

**Temiskaming and Northern Ontario Ry.**

Replying to a question in the Ontario Legislature recently, the Minister of Public Works stated that the expenditure on the construction of this line to Mar. 1 was \$4,882,855.51, of which \$4,240,114.82 was on the first division, and \$642,740.64 on the second division. During April there was expended \$7,993.28 on the first division, and \$118,362.16 on the second division, making a total of \$5,009,210.95.

Another question elicited the following information as to the quantities estimated, and the actual quantities paid for to Jan. 30 last in the construction of the first 112 miles of the railway.

|                            | Estimated | Paid For. | Price  |
|----------------------------|-----------|-----------|--------|
| Solid rock, cu. yds.....   | 200,000   | 682,542   | \$1.70 |
| Loose rock, cu. yds.....   | 100,000   | 88,367    | .50    |
| Hardpan, cu. yds.....      | 850,000   | 774,123   | .38    |
| Earth, cu. yds.....        | 1,500,000 | 764,695   | .22    |
| Permanent trestle, ft..... | 4,000,000 | 1,341,367 | .25    |
| Temporary trestle, ft..... | 10,000    | 687,241   | .25    |
| Culverts.....              | 1,600,000 | 751,051   | .24    |

The third annual report of the commissioners details the work done during 1904. The report is divided into five sections—two dealing with construction, from North Bay to New Liskeard, and from New Liskeard northerly; one with rolling stock and equipment, one with finances and the last on the proposed land grant.

In connection with the construction between North Bay and New Liskeard, the contractor was given an extension of three months' seasonable weather to complete the line in his hands until Aug. 15, 1904. In Sept. J. H. Black was appointed General Freight and Passenger Agent, to arrange tariffs, etc., and was subsequently appointed General Superintendent to operate the line. Reference is made to the erection of water tanks, station houses, and section houses on the line, the laying out of yards, etc. Stations were erected at Temagami, Haileybury, Whitefield, Montreal River and New Liskeard. The progress on the telegraph line not being satisfactory, a contract was let for the work at \$65 a mile.

Tenders were asked for early in May, 1904, for the construction of the line northerly, the commissioners undertaking to deliver rails, ties, etc., at New Liskeard. Four tenders were received, and the contract was awarded to A. R. Macdonell, who was the contractor for the first section of the line. Upon the estimated quantities the prices tendered worked out as follows:

|                              |                |
|------------------------------|----------------|
| A. R. Macdonell.....         | \$1,523,650.00 |
| Larkin & Sangster.....       | 1,681,325.00   |
| Battle, Conlon & Armstrong.. | 2,354,642.50   |
| B. D. Steacy.....            | 2,756,950.00   |

A contract was entered into with A. R. Macdonell and the work proceeded. The plans were submitted to Jos. Hobson, Chief Engineer, G.T.R.; who, in reporting upon the first 47 miles, said there are 44 curves, with an aggregate length of 57,717 ft., or say 10.93 miles out of a total length of 47 miles, which is very satisfactory. The curvature varies from 1° to 4°, and Mr. Hobson said that there were on lines ranking among the best on the continent more objectionable curves than any proposed. The gradients were favorable, the maximum being 1% for a total distance of five miles. Taking the line as a whole the gradients are remarkably good. The elevation of the subgrade at station O at the south end is approximately 648.5 ft. above datum; and at milepost 46 it is 1,024 ft.; the gradients are therefore favorable to southbound traffic. The contract called for the laying of 25 miles of track by the end of 1904.

The commissioners rented four locomotives to the G.T.R. at \$10 a day each between Feb. 12 and April 24, and subsequently rented four locomotives and a num-

ber of flat cars to A. R. Macdonell for ballasting at \$10 a day per locomotive, and 25 cents a day for each car. The total revenue from rolling stock was \$18,891.83, of which \$2,627.18 was received in cash from the G.T.R., and the balance deducted monthly from the progress payments to the contractor. The following equipment was ordered: three first-class passenger coaches, four second-class coaches, two combination baggage, mail and express cars, to be equipped with Westinghouse quick action brakes, which were delivered in Sept. and Oct.; 50 flat cars, one baggage and mail car, and 10 stock cars from the Crossen Manufacturing Co., Cobourg, Ont.; 25 flat cars, two conductors' vans and a snow plow from Rhodes, Curry & Co., Amherst, N.S. Two flanger cars and 25 flat cars were also purchased.

The statement of receipts and expenditure showed total receipts of \$5,859,252.03, of which \$228.40 was for cordwood sold in 1903, and \$19,019.63 for cordwood sold, and rent of engines, etc., the balance being a loan from the Province. The expenditure for 1903 was \$2,020,320.82, and for 1904 \$2,484,245.19, total \$4,504,566.01, leaving a balance of \$1,354,686.02.

The Chief Engineer, W. B. Russell, in his report referred to the completion of the 112.95 miles from North Bay to New Liskeard, with its water tanks, telegraph line, fencing through the settled townships, and station buildings, and to the survey work on the line north of New Liskeard. The work on this section turned out comparatively light on the first 32 miles, although there were one or two cuts; from mileage 32 to mileage 56, the work turned out heavy, and from mileage 56 to mileage 65, light. The maximum and ruling gradient was .5% rising north, and .4% rising south with compensation for all curves of .04% per degree, and advantage being taken in places of velocity or momentum gradients as high as .75% to reduce the work. The maximum curve held throughout is 4° with a radius of 1,432 ft. There are two heavy stream crossings at mileage 25 and 33 respectively, one being 100 ft. deep, and 700 ft. long; and the other 100 ft. deep and 550 ft. long at the top. They are to be crossed with steel trestles with 200 ft. and 150 ft. spans on the centres. Owing to the low ruling gradient, it is necessary to have some heavy cuts and fills in the broken country, one near the 36th mile is 70,000 cubic yards. At the end of 1904 the grading and track laying had been completed to the Blanche River, 25 miles from New Liskeard; grading had been done in spots to the 40th mile, and a road cut to mileage 70, three miles beyond the Hudson Bay height of land.

The final section of the report deals with the land grant voted for the construction of the line, viz., 20,000 acres a mile. It suggests the setting apart of an area of 6,336 square miles of land in Algoma and Nipissing districts, and north of the height of land for the purpose of sale by the commissioners, and recommends several amendments in the act as to the grant.

**Railway Equipment Notes.**

The Quebec and Lake St. John Ry. is adding to its rolling stock one passenger and one freight locomotive, a sleeping car and a passenger car.

The report that the C.P.R. had ordered 25 automobile cars, for use on its line in the Rocky Mountains, has, we are officially advised, no foundation whatever.

G. R. Prowse, Montreal, has just filled an order for cooking ranges and complete cooking apparatus for two dining cars which have been built by the Pullman Co.

The C.P.R. between April 14 and May 17, placed the following orders for rolling stock:—34 flat cars, 24 stock cars, with its Angus shops, Montreal; 15 vans, with its Farnham, Que., shops; 4 steam shovels, with the Locomotive and Machine Co., of Montreal.

The Government car Ottawa has been overhauled at the Intercolonial Ry. shops at Moncton, N.B. It has been fitted with electric light, generated by a dynamo propelled from the axles, and there is a storage battery for use when the car is at rest.

The C.P.R. between April 14 and May 17 added the following to its rolling stock:—6 switching locomotives, 6 colonist cars, 264 box cars, and 50 ballast cars, from its Angus shops, Montreal; 4 vans from its Farnham, Que., shops; 13 colonial cars from the United States.

In the House of Commons May 23 a vote was passed amounting to \$1,383,000 for the purchase during the year of 12 passenger and freight locomotives; 25 first-class day coaches, four second-class coaches, four parlor cars, two dining cars, 10 baggage cars and 150 box cars for the Intercolonial Ry.

The Intercolonial Ry. between April 19 and May 20, added to its rolling stock six Pacific type locomotives from the Canadian Locomotive Co., Kingston, Ont., and has also received 50 box cars from the Crossen Car Manufacturing Co., Cobourg, Ont., to replace cars destroyed, etc. The line is not at present in the market for additional rolling stock.

The Crossen Car Manufacturing Co., Cobourg, Ont., has orders on hand for 16 passenger cars of different descriptions for the Intercolonial Ry.; one baggage and mail car and 200 box cars for the Temiskaming and Northern Ontario Ry.; 10 passenger coaches, five baggage cars and 200 box cars for the Canadian Northern Ry.; and 100 flat cars for the James Bay Ry. The company has recently completed 100 flat cars for the James Bay Ry.

The executive officers of the Canada Car Co., Montreal, are: President and General Manager, W. P. Coleman; Vice-President, Sir H. M. Allan; Assistant General Manager, N. S. Reeder, Jr.; General Superintendent, J. Coleman; Auditor, and Assistant Sec. and Treasurer, R. B. Edwards. The company has placed large orders for the machinery for its works with the John Berttram Sons Co., Dundas, Ont.; Williams & Wilson, Montreal, and others.

The Canadian Northern Ry. has placed orders for the following passenger equipment: five 60 ft. baggage cars, 10 passenger coaches with the Crossen Car Manufacturing Co., Cobourg, Ont.; four 1st class passenger coaches, five 60 ft. baggage cars, 10 60 ft. mail and express cars with Rhodes, Curry & Co., Amherst, N.S.; 10 first-class coaches and 6 sleeping cars in the United States. The delivery of this equipment is to be made between July and October.

The Canadian Northern Ry. has placed an order with the Canada Foundry Co., Toronto, for five 10-wheel freight and passenger locomotives for the James Bay Ry. Following are the specifications:

CLASS.—4-6-0-141.  
CYLINDERS.—Diameter, 19 in.; stroke, 24 in.  
WHEEL BASE.—Driving, 12 ft. 6 in.; total, 22 ft. 6 in.; engine and tender, 50 ft. 4½ in.  
WEIGHT.—In working order on drivers, 111,000 lbs.; on trucks, 30,000 lbs.; total, 141,000 lbs.; tender, 120,000 lbs; total engine and tender, 261,000 lbs.  
BOILER.—Diameter, 62 in.; working pressure, 180 lbs.  
TUBES.—No. 260; outside diameter, 2 in.  
FIREBOX.—Length, 102½ in.; width, 42½ in.  
HEATING SURFACE.—Tubes, 1,618 sq. ft.; firebox, 148 sq. ft.; total, 1,766 sq. ft.; grate area, 30.2 sq. ft.  
LENGTH, ETC.—Length over all, 60 ft. 2½ in.; width, 10 ft. 2 in.; height of stack above rail, 14 ft. 5 in.  
WHEELS.—Diameter of driving wheels, 57 ins.  
TENDER.—Capacity, Ten tons of coal; 5,000 imperial gals. water.