$	1		(from Jan. 1, '89)		00 (5 00
Starkey's and Young's Cove Stymast Settlement and Upper Ne-	S. J. Thorne	11	1	12 do	************		3 00
Puec	P. Gratton	5	2	12 do		57	48
Summerfield and Upper Wicklow Sussex Corner and Sussex Vale	A Gee	$\frac{3}{2}$	$\frac{2}{6}$	12 do			00
Sussex Vale and Railway Station.	R. D. Boal	250 yd	30	12 do			3-68)-00
The Range and Wiggins	A F Barton	91	1	12 do		ou.	
		1	12	12 do 9 do	(to Dec. 31, '88).		3 00 2 50
Three Tree Creek and Ry. Station Tower Hill and Railway Station	a weamestion		6 2	12 do		15	5 00
2.4000 Merion and Railway Station	D. S. Dupnsea	50 yds	12	12 do			3 75) 00
racey Station and Traceyville	do ,.	4	1	12 do			00
Waweig and Railway Station	M. J. Greenlaw.	16	6	12 do			00
Welsford and Railway Station	t. I Wathem	į		12 do	(and outre tring)		00
Whittier's Ridge and Dumbarton Mail Route				[(and extra trips).	01	36
PIRII Route	. Hill	1	-2	9 do	(to Dec. 31, '88).	9	75

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Woodstock and Houlton, U.S Woodstock and Railway Station	F. W. Bull J. R. Tupper	14 1		12 months	\$ cts. 245 00 224 64 \$55,058 76

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

DETAIL of all payments for Mail Transportation in New Brunswick, made within the Year ended 30th June, 1889. CONVEYANCE OF MAILS BY STEAMBOATS AND SAILING VESSELS.

W. H. Smithson,
Accountum!.

Name of Railway.	Distance in Miles.	No of Trips per Week.			Period.	Amount.
Albert Railway	*	9	10 m	omths	10 months 27 days (to March 31, 1889)	\$ cts.
Caraquet Railway Co	33	2	6.	do	(to March 31, 1889)	1,343 85
Chatham Branch Railway	G	ส์เ	27	do		896 00
Flgin, Petitcodiac and Havelock Railway Co	77	9	15	do	•	673 92
Grand Southern Railway	825	9	15	do		2,036 76
Total Railway (within New Brunswick)	# 57 74	With varying frequency over different sections of the line, 15 (ခုခု	(to June 30, 1889) and arrears(to March 31, 1889).	61,168 75 673 92
New Brunswick Railway	308	With varying frequency over				
New Brunswick and Prince Edward Island Railway	%	different sections of the line. 12	უ ⊱	3 -8	17 days (to March 31, 1889)	24,428 423 36 56
Northern and Western Railway Co	116	· ·	∵ 1	do	(to March 31, 1889)	416 66
St. John Bridge and Railway Extension Co	13	As required12		ą		500 00
					Total	\$94,734 98

W. H. SMITHSON Accor

Detail of all payments for making and repairing Mail Bags, Mail Locks, &c., in New Brunswick, made within the Year ended 30th June, 1889.

Tradesmen's Names	Particula	rs of Disbursem	ents.	Amom	nt.
	Andrew Control of the	Julie SPE SPECT PRODUCTS		*	ets
S. & H. Borbridge	ail bags, labels and r	epairs for Post (Office Department.	446	91
R. S. Montgomery	do	do	do	183	20
doLe	ead rivet seals for Po	st Office Depar	tment	280	00
Pritchard & Andrews	ail bag labels	do		43	27
Miller Lock Co	ail locks and keys	do		7	20
E. Chanteloup	ail lock keys	do		2	50
G. Bailey Re	epairing mail locks	do		3	(0)
Smith & Egge Manufacturing Co M	ail locks and keys	do	,	7	(0)
D. Brown Re	epairing mail bags fo	r Post Office Ins	spector, St. John	7	56
Sun Publishing CoSt	encilling mail bags	do	do	52	2 20
D. Brown Re	epairing mail bag for	Postmaster, St	John	6	24
	T	otal		\$1,039	08

WILLIAM WHITE, Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF MANITOBA AND THE N-W. TERRITORIES.

Detail of all payments for Mail Transportation in Manitoba and the North-West Territories, made within the Year ended 30th June, 1889.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount
	! :		!				\$ et
Adelpha and Killarney	H. Mason	$\frac{20}{12\frac{1}{3}}$		12 : 12		ths	240 0
Alexander Station and Ry. Station.	J. F. Walker	125		12			$\frac{122}{30} \frac{2}{0}$
Almasippi and Campbellville	G, $Grev$	8	1	12	do		75 0
Archibald and Beaconsfield	G. Saunders	483		10		(to Jan. 31, '89).	575 - 0
Archibald and Mussellboro' Archibald and Mowbray	W. Shields	$\frac{17\frac{1}{2}}{26}$		$\frac{12}{12}$	do		$145 \ 0$ $555 \ 0$
Archibald and Mussemoord Archibald and Norquay Archibald and Railway Station Arden Station and Railway Station Ardpatrick and Asessippi Argyle and Stonewall Arnaud and Dominion City	G. Saunders	44	2	2	do		104 3
Archibald and Railway Station	W. C. Kennedy.	ł	12	12	do		150 0
Arden Station and Railway Station	M. E. Boughton	908		12	do		50 0
Aropatrick and Assessippi	A. Guthrie	9	Ftn'ly	12	do do		$\frac{110}{120} \frac{0}{0}$
Arnaud and Dominion City	J. M. Martineau	9	$\hat{2}$	3	do	18 days (from Dec. 14, '88)	120 0
	1					Dec. 14, '88)	62 1
Arnaud and Railway Station	do	25	3	8	do	8 days (to Dec. 8, '88)	51.5
Arrochar and Railway Station	R. McDonald	3	3	12	do	0, 00)	51 5 32 0
Arrow River and Beulah	J. Evans	. 22		12	do		180 0
Assassing and Russall	W Dunku	1 15		12			300 0
Ash Creek and Moropano Assiniboine and Poplar Point	G. M. Jackson	5 4		$\frac{12}{12}$			$\begin{array}{c} 52 \ 0 \\ 100 \ 0 \end{array}$
Aubigny and St. Agathe	F. Roy	7		12			125 0
Aubigny and St. Agathe Austin and Railway Station Aweme and Two Rivers	E. Broadfoot	18		12	do		30 0
Aweme and Two Rivers	C. Bellhouse	5	1	12	do		60 0
Baie St. Paul and Fortier Baie St. Paul and Railway Station.	J. H. Lavoie	7		12	do		80 0
Baie St. Paul and Railway Station.	E. L. Fairbanks.	30		12	do	4. To 97 1001	80 0
Balcarres and Indian Head	J. Morrison	27	1	9	do	(to Dec. 31, '88). from do	258 7 62 5
do do Balgonie and Loon Creek. Balgonie and Railway Station	B. Woolhouse	30	1	12	do		260 0
Balgonie and Railway Station	A. R. Dickson	1 8	12				60 0
samerino and binscarth	A. rietcher	1 4		$\frac{12}{12}$			80 0
Balmoral and Pleasant Home Balmoral and Stonewall	do	8		12			161 0 131 0
		1	_		C(O		101 0
Station	J. P. Parsons	19 & 3	2 & 4	12	do		377 0
Barnsley, Lintrathen and Railway Station Batoche and Boucher. Batoche and Saskatoon. Battleford and Fort Pitt &c. also	P. Parenteau	23	Ft. 7	12	do		125 0
				12	do		2 50 0
Calgary and Fort Saskatchewan.	Leeson & Scott	90, 198	Ftn'ly			1	
Description of Description of	E A Dunand		& wky	12	do		20,061 8
Beauséjour and Brokenhead Beaver Creek and Railway Station.	M I Thomason	14 51		$\frac{12}{12}$			130 0
Selleview and Virden. Senbecula and Wapella. Seulah and Elkhorn.	A. Mooney	353		12	do	(and arrears)	41 6 305 9
Benbecula and Wapella	D. Miller	8	1	12	do		40 0
Beulah and Elkhorn	G. H. Rowswell.	25 25	$\frac{2}{2}$	7	do	(to Oct. 31, '88).	273 0
do do	W. H. Gwillim	8	1	5 4	do	from do (from Dec. 1, '88)	195 0 17 3
Binsearth and Millwood	Mitchell & Buck-	.1				· 1	
Binscarth and Railway Station	nall	9	1	4	do	(to July 31, '88).	8 6
1 4	mid	16	4	6	do	(to Sept. 30, '88).	13 0
do do Binscarth and Shellmouth	A. G. P. Smellie A. P. W. Golds-	16	4	6	ao	from do	13 0
, 1	mid	27	2	2	do	(to May 31, '88).	69 3
do do	M. Whaley	27	$egin{array}{c} 2 \ 2 \end{array}$	3 7	do	(to Aug. 31, '88).	109 5
Sinsearth and Spy Hill	H. V. Bailev	21	1	8		from do (from Aug. 1, '88)	297 24 133 33
do do do	T. S. Rutherford	$12\frac{1}{2}$	1	3		(to June 30, '88).	39 0
do do	C. Hamilton	121	1	9		from do	93 7

Detail of all payments for Mail Transportation in Manitoba, &c.—Continued.

			· r.				
		Э.	Êź				
	Name	Distance Miles.	₹.			1) ')	
Name of Route.	of Contractor.	ŧ.≓	5 5			Period.	Amount,
	Contractor.	ΞŽ	No. of Trip per Week.				
		a. sustainment of the					\$ cts.
Bird's Hill and Cook's Creek	J. S. McLeod	175	2	3	mon	s. (to June 30, '88)	90 00
Bird's Hill and Rallway Station	C. Chudleigh		6	12	do	·······························	124 80
Birtle and Moosomin	G. Hume	37		12	do		570 00
Birtle and Railway Station Birtle and Seeburn	W.G.L.Porteous	20^{2}		$\frac{12}{12}$			97 48 130 00
Birtle and Warleigh	W. E. Howev i	8		9		(to Dec. 31, '88).	55 00
do do	J. C. Dudley	8	1	3	do	from do	15 00
Blackwood and Indian Head	J. A. L. Black-	19			а.	/f T 1 2000	10 50
Blythfield and Starbuck	wood	13 9	1	$\frac{3}{12}$		(from Jan. 1, '89)	18 50 80 00
Boissevain and Desford	A McKnight	24	$\frac{1}{2}$	12			125 00
Boissavain and Haarlin	IG. F. Brown	$18\frac{1}{2}$	2	12			300 00
Boissevain and Langvale	H. Hammond	23		12			275 00
Boissevain and Railway Station	A. McKnight	$12^{\frac{1}{8}}$	6	12 1		(to April 30, '88)	50 00 10 55
Boissevain and Wapahado do	J. Sheppard	12	. 1			(to May 4, '88)	1 37
Boissevain and Whitewater	do	18					1 01
			: -			ths, 27 days (from May 5, '88)	75 43
Boscurvis and Moosomin	W. A. Turriff	117 14	1	$\begin{array}{c} 12 \\ 12 \end{array}$	do	,	890 00
Bradwardine and Logoch Brandon and Minnewawa do do do do do	H M Sage	27	$\frac{1}{2}$	3	do	(to June 30, '88).	90 00 130 00
do do	W. D. Matheson	27	$\tilde{2}$	6		(to Dec. 31, '88).	260 00
, do do	R. Crompton	27	2	3	do	from do	130 00
Brandon and Olivedale. Brandon and Pendennis do do do	D. Reed	12	2	3	do	(from Jan. 1, '89)	32 50
do do do	w. J. Sargent	$\begin{array}{c} 17 \\ 20 \end{array}$	1	9	do	(to Dec. 31, '88). from do	97 50 48 00
Brandon and Rapid City	D. McNaught	20	6	9		(to Dec. 31, '88).	900 00
_ do	A. Stewart	20	6	3	do	from do	187 50
Brandon and Railway Station		$25\frac{1}{3}$	14	12	do		334 80
Brandon and SourisBrandon and Two Rivers	W. Talford	$\frac{20\frac{5}{2}}{33\frac{1}{2}}$		12 12	do		650 00 680 00
Bridge Creek and Railway Station.	R. Campbell			12	do		117 00
Brierwood and Roden.	D. Aitken	6		12	do		50 00
Broadview and Railway Station	J. Clementson	30g		12	do		100 00
Brookdale and Carbery do do	H. Glass	20 20	1	3 9	do	(to June 30, '88). from do	37 50
Brunton and Railway Station	W Shepherd, sr.	3	1	9	do	(from July 1, '88)	67 50 19 50
Burnside and Railway Station.	W. A. McIntosh	$5\frac{1}{2}$	2	12	do		180 00
Butterfield and Workman	W. A. W. Smith	22	. 1				175 00
Cadurcis and Minnedosa. Calf Mountain and Thornhill.	W. A. Smith	6 6	$\frac{2}{2}$	12 12			156 00
Calgary and Mosquito Creek	Stewart Ranche	56		12			130 00 1,080 36
	Co					4	1,000 00
Calgary and Railway Station	G. C. King	10	12	12	do J.,	/4- 3) - 91 2000	300 00
Camille and Trehern Ry. Station	J. Palmer		$\frac{2}{2}$	9		(to Dec. 31, '88).	150 00 52 00
Carberry and Railway Station,	H. A. Perley	Į.	14	12	do		36 48
Carborry and Wallwood	D. W. Newton.	$16\frac{\Gamma}{2}$	2	3	do	(to June 30, '88).	62 50
do do	G. R. Black	141		9	do	from do	171 75
Uselingville and Oak River	J. L. Fraser	17 17	1	3 9	do	(to June 30, '88).	60 00
do do Carlyle and Clare	T Hislon	13	1	3		from do (to June 30, '88).	131 25 37 50
do do	D. McEachen	13	i	6		(to Dec. 31, '88).	49 00
Carlyle and Dennington	W. D. Kisbey	8	1	12	do		83 20
Carlyle and Percy	D. McEachen	1.8	1	3		(from Jan. 1, '89)	33 92
Carman and Pomeroy	R Squires	8	$\frac{1}{2}$	$\begin{array}{c} 12 \\ 12 \end{array}$	do do		80 00 104 00
Carnduff and Sourisford	J. D. Bride	40	î	12	do		396 00
Caron and Railway Station	J. G. Macdonald	1	6	12	do		30 00
Carsadale and Regina	E. Carss	22	1	12	do		170 00
Cartwright and Railway Station	T. S. Menary	14	6		do		52 00
Castleavery and Shellmouth Chater and Railway Station			1 12	12 12	do do		117 00 62 60
Clandebove and Selkirk	A. M. Muckle	8	2	3	do		40 00
do do	S. H. Ward	8	2	9		from do	97 50
	10	5					

DETAIL of all payments for Mail Transportation in Manitoba, &c.—Continued.

Name of Route.	Name of Contractor,	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
		1				s ets.
Clarkleigh and Lundyville	J. Clark	18	1	12 me	onths	130 00
Clarkleigh and Reaburn	: do	40	. 2	12 d	ο	328 20
Clarkleigh and Seamo	R. Rogers	5			0	39 00 78 00
Cook's Creek and Winnipeg	G. P. Bliss	22	2	9 d	o (from July 1, '88)	$225\ 00$
Craigilea and Roseberry Creeford and Neepawa	A Kelso	1.9	1	12 d 12 d		104 00
Crewe and Fort Ellice	J. Ellis	6			0	365 00 120 00
Crystal City and Railway Station	R. Rollins			12 d	υ	60-00
Cypress River and Ry. Station Cypress River and St. Alphonse		$\cdot \cdot \cdot \cdot \mathbf{s}^{\mathbf{s}}$	$\frac{4}{2}$		0	26 00 130 00
						100 00
Dalton and Catching Post Daly and Virden	J. Parke	118		12 d		30 00 3 09
do					ys (to April 15, '88). inths 15 days (from	ล 09
		-	i .	1	April 14, '88).	83 23
DeClare and Welwyn Deloraine and Napinka	S. Leach	$\frac{7}{23}$	1	12 d 9 d	o (to Dec. 31, '88)	74 00 175 50
Deloraine and Railway Station	R. D. Martin	1,4	6	/12 d	0	50 00
Deloraine and Sourisforddo do	A. Cochlan				o (to Dec. 31, '88)	351 00 128 70
Deloraine and Waneche	A. Stewart.			12 d	o from do	156 00
Deloraine and West Brenda	S. Leach	32	•		o (from Jan. 1, 89)	75 00
Dominion City and Emerson	C. Wintman	10	3	3 d	o 21 dys (from Dec. 11, '88)	95-80
Dominion City and Ry, Station	R. Taylor	1	12	8 d	8 days (to Dec. 8, 88)	55 00
Donore and Railway Station	C. Whiteland	17			ο	57 20
Douglas Station and Ry. Station Drumconnor and Railway Station	T. E. Greenwood				o	39 00
Dunbow and Okotoks				12 d		43 65 133 25
Dunmore Junction and Ry. Station	W. B. Higginson		24		o (to June 30, '88).	27 00
do do	W. A. Kellier	Š	24	9 d	o from do	81 00
East Selkirk and Railway Station.		3	6	3 d	to June 30, '88).	25 00
do do	J. D. Fraser D. McLeod, jr	4	6 6	5 de	o (to Nov. 30, '88). o from do	41 67 33 33
East Selkirk and Selkirk	R. Comber	2	3	12 de		75 00
Edgeley Farm and Qu'Appelle Station	W. C. Cameron	65	2	12 de	·	200 00
Edmonton and St. Albert	S. Moran	$\tilde{9}^2$		12 de		200 00
Elkhorn and Kola	C. W. Wain- wright	18	1	3 d	. (to Inno 20 199)	o9 75
Elkhorn and Lippentott	W. F. Longman.	20	i		o (to June 30, '88). o (from July 1, '88).	23 75 108 75
Elkhorn and Railway Station	J. McLeod			12 de	·	78 00
Elphinstone and Strathclair Station Emerson and Gauthier	J. H. Vanwhort.	$\frac{9\frac{1}{2}}{19}$	$\frac{2}{2}$	12 de 8 de	(to Nov. 30, '88).	123 76 $223 33$
Emerson and Gretna		18	6	3 d	22 dys (from Dec. 10, '88)	
Emerson and Letellier	I H Vanwhort	15}	2	4 de	10, '88)	265-79 91-09
Emerson and Green Ridge	do	18	ĩ	3 de	(to June 30, '88)	45 50
Emerson and Railway Station	C. Whitman	3	6&24	8 de	o 8 days (to Dec.	5.4F .05
Emerson and Stuartburn	J. H. Vanwhort.	291	1	9 de	8, '88) (from July 1, '88)	165 21 253 50
Emerson and West Lynne			12	8 do	8 days (to Dec.	
Erinview and Stonewall	A J Roll	25	1	9 de	8, '88)	129 11 124 98
do do	W. E. Crawford.	25	1	3 de	from do	43 75
Esterhaz and Ohlen	N. Johanson J. Vas		1	11 de	(to Feb. 28, '89).	44 00
do do	υ. γ as	7	1	1 do	from do	4 16
Fairfax and Souris		9		12 de		100 00
Fairmede and Wapellado do	H. A. Hall	16 16	1		to Dec. 31, '88)	136 50 31 2 5
Ferndale and Hillburn	W. Moran		1	12 de		52 00

DETAIL of all payments for Mail Transportation in Manitoba, &c.—Continued.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per, Week.		Period.	Amount.
						\$ cts.
Fernton and Winnipeg	C. F. Bridgman.	4	3	9 m	onths (fromJuly1, '88)	93 75
Fleming and Railway Station Fort Alexander and Peguis	M. Morrison M. Fontaine	50	12 Ftn'ly		lo	60 00
Fort Francis and Rat Portage	C. Lewis	160	Ftn'ly	12 c	lo	182 00 960 00
Fort McLeod and Lethbridge	F. Strong Stewart Ranche	30	3	12	lo	750 00
	Co	28	1		lo	686 24
Fort McLeod and Pincher Creek			$\frac{1}{2}$		lo (to June 30, '88).	142 50
do do Fort Saskatchewan and Pakan	M. Brouillette Borwick & Eras-	32	1 2	"	lo from do .	356 25
	mus	55	Ftn'ly		lo	650 00
Gladstone and Golden Stream Gladstone and Mekiwin					lo	78 00 225 00
Gladstone and Plumas	L. A. Dunning	20			lo	160 00
Gladstone and Railway Station	J. L. Logie	1			lo	100 00
Gleichen and Railway Station Glenboro' and Grund	V. J. Beaupre S Christopherson	5^8	12		lo	60 00 100 00
Glenboro' and Railway Station	J. Duncan	1 1	4		lo	30 00
Glenboro' and Sittakaw	F. W. Lipsett	4	2	6 da	ys (to April 6, '88)	1 71
Glenboro' and Stocktondo	J. Dowd		$\begin{array}{c c} 2 \\ 1 \end{array}$		lo (to Nov. 30, '88). lo (to Jan. 31, '89).	69 33 26 00
do do	A. F. Andrews.	9	2		lo from do .	26 00
Glendinning, Pilot Mound and Rose- berry	J M Fraser	201 22	1	12	lo	450 00
Gonor and Railway Station	J. Gunn	3	2	12	lo	100 00
Grandin and Wingard	C. Nolin	17	1	4 0	lo (from Dec. 1, 88).	46 66
Green Ridge and Stuartburn Grenfell and Railway Station		111		3 c 12 c	lo (to June 30, '88).	31 25
Gretna and Reinland	W. Esau .	17			lo	78 00 165 00
Gretna and Railway Station	J. R. Hoffman	1	14&18		lo	159 00
Griswold Station and Ry. Station Griswold Station and Viola Dale	G. Lindsay	425	12		lo 26 dys(to Jan. 26,	80 00
		į į		ĺ	1889)	476 16
do do	G. E. Brown	421		2 0	lo (from Feb. 1, '89)	74 16
Hanlan and Meadow Lea Harrowby and Railway Station	S. Blane	61			lol	52 00 25 00
Hayward and Qu'Appelle	H. H. Hayward.	12	1	3 (lo (to June 30, '88).	32 50
do do	do	12	3	9 0	lo from do .	60 00
Helmsdale and Winnipeg High Bluff and Railway Station	J. A. Drummond	1			lo (to June 30, '88).	20 83 70 00
Holland and Railway Station	J. F. Holland	ļ <u> </u>	4	12 d	lo	40 00
Holmfield and Railway Station	T. S. Young	18	6	12 c	lo (4. Cart 20 100)	60 00
Hun's Valley and Minnedosa do do	M. Raby	18	i	6 6	lo (to Sept. 30, '88). lo from do	71 25 64 50
Icelandic River and Peguis	S. Jonasson	65	Ftn'ly	3 6	lo (to June 30, '88).	93 75
_ do do	S. Sigurdson	60	do 12		lo from do .	258 75
	W. H. Cobb H. Hamilton	128	1		lo	80 00
					and arrears)	47 32
	H. Sturton	12	1 12		lo (from do	19 50
Indian Head and Railway Station. Joly and Otterburne	E. Vinette	68	3		lo (to June 30 , '88).	156 00 33 00
do do	A. Lafrance		3&6	5 d	lo 8 dvs (to Dec. 8. '88)	30 24
do do	do	6		, L d	lo (to Jan. 31, '89)	4 16
Joly and Ste. Agathe	$\begin{array}{c} \text{do} & \dots \\ \textbf{E. Vinette} & \dots \end{array}$	15 34	2		lo (to Jan. 31, '89) lo from Feb. 1, '89. lo (to June 30, '88).	20 83 43 75
do do	J. Cadotte	36	1	9 6	lo from do .	90 00
Kaministiqua and Railway Station.	S. A. King	998			lo (from Dec. 1, '88)	8 33
Kamsack and Wallace Keewatin and Railway Station			Ftn'ly 12		lo (from Nov. 1, '88) lo	37 91 312 00
Kelloe Station and Railway Station.	J. Higham	ļ.	4	12 c	lo	31 20
Kemnay and Railway Station	J. A. Scott	16			lo	30 00
Killarney and Railway Station Killarney and Rowland	J. Russell.	$16\frac{\$}{4}$	6 2		lolo	52 00 234 00
Kinistino and Prince Albert	R. Pritchard	$48\frac{1}{2}$			lo (from Jan. 1, '89)	
	10	7 -				

Detail of all payments for Mail Transportation in Manitoba, &c.—Continued.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amount.
Kinistino and Puckalın	R Pritchard	25	Ftn'ly	9 mo	onths (to Dec. 31, '88)	\$ cts.
Kinosota and Westbourne	$C. Anderson \dots$	65	do	12 d	o	248 00
La Broquerie and Winnipeg Langenburg and Railway Station	P. Ulrich	1			0	574 00 25 00
Langvale and Ninette	J. Overend	8	1	12 d	o	104 00
Larivière and Railway Station Lebret and Qu'Appelle	J. P. Magnan.	45	$\frac{6}{2}$		o	52 00 104 00
Lennox and Montefiore	H. Mantz	14&8	1	12 d	o	123 50
Lethbridge and Railway Station	J. D. Higinboth-	18	12	4 d	o (to July 31, '88).	86-66
	am	1	12		o from do	166 66
Lintrathen and Roseisle Lowestoft and Morden		$12\frac{5}{2}$	1		0	88 40 160 00
MoGregor Station and Ry Station	T R Vardon	18	6	12 d	o	40 00
McGregor Station and Ry. Station. McGregor Station and Wellington.	W. J. Thompson	88	1	12 d	o	72 80
McLean and Railway Station Maple Creek and Railway Station	J. B. Davis	1 1			o o	150 00
Marieton and Regina	S. Beach	1	1	12 d	0	156 00 453 04
Marieton and Strassburg Marlborough and Moose Jaw	A. Christoph	16 14	1		0	125 00
Marney and Newdale	S. B. Baxter	7	1		0	104 00 46 80
Marringhurst and Otenaw Medicine Hat and Railway Station.	A. W. Playfair.	15	1		o	124 80
Medora and Princess	W. Cosgrove	58	12 1		o	187 20 19 50
Medora and Princess	W. A. Dolmage.	20	2	12 d	0	400 00
Melita and Sourisford		10 6	1	5 d	o (to Aug. 31, '88). o (from Jan. 1, '89)	48 75 18 75
Miami and Morden	J. G. Blair		2	12 d	ο	215 00
Millbrook and Queen's Valley Millwood and Spy Hill	H. V. Bailey	12	1 1		o (from July 1, '88) lo (to July 31, '88)	35 10 43 33
Minnedosa and Railway Station	T. Boyd	$\frac{1}{2}$	8	12 d	o	84 50
Minnedosa and Scandinavia Moffat and Wolseley	E. A. Banbury.	$\frac{20}{9}$	$\frac{1}{2}$		o	200 00 124 00
Moline and Rapid City	D. McNaught	8	1	12 d	o	120 25
Montgomery and Whitewood Station	T. B. O'Donohue	20	1	12 d	lo	182 00
Moose Jaw and Railway Station	J. A. Whitmore.		12	12 d	o	200 00
Moosomin and Railway Station Moosomin and Redpath	J. Daniei J. Deavitt	418	12		o	125 00 249 00
Morden and Railway Station	J. M. Grover	18	12	5 d	o 6 days (to Sept.	
do do	J. H. Dunsford	l l	12	6 d	6, 388)lo 24 days (from	54 40
N. 1	I Staddom		0		Sept. 6, '88)	70 40
Morden and Stodderville Morris and Railway Station	W. A. Russell	10	$\frac{2}{12}$		o o	176 80 40 00
Morris and St. Jean Baptiste	P. Parenteau	6	0		lo	135 00
Neepawa and Oberon	J. McIntyre	13	2	3 d	lo (to June 30, '88).	78 00
do	S. Farrell	13 12	2 2	9 d	o from do	156 00
Neepawa and Orange Ridge Neepawa and Railway Station	J. McIntyre	3	1 8		lo	189 00 26 00
do do	A. M. Dalton	7		9 d	lo from do	81 90
Neepawa and Salisbury Nelson and Opawaka		81	1		lo	156 00 75 40
Newdale and Railway Station	J. L. Čook	7	8	12 d	lo	67 00
Newdale and Raven's Glen Niverville and Otterburne		\	1		loal trips	52 00 2 50
Niverville and Railway Station			12	3 mos	s. (to June 30, '88)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
do do	F. J. Alden	1	12	5 d	lo 8 days (to Dec.	
Niverville and Royal		91	1		8, '88)	10 93
Norman and Railway Station	J. B. Davies	1	6	. 9 d	lo (from Feb. 1, '89) lo (to Dec. 31, '88).	26 00 74 90
- do - do	J. B. Nadon	17	6		lo from do	30 00

Detail of all payments for Mail Transportation in Manitoba, &c.—Continued.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		•	Period.	Amount.
							\$ ets
Qakburn and Shoal Lake	J. A. Hamilton.	9,				ths	156
Jak Lake and Railway Station	G. D. Miller	148-17		$\frac{12}{12}$	do		78 (
Oakland and Portage la Prairie Oak River and Tatonka	J. Reid	8	i	3	do	(to June 30, '88).	$egin{array}{c} 127 & 3 \ 26 & 6 \end{array}$
do do	J. H. Stewart	- 8	1	9	do	from do	67
Orrwold and Raven Lake	J. Brownridge	$\frac{12}{7}$	$\frac{1}{2}$	$\frac{12}{12}$	do do		104
Ossowo and Poplar Point	J. L. Ewing	18	$1\overset{2}{2}$	8		8 days (to Dec. 8,	159
				1		'88)	17
Otterburne and Royal	J. Rougeau	17	2	3	do	21 days (from Dec. 11, '88)	49
Parkin and Wapella	W. Archibald	12	1	12	dο	Dec. 11, 66)	43 75
Parklands and Ou'Appelle	T. Murray	11	1	12	do		75
asqua and Railway Station	H. U. Rorison	$8^{\frac{1}{8}}$	$\frac{6}{1}$	$\frac{12}{12}$	do do		$\frac{72}{57}$
Peguis and Poplar Park	J. McNabb	$\frac{61}{62}$		12			57 150
Penrith and Virden	W. F. Scarth	15	. 1	12	do		166
Pense and Railway Station	. 'A. Blair	: 🛔		12	do		
Pheasant Forks and Wolseley Pigeon Lake and Winnipeg			$\frac{2}{2}$	$\frac{12}{12}$	do		374 545
Pilot Mound and Railway Station.	J. M. Fraser	1 1	6	12	do		
Coplar Point and Railway Station.	. G. M. Jackson	1 . 3		12	do		
Portage la Prairie and Ry. Stations Portage la Prairie—C. P. Ry. and	. W. W. Miller	1 6 4	12&1	1 1Z	do	•••••	487
M. and N. W. Rv. (transfer)	,⊦, do	150 y's		. 3	do	(from Jany. 1, '89	12
Prince Albert and Puckahn	.:R. Pritchard	231		9		(to Dec. 31, '88)	170
Prince Albert & Qu'Appelle Station	R Johnston	253 18		$^{-12}$	do		7,900
Qu'Appelle and Qu'Appelle Station Qu'Appelle Station & Ry. Station.	S. S. Nelson	1		12			470 140
Qu'Appelle Station & Ry. Station. Rat Portage and Railway Station.	W. Oliver	1 4		12			250
Raven Lake and Shoal Lake Reaburn and Railway Station	A. H. Scouten	***	12 &1	12 1 19	do		
Reaburn and Woodlands	J. Porteous	134	2	3	do	(to June 30, '88).	168 24
do do	W. W. Keeling	13	2	8	dο	(to Feb. 28, '89)	
do do	M. Slater	13	12	$\begin{array}{c c} 1 \\ 6 \end{array}$	do do	from do (to Sept. 30, '88)	12
Regina aad Railway Stationdo do	C. Irvine	1	12	6	do		156 156
Reinland and Schauzenfedt	B. Loewen	9	1	12	do		70
Richland and Winnipeg	P. Blondin	$\frac{404}{375}$		3 9		(to June 30, '88) from do	161
do do Rossburn and Salsgirth	R. R. Ross	16					375 200
Rosser and Railway Station	P. J. Sherlock		, 12				30
Rounthwaite and Stratherne	. G. Stewart	. 4					100
te. Agathe and Winnipeg t. Boniface and Winnipeg	. M. Petrim	. 1					285 350
Saltoneta and Dailway Station	W. Walley	. 1 - 1	1		do	(from Dec. 1, '88)	1 6
Selkirk and Winnipeg	, J. McNabb	ZZ					1
Shadeland and Thornhill Shoal Lake and Railway Station	M. W. Thompson	1 1	§ 6				160 45
Sidney and Railway Station	Tr. Babb	. 1 - 1	$\frac{C}{2}$ 2		do		
Silver Spring and Railway Station	R. Armstrong	. 3	2 2 3	$\begin{vmatrix} 12 \\ 3 \end{vmatrix}$			
Sintaluta and Railway Station	C. G. Booth		3				8 24
do do Solsgirth and Railway Station Solsgirth and Railway Station	. J. C. Anderson.	.	8	12	do		50
			, 1		do	(to Dec. 31, '88)	52
Starbuck and Railway Station Stonewall and Railway Station	C. V. Tottle	. 1	6				
Stonewall and Wavy Bank	J. Graham	. 8	1	12	do		
Stonewall and Wavy Bank Stony Mountain and Ry. Station Strathclair Station and Ry. Station	. A. Perry	. 1	12				100
Strathclair Station and Ry. Station Summerberry and Railway Station	I. W. L. McInnes		8				40 60
Swift Current and Rv. Station	W. G. Knight.	. 1	i 12	12	do		
Swift Current and Ry. Station Thornhill and Railway Station	. W. Bradley	10	12	112	do		39
Touchwood Hills and Wishart	. J. Hall	$\overset{1}{0}\overset{10}{9}$	1 1	. 12	do		80

DETAIL of all payments for Mail Transportation in Manitoba, &c.—Concluded.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Period.	Amount.
m at Marchite and Dec Sheling	D St. II	- 01) (1 G 1 G 100)	\$ cts.
Turtle Mountain and Ry. Station do do	C. F. Keller		$\frac{2}{2}$	3		hs (to Sept. 30, '88)	52 00
do do	P. S. Keller	4	3	3	do	(to Dec. 31, '88) from do	26 00 39 00
Vermilion Bay and Ry. Station		ī	12	8	do	(to Nov. 30, '88).	39 U 16 00
	W. Montgomery		12	ĭ	do	(to Dec. 31, '88)	2 00
	J. A. Crawford	70	12	3	do	from do	6 00
Virden and Railway Station		10	12	12	do		78 00
Wallace and Whitewood Station	T. G. Lyons	103	1	12	do		
Wapella and Railway Station Westbourne and Railway Station	E. P. Benoit Smalley & Chant-	18	12	12	do		87 00
• • • • • • • • • • • • • • • • • • • •	ler	1	12	12	do		100 00
Whitemouth and Railway Station	J. S. Corregan	3		12	do		130 00
Whitewood Station and Ry. Station.	T. G. Lyons	Í	12	12	do		78 00
Winnipeg and Railway Station Winnipeg—Transfering Mails at	J. Sheppard	<u> </u>	Asreq	12	do		994 00
Railway Station		1		12	do		300_00
Winnipeg and Street Letter Boxes			21	12	do		730 00
Wolseley and Railway Station		. 1	12		do		200 00
Wood Bay and Railway Station	M. Campbell	$6^{\frac{1}{2}}$	3	12	do		65 00
Woodlands and Woonona				12	do		52 00
Woodside and Railway Station	N. Morrison	$1\frac{1}{2}$	1	12	do		30 00
						Total	\$79,147 92

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

99 A IGIU		Sessiona	1 1 apers (No. 15.)	
the rear	Amount.	\$ cts. 71,128 40 3,912 22 2,078 59 \$77,119 21	eneral.	
Mail Transportation in Manitoba and the North-West Territories, made Within the Tear ended 30th June, 1889. CONVEYANCE OF MAILS BY RAILWAYS.	Period.	12 months (to 31st March, 1889)	WILLIAM WHITE, Deputy Postmaster General.	
oortation in Manitoba and the North ended 30th June, 1889. CONVEYANCE OF MAILS BY RAILWAYS.	No. of Trips per Week.	With varying frequency over different sections of the line.		
n in Man nded 30tl ANCE OF]	Distance in Miles.	1,373 1,252		
DETAIL of all payments for Mail Transportation e CONVEY.	Name of Railway.	Canadian Pacific Railway (within Manitoba)	W. H. Smithson, Accountant.	

Detail of all payments for making and repairing Mail Bags, Mail Locks, &c., in Manitoba and the North-West Territories, made within the Year ended 30th June, 1889.

Tradesmen's Names.	Particulars of D	is bursements.		Amount.
S. & H. Borbridge	Mail bags, labels and repairs for	8 ets. 149 04		
R. S. Montgomery	Mail bags, rivet seals and repairs	do		183 10
G. Bailey	Repairing mail locks	do		8 00
Smith & Egge Manu. Co.	Mail locks and keys	do		7 00
E. Chanteloup	Mail lock keys •	do		2 00
	•	Total		\$349 14

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF BRITISH COLUMBIA.

Detail of all payments for Mail Transportation in British Columbia, made within the Year ended 30th June, 1889.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
						\$ cts
Agassiz and Ry. Station.			5		onths	60 00
Alberni and Sayward Alberni Aldergrove and Mount Lehman Alkali Lake and Clinton Anthracite and Catching Post. Ashcroft and Ry Station Ashcroft Station and Barkerville. Ashcroft Station Clinton Barker	P. Jackman	1 5	i		o (and arrears) lo	75 00 100 00
Alkali Lake and Clinton	N. Hanlon	80	1&f'lv	12 d	lo	1,000 00
Anthracite and Catching Post	A. Morgan	$\frac{1}{2}^{\epsilon}$	12	12 d	lo lo	$\frac{50}{105} \frac{00}{00}$
Ashcroft Station and Barkerville	B. C. Express Co	279	ī	1 d	o (to June 30, '88).	1,545 00
21sherore istation, Chinesi, Darker	1	1				
ville and Lillooet Ashcroft Station and Lillooet	do do	$\begin{vmatrix} 250, 47 \\ 77 \end{vmatrix}$	3&1 1		o (from July 1, '88). lo (to June 30, '88).	22,000 00 455 00
Asheroft Station and Rv. Station	T.G. Kirkpatrick	200v's	12		lo (to June 30, 38).	45 00
do do	W. B. V. Bailey	. do	12	9 d	o from do	135 00
Banff and Ry. Station	R. Frank	. 2	12	2 d	lo 8 days(to June 8, 1888)	34 91
do do	R. G. Brett		12	12 d	lo	260 00
do do	F. Littler	50	F't'ly	12 c	lo	700 00
Beaver Point and Burgoyne Bay	A. McLennon.	10	1	12 d	lo	150 00
Burgoyne Bay and Wharf Burrard Inlet and Ry. Station	C Black	2000	\mathbf{Asreq}	12 d	lo lo	50 00 60 00
Canmore and Ry. Station	J. Chenier	. 1	12	12 d	lo	60 00
Cedar and Nanaimo	J. Hill	. 10	1		0	80 00
Chemainus and Ry. Station	H. Croft	1	6	$\begin{array}{c c} 11 & d \\ 1 & d \end{array}$	lo (to Feb. 28, '89). lo from do	110 00 10 00
Canmore and Ry. Station Cedar and Nanaimo Chemainus and Ry. Station do do Chilcoten and Soda Creek.	J. Salmon	404	F't'ly	1 0	o nom do	10 00
	ļ		& m'ly		ο	268-75
Chilliwack and Ry Station	J. F. Harrison.	$\frac{6\frac{1}{2}}{3}$		12 d 12 d	o o	650 92
Chilliwack and Sardis. Chilliwack and Sumas.	D. McGillivray.	. 6	5		o (from Mar. 1, '89)	100 00 22 00
Chilliwack and Wharf Cobble Hill and Ry. Station	C. P. Navigat. Co	11	3	Seaso	n 1888	32 50
Cobble Hill and Ry. Station	H. T. Porter	40yds	6 7	12 mg	onths	24 00
Cochrane and Ry. Station	G. T. Corfield.	1 1			o o	150 00 180 00
Corfield and Ry. Station Cowichan and McPerson's Station	H. H. Welch				al trip	1 50
Cranbrook and Donald	E. Bray	200	F'tl'y	1	41- (4 A 90 100)	
Cranbrook and Golden	F P. Armstrons	200	a m iy do		onth (to Apr.30,'88). o (from May 1, '88).	150 00 907 50
Donald and Ry Station	G H Preswell	1	12	12 d	0	240 00
Douglas Lake and Quilchena Duck and Pringle and Ry. Station.	J. B. Greaves	22		5 d	o (from Nov.1, '88).	62 50
			6 6	12 d 12 d	lo	60 00 180 00
Elgin and New Westminster	D. Stewart	12	ï	12 d	lo	120 00
Emory and Yale	F. W. Geisler	5	1	12 - d	lo	50 00
East Wellington and Nanaimo Elgin and New Westminster Emory and Yale. Enderby and Sicamous Enderby, Sicamous and Vernon. Esquimalt and Victoria	A. Schubert	36 26&24	1 w. 2s. 2&1		lo (to Aug. 31, '88).	75 00
Esquimalt and Victoria	W. G. Bowman	3	24	3 6	lo (from Sept. 1, '88) lo (to June 30, '88).	315 00 100 00
			91	9 d	lo from do	225 00
Gabriola Island and Wharf	A. Shaw, jr	100	2		lo	60 00
Goldstream and Ry. Station	J. Phair	400y s	12	12 d	lo lo	120 00 120 00
Goldstream and Ry. StationGranite Creek and Lower Nicola	W. T. Thompson	i 65 ³	Mily	12 6	lo	240 00
tranite Creek and Princeton	l do	1 12	1	4 6	lo (from Dec. 1, '88)	20 00
Hall's Prairie and New Westminster Harrison River and Ry Station	J. Barker	$\begin{array}{c c} 23 \\ \end{array}$	1		lo	275 00
Harrison River and Ry. Station Hope and Ry. Station	J. Wardle	2^2	6		lo	60 00 159 50
uncillewaet and Rv. Station	W. I. Arthertor	ો∶ કું	12	12 c	lo	40 00
Johnson's Landing and Matsqui	R. C. Garner	. 5 ₅			lo	180 00
Kamloops and Okanagon Mission Kamloops and Ry. Station	A. J. Venn	. 1	1 12	12 d	lo	1,200 00 15 00
do do	E. H. Jones	î	12	11 m	onths, 15 days (from	
	1	18	i	1	April 15, '88)	350 00

DETAIL of all payments for Mail Transportion in British Columbia, made within the Year ended 30th June, 1889—Concluded.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.		Amoun	ıt.
							ets
Kamloops and Spence's Bridge	J. Clark	100	1	: 12 moi	nths	1.800	00
Kananaskis and Mail Catching Post				12 do		45	00
Koksilah and Railway Station	C. Crosier	30 y's	6	12 do		40	
Langley and Railway Station	O. J. J. Wilkie	4				296	
ytton and Railway Station	L. Cuvreau	- 3	3 & 12			105	
McPherson's Station and Ry. Station		70 y's	3			40 180	
Maple Bay and Railway Statiou Matsqui and Mount Lehman						220	
Matsqui and Railway Station	J. Trethewev	1 1				180	
Metchosin and Victoria	J. Parker	254		12 do		250	00
Millward and Railway Station	J. McDougall	3	2	12 do		100	00
Morley and Railway Station			12	5 do	17 days (from Oct.	18	25
Sanaimo and Railway Station	I Conner	1 1	24	12 do	15, '88)	300	
Nanaimo and Nanway Station	W. Armstrong	54	1	12 do		619	
Nanaimo and Sayward Alberni New Westminster and Port Moody.	W. E. Falls.	6	6		(to June 30, '88).	150	
New Westminster and Ry. Station.	A. Heffren			12 do		180	00
New Westminster and Vancouver	G. R. Raymond	12				465	
do do		12	6)	600	
North Bend and Railway Station.					•	24	
North Saanich and Victoria	H. Simpson	24 85				445 414	
Okanagon Mission and Osoyoos	T Turnell		Mthly 1	6 de		100	
Otter Point and Victoriado do do	E Gordon	30	1		from do .	100	
Osoyoos and Rock Creek	J. Brent	27	Mthly		(from May 1, '88)	220	
Port Hammond and Ry. Station)		
Port Haney and Railway Station.	D. Docksteader	50 v's	12)	60	
Port Moody and Mail Catching Pos Quadra and Wharf	t J. Tays	. 1	12				
Juadra and Wharf	R. T. Swan	- 4	, 1)	32 180	
Quamichan and Railway Station			6 12))		
Revelstoke and Railway Station Roger's Pass and Railway Station.	I M. Cowoll	150 22))		
Salt Spring Island and Wharf	J Broadwell	3	\mathbf{Asreq}			150	
Savona's Ferry and Railway Station	J. H. Macnab.	30 y's		12 de		40	
Sea Island and Vancouver	H. C. Magee	. 10	3	7 de	(from Sept. 1, '88)	140	0
Shuswap and Railway Station	. A. McBryan	. 200 y's	6	12 do)	60	
Sicamous and Railway Station	. S. A ppleb y.	. ¦400 y's	1.2) ,	120	
Somenos and Railway Station	. J. Kier	. 1)	180	
Spence's Bridge and Ry. Station	J. Murray	4	12 5)	100 414	
Sumas and Railway Station,	D. W. Miller	14	í)	124	
Sumas and Upper SumasVancouver and Railway Station	H A Berry	1 1		12 de		280	
Vancouver and Street Letter Boxes	J. J. Tiernev		6		(from June 1, '88)		
Vancouver and Wharf	H. A. Berry		12)	190	
do do Vietoria and Railway Station do do	. do		1		d trips	37	
Victoria and Railway Station	. W. G. Bowman		21		nths	292	
do do	. J. Ecderslex	• †	§1		d trip	1) õ
Victoria and Street Letter Boxes Victoria and Wharf			. 12	a mo	s. (from July 1, '88)	316	, 0
r ictoria and whari	Co		12	12 de	0	360) (1
Wellington and Railway Station			12)	120	
Whomock and Railway Station			$\tilde{1}$			60	
Yale and Railway Station	. W. Teague	. 100 y				60	0
•	1	1	1	1			

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

DETAIL of all payments for Mail Transportation in British Columbia, made within the Year ended 30th June, 1889. CONVEYANCE OF MAILS BY STEAMBOARS AND SAILING VESSELS

Deputy Fostmaster-General.

W. H. Smithson, Accountant.

DETAIL of all payments for Mail Transportation in British Columbia, made within the Year ended 30th June, 1889.

CONVEYANCE OF MAILS BY RAILWAYS.

Name of Railway.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Canadian Pacific Railway (within British Columbia) Esquimalt and Nanaimo Railway	650 <u>1</u> 78	6	12 months (to 31st March, '89). 12 do do Total	3,893 76

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

DETAIL of all payments for making and repairing Mail Bags, Mail Locks, &c., in British Columbia, made within the Year ended 30th June, 1889.

Tradesmen's Names.	Particul	ars of Disbursements.	Amount.
			\$ ets.
S. & H. Borbridge	Mail bags, labels and re	pairs for Post Office Department	203 90 15 50
R S Montgomery	Lord rivet seals &c	do do	2 16
R. S. Montgomery E. Chanteloup	Mail locks and keys	do	16 25
Smith & Egge Manufacturing Co.	do	do	10 50
G. Bailey	do	Postmaster, Victoria	4 14
		Total	\$252 45

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF PRINCE EDWARD ISLAND.

Detail of all payments for Mail Transportation in Prince Edward Island, made within the year ended 30th June, 1889.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Albany and Tryon (via North Tryon)	C. Crawford R. Tuplin W. Hardy T. Keefe		2 2 12 2 1 2	12 months 12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do	60 00 50 00 60 00 20 80 22 48 30 00
Baldwin's Road and Perth Station Bangor and Morell Station do do Bay Fortune and Souris East Beach Point and Montague Bridge Bear River and Clear Springs Bear River and Call Station Bedeque and Charlottetown Bedeque and Sea Cow Head Bedeque and Summerside. Belfast and Charlottetown Belfast and Garfield Belfast and High Bank Belfast and Point Prim. Bloomfield and Railway Station	D. Reid. W. Jardine J. McGregor. J. McKie. A. Martin C. McDonald D. Costello. B. Toole. W. A. Noonan G. M. Pierce G. W. O'Neill A. A. Martin E. W. Martin J. O'Halloran	$\begin{array}{c c} 1\frac{1}{2} \\ 4 \\ 4 \\ 10\frac{1}{2} \\ 22 \\ 8 \\ 41 \\ 4\frac{1}{2} \\ 11 \\ 24 \\ 3 \\ 22\frac{1}{4} \\ 6\frac{1}{2} \\ 2 \\ \end{array}$	2 2 2 3 3 3 3 3 6 2 3	12 do	32 25 88 00 460 00 120 00 15 60 774 00 46 80 120 00 950 00 30 00 402 90 50 00
Bloomfield Station and Railway Station. Blooming Point and Tracadie Cross. Bonshaw and Nine Mile Creek. Brackley Point and Shaw's Hotel Breadalbane and New London Brown's Creek and Whim Road Cross.	F. Peters J. B. McDonald. N. H. McNevin. N. Shaw G. W. Bell	$1\frac{1}{4\frac{1}{2}}$ 12 3 12	6 2 2 3 6	12 do 12 do 12 do Season 1888 12 months	34 72 69 00 11 70 398 00
Caledonia and Iris	A. Beaton	3 10	2 3 3 2 2 2 As req	12 do	32 00 38 50 85 86 32 00 41 60 29 67
digan	M. McAuley J. J. Campbell J. McDonald H. McPhee	$\frac{4}{13\frac{3}{4}}$	As req 2 2 3 3 3	Season 1888-89 12 months 12 do 12 do 3 do (to June 30, '88) 9 do from do 12 do	120 70 62 00 52 00 41 60 71 39
Cardigan Bridge and Railway Station Cardigan Road and Railway Station Cavendish and Hunter's River. Charlottetown and Railway Station. Charlottetown and Rocky Point. Charlottetown and Street Letter	J. McVean J. Smith J. Crew G. Weldon J. Smith	31 r.t. 2½	$rac{3}{\mathrm{As}\mathrm{req}}$	12 do	34 68 18 72 148 00 278 18 42 64
Boxes	M. Gleeson R. Ings	$egin{array}{c} 2 \\ 3 \\ 3 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 2$	2	8 do (from Aug. 1, '88 3 do (to June 30, '88). 3 do (from Jan. 1, '89 12 do	7 50 13 12

Detail of all payments for Mail Transportation in P.E.I., &c.—Continued.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amount.
Clyde Station and Railway Station. Coleman and Railway Station Commercial Road and Peters Road. Covehead Road and Grand Tracadie	A. McKinnon W. Johnston	16 16 25 5		11 do 11 do	iths	14 00 30 00 30 00 49 40
Darlington and Kelly's Cross. Darlington and New Wiltshire. Darlington and Princetown Road. Darlington and Railway Station. Darlington and Rose Valley. Darnley and Kensington De Blois Station and Railway Sta-	D. L. McLeod do do do J. Glover	$\begin{array}{c c} 1\\3\\\frac{3}{4}\\8\end{array}$	6 3	12 do 12 do 12 do 12 do		115 00 17 00 18 00 35 00 85 00 190 00
tion Dromore and Railway Station Dundas and Upton	C. Perry J. McCabe	2	3 2 2	12 do		20 00 26 00 38 00
East Baltic and Red Point. East Point and Souris East. Elliot's Mills and Railway Station. Elliotvale and Peake's Station. Elmira and South Lake. Elmsdale and Railway Station Emerald and Graham's Road Emerald and Kinkora Emerald and Railway Station	J. Kennedy R. Elliot J. Edmonds L. McDonald J. Adams R. McDonald W. Clarke	15 16 31 2 16 7 16 r.t.	2 3 3 2	12 do 12 do 12 do 12 do 12 do 12 do 12 do 12 do	(and extra trips).	30 00 130 00 15 60 27 00 23 92 11 00 100 00 75 00 110 45
Farmington and Head of St. Peter's Bay. Farmington and Mansfield. Fifteen Point and Miscouche Fitzgerald Station and Railway	E. Power T. Boling G. Des Roches	$3\frac{1}{2}$	$\begin{bmatrix} 2\\2\\2 \end{bmatrix}$			50 00 26 00 67 00
Station. Flat River and Selkirk Road. Forest Hill and Head of St. Peter's	J. Lawlor.	$\begin{array}{c} \frac{1}{16} \\ 6\frac{1}{2} \end{array}$	3 2	4 do 12 do	(from Dec. 1, '88).	$\frac{1}{40} \frac{66}{00}$
Bay Fredericton and Railway Station. Freetown and Lower Freetown. Freetown and Railway Station. French Village and Mount Stewart.	J. Weeks T. Taylor R. B. Auld	$\frac{1}{16}$	2 6	12 do 12 do		48 00 18 00 29 00 46 95 64 00
Gasperaux and Mink River Road Georgetown and Murray Harbor North		3 12	3	3 do	(to June 30, '88).	4 00 50 00
Georgetown and Murray Harbor North Georgetown and Newport. Georgetown and Railway Station Georgetown and Steamer "Stanley" Glencorradale and Priest Pond. Glenfinnan and Johnston's River. Glen William and Murray River. Gowan Brae and Souris East. Greenwich and Head of St. Peter's Bay	R. Thornton P. McIntyre R. R. Jenkins do J. McPhee W. J. Brazel J. Martin J. E. Manning	30 r.t. 21 31 32 32 32 32	3 3 12 As req 2 2 2 2 2	9 do 12 do 12 do Special 12 mon 3 do 12 do	from do (and extra trips). trips. ths . (to June 30, '88).	198 75 68 00 115 28 24 60 23 92 6 50 33 28 30 16
Harrington and Winsloe Road Hazel Green and Peake's Station Head of Hillsboro' and Mount	H. R. Moone	$\begin{array}{c} 1\frac{1}{2} \\ 6 \end{array}$	2 2	12 do 12 do		32 00 57 48
Stewart	D. D. Coffin J. McInnis	1 -	:	12 do 12 do		46 80 61 00
Head of St. 'Peter's Bay and Railway Station. Higgin's Road and Wellington Station.	A. McAulay	1 1	12	12 do		100 00

Detail of all payments for Mail Transportation in P.E.I., &c.—Continued.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.			Amour	nt.	
Hopefield and Murray River Hunter's River and North Rustico. Hunter's River and Railway Station	J. Crew	4 16 16	2 3 12	12 do		ths (and extra trips).	8 et 40 0 146 0 68 9	
Inverness and Railway Station	L. Hughes	2	2	12	do		41	00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	A. Beagan T. Corcoran W. J. Brazel	$12\frac{1}{4}$	$\begin{bmatrix} 2\\2\\2\\2 \end{bmatrix}$	3 6 3	do	(to June 30, '88). (to Dec. 31, '88) from do	37	40 50 75
Kensington and Railway Station Kildare Capes and Tignish	H. McLeod G. Glover M. Dillon J. Des Roches H. Gaudet A. Lamont	165 4 4 112 3	12 2 2	3 9 12 6 6 12 5 9	do do do do do	(to June 30, '88). from do (and extra trips). (to Sept. 30, '88). from do (from Nov. 1, '88) (from July 1, '88)	123 68 20 20 12 10	50 94 80 80 48 00 25
Lansdowne Hotel and Railway Station Launching and Newport. Little Tignish and Tignish Little York and Marshfield. Little York and Marshfield. Little York and Union Road Lot 4 and Miminegash Lot 4 and Railway Station. Lot 10 and Railway Station Lot 11 and Railway Station Lot 12 and Railway Station Lot 12 and Railway Station Lot 135 and Railway Station Lot 35 and Railway Station Lot 40 and Railway Station Lot 40 and Railway Station Lot 40 and Railway Station Lot 56 and Sailor's Hope	A. Morrison. J. J. Buote. R. Lawson. T. H. Lawson. R. Lawson. J. Doyle. J. M. O'Halloran H. Ritchie. T. Bulger. R. Hayes. J. Smith. M. Lawler. A. H. McEwen.	4 1½ 18 22 r. t. 5 4 1½ 54 2 5 1½ 1		9 12 12 12 12 12 12 12 12 12 12 12 12 12	do do do do do do do do		65 25 35 62 180 67 124 26 58 87 63 33 48	75 00 00 40 60 80 00 64 96 28 48
Marie and Milburn Marie Bridge and Morell Road Midgell and Morell Station Mill Cove and Railway Station Mill River and Railway Station Mill View and Vernon River Bridge Milton Station and North Milton Milton Station and Railway Sta-	A. Webster P. Long B. Hughes F. Peters F. Storry	$ \begin{array}{c c} 3\frac{1}{2} \\ 5 \\ 2 \\ 2 \end{array} $		12 3 12 12 12 12 12 12	do do	(from Jan. 1, '89).	3 45 20 15 76	00 75 00 00 00 00
tion Miscouche and Railway Station Miscouche and South West Lot 16. Monaghan and Pownal	do G. Desroches S. McNeill B. Jenkins	9 <u>1</u> 9 <u>1</u> 8 <u>1</u> 8 <u>1</u>	12 2	$12 \\ 12 \\ 12 \\ 12 \\ 12$	do do do	(and arrears)	36 82	00 00 00
	J. McNeill	$\frac{5\frac{1}{2}}{5}$		12 12	do		325	
Montague Bridge and Victoria	W. McLeod J. Dewar	3	3		do			36
Montague Cross and Murray Harbor Road Morell Rear and Morell Station	J. McLean R. D. Sterns	$\frac{2\frac{1}{2}}{4\frac{1}{2}}$	3	12 12 12	do do do		26	00 40 00
Morell Station and Railway Sta- tion	M. Coffin R. Wood	1 63		12 9	do	(from July 1, '88)	15	60 50
Mount Pleasant and Railway Sta	H. N. Robinson.	31 31	2	12	do	(Hom 5 ary 1, 66)		60
Mount Stewart and Railway Sta-	H. McEachern	1		12	do			00
Murray Harbor South and White Sands		3		12	do			00

DETAIL of all payments for Mail Transportation, in P.E.I., &c.—Concluded.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.		Period.	Amou	nt
New Haven and Riverdale	D. Cody J. Cantwell H. J. Folland	$3\frac{1}{2}$ 2 $\frac{1}{16}$ 24 4	2 3 6 3	12 do 12 do 12 do		36 26 15 20 213	cts. 00 00 60 00 00
O'Leary Station and Railway Station	J. Frost R. Ellis	$\frac{1}{16}$ $\frac{9}{9}$ $\frac{9}{2}$	6 2 2 3	12 do 3 do 9 do 12 do	(to June 30, '88). from do	$\frac{22}{62}$	65 00 61 00
Palmer Road and Railway Station. Palmer Road and Waterford.	dο		$\frac{2}{2}$	12 do 12 do	•		00
Peake's Station and Railway Sta- tion	J. F. McDonald A. Wedge A. McDonald P. McNally E. O'Keefe	. 9	3 2 2 3 2 12	12 do		26 33 52	60 00 28 00 00 80
St. Andrews and Railway Station. St. Eleanors and Summerside. Scotchfort and Railway Station. Sea Cow Pond and Tignish. Skinner's Pond and Tignish. Souris East and Railway Station. Suffolk Station and Railway Sta	H. Mills J. McDonald T. Bernard P. Aylward L. Cheverie	$egin{array}{c} 2rac{1}{2} \\ 7rac{1}{2} \\ 16 \end{array}$	2	12 do 12 do 12 do 12 do	(and extra trips).	74 12 50 58	00 00 48 00 00 40
Summerside and Railway Station. Summerside and Street Letter	J. A. Ferguson. R. Glover	16 2	As req				68 44
Boxes	do D. Fraser E. Fraser	41 41 42	14 3 3	3 do 6 do 6 do		27	25 00 00
Ten Mile House and Railway Station. Tignish and Railway Station Tracadie Cross and Railway Sta	J. Fitzpatrick D. Villard	1 1	$\frac{2}{12}$	12 do 12 do			00
tion	A. Johnston	$\frac{1}{2}$		12 do			08
Wellington and Wellington Station Wellington Station and Railway	J. A. Arsenault.	$\frac{1}{1\frac{1}{2}}$		12 do 12 do			48
Station	F. J. Arsenault.	1		12 do			00
tion		$1\frac{1}{2}$		12 do 12 do			00
tion Wilmot Valley and Railway Sta	J. McDonald	-	Ţ	12 do		36	25
tion	W. B. Bowness.	312	1	12 do			23
tion	J. Burrows	16	3	12 do	Total		52

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

DETAIL of all payments for Mail Transportation in Prince Edward Island, made within the year ended 30th June, 1889.

CONVEYANCE OF MAILS BY STEAMBOATS AND SAILING VESSELS.

Name of Route.	Name of Contractor.	Distance in Miles.	No. of Trips per Week.	Period.	Amount.
Charlottetown and Pictou, N.S., &c.	P. E. Island S.	40.8.42	40	T 11	\$ ets.
	N. Co	60 & 45	4&6	(In addition to subsidy)	1,742 00

N.B.—For Special Mail Subsidies and Steamship Subventions, see page 9.

WILLIAM WHITE,

W. H. SMITHSON,

Accountant.

Deputy Postmaster-General.

DETAIL of all payments for Mail Transportation in Prince Edward Island, made within the year ended 30th June, 1889.

CONVEYANCE OF MAILS BY RAILWAYS.

Name of Railway.	Distance in Miles.	No. of Trips per Week.	Period.	Amour	ıt.
Prince Edward Island Railway	2013	With varying frequency over different sections of the line	15 months (to 30th June, 1889), including special service and arrears	\$ 21,337	ets. 55
				\$21,337	55

WILLIAM WHITE,

W. H. SMITHSON,

Accountant.

Deputy Postmaster-General.

Detail of all payments for making and repairing Mail Bags, Mail Locks, &c., in Prince Edward Island, made within the year ended 30th June. 1889.

Tradesmen's Names.	Particulars of Disbursements.	Amount.
S. & H. Borbridge R. S. Montgomery Pritchard & Andrews. E. Chanteloup	Mail bags, labels and repairs for Post Office Department Mail bags, labels and rivet seals for do Mail bag labels for do Mail lock keys for do Total	\$ cts. 8 78 664 16 1 88 1 00 \$675 82

W. H. SMITHSON, Accountant. WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

cts. 7,319 05 S. 292, 3 Grand Total. DETAIL of all payments made for Salaries, &c., in Ontario; showing, in each case, the name of the person, the service or duty performed, and the amount paid within the Year ended 30th June, 1889. <u>:</u> 00 000 1,062.50 00 001 300 00 3,600 00 1,939 05 1,200 00 580 00 Total of Classes. Night Duty and Mileage. ċ, J. cţ; 2,200 00 1,400 00 2,800 00 1,262 50 1,200 00 739 05 300 (9) 88 1,400 00 500 00 8 Salary. 680 520 580 Total, Barrie Division. CHIEF INSPECTOR'S OFFICE. Total, Chief Inspector's Office...... 2nd Class Clerk do promoted from 3rd Class, 13th February, 1889. BARRIE DIVISION. Post Office Inspector.
Assistant Inspector. 1st Class Clerk. Service. ... Temporary Clerk, from 1st February, 1889. .. Messenger. မှ မှ 3rd 3rdD. Spry. J. Henderson.... J. Dewe. W. E. Bennett. C. P. Beroard..... A. N. Payne..... 121. F. A. Maingy. G. J. Mason...
J. Powell.... J. Ward..... J. Harris...

	- Marine San San San San San San San San San San				18,112 89				7,507 50
	1,475 63	3,150 80	Σ α Θ α	4 567 90	£,001 00		3,800 00	3,307 50	
	3 86	158 95 154 64 158 21	208 33 187 02 169 09 163 27 157 99 209 33 	. 163 81 185 80 166 26 171 28 187 93 161 62 102 20	3,156 47				:
	1,471 77	959 00 880 00 840 00	800 80 800 80 753 83 83 80 720 80 83 83 63 60 80 80 63 60 80 80 80 80 80 80 80 80 80 80 80 80 80	560 00 560 00 520 00 520 00 499 00 489 00 290 00	14,956 42	2,400 00	1,200 00 1,195 00 912 50	400 00	
RAILWAY MAIL SERVICE.	Chief Railway Mail Clerk, suspended from 4th to 10th July, 1888	. 1st Class Railway Mail Clerk (less fine). do promoted from 2nd Class, 1st October, 1888.	2nd do do do do do do do do do do promoted from 3rd Class, 1st December, 1888.	3rd do do do do do do do	Total. Barrie Railwav Mail Service.	Post Office Inspector.	2nd Class C	. 3rd do	Total, Kingston Inspector's Office
	A. McCarthy	P. Hynes. W. Stokes. J. H. Bennett.	M. E. Kelly R. Muray. J. O'Connor E. J. Skelly T. Martin. T. Mason. T. Mason. M. Maloney J. Legake. T. J. Atkins.	J. D. Cunningham P. J. Duffy. P. J. Duffy. W. Leadley. W. W. L. Swan. J. McL. Hartlev. A. C. Mackenzie. W. J. Meagher.		G. E, Griffin	J. E. Hopkirk P. H. Macarow J. C. Strange	H. F. Wilmot.	

Grand Total.	ets.						5,497 62							
Total of Classes.	ects.	020	60 20 07	1,470 31	000	3,174 02		***************************************		4,000 00	1,400 00	2,150 00	382 50	
Night Duty and Mileage.	ets.	176 70	130 61 163 30	115 02 143 98	131 95 145 56 131 24	.1,138 36								
Salary.	ets.	675 99	630 00 547 00	560 00 520 00	432 93 513 34 480 00	4,359 26			2,400 00 1,600 00	1,400 00	1,100 00	800 00 800 00 620 00	382 50	
Service.		KINGSTON DIVISION—RAILWAY MAIL SERVICE. 1st Class Railway Mail Clerk, promoted from 2nd Class, 10th April, 1889	2nd do promoted from 3rd Class, 10th April, 1889.	do do			Total, Kingston Railway Mail Service	LONDON DIVISION.	Post Office Inspector Assistant Inspector	1st Class Clerk	2nd do		Messenger	
Name.		H. F. Ketcheson	J. A. Renton	J. Hoyland.	J. K. Sayers TM. McKinnon				R. W. Barker.	A. Thomson	W. Blair. F. W. Matthews	R. G. Mercer G. Hampton J. Johnson	W. G. McKenna Messenger.	

1,509 72	11,303 28	15,261 61	90
9 72	183 71 173 01 1158 76 1113 07 113 07 1158 98 158 98 156 86 156 56 192 99	139 173 173 173 173 173 173 173 173 173 173	52 52 52 52 53 54 54 54 55 55 56 56 56 56 56 56 56 56 56 56 56
1,500 00	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	880 880 880 880 880 880 880 880 880 880	560 90 90 90 90 90 90 90 90 90 90 90 90 90
RAILWAY MAIL SERVICE. Chief Railway Mail Clerk	1st Class Railway Mail Clerk do do do do do do do do do do do do do	2nd do do do do do do do do do do do do do	do do do do do do do do do do do do do d
. Chief	1st Clk	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2
A. G. McWhinney	P. Purdon. J. Wynn B. D. D. Rorison. M. Mathews. J. G. Wright H. Cousins T. J. Essex W. Mitchell W. Edgar T. J. O'Meara	R. P. Wright. J. Flynn. J. Klynn. J. Mitchell. J. W. McLaren. J. J. Doyle. W. D. Tye. W. D. Tye. W. A. Cleary. J. Farrow. J. Farrow. J. Farrow. J. F. Coulter. D. J. McLean. J. G. L. Dawson. J. P. Casgrain. W. G. McMillan.	H. Elliott W. H. Arland A. Northwood C. McL. Sindair G. W. Young W. L. McNeal W. L. McNeal C. C. Fox C. Lee R. W. S. Johnson J. J. OrFarrell W. W. McVicar

9,978 99 37,508 87 cts. Grand Total. DETAIL of all payments for Salaries, &c., in Ontario, made within the Year ended 30th June, 1889.—Continued. 560 28 560 00 5,137 50 ,847 75 212 90 8 1,162 50 1,183 34 cts. Total of Classes. 435 Night Duty and Mileage. 88 6,519 22 cts. 73 Total, Ottawa Inspector's Office 177 75 760 00 440 00 470 00 828 8 5 1,162 50 28 cts. 19 Salary. 2,400 1,237 500 82 260 358 238 30,989 Temporary Railway Mail Clerk, from 8th August, 1888
do from 21st May, 1889 to 30th September, 1888 (transferred to Ottawa Post Office; also suspended from 7th to 15th September, 1888).... Post Office Inspector
Assistant Inspector LONDON DIVISION—RAILWAY MAIL SERFICE—Concluded. to 30th November (transferred to Stratford Division)....... from 1st October, 1888 (transferred from Ottawa Post Office) promoted from 1st Class, 1st January, 1889..... 1st Class Clerk, promoted from 2nd Class, 1st October, 1888 Total, London Railway Mail Service.... OTTAWA DIVISION Service. Temporary Clerk, from 20th December 1888 Mail Transfer Agent.... Messenger .. ခုခု ဗု မှ 2nd 3rd T. P. French G. Marsan ... C. P. LeSueur H. Carroll P. B. Dunne W. C. Cochran G. W. Routledge J. E. Johnson R. Dagg..... J. F. O'Connor ... D. Moloney M. J. Whitty... W. M. Brophy.. Name. C. Duggan... 126

	1,504 79	9,110 21	13,005 12	618 46
	1,5	9,1	13,0	9 66
	4 79	350 64 520 03 518 12 392 92 415 93 398 91	456 08 834 888 888 884 884 884 884 884 884 884	
	1,500 00	960 00 960 00 960 00 960 00 960 00 960 00 960 00 960 00	886 88 88 88 88 88 88 88 88 88 88 88 88	480 00 430 97 440 00 23,486 80
RAILWAY MAIL SERVICE.	ay Mail Clerk	s Railway Mail Clerk do do do do do do do do do do do do do	suspended from 23rd June to 6th September, 1888 (transferred to Toronto Division) (less fine). suspended from 22nd to 25th January, 1889 (less fine)	do from 8th August, 1888 Railway Mail Clerk, from 1st August, 1888 Total Ortawa Railway Mail Service
	Acting Chief Railwe	1st Class Railway M do do do do do do do do do	949 9999999999999999999999999999999999	
	J. D. Thomson Acting Chi	E. Gordon W. F. Burnham G. T. Gorrell R. Peden J. A. Chevrier D. J. Skelly F. H. Smith	J. B. Z. Legendre A. Leclair. P. A. Maingy J. B. Gillessie C. Plumb H. Macdonald C. W. Macdonald J. H. P. Brown J. H. P. Brown J. H. P. Brown J. H. P. Brown J. H. P. Brown J. H. P. Brown J. H. P. Brown J. H. P. Brown J. H. P. Brown J. Griffith J. Eagleson J. J. Nevens J. J. Lally J	S. L. Hollingsworth J. Purcell H. J. Kenny Temporary

Detail of all payments for Salaries, &c., in Ontario, made within the Year ended 30th June, 1889.—Continued.

H. G. Hopkirk Post Office Inspector D. Moloney Assistant Inspector, from 1st L. J. Yorick 2nd Class Clerk, from 1st L. D. A. Bruce 3rd do do C. B. Lawrence do do W. S. Watson Messenger Total, Str. A. Jones 2nd do do D. B. Kelly do do J. J. Golden 3rd do do J. J. Golden 3rd do do W. J. Ramsay do do W. J. Ramsay do do W. J. Cheyne do do H. F. Dunning	Service.	Salary.	Night Duty and Mileage.	Total of Classes.	Grand Total.
H. G. Hopkirk Post Office Inspector. D. Moloney Assistant Inspector, from 1st L J. Yorick 2nd Class Clerk, from 14th Ma D. A. Bruce 3rd do C. B. Lawrence do RA W. S. Watson Messenger. RA A. B. Orr Messenger. RA J. Jones 2nd do G. Pierson 2nd do J. J. Golden do do J. J. Freel do do W. J. Ramsay do do W. J. Ramsay do do W. J. Cheyne do do H. F. Dunning do do R. Johnston do do	ATFORD DIVISION.	\$ cts.	& cts.	st cts.	\$ cts.
J. Yorick 2nd Class Clerk, from 14th Magnetics D. A. Bruce. 3rd do do do do do do do do do do do do do		2,200 00 700 00		9000	
D. A. Bruce. 3rd do C. B. Lawrence do W. S. Watson Messenger A. B. Orr Total, Str A. Jones 1st Class Railway Mail Clerk, do J. Dundas do D. B. Kelly do G. M. Harris. do C. Pierson 3rd do G. J. Freel do W. J. Ramsay do W. J. Freel do W. J. Freel do W. J. Freel do M. J. Bunning do R. Johnston do B. Johnston do	.889 (transferred from Railway Mail Service)	126 45		196 45	
A. B. Orr Messenger Total, Str A. Jones Ist Class Railway Mail Clerk, do do do do do do do do do do do do do		550 00 430 00 410 00		90 90	
Total, Str RA. 1st Class Railway Mail Clerk, 2nd do		375 00		375 00	
1st Class Railway Mail Clerk, 1 2nd do do do do 3rd do do do do do do do do do do do do do	ard Inspector's Office	:			4,791 45
2nd do do do do do do do do do do do do do	3th May, 1889 (transferred to Inspector's Office)	833 55	1 00	23 F28	
3rd		800 00 720 00 720 00	180 87 174 97 158 94 202 70	9 777 9	
		560 00 520 00 520 00 520 00 520 00 520 00 520 00	160 83 154 02 179 23 182 17 181 52 164 04 207 98 162 95	0	
J. McD. McNeill Temporary Railway Mail Clerk, from 21st May, 1889	com 21st May, 1889	54 19	60 9	90 000,0	
		8,141 06	2,117 31	97 00	

		ALC:				11,340 00				
	900	4,200 00	1,400 00	90 000,4	90 985			10 10 10 10	12,433 15	
		,					and the second	17 54		232 23 23 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
_	2,600 00 1,600 00	1,400 00	1,200 00 1,200 00 1,200 00 1,000 00	260 00	280 00			1,500 00	957 30 960 00 960 00 960 00 960 00 888 00 888 88 888 88	
TORONTO DIVISION.	Post Office Inspector. Assistant Inspector	1st Class Clerk	ob do do do do do do do do do do do do do	3rd do	Messenger	Total, Toronto Inspector's Office	RAILWAY MAIL SERVICE.	C. J. H. Winstanley Chief Railway Mail Clerk	do (less fine). do do do electron suspended from 24th December, 88, to 23rd January, 89. do promoted from 24th Permuary, 1889.	2md do do do do (less fine) do do do do do do do do do do do do do
	M. Sweetnam Post Office Inspector G. A. Burnham Assistant Inspector.	W. E. Griffith	G. T. B. Gurnett. J. Henry. W. Crocker. H. W. Snallpiece.	G. B. Sweetnam	J. McKillop			C. J. H. Winstanley	67. McCornick. J. G. Bennett. W. C. Ashdown. W. C. Ashdown. G. F. Burns. T. S. Birchall. L. V. Byrne. F. O'C. Higgins.	W. Noble J. Egan A. Thompson A. Thompson J. E. McLeod A. Findlay C. T. Bell G. Mathews A. Beatty E. O. Boyle W. M. Platt W. O'Connor. W. B. Smith J. Little

Name.		Service.	Salary.	Night Duty and Mileage.	Total of Classes.	Grand Total.
L. Sewell	TORONTO DIVISIO	N-RA1LWAY MAIL SERVICE—Continued.	\$ cts.	\$ cts.	ee cts	& cts.
J. Programs F. C. Clarke W. J. Little W. Smellie J. T. Mollard W. E. Wiley W. S. Wiley W. E. Wiley T. Patterson A. McGill A. McGill A. McGill A. McSkelly	3.4	(less fine) to 30th November, 1888 (transferred to Barrie Division). from 6th September, 1888 (transferred from Ottawa Divi-	725 560 560 560 560 560 560 560 56	. 132 283 38 39 39 39 39 39 39 39 39 39 39 39 39 39	18,300 94	
J. F. Harper A. Scholes M. Sullivan A. A. Allen	Mail Transfer Agent do do do do Transf		550 00 580 00 600 00 7		7,115 38	
	Toronto Post Office	1 :	32,006 63	9,710 16	2,349 78	41,716 79
	70 E 77 E		10 100 11	19 200 00	67 002	67 003 700

Grand Total.	\$ cts.				6,510 00				
Total of Classes.	• cts.	2,500 00	OC CASE	2,710 00			4,200 00	1,400 00	4,325 00
Salary.	÷ cts.	1,400 00	560 00 550 00 550 00 550 00 500 00	400 00	:	2,400 00	1,400 00	1,200 00 1,075 00 1,075 00 975 00	800 00 800 00 800 00 800 00 133 34
Service.	Brought forward	BELLEVILLE POST OFFICE. Postmaster s Clerk		Rerk.	Total, Belleville Post Office	HAMILTON POST OFFICE.	k		to 31st August, 1888 (deceased).
		PostmasterAssistant Postmaste	3rd do do do do do	Temporary Clerk.		Postmaster Assistant Postmaster.	1st Class Clerk.	2nd do do do do	3rd Go Go Go Go
Name.		J. H. Meacham T. Duncan A. Gillen	S. W. Glazier. W. B. Walker. I. M. Newberry. 11.J. J. Embury.	E. Doyle		H. M. Case	H. A. Eager	T. Burns 22 G. H. Bull G. Ross A. C. Crisp.	J. S. Mathews. E. H. Dunnett. B. F. Barber. W. R. Ecclestone. H. Dinnse.

Total (frand of Total.	\$ cts. \$ cts.
Salary.	8 ct 2 ct 2 ct 2 ct 2 ct 2 ct 2 ct 2 ct
Service.	F. J. O'Donnell 3rd Class Clerk HAMILTON POST OFFICE.—Conctuded. HAMILTON POST OFFICE.—Conctuded. H. Fitzgerald do
Name.	R. J. O'Donnell 3rd Class R. Fitzgerald 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6

28 28 28 28 28 28 28 28 28 28 28 28 28 2	8884 8 8	600 00 412 50	260 00 260 00			2,000 00 1,176 66 3 176 66	1,399 00 1 200 00	875 00 1,335 00	740 00 800 00 800 00 560 00 530 00 480 00 420 00 400 00
do to 31st March, 1889; suspended from 16th to 31st March, 1889 (dismissed). do do do do do do do do do do do do do d		Temporary Messenger.	Postn	Total, Hamilton Post Office	KINGSTON POST OFFICE.	Postmaster Assistant Postmaster, to 23rd June, 1889; promoted from 2nd Class, 1st October, 1888 (dismissed)		2nd do	දීය ප්රතිදේශීල් ප්රතිවේ ප්රති ප්රත ප්රත ප්රත ප්රත ප්රත ප්රත ප්රත ප්රත
D. V. Downte. W. H. James. E. Frank. T. W. North. G. Springate. M. Dawson. B. Sevier. W. Strongman. W. Lawrence. W. Lawrence. J. Charters. J. Philips. J. Philips. J. Philips. R. M. McDonald.			& A. Vincent			J. ShannonR. T. Burns	Kelly		McBride P. Pense Macdonald J. D'Arcy Moore J. O'Reily J. Chamberlain Wells

A. 1890

DETAIL of all payments for Salaries, &c., in Ontario, made within the Year ended 30th June, 1889—Conlinued.

	Grand Total.	e cts.	,	•		15,610 62			
	Total of Classes,	& cts.	00 #06 60 FF	96 069	375 00		3 800 00	72 E9 6	0,401,0
	Salary.	\$ cts. 400 00 554 00	600 00 575 00 480 00 465 00 442 50 427 50 420 00	345 48 345 48 375 00			2,200 00 1,600 00	1,200 00 1,200 00 1,087 50	800 00 800 00 800 00 800 00 800 00 800 00 1280
	Service.	Temporary Clerk	etter Carr do do do do do	Temporary Letter Carrier, from 16th July, 1888do	M. essenger.	Total, Kingston Post Office	Postmaster. Assistant Postmaster	2nd Class Clerk. do do	3rd do do do do do do do do do do do do do
•	Name.	G. G. Meagher A. T. Deacon	A. H. Miller J. Collins. R. Lewers. P. J. Howland. R. Gilmour. R. Kearns.	78. E. Genge	J. Morrisey		R. J. C. Dawson J. D. Sherman	J. Hunter R. F. Matthews C. Hevey	on on eler

550 00 400 00 600 00	(suspended from 1st November, 1888, to 13th March, 1889).
760 00 600 00 600 00 600 00 600 00 600 00 600 00 600 00 600 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 600 00 600 00 600 00 600 00 600 00 600 00 600 00 600 00 600 00 600 00	
600 00 600 00 600 00 600 00 550 00 527 50 527 50 527 50 600 00 60	
600 00 600 00	
550 00 557 50 557 50 557 50 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 480 00 50 00 600 00 600 00 600 00 600 00 600 00	
557 59 527 59 527 50 580 00 680 00 680 00 680 00 680 00 680 00 680 00 690 00 600 00 73 600 00 73 73 73 73 73 73 73 73 73 73	
490 00 480 00 480 00 480 00 480 00 480 00 472 50 472 50 472 50 472 50 472 50 472 50 472 50 472 50 472 50 472 50 472 50 600 00 830 00 800 00	
480 00 480 00 480 00 480 00 480 00 472 50 890 00 800 00 80	suspended from 3rd to 17th October, 1888)
480 00 480 00 480 00 480 00 472 50 890 60 800 60 80 800 60 80 800 60 80 80 80 80 80 80 80 80 80 80 80 80 80	
#80 00 #80 00 #80 00 #72 50	
480 00 472 50	
# 472 50 472 50 450 00 840 00 890 00 890 00 890 00 13,293 31 600 00 600 00	
450 00 420 00 390 00 390 00 360 00 580 00 580 00 580 00 600 00 600 00	
442 50 442 00 390 00 390 00 390 00 360 00 13,293 31 600 00 580 00 1,180 00 600 00	
390 00 390 00 390 00 380 00 13,293 31 580 00 1,180 00 600 00 600 00	
380 00 360 00 580 00 580 00 1,180 00 600 00 600 00	
600 00 580 00 600 00 600 00 600 00	
580 00 580 00 1,180 00 600 00 600 00	
00 009 00 009	
	Total, London Post Office
2,400 00	

Name.	Service.	Salary.	Total of Classes.	Grand Total.
	OTTAWA POST OFFICE—Continued.	** cts.	se cts.	e cts
French1st Class	1st Class Clerk	. 1,400 00	90	
E. B. Bates. 2nd c E. J. O'Connor. C C. Shaw. C M. H. Pennock W. J. Whitty. C	do do do do to 30th September, 1888 (transferred to Ottawa Division).	1,200 00 1,200 00 1,200 00 1,200 00 237 50 1,050 00	1,400 00	
3rd	do to 11th February, 1889 (resigned). do do do (less fine).	800 760 639	OC Perio	
		00 000 00 000 00 000 00 000 000 000 000		
1	do to 31st July, 1888, including arrears (transferred to Winnipeg Post Office) do suspended from 28th November to 27th December, 1888 to 31st December (resigned).	155 90 155 90 185 90 185 90 186 93 186 93 186 93		
	from 1st Augu Division	25 25 25 25 25 25 25 25 25 25 25 25 25 2		
L. D. Chevrier W. A. Bangs	do do	430 00 410 00		

13 488 60	10,400 00																		70 007 0	0,403 04																								90
303 38	400 00	8 5 8 5	868	400 00	00 00 7	400 00	90 00	400 00	400 00	366	96 96 96 96	90 00;	400 00	97	287 71	250 45	138 10	 86 87 87 87 87	3 3 3			400 00	-	308 01	909 909	98 669	999	200	90 20 20	20 007	200	2000	00 02	00 706	00 477	942 50	90 00	90 02	888	200	300	366 50	300 00	360 00
12th December, 1888; also from 1st March to 30th April, 1889)	Temporary Clerk	do to 31st July, 1888 (resigned)			•	do	•	ор		do (less fine)	ф	Go Go			do from 10th October, 1888 (less fines)			do from 23rd March, 1889		Superintendent Letter Carrier		o 28th February,	do to 9th April, 1889 (suspended from 7th July, to 10th September. 1888; services dis-	pensed with)		do (less fine)	တို	ор	op,	(0)	0011 NT - 1 - 4000 (4 4)	to Juin November, 1888 (deceased)		00 00 00 00 00 00 00 00 00 00 00 00 00		ор	op op		(less f	0p	00	do fless fine)		do from and Temporary to 9th February, 1889
•	E. Smith	Landriau	L. Iraversy		H. Powell	J. P. Chilton	4. Gosselin	T. Duhan.el	Faulkner	S. H. Bartlett	S. Warwicker	P. Archambault	C. Fraser	Corbeil	C. P. Dontigny	E. M. Webber	A. Coleman	M. L. Blanchet	St. Denis	Marwicker	Sroum	Larue	Dolan.		Robert	Dupuis	. J. George	Cuddie	Lamb.	J. Egan	J. N. Larue.	. Bedard	M. Fagan	Marion	d. Duggan	E. T. Edwards	W. Fair	H. Murphy	X. Giroux	J. O. Noël	. Bell	G. Cooch	Chamberlain	W. Roeske.

DETAIL of all payments for Salaries, &c., in Ontario, made within the Year ended 30th June, 1889—Continued.

			of Prince - Administration of the Control of the Co	And the second s
Name.	Service.	Salary.	Total of Classes.	Grand Total.
	OTTAWA POST OFFICE—Continued.	e cts.	\$ cts.	& cts.
F. A. Schultz O. Legault. E. W. Guines J. Hayes C. Chaput W. J. Usher D. Charlebois J. McCallum H. Ketcheman	Temporary Letter Carrier do from 13th to 31st July, 1888 (services dispensed with) do from 1st August, 1888 do from 24th November, 1888 do from 24th December, 1889 do from 27th February, 1889 do from 17th February, 1889 do do from 18th April, 1889	360 00 360 00 18 38 330 00 231 00 187 74 122 14 78 00 78 00	17 16	
8W. Goodwin	Letter Collector do	00 009 009 009	1,740 20	
	Messenger	600 00 420 00	1,200 00	
R. McElligott	Temporary Messenger, from 28th January, 1889.	153 87	153 87	
	Total, Ottawa Post Office			46,997 76
	TORONTO POST OFFICE.			
T. C. PattesonJ. Carruthers	Postmaster Assistant Postmaster	3,000 00 2,000 00	9	
J. H. Davis. A. Gooper. J. Moerschfelder. A. G. Thompson. R. W. Riddell	1st Class Clerk do do do do do	1,400 00 1,200 00 1,500 00 1,200 00 1,200 00	00 000 000 000 000 000 000 000 000 000	
A. Harstone H. F. Falkiner W. Leudon	2nd Class Clerk do do	1,200 00 1,200 00 1,200 00	00 000.00	

do do do 3rd Class		1,055 48 1,100 00 1,100 00 1,050 00 1,000 00 1,000 00 800 00 800 00
	(suspended from 7th to 20th February, 1889). to 13th May, 1889 (transferred to Post Office Department).	566 66 506 90 594 63 594 63
		200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00 200 00
60 Consider the constant of th	(ent)	540 00 640 00 640 00 640 00 648 33
J. Kinkpatrick do M. Macdonald do M. Boyd. do R. A. Pridham do W. Riddle do A. McIntyre do J. Purharical do		230 00 230 00 230 00 230 00 230 00
R. Futtherrord, do J. S. Boddy do G. E. Smith do G. E. Smith do G. H. F. Durham do H. F. Durham do W. Sparks. do E. Spencer do W. A. Hynes do J. A. Whiteside do J. Stoddart do J. Stoddart do J. Stoddart do J. Stoddart do G. J. Stoddart do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do J. Stoddart do do do J. Stoddart do do do do do do do do do do do do do		28

Grand Total.	s cts.				
Total of Classes.	se cts.		35,516 39	1,108 62	
Salary.	e cts.	25	430 00 430 00 450 00 128 89 66 66	200 47 200 47 216 13 23 34 33 34 33 34 33 34 33 34	600 00 00 00 00 00 00 00 00 00 00 00 00
Service.	TORONTO POST OFFICEContinued.	Clerk (less fines)	from and Letter Carrier to 31st August, 1888. from 14th May, 1889, also Temporary from 5th April, 1889 Clerk to 31st August, 1888 (resigned)	from 8th October, 1888 from 17th December, 1888. do do do do do do do do	to 30th November, 1888 (deceased).
			do do do do	H. Bills do Baird. J. Doyle do Jackinan. A. McIntyre.	W. Foster Letter Carrier C. Reeves. do W. Kemy do J. Barnes do M. Coffey do

* **			
600 00 00 00 00 00 00 00 00 00 00 00 00	255 20 25	\$\frac{1}{2}\$\$ \frac{1}{2}\$\$ $ \frac{1}{2}\$\$\$ \frac{1}{2}\$\$\$\$\$ \frac{1}{2}\$	300 308 308 308 308 309 309 309 309 309 309 309 309 309 309
	, 1889).		
	less fine). suspended from 6th to 12th March, 1889)		ssigned).
	th to 128		1889 (re
	d from 6		ebruary,
	ess fine)		to 7th March, 1889 (dismissed).
9230000000		£\$\$\$\$\$\$\$\$\$\$\$\$\$\$	
therbee.			
f. H. Weatherbee. Tates. Williams Stewart Stewart N. Moore Oulross. R. Cuthbertson. Murphy Beale Marks. Crawford	Birney. Hodgins. Jamieson. Askin. Gordon. Kimber. Gardiner. Flack. Durstan. S. Parry. C. Jackson.	Kirkpatrick. Kennedy Bowell H. Watson. Kirk H. Langstone. E. Swait. Reid. Reid. R. Woodcock. J. Platt. J. Platt. Ellis. Meadows.	tkinson. IcNair nith enzie ordie ad
	T. Birney R. Hodgins R. Jamieson J. Askin J. Gordon W. Kimber R. Gardiner D. Flack R. Durstan W. S. Parry A. C. Jackson R. Loudon	a.R. Kirkpatrick. C. Kemedy B. Bowell J. H. Watson. F. Kirk W. H. Langstone. C. E. Swait. S. Reid. A. H. Meadows. W. R. Woodcock. T. Haycock W. J. Platt. G. Ellis. G. Ellis. G. Ellis.	T. Smith. H. R. Atkinson. R. Woir. W. C. McNair. Theo. Smith. J. Reid. A. McKenzie. H. T. King. H. T. King. A. McMordie. N. A. Goad. J. A. Ingram.
アロエルのこのよれによる		gom==≥codd≥=≥cg= 141	こしまてりらくまくたび

Grand Total.	es cts.		
Total of Classes.	& cts.	39,398 42	
Salary.	es cts.	74444444444444444444444444444444444444	8 9 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Service.	TORONTO POST OFFICE—Concluded.	rrier to 31st October, 1888 (services dispensed with). on leave without salary, to 31st August, 1888. from 21st July, 1888 from 23rd do do from 1888 from, 23rd do do (suspended from Division). from, and temporary to 10th April, 1889 from, and temporary to 10th April, 1889 do do (suspended from 18th to 24th November, 1888) from 14th May, 1889; also temporary from 19th September, 1888. from 1st January, 1889, also temporary from 7th December, 1888.	y Letter Carrier. do do
Name.		26 25	F. S. Rutland Temporary I E. E. Knox

	- Commission	-	00	3			8 8														-	
2,023			360 00	00 08Z	197	,	236.00	90	2,890 62	000												
360 00 240 00 275 48 258 33 290 00	360 00 240 00			360 00	290 00	197 85	236 00	360 00 360 00	580 00	90 98 98	88	28	22.88	 36 86 87 87	88	38	88	96 76 76 76	95.80	3 S	158 71	158 21
Av	202	BRANCH POST OFFICES.		aretaker, from, and Temporary Letter Carrier to 31st October, 1888	t December, 1888 (deceased)	essenger, from 17th January, 1889; also Acting Temporary Clerk, from 17th December, 5th January, 1889	er, from 5th November, 1888,	do do from, and temporary to, 10th April, 1889; also Temporary Letter Carrier, to 31st October, 1888			do do do	17th December, 1888, to 16th January, 1889.	23rd do	22nd May, 1889.	15th do	ao 2nd do	$A_{\rm pl}$	29th do 30th do	do do	from 20th March, 1003.	do do do do do do do do do do do do do d	do do do do do do do do do do do do do d
do Car do Du do Pet do Que do Spa				mporary Care	rretaker, to 31a		emporary Port	do from, and	orter	do	ප් දි	පිද	do do	3	ခြင့	දිදි	.	ခွင့်	op.	op G	ရှင	op
Carlton do Dundas do Peter do Queen do Spadina Avenue	ster—Bathurst Bleecker	BRANCH P		Temporary Caretaker, from, and Temporary Let	. W. Reynolds Caretaker, to 31st December, 1888 (deceased)	W. J. Woodman Temporary Messenger, from 17th January, 1889; 1888, to 16th January, 1889	Temporary Porter, from 5th November, 1888	R. H. J. Hutty do from, and temporary to, 10th April, 1889;	<u>-</u>						15th	do do 2nd		00 00				

PROVINCE OF QUEBEC.

Poet Office Inspector	Name.	• Service.	· Salary.	Night Duty and Mileage.	Total of Classes.	Grand Total.
Post Office Inspector		MONTREAL DIVISION.		æ		ets.
Strd Class Clerk 1,200 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,100 00 1,225 20 1	S. F. King. J. Nelligan J. E. Gervais	Post Office Inspector Assistant Inspector Ao	-		(F)	
3cd do (less fine) 3cd do (including arrears ; less fine) 431 65 431 65 1,225 20 Temporary Clerk, from 22nd August, 1889, to 31st January, 1889 (resigned) 177 42 129 04 Messenger					9,200 00	
Temporary Clerk, from 22nd August, 1889, to 31st January, 1889 (resigned). 177 42 do from 5th March, 1889 306 46 Messenger	M. Kearney	op op	793 55 431 65		3,200 00	
Messenger		Pemporary Clerk, from 22nd August, 1888, to 31st January, 1889 (resigned) do from 5th March, 1889			NZ 622,1	
Total, Montreal Inspector's Office RAILWAY MAIL SERVICE. Chief Railway Mail Clerk 1,500 00 10 57 1,510 57 1,510 57 1,510 57 1,510 57 1,510 57 1,510 57 1,510 77 1,510	:	d essenger	430 00		300 40 430 00	
Chief Railway Mail Clerk Chief Railway Mail Clerk 1,500 00 10 57 do do do 325 74 do do 325 74 do do 317 47 do do 317 47 do do do 317 47 do do 317 47 do do 317 47 do do 317 47 do do 317 47 do do 317 47 do 317 47 do 317 47 do 317 47 do 317 47		Total, Montreal Inspector's Office				10,361 66
1st Class Railway Mail Clerk. do do do 319 16 443 19 860 00 102 02 860 00 319 16 860 00 370 48 860 00 370 48 860 00 317 47 860		Thief Railway Mail Clerk	1,500 00	10 57	:	
do do 3102 do do 960 00 3102 do 60 370 do 60 370 do 60 370 do 60 3170 do 60 3170 do 60 3170 do 60 9170 do 60 9170 do 60 9170 do 60 9170 do 60 9170		st Class Railway Mail Clerk.	00 096	443	1,510 57	
do 960 00 325 do 147 do 160 00 317 do 160 00		op op		310		
do do 317	A. Menzies A. Lachapelle			325 147		
	A. Somerville.			317 133	.,	

Service. Salary. Night Duty and Nileage. ON—RAILWAY MAIL SERVICE—Concluded. \$ cts. \$ cts. ON—RAILWAY MAIL SERVICE—Concluded. 960 00 90 21 (including arrears). 960 00 90 21 (including arrears). 800 00 385 95 (suspended from 20th to 26th August, 1888). 800 00 286 21 (suspended from 20th to 26th August, 1888). 800 00 286 21 (suspended from 20th to 26th August, 1888). 800 00 286 21 (suspended from 20th to 26th August, 1888). 800 00 286 21 (suspended from 20th to 26th August, 1888). 800 00 286 21 (suspended from 20th to 26th August, 1888). 800 00 286 21 (suspended from 20th to 26th August, 1888). 800 00 286 21 (including arrears). 800 00 281 85 (including arrears). 40 00 281 85 (including arrears). 40 00 281 85 (including arrears). 40 00 281 85 (including arrears). 40 00 281 85 (including arrears). 40 00	Grand Total.	CGS. 95.		
Service. Salary. ON—RAILWAY MAIL SERVICE—Concluded. (including arrears). (suspended from 20th to 26th August, 1888). Show 00 Swo	Total of Classes.	\$ cts. 24,607 54		
Service. Salary. ON—RAILWAY MAIL SERVICE—Concluded. (including arrears). (suspended from 20th to 26th August, 1888). Show 00 Swo	Night Duty and Mileage.	2 081 8888488814884 8P85EF8384EF84		
		\$\text{cts}\$ \text{cts}\$	Service.	
	Name.	C. Beatty 1st Class Rullway Mail Clerk. H. E. Chamsell. 40 J. Murphy. 2nd do do do C. Hayden 40 E. Lefebvre. 2nd do do do C. Beaudoin 40 E. Dorion 60 C. Beaudoin 60 C. Beaudoin 60 J. F. Beique 60 J. T. Viger 60 J. R. Dewar 60 J. R. Dewar 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. McKenzie 60 J. R. Jones 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. Ford 60 J. French 60 J. French 60 J. L. French 60 J. L. French 60		

i i	e 1		2 3		46,784 77			3 8	3	3 8	8,720 00		<u> </u>	3 7	
Č	6) 121 (6	1001	00 0gc	eo ete			94	s,400 00 s	2,300 00	360 00			1 500 00	1, 100 1,	#0 676'0
178 80 136 68 93 20	26 54			10,071 20										185 30 252 00 364 02 393 48 380 84	161 78
480 00 510 00 336 66	141 93	550 00	400 00 115 05	36,713 57			2,000 00 1,400 00	1,200 00 1,200 00 400 00	\$00 00 530 00 430 00 400 00	360 00			1,500 00	00 096 00 096 00 096 00 096	800 00
do to 28th February, 1889 (transferred to Three Rivers Division)	. Temporary Railway Mail Clerk, from 15th March, 1889	Mail Transfer Agent	Temporary Mail Transfer Agent from 18th March, 1889		Total, Montreal Raliway Mail Service	QUEBEC DIVISION.	Post Office Inspector Assistant Inspector	2nd Class Clerk. do to 31st December, 1888 (transferred to Railway Mail Service).	3rd do do do do	Temporary Messenger.	Total, Quebec Inspector's Office	RAILWAY MAIL SERVICE.	Acting Chief Railway Mall Clerk.	1st Class Railway Mail Clerk do do do do do	also suspended from 26th February to 26th March, '89)
E. W. Hay J. M. Hall S. Gervais	G. W. Lawrence Temporary	C. Chase	L. O. GariepyS. Galbraith				A. Boldue	O. Fréchette C. Vohl LJ. E. Carrier.	J. B. Caouette L. J. H. Larue L. E. Simard. J. Bouffard.	A. Raymond			E. Blondeau	J. Deslauriers. 1st Class Ra G. Lapointe O. Tabot. T. Gaudry H. J. Kimlin	D. Blondeau

cts. 27,105 00 Ŋ, DETAIL of all payments for Salaries, &c., in Quebec, made within the Year ended 30th June, 1889—Continued. cts. 52 3,625 29 န္တ Total of Classes. 14,944 629 ĸ. Night Duty 82882828884 ##8888 **448333** 388 8 88888 \$25E58 **8** ≘ 5,977 cts. 2888833888 #88888 88828 2,000 00 83 8 3 Salary. 21,127 222233 217 125 to 30th November, 1888; transferred to Three Rivers from 1st Dec., 1888 (transferred temporary from Quebec Post Office; suspended from 1st to 14th June, 1889)... from 1st April, 1889 (transferred from Quebec Post Office) from 1st Jan., 1889 (transferred from Inspector's Office). to 30th Nov., 1888 (transferred to Quebec Post Office)... transferred from Ottawa Post Office)..... QUEBEC DIVISION—RAILWAY MAIL SERVICE—Concluded. Division (less fine)..... Fotal, Quebec Railway Mail Service..... THREE RIVERS DIVISION Service. 2nd Class Railway Mail Clerk..... G. A. Bourgeois.......lPost Office Inspector..... Mail Transfer Agent... **22222** 22222 3rd Class 74. Beaudry 8. C. Methot. C. A. Methot. M. P. Laberge A. Blondeau S. T. Green J. E. Carrier C. Dagneau C. Miquelon A. Routhier..... F. O'Dowd..... A. F. A. Chabot..... Evanturel.... Name. H. Hudon. G. Bourget L. P. Thibault. U. Gauvreau.. X. Labbe

		angent on British		4,696 43					3,113 11	(110. 15.)	1.00 (100, 100, 100)	100,780 97
9	90 90 90 90 90 90	00 000 01 94	360 00			2,755 68	219 97 137 46					100,780 97
-				:	78 78 104 81 66 59	46 63	17 46	473 11				16,521 69
1,400 00	710 00 180 00	46 43	360 00		540 00 460 00 460 00 466 66 420 00	173 34	120 00	2,640 00		• .		84,259 28
J. P. Chillas	G. O. Bailey 3rd Class Clerk 4bril, 1889 (transferred from Railway Mail Service).	H. Désilets Temporary Clerk, from 18th Feb. to 31st March, 1889 (transferred to Ry. Mail Service)	F. Teesdale	Total, Three Rivers Inspector's Office.	A. Dorais. A. Dorais. S. McKenzie. J. W. Genest A. Beaudry. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat. A. Mishbat.	3rd	H. Désilets		Total, Three Rivers Railway Mail Service			Grand Total carried forward

\$ cts. Grand Total. DETAIL of all payments for Salaries, &c., in Quebec, made within the Year ended 30th June, 1889—Continued. 6,000 00 10,150 00 20 Total of Classes. 20,137cts. 2888 88 888888 888888888888888888 Salary. 1,500 1,500 1,500 1,500 1,500 1,300 2222222222 8888 Assistant Postmaster. MONTREAL POST OFFICE. Service. Brought forward 1st Class Clerk.
do do do do do do do do do Postmaster ಕಿಕಿಕಿಕಿ 3rdJ. L. Palmer T. F. Larseneur O.J. Senez G. Lamothe..... A. Bourret..... Desnoyers. J. McKeon. Lefebvre..... Harding. A. Larbse.
H. D. Gaudry.
G. Beaudoin.
J. Chase.
U. Rondeau. Mayer. C. Sins. Clement. Name. B. A. Daoust. Hayden.... Duncan....

J. E. Renand.		00 000	
		200	
	(less fine)	799 50	
		90 00	
-		00 008	
Lord		00 008	
		00 008	
	(less fine).	266 00	
-: :		90 008	
T. Daniels		00 008	
····:	from 1st November, 1888 (transferred from Winnipeg Post Office)	533 33	
H. Oullette		740 00	
H. Forbes.		750 00	
J. McElroy		00 029	
H. Lapointe		00 029	
:		640 00	
2. Whelan		640 00	
		640 00	
O'Neull		00 019	
Joliceur do	to 30th November, 1888 (resigned).	250 00	
D. E. Mayer		00 009	
Larivière		00 009	
Berestord		290 00	
f. Guillemette		280 00	
U Donagnue		280 00	
F. Floure do		080 080	
Lorange		570 00	
A D McT-4cck		00 025	
۶ د		00 070	
F. Lancanana		00 076	
Circuit env.	More Ex.	00 000	
	(am gen)	00 600	
		20 000	
		00 000	
		00 000	
A. Carpenter		540 00	
Crowe		240 00	
L Grondin		240 000	
Florence	(less fines)	538 95	
		540 00	
K. Brazeau	to 31st May, 1889 (deceased).	193 34	
T. H. Ermatinger		530 00	
Lamanque		530 00	
		520 00	
:		480 00	
:		50 00	
Cumingham	floor Carrows	480 00	
. Cunningnam	(less mes)	1.00 87	

Grand Total.	ਤੰ ≎
Total of Classes.	41,450 08
Salary.	*
Service.	AMONTREAL POST OFFICE—Continued. 3rd Class Clerk do do do do do do do do do do do do do d
Name,	A. Massé T. J. Crowe L. D. A. R. de Cotret G. Clarke. E. C. Dowd E. Barcelo J. C. D'Amour J. E. Bourgeau O. Dumont J. E. Bourgeau O. Dumont M. E. Bourret. F. E. Bourret. R. E. Bourret. A. L. Auger J. W. Bathurst F. S. Dagenais. A. L. Auger J. B. Gariely W. P. Brophy W. P. Brophy W. P. Brophy W. P. Brophy J. R. Plante J. R. Plante J. R. Plante J. Callary J. R. Plante J. Callary J. R. Plante J. Callary J. R. Plante J. Callary J. R. Plante J. Reilly J. R. Plante J. Reilly J. R. Plante J. Reilly J. B. Callary J. R. Plante J. Reilly J. Hoube J. Callary J. Reilly J. Hoube J. Reilly J. Hoube J. Reilly J. Hoube J. Massomnette. S. Gorman. J. Lageace G. Plante S. Gorman. J. Lefebvre S. Gorman. J. Lefebvre

(less fine). (less fine). (less fine). (less fine).

Grand Total.	% (Gs.)	
Total of Classes.	8. 8. 94,001 2	3,864 79
Salary.	* \$25.52.52	00 009
Service,	MONTREAL POST OFFICE—Concluded. Clerks from 16th October, 1888 from 18th January, 1889 from 18th January, 1889 from 18th January, 1889 from 18th January, 1889 from 18th January, 1889 do do do from 18th April, 1889, dismissed do do from 25th July, 1888 do from 27th May, 1889 from 27th do do do from 27th May, 1889, also temporary from 24th to 27th December, 1888 do from 27th April, 1889, do do do do do do do do do do do do do d	:
	3rd Class do do do do do do	Stamper
Name.	J. Lemieux A. Gauthier A. Radakir F. X. Brault A. Radakir J. Pairallia J. Pairallia J. Pairallia J. Pairallia J. St. Jean M. Villeneuve A. Cadotte G. Rosa F. Vincent M. Brunal M. Brunal M. Brunal J. H. Lepine J. Mathieu J. Mathieu J. Mathieu J. Mathieu J. Mathieu J. Mathieu J. Mathieu J. Mathieu J. Mathieu J. Henaughty D. Wollennan M. F. Johnson M. R. Johnson M. R. Johnson M. Mayer A. Payfer A. Bolton L. B. Dumesnil L. B. Dumesnil L. Growe J. Growe J. Growe J. Growe J. Growe J. Growe	J. Collins.

		119,087 13								٠	
1,680 00		300 00		3,400 00	30 30 j' '			ı	11 196 75	14, Live 19	3
600 80 80 80 80 80 80 80 80 80 80 80 80 8	150 00	B	2,000 00 1,400 00	1,200 00 1,200 00 1,200 00 1,100 00	797 85 800 00 800 00 744 08 799 00	466 66 760 90 710 90	200 00 640 00 640 00	399 00 570 00 539 00	375 00 166 66 419 50	400 00 400 00 133 33	00 009 009
Messenger do do	BRANCH POST OFFICES. Postmaster, Ontario Street, East, from 1st January, 1889.	do St. Catharine Street, West, from 1st January, 1889	QUEBEC POST OFFICE. Assistant Postmaster.	2nd Class Clerk. do do do do	3rd Class Clerk (less fine). do do do suspended from 15th December, 1888, to 7th January, 1889; less fine). do (less fine).			do from 1st November, 1888 (transferred from Militia Department; less fine). do (less fine).	do to 31st March, 1889 (transferred to Quebec Division) do to 30th November, 1888 do (less fine).	Temporary Clerk do to 31st October, 1888 (transferred to Militia Department).	Letter Carrier.
J. Maher J. Bennett. L. Renois.	D. Lepage	E. M. Kenout	A. G. Tourangeau. J. E. Bolduc.	C. Chamberland A. W. LeBel W. Handford L. A. Rochette	LW. White GZ. Gagmon GF. Gaboury M. Myler U. Vezna	G. Evanturel. J. E. Turner. O. Plamondon	P. F. Lane. L. H. Garneau E. Morisette. I. T. Henreux	J. M. E. Genest. W. H. A. Eckhardt. J. J. Battle.	M. Pelletter F. O'Dowd P. Jobidon W. Batterton	J. N. A. Gingras. C. Audet. T. M. Maguire.	N. Giasson

Grand Fotal.	cts.	32,546 58	1,130 66 3,983 53	\$257,528 87
Total of Classes.	\$ cts	1,440 W		
Salary.	cts. cts. cts. cts. cts. cts. cts. cts.			TITLE TO THE TANK
Service.	Letter Carrier do do do do do do do do do do do do do d	Total, Quebec Post Office.	Balance of salaries remitted by cheque to Postmasters other than above; being the excess of their salaries over the amount of revenue collected by them to 30th June, 1888. Proportion of salaries transferred from Ontario— Of Ottawa Inspector, Staff and Railway Mail Clerks.	Total.
			Balance of sale salaries ov Proportion of a	
Name.	R. Wilkinson V. Houle. R. Pelletier. H. P. Kelly J. P. T. Gingras. J. Desroches. E. Duhault. D. Mercier. A. Pelletier. R. Blackburn. R. Blackburn. C. N. Langlois. A. E. Gingras. E. Emond. L. H. Beaule J. Evarts. T. Dénéchaud.			т н

ວວ ===	victoria.		Sessional Papers (No. 15.)	A. 1030
	e service	Grand Total.	\$ cts.	
	person, th	Total of Classes.	\$ cts. 3,600 00 1,200 00 2,050 00 1,166 66 1,000 00	1,502 34
	ne of the] .e, 1889.	Night Duty and Milage.	se cts.	2 34 323 24 368 48
	se, the nar d 30th Jun	Salary.	\$ cts. 2,200 00 1,400 00 1,400 00 1,100 00 480 00 486 06 600 00 400 00 173 33 300 00 210 00	1,500 00 960 00 960 00
PROVINCE OF NOVA SCOTIA.	nents made for Salaries, &c., in Nova Scotia; showing, in each case, the name of the person, the service or duty performed, and the amount paid within the Year ended 30th June, 1889.	Service.	Post Office Inspector Assistant Inspector 1st Class Clerk 2nd do do from 1st June, 1889 (transferred from Halifax Post Office) Temporary Clerk Messenger to 31st October, 1888 (deceased) Tempo- ary Messenger to 31st January 1889 (deceased) Total, Inspector's Office	Chief Railway Mail Clerk List Class do One do
	DETAIL of all payments made or duty p	Name.	C. J. Macdonald J. D. Story D. Stewart L. E. Davison S. J. R. Sircom A. Costley W. W. Page T. J. Curren S. Howe M. H. Meagher J. H. Kelly D. Wilson	A. Browne

Service.
SCOTIA DIVISION—RAILWAY MAIL SERVICE—Concluded.
lerk. promoted from 3rd Class, 1st October, 1888
from and Tammerer to 10th April 1889
Total, Railway Mail Service
Grand Total carried forward

DETAIL of all payments for Salaries, &c., in Nova Scotia, made within the Year ended 30th June, 1889—Continued.

Grand Total.	\$ cts. 29,785 07	/		
Total of Classes.	es cts.	2,700 00		11,655 17
Salary.	& cts.	2,400 00 1,600 00 1,500 00 1,200 00 1,100 00 1,100 00 1,100 00 1,100 00	71788888888888888888888888888888888888	570 80 84 48 34 46 80 80 80 80 80 80 80 80 80 80 80 80 80
Service.	Brought forward	HALIFAX POST OFFICE. k	suspended from 16th to 23rd April, 1889, on leave without salary from 1st May, 1889.	do do to 31st May, 1889 (transferred to Halifax Division). do from 7th May, 1889. Superintendent Letter Carrier Letter Carrier do do
	·	Postmaster	-	do do do do Superintende Letter Carrie do
Name.		H. W. Blackadar. F. V. Tremain. E. A. Bent. F. P. Bent. A. H. Cunningham. W. H. Chamberlain. 6T. G. Creighton. F. W. Casev.		

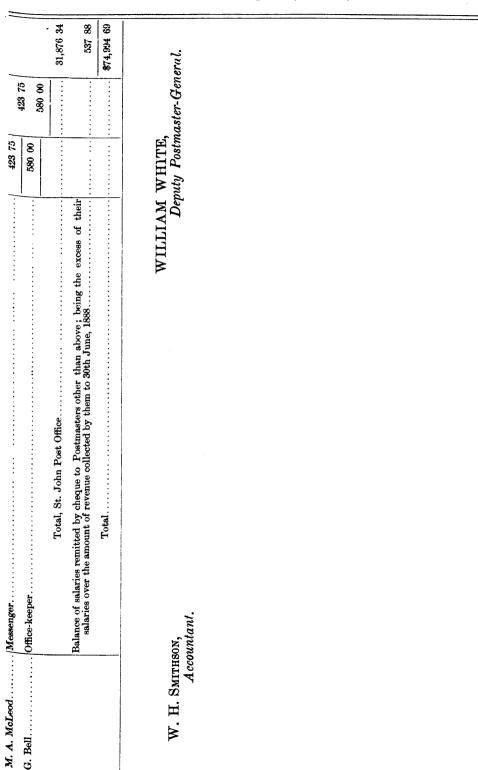
Service		Salarv.	Total of	Grand
		; ;	Classes.	Total.
HALITAX POST OFFICE—Concluded.		e cts.	& cts.	s cts.
Letter Carrier.		000000000000000000000000000000000000000		
		388		
to 31st December. 1888 (retired).		487 50 240 00		
		450 00 427 50	a kanana da aya kanga	
do do		85 72 8 8 72 8	or angle-way, it is suggested	
2		360 00	8,342 50	
do from 4th March, 1889		117 09	477 00	
Letter Collector. do do do		600 00 600 00 502 50	8	
Messenger		390 00	390 00	
Total, Halifax Post Office				33,767 26
Balance of salaries remitted by cheque to postmasters other than above; being the excess of their salaries over the amount of revenue collected by them to 30th June, 1888	the excess of their	<u>·</u>	:	841 08
Total				\$64,393 41

PROVINCE OF NEW BRUNSWICK.

							oper.		.10. 1	<i>-</i>			A. 1000
	rson, the	Grand Total.	♣ cts.						7,840 00				
	of the person.	Total of Classes.	e cts.	00 000	2,200 00	1,300 00	00 0GI 'z	600 00	8 :	-	3	1,340 00	% 24 25 25 27 27 27 27 27 27 27 27 27 27 27 27 27
	e name c June, 188	Night Duty and Mileage.	æ cts.							•		418 26 404 59	311 37 333 59 266 45 311 74 359 63 344 23 367 24
	th case, thurded 30th	Salary.	e cts.	2,200 00	1,350 00	1,200 00	800 00 740 00	00 009		,	1,345 00	00 096 096	000000000000000000000000000000000000000
PROVINCE OF NEW BRUNSWICK.	DETAIL of all payments made for Salaries, &c., in New Brunswick; showing in each case, the name of the person, the service or duty performed, and the amount paid within the Year ended 30th June, 1889.	Name. Service.	NEW BRUNSWICK DIVISION.	S. J. King Post Office Inspector	W. C. Whittaker 1st Class Clerk.	W. B. Avery 2nd do do do do do	C. A. Murray. 3rd do R. Freeze. do	W. Bannister	Tctal, Inspector's Office	RAILWAY MAIL SERVICE.	F. W. Blizard	G. M. Ryan. 1st Class Railway Mail Clerk. do do	F. A. Estey 2nd do W. Starkie do do J. Phips do do J. R. Pidgeon do do H. Wathen do do J. Frice do do J. G. Willer do do J. G. Willer do do

Grand Total.	\$ cts.	
Total of Classes.	\$ cts.	:
Night Duty and Mileage.	\$ cts. 246 47 244 47 244 44 244 44 245 36 286 38 287 388 287 3	
Salary.	\$ cts. 120 00	
Service.	NEW BRUNSWICK DIVISION—RAILWAY MAIL SERVICE—Concluded. 2nd Class Railway Mail Clerk do do do do do do do do do do from 14th August, 1889 Temporary Railway Mail Clerk do do do do do do do do from 14th August, 1889 Total, Railway Mail Service	
Name.	D. McKendrick A. Brittain R. J. Magee S. R. Jack S. R. Maxwell E. L. Willis G. H. Oulton A. Murray J. Campbell H. Nadeau H. Nadeau H. Nadeau H. Nadeau H. Watt H. B. Beck W. S. Hall R. R. Smith D. D'aigle H. W. Belding	

Name.	Service.	Salary.	Total of Classes.	Grand Total.
	Brought forward	ee cts.	es cts.	\$ cts.
	FREDERICTON POST OFFICE.			
P. McPeake	Postmaster	1,700 00	00	
J. Cameron. W. B. Phair.	2nd Class Clerk.	1,200 00	1,700 00	
E. W. Varasour A. E. Wilson Phillips R. Gardiner	3rd do to 31st May, 1889 (transferred to St. John Post Office). do (inclucing arrears).	800 00 540 00 520 00 410 75	2,100 00	
A. S. Phair	Letter Carrier, to 31st December, 1888 (deceased)	295 00	2,270 75	
B. Phair J. D. Perkins E. Ryan	Temporary Letter Carrier, from 8th January, 1889. do from 12th December, 1888, to 7th January, 1889.	173 22 15 48 14 51	203 21	
	Total, Fredericton Post Office			6,568 96
	ST. JOHN POST OFFICE.			
E. Willis J. Woodrow	Postmaster. Assistant Postmaster	2,000 00 1,500 00	6	
M. J. PotterA. W. Reed	M. J. Potter. do do do do do do do do do do do do do	1,200 00	9,000	
H. P. Otty. A. McNichol R. C. McIntyre. G. F. Ring. J. S. Flagfor	2nd do do (less fines)	1,200 00 1,200 00 1,200 00 1,142 13 1,200 00	7,	



PROVINCE OF MANITOBA, &c.

name of the per	name of the person; the service or duty performed; and the amount paid within the Year ended 30th June, 1889.	n the Yes	r ended 3	oth June,	1889.
Name.	Service.	Salary.	Provisional Allowance.	Night Duty and Mileage.	Grand Total.
	MANITOBA, &C., DIVISION.	e cts.	e cts.	s cts.	e cts.
W. W. McLeod A. W. Cairns A. J. Patton	Post Office Inspector Assistant Inspector (transferred from Railway Mail Service).	2,200 00 1,350 00 1,200 00	156 20 153 90 136 80	81.74	0
A. McGillis. C. F. Tuck	2nd Class Clerk do	1,200 00	136 80 114 00		#0 0/Z'c
99. L. Broughton. W. T. Macpherson. E. R. Stevenson. A. S. Royal.	3rd do do do from 1st October, 1888 (transferred from Railway Mail Service).	610 00 520 00 460 00 360 00	86 91 118 56 104 88 82 08		2,450 %
S. Knighton	Messenger, from 1st October, 1888 (transferred from Winnipeg Post Office)	307 50	11 02		377 61
	Total, Inspector's Office.	9,207 50	1,160 24	81 74	10,449 48
	RAILWAY MAIL SERVICE.		Anna Prima dia na Agus		
C. E. Kavanagh	Chief Railway Mail Clerk.	1,350 00	153 90	130 17	1 004
J. A. Carman. J. G. Norris. C. R. Stewart. L. T. Prudhomme. W. B. Sloan. H. H. Phinney. F. E. Harrison.	2nd Class Railway Mail Clerk do do do do do do do do	800 7200 72000 72000 76000 68000 64000 64000	114 00 102 60 102 60 108 30 108 30 96 30 91 20	542 37 608 43 507 60 528 47 500 97 519 33 420 11	1,034 0/
J. G. Moore	3rd do (suspended from 2nd February to 25th March, 1889)	560 00 443 26	127 68 101 04	236 80 455 33	90 467'6

	95	21,859 72	35,737 66		i i	4,570 60	1, 550 80	4,809 06
255 555 555 555 555 555 555 555 555 555	107 93 501 86	396 30 630 69 189 49	14,595 94		: :			
128 128 128 128 128 128 128 128 128 128	38 00 109 44	109 44 115 52 89 98 10 59	3,454 64	·	170 40 205 20	136 80	136 80 135 37 124 68 124 68	114 98 28 38 38 38 38 38 38 38 38 38 38 38 38 38
88888888888888888888888888888888888888	166 66 480 00	480 00 506 67 394 66 46 45	17,687 08		2,400 00 1,800 00	1,200 00	1,200 00 1,187 50 975 00 975 00	800 00 690 00 640 00 610 00 660 00 590 00 800 00
(including arrears) (including arrears) (suspended from 19th to 28th December, 1888) to 30th September, 1888 (transferred to Inspector's Office), from 1st March, 1889 (transferred from Winnings Post	from, and temporary to, 1st May, 1889.	Railway Mail Clerk do (including arrears) do from 5th September, 1888 do from 27th May, 1889	Total, Manitoba, &c., Railway Mail Service	WINNIPEG POST OFFICE.				to 31st October, 1888 (transferred to Montreal Poet Office)
දි දි දි දි දි දි දි දි දි දි දි දි දි දි දි	g op			•	PostmasterAssistant Postmaster	1st Class Clerk	9 999	20000000000000000000000000000000000000
J. T. A. Scott. J. T. Colton. J. Kinney. T. J. Smith. A. C. James. A. Lamothe. A. Hicks. W. T. Barrett. J. D. Sherman. A. M. Ferguson. G. L. Ferguson. A. Qaven. R. W. Holland A. S. Erguson. A. S. Lipsett. W. A. Porter. B. A. Porter. B. Porter.		P. W. Allaire			W. Hargrave Posti R. R. Brough Assis	C. M. Boswelllst C	E. Barrett 2nd G. H. Allen J. Scott H. C. Dumas.	J. R. Simons. W. A. Rice. G. A. Hargrave. W. Braden. F. Arneil F. Arneil A. Monkman. D. J. Smith.

luded.	Grand Total.	e cts.	0 639 70	60 606 6	77 000 °C	7 008 73	1.350.74
.889—Conc	Night Duty and Mileage.	es cts.	42 73				
th June, 1	Provisional Allowance.	ee cts.	2013 × 213 25 25 25 25 25 25 25 25 25 25 25 25 25	28232288 282322888	25 25 25 25 25 25 25 25 25 25 25 25 25 2	88888	82 08 61 56 51 19 50 39
ended 30	Salary.	ee cts.	298 93 90 00 00 00 00 00 00 00 00 00 00 00 00	400 00 400 00 400 00 333 32 3317 77 280 54 233 34	600 00 286 00 286 00 286 00 286 00 286 00 286 00 286 00 286 00		360 00 270 00 224 52 221 00
yments for Salaries, &c., in Manitoba, &c., made within the Year ended 30th June, 1889—Concluded.	Service.		of the Control of the	Temporary Clerk do do do from 10th September, 1888 do from 15th September, 1888 do from 19th October 1888 do from 19th October, 1888	Superintendent Letter Carrier Letter Carrier do do do do do do do do do do do do do	do to 30th September, 1888 (transferred to Manitoba Division). do to 30th September, 1888 (transferred to Manitoba Division). do from, and temporary to, 10th April, 1889.	Temporary Letter Carrier do from 1st October, 1888. do from 1st October, 1888, to 31st May, 1889 (resigned) do from 20th November 1888.
DETAIL of all payments	Name.	e E	1. Broad R. J. Lipestt. A. F. A. Chabot D. A. Keizer B. A. Parson L. Garrett E. C. Macdonald.	R. R. Mills R. S. Cox. E. M. Denison E. M. Morioe. W. S. Wallace M. Ruttan M. E. Rowan	Gow unningham iller Cuthbert, jr. L. Burows. Lilly Lilly Smith . Taylor.	W. J. Cuthbert, sr. J. Glose. S. Knighton H. W. Dayton N. Gow.	J. Russell. F. Norris J. Todd A. L. Hardisty

99 V	icto			_	3688 .
561 00	32,453 40	10,449 48 35,737 66 32,453 40	78,640 54	513 97	79,154 51
85 50	42 73	81. 74 14,595 94 42. 73	14,720 41		
	4,655 07	1,160 24 3,454 64 4,655 07	9,269 95		
890 00	27,755 60	9,207 50 17,687 08 27,755 60	54,650 18		
A. Fridham Porter, including arrears of provisional allowance Brown	Total, Winnipeg Post Office	Totals of Inspector's Office. do Railway Mail Service do Winnipeg Post Office.	Grand Totals.	Balance of salaries remitted by cheque to Postmasters other than above; being excess of their salaries over the amount of revenue collected by them to 30th June, 1888.	Total

WILLIAM WHITE,
Depuly Postmaster-General.

PROVINCE OF BRITISH COLUMBIA.

DETAIL of all payments in service or	tyments made for Salaries, &c., in British Columbia, showing, in each case, the name of the person, the service or duty performed, and the amount paid within the Year ended 30th June, 1889.	each case nded 30th	, the nam June, 188	e of the pe 89.	erson, the
Name.	Service.	Salary.	Provisional Allowance.	Night Duty and Mileage.	Grand Total.
	BRITISH COLUMBIA DIVISION.	e cts.	e cts.	e cts.	& cts.
E. H. Fletcher. W. H. Dorman	Post Office Inspector	2,000 00 1,200 00	285 00 171 00		9
H. B. Rogers	2nd Class Clerk, from 10th April, 1889 (transferred from Railway Mail Service)	172 17		6 40	3,050 00
F. A. Carmichael	3rd do brg.	480 00	109 44		589 44
170	Total, Inspector's Office	3,852 17	565 44	6 40	4,424 01
	RAILWAY MAIL SERVICE.				
J. Rooney	1st Class Railway Mail Clerk	960 096 00 096	136 80 96 75	10 40 683 52	70 72 6
W. T. Cox	2nd do	800 00	182 40	731 86	1714 96
H. B. Rogers R. Y. Ellis B. F. Drummond J. O. McLeod T. H. Thain P. R. Dougall	3rd do to 10th April, 1889 (transferred to Inspector's Office). do do do (less fine) (less fine) (from and temporary to 14th May, 1889 (less fine).	430 00 516 67 480 00 480 00 478 67 478 71	91 12 117 80 109 44 109 44 109 44	235 92 742 13 707 86 710 38 722 53 760 48	7 300 03
J. H. Good.	Temporary Railway Mail Clerk. trom 11th June, 1889.	480 00 26 66	109 44 6 08	236 04	858 22
	Total, Railway Mail Service	6,118 21	1,178 15	5,541 12	12,837 48
N. Shakespeare	VICTORIA POST OFFICE.	2,000 00	286 00		00 986 6
T. A. Cairns	1st Class Clerk	1,300 00	49 87		1.349 87
		-			

_				***		<u> </u>					
, , , , , , , , , , , , , , , , , , ,	7,721 60	38 38 38	9 619 29	60 CTO.	1,824 42 498 92	13,257 77	4, 424 01 12,837 48 13,257 77	30,519 26	293 69	\$30,812 95	
		•					6 40 5,541 12	5,547 52	:		
52 20 49 40	159 60 89 88 104 88 100 32	91 20		68 82 82 82 82 83 83 83 83 83 83 83 83 83 83 83 83 83	88 92	1,593 33	565 44 1,178 15 1,593 33	3,336 92	:	:	WHITE.
815 60 805 00	700 00 394 19 460 00 419 00 440 00	400 00 335 48 400 00 400 00 414 45 331 12	64 52 46 24 33 34	360 88 360 80 360 80 360 80 360 80 360 80 360 80 360 80 360 80 360 80 36	28 00 1 00 410 00	11,664 44	3,852 17 6,118 21 11,664 44	21,634 82	:		WILLIAM WHITE
do promoted from 3rd class, 1st October, 1888do do do	do to 11th May, 1889 (resigned) do do on leave without salary, from 1st June, 1889 (less fine).	ary Clerk. do to 2nd May, 1889 (resigned). do do (including arrears). do from 3rd September, 1888		Letter Carrier, to do do do do do	employed as	Totals, Victoria Post Office	Recapitulation. f Inspector's Office. Railway Mail Service. Victoria Post Office.	Grand Totals	Balance of salaries remitted to Postmasters other than above being the excess of their salaries over the amount of revenue collected by them to 30th June, 1888	Total	M
2nd	3rd	Temporary do do do do do		Temporary	Messen		Totals of Ins do Ra do Vi		Balance se		
C. W. Newbury2nd C. W. Finlaison	T. Chadwick F. R. Sargison R. J. Budler G. A. McCulloch J. S. Smith.	P.H.D.W.F.	F. J. Sehl. F. Bryant. W. Stewart	- : 6 3-:	LG. E. Smith. J. Greed. J. E. McRoberts.						W. H. SMITHSON,

15—12

PROVINCE OF PRINCE EDWARD ISLAND.

e person,	Night Duty Total Grand totals Mileage. Classes.
me of th 1889.	Total of Classes.
ase the nath	Night Duty and Mileage.
in each c ended 30	Salary.
DETAIL of all payments made for Salaries, &c., in Prince Edward Island; showing in each case the name of the person, the service or duty performed, and the amount paid within the Year ended 30th June, 1889.	Service.
DETAIL of all pa	Name.

		The same of the sa				
Name.	Service	Salary.	Night Duty and Mileage.	Total of Classes.	Grand totals	
	CHARLOTTETOWN POST OFFICE.	s cts.	& cts.	s cts.	sto &	
ecken Assistant Post O	F. de St. C. Brecken Assistant Post Office Inspector and Postmaster	2,000 00		00		
W. Harris		1,200 00		2,000		
3rd do do do		00 00 00 00 00 00 00 00 00 00 00 00 00		4,100 to		
1.1 McCarey do 5.1 G. W. Brown. do M. W. Murphy. do J. N. Robertson. do J. Macdonald. do		255 55 44 4 250 55 68 4 260 68 68 68 68 68 68 68 68 68 68 68 68 68				
Temporary Clerk.		400 00		5,620 00		
	Total, Charlottetown Post Office			B B#	10,120 00	
_	RAILWAY MAIL SERVICE					
O. B. Grabbe	2nd Class Railway Mail Clerk do Acting Railway Mail Clerk.	800 00 720 00 640 00	169 52 144 66 141 87	2,616 05		
	Total, Railway Mail Service	2,160 00	456:05		9 616 05	
Balance of salarie	Balance of salaries remitted by cheque to Postmasters other than above, being the excess of their salaries over the amount of revenue collected by them to 30th June, 1885				229 21	
	Total				\$12,965 26	
W. H. SMITHSON, Accountant.	MI	LLIAM WE	WILLIAM WHITE, Deputy Postmaster-General.	Postmuster-	general.	

PROVINCE OF ONTARIO.

DETAIL of all payments for Travelling Expenses, incurred in the service of the Post Office Department in Ontario, made within the Year ended 30th June, 1889.

Name.		Service.	Amount.
J. Dewe, Chief P.O.I W.E.Bennett, Asst. P.O.I Le F. A. Maingy		ses, within Ontario	\$ cts. 292 65 587 40 20 50
		Barrie Division.	
D. Spry, P.O.1 J. Henderson, Asst. P.O.1 A. McCarthy	Travelling exper do do	Kingston Division.	366 25 319 05 0 75
G. E. Griffin, P.O.I. A. Jones, Asst. P.O.I. P. H. Macarow J. C. Strange D. E. Rose C. G. Shannon H. F. Wilmot.	do do do do do	as acting Railway Mail Clerk. do do do do do	17 00 442 37 43 35 51 00 6 00 18 00 18 00
		London Division.	
R. W. Barker, P.O.I C. Fisher, Asst. P.O.I A. McWhinney	do	ottawa Division.	527 31 328 75 16 00
T. P. French, P.O.I G. Marsan, Asst. P.O.I. C. P. LeSueur, Asst P.O.I D. Moloney W. O. Mercer.	do do	nses within Ontario	728 50 189 50 40 50 1 00 24 00
		STRATFORD DIVISION.	
H. G. Hopkirk, P.O.I D. Moloney, Asst. P.O.I.	Travelling expe	nses.	596 74 17 50
	_	Toronto Division.	
M. Sweetnam, P.O.I G. A. Burnham, Asst.	Travelling exper	ises	353 77
P. O. I	do		294 75 1 50 0 65
Asst. P. M., Belleville Postmaster, Toronto	Travelling exper do	ises.	0 25 43 00
British Mail Clerks	Ontario's propor	tion of expenses, whilst in charge of British Mails.	966 35
		Total	\$6,312 39

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF QUEBEC.

DETAIL of all payments for Travelling Expenses incurred in the service of the Post Office Department, in Quebec, made within the Year ended 30th June, 1889.

J. Dewe, Chief P. O. I. W.E. Bennett, Asst. P.O. I W.E. Bennett, Asst. P.O. I D. Nelligan, Asst. P.O. I. J. E. Gervais, Asst. P.O. I. do OTTAWA DIVISION. Travelling expenses. OTTAWA DIVISION. OTTAWA DIVISION. Travelling expenses, within Quebec. do OTTAWA DIVISION. Travelling expenses, within Quebec. do OTTAWA DIVISION. Travelling expenses, within Quebec. do OFTAWA DIVISION. Travelling expenses and do OTTAWA DIVISION. Travelling expenses and do OFTAWA DIVISION.	•	cts
E. F. King, P. O. I D. Nelligan, Asst. P. O. I. J. E. Gervais, Asst. P. O. I. do do J. A. Madore OTTAWA DIVISION. T. P. French, P. O. I G. Marsan, Asst. P. O. I G. Marsan, Asst. P. O. I J. L. Anctil, Asst. P. O. I do C. Vohl O. Fréchette O. Fréchette do J. B. Caouette do L. J. H. Larue do do do do do do as acting Railway Mail Clerk do do do as acting Railway Mail Clerk do do do do do do do do do do do do do		50 75
T. P. French, P. O I G. Marsan, Asst. P.O.I QUEBEC DIVISION. A. Bolduc, P. O. I J. L. Anctil, Asst. P.O.I C. Vohl	478 546 453 25	72
A. Bolduc, P. O. I	171 147	
J. Boufford do as acting Railway Mail Clerk	6 19 10 31 39	80 00 00 75 50 40
G. A. Bourgeois, P. O. I. J. P. Chillas, Asst. P.O.I. G. O. Bailey	635 655 85 25	75 45 50
ham	2 369	00 15

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NOVA SCOTIA.

Detail of all payments for Travelling Expenses incurred in the service of the Post Office Department, in Nova Scotia, made within the Year ended 30th June, 1889.

Name.		Service.	•	Amour	nt.
				\$	cts.
J. Dewe, Chief P.O.I.	Travelling expe	enses within Nova Scotia		46	35
Le F. A. Maingy	do	do			50
C. J. Macdonald, P.O.I.	do			721	
J. D. Story, Asst. P.O.I.	do				00
D. Stewart, Acting Asst.	l do	,		448	45
T. G. Creighton	do				28
S. Howe	do	• • • • • • • • • • • • • • • • • • • •			50
Postmaster, Liverpool J. McN. Gabriel	Travelling expe Expenses whils	enses			40 00
		Total		\$1,374	68

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF NEW BRUNSWICK.

Detail of all payments for Travelling Expenses incurred in the service of the Post Office Department, in New Brunswick, made within the Year ended 30th June, 1889.

Name.	Service.	Amount.
S. J. King, P.O.I W. C. Whittaker W. R. Avery	Travelling expenses	\$ cts. 565 89 227 00 95 05
M. Sweetnam, P.O.I., Toronto	do (within New Brunswick)	53 15 \$941 09

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF MANITOBA, &c.

DETAIL of all payments for Travelling Expenses incurred in the service of the Post Office Department, in Manitoba and the North-West Territories, made within the Year ended 30th June, 1889.

Name.		Service.		Amount.	
W.E. Bennett, Asst. P.O. I	ravelling expenses wi	thin Manitoba,	&c	\$ ets	
W. W. McLeod, P.O.I.	do	do		40 5	50
A. W. Cairns, Asst. P.O.I	do	do		277 5	5 0
A. J. Patton, Asst. P.O.I	do	do		600 0	ю
		Total		8927 5	50

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF BRITISH COLUMBIA.

DETAIL of all payments for Travelling Expenses incurred in the service of the Post Office Department, in British Columbia, made within the Year ended 30th June, 1889.

Name.		Service.	1	Amoun	it.
E. H. Fletcher, P. O.I	Travelling expense	·s		\$ c	cts.
W.H.Dorman, A'st P.O.I	do			313	10
F. A. Carmichael	do	as acting Railway Mail	Clerk	48	00
H. B. Rogers	do	do		67	50
C. W. Finlaison	do	do		100	50
		Total		\$1,280	50

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF PRINCE EDWARD ISLAND.

Detail of all payments for Travelling Expenses incurred in the service of the Post Office Department, in Prince Edward Island, made within the Year ended 30th June, 1889.

Name.	Service.	Amount.
F. de St. C. Brecken, Assistant P. O. I	Travelling expenses	\$ cts.
J. G. W. Brown	do as acting Railway Mail Clerk	31 50
J. McCarey	do do	7 50
J. M. Campbell	do	2 25
	Total	\$162 79

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

DETAIL of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department in Ontario, made within the Year ended 30th June, 1889.

Name.	Particulars.				
					\$ c
A. Bank Note Co	Engraving and printing postage	stamps, po		, for the	97 100
itchard & Andrews	Post Office Department, in O Office stamps and seals, &c., for t	ntario	nartment in	Ontario	27,100 3,193
do	Office scales and weights	ne I. O. De	do	Ontario	512
Wilson & Son	do		do		120
G. Pratt	Coin scales		do		10
aynard, Harris & Co	Letter Carriers' uniform material	8	do	•••	946
samond Woolen Co Cummings, Sons & Co			do do	• • •	919 361
ton Manufacturing Co			do	::	236
yson, Graham & Co	do		do		11
	Re-covering Letter Carriers' cal	os, for the	P. O. Depart	tment, in	
	Ontario	<u>.</u> <u></u> .			386
Gagné & Co	Making Letter Carriers' uniforms	, for the P.		Intario	123
Force			do do		30 11
S. Montgomery evens & Burns	Street letter boxes		do		144
. Truman	Making and repairing postage star	np boxes	do		102
B. G. Samson	Repairing postage stamp boxes		do		36
Stevenson	Dominion ensigns Railway Mail Clerks' tin boxes, &		do		57
cKinley & Northwood.	Railway Mail Clerks' tin boxes, &	kc.	qo		45
Barnard			do do		18 25
	Repairing wooden boxes Patent bag holders, &c.		do	• • •	7
	Stamping machine rollers		do		$\dot{2}$
Leslie			do		1
Wilson & Co	Framing pictures for the Postmas	ter-General	's room		7
cKinley & Northwood.	Railway Mail Clerks' tin box for	P. Q. I., Ba	rrie		10
, Sewrey	Repairing copying press, &c.	do do			4 2
J. Henderson		do			ĩ
Henderson	Hardware	do			ō
$\mathbf{A.\ Dutton}\dots\dots$	Matches	do			0
G. Bastow	Repairing street letter boxes for		gston		8
H. Roberts	Locksmith's work	do			2 1
S. Henderson	Brooms and soan	do do			1
Muckleston & Co	Hardware	do			Ô
	Street letter boxes supplied P.O.				392
Anundson	Repairing office furniture. &c.	do .		!	7
. E. Young	Caligraph and office cabinet for I	P.O.Į., Otta	wa		111
K. Smith utterworth & Co	Repairing copying press	do do			7 8
					Ó
Dunsmore & Son	Sweet oil Water cooler and filter for P.O.I	Stratford	••••••••••••••••••••••••••••••••••••••		7
. Ward	Soap, matches, &c.	do			2
W. McEwin	Candles, matches, &c.	do	<u>.</u>		1
	Railway Mail Clerks' tin boxes f				70 49
	Street letter box locks	do do			19
rand Trunk Ry. Co	Repairing Railway Mail Clerks'				8
Pells	Carpenter's work	do do			i
ills Bros	Soap and broom	do			2
& J Taylor	Repairing office safe lock	do			1
D. Ford	Repairing lock boxes, &c., P.O., Repairing street letter boxes Bedding	Belleville			8
W Dunnet	Repairing street letter boxes	10			4
avis & Gibson	Soan	10 do			2
7.311(J A. Cl)	Soon and sode				2
Vallbridge & Clarke	IDOBO BIIU SUUB	01			

178

Detail of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department, in Ontario, made within the Year ended 30th June, 1889.—Continued.

Name.	Particulars.		Amou
			*
A. Hamilton, P. M.	To pay for repairing street letter box at To pay for repairing office scales at Dove	Collingwood	1
J. Rankin, P. M	To pay for repairing office scales at Dove	er Centre	· · · · · ·
chard & Andrews	Money order pay stamp for 1.0., Fores	••••••••••	1
do	do Goden	rich	158
Calder & Co	Making Letter Carriers' uniforms for P. Letter Carriers' boots	do	131
H. Lightfoot F. Tanner	do	do	73
	do caps	do	24
3 Montgomery	do waist belts	do	
ten & Son	Repairing street letter boxes	do	37
tch & Co	Renairing and bitting up street letter bo	xes do	37
Kinley & Northwood.	Oil, &c.	do	(
Conner	Repairing and painting mail truck at P. Making Letter Carriers' uniforms for P.	O. Kingston	118
V H Rombwidge	I offer I armore hoots	do	38
		do	2
		do	19
1 Hondomoon	Soan brooms matches Ac	do	
Waldron	l'l'owelling cloth for gramping page &c.	do	3
Unanteloun	Stamping machine rollers	do	
M. Wilkinson & Son G. King & Co	Turnentine &c	do	
Allichioston W. C.O.	Hardware	do	
M Bronnan	!(Iffice stool	do	1
Mahon Bros	Desk lock	do	9
de & Ryley	Moving street letter box for P.U., Linds:	ay	
toband	Repairing street letter box do Money order pay stamp do		:
Roard & Andrews	Making Letter Carriers' uniforms for P.	O London	18
['oo]-	Takken Commone books	do	13
F. Tannerwell, Allen & Bricken	do	do	6
well, Atlen & Bricken			
	uo iui capa	do	1
S. Montgomery	do waist belt	dodo	
R. Gurd	Repairing postage stamp boxes Brooms and brush	do	
		do	:
ANTERT	Renaimno street letter hox at Nababee.		_
Sykes	Carpenter's work for P.O., Oshawa	0.04	1.
Gagne & Co	Making Letter Carriers' uniforms for P. Letter Carriers' boots	do	32 13
N Tonnor	1 00 00	do	7
		do	
d Davlin	do fur cana	do	3
O. Montgomery	do waist peits	d o	
D. Kartlett	Attendance on clocks	do	6 1
Chanteloup	Stamping machine rollers Bubban been feather dusters to	do do	1
IJ. (∔raham	Rubber hose, feather dusters, &c.	do	
te & Co	Brooms, soap, &c.	do	
W. Allen & Co	Patent mail bag holders	do	
ives Rros	Hardware	do	
& (t. Hav	l do	do	
ALIDIAY AT NORTHWOOD	Proceedings of the second letter have at Owen Same	do	
Waites	Erecting street letter box at Owen Soun Repairing do do	a	
Eilliott	Putting up letter box at Perth Kallway	Station	
Illsey	Repairing street letter box at Picton		
Irving	Repairing street letter box at Picton Putting up do do		
A APAN D TAT	I do do corcator	•	
Sanoron	Money order pay stamp for P.U., Fresc	t 'l'homes	
~auo£011	Making Letter Carriers' uniforms for P. Letter Carriers' boots	v. INCHIMS	1,33

DETAIL of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department in Ontario, made within the Year ended 30th June, 1889.—Concluded.

Name.	Particulars.		
7 F Tanner	Letter Carriers' boots for	Post Office, Toronto	229
& J. Lugsdin	do caps	do	123
. S. Montgomery			9 '
Pells			619
		do	180
. I nompson	Repairing inside leather ca	ses for street letter boxes, Toronto	67
		Toronto	146
. H. Roberts	do,	do	117
he E. & C. Gurney Co	Street letter boxes	do	125
E. Ellis & Co		do	19
	Stamping machine rollers	do	7
yman Bros. & Co		do	7
	Turpentine, oil, broom, &c.		3
7. A. Murray & Co	Towels	do	3
ritchard & Andrews	Money order pay stamps for	or branch office, Peter St., Toronto	1
I. Serritt	Repairing mail box at Tres	nton Station.	1
Marentette	Locksmith's work for P. C.)., Windsor	37
Peters	do	do	6
. A. & E. B. Neveux	Hardware	do	4
H. Mann		do	4
Langlois	Prooms and matches	do	1
anada Patent Brush Co.	Drooms and matches		ī
		2-	1
H. Joseph	reatner duster	do	ī
rake & Joyce	Repairing office furniture	do	-
	Egbert and Parkersvil	l-catching posts at Berriedale, Creswell, le	50 5
. McCarthy	To pay expenses in connec	tion with sundry mail-catching posts	3
. Ryan	Repairing mail-catching po	ost at Bramley	4
7. C. Andrew	do do	do Creswell and Josephine	3
. Evans	do do	do Creswell	1
M. Grant		do Dumbarton	2
. Stata		do Farran's Point	1
A. Blain		do Gilford Station	ī
I. Callaghan		do Melancthon Station	0
'. Freeman	do do	do Proton Station	2
. Freeman	1 00 00	do From Station	l
		Total	\$40,515

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF QUEBEC.

DETAIL of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department, in Quebec, made within the year ended 30th June, 1889.

Name.	Parties	Particulars.				
			8 (
. A. Bank Note Co	Engraving and printing postage s	tamps, post cards, &c., for	the			
ritchard & Andrews	Post Office Departement, in Que Office stamps and seals for the P. C.	Department in Quebec	10,338 1,298			
do	Office scales and weights	do	250			
. Wilson & Son	do	do	78			
. G. Pratt	Com scales Letter Carriers' uniform materials	do	7			
osamond Woolen Co		do	516 501			
7. Cummings, Sons & Co	do	do	197			
ton Manufacturing Co.	do	do	128			
. J. Deviii	Re-covering Letter Carriers' caps, Quebec	for the P. O. Departement				
Gagné & Co	Making Letter Carriers' uniforms	for the P.O. Department.	in 210			
	Onehec		A1			
S. Montgomery	Letter Carriers' boots for the P. of do waist belts and straps	O. Department, in Quebec do	9 13			
B. G. Samson	Making and repairing postage stamp	oboxes do	54			
Stevenson	Dominion ensigns		19			
Barnard	Obliterating stamps	do	12			
Chanteloup	Railway Mail Clerks' tin boxes Street letter box keys for Chief Pos	do	10			
do	Repairing street letter boxes, &c.,	for P O I Montree!	303			
Giroux	Painter's work,		75			
Grace	do	do	14			
e E. & C. Gurney Co	Street letter boxes	do	19			
A. Robitaine	Repairing street letter boxes, &c	do	1 16			
Garneau Son & Co	Materials for postal maps of the P	rovince of Quebec, for P. O.	i			
	Chiehee		9 2 2			
Bailey	Repairing Ry. mail clerks' tin boxe	s, for P. O. I., Quebec	26 20			
idrews Bros	Hardware	do	. 8			
Binet	Brooms, soap, matches, &c.	do				
Jones, Agent	Whisperphone	do	1			
B. Luckeroff	Making mail box for P. O. I., Three Repairing Railway Mail Clerk's tin	Kivers hov Three Rivers	10			
B. Bellefeuille & Co	Repairing street letter box	do	2			
Allard	Erecting street letter hoves at Lévis	3	5			
& E. McIntyre	Making Letter Carriers' uniforms for		992			
K. McLaren F. Tanner	do do	do do				
nthier & Co	do caps	do do				
yson, Graham & Co	do uniform material	do				
Chanteloup	Locksmith's works &c.	do	139			
Grant & Son	Attendance on clocks Stamping pads and repairs	તું૦				
J. Maxwell & Co	Lumber	do do				
Bulwer & Bro	do	do	1 22			
Arthur & Co	Paints, oils, &c.	do				
A. Nelson & Sons Walker & Co	Brooms, feather dusters, &c.	do;				
avel Bros.	Soan	do do				
othingham & Workman	do.	do				
Pelosse	Sorting baskets	do				
Mitchell & Co tional Manufact's Co.	Repairing locks, &c	do				
COLUMN VINIBLE OF UN	repairing hags	do	2			
O'Donoghue	Renairing letter how	do	1			

DETAIL of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department, in Quebec, made within the year ended 30th June, 1889.—Concluded.

O., Que do do do	bec	111 68	cts. 00 75
do do do do do do do do to to to to to	imouski	51 36 4 7 45 18 16 16 0 0 3 1 1	00 24 75 25 50 00 00 74 00 00 00 00 00 00 00 00 00 00 00 00 00
	do do do do do do do y Statio me de R	do do do do do do do do do to to do do do do ey Station	do 4 do 7 do 45 do 18 do 16 do 16 do 0 do 3 y Station 3 tead 1 me de Rimouski 4

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NOVA SCOTIA.

DETAIL of all payments in discharge of Tradesmen's Bills for articles supplied for the service of the Post Office Department, in Nova Scotia, made within the year ended 30th June, 1889.

Name.	Particu	Particulars.				
B. A. Bank Note Co	Engraving and printing postage	stamps, post	cards, &c., for the	-	cts.	
	Post Office Department in Nov			3,700	54	
Pritchard & Andrews	Office stamps and seals for Post Off	ice Departmei	nt, in Nova Scotia.	725	57	
do	Office scales and weights	do	do		12	
C. Wilson & Son	do	do	do	123	75	
L. G. Pratt	Coin scales	do	do		50	
Maynard, Harris & Co	Letter Carriers' uniform materials	do	do	$9\overline{1}$	13	
Paton Manufacturing Co.	do	do	do		75	
Rosamond Woolen Co		do	do		49	
W. Cummings, Sons & Co	do	do	do		44	
R. J. Devlin	Re-covering Letter Carriers' caps	do	do		15.	
C. Gagné & Co	Making Letter Carriers' uniforms	do	do		50	
T. Force		do	do	4	50	
A. J. Grant & Co	Twine for P. O. I., Halifax			250		
C. W. Davies	Locksmith's work for P. O. I., Hal	ifax			00	
Truro Foundry and Ma-			1			
chine Company	Street letter box do			42	00	
C. & W. Anderson	Brooms, soap, &c., do				09	
Theakston, Angwin & Co.	Hardware do				00	
Clayton & Sons	Making Letter Carriers' uniforms for	or P. O., Hali	fax	185		
A. J. Grant & Co	Twine supplied	′do		210		
J. Lilly	Letter Carriers' boots	do			50	
R. J. Ďevlin	Letter Carriers' fur caps	do			75	
C. W. Davies		do			90	
do	Mail bag stretchers	do			00	
Gordon & Kieth		do			00	
Hattie & Mylius		do			50	
W. Slaughter	Sorting baskets	do			80	
R. H. Cogswell	Attendance on clocks	do			00	
R. S. Montgomery	Letter Carriers' waist belt	do			75	
Pritchard & Andrews	Money Order pay stamp for P. O.,	Annapolis			00	

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NEW BRUNSWICK.

DETAIL of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department in New Brunswick, made within the Year ended 30th June, 1889.

Name.	Particul	ars.		Amount.
D. A. Bank Note Co.	Engraving and printing postage st	man sout a	ands to fur the	\$ ct
b. A. Dank Note Co	Post Office Department in New	imps, post c	ards, &c., for the	9 (90 9
Duitshand & Androws	Office stamps and seals for P. O. I	Drunswick.	Man Danamial	2,620 2
do	Office scales and weights		l l	484 0
L. G. Pratt	Coin scales	do do	••••	133 8
	Letter Carriers' uniform materials fo			2 5
Rosamond Woolen Co	do		• • • • •	75 9s
	do	do	****	73 7
Paton Manufacturing Co.		ďο	• • • • •	18 9
W. Cummings, Sons & Co	do G	do	• • • • •	29 0
	Re-covering Letter Carriers' caps	do	• • • • •	31 1
C. Gagne & Co	Making Letter Carriers' uniforms	do		20 5
R. S. Montgomery	Letter Carriers' waist belts	ďο	• • • •	9 0
T. Force	Letter Carriers boots	dο		4 5
J. Stevenson		do do		29 4
	Attendance on clocks for P. O. I., 8	st. John	· · · · · · · · · · · · · · · · · · ·	50 0
Truro Foundry and Ma-			ì	
chine Co	Street letter boxes			14 0
	Repairing street letter boxes			3 1
J. W. Barnes & Co	Towels, &c.	-do		4 3
W. H. Thorne & Co	Feather dusters and brushes	do		7 03
H. W. Barker	Methylated spirits	do		2 7
Jardine & Co				16
A. McDonald	Putting up street letter boxes at P. 6	O., Moncton.	• • • • • • • • • • • • • • • • • • •	20 0
T. Youngelaus	Making Letter Carriers' uniforms, P.	O., St. John	. 	96 0
J. Hammond	Letter Carriers' boots	' do		55 2
W. F. Tanner	do	do		29 2
A. G. Bowes & Co	Repairing street letter boxes	dο		60 5
J. Hunter	Locksmith's work	do		12 2
A. Hunter	do	do		8 0
J. R. Smith	Sorting baskets	do		14 10
W. H. Thorne & Co		do		6.8
G. S. DeForest		do		6 3
	Attendance on clock, P. O., St. Jol			6 0
H. W. Barker				8 3
	Stamping machine rollers do			4 8
J. H. Pullen	Painter's work do			3 0
Pritchard & Andrews	Money order pay stamp for P. O.,			1 00
do	Money order pay stamp and pad for	P. O. St. M	artin's	1 50
R. Miller	Making and erecting mail catching	net at Eal R	iver Crossing	10 00
Truro Foundry and Ma-	Transition and crooming man concurry	SOUR AN THEI IN	ivia Orossing	10 0
chine Co	Street letter box for Salisbury Static	m		7 09
chine Co		/ 11		7 0
				\$3,965 93

WILLIAM WHITE, Deputy Postmaster-General.

PROVINCE OF MANITOBA, &c.

Detail of all payments in discharge of Tradesmen's Bills for articles supplied for the service of the Post Office Department in Manitoba and the North-West Territories, made within the Year ended 30th June, 1889.

Name.	Particulars.		Amount.			
					 \$	cts
3. A. Bank Note Co	Engraving and printing postage s	tamps, post c	ards, &c.,	for the	0.000	
	Post Office Department in Ma	nitoba, &c	in Manita	bo gra	2,898	
	Office stamps and seals for the P. Office scales and weights	do	do do		398 246	00
do L. G. Pratt		do	do	••		50
Manual II & Co	Letter Carriers' uniform materials	do	do	• •		00
Rosamond Woolen Co	do do	do	do			66
W. Cummings, Sons & Co		do	do			96
Paton Manufacturing Co.	1 22	do	do			23
& H. Borbridge	do chamois vests	do	do			1 00
do	1 1 4	do	do			50
R. J. Devlin	Re-covering Letter Carriers' caps	do	do			5 41
C. Gagné & Co	Making Letter Carriers' uniforms	do	do		20	50
R. S. Montgomery	Letter Carriers' waist belts	do	do		9	75
T. Force	do boots	do	do		4	1 50
	Railway Mail Clerks' boxes	do	do		10	0 60
J. Stevenson	Dominion ensigns	do	do	1	9	9 82
G. P. Bliss	Erecting and painting street letter	r boxes for P.0	O.I., Winn	ipeg	66	675
J. L. Blair & Co	Blankets and rug		do		{	8:00
Wright & Co	Waterproof blanket		$\mathbf{d}\mathbf{o}$			600
Mulholland Bros	Hardware		do		4	4 20
H. Hodges	Soap, matches, &c.		do			3.95
R. D. Richardson	Baskets		$\mathbf{d}\mathbf{o}$			3 00
J. H. Ashdown.	Turpentine, oil, &c					0.75
ي. R. Cameron & Co	Making Letter Carriers' uniforms	for P. O., Wi	nnipeg		300	6 00
R. J. Devlin	Letter Carriers' fur caps, collar				_	
Tre	Winnipeg		• • • • • • • • • •			6 50
W. F. Tanner	Letter Carriers' boots for P. O., V	Vinnipeg				6 60
H. B. Rose & Co	Measuring Letter Carriers for uni	forms, for P. (eg		2 00
R. S. Montgomery	Letter Carriers' waist belts		do			1 50
A. Schmidt	Locksmith's work		do			1 6
H. Ashdown	Hardware, brooms, &c.		do do	• • • • • • •		8 18
Wright Bros	Mothylated spirits disinfectants	&c.				8 50
G. Andrew	. Methylated spirits, disinfectants,	ac.	do do			4 20
G. Andrew	. Repairing clocks		ao	• • • • • •		3 00
	m . 1	· . • . • • • • • • • • • • • • • • • •			\$4,57	

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF BRITISH COLUMBIA.

DETAIL of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department, in British Columbia, made within the Year ended 30th June, 1889.

Name.	Particu	lars.		
				\$ ct
B. A. Bank Note Co	Engraving and printing postage s	tamps, post ca	ards, &c., for the	10 7
	Post Office Department, in Bri			1,142 7
	Office stamps and seals for the P.O.	Department, in	British Columbia	7152 2 50 5
	Office scales and weights	do	do	75 0
C. Wilson & Son	do	do	do	25 3
	Letter Carriers' uniform materials	do	do	20 5 24 5
Rosamond Woollen Co	do	do	. do	9 6
W. Cummings, Sons & Co.	do	do	do	6 3
Paton Manufacturing Co.	do	do	do	b 3
C. Gagne & Co	Making Letter Carriers' uniforms	do	do	20 5
8. & H. Borbridge	Letter Carriers' boots	do	do	18 0
C. Force	do	do	do	4 5
Cook	do	do	do	4 5
R. J. Devlin	Re-covering Letter Carriers' caps	do	do	13 13
	Letter Carriers' waist belts	do	do	3 0
Ack inley & Northwood	Oil for Letter Carriers' lamps	do	do	0.8
W Hart	Office furniture for P. O. I., Victor		40	32 8
McKillican & Anderson	Painting and putting up street lette	ar haves for P	O I Victoria	30 0
W. Heathorn	Letter Carriers' hoots	or boxes for 1.	do	20 0
Cross & Son	Measuring Letter Carriers for unifo	amma n	do	2 0
Taylor & Mellon	Altering do uniforms		do	0.7
aylor & Mellon	Painting indicators, for street letter			9 0
. Sears	Painting indicators, for street letter	r boxes	do	ž 0
N. Hibben & Co	Drooms, soap, &c.	2 (11)	do	3 0
	Painting and lettering Railway Ma			10
W. & G. Wolfenden	Soap, matches, &c., for P. O., New	westminster		20 0
W. J. Brewer	Making and erecting street letter b	ox posts for P.	O., Vancouver	6 0
albraith & Campion	Screen for P. O., Vancouver			1 50
A. King	Screen for P. O., Vancouver	., Vancouver.		39 0
W. Cummings, Sons & Co.	Letter Carriers' uniform materials i	or P.O., Vict	oria	54 0
	Making Letter Carriers' uniforms	do		1 5
T. Burrows	Altering do	do		1 0
P. Cook	Letter Carriers' boots	do		22 5
V. F. Tanner	do	do		9 7
E. B. Marvin & Co	Twine	do		62 5
. Barnsley & Co	Locksmith's work	do		11 7
A. Vipond	do	do		3 0
Sehl		do		7 7
Gosnell	Brooms, soan, &c.	do		5 3
H. Gribble	Feather dusters	do		5 0
D. Spencer		do		1 0
E. G. Prior & Co	Handwara	do		0.50
f Street	Putting up street letter box at Dun			1 5
. otreet	r using up street letter box at Dun	can station		

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF PRINCE EDWARD ISLAND.

Detail of all payments in discharge of Tradesmen's Bills, for articles supplied for the service of the Post Office Department, in Prince Edward Island, made within the Year ended 30th June, 1889.

Name	Particulars.	Amour	nt.
		8	cts.
	Engraving and printing postage stamps, post cards, &c., for the Post Office Department in Prince Edward Island	585	39
	Office stamps and seals for the Post Office Department in Prince Edward Island	203	71
	Office scales and weights for the P. O. Department in P. E. Island.		98
C. Wilson & Son		48	75
A. L. Brown	Bedding, towels, &c., for P. O., Charlottetown	10	52
	Brooms, soap and matches do	3	92
W. W. Wellner	Repairing clock, &c. do	0	48
	Total	\$896	75

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

DETAIL of all payments by the Post Office Department, for Rents and Taxes in Ontario, made within the Year ended 30th June, 1889.

Name.	Particulars.	Amount.
Corporation of Prescott. Grand Trunk Ry. Co	Rent of Post Office, Prescott (1 year to 31st August, 1888)	\$ cts. 325 00 50 00 \$375 00

PROVINCE OF QUEBEC.

DETAIL of all payments by the Post Office Department, for Rents and Taxes in Quebec, made within the Year ended 30th June, 1889.

Name.	Particulars.					Amoun	t.
Montreal City and District Savings Bank W. McGowan Montreal City and District Savings Bank R. S. Cooke Grand Trunk Ry. Co	Rent of do do	Northern Western Post Office V	do do 'alleyfield (1	do do year to 31st M	year to 30th April, 1889) do do arch, 1889)	\$ 0 250 250 250 160	00 00
Grand Trunk Ry. Co	ao	30th Nov	ember, 1888) 	treat (11 months to	\$955	

PROVINCE OF BRITISH COLUMBIA.

DETAIL of all payments by the Post Office Department, for Rents and Taxes in British Columbia, made within the Year ended 30th June, 1889.

Name.	Particulars.	Amount.
L. A. Hamilton, Agent J. M. Browning do	Rent of Post Office, Vancouver (6 months to 30th June, 1888) do do (9 do 31st March, 1889) Total	\$ cts. 180 00 270 00 \$450 00

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

Detail of all payments, by the Post Office Department, for Stationery, Printing and Advertising, in Ontario, made within the Year ended 30th June, 1889.

Name.	Particulars.						Amount.	
						*	ete	
Queen's Printer and Sta-	Drinting and	Stationery for the	P O Departme	nt in Onta	rio I	30,336	. 45	
ttawa "Canadian Mil-	-		1. O. Departine	110 111 011000		30,330) 41	
itia Gazette"	Advertising	Money Orders	do	do	••••	96	00	
Ottawa "Canadian Min-	do	do	do	do		50	60	
lasgow "Herald"	Advertising	for mail tenders, C	anada and Unite	d Kingdon	1		5 80	
ing Review"	Advertising	tenders, for Lette	r Carriers' suppl	ies	• • • • • • • •	57	7 20	
John Tico I I con	do do	do do	do do				1 33 1 33	
Ottawa "Citizen" do "Le Canada"	do	do	do				1 3	
Stratford "Times" Foronto "Empire"	do	do	do			2	L 60	
Coronto "Empire"	do	do do	do do				5 80	
do "Sentinel" do "World"	do do	do	do				250 720	
Barrie	Advertising	time-tables, Post C	ffice notices, &c.				Ó	
Belleville	do	do					7 50	
Bradford	do do	do do		. 			9 0	
Brantford Brockville	do	do		· • · · · · · • · · · •			0 00 7 50	
Chatham	do	do					ōŏ	
Falt	do	do do		· · · · · · · · · · · · · · ·			0 0	
Juelph	do do	do			i		50 35	
Hamilton	do	do		· · · · · · · · · · · · · · · · · · ·			00 14	
indsay	do	do					ōō	
London	do do	do do					7 5	
Ottawa	do	do		· · · · · · · · · · · · · · · · · · ·			$\begin{smallmatrix}0&5\\2&0\end{smallmatrix}$	
Peterboro'	do	do					7 5	
Port Hope	do	do		• • • • • • • • • • •		79	9 1	
Richmond Hill	do do	do do					0 0	
St. Thomas	do	do		.			50 00	
Stratford	do	do					50	
Coronto	do	do				23	0 0	
Wallaceburg	do do	do do					5 0	
Woodstock	Advertising	for mail tenders, &	c	· · · · · · · · · · · · · · · · · · ·			$\begin{array}{ccc} 0 & 0 \\ 2 & 4 \end{array}$	
Almonte "Times"	do	ao		.			$\tilde{9}$	
Arnorior "Chronicle"	do	do do	••••••				1 3	
Brantford "Courier" do "Telegram"	do do	do	•••••				$\frac{1}{9}$ $\frac{3}{2}$	
Brockville "Times"	do	do					$\frac{\sigma}{6}$	
Carleton Place "Central		.						
Canadian " Chatham "Planet "	do do	do do					7 (
Clinton "News-Record".	do	do					$\frac{3}{4} \frac{4}{2}$	
Comwell "Standard"	do	do					$\overline{6}$	
Zeenwille "Enterprise"	do	do					6 4	
Ingersoll "Tribune" Kingston "News"	do do	do do	• • • • • • • • • • • • • • • • • • • •				4 2	
comington "Post"	do	ďο	***************				$\frac{1}{5}$	
Listowel "Standard	do	do	• • • • • • • • • • • • • • •				4 2	
London "Catholic Re-	ا ا	do						
cord" London "Farmer's Ad-	do	do	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •		1	0 8	
vocate"	do	do		· • • • • • • • • • • • • • • • • • • •			6 (
London "Free Press"	do	do					$\tilde{6}$	

Detail of all payments, by the Post Office Department, for Stationery, Printing and Advertising, in Ontario, made within the Year ended 30th June, 1889—Concluded.

Name.	Particulars.				Amount.	
				*	c	
'Orignal "Advertiser".	Advertising fo	r mail tender	s, &c	13		
ladoc "N. H. Review".	do	do	*****************************	4		
Iorrisburg "Courier" apanee "Beaver"	do do	do		10		
ew Hamburg "Inde-	ao	do	•••••	5	. (
pendent	do	do		2		
orwood "Register"	do	do		3		
ttawa "Canadian Mil-						
itia Gazette"	do	do		20	. 1	
ttawa "Citizen" do "Journal"	do	do		18	. (
	do	do		23		
do "Le Canada"	do	фо		18		
embroke "Standard"	do	фо	**** ****** *************	12		
erth "Expositor"	do	do		29		
eterboro''' Canada Lum-	J.	J		١.		
berman"eterboro' "Review" do "Times"	do do	do do		4 5		
do "Times"	do	do	••••••	6		
cton "Gazette"	do	do		8		
ort Dover "Maple Leaf"	do	do	4	1		
escott "Messenger"	do	do		4		
enfrew "Journal".	do	do	***************************************	16		
escott "Messenger" enfrew "Journal" dgetown "Standard".	do	do	*************************	4		
rnia "Canadian"	do	do	***************************************	9		
mcoe "Br. Canadian".	do	do	***************************************	3		
nith's Falls "Independ-						
ent "	do	do	**************************	5		
nith's Falls "News"	do	do		10		
irling "News-Argus"	do	фo		4		
rathroy "Dispatch" oronto "Canada Pres-	do	$d\mathbf{o}$		4		
pronto "Canada Pres-	3	,				
byterian" oronto "Canadian Bap-	do	do		8		
	a	J.				
tist"oronto "Canadian Gro-	do	do		5		
cer '	do	do		5		
oronto "Canadian		ao		3		
Sportsman"	do	do		10		
Sportsman" pronto "Christian Guardian"				10		
Guardian "	do	do		8		
ronto "Dominion				_		
Churchman "	do	ďο		8		
oronto "Empire"	do	do		18		
do "Evangelical						
Uhurchman "	do	do		4		
ronto "Evening Tele-	,	,				
gram "	do	do		12		
ronto "Irish Canadian" do "News"	do	do do	********************	8		
do "Prochytorian	do	· do		14		
do "Presbyterian News"	do	do		9		
ronto "Sentinel"	do	do		6		
" "World"	do	do		14		
alkerton "Herald"	do	do		4		
indsor "Clarion"	do	do	***************************************	6		
indsor "Clarion " do "Review "	do	do	***************************************	5		
				1		

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF QUEBEC.

DETAIL of all payments by the Post Office Department, for Stationery, Printing and Advertising in Quebec, made within the Year ended 30th June, 1889.

Name.	Particulars.					Amount.	
					\$	cts	
Queen's Printer and Station-	D		L. D. O. D.		11 045	• •	
ery Office	Frinting and sta	thonery for t	ne P. O. Depar	tment in Quebec	11,945		
Aylmer "Times"	Advertising for	tenders for 1	etter Carriers'	supplies	24	48	
Hull "La Vallée de l'Ot-	4.		3.			00	
tawa"	do		do			80	
Hull "Weekly Dispatch" Montreal "Gazette"	do		do	• • • • • • • • • • • • • • • • • • • •		22	
	do		do			62	
	do		ďο			33	
	do		do			33	
Quebec "Canadien" do "Courrier du Canada"	do		ďο			62	
	do		ďο			62	
	do		ďο			76	
Shawville "Equity"	do	. 4.11 D	do do			60	
Aylmer		e-tables, Pos		&c		00	
Chicoutimi ,	do do		do do			. 09	
Fraserville					-	00	
Lévis	do do		do do	• • • • • • • • • • • • • • • •		50	
Montreal	do do					00	
			do	· · · · · · · · · · · · · · · · · · ·	626		
Quebec Richmond			do	• • • • • • • • • • • • • • • • • • • •	653		
Ste. Anne de la Pocatière	do do		do		•	20	
Sherbrooke	do		do			94	
The Total			do	• • • • • • • • • • • • • • • • • • • •		77	
Ambus "Timos"	A description or for		bo	• • • • • • • • • • • • • • • • • • • •		20	
Three Rivers Aylmer "Times" Bryson "Equity"	do do	man tenders	, «c	/ * * * * * * / * * / * * * * * * * * *		44	
Hull "La Vallée de l'Ot-	uo	ao	• • • • • • • • • • •		4	50	
tawa"	do	do		1	•		
Hull "Weekly Dispatch	do	do do	• • • • • • • • •		•	10	
Montreal "Gazette"	do	do do	• • • • • • • •			80	
do "La Minerve"	do	do do	• • • • • • • •	• • • • • • • • • • • • • • • • • • • •		40	
oo "La Presse"	do				-	60	
do "Le Monde".,	do	do		•••••		70	
do "Star"	do	do				60	
Three Rivers "Journal"	do	do do				80	
Three Rivers Journal	uo I	ao			Z,	20	

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NOVA SCOTIA.

DETAIL of all payments by the Post Office Department for Stationery, Printing and Advertising, in Nova Scotia, made within the Year ended 30th June, 1889.

Name.	Particulars.				nount
Annapolis "Spectator" Antigonishe "Casket" Bridgetown "Monitor" Caledonia "Gold Hunter" Digby "Courier" Halifax "Evening Mail" do "Morning Herald" do "Presbyterian Witness Kentville "Western Chronicle Now Glasgow "Enterprise" North Sydney "Herald" Parrsboro' "Leader" Pictou "Colonial Standard "Springhill "Independent" do "Record" Stellarton "Trades Journal" Sydney "Advocate"	Advertising for to do do Ink and mucilage do Advertising time-Advertising for mode do do do do do do do do do do do do do	enders, for I do do for Inspecto Postmas tables, Post do do do do do do do do do do do do do	etter Carriers' supplies do do r's Office, Halifax	otia 4	\$ cts. 218 5 77 21 8 5 77 21 9 8 21 20 27 23 8 1 20 8 2 20 2 20 4 4 22 2 20 4 4 22 2
Windsor "Clarion"do "Journal"do "Tribune"Yarmouth "Times".	do do do do	do do do do			31 3 31 3 4 4 294 6

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NEW BRUNSWICK.

DETAIL of all payments by the Post Office Department for Stationery, Printing and Advertising in New Brunswick, made within the Year ended 30th June, 1889.

Queen'sPrinterandStationery Office.Printing and stationery for the P. O. Dept. in New Brunswick.3,521 for the P. O. Dept. in New Brunswick.St. John "Sun"Advertising for tenders for Letter Carriers' supplies.44 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John10 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John11 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John11 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John11 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and stationery for Inspector's Office, St. John11 for the P. O. Dept. in New Brunswick.Barnes & Co.Ink and statione	Name.	Particulars.				nt.
tionery Office. Printing and stationery for the P. O. Dept. in New Brunswick. 3,521 &					8	ets
St. John "Sun"	Queen's Printer and Sta-					
Barnes & Co.	tionery Office	Printing and st	ationery for th	ie P. O. Dept. in New Brunsw	ick. 3,521	. 67
do	St. John "Sun "	Advertising for	tenders for Le	etter Carriers' supplies	44	
do	Barnes & Co	Ink and station	ery for Inspec	ctor's Office, St. John	10	85
St. John	do	do	Postm	aster, St. John	21	. 90
St. John	Bathurst	Advertising tin	ne-tables, Post	Office notices, &c	11	52
Chatham "World" Advertising for mail tenders, &c. 146 a do Fredericton "Capital" do do 85 1 Fredericton "Maritime Farmer" do do 95 5 Fredericton "Religious Intelligencer" do do 145 6 Fredericton "Reporter" do do 62 7 Fredericton "Temperance Journal" do do 62 7 Harvey "Observer" do do 8 6 Hillsboro' "Observer." do do 29 5 Moncton "Times" do do 50 5 Newcastle "Advocate" do do 63 5 St. John "Evening Gazette" do do 38 7 St. John "Sun" do do 65 5 St. John "Sun" do do 65 5 St. Stephen "St. Croix Courrier" do do 45 6 Tredericton "Times" do do 45 6 Sackville "Chignecto Post" do do 27 6 Shediac "Le Monite		фо				10
Fredericton "Capital" do do 85 1 Fredericton "Maritime Farmer" do do 95 9 Fredericton "Religious Intelligencer" do do 145 8 Fredericton "Reporter" do do 62 9 Fredericton "Temperance Journal" do do 70 9 Harvey "Observer" do do 36 9 Harvey "Observer" do do 29 2 Moncton "Times" do do 29 2 Moncton "Times" do do 63 3 St. Andrew's "Bay Pilot" do do 29 7 St. John "Evening Gazette" do do 38 7 St. John "Sun" do do 65 5 St. John "Sun" do do 65 5 St. John "Sun" do do 27 6 Sackville "Chignecto Post" do do 27 6 Shediac "Le Moniteur Acadien" do do 21 5 Sussex "Record" do <td>Sackville</td> <td></td> <td></td> <td></td> <td> 7</td> <td>00</td>	Sackville				7	00
Fredericton "Capital" do do 85 1 Fredericton "Maritime Farmer" do do 95 9 Fredericton "Religious Intelligencer" do do 145 8 Fredericton "Reporter" do do 62 9 Fredericton "Temperance Journal" do do 70 9 Harvey "Observer" do do 36 9 Harvey "Observer" do do 29 2 Moncton "Times" do do 29 2 Moncton "Times" do do 63 3 St. Andrew's "Bay Pilot" do do 29 7 St. John "Evening Gazette" do do 38 7 St. John "Sun" do do 65 5 St. John "Sun" do do 65 5 St. John "Sun" do do 27 6 Sackville "Chignecto Post" do do 27 6 Shediac "Le Moniteur Acadien" do do 21 5 Sussex "Record" do <td>Chatham "World "</td> <td>Advertising for</td> <td>mail tenders.</td> <td>&c</td> <td>146</td> <td>40</td>	Chatham "World "	Advertising for	mail tenders.	&c	146	40
Fredericton "Maritime Farmer" do do 95 % Fredericton "Religious Intelligencer" do do 145 % Fredericton "Reporter" do do 62 % Fredericton "Temperance Journal" do do 36 % Harvey "Observer" do do 8 % Hillsboro" "Observer." do do 29 % Moncton "Times" do do 50 % Newcastle "Advocate" do do 63 % St. Andrew's "Bay Pilot" do do 29 % St. John "Evening Gazette" do do 38 % St. John "Sun" do do 66 % St. John "Sun" do do 65 % St. Stephen "St. Croix Courrier" do do 45 % Sackville "Chignecto Post" do do 27 % Shediac "Le Moniteur Acadien" do do 36 % Sussex "Record" do do 36 %						
mer	Fredericton "Maritime Far-					
Fredericton "Religious Intelligencer"		do	do		95	95
telligencer "	Fredericton "Religious In-					
Fredericton "Reporter". do do 62 9 Fredericton "Temperance Journal". do do 70 9 Journal "	telligencer"	do	do		145	. 88
Fredericton "Temperance Journal" do do 70 9 Harvey "Observer" do do 86 Hillsboro' "Observer." do do 29 9 Moncton "Times" do do 50 8 Newcastle "Advocate" do do 63 8 St. Andrew's "Bay Pilot" do do 29 7 St. John "Evening Gazette" do do 38 7 St. John "Messenger and Visitor" do do 66 9 St. John "Sun" do do 65 7 St. Stephen "St. Croix Courier" do do 45 6 Tier" do do do 27 6 Shediac "Le Moniteur Acadien" do do 21 5 Sussex "Record" do do 36 0	Fredericton "Reporter"					
Journal "		u.		***************************************	92	
Harvey "Observer" do do 8 6 Hillsboro' "Observer." do do 29 2 Moncton "Times" do do 50 1 Newcastle "Advocate" do do 63 3 St. Andrew's "Bay Pilot" do do 29 7 St. John "Evening Gazette" do do 38 3 St. John "Wessenger and Visitor" do do 66 3 St. John "Sun" do do 65 5 St. Stephen "St. Croix Courier" do do 45 6 Sackville "Chignecto Post" do do 27 6 Shediac "Le Moniteur Acadien" do do 21 5 Sussex "Record" do do 36 0	Journal"	do	do		70	90
Hillsboro' "Observer." do do 29 9 Moncton "Times" do do 50 ! Newcastle "Advocate" do do 63 : St. Andrew's "Bay Pilot" do do 29 : St. John "Evening Gazette" do do 38 : St. John "Messenger and Visitor" do do 66 : St. John "Sun" do do 65 : St. John "Sun" do do 65 : St. Stephen "St. Croix Courier" do do 45 : Sackville "Chignecto Post" do do 27 : Shediac "Le Moniteur Acadien" do do 21 : Sussex "Record" do do 36 :						
Moncton "Times"	Hillshoro' "Observer"					
Newcastle "Advocate"	Moneton "Times"					
St. Andrew's "Bay Pilot". do do 29 7 St. John "Evening Gazette" do do 38 7 St. John "Messenger and Visitor". do do 66 9 St. John "Sun". do do 65 9 St. Stephen "St. Croix Courier". do do 45 9 Sackville "Chignecto Post". do do 27 9 Shediac "Le Moniteur Acadien". do do 21 5 Sussex "Record". do do 36 0						
St. John "Evening Gazette" do do 38 % St. John "Messenger and Visitor" do do 66 % St. John "Sun" do do 65 % St. John "Sun" do do 65 % St. Stephen "St. Croix Courrier" do do 45 % Sackville "Chignecto Post" do do 27 % Shediac "Le Moniteur Acadien" do do 21 % Sussex "Record" do do 36 %						
St. John "Messenger and Visitor". do do 66 ! itor". do do 65 ! St. John "Sun". do do 65 ! St. Stephen "St. Croix Courier". do do 45 ! Sackville "Chignecto Post". do do 27 ! Shediac "Le Moniteur Acadien". do do 21 ! Sussex "Record". do do 36 !	St. Tahn "Fuoning Gagatta"					
itor" do do 66 ft St. John "Sun" do do 65 ft St. Stephen "St. Croix Courier" do do 45 ft Sackville "Chignecto Post" do do 27 ft Shediac "Le Moniteur Acadien" do do 21 ft Sussex "Record" do do 36 ft	St. John Evening Gazette	uo	uo	*******) 90	, 10
St. John "Sun". do do 65 % St. Stephen "St. Croix Courrier". do do 45 % Sackville "Chignecto Post". do do 27 % Shediac "Le Moniteur Acadien". do do 21 % Sussex "Record". do do 36 %	St. John Wiessenger and Vis-	do	do		0.0	• 00
St. Stephen "St. Croix Courier"	Ct. Tab. " Com."					
rier "	St. John Sun Com	ao	go) 74
Sackville "Chignecto Post". do do 27 is Shediac "Le Moniteur Acadien". do do 21 is Sussex "Record". do do 36 is	St. Stephen "St. Croix Cou-	a.	,			- ^^
Shediac "Le Moniteur Acadien"						
dien "		ao	do	• • • • • • • • • • • • • • • • • • • •	27	7 80
Sussex "Record" do do						
	_ dien "					
Woodstock "Press" do do						
	Woodstock "Press"	do	do		32	2 32

WILLIAM WHITE,
Deputy Postmaster-General.

PROVINCE OF MANITOBA, &c.

Detail of all payments by the Post Office Department for Stationery, Printing and Advertising in Manitoba and the North-West Territories, made within the Year ended 30th June, 1889.

Name.		Partie	culars.	Amount
Queen's Printer and Station-		The Paris Secret Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Sec	The second section of the second section of the second section of the second section of the second second section sect	\$ c
ery Office	Printing and St	ationery for the	P. O. Dept. in Manitoba, &c	3,517
St. Boniface "Le Manitoba"	Advertising for	tanders for Lat	ter Carriers' supplies	14
Winnipeg "Call"	do	octidets for the	do	57
A. Taylor	Ink and mucila	ge for Inspector	's Office, Winnipeg	22
do	do	Postmast	er do	23
		no tables Post (Office notices, &c	215
Battleford "Herald"	Advertising tin	mail tandora	C	
Birtle "Observer"	do	do		
Brandon "Mail"	do	do	• • • • • • • • • • • • • • • • • • • •	
Calgary "Herald"	do	do	• • • • • • • • • • • • • • • • • • • •	
Emerson "International"	do		• • • • • • • • • • • • • • • • • • • •	1 22
Fort Qu'Appelle "Vidette"		do	•••••	
Lethbridge "News"	do	do		
McLeod "Gazette"	do	φo		
	do	ďo		
Minnedosa "Tribune"	do	ďο	*. * * * * * * * * * * * * * * * * * *	
Moosomin "Courier"	do	do		. 33
Morden "Monitor"	do	do		
Neepawa "Register"	do	do		
Portage la Prairie "Review"	do	do		29
Qu'Appelle "Progress"	do	do		
Regina "Leader"	do	do		33
St. Boniface "Le Manitoba".	do	\mathbf{do}	* * * * * * * * * * * * * * * * * * * *	142
Selkirk "Record"	do	do		. 16
Stonewall "News"	do	do		16
Winnipeg "Call"	do	do		74
do "Emigrant"	do	do		79
do "Heimskringla"	do	do		41
do "Manitoba Colo-				
nist "	do	do	• • • • • • • • • • • • • • • • • • • •	58
Winnipeg "Nor'West Far-				
mer "	do	do		35
Minnipeg "North-West Re-				1
view"	do	đo		58
Winnipeg "Scandinavian				
Canadian "	do	do		21
Winnipeg "Siftings"	do	do	***************************************	
	40	uo	• • • • • • • • • • • • • • • • • • • •	. 50

WILLIAM WHITE, Deputy Postmaster-General.

PROVINCE OF BRITISH COLUMBIA.

Detail of all payments by the Post Office Department for Stationery, Printing and Advertising in British Columbia, made within the Year ended 30th June, 1889.

Name.		Part	iculars.		Amour	ıt.
					\$	cts
Queen's Printer and Station-						
ery Office	Printing and st	tationery for	the Post (Office Department in		
•	British Colum	ibia			1,220	31
Victoria "Colonist."	Advertising for	${f tenders}$ for ${f Le}$	etter Carrie	rs' supplies		75
T. N. Hibben & Co	Ink supplied Ins	spector's Office	, Victoria.		7	90
do do	Ink and mucilag	ge for Postmas	ter, Victor	ia		50
Vancouver	Advertising time	e-tables, Post	Office notic	es, &c	14	80
Victoria	do		do		159	40
Kamloops "Sentinel"	Advertising for	mail tenders,	&c		4	₹ 90
Nanaimo "Free Press"	do	do		· · · · · · · · · · · · · · · · · · ·	7	. 00
New Westminster "British	i.					
Columbian "	do	\mathbf{do}			5	88
$\mathbf{Vancouver}$ "Herald"	do	do			8	3 00
Vancouver "News-Adver-	.]					
tiser"	do	do			8	3 00
Victoria "Colonist"	do	do			13	80
Victoria "Standard"	do	do			13	3 20

WILLIAM WHITE,

Deputy Postmaster-General.

W. H. SMITHSON,
Accountant.

PROVINCE OF PRINCE EDWARD ISLAND.

Detail of all payments by the Post Office Department for Stationery, Printing and Advertising in Prince Edward Island, made within the Year ended 30th June, 1889.

Name.	Particulars.	Amount.
		\$ ct
Queen's Printer and Station-	Printing and stationery for the Post Office Department in	
	Prince Edward Island	601 83
T. L. Chappelle	Ink for Postmaster, Charlottetown	9 5
Charlottetown	Advertising time-tables, Post Office notices, &c	96 00
do "Examiner".	Advertising for mail tenders, &c	7 60
do "Herald"		7 00
Summerside "Journal"	do do	24 1
	Total	\$746 13

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

DETAIL of all payments for Miscellaneous Disbursements on account of the Post Office Department, in Ontario, made within the year ended 30th June, 1889.

Name.		Particular	rs.	Amount.
				\$ cts.
D. Spry, P.O.I	Incidental expenses	s, Post Office Inspe	ector, Barrie	
G. E. Griffin, P.O.I	do	фо	Kingston	
R. W. Barker, P. O. I F. P. French, P.O.I	do do	do do	London Ottawa	
H. G. Hopkirk, P.O.I	do	do	Stratford	
M. Sweetnam, P.O.I	do	do	Toronto	
J. H. Meacham, P.M	do	Postmaster,	Belleville	141 75
H. N. Case, P.M	do	do	Hamilton	
J. Shannon, P.M	do	do	Kingston	
R. J. C. Dawson, P.M J. A. Gouin, P.M	do do	do do	London Ottawa	
r. C. Patteson, P.M	do	do	Toronto	
A. Wigle, P. M	do	do	Windsor	82 44
Post Office Department.	Freight paid upon	Letter Carriers' un	iform materials, &c	57 35
C. P. Telegraph Co			Office Inspector	13 76
G. N. W. Telegraph Co.	do	Door Office I	Managatan Dannia	22 94 22 67
do C. P. Telegraph Co	do do	do	Inspector, Barrie Kingston	17 14
G. N. W. Telegraph Co.	do	do		
do	do	do		37 53
C. P. Telegraph Co	do	do		
G. N. W. Telegraph Co.	do	ďο		
C. P. Telegraph Co	do do	do do		
G. N. W. Telegraph Co.	do	do		
C. P. Telegraph Co G. N. W. Telegraph Co.	do	do		
do	do	Postma		9 18
do	do	do		
do	do	do		
do do	do do	do do		
			ector, Barrie	
do	do	do	Kingston	[1 10
\mathbf{do}	do	do	Stratford	
D O S i D I	do	do	Toronto	
P. O. Savings Bank			Savings Bank business	10,648 31
Director of the Interna	•	, ,		
_ tional Postal Bureau			(12 months to 31st Dec., 18	
Bell Telephone Co		e at Inspector's Of	fice, Barrie (12 months to 3	25 00
do	Rent of Telephone	at Inspector's O	ffice, Kingston (12 months	to 35 00
do	Rent of Telephone	at Inspector's Offi	ce, London (12 months to 3	0th 55 00
do	Rent of Telephone 30th June, 188	e at Inspector's Res	sidence, Ottawa (12 months	35 00
do	Rent of Telephone 31st Oct., 1889	at Inspector's Of	ffice, Stratford (12 months	to 35 00
d o	Rent of Telephone 30th Sept., 186	at Inspector's O	Office, Toronto (12 months	50 00
do	Rent of Telephon July, 1889)	e at Post Office,	Kingston (12 months to 3	35 00
do	Rent of Telephone 1889)	at Post Office, Lo	ondon (12 months to 31st O	ct.,
do			pronto (12 months to 31st A	ig.,

Detail of all payments for Miscellaneous Disbursements on account of the Post Office Department, in Ontario, made within the year ended 30th June, 1889—Continued.

Name.				Particulars.			Amount
							\$ c
London Street C	ar Co	Street Car Lett	er Carrier	service, Lond	on		400 (
)ttawa (lo	do tick	ets for use	of Letter Car	riers, Ottawa		110 (
Coronto (do	do Let To pay for Let	ter Carrier ter Carriers	service, Toro	nto		2,400 (9 t
. Hendry		Express hire fo	r Letter Ca	rriers on Chr	istmas day, Toro	onto	22 2
Blackburn & Co	x	Legal services:	in <i>re</i> Scott,	late P. M. D	orchester Station	ı	225 8
I. Walsh		do	Wilki	nson, late P.	M. Holbrook		5 5 10 (
'. G. Meredith do		do do		Maitland d	ed for false prete o do	nces .	15 (
ouglas, Doug		do	2.	namental d	0 00		20 (
Walker		do	Hunte	er, late P. M.	Fargo		5 (
A. P. Sherwoo		D-44:		modern of D	O. D]	51
Dominion Po.		Detective servi	ces in re bi	irgiary of r.	O., Pembroke		
Dominion Po			do	do	do		82 -
do	do				Prescott		50 (
. Bell					${f th}$ the arrest of ${f the}$ mail		5
V. Calverley					red letter, P. O.		4
Ier Majesty's S	tationery				•		
Office., Londo	on, Eng	Alphabetical li	sts of Mone	ey Order Offic	es in the United	Kingdom.	89
					stmaster's Office		6
. Logan					nail from London	ii to Ottawa,	15
. Pringle		Allowance whi	le engaged	in P. O. Insp	ector's Office, Ba	arrie	28
do		Allowance whi	le in charge	of Post Office	e, Burlington		60
V. Cousins V. C. Cochran		Expenses in co	nnection w do	ith P. O. at E do	xhibition Ground do	Ottawa	25 12
B. Sweetnam		do	do	do	do	Toronto	21
Postmaster, Gle	n Stewart	Arrears of sala	ry to 30th	June, 1888			2
do Ha	rriston		vard duty		, 1889		48 14
	lsdale vian	do do		do do	*********		16
A. A. Allen			e acting Ma		gent at Hamilto	n	33
V. H. Off ett		Collecting lette	ers from str	eet letter box	es at Windsor		300
P. Reid L. Hanley	• • • • • • • •	do To pov for coll	aatina latta	do most Cita do	Gananoque pot, and deliver	ing upme to	25
. Hamey		Mail Clerks	at outer de	not. Kingston	pot, and denver	ing same to	24
			for Post Of	fice funds los	t in transmission	to bank	80
	nnington	do do			royed by fire		187
	thwell	do	Post Or	nce runus sto	len from his offic do	e	33
do Bri	dgewater.	do		ards destroyed	l by fire		3
do Ch	esley	do	Postage	Stamps dest	royed by fire		5
	esterville. .rke	do do	Money	do	stolen from his of do	mce	50 19
	cre	do	Postage		royed by fire		35
do Da	le	do		do	do		9
	ibrun	do			n from his office		45
do Fo	rt Francis.	do			rned in postal , and charged to		36
do For	rtWilliam			-	,		
	West	do	Postage	Stamps stole	n from his office		36
do Ga	rdenRiver rrowsmith		Postage	Stamps dest	royed by fire		7 30
	rrowsmith lton		Post Ö	ffice funds lo	en from his office st in transmission	n to P.O.I.,	13
do K e	ene	do	Post O	ffice funds los	t in transmission	to Bank	59
$\mathbf{do} \mathbf{L'}$	Amable	do	Money	Order funds	lost in transmissi	on to Bank	70
	itland rtintown.		Postage	e Stamps dest	royed by fire en from his office		4
		do			an thoma his atting		60

DETAIL of all payments for Miscellaneous Disbursements on account of the Post Office Department, in Ontario, made within the year ended 30th June, 1889—Concluded.

N	lame.	Particulars.		Amoun	ıt.
Postinaste	r Mt Brydges	Companyation f	or Post Office funds lost in transmission to Bank		cts
do	Norwood	do	Money Order funds stolen from his office		96
do	Orono	do	Post Office funds stolen from his office		98
do	Pembroke	do	Post Office funds and Postage Stamps stolen from his office	667	90
do	Sault Ste.			-	
	Marie	do	Post Office funds lost in transmission to Bank	417	61
do	Smith's Falls	do	Post Office funds and Postage Stamps stolen from his office	419	30
do	Toronto	do	counterfeit note taken at Money Order Office	2	00
do	Vienna	do	Post Office funds lost in transmission to Bank	675	00.
do	Warkworth	do	do do	290	00
do	West Hunt-				
	ingdon	do	money paid to late Postmaster through a misun- derstanding	3	00
do	Whitby	do	Post Office funds and Postage Stamps stolen from		
_		_	his office	396	
do	Windsor	do	loss of Postage Stamps through error of late Clerk		09
do	Zimmerman.	do .	Postage Stamps destroyed by fire		00
		Services as labo	rer, Post Office, Ottawa.	365	
II. Mannet T	ar	do do	do do	312 456	
	n	do	do Torontodo do	456 456	
H I. Ball		do	do do	200	
G Hullett	,		do Windsor	200	
A. Kelly	,	Services as Nio	ht Watchman at P.O. Inspector's Office, Ottawa	547	
E. Hart.		do	do Post Office, London		00
H. J. G	rassett, Chief		· · · · · · · · · · · · · · · · · · ·		
Police		To pay Night V	Vatchman, Post Office, Toronto.	130	
	way Co	To pay Mail Po	orter at Union Station, Toronto.	187	
N. M. Bell	, Supt. Foreign		ble windows, &c., Inspector's Office, Ottawa	19	00
		Jas. Dewe.	ant claimed to have been enclosed in letter to Mrs. Stanhope, Ont., and which failed to be delivered or loss of quarters in Kingston Post Office building,	10	10
		while Mess	enger	100	00
D. Molone	y	Removal expens	ses, Ottawa to Stratford	156	
J. Yorick.		do	London to Stratford	30	25
J. H. Scot	i t	do	Toronto to Ottawa	122	10
T. E. Dav	ison	do	Halifax to Ottawa	35	85
Sundry pe	ersons	Gratuities for cl	harge of night mails at principal Railway Stations	65	00
			• • •		

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF QUEBEC.

Detail of all payments for Miscellaneous Disbursements on account of the Post Office Department, in Quebec, made within the year ended 30th June, 1889.

Name.	Particulars.	Amour	nt.
		\$ (cts.
E. F. King, P.O.I	Incidental expenses, Post Office Inspector, Montreal	44	74
A. Bolduc, P.O.I	do do Quebec	207	58
G. A. Bourgeois, P.O.I.	do do Quebecdo Three Rivers	148	
G. La Mothe. P. M	do Postmaster, Montreal		
A. G. Tourangeau, P.M.	do do Quebec. Telegrams to and from Post Office Inspector, Montreal do do do do do do do do do do do do do	381	
C. P. Telegraph Co	Telegrams to and from Post Office Inspector, Montreal		23
G. N. W. Telegraph Co	do do		35
O. P. Telegraph Co	do Quebec		74
G. N. W. Telegraph Co.		117	
C. P. Telegraph Co			51
C. P. Telegraph Co	do do do do do		00
G. N. W. Telegraph Co	do Postmaster, Montrealdo do do		30
do		257	
	do do Quebec		45 35
Post Office Savings Bank.	Commissions to Postmasters upon Savings Bank business (12 months, to 31st March, 1889).		
Director of the Interna-		1,527	
tional Postal Bureau	Proportion of Postal Union expenses (12 months, to 31st Dec., 1888). Rent of telephones at Inspector's office and residence, Quebec, (12	84	85
ben relephone co	months to 30th June, 1889).	90	00
do	Rent of telephones at Inspector's office and residence, also at Assis-	00	00
	tant Inspector's residence, Three Rivers (12 months, to 30th September, 1889).	75	00
do	treal, (14 months to 30th Nov., 1889)		00
do	Rent, and expense of removing telephone at Receiving Houses, Montreal (12 months to 30th June, 1889)	184	
J. Neilson	Furnishing telephonic reports of railway mail trains to Post Office.		
Electric Service Co		130 14	00
A. Bolduc, P. O. I	March, 1889). Expenses in connection with arrest of J. N. Grondin, at St. François,		
n n 1	Beauce, for appropriating money letters. Expenses as witness in re J. N. Grondin.		00
B. Desroche	Expenses as witness in re J. N. Grondin	5	91
J. P. Chillas, Asst, P.O.1	To pay legal services of L. J. Cannon in connection with mail rob-	_	
I Dotum	bery at Arthabaska Station	5	00
J. Patry	Detective services in connection with mail robbery at Arthabaska	40	•
J. Fahey	Station. Detective services in connection with investigation at Post Office,	48	30
o. Paney	Montreal	150	00
C. A. Cinq-Mars	Employed by the Postmaster-General on detective services.		00
J. S. Hall, jr	To pay detective services in connection with Reade lottery.		00
E. J. Hemming	Legal services in re Regina vs. Wood, late P M. Boulogne		00
H. Abbott, jr	Legal services in re garnishee to restrain Postmaster General from	20	vv
, , ,	delivering a letter to M. Durocher.	5	00
A Cullin	Detective services in re J. S. Scott, clerk in Post Office, Melbourne,	,	33
	Who was arrested for stealing money from registered letters	3	00
W. Lee	Measuring Letter Carriers for uniforms		00
Postmaster, Port au Persil	Arrears of salary to 30th June, 1888		00
F. Pepin	To pay for Letter Carriers' street car tickets at Montreal		80
B. Tremblay	Refund of money found in a dead letter and reclaimed	5	00
A. F. Foss	Expenses in connection with Post Office at exhibition building.		75
M. E. Ballantyne	Sherbrooke	3	75
I Frants	Station, before expiration of term	35	00
J. Evarts	Allowance for attendance on British mails upon their arrival at South Quebec.	100	00
P.M. Denison's Mills	Compensation for Postage Stamps stolen from his office.		00
do Levis Sub Office do St. Jean Baptiste	do Post Office funds stolen from his office		92
de R		20	00

DETAIL of all payments for Miscellaneous Disbursements on account of the Post Office Department, in Quebec, made within the year ended 30th June, 1889—Concluded.

Name.	Particulars.	Amount.
P. Jones T. Cunningham J. McLaughlin J. Manning R. Lanning L. Quinlan J. Quinlan J. Berthelet R. Talbot A. Trudel T. F. Battle Postmaster, Hochelaga do Point St Charles do St. Jean Bte	do do do do do do do do do do do do do d	\$ ct 200 00 455 75 456 25 456 25 456 25 456 25 456 25 456 20 72 00 200 00 72 00 68 00
	Total	\$10,304 63

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NOVA SCOTIA.

Detail of all payments for Miscellaneous Disbursements on account of the Post Office Department, in Nova Scotia, made within the Year ended 30th June, 1889.

H. W. Blackadar, P.M Western Union Tel. Co do Post Office Savings Bank Com	dental expenses, Post Office Inspector, Halifax	\$ 252 240 255 16	92 53
H. W. Blackadar, P.M. Western Union Tel. Co. do Post Office Savings Bank	do Postmaster do grams to and from Post Office Inspector, Halifax do Postmaster do missions to Postmasters upon Savings Bank business (12 mos.	240 255	92 53
H. W. Blackadar, P.M. Western Union Tel. Co. do Post Office Savings Bank	do Postmaster do grams to and from Post Office Inspector, Halifax do Postmaster do missions to Postmasters upon Savings Bank business (12 mos.	255	53
Post Office Savings Bank Com	missions to Postmasters upon Savings Bank business (12 mos.		
Post Office Savings Bank Com	missions to Postmasters upon Savings Bank business (12 mos.	16	70
1	missions to Postmasters upon Savings Bank business (12 mos. to 31st March, 1889)		10
		374	-
		3/4	: 10
national Postal Bureau Prop	portion of Postal Union expenses (12 months to 31st Dec., 1888)	30	82
Control Department Mili	tary and naval postage paid within the Dominion and refunded	20	58
Nova Scotia Telephone Co Rent	t of telephone at Inspector's Office, Halifax (6 months to 31st		
M	arch, 1889)	20	00
	t of telephone at Post Office, Halifax (12 months to 30th April,		
	1889)	40	00
Burland Lithographic Co Post	al maps of Nova Scotia	952	67
J. McN. Gabriel Exp	enses incurred while assorting British Mails at Halifax	104	25
W. H. McRobert		24	F 00
	and of postage erroneously charged on newspapers mailed to		
	subscribers in the United States, from 1st January, 1883, to		
<u> </u> _ ;	30th November, 1888		5 97
W. Graham Lega	al expenses in re Kelly, late Postmaster at Shelburne		L 48
	pensation for Postage Stamps stolen from his office		2 41
do AylesfordCom	pensation for Money Order funds stolen from his office	35	5 09
do Hebron Allo	wance for forward duty from 1st April, 1883, to 31st December,		
	1885)	137	7 50
do_ Head of Wal-			
	wance for increase of salary from 1st January, 1884, to 30th		
	June, 1885	19	9 00
Postmaster, Rawdon Gold			
MinesCom	pensation for Postage Stamps destroyed by fire	30	75
Postmaster, Upper Mus-			
quodoboitAllo	owance for forward duty from January 1st, 1886, to June 30th,		
m 72 5 : D	1888		00 0
T. E. Davison	noval expenses, Ottawa to Halifax	29	9 85
	Total	\$2,994	4 90

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF NEW BRUNSWICK.

Detail of all payments for Miscellaneous Disbursements, on account of the Post Office Department in New Brunswick, made within the year ended 30th June, 1889.

Name.	Particulars.	Amoun	ıt.
		8	
	7 11 13 7 100 7	•	
S. J. King, P.O.1	Incidental expenses, Post Office Inspector, St. John.	132	
P. McPeake, P.M	do Postmaster, Fredericton do St. John	17	
E. Willis, P.M	do do St. John	332	
C. P. Telegraph Co	Telegrams to and from Post Office Inspector, St. John		89
Western Union Tel. Co		155	
do	do Postmaster, Fredericton	11	
do do	do do St. John	28	
St. Martins Telephone Co	Telephone message, Post Office Inspector, St. John	0	80
Post Office Savings Bank.	Commissions to Postmasters upon Savings Bank business (12 mos. to	45.0	
D:	31st March, 1889)	658	43
Director of the Interna-			
	Proportion of Postal Union expenses (12 months to 31st Dec., 1888)	21	62
Nova Scotia Tel. Co	Rent of telephone at Inspector's Office, St. John (6 months to 31st		
	March, 1889.	20	
New Brunswick Tel. Co	do do (6 mos. to 30th Sept., 1889)	17	
	Rent of telephone at Post Office, Fredericton (4 mos. to 31st Jan., '89)		67
New Brunswick Tel. Co.		10	
Burland Lithographic Co.	Postal maps of New Brunswick	645	
J. & A. McMillan	Map of New Brunswick for Post Office Inspector, St. John	50	00
Dep. Minister of Justice.	To pay legal expenses in Regina vs. Fisher and Farmer, sureties for		
	late Postmaster, Portland.	174	
	Legal services in relate Postmaster, Portland	55	
do		150	
	Expenses while in charge of Bathurst Post Office	134	00
J. Duke	Compensation for termination of mail contract—Caraquet and Ship-		
	pigan—on opening of Caraquet Railway	10	
	Compensation for Post Office funds stolen from his office	106	17
do Grand Falls.		14	00
do St. John			
	upon transfer of Post Office	2	00
T. Allen	Gratuity for charge of mails at Cape Tormentine, season 1888-89	125	00
R. Dunbar.	do do at Chatham Junction (1 year to 31st		
	March, 1889)	25	00
J. Shehan	do do at Fredericton Junction, Seasons'87 & '88	40	00
W. Hagerman	do do on Fredericton Branch Railway (1 year		
Ü	to 30th Sept., 1888)	20	00
J. B. Humphrey	do do at Painsec Junction, Seasons 1874 & '75	45	00
	Total	\$3,011	68

WILLIAM WHITE,

Deputy Postmaster-Genera.

PROVINCE OF MANITOBA, &c.

Detail of all payments for Miscellaneous Disbursements on account of the Post Office Department in Manitoba and the North-West Territories, made within the Year ended 30th June, 1889.

W. Hargrave, P. M	Incidental expenses, Post Office Inspector, Winnipegdo Postmaster, Winnipeg	8	cts.
W. Hargrave, P. M	Incidental expenses, Post Office Inspector, Winnipeg.	151	
W. Hargrave, P. M	do Postmaster Winning		75
a D. m. i. a.			47
	Telegrams to and from Post Office Inspector, Winnipeg	131	
Great NW. Tel. Co	do do		20
Post Office Savings Bank	Commissions to Postmasters upon Savings Bank business (12 mos.	**	20
Ost Office parrings Dum	to 31st March, 1889)	- 91	42
Director of the Interna-		21	72
tional Postal Bureau		94	17
Bell Telephone Co		24	11
Aikins, Culver & Hamil-		50	00
ton	Legal services in re Haight, late Postmaster at Rowland		00
G. P. Bliss		۵	
Jr. F. Dilss	nipeg	00	00
T 61	Conveying dutiable goods from Post Office to Custom House, Win-	00	· UU
J. Sneppard		-	ha
D	nipeg	- 1	00
Postmaster, Calgary	To pay for conveying dutiable goods from Post Office to Custom	05	- 00
T T7'	House, Calgary		00
J. King			50
W. S. Wallace			00
Postmaster, Birtie	Arrears of salary and of rent allowance to 30th June, 1888	120	
do Brandon	Compensation for Postage Stamps destroyed by fire at his office		66
	Arrears of rent to 30th June, 1888		00
do Shell River.			00
do Sumner			00
J. Brown			58
F. E. Harrison	Removal expenses, Vancouver to Winnipeg	58	50
	Total	1,453	

WILLIAM WHITE, Deputy Postmaster-General.

PROVINCE OF BRITISH COLUMBIA.

DETAIL of all payments for Miscellaneous Disbursements, on account of the Post Office Department in British Columbia, made within the Year ended 30th June, 1889.

Name.	Particulars.	Amount.
		\$ cts
E. H. Fletcher, P. O. I.	Incidental expenses, Post Office Inspector, Victoria.	25 87
J. C. Brown, P. M	do Poetmaster, New Westminster	44 00
N. Shakespeare, P.M	do do Victoria	8 90
C. P. Telegraph Co Victoria and Esquimault	do Postmaster, New Westminster do do Victoria Telegrams to and from Post Office Inspector, Victoria	90 85
Telephone Co	Rent of telephone at Post Office, Victoria (12 mos. to 30th June, '89). Commissions to Postmasters upon Savings Bank business (12)	48 00
Director of the Inter-	months to 31st March, 1889)	232 33
	Proportion of Postal Union expenses (12 months to 31st Dec., 1888).	9 76
J. Rooney	Allowance while on special duty at Vancouver	271 50
do	Expenses while in charge of Post Office, Kamloops.	30 00
	Services as messenger in Post Office Inspector's Office, Victoria	130 00
J. Miller	Conveying dutiable goods from Post Office to Custom House, Van-	18 00
W. G. Winsor	couver Conveying dutiable goods from Post Office to Custom House, Van-	
Duke, Jackson &	couver	15 00
Helmcker	Legal services in re burglary of Post Office, Victoria Expenses in connection with mail contract, Gabriola Island and	13 00
and the state of t	Nanaimo	2 50
Postmaster Illicillewaet .	Nanaimo Arrears of salary to 30th June, 1888.	25 00
F. E. Harrison	Removal expenses, Winnipeg to Victoria	79 00
do	Allowance for expenses while on duty in British Columbia	188 50
Mrs. McLelan	Gratuity of two months' salary owing to the death of her husband, D. S. McLelan, who was killed while doing duty as Railway	
	Mail Clerk	80 00
	Total	\$1,312 2

WILLIAM WHITE,

Deputy Postmusteq-General.

PROVINCE OF PRINCE EDWARD ISLAND.

DETAIL of all payments for Miscellaneous Disbursements, on account of the Post Office Department, in Prince Edward Island, made within the Year ended 30th June, 1889.

Name.	Particulars.	Amount	
F. de St. C. Brecken,		* cts	8.
P.M., and Asst. P.O.I. I	Incidental expenses, Charlottetown Telegrams to and from Postmaster and Asst. Post Office Inspector,	153 0	
P.E. Island Telephone Co Director of the Interna-	Charlottetown	60 7 0 2	
tional Postal Bureau I	Proportion of Postal Union expenses (12 mos. to 31st Dec., 1888) Rent of Telephone at Post Office, Charlottetown (6 months to 31st	4 8	36
	December, 1888)	15 0	
J. Grant	December, 1888) Special services in Post Office Charlottetown	12 5 133 3	
J. D. Mason	do do Expenses in connection with Prince Edward Island mails, Season	66 6	
	1888	222 7	
J. M. Campbell	Expenses while in charge of Post Office, Montague Bridge	10 0	
J R Allen	Arrears of forward duty to 30th June, 1888	10 0 30 0	
C. Muncey	Services as telegraph operator at Cape Traverse, Season 1889	30 0	
	Total	\$749 0)4

WILLIAM WHITE,

Deputy Postmaster-General.

PROVINCE OF ONTARIO.

STATEMENT showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commission thereon; and the Compensation, Salary and Allowances paid to the Postmaster at each Office respectively, during the Year ended 30th June, 1889.

	-			_			_		-	
Name of Office.	County.	Gross Postal Revenue.	Number of Money Orders Issued.	Total Amount of Money Orders Issued.	Total Commission sion received from Public.	Total Amount of Money Orders Paid.	Com- pensation paid to Post- masters on M. O. business.	Salary.	Forward Allow- ance.	Allowance towards Rent, Fuel and Light.
		ects.		s cts.	e cts.	& cts.	se cts.	s cts.	es cts.	& cts
<u>^</u>	Wellington	191 15	151			744 94				
<u> </u>	Halton		296							&
~ (Middlesex		387			2,933 22				9
<u> </u>	Jardwell		360						88 88	9
A	Elgin		24							:
:	Glengarry		302						130 00	æ
	Algorna		387							3
Allandale	Simooe		355							
m	:		255						12 00	
<u> </u>	Muskoka & Parry Sound		245							
σΩ: ::	Simcoe		602						8	120 00
<u> </u>	Wellington		113							
<u> </u>	anark		1,171						98	200 00
<u>ပ</u> :	Jardwell		569 269							
<u> </u>	ambton		4.0							90 09
1	Тввех.		1,188						00 08 80	
9	Srant		38							
2	Simcoe.		29							
*	Middlesex		280 280						12 00	
<u> </u>	anark		10							
<u> </u>	ambton		299							90 07
<u> </u>	Bruce		9							
24	Renfrew		858						180	160 00
×	Wellington		549							
00	Simooe		4						:	
1	eeds		959						:	20
<u> </u>	Huron		103							
	Stormont	734 33	310	5,481 19	75	875 53	3	38		:
X	York		8						88	190
5	C		9 1							2

A. 1890

53 Victoria.

Avlmer. West	Elgin		1.816	792			-	_	00 09	_
Ayr	Waterloo		1.048	857			-	_	2	65
Ayton.	Grey.		247	88				_	:	
	Waterloo		122	649					16 67	
Bailieboro'	Peterboro'		177	8			•	_		
Bancroft	Hastings		613	222			•	_		
Barrie	IJż.		2,027	- 662			•	_		
Bath	Lennox	664 41	265	6,076 99	\$ \$	1,689 14	16 63	250 00		:
Bathurst Street (Toronto)			3,037	73			•			
Bayfield			610	2				_		
Baysville.	_		156	88			_	_		
Beachburg	Renfrew		67	78			_	_	16 00	
Beachville	Oxfora		98	9				_		
Beamsville	Lincoln and Niagara		1,143	623				_	96 87	40 00
Beaverton	Ontario		807	8				_		Ξ
Beeton	Simcoe.		212	072			-	_		Ξ
Belhaven	York		35	3				_		
Belle River	Еввех		98	472				_		
Belleville	Hastings		3,440	19						
Bell's Corners	Carleton		98	68				_		
†Belmont	Middlesex		8.	£3	-					
•	Wellington		998	010				_		
Berlin	Waterloo		2,100	. 76#	-			90 005	99	
Bethany			312	840				_		
Street (Toronto			296	898	_					
Blenheim	Kent		1,028	88					160 00	120 00
Bluevale)Iuron.		:8:	514	_					
Blyth	do		919	560					88	98
Bobcaygeon	Victoria		370	2	_					
	York		135	#						
:	Bothwell		953	262						
	Durham.	897	1,348	<u>.</u>	-					
Bracebridge	Ontario	88	787	593	-					
Bradford	York	8	242	 88			_			-
Brampton	Peel		885	88						_
Brantford.	Brant	42	4,008	#		-	_			
Brechin.	Ontario.		130	913		_			10 00	
Bridgewater	Hastings		8	8	_	_				
Brigden	Lampton		117	88	•		-			
Bright	Oxford		331	2			•			
Brighton.	Northumberland			5 7	•					
Brockton	York		355		•		_			
Brockville	Leeds		3,314	573	٠.		_			
Bronte.	Halton		4	8		-			•	-
Brooklin	Ontario.		924	248		-			•	
	op	_	83	074	Τ.					
	Algoma	595 25	2 8				88 88	220 00	 98 98	
Brussels Huron	Huron		1,111	268		6,498 67			-	120 00
* Closed 31st December, 1888.	, 1888. + Opene	d 1st Januar	n, 1889.	++	Late Farmer	mille.				- may proved
§ Closed Ilst August, 1888; re-op	888; re-opened 1st April, 1883	œ.				.	Salaries, de.	, entered else	omhere.	
										-

										-
Name of Office.	County.	Gross Poetal Revenue.	Number of Money Orders Issued.	Total Amount of Money Orders Issued.	Total Commission received from Public.	Total Amount of Money Orders Faid.	Com- pensation paid to Post- masters on M. O.	Salary.	Forward Allow- ance.	Allowance towards Rent, Fuel and Light.
		s cts.		& cts.	& cts.	\$ cts.	se cts.	& cts.	& cts.	& cts
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Burlington	Halton		3							\$ P
Byng Inlet, North			200						:	:
austorville			3,							
Caledon			181							: 6
Caledonia.			282						38	2
Cambray	Victoria		101							:
Cambachie	Lampton		90							
ord	Northumberland	-	1,200							120 80
			221							:
O*Canfield.			111						16 00	
			545							8
			398							
			170						• • • • • • • • • • • • • • • • • • • •	
Carleton Place			1,023						:	99 189 80
(Toronto			2,143							:
Sastleton			963							
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Chapleau	Algoma		611					_		₹ 9
	Kent		105					_		
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Clariford			3 5			360 65		_		
Clarke			150			200 63		_	8	
Clarksourg	Wiese		200			86.08		_		
CHIEF VILLE	Wellington		6			30.00		_	8	99
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Cardon	Denface		25			80.58				

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Northumberland 2,537 Simose 2,658 2,66 2,66 2,66 2,69	5.1.1 5.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	25 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	25.5 25.5 25.5 25.5 25.5 25.5 25.5 25.5	oscd 30th
Northumber Simooe York Simooe Datario Waterloo Waterloo Waterloo Prince Edw Simooe Peel Gormont Gormont Russell Bruce Simooe Middlesex Middlesex Middlesex Middlesex Middlesex Middlesex With Middlesex With Middlesex With Middlesex With Middlesex With Middlesex With Middlesex With Middlesex With Middlesex Wellington Brann Widdlesex Wellington Brann Widdlesex Wellington Wauskoka & Grey Wentworth York Huron Muskoka & Grey Wentworth York Huron Muskoka & Grey Wentworth York Huron Waterloo Bruce Wellington Simooe Bruce Wellington Simooe				pril, 1889—Cl
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waren waren ogwood			Ontario Muskol Grey Grey York York Huron Grey Grey Grey Grey Elgin Simcoe Renfrey Huron Waterle	Oxford.
has agatun men men a a a a a a a a a a a a a a a a a a a	Colborne Coldwater Coleman Collingwood Colpoy's Bay Colpoy's Bay Colwantus Consector Consector Consector Consector Consector Consector Contraight Cortuna Courtright	Credition Creemore Crysler Cumberland Clamberland Bellaware Delka Descroto	Dunbarton Duncharch SDundalk SDundals Dundas St. (Toronto) Dungannon Dunmvegan Dunhan Dutton Edgar Eggar Eggar Egmville Egmondville Egmondville Egmondville Effina	"Opened 1st Octobe

Forward towards Allow- Rent, Fue and ance. Light.	\$ cts. \$ cts		12 90 45 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90 15 90 90	200	99	96 120	R	70 00 40 00						90.0	 B		24 00 240 00	00 120		190	160 00 280 00	-		3	99 94 99 95 99 95 99 95			00 08 00 09	
Salary.	e cts.		356 00																										
Com- pensation Paid to Post- masters on M. O. Rusiness.	& cts.		88 88 88 88																										
Total Amount of Money Orders Paid.	◆ cts.		3,364 72									3,888 54							2000							3		9,479 87	
Total Commission Sion received from Public.	s cts.		38																										
Total Amount of Money Orders Issued.	.≉ cts.		10,089 63																										
Number of Money Orders Issued.		103	- - - - - - - - - - - - - - - - - - -	132	, 100	1,189	3 8 8		445	187	32	1,84	1,026	663	<u> </u>	3.10	1,631	1,179	ន្ទ	3 5	2,190	244	292	203	96	20 25	138	579	4 500
Gross Postal Revenue.	& cts.	551 74	1,250 38	6.65 5.65 5.65 5.65	1,843 41	2,837 68	3000	1 169 56	700 09	355 87	2000 00	932 84	992 01	646 22	212 00	88.90	4,985 79	3,027 95	98 88 88 88 88 88 88 88 88 88 88 88 88 8	9 374 55	5.508	733 01	776 31	882 86	1,052 76	70 000 8	221.95	1,995 63	18 242 62
County.		Muskoka & Parry Sound	Wellington.	Middlesex	Vietoria	Wellington	Elgin	Grev	Middlesex	Welland	Huron.	Welland	Algoma.	Hastings	Wentworth			Halton	Bruce					Northumberland		Simoce			Wallington
Name of Office.		Emsdale	Krin. Kasay Contro	Exeter.	Fenelon Falls.	Fergus.	Fingal Fisherville	Elesherton	Florence	S Fonthill	O Forest	Fort Erie.	Fort William, West	Frankford	*Freemen	Galt		Georgetown.	Cleanis.	:	Goderich	:	•	Grafton	Grand Valley.	Createn hunst	Greenwood		

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amonaton			860	38				Ξ.		
Abut Cabbells			111	88		1,415,93				

STATEMENT Showing the Money Order Offices in operation. &c., in Ontario—Continued.

Name of Office.	County.	Gross Postal Revenue.	Number of Money Orders Issued.	Total Amount of Money Orders Issued.	Total Commission received from Public.	Total Amount of Money Orders Faid.	Compensation paid to Post-masters on M. O. business.	Salary.	Forward Allow- ance.	Allowance towards Rent, Fuel and Light.
		s cts.		S cts.	& cts	& cts.	s cts.	& cts.	& cts.	S cts
Commington	Keenx	0 458 70	1 2659	ST 190 06		5 164 08		530 00		-
Afrov	Simone	32.52	13.5	1.472.37	15 37		. 4 . 8	117 00	88	•
Lindsav	Victoria	8.062 07	989	19,891 00			_	2,100 00		•
Listowel	Perth.	4,348 76	1,599	16,819 26		17,167 52		1,200 00		200 00
Little Britain	Vietoria	98 878	33	4,749 85				240 00		:
Little Current	Algoma.	.28 826	292	19,402 93		3,234 71		337 00		:
Lloydtown		252 12	33	1,281 63		697 83		98 98		
ondon.	Middlesex	51,500 02	6,167	89,048 48		358,081 44		; ;		
Jondon, East.		1,508 81	36 S	10,319 11		3,800 %		470 00	:	3
London, West	op	214 09	€ 5	448 73		402 67		96 96		
L'Orignal	Frescott	1 0 100 1	200	08 608.01		1,443 64		200	_	
ucan	Middlesex	1,408 39	46	4,513 21		4,260 21		20 20	33	36
2 Pricknow.	Bruce.	7,230 35	0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0	82.812.02		9,360 69		88	_	
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Macnetawan	Muskoka & Parry Sound.	1200	28	2,111 96		3966		168 90		
Manilla	, .	452 48	33	844 86		970 18		160 00	•	
Manitowaning	Algoma	792 41	88	22,426 75		5.991 14		272 00	00 87	
Manotick	Carleton	517 53	88	10,853 04		1,159 12		206 00		:
Maple	York.	320 36	16	1,747 93		1,885 20		120 00	Ξ.	
Markdale	Grey	1,694 03	88	11,153 75		4,062 07		220 00	8 8	3 3
Markham.	York.	1,801 75	530	9,356 95		12,591 12		240 00	Ξ	3
Marmora.	Hastings	894 40	33	3,112 67		1,419 98		324 00		
Mattawa	Nipissing	2,722 59	386	12,646 73		2,338 34		730 00	_	_
Maxwell	Grey	341 36	88	9,180 89		1,593 90		100 00	• • • • • • • • • • • • • • • • • • • •	•
Meadowvale	Peel	215 44	114	2,167 59		22 029		8	:	
Meaford	Grev.	3.251 30	1.899	23,491 84		21.750 57		948 00		160
Melbourne.	Middlesex	501 93	148	3,671 11		1,107 09		156 00	8	
Merrickville	Leeds and Grenville.	1.522 19	398	8,964 21		4.824 05		200	_	_
Merritton	Lincoln and Niagara.	1.064 74	505	7,144 96		2,653 38		340 00	00 O T	96 94
Metcalfe.	Russell.	650 20	187	6,204 48		1,563 50		220 00		
Middleville.	Lanark	25.	113	17 086		373 55		73 00		
Midland	Simone	2347 97	9	13.301 00		8.027 98		656 00	20 00	90 001
Mildmay	Bruce	1,030 %	588	5 075 43		9,080 66		00 028		
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1,695 39 389 04 2,391 00																																	203					1,165 61 te Red Rock.
Durham. Cornwall. Halton.	Perth Victoria	Perth.	Cardwell	Lambton. Wellington	Elein.	Dundas.	Wellington	Y OFK	Norfolk	Wellington.	Haldimand	Lennox	Middlesex	Algorina	Grev.	Leeds	Addington	Middlesex	Durham	Waterloo	Waterloo	op	Ontario	Lincoln and Inlagara	op	York	Victoria	Vinisaina	Carleton	Prince Edward.	Halton	Oxford	Peterboro'	Oxford	Victoria	Lennox	Lambton	Victoria+La
Millbrook Mille Roches Milton, West		Mitchell	Mono Mills.	Moorefield		Morrisburg.	Morriston	:	Mount Elgin	Mount Forest	Nanticoke	Napanee	Napler							New Edinburch			ket		Niagara Falls, South.							: :	:	Caktand	Oakville	Odessa	:	Omomeo* Late Petersville.

STATEMENT showing the Money Order Offices in Operation, &c., in Ontario.—Continued.

Name of Office.	County.	Gross Postal Revenue.	Number of Money Orders Issued.	Total Amount of Money Orders Issued.	Total Commission received from Public.	Total Amount of Money Orders Paid.	Com- pensation paid to Post- masters on M. O. business.	Salary.	Forward Allow- ance,	Allowance towards Rent, Fuel and Light.
A de la desta de la companya de la c	a (managara, managara, - managara, - managara, managara	ets.		& cts.	S cts.	& cts.	s cts.	es cts.	se cts.	& cts.
Omenanille	Wollington	1 080 7	1 903					1.230 00	25 00	
Orillia	Simood	25.5	25.						150 00	300 00
Orono	Durham	1.128 47	- S	9,154 79	64 78	2,867 92	24 04	400 00	:	
Orwell.	Elgin	102 35	<u>5</u>	835 84					8 9	:
Osceola	Renfrew	444 74	53	1,799 45	_	494 32				
Oshawa.	- -	5,448 11	1,495	16,632 98	144 45	29,816 88				240 00 240 00
Ottawa		47,503 01	10,456	196,540 60		143,656 97	•		:	
Otterville	. Oxford	1,174 45	25	2,556 2,566 2,566		2,044				
Owen Sound		200000000000000000000000000000000000000	4,141	00,038 08		00 036 96				
:	Longal.	2,074 40	200	10,929 19		1,514 65			88	9
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Palmerston.		1,925 12	8	12,542 45					90 98	120 00
		4,022 77	1,242	13,208 38					8 8	
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Parkdale		3,916 60	1,370	16,598 (%)						
Park Hill.	Middlesex.	2,918 44	38	10 020')					38	
Farry Sound	Muskoka & Farry Sound.	1,000 40	1,0(1	6,547, 19						
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Penetanonishene		2,211.98	613	8.631.28					14 00	100 00
Perth		5,422 73	1.268	14,151 24						_
Peterboro'.	Peterboro'	14,422 85	3,923	44,819 42						
Peter Street (Toronto)		•	1,672	20,198 95				++,		
Petrolea			2,188	23,662 40				1,480 00	99;	400 30 30
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Pickering			246	4,200 41		38		20 000	000	38
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Bruce	Ontario	welland	op &	Muskoka & Parry Sound	Grenville	Waterloo	Grey	Brant	Wellington.	Defend	Algoma	Renfrew	Prescott	Carleton	I OFK	Welland	Bruce	York	Kenfrew	Wentworth	Floria	Simcoe	Muskoka & Parry Sound.	Wellington	International Nieges	Brant	Waterloo	Perth	Elgin	Nortolk	Lambton	Brite	Iroma	York	op	Algoma	Huron	Haldimand	Ontario
Port Elgin				Port Stanley				Princeton.	Fusing St. Foot (Townson)	:				-	÷						Rodney		:::::::::::::::::::::::::::::::::::::::		Catherines	(:						Sault Ste. Marie						Severn Bridge.

STATEMENT showing the Money Order Offices in operation, &c., in Ontario-Continued.

Name of Office.	County.	Gross Postal Revenue.	Number of Money Orders Issued.	Total Amount of Money Orders Issued.	Total Commission received from Public.	Total Amount of Money Orders Paid.	Compensation Paid to Postmasters on M.O. business.	Sudary.	Forward Allow- ance.	Allowance towards Rent, Fuel and Light.
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Snannonville	Hastings		237						24 00	:
Sharon	X ork		41							•
Shelburne	Grey		898							
Simcoe	Norfolk		1,403							210 00
Singhampton	Simcoe		197							•
Smith's Falls.	Leeds and Grenville		1.073							240 00
Smithville	Wentworth		1,564							
	Bothwell	285 94	328			1,364 97		100 00	24 00	
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(Toronto).	York		2.512							
Sparts	Klerin		149							· · · ·
Spencerville	Grenville		517						8	
Sprinofield	Middlegev		467						3	:
+Springfield on-the Credit			1,5						:	
Springford	Oxford		3 7						:	:
	Simone		1 100						2	8
Stella	Lennox		1,1						3	
Stevensville	Welland		447							:
Stirling	Hastings		80.75						33.00	40.00
Stirton	Wellington		46							3
Stony Creek	Wentworth	292 70	79	2.426 10	19 52	418 20	9	8 8	32 00	
Stouffville	Ontario.		489							00 09
Strabane	Wentworth		105							
Stratford	Perth		2.652						166 00	
Strathroy	Middlesex.		1,956							
Streetsville	Peel		598		-					40.00
Sturgeon Falls	Nipissing									
Sudbury	Alcoma		1 003						•	•
Sunderland	Ontario								-	38
Sutton West	Vork		691						_	
Sydenham	Addington		296							
Tamworth	go		686						_	9
Tavistock	Oxford		347						899	
	British		641							9
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STATEMENT showing the Money Order Offices in operation, &c., in Ontario-Concluded.

		Number	Ę	otal	Total	Com- pensation			Allowance
County. G	Gross Postal Revenue.	of Money Orders Issued.	f Amount of 8 ney Money Orders rec lers Issued. fr	eive om oblic	S. Amount of Money Orders to Paid. ms	paid to Post- masters on M.O.	Salary.	Forward Allow- ance.	towards Rent, Fuel and Light.
	& cts.		& cts.	& cts.	x cts.	se cts.	e cts.	35.	& cts.
Bothwell.	246 03	346		_				3	
garry	724 18	126	3,730 61	24 92	2,329 42	10 04	240 00	•	
Essex		2,304			_				
Huron		1,23		-		67 87			160 00
Wentworth		3						27 00	
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Perth.		8							
Essex		423							
d		3,820							
Victoria		1,039							
Huron		328						35 36 38	90 07
ton		774							
gton		6		-					
Haldimand		100							
York		1,981							200 00
Huron		282			-		220 00		
1	1 204 150 14	265 004	E E47 400 10	00 000	00 000 000 4			-	

+ Sdaries, do., entered elsewhere.

WILLIAM WHITE, Deputy Postmaster General.

W. H. Smithson,
Accountant.

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Name of Office.	County.	Gross Postal Revenue.	Number of Money Orders Issued.	Total Amount of Money Orders Issued.	Total Commission received from Public.	Total Amount of Money Orders Paid.	Com- pensation paid to Post- masters on M. O.	Salary,	Forward Allow- ance.	Allowance towards Rent, Fuel and Light.	
		es cts.		es cts.	es cts.	& cts.	e cts.	& cts.	& cts.	& cts.	
Abercorn	Brome	166 20	7	530 83							
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Arthabakkaville	,	1,644 61	45	26 010 9					-		
Avlmer Fast		1,358 49	412	11 107 73					_	800	
Baotville		196 13	S	3,563 10					_		
6 Beauharnois		1.097 50	8 \$	8,666 46	1 % 2 %	4.163 38	22 70	420 00	8 99	40 00	
Bécancour	, ,	578 15	13	00 026					_	:	
Bedford		1.277 49	447	5.957 97						40 00 40 00	
		27.1 50	2	2.862 36							
†Bersimis	Saguenay	24 00		22 2026					12 50		
Berthier (en haut)		1,879 53	385	8,621 44		4,800 88	24 38			00 09	
Black Cape		618 73	147	3,928 10	56 69	1,242 25	10 38			:::::::::::::::::::::::::::::::::::::::	
Bolton Centre		72 53	100	2,043 70		769 92	5 71				
Bryson		493 %	151	3,092 86		1,301 45	8 44		80 80		
Buckingham		2,621 55	682	15,662 66		4,166 14	41 52			300	
Oacouna		630 26	S	1,048 18		2,997 35	3 65				
Capelton	Sherbrooke	535 56	295	4,132 73		785 42	11 55		:		
Cap Santé	_	344 53	22	1,446 21		591 02	3 89			:	
Chambly Canton		566 31	167	2,845 01		1.364 47	2 86			=	
Chapeau		336 74	29	1 730 89		115 78	4 37				
	_	444 01	666	3,189 23		897 69	98				
Chicontimi	_	1 490 97	222	11 496 81		8.371.60	36.08			8 99	
Œ	Missismoi	573 30	103	3 379 41		1,148 01	26 6		16 00		
	Stanstead	3 581 55	1 197	11,933 61		7,989 57	34 60			140 00	
	Compton	91 066	916	3 059 87		2,055 05	19 6				
		1 348 00	202	7,918,50		9, 891 79	99.64				
ou	ğ	600 44	86	7 844 57		1,403 05	8		48 00		
Cowangville	Missismoi	1 979 06	202	6 387 37		4 978 03	17 41			90 08	
:		9,115	767	7 705 47		6 130 16	28 14		32 00	_	
+Opened 1st April, 1889.			i						-	Ξ	

Total Companies	\$ cts. \$ cts.<	32 1,153 44 9 70 100
4 7 3	\$ 828282828282822222288888822282888858 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	63 21 32 63 31 45
Number of Money Orders Issued.	24	
Gross Postal Revenue	2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	262
County.	Portneuf Drummond Missisquoi Brome Lévis Lévis Lévis Missisquoi Gaspé Gaspé Gaspé Ghicoutimi Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Huntingdon Hevelelaga Ottawa. Hachenelaga Ottawa. Hachenelaga Ottawa. Hachenelaga Ottawa. Lapraniee Jacques Cartier Jacques Cartier Huntingdon Heganto Johns Heganto Johns Heganto Johns Hachenell St. Johns Brome Laprairiee	Shefford
Name of Office.	am site ast. site ast. site ast. site ast. site ast. site ast. site ast. site ast.	Lawrenceville

Dossional Lapers (110, 10,	Sessional	Papers	(No.	15.)
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A. 1890

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	80 00 00 00 00 00 00 00	00.08		9	3 :		40 00			120 00		00 08	•		8 8			40 00					40 00	:	dsewhere.
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116 90 500 00 120 00 180 00 180 00							320 00				•										120 280 280 280 280 280 280 280 280 280 2		360 00	87 50	
15 31 44 39 6 43 6 11 17 59				‡o:										3 8 8							 7 7 7 7 7 7			•	25 25 26 27
2,566 76 12,260 77 8,060 44 1,896 98 2,729 08	844	# X X Z		28E	123																		4,914 39		1,304 31
26 04 102 46 11 71 16 55 35 74																					220		42 94		4 pril, 1889.
4,496 78 13,262 40 1,582 81 1,800 25 5,334 07																							7,222 42 5,048 27		8,202 07 S Opened 1st
204 496 87 233	132 451	848	7,315	7CI 88 I	1969	27.8	1 25 5	516	32	1,981	175 6,166	250	45	310	409	351	88 8	11,	4,5	317	272	3 8	328		253 1889.
317 90 766 49 387 22 489 07 416 72								1,013 92	£ 5	365		622											946 86	97 23	
Charlevoix Lévis Rimouski Chambly Lotbinière	Maskinongé Stanstead Brome	Ottawa Stanstead Montmagny	Hochelaga	NapiervilleBonaventure	Stanstead	Missisquoi.	Hochelaga	BonaventureGaspé	Yamaska Charlevoix.	Jacques Cartier.	Pontiac. Quebec.	Pontiac	Vaudreuil	Rimouski. Vamaska.	Temiscouata	Stanstead	Shefford	Argenteuil	Champlain	Lamouraska	Berthier	rorcheur	HochelagaRouville	St. Hyacinthe.	
Les Eboulemens. Lévis Little Métis Longueuil. Longuein	Louiseville Magog Mansonville		: :	ile							Portage du Fort.		7.	River David	oup (en pas)	Rock Island		St. Andrew's, East		+Ste. Anne de la Focauere.	imi	t St. Catherine Street(Mon-		§ St. Charles, River Richelieu.	8

53 Victoria.

STATEMENT showing the Money Order Offices in operation, &c., in Quebec-Concluded.

Allowance towards Rent, Fuel and Light.	& cts.					40 00		00 09			•	40 00			•	38			:				40 00	:			88		
Forward Allow- ance.	\$ cts.	•	12 80		54 50 54 50 56 50			120 00	_			200 200 200 200 200 200 200 200 200 200			32 00		72 88		•		88							16 00	_
Salary.	& cts.	130 00 220 00																											
Com- pensation paid to Post- masters on M.O. business.	s cts.	9 94 13 10																											
Total Amount of Money Orders Paid.	1 -	1,892 13																							-			1,969 12	_
Total Commission sion received from Public.	\$ cts.	33 50 33 50						_								15 25 25 25 25							-	_	-	_			
Total Amount of Money Orders Issued.	es cts.	2,495 84 5,205 62	1,137 79	1.507 22	982 41	780 82	12,561 72	8,833 72	14,336 85	1,400 28	3,115 81	11,834 09	1,163 90	993	823	3 981 76	817	328	833	35	465	12.	293	1 38	510	553	2 2		89
Number of Money Orders Issued.		46 179	200	16	8:	28.	977	210	861	72	108	375	=	130	152	081	110	62	æ 8	707	242	1.812	62	683	99	100	274 975	257	127
Gross Postal Revenue.	es cts.	316 71 658 65																				8		914	629	•		~ ~-	
County.		Lotbinière. Two Mountains	Rimouski	Beauce.	Champlain.	Hochelaga	St. Hyacinthe	Terrebonne.	St. John's		Chateauguay	Charlevoix	Soulanoes	Portneuf	Napierville	due Dec.	Two Mountains.	Lotbinière	do do	Committee	Pontiac	Sherbooke	Megantic	Richelieu	Drummond	Arthabaska	Stanstead.	Missisquoi	Terrebonne.
Name of Office.			ion	rançois, Beauce	tiscan.		St. Hyacinthe.	St. Jerdme.	5 st. John's, East.			:	Polycarpa	Raymond	Rémi.	St. Sanvenr de Onebec	Scholastique	Sylvester, East	TSt. Sylvester, West	Therese de Diamivilie.	:				:		Stanstead		

oo victoria.		cossional rapers (No. 15.)	A. 1050
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1,500 00 2,500 00 2,500 00 1,00 00 6,500 00 6,500 00 8,50	2,382 87 51,953 50 6,5 + Closed 31st December, 1888.	Lenam White, Deputy Postmuster-General.	
47 87 9 992 10 51 1 39 23 72 23 72 23 72 82 49 6 34 6 34 6 34	2,382 87 + Closed 3181	William White, Deputy Postin	
13,011 12 1,985 27 639 64 639 99 613 42 7,617 88 1,650 88 1,650 88 1,650 88 1,650 89 178 64	1,577,448 61	⊭	
114 66 26 05 28 05 4 4 32 61 72 61 72 85 27 13 24 13 05 13 05	11,405 89		
14,598 62 3,680 36 4,078 65 4,078 65 7,729 37 846 56 11,151 57 1,432 16 1,727 15	0 74,195 1,321,589 16 ‡ Opened 1st October, 1888.		
877 178 214 214 33 424 41 1,050 1 74 1 58	74,195 pened 1st		
6,522.94 996.85 834.11 834.11 2,366.55 1,252.00 1,462.32 822.88 822.88	490,988 20		
St. Maurice. Ottawa. Jee. Temiscouata. Temiscouata. Drummond. Beauharnois. Arthabaska. Shefford. Shefford. Sist Richmond. Ottawa.	Totals. * Opened 1st January, 1889.	W. Н. Ѕмітнвом, Ассоипіапі.	
Three Rivers Thurso. Trois Pistoles Three Pistoles Unerton Valleyfield. Victoriaville Witerloo, East Windsor Mills +Wright Yamachiche.	Totali	993	

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77.

23,447 23,552 23,497 124 8,884

Shelburne Annapolis Shelburne Dartmouth Halifax

Cape Breton

Clyde River ...

Cow Bay... Cross Roads, C. H

fants Cape Breton.....

Christmas Island.

Clarke's Harbour

Chester Cheticamp Chapel

Lunenburg nverness

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PROVINCE OF NOVA SCOTIA.

towards Rent, Fuel and Light. STATEMENT showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commission thereon; and the Compensation, Salary and Allowances Allowance 40 00 8 8 8 88 :88 50 8 88 9 9 Forward 888 8 :88 888 Allow-25 **2** 8 유원 828 88888888888888888888888888888888888 Salary. paid to the Postmaster at each Office respectively, during the Year ended 30th June, 1889 pensation Paid masters on to Postbusiness. M.O. Money Orders Paid. Amount of Total sion received Total Commis-from Public. 55555411585247427580 655555411585547427580 Amount of Money Orders Issued. 55.000 41.53 45.50 45.00 19,879 88,602 88,602 88,602 88,604 88 Total Money Orders Issued. 1,253 1,553 Number Gross Postal Revenue. 6,813 2,728 2,728 2,728 2,728 2,728 2,728 2,728 2,728 3, Digby King's Guysboro' Victoria.... Shelburne Cape Breton.... King's Annapolis Annapolis Lunenburg Antigonishe County. King's Antigonishe Cumberland Cumberland Richmond Colchester Guysboro' Antigonishe
75 Ariohat.
FAthol Baddeck..... Berwick Caledonia Corner.... Canning... Bayfield ... Bear River (West Side) *Bridgeport. Name of Office. Canso Boylston.... Acadia Mines Bridgewater Annapolis Aylesford

100 00	10 00 50 00 40 00	110 00	100 00	80 00	40 00 40 00 40 00 ewhere.
48 00	· · · · ·	24 90 12 90 4 90 240 90	12 90 100 90 100 90 10 90	120 00 120 00 100 00 6 00	
620 82 82 82 82 82 82 82 82 82 82 82 82 82					72 00 60 00 50 00 168 00 38 00 130 00 130 00 1,100 00 1,300 00 1,300 00 1,300 00 1,300 00 1,300 00
69 50 50 50 50 50 50 50 50 50 50 50 50 50					84 &8 & & & & & & & & & & & & & & & & &
200 200 200 200 200 200 200 200 200 200		55 55 55 55 55 55 55 55 55 55 55 55 55	508 694 593 513 143 692 451		1,438 62 737 28 1,810 68 6,472 77 6,472 77 17,049 30 1,580 61 1,580 61 2,107 89 87,027 80 4,729 11
					25 25 25 25 25 25 25 25 25 25 25 25 25 2
2825282528	8222228	912 22 23 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	810 646 873 873 706 821	744 744 780 780 780 757 948	6,750 31 16,714 20 31 17,712 62 7,772 63 27,958 98 3,776 95 3,776 95 5,916 99 6,916 99
1,489 256 89 264 1145 145 183	266 287 12,099 780 500 368	302 125 144 159 1,600 122 595 657	293 146 993 2,222 21 1,541 381	108 1,447 553 279 279 634 204	288 1114 273 273 1,165 2,543 2,869 2,869 2,869
					154 38 237 387 387 387 387 387 387 387 387 387 3
Digby Colchester Victoria Colchester Colchester Digby Cape Breton	Annayous Colchester Guysboro' Halifax Hanisa Antigonishe				Shelburne Pictou Digby Halifax Colchester Colchester Queen's do fo ho ho ho ho ho ho ho ho ho ho ho ho ho
Digby. Economy. English Town. Five Islands Folly Village Freeport. Gabarouse	Granville Ferry Great Village Guysboro' Halifax Hantsport Harbour au Bouche	Hopewell Hubbard's Cove Isaac's Harbour Kennetcook Kentville Kingsport Kingsport	Lingan Lingan Little Bras d'Or Carlittle Glace Bay Trochaber Lockeport Lockeport Lockeport Lockeport Lockeport Lockeport Lockeport Lockeport Lockeport Lockeport	Lower L'Ardouse Lower Stewiacke Lumenburg Mabou Maccan Main a-Dieu Marfland, Hants Margaree Harbour	McGray Shelb Merigonishe Picto Merigonishe Digtop Metaghan Middle Musquodoboit Halif Middleton Middleton Anna Mill Village do Milton do New Glasgow Picto New Glasgow Picto New Glasgow Hank * Opened Ist January, 1889.

	Allowance towards Rent, Fuel and Light.	8 66 66 66 66 66 66 66 66 66 66 66 66 66	
	Forward Allow- ance.	8 cts 1000000000000000000000000000000000000	
Scotia—Concluded	Salary.	**************************************	
Scotia-	Com- pensation paid to Post- masters on M. O. business.	8 0 2218 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
&c., in Nova	Total Amount of Money Orders Faid.	8	
ıtion, &c	Total Commission received from Public.	**************************************	
Order Offices in operation,	Total Amount of Money Orders Issued.	* 9.00% H. & 4.00.00 H. & 4.00.	
ler Offi	Number of Money Orders Issued.	7. 1. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	88
Money Ord	Gross Postal Revenue.	20, 20, 20, 20, 20, 20, 20, 20, 20, 20,	
Statement showing the Money	. County.		Pictou
STAI	Name of Office.	Newport Landing New Ross Noel North Sydney Oxford Parrsboro Pictou. Port Hastings Port Hastings Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Hawkesbury Port Houghans Port Houghans Port Mulgrave Port Williams Port Williams River John River John River John River Philip Round Hill St. Andrews St. Andrews St. Andrews St. Peter's Sandy Cove Shelburne Shelburne Shelburne Shelburne Strathlorne Sydney Tangier Takamagouche	Thorburn Tracadie

96 00 00 00 100 00 00 00 00 00 00 00 00 00	2,486 66 ral.
55 98 8 90 90 90 90 90 90 90 90 90 90 90 90 90	4,343 00
1,956 00 110 00 120 00 120 00 210 00 150 00 150 00 1,060 00 1,060 00 1,500 00 1,500 00 1,500 00 1,500 00 1,500 00 1,500 00 1,500 00 1,500 00	,808 47 38,625 34 4,343 00 2,4 M. WHITE, Deputy Postmaster-General.
557728888384888888888888888888888888888888	WILLIAM WHITE, Deputy Postn
92, 385 51 1,063 22 1,063 22 1,063 22 2,728 42 32 1,723 86 4,474 23 4,442 23 6,141 74 2,1908 98 24,352 39 20,154 57 85,824 95	WILLI
25 26 26 26 26 26 26 27 26 26 26 26 26 26 26 26 26 26 26 26 26	12,946 42
2,2,295 96 96 96 96 96 96 96 96 96 96 96 96 96	1,764,088 20
3,043 157 103 103 206 952 607 607 856 1,050 1,650 1,62 1,739 1,739 1,739 1,395 1,395 1,395 1,395 1,395 1,395	727.
8,569 92 197 69 249 03 250 14 250 14 250 14 252 67 1,023 51 1,023 51 257 69 2,758 11 7,466 39	176,664 43
Truro Colchester Tusket Yarmouth Upper Musquodoboit Goldhester Upper Stewische Colchester Unberland Walton Hants Colchester Undlace Hants Hants West Bay Hiver, Sheet Harbour Halifax West Bay Digby West River, Sheet Harbour Halifax Westport Digby Westport Digby Westport Harbour Halifax Westport Harbour Halifax Westport Harbour Halifax Westport Harbour Halifax Westmouth Bridge do Inverness Wilmot Hants Wilmot Hants Wilmot Hants Wilmot Hants Wilmot Hants Wilmot Hants Wing's.	* Opened 1st January, 1889. W. H. SMITHSON, Accountant.

227

PROVINCE OF NEW BRUNSWICK.

towards Rent, Fuel STATEMENT showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commission thereon; and the Compensation, Salary and Allowances Allowance cts. Forward Allow-ance. 8 888888 8 Salary. paid to Postmasters on pensation business. paid to the Postmaster of each Office respectively, during the year ended 30th June, 1889. M. 0. Amount of sion received from Public. Total Commis-Amount of Money Orders Money Orders Issued. Gross Postal Revenue. Victoria Kent..... Gloucester Carleton Northumberland County. Westmoreland Westmoreland Restigouche 3lack ville 3ristol ... Anagance..... Sathurst Village..... Apohaqui..... Name of Office. 3ayfield

8 8 8383 88 8888 8 88838 8458228 *08744441296808088 28222283 RREPERR \$588828 84852124884248484251888488 18,754 3,190 15,254 17,897 5,703 4,473 1222128688272325 8828834288388 2,304 83 112 83 123 630 4,214 258 1,247 1,247 1,247 1,795 1,247 1,795 1,247 1,795 1,247 1,795 1,247 1,795 1, Queen's King's Restigouche Charlotte..... York.... Restigouche Houcester Ķing's Carleton Carleton St. John.... Northumberland Westmoreland Florenceville Buctouche.....Butternut Ridge..... Caraquet...... Carleton Centreville...,... Chatham..... Campbellton Canterbury Station..... Campo Bello.... Clifton King's..... Andover ... BArmstrong's Brook... Debeck..... Dalhousie.... Dorchester.... Chipman Fairville

	40 00				:				100 00			40 00						:	:	2 8	:	:	:			: : : : : : : : : : : : : : : : : : : :		3 2		40 00	:	:	:	:	120 00	40 00		:	100		8	elserchere.
œ	88	197	:	00,10	#	10 00	-					:::::::::::::::::::::::::::::::::::::::	:						:	:		35	38	200	48 00	8		3			8 8	~	:	:	200				38		75 00	&c. entered
	366 00																																						1,050 00			+ Salaries.
	16 34												54.5	35	1 24	18												25 24 24 24 24											55 55 56 56 56 56 56 56 56 56 56 56 56 5			
53,347 73 315 84																																		700	360	37	292	519		474	5	3
306 08																																										
36,127 32 692 20	6,051 41	8=	₹	3	000	200	4	8	202	115	2 5	906	98	9	200	200	6	68	777	93	\$	₹1	_;	28	98	721	75	200	3	8	듔	2	5	200	200	3	668	343	646	26.5	3	Š
2,749	385	27.7	8	777	503	038	88	169	710	921	114	-19E	<u>e</u>	20 1	17	28	354	116	434	369	92	5,859	777	1,004	8	377	255	225	354	8	89	8	164	78	35	150	8,629	354	1,8	1,777	3	
10,499 09			_			_							-		_	-	-	_				_		-	•	-									£ 5	3		537				_
York	Queen's	VictoriaCharlotte	Queen's	King's	Carleton	AlbertVork	Albert	do do	202	Carleton	York	Kent	King's	Victoria	Kent	Utariotic	Westmoreland	do	Northumberland	Charlotte	York	Westmoreland	Oneen's	Portionapho	Surbury	King's	ор	Westmoreland			Carleton	Restigouche	op	Westmoreland	Charletto	do	ď.			w est	on on	1888
Fredericton Junction	Gagetown	Grand Falls			Hartland	Harvey Station	Hillshorough	Honewell Cane				ngston, Kent	Kingston, King's	Kintore	Kouchibouguac	Medithomaillo	Mommomorph	Middle Sackville	Millerton		llville				Oromocto	Ossekeag	Penobsquis	Petitcodiac			Richmond Corner.	River Charlo	River Louison	Rockland	Kothesay	t Coords	:	t, Martin's	St. Stephen	Sackville	Shediso	Shediac * Choed Oth Sententher 1888

STATEMENT showing the Money Order Offices in operation, &c., in New Brunswick-Concluded.

	Allowance towards Rent, Fuel and Light.	& cts.		:	-				:		40 00			66 628
led.	Forward Allow- ance.	s cts.		20 00			100 00		:		12 00	10 00	400 00	3,171 34
-Concluc	Salary.	& cts.					200 00							24,400 34
unswick-	Com- pensation paid to Post- masters on M. O.	♦ cts.	18 12	-		-	61 93		-		-			2,225 24
in New Br	Total pen Amount of the Money Orders mass Paid.	e cts.					19,920 57							907,097 65
ion, &c.,	Total Commi sion receive from Public	e cts.					161 44							7,129 12
s in operat	Total Amount of Money Orders Issued.	\$ cts.	7,204 29				20,554 56							954,767 43
r Office	Number of Money Orders Issued.		227	79	215	185	1,577	198	8	152	625	145	1,677	55,493
loney Orde	Gross Postal Revenue.	s cts	112 50											126, 493 32
STATEMENT showing the Money Order Offices in operation, &c., in New Brunswick—Concluded.	County.		Sunbury	Gloucester	King's	York	King's	Gloucester	King's	Queen's	Kent	Queen's	Carleton	
STATE	Name of Office.		:			:	Sussex Vale		:	:				O Totals

W. H. Smithson, Accountant.

PROVINCE OF MANITOBA.

Statement showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commission thereon; and the Compensation, Salary and Allowances paid to the Postmaster at each Office respectively, during the Year ended 30th June, 1889.	County. Gross Postal Money Money Money Orders Issued. Issued. Public. Postal Revenue. Public. Postal Revenue. Public.	\$ cts. \$ cts.<	+Opened 1st April, 1889. \$\frac{1}{4}\text{Late Archibald.} Relation of the property o
the Money Order ssued and paid; the tmaster at each Offic	County.	Marquette Selkirk do do Provencher Selkirk Provencher Marquette Selkirk Marquette Selkirk Provencher Marquette Selkirk Marquette Co Disgar Selkirk Lisgar Lisgar Lisgar	, 1889.
Statement showing the Money Orders issued paid to the Postmast	Name of Office.	Birtle. Boissevain Brandon *Carman *Carman *Calatone †Killarney #Manitou Morris Neepawa Pilot Moude Rapid City *Totals*	SMI

WILLIAM WIIITE,
Deputy Postmaster-General.

NORTH-WEST TERRITORIES.

STATEMENT showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commission thereon; and the Compensation, Salary and Allowances paid to the Postmaster at each Office respectively, during the Year ended 30th June, 1889.

	•		Number	Tctal	Total Commis-	Total	Com- pensation			Allowance
Name of Office.	Territory.	Gross Postal Revenue.	Money Orders Issued.	Amount of Money Orders Issued.		of	to Post- masters on M. O. business.	Salary.	Allow- ance.	Rent, Fuel and Light.
		ee cts.		s cts.	S cts.	& cts.	es cts.	es cts.	s cts.	& cts.
	Alberta		679	17,078 38				_	:	
	Saskatchewan.		33			238		-	:	
:	Assiniboia	767 88	167	3,805 12	68 68 68 68 68 68 68 68 68 68 68 68 68 6	6,979 30	22 18	88		88
Manor	Assimilyois		102,201			270		_	8	
	Alberta		311					_		•
Fort McLeod	op		1,044					-	40 00	
*Lethbridge	do		394			_		_		
Maple Creek	Assiniboia		87.			_		_	-	
Medicine Hat.	ор		1,655					_		
Moose Jaw.	op		460			6,711 05			88	38
:	do		35							
:	Saskatenewan.		497 800							
Ou'Appelle Station	op op		249					_	360 00	
Regina.	op		1.619			_		-	00 09	
\$Saltcoats	do ob		22					_		
Swift Current	op		196			- •		_	140 00	8
#Whitewood Station	op		112							:
Wolseley	ор		104			-		_		:
Totals		33,985 44	11,153	270,562 76	2,053 74	112,374 84	761 95	9,968 83	1,228 00	1,560 00
#Owner Int Database 15		1990	+	and Sak Ontohom	1888 mm 4 m	and tot Am		ROwand	Tet Ameril 1	088
'Opened 1st October, 1000	566. TOpened IN Junuary, 1689	wary, 1000.	3	tolosea ota October, 1006, ana re-openea 18t April,	tooo, araa r	e-openea 186 Apr	н, 1009.	Sopered 8	Sopenea ist April, i	10007.

W. H. SMITHSON,
Accountant.

WILLIAM WHITE, Deputy Postmaster-General.

W. H. SMITHSON, Accountant.

PROVINCE OF BRITISH COLUMBIA.

STATEMENT showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commisson thereon; and the Compensation, Salary and Allowances paid to the Postmaster at each Office respectively, during the Year ended 30th June, 1889.

vance ards Fuel id ht.	cts.	: :	:	.00	:	:	120.00	: :		:	:		:	:	:	:		-		:	.00	8	
Allowance towards Rent, Fuel and Light.	69	<u>:</u> :		: 9	:	:	<u>:</u>	<u>:</u>	:	:	: :-		:	:	:	:			<u> </u>	<u>:</u>	:4	340	•
Forward Allow- ance.	& cts.	16 00	:	200 00		:	160 00		:	:	500 00	:::	:	:	:		20 00		120 00			1,016 00	where.
Salary.	s cts.	180 155 90	156 00	368 340 340 340 340 340 340 340 340 340 340	124 00	32 34 34	36 36 36 36 36 36 36 36 36 36 36 36 36 3	240 00	8;	36	989	105 00	25 00	88	128	200	5.25	88	2,500 00	•	38 88 88	8,460 50	= Salaries, &c., entered elsewhere.
Compensation Paid to Postmasters on M.O. business.	e cts.	33 37 48 89																			28 28 28 28 28 28	1,461 67	Salaries, &c.
Total Amount of Money Orders Paid.	& cts.	8,519 66 1,623 91	1,576 65	11,244 03 2 204 86	3,271 32	76 40				1,386 24	12,003 01	3,477 04	323 90	1,249 75	2,301 26	1,344 82	1 097 00	1,328 14	56,697 23	147,087 80	1,626 62	317,964 54	++
Total Commission sion received from Public.	& cts.	28.08.0 28.08.0 28.08.0																			86. 86.72 87.24 87.24 87.24	6,129 63).
Total Amount of Money Orders Issued.	& cts.	12,884 18	3,832 63	22,907 37	17,601 23	1,473 13	1,827 84	16.223 48	7,620 52	8,689 77	90,251 15	25,986,99 25,986,99	1,157 20	5,087 83	2,288 62	17,376 04	4,070 41	2,930 54	127,749 66	161,054 63	36,026 96 12,956 52	718,891 19	Opened 1st January, 1889
Number of Money Orders Issued.		460	215	827	1 20	82	22.62	702	172	240	4,155	, 986,	8	908	241	929	700	3 5	6.620	9,662	1,504 375	34,227	Opened 18
Gross Postal Revenue.	e cts.	571 21 821 68																	883		281 281 381 381	64,665 52	+
County.		Yale	Vancouver	New Westminster	Vancouver	Yale-Kootenay	Yale	New Westminster	op	Yale	Vancouver	New Westminster	Vancouver	New Westminster	Victoria	Cariboo	op	X ale.	do do	Victoria	Vancouver Yale		st October, 1888.
Name of Office.			Chemainus				:	ing	+Langley	Lytton	Nanaimo	New Westminster			:		Soda Creek		Vancouver			Totals	* Opened 1st October

PROVINCE OF PRINCE EDWARD ISLAND.

STATEMENT showing the Money Order Offices in operation; the gross Postal Revenue; the Number and Amount of Money Orders issued and paid; the Amount of Commission thereon; and the Compensation, Salary and Allowances paid to the Postmaster of each Office respectively, during the Year ended 30th June, 1889.

166 161	cte.	8	:8	<u> </u>		8		==			8	1
Allowance towards Rent, Fuel and Light,	# 9	40 0	20 0			40 0					100 00	
Forward Allow- ance.	e cts.	20 00		80 00				120 00	16 90		516 00	
Salary.	e cts.	360 00								80 00	3,076 00	-
Com- pensation Paid to Post- masters on M.O.	e cts.	32 96		92 6						13 05	234 49	
Total Amount of Money Orders Paid.	es cts.	6,306 30									127,404 95	
Total Commission sion received from Public.	e cts.	64 22									1,020 53	
Total Amount of Money Orders Issued.	♣ cts.	9,136 25	-	-	-			_	_	_	130,108 25	
Number of Money Orders Issued.		483	376	204	498	204	123	1,274	112	168	7,371	
Gross Postal Revenue.	es cts.	1,034 01	750 60	571 16	882 32	1,141 08	260 32	3,735 42	668 54	313 46	21,590 90	
County.		Prince Oneen's	King's	Frince	King's	op 6	Cineen's	Frince	op	Queen's		
Name of Office.		Alberton Prince Charlottetown Oneen's	Georgetown	Kensington	Montague Dridge	Couris East.	Stanley bridge	Summerside	Lignish	Victoria	Totals	

* Salarics, &c., entered elsewhere.

W. H. Smithson,
Accountant.

WILLIAM WHITE, Deputy Postmaster-General. STATEMENT (in accordance with the Act 52 Vic., Chap. 20, Sec. 12) of the Post Office Savings Bank transactions during the year ended 30th June, 1889, and of the total amount due to depositors at the close of that period.

Balance due to depositors on 30th June, 1888.	\$ 20,689,032	ets. 62	Repayments to depositors during the year	\$ ets 7,532,145 56
Deposits received during the year Amount of depositors' accounts transferred from closed Agencies of the Dominion Government Savings Bank during the year	1		Balance due to depositors on 30th June, 1889:— At credit of open \$ cts. accounts22,929,873 01 Withdrawal Che-	
Interest allowed to depositors during the year, in accordance with the statute	841,921	. 79	ques held by depositors and not presented for payment 81,549 56	23,011,422 57
	30,543,568	3 13		30,543,568 13

WILLIAM WHITE,

Deputy Postmaster-General,

David Matheson, Superintendent, Savings Bank Branch.

Analysis of the Money Order Business of the Dominion of Canada, for the Year ended 30th June, 1889.

			No. of	8	cts.	s	cts
			Orders.		000		CUD
Total amount of Mon	ev Orders iss	ued in Ontario	365,824	1		5,547,482	12
do	do	Quebec	74,195				
do	do	Nova Scotia	99,727				
do	do	New Brunswick	55,493				
do	do	Manitoba	25,823	1	. <i>.</i>		
do	do	North-West Territories.	11,153			270,562	76
do	do	British Columbia	34,227			718,891	19
. d o	$_{ m do}$	Prince Edward Island	7,371			130,108	
Total numbe	r and amount	of Money Orders issued	673,813			11,265,919	95
		d in Ontario				, ,	
do	do	Quebec		1,577,44	8 61		
\mathbf{do}	do	Nova Scotia		1,626,46	7 73		
do	\mathbf{do}	New Brunswick					
\mathbf{do}	do	Manitoba			7 76		
do	do	North-West Territories			4 84	1	
$\mathbf{d}\mathbf{o}$	do	British Columbia					
$\mathbf{d}\mathbf{o}$	do	Prince Edward Island		127,40	4 95	1	
			•			10,433,515	47
Total amoun	t of Money O	rders issued and paid				21,699,435	42
Savings Bank deposi	ts received th	rough Money Order Offices				7,926,634	00
do withdr	awals paid	do				7,532,145	56
m + 1	A of business i	transacted during the Year		i I		Ø97 159 01	4 0

W. H. SMITHSON,
Accountant.

WILLIAM WHITE,

Deputy Postmaster-General.

STATEMENT showing the losses sustained in collecting the Postal Revenue and conducting the Money Order and Savings Bank systems in the Dominion of Canada, brought to account during the Year ended 30th June, 1889.

ffice funds lost in transmission from the Post Office at Bancroft, Ont., to the Bank of ontreal, Ottawa, on 18th October, 1888.	\$ ets. 80 00
e stamps destroyed by fire at Bennington, Ont., on 9th November, 1888	2 75
e stamps stolen by burglars from Blenheim, Ont., in December, 1885	187 18
e stamps stolen by burglars from Bothwell, Ont., 4th February, 1888	33 00
e stamps destroyed by fire at Bridgewater, Ont., on 24th of May, 1889	3 38
e stamps destroyed by fire at Chesley, Ont., on 9th June, 1888	5 00
order funds stolen by burglars from Chesterville, Ont., in June, 1888.	50 00
fice funds stolen by burglars from Clarke, Ont., on 28th September, 1888	19 50
e stamps destroyed by fire at Dacre, Ont., on 7th October, 1884	35 00
e stamps destroyed by fire at Dale, Ont., on 23rd February, 1889	9 75
e stamps stolen by burglars from Embrun, Ont., on 25th August, 1888	45 00
e stamps destroyed by fire, while in transit to Postmaster, Fort Francis, Ont., through rning of postal car on 3rd October, 1886	36 00
nt allowed on account of Post Office funds stolen by burglars from Fort William West, nt., on,15th September, 1888.	36 00
e stamps destroyed by fire at Garden River, Ont., on 3rd October, 1888	7 50
re stamps stolen by burglars from Harrowsmith, Ont., on 21st October, 1888	30 00
ffice funds lost in transmission from Hilton, Ont., to the Post Office Inspector at Kingston	13 50
ffice funds lost in transmission from Keene, Ont., to the Bank of Montreal at Ottawa, 18th October, 1888	\$ cts. 59 75
office funds lost in transmission from L'Amable, Ont., to the Bank of Montreal at tawa, on 18th October, 1888	70 00
te stamps stolen by burglars from Martintown, Ont., on 27th October, 1888	60 00
ffice funds lost in transmission from Mount Brydges, Ont., to the Bank of Montreal at tawa, on 13th December, 1888	40 00
ffice funds stolen by burglars from Norwood, Ont., on 10th December, 1887	23 96
e stamps and post office funds stolen by burglars from Orono, Ont., on 7th October, 1888	87 98
ge stamps and post office funds stolen by burglars from Pembroke, Ont., on 20th April, 89; postage stamps \$552.10, cash \$115.80	667 90
ge stamps destroyed by fire at Port Maitland, Ont., on 9th January, 1889	4 00
office funds lost in transmission from Sault Ste. Marie, Ont., to the Bank of Montreal, ttawa, on 2nd November, 1888	417 61
ge stamps and post office funds stolen by burglars from Smith's Falls, Ont., on 13th stober, 1888	419 30
n counterfeit bank note taken in Province of Ontario	2 00
ffice funds lost in transmission from Vienna, Ont., to the Bank of Montreal, Ottawa, on d December, 1888	675 00
ffice funds lost in transmission from Warkworth, Ont., to the Bank of Montreal, Ottawa, a 18th October, 1888	290 00
y paid by the Postmaster to Ex-Postmaster at West Huntingdon, Ont., through mis- derstanding on the 7th January, 1887	3 00

STATEMENT showing losses sustained in collecting Postal Revenue, &c.—Con'd.

Allowance for postage stamps and portion of cash stolen by burglars from Whitby, Ont., on 11th January, 1889	396	02
Postage stamps lost through error of late clerk at Windsor, Ont., in December, 1885	8	09
Postage stamps destroyed by fire at Zimmerman, Ont., on 18th May, 1889.	20	00
Postage stamps stolen by burglars from Denisons Mills, Que., on 14th December, 1888	20	00
Postage stamps stolen by burglars from the sub-office at Notre Dame de Lévis, Que., on 10th May, 1887.	88	92
Postage stamps destroyed by fire at St. Jean Baptiste de Rouville, Que., on 9th October, 1888.	50	00
Postage stamps stolen by burglars from Annapolis, N.S., on 27th May, 1886, (\$112.41 of this amount having been deposited to balance of Postmaster's current account, and the difference, \$15.30, remitted directly to the Postmaster)	127	71
Postage stamps destroyed and Post office funds stolen by burglars at Aylesford, N.S., on 31st July, 1888, postage stamps, \$10.28; cash \$24.81	35	6 09
Postage stamps destroyed by fire at Rawdon Gold Mines, N.S., 11th June, 1888.	30	75
Post office funds stolen by burglars from Campbellton, N.B., in September, 1882	106	17
Loss on Maritime Bank Bills taken at Grand Falls, N.B., on Money Order Account in March, 1887	14	00
Difference in balance of stamps on hand at St. John, N.B., on transfer of office on 10th November, 1886	2	2 00
Postage stamps destroyed by fire at Brandon, Man., on 13th February, 1889	69	66
Total	\$4,382	47

WILLIAM WHITE, Deputy Postmaster-General.

W. H. SMITHSON, Accountant.

 * This amount has been recovered since the close of the fiscal year, and will appear in Postmaster General's Report for 1889-90, as a miscellaneous receipt.

Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada; showing the particulars of each case, and stating the result of the

T. Registered Letters.

ess in trion.			des- 3 e St. the nade	mit- 3 the the tawa good	s ab- by a wrne d by rne.	17
Result of Proceedings	Department.		Stated not to have There being no record of the desbeen received by the person addressed. Andrews East Post Office, the good contents.	Postmaster of Vernon having omitted to enter this letter on the Letter Bill of the mail from his office for St. Lawrence & Ottawa Railway Mail Clerk, made good contents.	20 15 Louis Côté & frères St. Hyacinthe Stated to have been Reason for believing that this absorbed without straction was committed by a contents. Post Office. Loss made good by the Post Office. Loss made good by the Post Office.	
Evidence of	Abstraction.		Stated not to have been received by the person addressed.	ор	Stated to have been received without contents.	•
f Letter.	Place.			Montreal	St. Hyacinthe	
Address of Letter.	Name.		20 00 Wm. M. Doran Iroquois.	75 00 Ward, Carter & Co. Montreal	Louis Côté & frères	*** **** *** *** *** *** *** *** *** *
Alleged	Contents.	e cts.	20 00	75 00	20 15	3
When	Mailed.	000	July 6	do 13	do 16	
W Well-	wire inairea.		St. Andrews East	Vernon, Ont	Racine	
, , , , , , , , , , , , , , , , , , ,	value of Writer.		L. CameronBt. AndrewsJuly East	G. M. Donaldson. Vernon, Ont.	3 Louis Belisle	
2	.0	39		67	8 I	

I. Registered Letters.—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada—Continued.

Class in Secapitulation.		00	က	က	ro .	L-	
Result of Proceedings instituted in each case by the Department.	The bag containing these letters, made up at Rusagornis on 24th		of a nature to warrant prosecu- tion. This letter was mis-delivered at the Powassan Station Post Office. The person to whom it was mis- delivered however restored the	contents to the person addressed. This registered packet was duly entered on Letter Bill of mail from Quebec for Sherbrooke, of 30th July, 38, and the postmaster of Sherbrooke having failed to	₹	No evidence to account for the	alleget discrepancy.
Evidence of Loss or Abstraction.	Stated not to have been received by	the persons addressed.	op .	op	Stated to have been received without contents.	op	Stated to have been received without contents.
Address of Letter. me. Place.	Hamilton	Northport	North Bay	Henry Sherbrooke Barthe	Racine	. Craigvale	& Montreal
Address o	John Carr	5 00 B. Drysdale	Benjamin Sweeney North Bay.	Mme.	Mrs. L. Bélanger. Racine.	5 00 R. S. Mann	10 00 Clark, Terroux & Co.
Alleged Contents.	\$ cts.		60 44	. Gold brooch value 11 00	10 00		
When Mailed.	1888. July 24	do —	do 26.	do 29	do 30	do 17	Aug. 3
Where Mailed.	1 :	ор	. Le Breton Flats.	Chateau Richer	Côte des Neiges.	Queensville	:
Name of Writer.	Walter Dunnett Rusagornis	G. A. Stafford	J. R. Booth	Georgiana L'Heu-Chateau Richer	Louis Bélanger	Susie Mortimer Queensvill	Ernestine Duguay. L'Avenir
No.	2	9	- - -	- 	6	10	=

B. Brodeur	12 J. B. Brodeur St. Hyacinthe	qo	· ·	14 00	14 00 M. Deschamps North Stukely Only \$4 have ceived.	North Stukely	stated to been re-	These abstractions are believed to have been committed by a dishonest employe in the Mel-bunne Post Office.	, rc
anchard	13 Jos. Blanchard Lewiston, Maine	qo	10	3 00	Antoine Blanchard Val Racine	:	Stated to have been received	Losses made good by Postmaster of Melbourne.	·
f. Burnie	14 Mrs. M. Burnie Pt. St. Charles 15 Mrs. D. R. Borland Ulverton	မှ မှ	15	20 10 00	Mrs. L. Walker Ulverton. Clendinning & Son Montreal.	Ulverton	do do ob	See case No. 19, class I.	
érin	A. Guérin Montreal	qo		20 00	John M. Guérin Toronto .	:	Stated not to have been received bythe person addressed.	Stated not to have This letter was mis-delivered by been received bythe a Letter Carrier on the staff of person addressed.	က
ın & Irwin	17 McLean & IrwinKingsbury	op	10	17 25	C. H. Fletcher Sherbrooke	Sherbrooke	op op	cens, were markegood by mm. Postmaster of Kingsbury having failed to enter this letter on his Letter Bill for Melbourne, Que,	ಣ
Wm. Badger Stroud	Strond	qo	i7	20 00	Bank of Toronto Toronto	:	Only \$45 stated to	Only \$45 stated to No evidence to account for the	2
	Montreal	qo	21	3 00	W. A. Sneath	Melbourne	Stated to have been received.	nave been received: anegou discrepancy. Stated to have been flins was a decoy letter which was received without one of N. S. Scott an assist.	ro
							real particular and the particul	Office, and contents abstracted by him. Marked bills, contained in the letter, which had been paid out by Scott were obtained and identified, and Scott was arrested, but subsequently succeeded in escaping from the constable who arrested him. Losses	
Lagacé	90 Joseph Lagacé Gatinean Point	ę,		8	Dominique Bray Funbrun		Stated not to have	made good by Postmaster of Melbourne. Stated not to have Embrun Post Office entered by	<u></u>
hile Lachap-	21 Theophile Lachap-Embrun	9			La Presse		been received by persons addressed.	bunglars night of 26th August, 1888, and these letters stolen. No clue obtained to perpetrators of the robbons.)
Alex. McKay Coboconk	Coboconk	ф	4	5 00	Miss Dora McKay. Greenwood, Ont.	Greenwood, Ont.	op op	There being no record of the despatch of this letter from the Coboconk Post Office, the Postmaster of that office made good	က
I. Hoare	Grenville	op	25.	00 9	R. SheppardOttawa.	Ottawa	do do	There being no record of the despatch of this letter from the Grenville Post Office, the Postmaster of that office made good	က
Garrett	24 W. H. Garrett Trenton	оþ		92 09	Citizens Ins. Co Montreal		Stated to have been received without	Stated to have been No evidence to account for alleged received without discrepancy.	۲-

1. Registered Letters.—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of Letters containing Money. sent through the Post Office in Canada.—Continued.

	ass in .moitsluti	Recapi	õ	ಬ	c)	6	ಣ		7	œ 1
.—Contratea.	Result of Proceedings instituted in each case by the	Department.	Postmaster of Mattie having neglected to seal the bag in which this letter was desnatched from	his office, made good the loss. Only \$62 stated to Evidence taken in this case pointed have been received, strongly to the conclusion that this abstraction was committed at the Thefford Mines Post	Omes. The Fostinaster of date office accordingly made good the loss.	been despatched from Batche to Saskatoon in mail of 17th Sept., 1989 but to have failed to reach	the latter office. Cause of failure not discoverable. Verona Post Office entered by burg-	and this letter stolen. Stated to have been despatched from Montreal in registered pack-	age, contained in locked bag for Ferth, on 17th Sept., 1888, but to have failed to reach the latter office. The Postmaster of Perth having failed to make a prompte having failed to make a prompte	Z	contents. On the pare Smith's Fall's Post Office entered based net coeived by the by burglars 13th Oct., 1888, and person addressed. this letter stolen. Contents made
Letters containing Money, sent through the Post Office in Canada.—Continued	Evidence of Loss or	Abstraction.	op op	Only \$62 stated to have been received.	Stated as to bear	been received by persons addressed.	ું ક	ob		Stated to have been received without	Concents. Stated not to have been received by the person addressed.
ugh the Fost (Address of Letter.	Place.	. Antigonishe, N.S	. Sherbrooke			Verona	. Perth		. New Westminster, B.C.	. Smith's Falls
ney, sent thro	Address	Name.	D. G. Kirk	J. H. Gendron Sherbrooke	5	of a Const. Shepheru., Saskatoon 1 00 A. McLean do	1 00 Miss C. Bedour	W. A. Meighen Perth			E. Gaston
ning Mor	Alleged	Contents.	\$ cts.	72 00	i i	1 00	1 00	8 50		20 00	40 00
ers contai	When		Aug. 31	op		Sept. 11 do 12	do 11	do 17		do 23	do 25
loss of, Lett	FolioM Gwod/M	w nere w	,	Thetford Mines		Frince Albert Sept. 11 do 12	Sharbot Lake.	Montreal		Ashcroft Stat'n, B.C.	Newaygo, Mich.
	M J T T N	Name of Writer.	David de Coste Mattie, N.	Adélard Lacasse Thetford Mines		A. B. Perry A. Sproat	Jno, W. Reynolds, Sharbot L	30 B. J. Kirkkouse Montreal.		Capt. J. Martley Ashcroft B.C.	32 Robert Gaston Newaygo,
		o K	8	98		1 88	8	8		83	35

·	!~	6.	!-	2	L ~	ಣ	63	က	
good by Postmaster of Smith's Falls, the addressee having made affidavit that the letter had been called for previous to the date of	Only \$70 stated to No evidence to account for the al- have been received. leged discrepancy. Cover of let-	not to have Stolen from the Clarke Post Office received by by burgiars on the night of 27th	persons addressed. Sept., 1888. Only \$55.15 stated to No evidence to account for the alhave been received. leged discrepancy. Cover of lef-	Only \$14 stated to No evidence to account for the al-	ieged discrepancy.	Stated not to have Stated to have been despatched been received by the from Nipissing to Gravenhurst person addressed. 12th Oct., 1888, but to have failed to reach the latter officer. Postmaster of Nipissing, admitting the possibility of letter having the possibility of letter having	Stated not to have These letters were contained in a been received by registered package stated to have persons addressed. Mail Clerks to Ottawa on 19th Oct., 1888, but to have failed to reach the latter office; cause of	Napoléon Demers. St. Pierre Bap-Stated not to have The registration of this letter havitate. Derson addressed. These letters were contained in a	nail bag made up at Sault Ste. Marie on 2nd November, 1888, for Windsor, Ont., vid Detroit, Mich., which failed to reach the Windsor Office. This bag was found in the woods near Soo Junction, Mich., on the 12th July, 1889; all of the registered
	Only \$70 stated to have been received.	Stated not to have been received by	persons addressed. Only \$55.15 stated to have been received.	Only \$14 stated to	Wolse-Only \$12.82 stated to have been received.	Stated not to have been received by the person addressed.	Stated not to have been received by persons addressed.	Stated not to have been received by the person addressed.	
	Hardware London, Ont	Montreal	London, Ont	Toronto	Moffat, Wolse- ley.	Pembroke		St. Pierre Bap- tiste.	Torontodo do do Haisance, Que
	Hobbs Hardware Co.	Davis, Lawrence & Montreal Co.	A. Robinson	John D. Ivey & Co. Toronto	Joseph Marlin	R. Miller	Bk. of Montreal. Ottawa.	Napoléon Demers.	Barber & Ellis Toronto John Hallam do Bank of Montreal. do Arts. Lascelles Plaisance, Mrs. M. J. Clarke. Blantyre.
	75 00	1 00	65 15	19 00	17 82	8 9	25 00 29 75 29 75 290 00	32 25 1	10 33 10 30 15 00 15 00 4 00 15 00 25 00
	25.	27	-i	5		12.	17. 18. 18. 18.	- 53	
	op	မ	Oct.	op	윤	do	ဝှင် ဝှင်	op	Nov. දිර දිර දිර
	Hepworth Stat'n	Clarke	Hepworth Stat'n	Wingham.	Anthracite	Nipissing	r Bancroft	Montreal	Sault Ste. Marie. do do do do do
	Mrs. Susan Vance. Hepworth Stat'n	Dr. Leitch	Mrs. Susan Vance. Hepworth Stat'n Oct.	<u> </u>	S. R. Carrick	Mrs. Samuel Car-Nipissing	The Postmaster] do do	Mrs. C. Lippe Montreal	E. Biggings. H. C. Gorkie. Jos. Wilson. Thos. Vivian. A. Lauzon. Mrs. W. C. Dun
	83	뚔	35	36	37	8	8343	£	433448

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1, or	uss in tulation.	Cli IGecapi		1,-	7	ž.	က	က
cases occurring within the Year ended 30th June, 1889, of abstraction from, ing Money, sent through the Post Office in Canada.—Continued.	Result of Proceedings instituted in each case by the	Department.	letters contained in the bag were found to have been opened and rifled with the exception of one containing \$417.61 surt by Postmaster, Sault Ste. Marie, to Bank of Montreal, Ottawa, which was	stated to No evidence to account for the	do do do do do	Only \$14 stated to Evidence in this case showed that have been received proper precaution had not been	$\widetilde{\mathbf{z}}$	tiary. Contents made good by Schmater, St. Felix de Valois. [See Case No. 78, Class I.] This letter is stated to have been transferred by Halitax and Moncton Railway Mail Clerks to Truro and Picton Railway Mail Clerks on 28th Nov., 1884, and is believed to have been lost or mis-sent by the latter Clerks. Contents made good by the Clerk in charge on the occasion.
-Report of all cases occurring within the Year ended 30th June, Letters containing Money, sent through the Post Office in Canada	Evidence or	Abstraction.		\$13	Only \$5 stated to	Only \$14 stated to have been received.	Stated not to have been received by the person addressed.	ор
the Year er gh the Post C	f Letter.	Place.	Dunblane Collingwood	Griffith, Ont	:	Jarvis	Félix de ⁄alois.	Brookland, N.S.
curring withir ley, sent throu	Address of Letter.	Name.	John Fraser Dunblane W. A. Copeland. Collingwood Peoples Milling Co. Meaford Jas. McLaughlan., Owen Sound	Mrs. Thos. Joyce. Griffith, Ont Only	Mrs. Robt. Burke. Waldemar	J. Parks	Joseph MayerSt.	Miss Jane Munroe. Brookland, N.S.
l cases ocining Mon	Alleged	Contents.	\$ cts. 3 00 13 55 29 00 20 00	22 00	90 9	19 00	25 00	8 10
eport of all etters contain	When	Mailed.	1888. Nov. 1. do 1. do 1.	do 1	do 1	do 7	do 9	ф
LETTERS.—Repo loss of, Letter	Where Mailed		ි: : . : ඉදිලිම්	Arnprior	Toronto	Simcoe	Montreal	Boston, Mass
Registered Let	Name of Writer	Tomo of the control o	J. Gillis	Mrs. E. A. Hatton Arnprior.	Miss Edgar	H. Nelson, jun Simcoe	А. Goyer	Miss A. B. Munroe Boston, Mass
	S	<u> </u>	22.22.22	72	55	92	22	88

	8	en	က	<u>ν</u>	೯	9
က	CA .		••			
Stated not to have This lotter is stated to have been been been received by the duly despatched in mail from person addressed. Kinloss for Kinlough, of 28th Nov., '88, and the Postmaster of the latter office, who states that the latter office, who states that the did not receive any letter bill or registered letter with the mail, having failed to report the	F	discoverable. There being no record of the despatch of this letter from the Barnsley Post Office, the Postmaster of that office made good	contents. Stolen from the Davenport Post Office, by a youth named Walter Camp in the employ of the Post-master, who was tried for the offence and sentenced to 3 years	in the Reformatory Prison at Penetanguishene, contents made good by Postmaster of Davenport. we been without Abstraction committed by a youth who had obtained access to the correspondence passing through the Charlottetown Post Office. Contents recovered.	Stated not to have Evidence showed that this letter been received by was lost or mislaid in the Toronto the person ad- Post Office. Contents made good dressed, by a clerk in that office through whose hands the letter should have passed, but who was unable to account for it.	\$20 stated to Circumstances pointed to the cone been received. clusion that the abstraction was committed in the Rathburn Post Office, the management of which was most unsatisfactory. Post-master removed.
Stated not to have been received by the person addressed.	Stated not to have been received by the persons addressed.	op	: იხ	Stated to have been received without contents.	Stated not to have been received by the person addressed.	Only \$20 stated to have been received.
		Winnipeg	Fairbank	Montreal		Rathburn
10 00 John Young Kinlough.	Bank of Montreal Ottawa.	Mrs. Wm. McGee. Winnipeg.	Miss K.M. Lennon Fairbank	Family Herald and Star	Walter BennisterBeaverton	John Smith
10 00	675 00 40 00	30 00	10 00	2 00	4 00	. 25 00
	m m	7	12.	12.	18.	19.
ор 	Dec.	op -	do	ор 	op	တု
Kinloss	LondonMount Brydges.	Barnsley, Man	Greenwood	Cornwall, P. E. I.	Glenarm	Wyanett, Ill
59 John Armstrong. Kinloss	Po. Office Inspector London The Postmaster Mount Brydges.	Wm. Magee Barnsley, Man	Miss H. Lennon Greenwood	A. C. McDonald Cornwall, P.	W. J. Rickaby Glenarm	Benjamin Smith Wyanett, Ill
	61 1		89	64 7	38	99

I. Registered Letters.—Report of all cases occuring within the Year ending 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada.—Continued

ni si noitslu	Class Recapit	ಣ	က	က	87	ಣ	70
desult of Proceedings		Stated not to have There being no record of the desbeenreceived by the patch of this letter from the St. persons addressed. Down Suburbis Post Office, the	Contained in a mail bag lost whilst in charge of courier on Arthur & Dallars Station.	of letter made good by the mail contractor for route in question. This letter was mis-delivered at the Parry Sound Post Office. Con- tents subsequently recovered	Stated not to have Contained in mail package deben received by spatched from Lakefield to the persons addressed.	Evidence pointed to the conclusion that this letter had disappeared in the Macdonald Post Office. Contents made good by Postmaster of that office.	Evidence in this case pointed strongly to the conclusion that the letter had been tampered with at the Thetford Mines Post Office. Deficiency made good by Postmaster of that office. See page No. 110.
ddress of Letter. Evidence of Institutions of Letter.	Abstraction.	Stated not to have been received by the persons addressed.	ор	ор	Stated not to have been received by the persons addressed.	op	Thomas Roy East Broughton Only \$46 stated to Evidence in this have been received. strongly to the control of the letter had be the Information of the control of
Letter.	Place.	Montreal	Arthur	Perry Sound	Brantford	Macdonald	Fast Broughton.
Address of Letter.	Name.	John Dougall & Son Montreal	A. Erb	Robert A. Laurie Perry Sound	Wm. Buck	Mrs. G. R. Hambley Macdonald	Thomas Roy
n	Contents.	\$ cts.	6 72	8 8	7 25 22 13	90 s	8 8
When	Mailed.	1888. burb, Dec. 21	do 22	do 24	do 27 do 27	do 31	1889 Jan. 2 .
Where Mailed	Wilete Malled.	St. John Suburb.	Orangeville	McKellar	Lakefield do	Trenton	Thetford Mines.
Name of Writer		Mrs. M. Edwards, St. John Sul	Singer M'f'g. Co Orangeville.	Thomas McGee McKellar	David Arnott	John McIrvy	Eusèbe Fugère
2	i I	67.3	89	246	1 02	72 7	73 H

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During the course of enquiry into these cases it was shown that at one of the offices through which the letters passed there had been a lack of proper supervision. The Postmaster, acknowledging his responsibility in the matter, made good contents.	de Stated not to have Stolen by a servant in the employ been received by the Postmaster of St. Felix the person address de Valois named Merelisse Godin ed. by the person address who was tried and sentenced to 5 years in Penitentiary. Contense made good by Postmaster of St. Felix de Valois. See case No. 57, class I.	Whitby Post Office entered by burglars on the morning of 11th Jan., 1889, and these letters stolen.	\$40 stated to No evidence to account for the al- e been received. leged discrepancy.	Stated not to have Evidence in the case pointed to been received by the conclusion that the letter distribution and appeared whilst under the charge dressed. of a mail clerk on the G. T. Railway running between Montreal and Kingston. Contents made good by clerk in question.	Stated not to have Stated to have been despatched in been received by mail from La Baie to Sorel of 23rd the persons addres. January, 1889, but to have failed to reach the latter office. Fraury failed to establish how or at what point letter disappeared, though a dishonest postmaster on the route was subsequently arrested, tried and sentenced for letter stealing. See No. 151.	Wm. Page Whitewood St'n. Only \$11 stated to No evidence to account for the alhave been received. leged discrepancy.
Stated not to have been received by the persons addressed.	Stated not to have been received by the person addressed.	op ,	Only \$40 stated to have been received.	Stated not to have been received by the person ad- dressed.	Stated not to have been received by the persons addres- sed.	Only \$11 stated to have been received.
A. Menzie	St. Felix Valois Glen Major Brooklin	Fort Ferry. Whitby. do do do Greenwood Baddow.				Whitewood St'n.
		Western Bank Port Perry Emma Southwell Whitby. W. H. Buell do do do do Greenwood Oat-Greenwood meal Milling Co. W. Burton. Baddow	D. McCall & Co Toronto		Beauchemin & Fils Sorel.	Wm. Page
17 00 2 70 27 00 9 00	13 00 40 00 16 00	8 8888888	60 00	3	19 00	15 00
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9 9 9		8888888 8	ор 	3	op	qo
Sheenboro'	St. Michel des Saints.	do St. Mary's. Teeterville. Navan. Norwood	Burgoyne	W anolioid	St. Monique de Nicolet.	Whitewood St'n.
74 M. Hayes		W. Betth E. H. Granton Maggie Taylor W. Hessin Jas. Cotton W. H. Tucker	Mrs. R. Gibson Burgoyne T. E. Armstrong Wolcofold		Edmond Trudel St. Monique Nicolet	Isaac Mick Whitewood St'n.
7.75	87 67.8	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	88 8	6	8	91

loss of, I		loss of, Lewers containing money, sent through the rost Office in Canada—Continued.)					
Z.	Name of Writer	Where Mailed		When	Alleged	Address of Letter.	f Letter.	Evidence of	Result of Proceedings	ns in constant.
; 7				Mailed.	Contents.	Name.	Place.	Abstraction.		Cla Recapi
			22	1889.	e cts.			-		
36	Jas. P. Duffy Embden, M.	Embden, Maine	Jan.	aine. Jan. 29	10 00	Mrs. J. P. Duffy	Byrnes' Road 39.	Stated not to have been received by the person addressed.	10 00 Mrs. J. P. Duffy Byrnes' Road 39. Stated not to have The registration of this letter was been received by dropped at the Charlottetown the person addres. Post Office. Contents made good sed.	က
88	Andrew McInroy Coe Hill Mi	Coe Hill Mines.	nes. Feb.	-:-	25 00	Mrs. E. McInroy.	West Hunting- don.	op	Registration of this letter was dropped by a railway mail clerk on Trenton and Coe Hill Mines route. Contents made good by	es •
ੜ 18	D. Cadieux	Quyon	op	12	10 00	10 00 Hency & Lacroix Montreal	Montreal	Stated to have been received without	Stated to have been No evidence to account for the alreceived without leged discrepancy.	t~
	95 John Blyth	Hepworth	op .	13	20 20	W. H. Lipsey	London, Ont	contents. Only \$17.20 stated to	contents. Only \$17.20 stated to No evidence to account for the al-	Ŀ-
••	96 W. H. McMurrough.	McMur-Miscouche, PEI	op	14.	5 00	L. McDonald	Bear River Sta- tion, P.E.I.	have been received. Stated not to have been received by the person addres-	have been received. Leged discrepancy. Stated not to have Stolen by ayouth who had obtained been received by access to the correspondence passthe person address ing through the Charlottetown.	x
97	John A. Allan	Wallaceburg	• op	. 16	00 2	Wm. Mathieson Kimball	Kimball	sed. Stated to have been received without	sed. Post Office. Contents recovered. Stated to have been No evidence to account for the alreceived without leged discrepancy.	7
8	Michel Lemieux Chaudière Curve	Chaudière Curve	op _	18.	10 00	10 00 Miss A. Lemieux Fabourg St. Henri Lauzon.		contents. Stated not to have been received by the person addressed.	contents. Stated not to have Evidence that this letter was destant on the chandiere the person addres. Curve Post Office not sufficient. sed.	က
98 10 10 10	Ella McLeod J. W. Ingraham M. A. Wallace	Brooklyn, N.S. N. Sydney, N.S. West Grove, N.S.	888	18 19	13 00 3 00 20 00	E. M. McLeod Miss A. Ingraham. J. J. Wallace	Wolfville, N.S		master of that omce. These letters were stolen from the Wolfville Post Office by a youth who left the country before he could be apprehended. Contents	%
	102 Neil McLean Aberdeen	Aberdeen	op	25	30 00	Miss M. Sheppard.	Burlington, Ont.	Stated to have been received without contents.	Miss M. Sheppard, Burlington, Ont. Stated to have been No evidence to account for the alcoeing without leged discrepancy.	

6.	ಣ	70	t-	2	ب		က		10	•		œ	
Stated not to have Pembroke Post Office entered by been received by burglars on night of 20th April, the person addres- sed.	Stated not to have Circumstances and final result the been received by same as in cases 74-77. the persons ad-	Set. Stated to have been Evidence pointed to the conclusion received without that the letter was tampered contents. Office. Contents made good by Postmaster of Wallace Ridge	No evidence to account for the	No evidence recount for the	St. Pierre Brou-Only 86 stated to have Evidence pointed strongly to the ghton.	tampered with at the theory Mines Post Office. Loss made good by Postmaster at that office.	Ξ	who was subsequently convicted of unlawfully opening certain letters passing through that office, and sentenced to I month's imprisonment. Contents made good by Postmaster of St. Hya-	cinthe.	These abstractions are perfected to have been committeed by a dishonest assistant at the St. Luce Station Post Office who was	arrested but acquitted on trial. Losses made grood out of the stolen money discovered where the culprit had secreted it.	Stated not to have These letters were stolen by Wm.	
Stated not to have been received by the person addressed.	Stated not to have been received by the persons addressed	Stated to have been received without contents.	op	ор	Only \$6 stated to have been received.		Stated not to have been received by the person addressed.		Stated to have	been received without concents Only \$20.44 stated	to have been received. Only \$5 stated to have been recei-	Stated not to have	person addressed.
:	Ottawa		St. Hyacinthe	Montreal	St. Pierre Broughton.		Montreal		Fleuriau, Que		:	R. Plum-Glenloyd, Que	Inverness, Que
10 00 Pierre Beaupré Pembroke	". Free Press" Ottawa D. Craig. Dunrobin J. Coursolle & Co Ottawa	W. R. Henderson. Henderson tlement.	Siméon Lawrence St. Hyacinthe.	H. Lamontagne.	11 00 Xavier Paré		16 00 T. Berthiaume		25 00 Miss Sophie Ross Fleuriau, Que.	Ernest Desgagné St. Donat Rev. J. A. Lebanc. Fleuriau, Que. Talbot & Parent Rimouski	Wm. McLimont & Quebec Son.	Miss E. R. Plum	J. Watts Inverness, Que
10 00	0 75 5 0 00 25 00	25 00	5 00	2 00	11 00		16 00		25 00	20 10 40 40 40 40 40 40	15 00	15 00	4 00
21	න න න 	6	9:	9	7		86		10.	16. 19.	19	16	16
ဝှ	Mar. do	op	ခု	qo	op		qo		qo	응응용		οþ	op
Bois Franc	Almonte do	Wallace Ridge, N. S.	Somerset, Que	Ste. Thèrese de	Blainville. Thetford Mines		St. Hyacinthe		Indian River,	Mich. Sudbury Bic St Donat	op	Manchester, N. H	о р
	W. McFarlane Mrs. S. Metcalfe W. H. Stafford	:	Jean Rowe	Jos. Cousineau Ste. Thèrese	110 Eusèbe Fugère		F. A. Gravel St. Hyacinthe		Fabien Ross	Mrs. V. Desgagné. Sudbury Rev. M. Carboneau Bic The Postmaster. St. Donat	·· op	Miss Plummer Manchester, N	Miss S. J. Watts.
103	4,65		108	109	110		H ₀ .		112	113	116	117	118

I. Registered Letters.—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada—Continued.

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٤	Nomo of Writon	Whose Meiled	When	Alleged	Address of Letter.	f Letter.	Evidence of	Result of Proceedings	ni se noitalu:
		Wiere Malled.	Mailed.	Contents.	Name.	Place.	Abstraction.	instituted in facilicase by the Department.	elD Recapit
119	119 Patrick Mulligan. Kinkora, P.	Kinkora, P.E.I	1889. E.I Mar. 22	\$ cts.	cts. 30 00 Ritchie Bros	Charlottetown,	Only \$20 stated to	Z	2
120	120 Jos. Mailloux St. Hyacin	St. Hyacinthe	do 23	4 00	Fabre & Gravel	P.E.I. Montreal	have been received. Stated to have been received without contents.	₹	ro.
181	J. L. Duggan	Chatham Ont	g 9		90 00 Mrs. J. L. Duggan Montreal	Montreal	Only \$10 stated to	Ornice. Loss made good by Fost- master of that office. See Case No. 111, class 1. Only \$10 stated to No evidence to account for the	1-
250 250					J. B. Labelle Pembroke.	Pembroke.	have been received. Stated not to have	have been received, alleged discrepancy. Stated not to have Pembroke Post Office entered	
123	Mrs. J. Robertson	McCormick	do 18		Mrs. Virg. Hamel. Hull	Hull	been received by the person addressed. Stated to have been	beenreceived by the by burglars on night of 20th person addressed. April, 1889 and this letter stolen. Stated to have been No evidence to account for the	
124	124 John Dalton	Victoria Harbor April 12	April 12	15 00	William Rennie Toronto	Toronto	contents. Stated to have been received without	received without augged uscrepancy. Stated to have been No evidence to account for the received without alleged discrepancy.	2
22 22 22 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	F. Pilatsky. F. E. Savarin.	Eganville Farrelton Springfield, Mass	දි දි දි	232 00 10 00 10 00	Auguste Frederick Pembroke Miss J. McCarthy do Jos. Berhhaume do	Pembroke	contents.		
23.28.28.28.28.28.28.28.28.28.28.28.28.28.		bissett s Creek Deux Rivièrés Rockingham Beachburg Dacre.	66 66 17 66 17 67 17	88888 88888	Francis Scott. R. C. Millar. Chas. Merrick R. C. Millar. Deacon, Delahay &	00000000000000000000000000000000000000			
133	A. Shouldice		do 18	27 00	DeaconW. F. Fenton	op op			
135 136 137	ner W. Larochelle James Dunlop Anna Jennings		do 18 do 18 do 18	12 10 10 10 10 10 10 10 10 10 10 10 10 10	Thos. O. Dacre W. Larochelle R. C. Millar Miss B. Jennings.	ф ф ф ф ф ф ф	Stated not to have been received by persons ad-	Stated not to have Pembroke Post Office entered by been received burglars on morning of 20th by persons ad. April, 1889, and these letters	o.
138	James Costello	Brudenell		100 00	W. M. Moffat	-	ressed.	stolen.	=

00 V100011a.		COSSIGNAT	Tapers (1	0. 10.)			11. 100.0
	က	44	83	ಣ	61	7	2
	Evidence in this case pointed to the conclusion that this letter was not despatched from the Orwell Post Office. Contents made good	by Formaster at Crivell. Stated to have been despatched in mail from La Baie to Sorel of 18th April, 1889, but to have failed to reach latter office. Though no evidence could be obtained at the time as to how the letter disappeared, a dishonest Postmaster	on the route was subsequently arrested, tried and sentenced for stealing a post letter. (See case No. 90.) Stated to have been despatched by Ottawa and Port Arthur clerks to Montreal and Three Rivers clerks, but to have failed to reach	the latter clerks. Registration of this letter was dropped by a Railway Mail Clerk on the Canada Altantic Railway who made good contents.	ž	Frost & Wood Smith's Falls Only \$10 stated to No evidence to account for the have been received. alleged discrepancy.	Stated not to have Destroyed on the occasion of the been received by railway accident, which occurred persons address: 28th April, 1888, at the "Junction Cut" near Hamilton.
	op (ob	do .	op	: •	Only \$10 stated to have been received.	Stated not to have been received by persons addressed.
do do do do do Snake River Allumette Island Pembroke do	Montreal	Sorel	Ste. Cecile du Bic	Friedman Montreal	River du Loup	Smith's Falls	do
"Observer" Godfrey Schmidt. Alex. Millar. J. P. Bostwick. A. Foster. Robert Brown. J. Cox. Michael Doyle. B. J. Dowsley. A. Irwing.	"Family Herald". Montreal	C. Labelle	J. B. Lafrance, sr. Ste. Cecile du Bic	Mrs. Friedman	J. A. Jarvis River du Loup	Frost & Wood Smith's Household Ladies Toronto	
103 2 2 5 8 1 8 1 8 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8		20 00	10 00	37 00	10 00	12 00	2 gold watch P. W. Ellis. cases value \$600. Gold cuff R. Leask value \$4
82 82 82 82 82 82 82 82 82 82 82 82 82 8	116	17	18			27	27 2 g
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Haley's Station. Douglas Osceola. Westmeath do Douglas Cutawa. Pembroke Arnprior	Orwell, P.E.L.	St. Zephirin	Chapleau	Apple Hill	Belleffeur, N.B.	Gooderham Lucknow	op op
Richd. Humphries. Levi Beach. P. Gibbons. A. W. Weid. O. Akesson. A. J. Brown.	M. Martin	O. Lemaire	J. B. Lafrance, jr. Chapleau	P. Silverstone Apple Hill	A. De Villers	S. Kettle	John Murchisson John Wallace
951 141 145 145 145 145 145 145 145 145 1	150	151	152	153	154	155 156	157

I. Registered Letters.—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from or Class in Recapitulation 2 Stated not to have Destroyed on the occasion of the railway accident, which occurred on the Grand Trunk Railway on 28th April, 1889, at the "Junc-tion Cut" near Hamilton." Result of Proceedings instituted in each case by the Department. loss of, Letters containing Money, sent through the Post Office in Canada—Continued. been received by persons addressed. Evidence of Abstraction. Loss or foronto Markham..... Montreal.... Toronto Kingston Northford, Con. Hamilton.... Napanee..... Poronto W. H. Gillard & Co Hamilton..... Oshawa..... Peterboro.... Montreal.... Place. Montreal. | Foronto Address of Letter. မှ Mrs. F. Day. Mrs. C. Day. W. Couse. G. Graham.....J. C. Nicholson... Henderson & Small S. S. Kimball W. T. Bain & Co.. C. H. Mortimer... H. D. Cameron... Wood & Legatt... Barnardo Home. . . J. J. Dally & Co.. J. S. Bruce & Co... P. W. Ellis Fraders Bank..... A. McKellar..... C. Moore "Herald & Star". H. D. Cameren f. Taylor & Co. D. Dexter.... Western Bank Name. မှ rings, (one diamond & Alleged Contents. cts. 1 Ruby) 2140221818 *ដង់ដង់ដង់ដង់ដង់ដង់ដង់* 23 2222 1889 qo 8888888 දිදිදිදි Essex Centre.... Chatham.... London.... U. Danley Gorrie
J. M. Taggart Moncrieff M. K. Detwiller. Wallace Zurich.... Woodslee.... Simcoe..... Where Mailed. ...opdon Strathroy..... Lakeview.... St. Thomas. . . Thorndale.... Cranbrook.... Bothwell London East. Chatham ... Clinton.... Blyth Talbotsville. London.... Brussels . . . Poplar Hill Brucefield Wyoming Day W. Collver Elliott. Dickinson, Nichol-Name of Writer. E. R. Barclay. C. Everingham.... John Murray..... Spencer.... M. D. Carder.... W. J. Smith. F. Day.... F. Day.... Moore..... A. Lynch... J. Graham.... Rosebrugh. Geo. A. King Hobbs Ŋo. 252

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==						23		63	,	• 1		-	2	00		
		-				Stated to have been despatched in mail from Sudbury to Sault Ste. Marie, of 4th May, 1889, but to have failed to reach latter	office.	Contained in a registered package made up at Hull for Ottawa, on	Sequent trace was lost. Sequent trace was lost. Sequent trace was lost.	alleged discrepancy.	op op	op op	op op	The bag in which these letters were despatched to Sackville, N.B., by the Moncton and Campbellton Railway mail clerks on 30th May, 1889, was ripped open at the Sackville Railway Station, and the letters stolen by two boys, who had been improperly permitted by the contractor for the Sackville had been improperly permitted by the contractor for the Sackville was the contractor for the Sackville was Regiment Station service to	car and take charge of it until he called for it. These lads were	arrested, but admitted to bail, and fied the country. Contents made good by contractor for the service in question.
						op		op	Only 695 10 stated to	have been received.	Only \$40 stated to	Only \$30 stated to	nave been received. Only \$8 stated to have been received.	Stated not to have been received by the		
Hamilton	Toronto	Hillsburg. Toronto do	ද ද ද	Virden.	op	Sault Ste. Marie	Maynooth	Detroit, Mich Malone, N.Y	Sorel	Oroawa	ор	op	:	Upper Sackville,	Cackville, In L.	
Canon Mockridge Hamilton	Wm. Rennie Toronto	michael. Shepherd Bros News Printing Co. Wm. Briggs Smith & McGlash-	anCanada Life Ass'n. Steele Bros	T. Miners.	J. D. Wells.	Meir & McKenzie, Sault Ste. Marie	T. McGuire.	vertiser Detroit, Mich J. O. Beaupré Malone, N.Y	Dile. V. Chretien. Sorel	Montreal Dalik Ottawa	Thomas Story	Bank of Montreal.	P. J. Thomson Guelph	John Fawcett Upper Sackville,	Wilss F. Sillan wood	
1 00	1 45	1 00 1 00 10 00 10 00	4 92	.85 .88	388	9	500 00		× - 4	G G	96 98	34 86	18 00	19 00		1
do 27	do 27 do 27	do 27 do 27 do 27 do 27	99 37		3 6 6 6 6 6 7 6 6 6		. May 6	: : g	: : g op ;	may o	do 13	do 15	do 24	May 30.		
Zurich	St. MaryBurnham, Mich.	Dresden do	_ రి_	Elimville.		Sudbury		op	do do	:	Pembroke	Gravenhurst	Uptergrove	Weldford, N. B.	Se II yaciii olle, v.	
A. Johnson Zurich	strong St. Mary Jos. Lawson Burnham, Mich.	Mrs. McGranger. Dresden J. D. Moir. do do do	Rev. G. W. Tomp- son.	Wm. Miners Elimville.	M. McInnis	G. H. King	Eddy Manf'g Co. Hull.	Wiss Brault	Joseph Chretien Henri Guillote	The Fostmaster Sunderland	A. McCormack Pembroke.	The Postmaster Gravenhurst	P. Thomson	:		
189	161	193		861			203		25	8028	608	210	112	212	C12	

I. Registered Letters.—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada—Cintinued.

	ns in tulation.	Cla Recapi		~	-	۲-	67			6				
	Result of Proceedings instituted in each case by the	Department.		~	\mathbf{z}	T. Gilmour & Co Brockville Only \$95 stated to No. evidence to account for the	<u> </u>	mail from Perth Road to Kingston of 8th June, 1889, but to have failed to reach the latter	onice.	Shubenacadie Post Office entered	by burglars on the night of the 10th June, 1889, and these letters stolen.			
	Evidence of	Abstraction.		Only \$22 stated to	nave been received. Only \$20 stated to have been received.	Only \$95 stated to	ived. to	have been re- ceived by the persons ad-	dressed.		op			
222 7 232 3	f Letter.	Place.		St. Hyacinthe	Toronto	Brockville	Merrillon, Wis.	Toronto	Halifax	Halifax do do Lower Stewiacke Toronto	Halifax do Upper Musquo-	doboit. Maitland	Upper Nine Mile River.	Middle Musquo-doboit.
Sparra area (Address of Letter.	Name.		Mrs. G. Knight	Wyld, Grassett & Toronto Darling.	T. Gilmour & Co	Dr. S. McBride Merrillon, Wis.	Stone & Wellington Toronto	M. H. Ruggles. Middleton. Miler Bros. Misk Phillips Shubenacadie.	J. E. Roy & Co Clayton & Sons The Postmaster James Fisher Charles Stark	Baldwin & Co Halifax Moir, Son & Co do do J. Stewart Upper Musquo-	watch Miss F. E. Cochran Maitland	10 2 silver brood Mrs. Jno. Wright. Upper Nine Mile ches and 1	ear-drop. 98 21 Daniel Reid
es (fourte Sm	Alleged	Contents.	· & cts.		30 00	100 00	2 03	2 00	100 00 35 00 15 00	6 00 17 12 6 00 90 00 1 00	12 74 10 34 92 17	10. Gold watch	and chain. 2 silver broo- I ches and 1	ear-drop. 98 21 1
9	When	Manled.	. 1889.	do 14	June 5	do 6	do 8	do 8	do 6 do 7 do 7	do 88	do 10 do 10 do 10	do 10	do 10	do 10.
aronnar tro	Where Mailed			Toronto	Waubashene	:	:	:						
	Name of Writer. Where Mailed.	'		214 G. Knight	H. F. Ames	216 Moulton & Mackay Lyndhurst	217 Mrs. J. Bolton Perth Road	P218 John Corkill	Jas. W. McDonald Harrigan Cove Geo. Pye Ecum Secum, NS Henry Pye do Jas. Phillips East Orrington,	Maine. Mrs. T. McLellan, Salmon River Rev. R. Smith do The Postmaster Little River Samuel Burns do Wm. Logan Middle Musquo-	M. H. Layton do do do Eaton, Parsons & Halifax	Beckwith. Mrs. Raymond	Mrs. Dav. Emmett Lower Stewiacke	233 Halifax Banking Truro
	N.			214	215	216	2112	817 5 4	213 223 223 223 233	224 224 225 227 227	23.23 23.33 23.33 23.33 23.33	231	232	233

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This letter was mis-delivered at the Windsor Post Office. The contents were recovered, however, from the party to whom the letter	Mrs. C. T. Alterton Bloomfield N.B. Stated not to have Bloomfield Post Office destroyed been received by by fire on the 19th June, 1889, the person address- and this letter burnt.	These letters were ascertained to have been tampered with at the Chambord Post Office. Losses	made good by the Fostmaster of that office.	143 Mrs. W. Stephen-Quesnelle Forks, Stated not to have Ashcroft Station Post Office enterbeen received by ed by burglars on the night of person addressed. the 6th July, 1889, and this letter	No evidence to account for the	Stated not have Stated to have been despatched been received by from Treadwell, in mail of 18th the persons address June, 1889, for C. P. R. Clerks	passing east, between Ottawa and St. Scholastique, but to have failed to reach the latter clerks. This letter disappeared whilst under the charge of a Letter Carrier at Toronto, who made	This letter was duly received at the Grenville Post Office, but the Postmaster of that office	being unable to show how it was disposed of made good contents. The Postmaster of Cap St. Ignace having failed to report the non-receipt of the Letter Bill of the	mail from Quebec and River du Loup Mail Clerk, with which this letter is stated to have been despatched to the Cap St. Ignace Post Office, made good contents.
op	Stated not to have been received by the person address-		Only \$10 stated to have been received.	Stated not to have been received by person addressed.	Only \$94.03 stated to	Stated not to have been received by the persons address	op do	op	ф	
Windsor, Ont	Bloomfield N.B.	Chambord	St. Jérôme	Quesnelle Forks, B.C.			Toronto	Grenville, Que	Cap St. Ignace	
5 00 John Ellis Windsor, Ont	Mrs. C. T. Alterton	Alexandre Vallée. Chambord.	Mme. J. Goudreau. St. Jérôme	Mrs. W. Stephen- son.	Bank of Montreal. Ottawa.	Messrs. R. Miller, Montreal Son & Co.	Wheeler & Bain Toronto	Edward Steele Grenville, Que	M. E. Methot Cap St. Ignace.	
20 00	8 00	15 35	15 00	1 43	104 03	59 11	1 73	22 00	3 25	
18	19	19		27	18.	18	12	8	30	
do 18	June	op	op	op	ф	op	ор	ф	op	
Amherstburg	Woodstock, N.B	Quebec	Chambord	Toronto	Fordwich	Treadwell	Plainfield	Pickford, Mich.	Grande Baie	
34 Mary Ferguson Amherstburg	C. G. Alterton Woodstock, N.B.June 19	H. J. Beemer	John Goudreau Chambord	J. Eaton & Co Toronto	The Postmaster Fordwich.	240 W. K. Kains Treadwell	Archie Moore	Reuben Steele Pickford, Mich.	243 Joseph St. Jarre Grande Baie.	
*	235		237	538	239	240	241	242	_ 	

11.

REPORT of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money sent through the Post Office in Canada.

UNREGISTERED LETTERS.

	ass in itulation.	Recap Cl			,	→		4	-	4	-	က	
	Result of Proceedings instituted in each case by the	Department.		Stated not to have No trace, owing to want of regisbeen received by the tration.	·· op op	: : : විච චච චච චච	do do ob	Believed to have been stolen by Letter Carrier Spence of the Tor- onto Post Office. See Case No.	Z	Litation. Believed to have been stolen by Letter Carrier Spence of the Tor- onto Post Office. See Case No.	Z	This letter was mis-delivered at the St. François Beauce Post Office to a Mr. Joseph N. Grondin, who	was arrested and committed for trial for misdeneanor, and re- leased on bail, but fled the coun- try, forfeiting his bail. Contents recovered.
	Evidence of Loss or	Abstraction.		Stated not to have been received by the	do do do do do do do do do do do do do d	: :	: : : 399	දි දි දි	do ob ob ob	:: op op	op op	op	
Time trains	Letter.	Place.		Quebec	Yarmouth, N. S.	Whitby Klngston N B	Quebec	Torontodo	do Lindsay	Toronto	do Quebec	St. Fr. Beauce	
ONEGISIERED TELLERS	Address of Letter.	Name.		Mme. Veuve Ber-Quebec	Mutual Relief So- Yarmouth, N. S.	Mrs. E. Frost Whitby Macnee & Minnes Kingston T. T. Cheristic & C. St. John N. B.	Renaud et Cie Mrs. Herdsman	Dr. McCully F. G. Howe	Mr. Barron	Mrs. Payne Consumers Gas Co.	Jas. McCance do Thos. Aylward Quebec.	Joseph Grondin St. Fr. Beauce	
	Alleged	Contents.	es cts.	3 00	11 12	888	388	888 888	888	888	888	25 00	
	When	Mailed.	1888.	July 1	do 1		00 00 00 00 00 00 00 00 00 00 00 00 00	888		දිදි	do 18 do 18	do 20	
	C. C. W AV	where maneu.			St. John, N. B.	Pembroke	Kiverside Deschambault	Richibucto, N.B. Orillia	St. Catharines Gravenhurst	Credit Forks	Niagara Toronto Tadousac	La Beauce	
		Ivame of Writer.		1 Mme. E. Bertrand. Montreal	H. V. Barbour	John S. Rolph	P. Bernard Wm Monvnenny	D. Hudson Miss C. M. Stewart Orillia	Mary A. Brunt John Skitch	William Payne Credit Forks	Miss G. Kennie R. Dunlop Kate Aylward	Desiré Rousseau La Beauce	
			İ		87	26 e.4.	960		223		1292	18	

13	19 George Mucklebor-St. Thomas	St. Thomas	op	.	8	2 00 Miss T. Dieterle Toronto	:	Stated to have been received without contents.	Stated to have been Believed to have been tampered received without with by Letter Carrier Spence of contents.	•	
8	Crompton & Co Barrie	Barrie	op		4 00	Aggie Allen Stayner.		Stated not to have been received by the	ä		
ផងន	St. Hyacinth And. Willoughby Port Elgin C. Wood Collingwood	St. Hyacinthe y Port Elgin	දිදිදි	888	288	Noël Brodeur Montrea Wm. Lewis Owen So Mrs. E. Browne Toronto	Montreal Owen Sound Toronto	person addressed.	do do do Believed to have been stolen by Letter Carrier Spence of the Tor-		
25	Joseph Gagnon L'Avenir	L'Avenir	op		17 10	17 10 Ledoux & Co	St. Hyacinthe	op	onto Post Office. See Case No. 126, Class II. Believed to have been stolen by a dishonest employe at the Melbourne Post Office. Contents	ro	
	L. Heacock	Newmarket	op	: 8	90 80	R. S. Mann.	Craigvale	·· op	made good by Postmaster of Mel- bourne. See Case No. 19, Class I. fraction	H	
8	Mrs. P. Gregg Rosseau	:	Aug.	63 :	10 00	Hugh Nelson	Spence, Ont		op op	-	
888	Mrs. M.G. R. Looke Hamilton Miss K. J. Lumsden Miss Reeve Morrisburg	Hamilton do	දිදිදි	4.00	10 00 1 00 4 00	MrsC.M. Hamilton Toronto Miss Lumsden do	Torontodo	person addressed. do do do do	Believed to have been stolen by Letter Carrier Spence of the Toronto Post Office. See Case	44	
30	Miss Blackburn Montreal	Montreal	qo	7	00 9	Miss Burrowes Montreal.	Montreal	do	No trace, owing to want of regis-		
####	R. Franklin Port Credit Smellie & Macrae. Toronto Edouard Rhéaume. Chateau Richer.	Port Credit Toronto Chateau Richer.	666	10 00 00 0	8888	Miss M. Franklin. Jarvis & Hardy]	Parkdale London Quebec	9999	op op op		
2	Miss Famenter Louis Laliberté	Fenelon Falls	္မမွ	10	88	L. Quotidien St. Léon,	St. Léon, Que	Stated to have been received without	St. Léon, Que Stated to have been No evidence to account for the received without alleged discrepancy.	7	
8	Joseph Williams Cambray	Cambray	qo	10	1 80	Marie Williams Little Britain.	:	contents. Stated not to have been received by	contents. Stated not to have No trace, owing to want of regisbeen received by tration.	H	
883	A. Watson Deseronto W. Senior Niagara Andrew Watson Kingston	Deseronto Niagara Kingston	999	120.0	98 98 98	Mrs. A. Watson Rose Publishing Co Mrs. And. Watson.	Torontodo	person addressed. do do do	Believed to have been stolen by Letter Carrier Spence of the Toronto Post Office. See Case No. 196, Charge II	4	
6	Fred. Hemmings. Rat Portage Station.	Rat Portage R'y. Station.	မှ	13	32 00	H. H. Smith Winnipeg.	:	Stated to have been received without	Stated to have been No evidence to account for the received without alleged discrepancy.	2	
41	Jas. E. Robertson. Toronto	Toronto	op ,	14	3 00	Alex. McLachlan Shelburne.	Shelburne	Stated not to have been received by	to have No trace, owing to want of regisved by tration.	-	
4	42 Miss Pamenter Riverside	Riverside	ę	16	8	4 00 MrsC. M. Pamenter Dorset.	Dorset	person addressed.	op op		

Unregistered Letters—Report of all cases occurring within the year ended 30th June, 1889, of abstraction from Recapitulation Olass in lieved to have been stolen by Letter Carrier Spence of the Coronto Post Office. See Case elleved to have been stolen by Letter Carrier Spence of the Toronto Post Office. See Case No trace owing to want of registranot to have No trace owing to want of regis-received by tration. elieved to have been stolen by Letter Carrier Spence of the No trace, owing to want of registration. No trace, owing to want of regis-Toronto Post Office. See Case Results of Proceedings instituted in each case by the Believed to have been stolen Believed to have been stolen မှမ 99999999 မှ Department. No. 126, Class II. No. 126, Class II. No. 126, Class II. or loss of, Letters containing Money, sent through the Post Office in Canada—Continued. 66666666 မှ tration. Selieved person addressed. Evidence of Abstraction. Loss or ಕ್ಕಿಕ್ಕಿ ခုခုခ မှ 22222222 ခု မွ မှ ခ péen Miss F. Zougg.... Grimsby Park .. Stated Torcnto.... Minden.... Mrs. W. T. Wood-Point Kaye.... Aspdin..... Toronto Hoodstown.... Mrs. J. D. Smith.. Brockville weed Mrs. P. D. Wyatt. Brooklin, Ont. Bertie, Ont. .. Kingston.....
Fenelon Falls. Toronto.... Mrs. D. Morrison. Toronto.... Hoodstown Place. Hull, Que. D. Worthington Toronto Address of Letter. Miss C. Horner... B Miss M. Molyneux T Mrs. A. Bouron... Miss M. Belfry ... TMrs. T. H. Grey... Miss Himsworth.. Mrs. Geo. Turner. John Urquhart Lumbers & Son... Name. Miss R. S. 8 8 888 8 888 8 8 8 Alleged Contents. 2 222 9 19.. 21... 31.. 23 ö When Mailed. 13 8 8 888 do Sept. do Aug. ခုခုခု မှ 99999999 ф မှ ф ф Lakefield......ShelburneBrampton Stat'n W. A. Kester..... Cobourg Ry. Stn Thos. Woodbridge, Toronto.... Where Mailed. Stratford.... Pembroke ... Miss L. Graham .. Toronto.... Napanee A. F. H. Himsworth Toronto.... Stratford... M. A. Nightingale Craigvale. N. Wayley. Halifax. R. A. Dickson. Toronto. John Worthington Brantford. Manufacturers Life Toronto .. Hamilton. Churchill Chas. Stevens Sarah Phillips T. Belfry Horner W. Brennan.... Name of Writer. Margaret Bouron J. D. Smith Assurance Co. George Turner Mrs.] Mrs. og. No. H 62 ವಿ 47 **442222222** 444 8 57 2822

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	Toronto Post Office. See Case No. 126, Class II. No trace owing to want of registra-	·· op		Toronto Post Office. See Case No. 126, Class II. This letter was posted for registration, but the registration having been omitted the Postmaster of	Vancouver made good contents. No trace owing to want of registration	op	do do do do do do do do do to have been stolen by	Letter Carrier Spence of the Toronto Post Office. See Case No. 126, Class II. No trace owing to want of regis.	op op	Letter Carrier Spence of the Toronto Post Office. See Case	No. 120, Class 11. No trace owing to want of registration	do do Believed to have been stolen by	rier Spence of the	No trace owing to want of regis-	ob
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13 00 David Bell Toronto	Mrs W J S Brown Winnipeg.	Montreal Optical Montreal	Mrs. A. Woodcock. Ottawa Post Office Box 54. Montreal. Miss M. A. Gosling Toronto	Reid & Currie New ster	Rev. Prof. Ross Kingston	Rev. Mère Cather-St. Hyacinthe	Sang. Sang. William Oliver Florence, Ont L. P. Sylvan Ottawa. Mrs. Hutchinson. London, Ont Mrs. A. Crumpton Toronto.	Messrs Taylor Bros do H. S. Mara do Detective N. Power Halifax, N.S.	Post Óffice Box 54. Montreal Mrs. E. O'Meara Ottawa	Dr. A. Geikie	Mrs. J. M. Walsh. Brockville	"La Minerve" Montreal. Mrs. W. V. Archer Quebec Water Works Dept Toronto	1	120 00 Thos. W. Fletcher. Victoria, B.C	23 00 Mrs. Eagle Minnedosa
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63 John Guttridge Forest	W. J. S. Brown Carberry	W. J. Passmore Conestogo	Miss Kate Maybee Gananoque Joseph Smith Montreal W. Goslin Renfrew	Wm. Beavis Vancouver, B.C	James Alison Toronto	Mlle. Marie M. Pouliot.	H. Throuin	J. J. Hanna H. R. Holt G. A. Dixon	Charles Ennis Montreal Mrs. Villeneuve do	E. C. Hancock	Louis Walsh Port Arthur	G. Martin		Mr. McDonough Vancouver, B.C.	89 C. Eagle Bredenbury Stn
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II. UNREGISTERED LETTERS—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada—Continued.

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	insti			o evidence to accalleged abstraction.	with of the	Case No. 120, Class II. o trace, owing to wan tration.					Letter Carrier Spence, of the	1 oronto Fost Omce. See Case No. 126, Class II. No trace, owing to want of regis-	tration. d	
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	Address of Letter.			10 00 Mme Moïse God-St. Roch de Qué-Only \$5 stated to No evidence to account for the bout.	Miss E. Holmes Toronto	Singer M'f'g Co Montreal	Mrs. W. V. Archer Quebec	E. L. Philips St. John	Marine. Hubert Demers L. Lepage	Miss K. McLean Cen. Press Agency H. Hammersley	Kev. W. Briggs do Carswell & Co	Miss Annie Powell Mrs. Gage Miss Cadenhead		Geo. Graham Montreal
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-0	.0	Believed Letter Toront No. 120	No trace,	orwin.	Believed Letter Toronts No. 126	No trace	Believed Letter Toronto	These letters to the Carrier to the Spence, on a challetters, I sentence tentiary.	Stated not to have No trace, owing to want been received by the tration.	ဝှင်	
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00 Miss H. A. Pusey Peterboro'	John Sullivan Orillia .	Toronto do	Ottawa	Woodstook Kingston Beachville Toronto	op op	St. John, N.B.	Toronto	දි දි	Clinton		රිසුපුර
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II. UNREGISTERED LETTERS—Report of all cases occurring within the Year ending 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada—Continued.

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	Result of Proceedings instituted in each case by the	Department.		ilford Post Office entered by burglars on the night of 8th Nov., 1888, and these letters robbed of their contents. The Postmaster of Milford not having taken pro-	per precautions for the security of his office, made good contents. o trace, owing to want of regis- tration.	do do do his letter is believed to have been tampered with at the Dutton	oss made good of Dutton. to want of regis	do do			op
	Result of I	Depar		Milford Post Office entered by burglars on the night of 8th Nov., 1888, and these letters robbed of their contents. The Postmaster of Milford not having taken pro-	per precautions of his office, ma No trace, owing tration.	do do This letter is beli tampered with	Fost Onice. Loss may Postmaster of Dutton. No trace, owing to wan tration.	op op	0 0 0 0 0 0 0 0	· වෙවලිවිවිවිවි	op
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	Letter.	Place.		Milford, N.B St. John, N.B	Buckingham	Franktown Mildmay St. Thomas, Ont		Martintown, Ont Clarendon Sta-	tion, N. E. Fenelon Falls Toronto Montreal	Newry Orleans Vancouver, B.C. Dundalk Toronto Kingston	Ottawa
	Address of Letter.	Name.		Mrs. S. McBriarty Milford, N. B Isaac Erb St. John, N. B	W. Campbell Buckingham	Maggie H. Rowe Franktown Miss E. Thompson Mildmay Miss L. McIntyre St. Thomas, C	Miss K. McKinley Fergus	Mrs. M. McCallum Martintown, Ont Mrs. Geo. Howell. Clarendon, Sta-	Mary A. Tugman. Fenelon Smith, Rae & Green Toronto W. Street		Miss A. Armour. Ottawa
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	Where Mailed.			Boston, U.S Milford, N.B	Montreal	Pembroke Toronto Dutton	Toronto	WinnipegChatham, N.B.	Montreal. Minden. Carillon. London. Ont.	Sudbury Montreal Agassiz, B.C Toronto Vancouver, B.C. Toronto Waidmann	Fort Coulonge
	Name of Writer.			137 Kate O'Neil	139 R. C. Adams Montreal	140 Maggie H. Roe 141 W. Sutherland 142 Mrs. McIntyre	143 Miss J. McKinley. Toronto	144 D. R. McCallum. Winnipeg	146 Maggie M. Tugman Montreal 147 J. H. Delamere Minden 148 Miss M. Poulin Carillon 149 A. Kemlevside London. O.	150 Arthur Gordon Sudbury 151 C. Hutchis n Montreal 152 Mrs. Brewer Agassiz, B. 153 James Drewe Toronto 154 J. W. Lawson Vancouver 155 Lb. P. Blakely Toronto 166 John J. Clark	Liss Susan Armour
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op do	_ 92 82 90	of Lindsay. No trace, owing to want of registration.	දු දෙ	do do do do do do to Believed to have been tampered with at the Dutton Post Office.	Stated not to have No trace owing to want of regisben received by the tration.	op do	op op op	ဝဝ ဝ ဝ ဝ ဝ ဝ ဝ ဝ ဝ ဝ ဝ ဝ ဝ	දිදි දිදිදිදිදි
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Dr. Neilson	Dringes Banghnessy Oakville Wm. Smith Stayner John Hill Lindsay	C. D. Miller St. Andrews	Thos. W. Hart. Bethany do do Tr. W. Brown Sault Ste M.	Mrs. W.M. Christie Ottawa. Mrs. F. Dillon. Halifax, N.S. Mrs. Lewis. London Mrs. McIntyre. Dutton	J. Gilmour Powassan	Geo. Mayhew Louis Perreault	Mrs. Dale W. H. Foy George Little	W. F. Murphy W. Nicholson Geo. Harwood Thos. Lockhart Jas. C. McBain	A. T. Bertniaume Battleford do Gertrude Watson Adolphustown Adam Morrison Toronto Adam Morrison Toronto A. C. Macauley Victoria, B.C. T. W. Edwards Victoria, B.C. A. W. Chapman Dorchester, N.B.
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II.—Unregistere Letters—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or Kecapitulation. Letter Carrier Atkinson, of the Toronto Post Office. See cases No. 265 Alone Toronto Post Office. Letter Carrier Atkinson, of the Toronto Post Office. See case No. 985 not to have No trace owing to want of registrahis letter was mis-delivered at the to one Joseph N. Grondin, who 5 St. François Beauce Post Office, Result of Proceedings instituted in each case by the do do Believed to have been stolen leased on bail, but who fled rial for misdemeanor and want country, forfeiting his bail. 유유유유 2 ಭ do do do do do do do do do Believed to have be owing No trace, owing registration. No. 265, class II. tents recovered. loss of, Letters containing Money sent through the Post Office in Canada - Continued. registration have No trace, 2222 the person adressed do do do do received by been received by the person addressed.
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do
Mrs. W. Fenwick. Galt....
J. D. King, & Co. Toronto. Address of Letter. Perth. John Flanigan. J. Lendrum...
P. Stewart.... Father Gadts.... Miss A. Sheldrick. W. J. Lendrum Mrs. S. Norris.... Joseph Grondin. M r 8. 888 888 2 8358 8 8 8883 8 Alleged Contents. cts. **⊙∞** – ∞ ജ : : : When Mailed. 쯦. 66.57.89 888 લં Jan ಕಿಕಿಕಿಕಿ 4444 ද မှ ಕಿಕಿಕಿ r Toronto..... Philipsburg, West. Minnedosa, Man Lunenburg, N.S. Gananoque Belleville Ottawa..... Toronto..... Oakville..... Where Mailed. Montreal Oakville.... Chicago, Ill Samuel Rogers Oil Ottawa.... Montreal Montreal W. H. Ewer Sanuel Risser I W. J. McCormack T D. Lohr Coote & Watson. no. Williams.... F. Roberge.....Jas. Elliott..... Name of Writer. Emily Fleet......G. W. Lendrum. Esdras Grondin Miss S. Norris. John Flanigan. H. Kavanagh. No. 264 264 192 193 194 195 197 86588 8088 8088 <u>1</u>6

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1889, of abs—Continued.	Result of Proceedings	Department.		have Believed to have been stolen by cythe Letter Carrier Atkinson, of the red. Toronto Post Office. See Case Sed. No. 965 Chast II.	. No trace owing to want of registra-	do do	999	op	ဝ ှ ဝ	ခုန	g op	qo	This letter was stolen by A. R. Dillon, a young lad employed as	town Post Office. No instituted on accou	No trace, owing to want of registra-		ှ
UNREGISTERED LETTERS—Report of all cases occurring within the Year ended 30th June, loss of, Letters containing Money, sent through the Post Office in Canada-	Evidence of	Abstraction.		Stated not to have been received by the person addressed.	do	go op		90		. : . :	op op	do do	: :		do	do do	do do
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curring withi y, sent throug	Address of Letter.	Name.		Mrs. M. P. Van Ressler	L. L. Devenny	Mrs. Macdonald J. L. Willis	Jesse Hoove.	F. Bryce.	"Star" Montreal	Mme. N. Barbier.	Mrs. R. Argue	son.	W. H. Robertson.		Miss J. Wainwright Montreal	Miss Louise Demers J. S. Shurie.	raser.
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Unregistered	Name of Writer			J. D. Johnstone Peterboro.	Adam Devenny	R. MacDonald N E. Hoople V	Wm. Watmough.		E. Maguire.	Norbert Barbier.	Miss Newton Petrolea W. F. McKenzie New	P. Jackson			Charles Codère	W. Emerson J. P. Shurie	Mrs. A. Gay Meaford Mrs. M. Collins St. John, N.
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ඉ ඉඉඉඉ	Atkinson, of the Toronto Post. Office, who was apprehended on a charge of stealing an ordinary letter, and sentenced to 3 years in the Penitentiary. Contents	Z		do	රු දි	දිලි දි	go-	9 9 9	ද ද	op	op	go		Stolen by Letter Carrier G. Rosa, of the Montreal Post Office. who	was brought to trial, pleaded guilty, and was sentenced to five years in Penitentiary. Contents	recovered. No trace, owing to want of registra-	
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A. Patterson, ir Rev. A. Beamer Miss M. Slater C. Gauthier W. J. Hayward		Mrs. J. Hardin Montreal	J. L. Courtois L'Assomption Victorine Gauthier Montreal	London Stamp Co. London	Arthur Gariepy		Miss Picken Brockville	G. W. Faulkner Dr. Coulombe	L. BeaubienS	Mrs. de la Motte. New Richmond	Mrs. Coote	Miss M. Dumble. Cobourg	Henry Simmons James Elsev	:		J. R. Williamson Stratford	Patrick Hart. Mrs. A. Landreth. Galt. J. M. Hutchins Baysville. W. G. Sheppard St. Thomas.
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Patt 3v. A iss M Gauf J. I.		rs. J.	L. C ictori	ndor	rthur	Dal.	188 F	ۆ`≼ :	Bea C	rs.	rs.	iss M	Henry Simmons. James Elsev	:		R.	rs. A M. F G.
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30th June, 1889, of abstraction from, in Canada—Continued.	Result of Proceedings	Department.	Stated not to have No trace, owing to want of regisbeen received by tration.				do do do do do Stolen by F. E. N. Boucher, late Postmaster St. François du Lac, who was arrested, brought to trial and sentenced to seven years in penitentiary.
ne, 188 a—Co	Res		No trace, tration.	999999	9999999	දි දිදිදිදිද	do do do Stolen by Postmas who w trial and
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g witl nt thre	Address of Letter.	je.	J. R. Nelson & Co. Toronto .	Geo. W. Gibson Drew	Mile. H. Sicotte Boucherville E. J. Steel Winnipeg Mrs. R. Agnew Kingston Gazette Pr'y Co. Montreal Ernest Girardot Sandwich Mrs. T. H. Bucking. Stratford	R. A. Webster St. Johns, East. Wm. Jones Toronto	Sons. Ner. Henderson Ottawa. Joseph Danserseau. Belleville. A. J. White & Co. Montreal. Alex. Martel St. Pie de Guire.
currin ey, se	¥	Name.	R. Nels	ark, Day S. Brov rs. Bulli rs. D. Mc	Mile. H. S. Vipk. E. J. S. Vipk. E. J. S. Vipk. E. J. Stee Mrs. E. A. S. Vipk. E. A. Vipk. E. A. Vipk. Ernest Giller E. T. Vipk. E. Vipk.	R. A. Webs Wm. Jones. Mrs. T. H. Mrs. J. S. H Mrs. E. P. I Messrs. Suel	Sons. frs. Henceseph Danseph D
ses oc Mon	Pe	žį.	t cts.	888888	2888888	8 88884	8888
-Report of all cases occurring within the Year ended 30th June Letters containing Money, sent through the Post Office in Canada-	Alleged	Contents	*	233 7 1 1 16	e 0 4 8 6 4 e	15 15 10 0	1133
ort of cont	When	ailed.	1889. April 19.	7 28. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	9 m 4 4 m F	8 110 12 13	13 17 17 17
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II. Unredistered Letters or loss of,		Name of Writer.	"Day's" Bookstore Berlin	David E. Holmer. Willowdale Hooper & Co. Toronto Henry Roppel. Wallace Mrs. Kellett. Deloraine. W. J. Livrngston. Clinton Railw	Station. Station. Edward Pole. C. H. Winbress. Winnipeg. Bra Agnew. James Brown. J. E. Duprat. James Main.	Ferguson, Alex-Montreal ander & Co. W. Jones Stoneleigh Thos. H. Ellis Sault Ste. M. Mrs. H.C. McInnes Wingham E. P. Park D. F. McWatt Barrie	John Henderson Montreal R. Eldon
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00 Mrs.L. Henderson. Gravenhurst	Joseph Leveillé, fils Ste.	True-Winnipeg.		: : 8 g : :	:	A. Hill Press" Lc	oyal Silverware Windsor, Ont.	Press "London, Ont.	: : :	vern &			::	Samuel Hildred Bervie
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315 J. B. Henderson. Toronto	316 Joseph Leveillé Montreal	R. H. Trueman Brandon	J. H. Parnell Ottawa Alex. Smith Lieury Alphonse L'Abbé St. Urbain	B. B. B. S. N. S. W. B. C. C. C. C. C. C. C. C. C. C. C. C. C.	J. W. Forbes	J. A. Sheares Cornwall E. V. Thornycroft. Wanstead	Mrs. M. Harnott Montreal	E.	D. W. Anderson. Wyoming John McNeil Lethbridge Thomas Galey Ottawa	D. Cattanach Camerontown. P. McGovern Montreal T. & W. Murray Pembroke	Moise Pouliot	Murray & Gorman Pembroke do do Jane A. Todd Montreal E. Cockroft Elora. George Harris Nilestown	William Brown Owen Sound E. & C. Gurney & Hamilton	Charles Hildred Toronto
315	316	317	318 319 320	325 325 325 325 325 325	327	888	ຼື ຂ 26	331	22 22 22		88892	28 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	347	349
-	-	4.5					26	9	, -	2.5	,		4.0 6.3	v,

II. Unregistered Letters—Report of all cases occurring within the Year ended 30th June, 1889, of abstraction from, or loss of, Letters containing Money, sent through the Post Office in Canada—Continued.

	sss in tulation.	Cly Recapi		1		Unreg- istered.	292	∞₽π0 ⊢ 4
	ings		t of regis-	: : : : : : : : : : : : : : : : : : :		Regis- Utered. is	1 12	& 48 to 30
	Result of Proceedings	Department	Stated not to have No trace, owing to want of regisbeen received by the tration.	දිලි දිලි දි			1. Letters stated not to have been received by persons addressed; but, for want of registration, no trace obtainable, and no positive evidence that loss occurred in the Post Office. 2. Letters contained in mails or mail packages stated not to have reached offices for which they were intended; cause of failure not discoverable.	elivered in the Post Office, the contents of which were not recovered. elivered in the Post Office, the contents of which were not recovered. or a portion thereof) were lost or stolen, and made good by the officers responsible. or a portion thereof) were lost or stolen in the Post Office, and not recovered. or a portion thereof) were stated to be missing, no evidence being forthcoming to account for the alleged discrepancy.
netiers containing money, sent through the rost office in Canada—Continued.	Evidence of	Abstraction.	Stated not to have been received by the	person addressed. do do do do do do do do do do do do			race obtainable, and r	elivered in the Fost Office, the contents of which (or a portion thereof) were recovered from the offices respected in the Fost Office, the contents of which were not recovered. Or a portion thereof) were lost or stolen, and made good by the officers responsible. Or a portion thereof) were lost or stolen in the Post Office, and not recovered. Or a portion thereof) were stated to be missing, no evidence being forthcoming to account for the alleged disc
gn the rost	f Letter.	Place.	Toronto	Neustadt	LATION.	•	registration, no twhich they were i	r a portion thereo ere not recovered good by the office Office, and not re vidence being fort
ey, sent tnrou	Address of Letter.	Name.	J. D. King & Co Toronto	Jacob Drumm Robt. Pearson Annie Ryder Jno. R. Williams. Miss A. Gould F. H. Nield	RECAPITULATION.	Classification of Csses.	but, for want of reached offices for	elivered in the Fost Office, the contents of which (or a portion thereof) were recovered elivered in the Fost Office, the contents of which were not recovered. or a portion thereof) were lost or stolen, and made good by the officers responsible or a portion thereof) were lost or stolen in the Fost Office, and not recovered. or a portion thereof) were stated to be missing, no evidence being forthcoming to account
nung mon	Alleged	Contents.	20 00	හල සහ ප 4 8		Cla	ns addressed;	t Office, the c of Office, the office, were lost o office estated
ers contai	When	Mailed.	1889. June 13	do 28: do 28: do 28: do 21:	,	-	ed by person	d in the Pos d in the Pos ortion therecortion therecortion therecortion
ioss or, Leto	Where Meiled	TOTAL TABILLAN	Lakefield	Hamilton Schreiber Toronto South River Uxbridge Toronto			rs stated not to have been received by oss occurred in the Post Office	led or misdelivere de good led or misdelivere s of which (or a p s of which (or a p s of which (or a p
	Name of Writer		R. G. Cotton Lakefield	E. & C. Gurney Hamilton Thomas McBride . Schreiber Alfred Ryder G. L. Williams South River S. J. Gould Uxbridge J. T. Hampson Toronto			etters stated not to loss occurred in etters contained in	Letters lost, embezzled or misd or otherwise made good Letters lost, embezzled or misd Letters, the contents of which (Letters, the contents of which (Letters, the contents of which (
	Z		350	588585 270			1 1 2	

8	356	al.			
12 66 47	243	Fener			
8. Letters stolen, or supposed to have been stolen, from the Post Office or mails en route, the contents of which (or a portion thereof) were recovered or made good. 9. Letters stolen from the Post Office or mails en route, the contents of which were not recovered. 10. Letters accidentally destroyed during course of Post.		WILLIAM WHITE, Deputy Postmaster-General.			
Letters stolen, or supposed to have been stolen, from the or made good Letters stolen from the Post Office or mails en route, the Letters accidentally destroyed during course of Post	Totals	W. D. LeSurur, Secretary.			

STATEMENT of Letters received at the Dead Letter Office, Canada, during the showing how such Dead

TABLE No. 1.—Showing the Number of Letters of all

Number received.			-	
EAD LETTERS:			Ì	
Returned from Great Britain; of these were registered	(266)	9,194	1	
do United States do(1,	992)	98,844		
do Newfoundland do	(4)	418		
do Victoria do do New South Wales do	(2)	151		
do Mexico do	}_{	68		
do New Zealand do	(-)	58		
do Queensland do	__ (4)	56		
do Brazil do Other colonies and foreign countries;	(-)	50		
of these were registered	(2)	199		
. (2	,270)	109,179		
LESS—Registered, accounted for below		2,270	106,909	
Returned from Post Offices in Canada, classified follows:—	i as		100,000	
Registered Letters on hand on 30th June, 1888 do in hands of Postmasters on		2		
June, 1888	29	1	,	
do received during the year ended June, 1889 (including those of foreign origin)) 12,43	9 10.050		
Letters found to contain value and recorded, on l		12,852	,	
30th June, 1888Letters found to contain value and recorded in h				
of Postmasters, 30th June, 1888 Letters found to contain value and recorded, rece	eived	9		
during the year ended 30th June, 1889	3,25	3,495	10 047	
Ordinary Dead Letters originating in Canada:-			16,347	
On hand on 30th June, 1888	4.98	ko l		
Received during the year ended 30th June, 1889.			1	
	<u>-</u>	236,898		
Ordinary Dead Letters originating in other countries	es re-	101,374		
ceived during the year ended 30th June, 1889 Dead Letters with printed addresses of senders		33,509		
do with official franks		11,386		
Returned Dead Letters, i.e., Letters sent out from I	Dead		}	
Letter Office and again returned unclaimed	•••••	69,485	1	
Dead Books, Parcels, &c. :— On hand 30th June, 1888	1,89	n l		,
Received during the year ended 30th June, 1889.			İ	
	ļ	22,895		
Circulars, Postal Cards, &c	•••••	184,993	000 540	
			660,540	783,79
		1		100,10
	.	\ \ \		
		-	 	
		1		
	-		l l	
.				
Carried forward				783,79

Year ended 30th June, 1889, and of their contents, valuable or otherwise, Letters have been disposed of.

kinds received, with the disposition made of them. How disposed of. DEAD LETTERS :-Returned to Great Britain, including all foreign letters not enumerated below; of these were (607)28,898 Returned to the United States; of these were registered... 75,198 Returned to Newfoundland; of these were regis-659 Returned to New South Wales; of these were registered. Returned to Victoria; of these were registered....
do New Zealand do 73 (3) 67 61 Mexico dio do do do (4)50 do Other colonies and foreign countries; of these were registered..... (12)366 (1, 110)Letters of British, colonial or foreign origin remaining on hand on 30th June, 1889; of these were registered..... 912 101.374 Registered Letters returned to writers, including those of 10,913 foreign origin . . Registered Letters in the hands of Postmasters.... 329 failed of delivery to writers, owing to refusal to redeem, want of address, &c., found to be of no value and destroyed. Registered Letters in Dead Letter Office awaiting claim. 334 12,852 Letters found to contain value returned to writers..... 3,074 do in hands of Postmasters. 135 do in Dead Letter Office await 286 ing claim . . . 3,495 16,347 Ordinary Dead Letters returned to writers... 216,622 remaining on hand 30th June, 1889 1,496 do 218,118 do with printed addresses returned to 33,509 senders do do returned to Government Depart 11,386 ments..... without signatures or postmarks,

273

accounts, &c., destroyed

remaining in Dead Letter Office

of no value disposed of . . .

Returned Dead Letters destroyed

Dead Books, Parcels, &c., returned to senders.

Carrie forward.....

Circulars, Postal Cards, &c., destroyed or otherwise dis-

133,916

69,485

7,285

4,078 3,305 203,401

14,668

184,993

666,075

783,796

783,796

STATEMENT of Letters received at the Dead Letter Office, Canada,

TABLE No. 1.—Showing the Number of Letters of all kinds

· Number received.	-	-	_	
Brought forward				783,79
CIAL LETTERS, classified as follows:— Registered Letters on hand on 30th June, 1888 do in hands of Postmasters, 30th June, 1888 do received for better address, postage, &c.	202 49 9,988	10,239		
Letters found to contain value and recorded:— On hand on 30th June, 1888 In hands of Postmasters on 30th June, 1888 Received for better address, postage, &c	50 31 1,123	1,204		
Ordinary Letters on hand on 30th June, 1888	689 36,096		11,443	
do do better address		36,785 18,233	55,018	•
Drop Letters received for postage Letters for foreign countries on hand on 30th June, 1888. do do received as unpaid or short- paid		401 12,242	6,431	٠
Returned Dead Letters received. Postal Cards received for postage		4,751 4,421	12,643 4,797	
Circulars received for postage	ŀ	390 752	9,172	
Books, Parcels, &c.:— On hand on 30th June, 1888, received in that and previous years. Received for postage, better address or not claimed. (Of these 1,171 contained enclosures contrary to law).		1,738	1,142	
		-	8,856	109,5
Carried forward				893,2

during the Year ended 30th June, 1889, &c.—Continued.

received, with the disposition made of them—Con	tinued.	7		
How disposed of.	-	_ ,		· <u>·</u>
Brought forward		.,		783,79
Registered Letters returned to writers or forwarded to address. Registered Letters in the hands of Postmasters	10,020 70			
Letters found to contain value, returned to writers or forwarded to address. Letters found to contain value, in the hands of Postmasters do do in Dead Letter Office await-	1,066	10,239		
· ing claim	114	1,204	11,443	
Ordinary Letters received for postage: Returned to writers. Forwarded to address. Destroyed, in consequence of the inability of the Department to return or deliver. Remaining on hand on 30th June, 1889.	23,281 10,992 2,133 379			
Ordinary Letters received for better address: Returned to writers. Forwarded to address. Destroyed, in consequence of the inability of the Department to return or deliver.	15,487 704 2,042	36,785	-	
Drop Letters received for postage :— Returned to writers		18,233	55,018	
Forwarded to address Destroyed, in consequence of the inability of the Department to return or deliver		4,212	C 101	•
Letters for foreign countries: Returned to writers. Forwarded to address. Destroyed, in consequence of the inability of the Department to return or deliver. Remaining on hand on 30th June, 1889.		4,877 7,345 239	6,431	
Returned Dead Letters destroyed	1.899	182	12,643 4,797	
Postal Cards received for postage, destroyed in consequence of the inability of the Department to return or deliver	2,852	4,751		
or forwarded to address Postal Cards received for better address, destroyed, in consequence of the inability of the Department to return or deliver	2.221			
	-,	4,421	9,172	· · · · · · · · · · · · · · · · · · ·
Carried forward			99,504	783,79

STATEMENT of Letters received at the Dead Letter Office, Canada

TABLE No	. 1.—Showing	the Number	of Letters	of all kinds
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Number received.	_	 ,	
Brought forward			893 29
			3
Grand Total		 	893,2

su M

 Letters on hand on 30th June, 1888.
 10,230

 Dead Letters received.
 776,646

 Special
 do

 106,422

893,298

W. D. LESUBUR, Secretary.

received, with the disposition made of them—Con	cluded.		· · · · · · · · · · · · · · · · · · ·	
How disposed of.				_
Brought forward			99,504	783;796
SPECIAL LETTERS—Concluded, Circulars received for postage, returned to senders do do destroyed	315 75	390		
do received for better address, returned to senders or forwarded to address	291 461	752		
Books, Parcels, &c., held for postage, address, enclosures, or not called for, returned to senders. Books, Parcels, &c., held for postage, address, enclosures, or not called for, sent to address.		1,604	1,142	
Books, Parcels, &c., held for postage, address, enclosures, or not called for destroyed, being of no value and the Department being unable to deliver or return		1,159		
of previous years) on 30th June, 1889.		3,309	8,856	109,502
Grand Total				893,298

WILLIAM WHITE,

Deputy Postmaster General.

Table No. 2.—Showing the number of Letters received containing Money or other enclosures of value; the amount and nature of their contents; the number of such Letters delivered during the Year, and the number remaining undelivered.

iv- ear ne,		ser ed	9 5 5 5	유독교 후 0	きっぱ 見まら
E 148	•	rits V _t	2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	m m m i	Se a si
2 e 2		receive the Y	Letters of those during anded 3	F 200	8 8 00
# E E	!	in Tage	######################################	1.1.88 of	5 28 2 5 .
# E	Nature of Contents.			gran g	ing n
ıÄ∄∀.		alue of Letters during ended 1889.	o. of livered ceived Year June, 1	of Livered June, now claimed	chair, ed
No. of ed de ende 1889		85.H. 48	o. of livered ceived Year June,	of liver Jun now clair	No. of I livered June, now i Postm
5.8 g ∺		E 4 4 E	AKE E.	No. liv Ju cla	CHP PHE
4		<i>></i>	4	4	4
					1
		\$ cts.			}
4,545	Money (including \$6.06 enclosed in letters	05 000 051	4 150		100
56	under other heads	25,986 05½ 17,648 29	4,173	206	166 1
6	Bonds	21,342 80	6		
435	Cheques	53,924 83	406	8	21
332	Drafts	58,505 30	320	5	7
. 2	Letters of Credit	257 00	2		
	Money Orders	13,583 31	593	14	32
61 11	Orders Passage Certificates	3,436 97 547 86	58 10	2	1
	Promissory Notes	77,445 42 1	356	8.	14
782	Receipts	68,143 01	743	21	18
6	Stock Certificates	5,082 00	5		1
6	Various Certificates	15,300 03	6		
607	Registered Letters sent to Dead Letter Office, London, England Registered Letters sent to Dead Letter Office, Washington, U. S. A.		007		
475	Posistand Letters sent to Dood Letter		607		
410	Office Washington II S A		475	Į	į
28	Registered Letters sent to Dead Letter		1.0		
	Offices, other countries		28] .	
98	Deeds	,	96	2	
64	Documents of Value		59		5
$\frac{1}{2}$	Certificates—American Legion of Honor do A. O. U. W		$\frac{1}{2}$		[·····
í	do Architects			1	
10	do Baptism			l . .	2
1	do Birth		i		
1	do Board of Trade		1.	l	. <i>.</i>
1 18	do Carpenters and Joiners do Character		1		
10	do Character		16 1	2	
12	do Commercial Travellers	• • • • • • • • • • • • • • • • • • • •	12		
5	do Deaths		5		
1	do Endowment		1		
2 6	do Entrance Examination	<i>.</i>	2		
6 2	do Foresters		6		1
4	do Freemasonsdo Good Templars		2 4	} • • • • • • • • • • • •	
6	do Homestead Patents		6		
1	do Infantry			1	1
1	do Insanity	<i></i>	1		[
8	do Insurance		8		[
1	do Knights of Labor		1		
$\frac{1}{2}$	do Law Society		$\frac{1}{2}$		1
22^{2}	do Marriage		21	1	
10	do Medical		9	i	}
9	do Membership	[<i></i>	9		[
. 7	do Oddfellows	[7	[[
. 8	do Orange Lodge		8		
5 1	do Ownership		5 1	1	
4	do Pensioners		4		
3	do Pre-emption		2		i
3 5	do Registration	l	4	1	[
2	do Royal Templars		2	1	[,
	27	8	-		

Table No. 2—Showing the number of Letters received containing Money or other enclosures of value, &c.—Continued.

ended 30th June, 1889.	Nature of Contents.	Value of contents of Letters received during the Year ended 30th June, 1889.	No. of Letters delivered of those received during the Year ended 30th June, 1889.	No. of Letters undelivered on 30th June, 1889, and now lying unclaimed in D.L.O.	No. of Letters undelivered on 30th June, 1889, and now in hands of Postmastersawait-
		\$ cts.			
1	Certificates—Sale		1	l	
2	do Scholars		2		
12	do School Teachers		12		
6	do Seaman's		3 2	3	• • • • • • • • • • •
2	do Sheriff'sdo Steamboat		1		
1 19	do Steamboat do Various		16	1	
1	do Weights and Measures		1	1	
	Abstracts		4		
7	do of Title		5	1	
	Accident Insurance Ticket		ĺ	1	l
. 8	Account Books		8		
	Affidavits]	25	1	
	Agreements		26	1	
1	Album.		1		
	Anchor (gilt)		· · · · · · · · · · · · · · · · · · ·	1	
	Applications		7		· · · · · · · · · · · · · · · · · · ·
	Assignments		6		
	Baggage Checks		6		
	Bead Work		4		
	Bibles		$\hat{2}$	1	
	Bib		1		
	Bill of Cost		1		
	Bills of Sale		2		.
	Blood Stone		1		
	Books		55		1
	Braces (Pair of)		1 1		
î	Brooch (Asbestos)		i		
3	Brooch (Asbestos)do (Gilt)			2	
1	Chair Tidy		1	l	l
	Check		1		
1	Child's Clothes		1		
	Cigar Case		1		
6	Contracts		$\begin{array}{c} 6 \\ 1 \end{array}$		
	Coupons		$\frac{1}{2}$	1	,
ī	Crape		ĺ		
1	Crochet Needle			1	
	Crown Grant		1	l	
1	Cuff Buttons (Gilt)		1		
	Declarations		11	1	
2	Deeds of Sale	• • • • • • • • • • • • • • • • • • • •	2		
1	Derby Sweepstake Ticket	• • • • • • • • • • • • • • • • • • • •	1		
1 1	Diamond Ring Diploma	1	1 1		
11	Discharge—N. W. M. Police		11		
4	do Seaman		2	2	
2	do Soldier		$ar{f 2}$. .	
4	Dominion Land Grants		4		
	Drawing		1		
	Dress Goods		2		
	Duplicate Ticket			1	• • • • • • • • • • • • • • • • • • •
4	Ear-drums		4	1	
2	Ear-rings (Gilt)		1	·····i	
ī	Emerald		1	1	
- 1	Examination Papers				

Table No. 2—Showing the number of Letters received containing Money or other enclosures of value, &c.—Continued.

euqed 30th June of Conte	nts.	Value of contents of Letters received during the Year ended 30th June, 1889.	No. of Letters delivered of those received during the Year ended 30th June, 1889.	No. of Letters undelivered on 30th June, 1889, and now lying unclaimed in D.L.O.	No. of Letters undelivered on 30th June, 1889, and now in hands of Postmastersawaiting claim.
		\$ cts.	,		
1 Execution			į <u>1</u>		
1 Exhibition Ticket			$\frac{1}{2}$		· · · · · · · · · · · · · · · · · · ·
2 False Teeth			2		
2 Fancy Work		.	2		
4 Foreign Stamps			4		
1 Fountain Pen			1		<i></i>
2 Fruit 2 Fur Caps			2 2	• • • • • • • • • • • • • • • • • • •	
2 Fur Caps			3		
1 Glass Eye			ĭ		
4 Gold Jewellery—Bracelets			4		
	.		8	4	
	r-rings			1	· • • • • • • • • • • • • • • • • • • •
			1	1	
			3	î	
	ζ8		49	8	1
4 do Lockets	· · · · · · · · · · · · · · · · · · ·	.	3	1	
	Chain		1		
-	• • • • • • • • • • • • • • • • • • • •		2 7		
	• • • • • • • • • • • • • • • • • • •		6	3	
			1	i	
			9	l ī	
2 Gold Quartz			1	1	
1 Hat			1	·····	
1 Hood Pools			1 1		• • • • • • • • • • • • • • • • • • • •
1 Insurance Agent's Book 162 Insurance Policies	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	154	1	7
2 Invoices			2	<i></i>	
7 Keys			6	1	
3 Kid Gloves			3		
3 Lace			2	1	
1 Land Contract			1 7	·····i	
87 Legal Documents			83		4
2 Letters of Administration			2		
1 Linen Apron			.1		
1 Licenses—Auctioneer			1	· · · · · · · · · · · · · · · · · · ·	
2 do Pedlar			2		
1 do Tavern			1 1		1
1 Lock (Gilt)			l î		
2 Lockets (Gilt)			2		
1 Machinery			1		
2 Maple Sugar			1	1	• • • • • • • • • • •
3 Medals		.	3		• • • • • • • • • • • • • • • • • • • •
2 Medical Diploma 2 Medicine			2		
1 Meerchaum Pipe			l	1	
2 Membership Tickets		.	2		
1 Metal Time Check			1		
2 Minerals			2	•••••	
1 Manicure Set			2		
2 Moccasins.			2		
22 Mortgages			21		1
14 do Chattel					

Table No. 2.—Showing the number of Letters received containing Money or other enclosures of value, &c.—Continued.

1889.	Nature of Contents.	Value of contents of Letters received during the Year ended 30th June, 1889.	No. of Letters delivered of those received during the Year ended 30th June, 1889.	No. of Letters undelivered on 30th June, 1889, and now lying unclaimed in D.L.O.	No. of Letters undelivered on 30th June, 1889, and now in hands of Postmasters await-
		\$ cts.			
5	Mortgages, Discharges of		5 1	• • • • • • • • • • • •	· · · · · · · · · · · · · · · ·
1	Muffler Naturalization Papers		1		
i	Necktie		î		
1	Oil.		1		
1	Old Letters	• • • • • • • • • • •	1		
2	Ostrich FeathersOxidized Silver Chain and Charm	· · · · · · · · · · · · · · · · · · ·	1	1	
1 30	Pass Books—Bank		$\begin{array}{c} 1 \\ 29 \end{array}$		
10	do Building and Loan		8	2	1 2
10	do Savings Bank		18	l	J
1	Patent Medicine		1		
2	do for Harrow		2		
1	do Watchmakers' Pliers		$\frac{1}{3}$	•••••	
3 2	Pearls		3	• • • • • • • • • •	
í	Pedigree		ĩ		
1	Pencil (Gilt)		î		
	Permits—Liquor		5		
1	do Ticket Sellers		1	•••	
1	do Timber				}
1	Photo (large)		1 1		
5	Pills (Boxes of)	1	1	1	
2	Pins (Gilt)		1	ĩ	
4	Plans	•••••	3	1	
	Pocket Knives		2		
2	Prayer Books		14 2		
ĩ	Probate of Will		ĺ		
1	Railway Book of Tickets	<i></i>	1		
8			8		
$\frac{26}{1}$	do Ticket		22	4	
7	Registered Letters		1 6		
i	do Letter Receipt			1	Ì
2	Releases	[<i></i>	2	·	
.1	Revolver	····		1	
14	Rings (Gilt)		8	4	
i	School Return.	1	i	1	
3	Seeds	<i>.</i>	2	i	
1	Sewing Machine Needles		1		
3	Shawls. Ships Papers.	·····	3		
2 2	Silk		2 2		1
2	do Gloves.	1	2		1
17	Silk Handkerchiefs		15	1	
2	Silver Jewellery—Bracelets		1	1	1
11	do Brooches		8	3	1
2 2	do Chains		2		
í	do Monogram			1	1
1	do Pin		l ī	1	
1	do Scent Bottle			1	1
35	do Watches			5	
1	Silver SpoonLock				· • • • • • • • • • • • • • • • • • • •
1	Solar Time Piece (Gilt)		1		1
1	Solar Time Fiece (Gilt)28		1	1	1

Table No. 2—Showing the number of Letters received containing Money or other enclosures of value, &c.—Concluded.

ed during the Year ended 30th June, 1889.	Nature of Contents.	Value of contents of Letters received during the Year ended 30th June 1889.	No. of Letters delivered of those received during the Year ended 30th June, 1889.	No. of Letters undelivered on 30th June, 1889, and now lying unclaimed in D.L.O.	No. of Letters undelivered on 30th June, 1889, and now in hands of Postmasters await in ordain
		\$ cts.			ļ
5	Spectacles		4	1	
2	Statements of Claim		2		
	Steamboat Passes		2	1	
	Stethoscope		1		
	Stock Book	1	1		
	Stylographic Pen		1		
	Summons		18	1	1
1	Testimonial of Merit		1		
2	Tobacco.		2		
3	do Pouch		3		
1	<u>Trinkets</u>		1		
4	Trusses		3	1	
13	Unopened Letters.		10	1	. 2
2	Victoria Rifle Armory Tickets		2		
3	Waists of Dresses		3		1
1	Watches-Brass		1	l. .	l
1	do Chain Gilt)	1	1	l	1
2	do Gilt		2		
2	do Nickel		2		
2	do (Parts of)		2	l	
1	do (Sundial)		1		
1	do (Works)		1		
1	do Seal		Ī		1
6	Wills		$\bar{6}$		
1	Wood Cut.		i.		
2	Wooden Pipes		2		
19	Woollen Goods		18	1	
3	Woollen Mitts		3	-	
21	Writs		21		
873		361,202 88	9,209	354	310
917	Add to these ordinary Registered Letters not enumerated above and letters containing value not enumerated above which have been returned, forwarded or otherwise disposed of, as shown in Table I	,	17,175	204	538
	E and mine and an arrange at the tree are		11,210	201	
	Grand Total of letters containing value disposed of		26,384	558	848
	Grand Total of Letters unclaimed in Dead		·		
	Letter Office		558		1
	Grand Total of Letters in hands of Post- masters		848		1
	IIIAGUCIS				1
			27,790		

450 Letters remained in hands of Postmasters on the 30th June, 1888. All of these have been satisfactorily accounted for.

WILLIAM WHITE,

Deputy Postmaster General.

W. D. LESUEUR, Secretary.