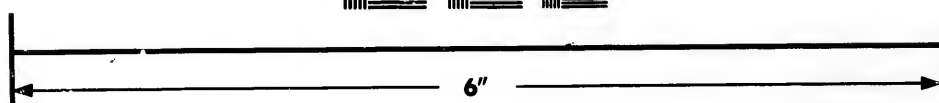
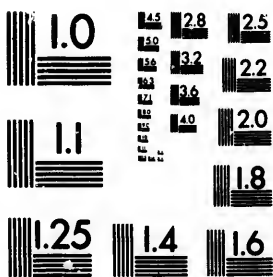


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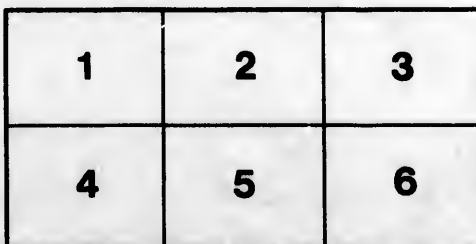
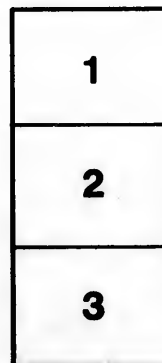
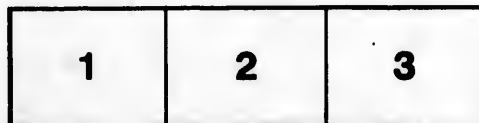
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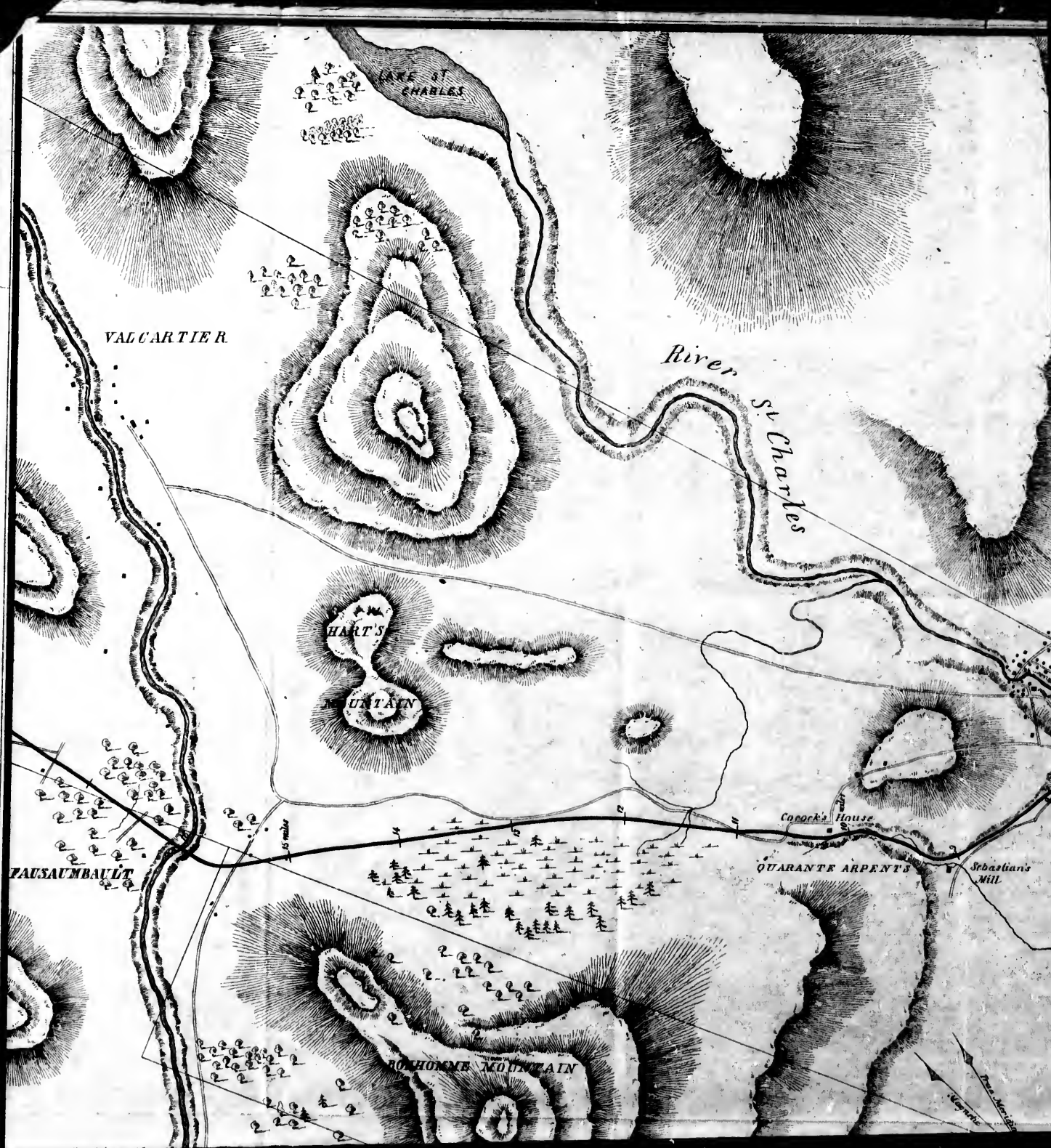
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LAKE ST CHARLES

VALCARTIER

River St Charles

HART'S MOUNTAIN

TAUSAUMBAULT

QUARANTE ARPENTS

ROUHONNE MOUNTAIN

Canork's House

Sebastian's Mill

1/2 mile

North





MAP

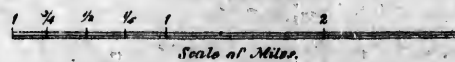
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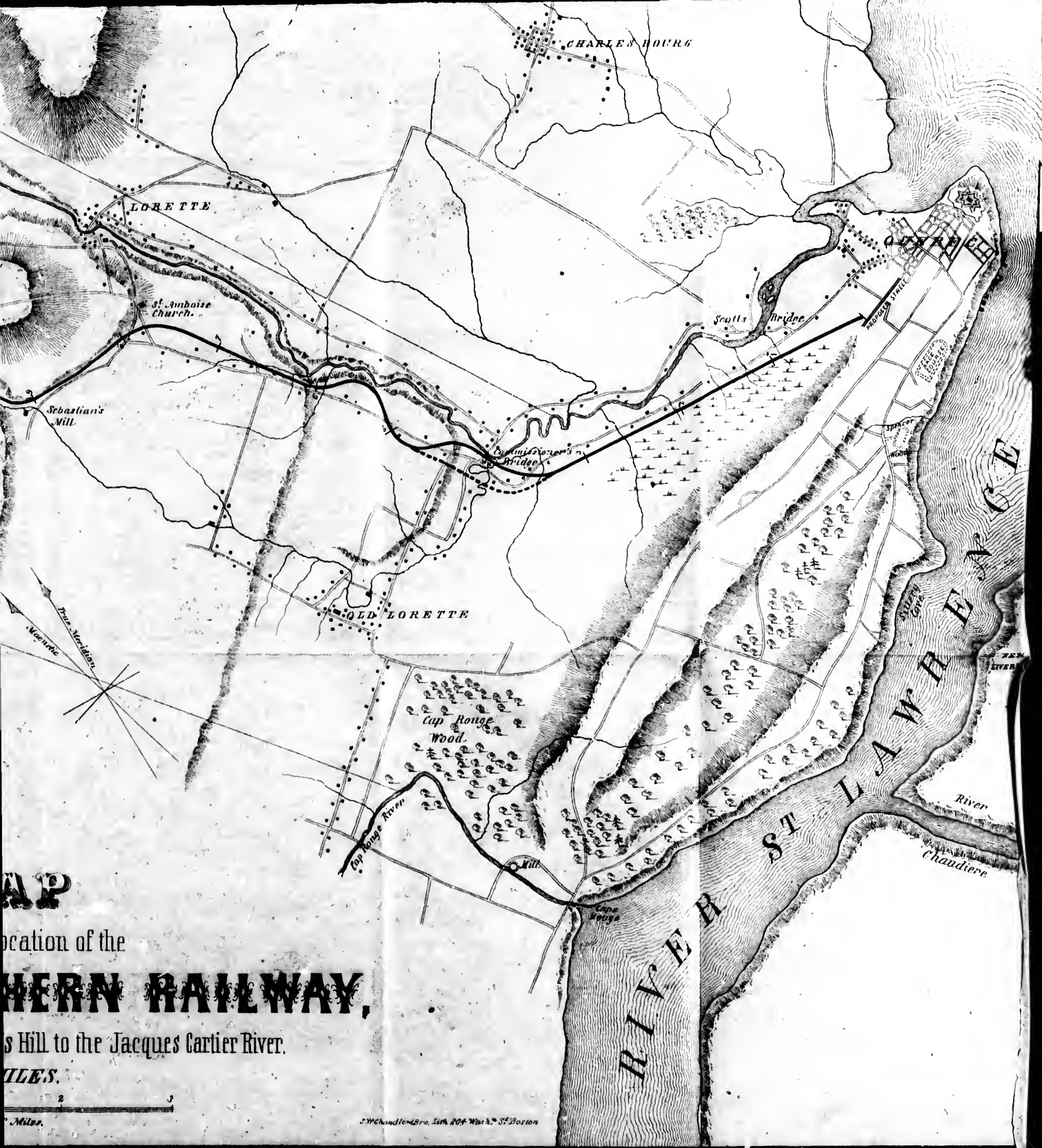
QUEBEC NORTHERN

From the foot of Sauvageau's Hill to the Jacques

16 MILES.

By H.M. Fosdick, Engineer,
September 1864.





MAP
 Location of the
NORTHERN RAILWAY,
 from Jacques Hill to the Jacques Cartier River.
 MILES.



Wichand & Bro. 204 Wash. St Boston



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Ch

G. E. Morgan
REPORT

1865

OF THE

CHIEF ENGINEER,

ON THE SURVEY OF THE LINE FOR THE

QUEBEC & SAGUENAY RAILWAY.

CONTAINING ALSO A STATEMENT OF THE RESOURCES OF THE
COUNTRY THROUGH WHICH IT PASSES, AND THE GENERAL
ADVANTAGES TO BE DERIVED THEREFROM:—WITH
THE PROPOSED ORGANIZATION AND

BYE-LAWS

FOR THE

MANAGEMENT OF THE COMPANY.

QUEBEC :
PRINTED BY J. T. BROUSSEAU,
AT HIS STEAM PRESS ESTABLISHMENT, NO. 9, BUADE STREET.

1854.

PREFACE.

The Survey and Location of the route for the "Quebec and Saguenay Railway Company," (heretofore called the Quebec Northern Railway Company,) now being complete; the Directors have much pleasure in laying before the Public the Report, Plan, and Estimate, furnished by their Engineer. It is with feelings of much satisfaction that they are enabled to publish a Report so very favourable to the undertaking; which, not only clearly points out the practicability of a Railway being carried far into our back forests; but gives statistical information, shewing that the portion located, is far superior in curves and gradients, to some of the best and most paying Railways in the United States.

The Estimate, for the construction of this Railway; is calculated from the highest prices of labor and materials at present existing:—But, as in the judgement of the Directors, a very material saving may be effected, by the Company engaging the services of an efficient Engineer to superintend the construction of this short line of Railway, they hope to build it considerably under the estimated cost; particularly, should the prices for labor, iron, &c., happen to fall. Although it was intended in the first instance to have estimated for a Railway of a cheaper description than the one now proposed, it soon became evident to the Engineer,

that the amount of traffic which would pass over it, would render a heavier and more permanent description of road imperatively necessary, as will be seen on perusal of his Report.

As, therefore, no physical difficulty has to be encountered, in the formation of the road, and, as its construction cannot be otherwise than beneficial to every Citizen of Quebec ; the Directors with much confidence now bring the subject in a proper form before the Public ; which could not have been done at an earlier period, in the absence of a Charter, and a proper survey of the proposed route.

If this Railway had no other source of profit than that to be derived from supplying fire wood, the knowledge that fuel is a necessary of life in this cold climate, and must be purchased by every individual ; with the certainty, also, that it can be purchased from the Company at a cheaper rate than it can be obtained elsewhere, is a sufficient reason for at once constructing it ; but the Return furnished at the conclusion of Mr. Fosdick's Report, shews that a large amount of produce, &c., may be expected to pass over the road, and materially contribute towards the profits. It will in fact be the means of opening out to settlement a vast extent of valuable land, and bring to our Markets the fine timber which abounds along its route ; and incalculable benefits will be derived by the back Country of Quebec, from its construction.

But sixteen miles (not including turnouts, &c.,) require to be made, to ensure a certain supply of fuel for some years to come, at a low and uniform price ; and it is only necessary for it to be borne in mind that the sum lately, and now paid, viz :— from 10s. to 15s. a cord over what this Company could supply it for, would amount, on one year's consumption, (100,000 cords,) to from £40,000 to

£50,000 per annum, almost sufficient to build the Railway; and, that should fuel maintain its high price for two years more, every family, whose consumption of fuel annually exceeds 12 cords, will expend as much money, unnecessarily, as would purchase one or more shares.

The Directors cannot then but sincerely hope, that there are but few citizens in Quebec, both for their own interests and the general welfare of the City, who will not at once come forward, and form themselves into an ASSOCIATION for carrying out this enterprise; for, if they will but give it prompt support, firewood can be cut this winter, and the Railway completed and in operation next Autumn. It now rests entirely with themselves; and, in this instance, when a general benefit is offered to the City, where no monopoly is intended, or speculation contemplated, the undertaking surely will be viewed in its proper light, and ably supported.

It has been rumoured that this Railway was first proposed in order to benefit by its construction some persons possessing lands on the line of route. To this the Directors desire to give the most positive denial, as neither they, nor their Officers, possess, or did possess, a single foot of land through which the Railway runs, or even hold land within some miles of it; and only one of the present shareholders (living in the neighbourhood of Lorette), possesses land on the line of route. Had such been the case, the Directors themselves would have been the first to expose it; they supported the project because they (not being prejudiced) considered it a feasible, profitable, and praiseworthy undertaking:—And they take this opportunity of expressing their thanks to the present shareholders, for so liberally contributing towards the payment of the preliminary expenses

attendant on a good survey, and final location of the Railway.

It was their intention to have made some remarks with regard to the hope of ultimately connecting this Railway with Lake St. John and the Saguenay Territory. The present Reports however have occupied much space ; at a future period, therefore, this subject will be brought in a more general manner before the Public ; moreover, the Directors did not consider themselves warranted in expending the funds of the Company on any other object than the first portion of the project. In the spring of this year, the Country was explored by Mr. Boxer the Secretary, and Mr. J. Bignell, P. L. S., as far as the height of land separating the waters of the Saguenay from the St. Lawrence ; and those gentlemen are of opinion that it is quite possible to construct a Railway as far as they explored, and that no difficulty, whatever, exists to the construction of a good plank, or common road, the whole way to Lake St. John ; however, after the first portion of the Railway is built, ample time and opportunity will be afforded for having a thorough exploration of the whole of that Country, and making a trial level through to the Lake ; and should no physical difficulty then present itself as a bar to the construction of a Railway in that direction, it would be the object of the Company to endeavour to connect the Saguenay with Quebec,—in the first instance, by a good road, and the Railway could hereafter be continued on in that direction, should its prospects, in course of time, render such an undertaking desirable.

In concluding these remarks the Directors desire to testify to Mr. Fosdick, their sense of the efficient manner in which he has performed the duties entrusted to him, as well as for his studious economy in conducting the survey. To his Report and

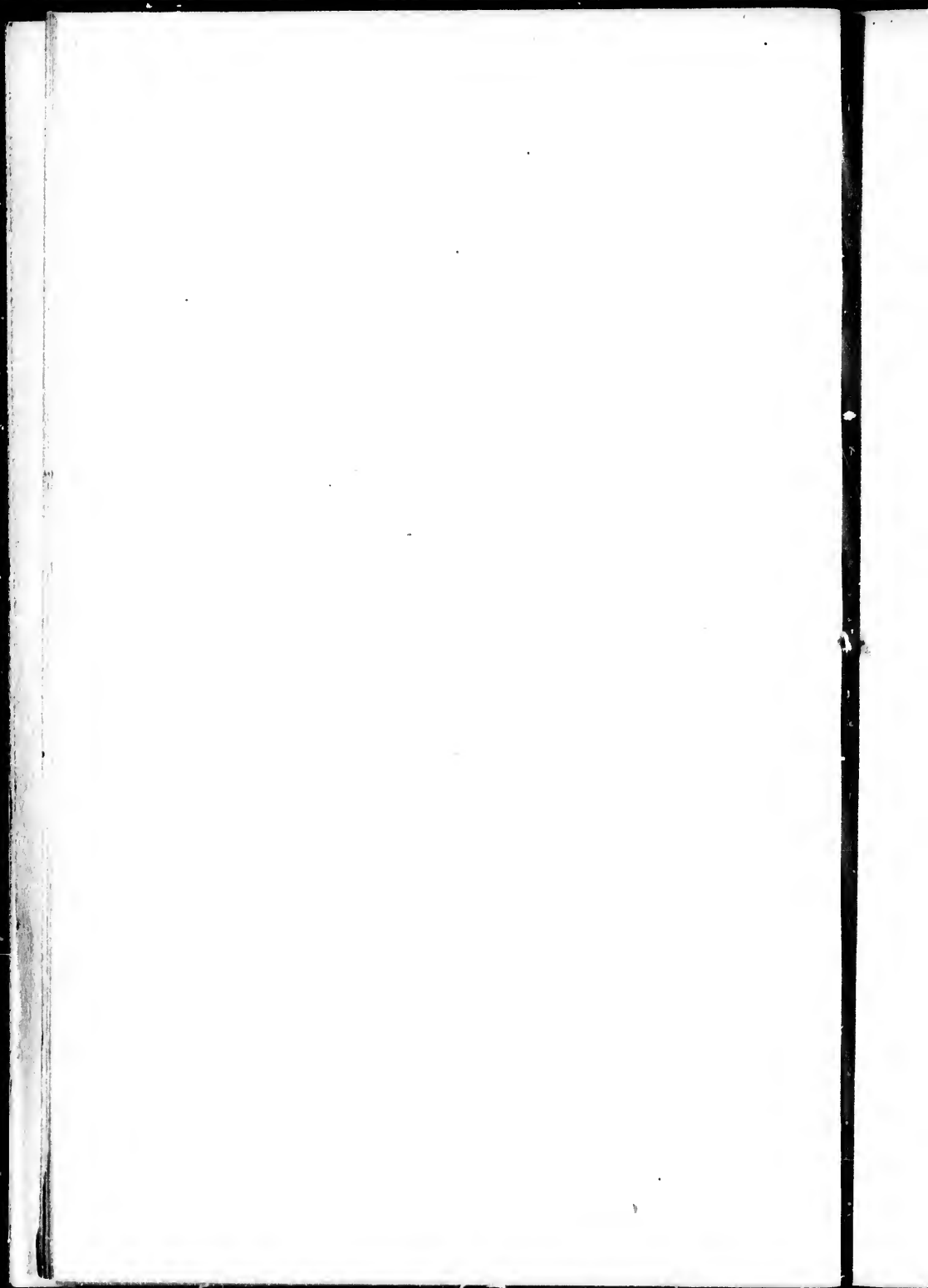
to the Secretary's the Public are refered for every information in connection with the subject, and the Bye Laws, approved of, will give an idea of the Working system intended to be adopted.

So soon as this Report is distributed throughout the City; Agents, specially authorized by the Company, will call upon the Citizens to subscribe towards the undertaking; and the Directors can only repeat the hope, that there are few who will not at once take stock in the Company, so as to avoid any delay in putting the project into immediate operation.

By Order,

F. N. BOXER,
Secretary.

Quebec, 24th October, 1854.



ENGINEER'S OFFICE,
QUEBEC, 20th SEPTEMBER, 1854.

*To the President and Directors of the QUEBEC
and SAGUENAY RAILWAY.*

GENTLEMEN,

On the 8th July last a set of instructions was placed in my hands by your Secretary, from which the following is an extract.

“Commencing at what may appear in your judgment, the most suitable place for a Terminus and Depot, immediately below Sauvageau's hill, in the suburb of St. Roch, you will be good enough to have a trial level made of the proposed route between Quebec and the River Ste. Anne.”

* * * * *

“When this line of levels has been ascertained, the Company wish that your party in returning, should locate the first portion of the line, namely, from the River Jacques Cartier to Quebec; and on the completion of the service to furnish them with the usual plans and sections; together with an estimate of the expense of constructing the road as far as the south bank of the Jacques Cartier River; and to state the additional cost of substituting a light T rail for the proposed one of plate iron,*****and you will be good enough to make a full report, in order that the Directors may publish the same for the information of the Public.”

(Signed,) { P. J. O. CHAUVEAU, Pres.
 { F. N. BOXER, Secry.

In compliance with those instructions, a party of Engineers was duly organised, and put on the route on the 10th July.

Owing to the absence of all reliable plans of that section of country, and to the fact that no record of levels existed, all the difficulties naturally occurring in tracing a line through the forests, over such a broken and heavy country, presented themselves; and more time was required for our operations than would have been necessary, had we known, in leaving one stream, what summit we had to overcome to reach the next. The party, however, have been very fortunate, but little time having been lost in retracing.

By the aid of the accompanying Map and Section, the following description of the line, as surveyed, will be rendered intelligible.

Commencing at the foot of the ridge called Sauvageau's hill, in the lot of ground belonging to the Nuns, the line crosses the level flat that extends from this ridge to the Lorette ridge in a North Westerly direction to the "Bend of the St. Charles River," near the Commissioners' Bridge, a distance of $3\frac{4}{10}$ miles. Here the line takes a more Northerly direction, in order to reach, as early as possible, the sloping ridge under St. Ambroise Church, which slope offers the only means of surmounting Lorette ridge, and reaching the elevated table land in the rear.

Near this Church, at a point $7\frac{5}{10}$ miles from point of our departure, the line again deviates and assumes a North Westerly direction; working up this slope to the Mill, known as Sebastien's Mill, $9\frac{5}{10}$ miles, from Quebec; there turning Northerly, and again North Westerly, it follows up the gorge formed through the ridge by the mill stream "Ruisseau St. Berbe," to the elevated plain, reach-

ing this plain near the Indian Cocock's residence, 10 $\frac{3}{10}$ miles from Quebec.

From this, to the Jacques Cartier River, 5 $\frac{2}{10}$ miles, the general direction is North Westerly, crossing the Jacques Cartier near the house of one Sullivan at the Falls; thence 4 miles to near Denis Clerc's Mill, crossing this Mill stream, and descending to the "Rivière Au Pin," distant from point of departure 22 miles.

The Rivière Au Pin is crossed between the mouth of the Rivière Lac a L'Isle, (coming into the Au Pin from the West,) and the house of Henry Crawford.

Thence the line follows up the Northern side of the valley of the Lac a L'Isle River, 4 miles in a North Westerly course to the Lac a L'Isle; passes this Lake along its northern shore to its head, crosses the inlet, and winds up the inlet to Grand Lake, 29 $\frac{2}{10}$ miles from Quebec; follows the Southern side of Grand Lake to its Western extremity, and here reaches the summit between Jacques Cartier River and the Ste. Anne, at a distance of 30 miles from Quebec.

From this summit to the Ste. Anne, a distance of 2 $\frac{1}{2}$ miles, the line deviates a little to the northward, and descends along the slope of the mountain, lying to the north and west; reaching the Ste. Anne River, at a point, 32 $\frac{1}{2}$ miles distant from Quebec.

Here our explorations terminated, and it is proper to add, that, as our instructions were, merely to ascertain the levels of the various summits, after passing the Jacques Cartier River, (with a view to decide the practicability of a line at some future period) we have not, in every instance, succeeded in placing the line upon the most favorable ground at the first trial; and, generally, have avoided retracing our lines in the belief that the object in view would be effectually accomplished,

and a saving in time and expense effected. A future *location* therefore ought to reduce the distance above given.

Enough has been gathered to furnish the information called for in the instructions, and to establish this fact,—a feasible line of Railway can be constructed from the Jacques Cartier to the Ste. Anne with no grades more difficult than those upon many first class lines in this Country.

The curves and grades may be more severe than those upon the portion located, but not impracticable for such a road.

Upon the completion of the above operations, the party returned to the Jacques Cartier River, and commenced an approximate location of the line to Quebec.

This portion, therefore, is in a condition to be more fully reported on, and detailed estimates are herewith presented.

It was deemed unnecessary to establish all the curves upon the ground, inasmuch, as the limited means at our command, rendered desirable the utmost economy, so as to obtain the fullest information as to cost and grades, with the least expenditure.

Most of this portion being in the woods, more than double the time must have been required, had we attempted to effect a complete location. The line has been established by short lines, or chords, and these furnish for our investigation, data sufficiently correct, and serve to mark out the future path of the Railway should any efforts be made to secure the right of passage.

The track, as far as the Commissioners' Bridge, will be level, or nearly so, a distance of $3\frac{1}{10}$ miles. At this point it will ascend at the rate of 85 feet per mile for $1\frac{1}{10}$ miles, to overcome the secondary ridge sloping down from Lorette. But little oppor-

tunity is here afforded to take advantage of the slope in ascending,—the line is forced to encounter the ridge nearly perpendicularly to its face, in order to render available, as early as possible, the side hill of the main Lorette ridge near St. Ambroise Church.

From the end of this 85 feet gradient, the track rises at the rate of 44 feet per mile for $1\frac{1}{10}$ miles, to near the aforesaid church, then ascends by Sebastian's mill, up the gorge to the table land near Cocock's house, at 85 feet per mile for $3\frac{1}{10}$ miles.

From this point, having reached the general level of the elevated plain in the rear of Lorette, at a height of 575 feet above Quebec low tides, the track will gently ascend, at an average rate of 11 feet per mile, till in $4\frac{1}{10}$ miles it has reached its greatest elevation, 600 feet above the St. Lawrence

From this point to the Jacques Cartier, where we complete our location and estimate, the track for the present should be level, till it shall have been decided to extend the construction across this River; then, a slight descending gradient may be admitted, so as to cross the river as low as the banks upon the opposite side will allow.

No curves are adopted of a less radius than 1500 feet, and but six of these with an aggregate length of 3 miles. The remaining curves will be of more than one mile radius.

Near the bend of the St. Charles we have two lines established; one passing in the rear of "Wood's Tavern," the other in front, on the opposite side of the road. The cost of each will be nearly equal; one will pass so near many buildings as to involve an expense for damages: the other will require the formation of a heavy embankment. The selection of the future line here, will depend upon the respective cost of each. In the absence, at present, of

necessary details, I should recommend the Western route.

The point we assume as the terminus of our location, and at which our estimates also terminate, is near the St. Catherine road, $15\frac{5}{10}$ miles from Quebec. At each end, we have estimated for an additional length of track of 2 miles, for loading, unloading, passing trains, and for empty waggons to stand upon, &c. giving an increase of 4 miles, or, a total of $19\frac{5}{10}$ miles to construct.

The subjoined estimate, is deduced from our examination, and is based on the following assumptions. Width of road bed in excavation, 20 feet; on embankment 15 feet. Small bridges and culverts of good rubble masonry, laid in mortar. The road bed is to be covered with good clean ballast to a depth of 18 inches. A building is intended at Quebec for the accomodation of Passengers and Freight, Wood and Water: A Car shed, and general Store House for housing passenger cars, &c. in the winter. A small repair shop and a shed for 3 or 4 Engines and Snow ploughs, will be required at Quebec the first year, or as soon as the line shall be opened.

At Lorette is a siding, arrangements for Passengers and Freight, and for wood and water.

At the Jacques Cartier, also, a similar provision is intended.

All the buildings estimated for, are of wood and of a plain character.

In the estimate for track, two styles of superstructure are separately estimated, as by the instructions prefixed to this Report, one to be a "plate rail" or "strap rail," and for the other, I have selected the form of rail known as "Bridge rail" or "inverted U rail;" as I deem this best combines the two requisites, minimum of material,

with maximum of strength; and a very light rail being called for, it is specially desirable to have all the available strength of the iron.

I am constrained by the nature of my instructions here again to limit my estimate to a cheap rail. I apprehend, however, that the interests of the Company will require, sooner or later, a heavier pattern of rail than I have estimated for:—Should the price of iron fall, to the rates at which it has ruled for a few years past, the present estimate will allow the requisite increased weight of rail.

This question should receive due attention, before the adoption of any pattern is decided upon:—the present estimate, however, answers present purposes.

In the Estimate for Plate Rail track, the form of superstructure most approved of is adopted,—Rail $2\frac{1}{2}$ by $\frac{3}{4}$ inches, spiked to longitudinals of hard wood: Spikes $\frac{5}{8}$ square 6 inches long, countersunk: Longitudinals, 6 ins. by 6 ins. sunk into the ties $3\frac{1}{2}$ ins., and properly confined by hard wood wedges: Ties 9 feet long, 6 ins. by 8 ins., placed 2 feet 6 ins. from centre to centre; the whole imbedded in good ballast, placed upon the road to a depth of 18 inches.

For the "Bridge Rail Track," is intended thus; Rail to weigh at the rate of 70 Tons per mile: Chairs 7 lbs. each, wrought iron: Spikes, $\frac{5}{8}$ inch square, 6 ins. long, hock headed: Ties, 6 ins by 8 ins., 9 feet long:—the whole imbedded as before in good ballast.

ESTIMATE OF COST.

Cost of Railway with the		Totals.					
		Bridge Rail.	Plate Rail.	Bridge Rail.	Plate Rail.		
		£	s.	d.	£	s.	d.
Clearing and grubbing, . . .		500	0	0	500	0	0
EXCAVATIONS.							
Earth exn. incld. haul, 157,679	cube yds.						
Solid rock do.		7883	19	0	7883	19	0
Loose rock do.		4040	15	0	4040	15	0
Foundations & brook		768	0	0	768	0	0
diversions		684	7	6	684	7	6
MASONRY.							
Arched culverts and							
small bridges,		1653	15	0	1653	15	0
Box culverts and cat-							
tle guards,		1056	2	6	1056	2	6
Rip rap or protec. wall,		230	5	0	230	5	0
Timber in foundations and							
bridge superstructure.		250	0	0	250	0	0
					13377	1	6
					500	0	0
					13377	1	6
					500	0	0
					13377	1	6

250 0 0 | 250 0 0 | 3190 2 6 | 3190 2 6

PERMANENT WAY.
 Sub sill, hemlock, 3 by 10, 20 miles,
 Ties do. 20 miles, 2112 p. mile, Longitudinals, hard wood, 6 by 6, 20 miles.
 Wedges, hard wood, 4224 per mile, 20 miles.
 Rails 70 tons and 30 tons per mile, 20 miles.
 Chairs and spikes 3½ tons and 1½ tons per mile, 20 miles, Points and crossings, 20 miles
 Distributing iron, ties, timber, &c., and laying track, 20 miles,
 Ballasting 4000 cube yards per mile, 20 miles.
 Lorette siding, (track and ballast,) ½ mile.

2640	0	0	1855	0	0
			2112	0	0
			1899	0	0
			220	0	0
19250	0	0	9000	0	0
2450	0	0	1050	0	0
300	0	0	300	0	0
4700	0	0	4400	0	0
4000	0	0	4000	0	0
850	0	0	600	0	0
				34190	0 0
			£	51257	4 0
				42503	4 0

Amount carried forward,

	Cost of Railway with the			Totals.		
	Bridge Rail.	Plate Rail.		Bridge Rail.	Plate Rail.	
	£	s.	d.	£	s.	d.
Amount brought up.				51257	4	0
ROLLING STOCK.						
3 Locomotives, 15 tons each,	5550	0	0			
4 Drivers, coupled,						
1 Passenger car, (1st and 2nd	500	0	0	500	0	0
class)	175	0	0	175	0	0
1 Box freight car.	12400	0	0	12400	0	0
80 Platform cars (for wood &c.)	50	0	0	50	0	0
2 hand cars, for road repairs, .	140	0	0	140	0	0
1 Snow plow.						
BUILDINGS.						
Station House, Engine Sheds,	1400	0	0	1400	0	0
Shop, &c.: Quebec,						
Station House, wood and water	350	0	0	350	0	0
fixtures: Lorette.						
Station House, wood and water	300	0	0	300	0	0
fixtures: Jacques Cartier, .						
				18815	0	0
				2050	0	0
				2050	0	0

Station House, wood and water fixtures : Jacques Cartier, 300 0 0 | 300 0 0 | 2050 0 0 | 2050 0 0

SUNDRIES.

Ballasting Station yards.	600	0	0	600	0	0
Fencing, (includ. Terminus.)	2880	0	0	2880	0	0
Road and farm crossings, and road diversion.	76	0	0	76	0	0
Land for road way.	2000	0	0	2000	0	0
Land for Stations : Quebec and Lorette.	2000	0	0	2000	0	0
Damages to property, (buildings, land, &c.)	2000	0	0	2000	0	0
Engineering and Agencies, Office expenses &c.	1600	0	0	1600	0	0
Contingencies, interest on instalments & loans, 10 p. ct.	8503	0	0	7452	0	0
	Total cost,			£	91781	4 0
	Cost per mile,			£	4589	1 2
					4098	16 2

NOTE.—In this estimate no Turn-tables are included, as the arrangement of the Tracks at each end, will be such as to obviate the necessity.
 Cost assumed in Estimate of Revenue £100,000, on which to divide the Profits. This amount will be required for the "Bridge Rail Track," which is the style of track recommended for the Company.

This sum will put the road in working order, and will furnish equipment sufficient for the first year's operation. An amount, however, must be provided for the purchase of a large track of land capable of furnishing a supply of wood for 10 or 15 years; and also provision must be made for the first year's cost of laborers, in chopping and delivering the wood upon the line, until the Company shall be in a position to defray this expense from the receipts of their traffic.

We have allowed for these two items as follows;	
For the purchase of wood lands,	£10,000
For the first year's labour chopping and delivering at line, including houses and barns for men and horses, provi- sion, provender &c.	30,000
	<hr/>
Estimated amount to be raised by loan.	£40,000
	<hr/>

It must be admitted that the Estimate is liable to be considered too low and meagre. It is far too low for a first class road, through such a district involving such heavy gradients. Still, it will be borne in mind, that the instructions merely point to such a road as shall be capable of supplying this City with fuel at a reasonable cost. This Estimate will effect that. To what extent it may be advisable to expand and enlarge the expenditure to secure any traffic likely to offer itself, other than that herein assumed, is not for the present investigation to determine.

The desired object is to expend just so much, and no more at present, as will suffice to establish a low rate for the price of firewood throughout the year; and bring back, to those investing, a fair return for their capital. Any other business besides the carrying of firewood that this expenditure can accommodate, we have a right to assume in our

estimate of profit. Further than this we do not go, but shall endeavour to show how this expenditure of £100,000 may be made profitable; merely promising, that, by constructing a different sort of line, increasing its facilities, and enlarging the expenditure, there is good reason to anticipate a proportional increase of return.

In this section of the country, the construction of a Railway depending for its support principally on the conveyance of fuel is perhaps a novel project. Still it need not be deemed an experiment.

The Reading Road, in Pennsylvania, does an immense traffic in Coal.

The amount of freight in Coal alone this year, was 1,600,000 Tons; yielding a revenue of £800,000. That it is a paying article of freight may be inferred from the fact, that it is conveyed upon that road at a cost of one half a cent (or about one third of a penny) per ton per mile.

This of course would require each train to carry sufficient coal to call into action the full power of the Engine. It is believed that upon your road this requirement will be met. If it be admitted, in the premises, that a sufficiency of firewood exists at one end of the line, and a ready market at the other, it would appear that the success or failure of such a project as this now under contemplation, is reduced to a mere question of practicability in working the line when completed.

It would be a difficult matter, without bestowing more time and reflection than has been afforded by the limited examination devoted to the preparation of this paper, to mark out, precisely, the proper mode of working the trains so as to produce the best result. A little time would be necessary to develop, by actual operation, the proper method.

Without entering into a discussion here, as to the existence of a sufficiency of firewood, at the further extremity of your road, to meet the demand at this end, I shall assume this to be a fact; and pass to a hasty view of how this immense quantity of wood can be delivered, in order to supply the demand; giving as my opinion, that upon either side of the line, within a reasonable distance, wood may be profitably brought to the trains; and that within this limit there exists a supply equal to the demand of the City for the next fifteen years.

This opinion is not based on any professional skill, but has been formed by a simple process available to all, namely, personal observation and enquiry on the spot; a similar process I would recommend to all who may differ from this opinion.

By an admirable and ingenious arrangement, the Secretary, F. N. Boxer, Esq., has obtained reliable data sufficient to form a very accurate estimate of the amount of fuel consumed yearly in Quebec. From these data we find not less than 78,000 cords are consumed by private families, stores, &c., and 20,000 cords, by Public Institutions, Offices, Hotels, &c. Those who found it convenient to come to the City for a load of groceries or other articles for the country, would doubtless often deem it to their advantage to come in loaded with wood. Many would probably, especially those in the immediate vicinity of Quebec, endeavour to compete with the Railway; while also a large number of traders would take their wood of the farmers, in barter, rather than of the Railway Company.

For these various sources of supply it is deemed safe to allow 10 per cent, or 10,000 cords; this gives to be furnished by the Railway 88,000 cords, per annum.

Let it be supposed the line will be worked for eight months only during the year; the remaining four months being deemed too severe to allow of operating with economy. Three Engines are provided in the estimate for the first year's operations. With these, four trains a day, upon an average of 26 days a month, may be taken down to Quebec. This allowance of time will give sufficient margin for ordinary repairs to the machines.

Thus 460 cords a day or 12,000 cords a month can be delivered in the yard at the Quebec terminus. There would be four sets of waggons; each Engine taking up a train of empty waggons, and at once returning with a loaded one;—trains passing each other at the Lorette siding. Two gangs of men will be engaged constantly; one loading at the upper end, the other discharging at the Quebec end.

True, this mode is taxing the Engines rather too much; still, in the article of ice, which is extensively conveyed on some lines, at the present time, and also in coal, a similar course has been pursued; we have therefore estimated for but 3 Engines to do this work. After the first year's operations, however, the state of the machinery and cars will be such, that an additional equipment must be provided even to do the same amount of work.

To prepare these 88,000 cords ready for conveyance, is not at all impracticable. Suppose all this is to be cut and corded in the woods during the winter season, which of course will be the proper time for labor of that sort. Take the four months during which we have assumed the road to be idle.

An average of 22,000 cords a month, 850 cords a day for these four months will give the required 88,000 cords. It is believed that 500 men will

furnish this ; a number certainly not more difficult to direct systematically than the same number in a lumbering operation, or than 1200 men upon a work like the Victoria Bridge.

A proportional number of men and horses would be required to convey it to convenient spots for piling where it would be accessible by the trains.

It would not be necessary to pile all this upon one locality. The last mile of track could be easily arranged by a little mechanical appliance, so as to be moved laterally to the different localities ; 6000 to 8000 cords, more or less, being piled where most convenient. Occasional branches, cheaply formed, could be run out to the different "chopping berths" even with severe inclinations, over which the waggons could be run down by their own gravity to the main line, with more expedition than by the usual horse and sled, and be drawn back again by horses.

Even if the whole estimated demand of 88,000 cords were hauled and placed along both sides the line, it would require but one mile of track, by piling 10 feet high, and back from the track but 100 feet. This could all easily be loaded by sliding the track laterally from time to time as the work of loading and taking away progressed.

This hasty examination is not intended as giving the only mode of working ; but merely to bring to your notice, one of many methods, by which, what at first might appear impracticable, is shewn to be capable of as systematic management as many, or indeed, most other railway operations.

Of the delivery in Quebec, from the Terminal yard to the various dwellings, but little will be said. This branch of the operation should be kept as a separate department. Agents, teams, men, &c., should be distinctly managed and a separate system of accounts be kept to avoid confusion, and

the better to ensure a profitable working of this branch of the enterprise. With good management, this may be made a most valuable source of profit to the Company.

Men and horses should be *owned* by the Company and kept in daily duty for the entire year.

A daily delivery of 330 cords from the yards would supply the amount yearly furnished. Fifty teams properly equipped, would deliver this. What mode of delivery would give the best result, what would be the proper system of management for this department, as to accounts, orders for wood, mode of payment &c., need not be discussed. It is perfectly practicable, and may be made profitable.

To enable teams to deliver throughout the winter, while the road is idle, the yard is estimated of such a size as to contain from 30,000 to 50,000 cords, independent of tracks, sidings and appurtenances.

I do not deem it absolutely necessary that the Railway should remain idle during the winter; I have assumed this in the foregoing examination, merely to exhibit the working under the most unfavorable circumstances. Indeed, a daily train to Lorette, and perhaps to the Jacques Cartier river, will be able to pay all costs of working, and in view of keeping up a communication with the operation in the forest, conveying supplies, &c., may very likely be deemed advisable. By this means, the operatives of the line could be retained throughout the year in active service; a circumstance very essential to a proper and efficient management. These four months, of comparative leisure, would give ample opportunity for the repairs of machinery and cars for the next season's duty.

The ascent up which all this wood must be hauled to reach upper town is most favorable. It

has been objected to the Terminus as proposed, at the foot of Sauvageau's Hill, that it is too far from town. This objection is not as weighty as at first might appear. The yard is as well situated for all parts of the City *outside* the gates, as any that could be chosen, being convenient to the suburbs of St. Roch and St. John. For access to upper town, to which a large proportion of the wood will be taken, no point offers better facilities. A street can be made leading from this site to St. John's gate, with an ascent of only 5 feet in 100, or one half the ascent of Mountain Hill, over which so much is daily taken of heavy traffic. This then gives equal facility with any other locality situated but half the distance, and requiring the passage of each load over Mountain Hill or some other equally steep ascent: no point is available at a much less distance, if any, from the centre of the upper town population; certainly not at one half the distance. This site may be deemed therefore as favorable as any with regard to distance; and, in view of its isolation, is far preferable to any locality that would require a yard of such an extent to be situated in close proximity to wooden habitations; especially, when this wood yard is to be constantly traversed by Locomotives.

Preparatory to presenting an estimate of the returns from working the line, a few details gathered from the latest Reports of different Railways in the States are here given. From an examination, you may be able to form some opinion as to the ability of your road to do duty with its heavy grades, the nature of the country, traffic and population.

The Western Railway, Massachusetts, has a gradient of 84 feet per mile for 8 miles; crossing the mountains in the western part of the State; yet, this road does an immense freighting business both with and against this grade; conveying annually

from 300,000 to 325,000 tons, four times the general average of other lines.

On the Pennsylvania Central Road, a grade of 95 feet per mile for 10 miles occurs; over this, huge trains of passengers and of freight are daily conveyed.

The Baltimore and Ohio road, a road doing a large business in coal traffic has grades of 111 feet, 116 feet, and 121 feet per mile: and up the 116 feet gradient (11 miles in length, and with curves of a 1000 feet radius) 225 tons have been drawn at a speed of seven miles the hour. The usual daily load is 125 Tons, speed 10 miles an hour.

There are in the Eastern States some 5 or 6 lines using a rail of less weight than that assumed for your road in the accompanying Estimate.

The general average tonnage of freight	
conveyed by each train is from	50 to 60 Tns.
Number of Passengers from	60 to 70.
Average distance each ton is moved .	72 miles.
Do. each passenger moved .	48 miles.
Average cost of running these trains, } pr. mile, varying with speed }	3s. 9d. to 4s. 3d.
Average number of Passengers, } per head of population, }	. . . . 4.
Average number of Tons freight, } per head of population, }	. . . . 1.
Average receipts, pr head of population	£1 : 1 : 6.
Average ratio of expense to income } varying from 45 to 65 p. ct. }	52 per cent.
Average profit, p. ann., p. ct., on cost, . . .	6 ¹ / ₁₀ .
Average earnings per mile of road, . . .	£2000.
Average general expenses, per mile, } of single track, }	. . . £640.

To obtain results applicable to your road, based upon the above data, we think we are justified in the following inference.

From the fact that a much less expenditure than usual will be required for offices, warehouses and buildings generally, valuable carriages, numerous engines, fuel, water, losses, taxes, &c., it would appear that the average as actually existing upon the lines above quoted, 52 per cent, will be more than ample, especially when we consider that each train will be fully loaded; a circumstance adding to the profits of a train in a far greater ratio, than to the expense—we therefore assume 47 per cent of the income as sufficient to meet all expenses of operating; indeed, upon some lines, taking uniformly full loads, the average for a period of years is but 38 per cent per annum.

We can hardly take the actual result of operating other lines of Railway, and apply them strictly to yours, owing to a want of entire similarity in character. Most lines are for traffic passing each way: yours will do a business principally in one direction. Other lines, in general, depend on local trade, and upon Passengers, for support. While both these characteristics will be wanting, or exist only in a limited degree on the line now under examination.

However, by a comparison much may be educed of valuable and reliable information. If traffic can be accomodated upon other lines, and carried in both directions, with and against their grades, the advantage your line possesses, in having all its grades descending with the traffic, should not be lost sight of, in deciding as to its merits.

For the sake of economy, both in the first cost and also in the operating of the road, I should recommend a light Engine; say of from 14 to 16 tons with all the weight on the drivers—such an engine will draw, though at a reduced speed, as much as the ordinary 20 tons engine, with but 15 tons on the drivers, and will do less injury to

the road. Speed not being of primary importance, this plan is decidedly preferable. A speed of 10 to 12 miles an hour will be obtained and will answer all necessities.

This light engine will be able to carry up all the load ever required for some time to come; generally her load will be empty waggons, 15 to 20 making a load.

The curves are so arranged upon the gradients, as to admit of being easily worked. The duty of the Engine will be to take from 100 to 120 cords down, and return with the empty waggons. This will be done, over this line, easily, as now located.

From official returns, we are enabled to arrive at the amount of grain, potatoes, cattle, &c., annually produced in the district tributary to your Line. Assuming that one half of these products are brought to the City for a market, and that this can be conveyed over the Railway, at a less cost to the farmer than by the present mode, we shall have a large traffic in this species of freight. In the estimate of revenue from this source, the prices per bushel, per mile, allowed, are the same as now charged on other Canadian lines for like commodities. For timber, knees, groceries, &c., the same scale of prices also is allowed.

One item does not enter into calculation of the amount of revenue. I allude to sawn lumber.—At present there are perhaps no mills that would add much to the revenue for some time.—Still this will eventually be a source of much profit.—Some of the finest mill sites exist on the Rivière Lac à l'Isle in this section. That they are profitable to a Railway Company when upon the line of Road, may be seen in the fact, that one mill upon the St. Lawrence road, not yet one year in operation, cuts at the rate of 10,000,000 feet of lumber per annum, and will pay the Railway Company from

£12,000 to £15,000 for freight, &c. The facilities of this mill for lumber convenient to it can not be at all compared to those alluded to upon your line. The finest pine, suitable for masts and spars, Tamarac, Spruce and Birch exist in exhaustless quantities.

Knees are brought, even now at a great cost, to Quebec. The advantage this Railway will afford the Ship Builder is not trifling. Ship timber generally is becoming scarce in the vicinity. Here is a sufficiency but no adequate mode of transporting it. I am informed, by residents upon the route that there are knees that could bring in Quebec from £5 to £7 10s. each. The cost of hauling by rail would not exceed 15 shillings.

In this section also is found good limestone; clay from which fire bricks have been made, and the ordinary brick clay; all of which would afford business for a Railway, were it constructed in that direction.

For firewood we estimate the returns, thus:—

Cost of cutting the wood, and delivering along the line at the upper terminus—per cord . . .	£	0	8	0
Sale at Quebec Terminus per cord		0	15	0
Remaining towards working the line, or which represents the item usually called Income . . .		0	7	0

I take the sales at 15s a cord. This may be deemed perhaps too high. However, as the wood will all be of good length, best quality, sound and seasoned, it will readily command that price. The wood also may be culled at the yard; the gnarled and knotty being used for the Engines, the free and clear for the market.

For Passengers, we assume 50 daily each way to Lorette Station, averaging the through and way passengers. At present there are conveyed by

public conveyance alone, during the season, upon an average, 30 a day, to and from Lorette and its vicinity.

The number passing by other means is about double this; and it is believed the increase to travel, this facility would create, will swell the number even beyond that estimated.

ESTIMATE OF RETURN.

80,000 Cords firewood <i>a</i> 7s.	30,800	0	0
181,000 Bushels, grain and potatoes <i>a</i> 3d.	2,262	10	0
50 Passengers, each way, daily for 8 months <i>a</i> 1s.	1,040	0	0
Timber, knees, spars and masts,	200	0	0
Butter, eggs and vegetables,	100	0	0
Groceries &c. (Liquors, Teas, Sugars, Molasses and Salt,)	50	0	0

Total estimated receipts, £34,452 10 0

Less 47 per cent expenses, 16,192 13 6

Net Profits, £18,259 16 6

Deduct 6 per cent on loan of £40,000, 2,400 0 0

Remaining for Dividends, £ 15,859 16 6
or 10 per cent on cost of Line, and £5859 annually reserved for extension beyond Jacques Cartier, and for contingent expenses.

Whatever views may be held by others, I cannot resist the impressions that this project is of importance to the Government Lands lying in that direction. Though the route, as surveyed, does not pass *through* Crown Lands, still, considered as a line hereafter to be extended, these lands become virtually affected, even by the present extent of projected operations.

Let the line be constructed for the distance only of 20 or 25 miles at present, so as to give reasonable hope of a future Railway in that region, and lands now unoccupied and comparatively useless will immediately be taken up by that numerous class of Settlers, who prefer going back into the wilds, and opening anew the forests, provided they see, with certainty, some future access to a market, for the products of their labor.

Already, numbers are watching with interest, the progress of the enterprise, and I have frequently been told by Settlers in that country, that, so soon as they know the Line is to be made, they intend leaving their present sites, after five, ten and even twenty years of profitless labor, and going back upon the interior, where better land is to be obtained, and where labor upon the soil will prove more remunerative.

Even now a sort of panic is created among new Settlers, and those eager to obtain Mill sites, merely because a party of Engineers have been through that Section, and have left behind them a line of stakes marked with certain mysterious Railway characters; and as soon as the Railway shall become a certainty, a rush for land will be made, that will tell upon the value of those lands, in the market.

These Settlers are now dragging out a laborious life of toil and hardship upon the mountain slopes, at points accessible by roads hardly passible; roads made up of a succession of steep rocky ascents and descents, and which effectually forbid the profitable transportation of produce to a market. Yet, but a short distance from these sterile farms, lies a rich and extensive valley, extending, as far as our examinations were made, and from reliable information, we venture to say along the whole valley of the Rivière Ste. Anne.

This tract has been and is shut to all enterprise, owing to the absence of communication with the market. The rivers that pass through it (and it is extremely well watered) are of such a character, as to prevent communication with the St. Lawrence to which they all flow. That this desire exists to enter on these lands, we may mention that among these mountain settlements to which allusion has been made, we have counted five farms in ten, that had been deserted after many years' labor. The dwellings, barns and fences were going to decay; what had once been a meadow is now coming back to it's original wildness; and on enquiry we were told that finding their years of labor unrequited, the former occupants had abandoned their farms and pushed back farther into the wilderness, where more encouragement was offered to toil.

Again, all along at intervals during our Survey, we came upon patches of potatoes and grain; a field cleared up in the midst of the forest, and at a distance of two to four miles from any habitation.

The disposition exists to open that section: let that disposition be encouraged by carrying forward some project that will ensure a communication for new settlers by which to convey their produce, and that line of communication, be it, railway or highway, will immediately develop a rich district, capable of meeting the rising demands of Quebec, for agricultural products.

Where is the back country of Quebec to be found, if not here? Upon what section is she to depend for her future supply of fuel, the demand for which yearly increases, while the supply as regularly diminishes.?

It is reasonable to conclude, that to have furnished, for the past few years an annual amount of 100,000 cords, must have materially reduced

the supply in the vicinity of the City; and it is a matter of doubt whether fuel will ever again be obtained at prices that ruled two years' ago. The evident scarcity of firewood in this neighbourhood, together with the high rate of wages paid for labor upon the Railways and other Public Works to be constructed, will of necessity restrict the future supply to such a limited quantity, as will always ensure high prices.

A new demand for labor has of late been created. The general result follows; that where new prospects are held out, promising better returns for labor, the old accustomed routines are abandoned, even to an unwarrantable extreme. How long such a state of matters may exist, it is impossible to conjecture; or if labor should ever revert to its former channels, still the fact of the non existence of a sufficient forest convenient to the City to supply her wants, remains unaltered.

When it is considered, that yearly from two to three square miles of wood land must be cleared to keep up this supply, it will readily be understood why forest lands have become limited and valuable.

The present time, therefore, above all others, would seem to be the proper one for carrying out some scheme like this, which shall have for its object the reducing the price and regulating the supply of fuel.

The amount of money expended last season by the citizens of Quebec, over and above the usual prices for firewood during previous years, would construct this line of Railway. Prices ruled at an astounding and unaccountable figure. To all appearance, the prices to be paid the coming winter, if stated, would appear fabulous.

To come to some opinion as to the quantity now ready for the market, a few days examination

The districts from which the supply usually comes, will suffice; and yet by this scheme properly developed, fuel may be furnished at the dweller's door *for one half the price paid on the market stand last winter.*

Furthermore, a very important feature in this project, the price will not be fluctuating as now; depending on the vacillating caprice of labor, but will remain constant throughout the year, the purchaser having it at his option to purchase more or less, at intervals, rather than be compelled to sink the cost of his year's supply at one stroke; an amount often of £50 to £100.

To the poor, this arrangement would be of incalculable benefit; to the rich, the saving effected would be an important item, representing, in the aggregate a large capital.

The coming winter, with its usual freedom from business cares, and its unusual prices of fuel, will afford a favorable opportunity to discuss and perfect the initiatory movements; all others will develop themselves as the enterprise shall be pushed forward.

I have deviated somewhat from the usual routine of an Engineer's duty in making up a Report upon a Survey merely. But so impressed have I become, since my examination commenced, with the increasing demand this City is making for fuel and the necessity of looking, sooner or later, to some other means of meeting this demand than those at present adopted, that I have ventured to lay before you, in this Report, a few opinions that have been forced upon me during this examination. It may serve to turn the attention of the citizens to a favorable notice of the project, prompting them to examine and judge for themselves: if so, I shall not regret having thus expressed myself.

Doubtless, many views herein set forth, may not coincide with the views of all, on a hasty consideration of the subject. A Report on a project like this, must be open to criticism. The discussion has commenced: let it continue.

I ought not to close this Report without expressing my indebtedness to Mr. Boxer, the Secretary, personally, for the valuable aid rendered me in procuring information, and statistical details; and specially for the promptitude with which he has met all my demands for "material aid" while prosecuting the survey.

To this gentleman, as the originator of the scheme, too much credit cannot be given, and his reward for the untiring energy and self sacrifices he has exhibited, should be to see his efforts successful.

I have found the report of Mr. Bignell, a copy of which was furnished me, of much assistance in my explorations.

To the gentlemen, also, who have co-operated with me in completing the field labors, under many annoyances incident to the season and the locality, I must acknowledge my indebtedness.

I have the honor, to be

Gentlemen,

Your obedient humble servant,

H. M. FOSDICK.

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TABLE SHEWING THE POPULATION, PRODUCTS, &c. OF FROM OFFICIAL

NAMES OF PARISHES.	Nos.		ACRES.		BUSHEL.								T
	Total Population.	Farmers.	Held.	Cultivated.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Potatoes.	Turnips.		Beets, Carrots, Wurtzel & Beans.
St. Raymond,	1701	302	26,879	5,180	1,459	152	3,108	622	16,576	1,620	21,839	628	22
St. Catherine,	1789	269	29,637	6,565	1,665	138	471	540	26,832	689	49,313	926	2
Ancient Lorette and St. Ambroise,	5064	650	50,053	23,485	4,439	380	60	1,074	69,672	510	45,076	2,643	128
St. Foye, (part)	2173	28	1,330	556	65	7	. . . . .	99	2,007	7	3,496	488	3
St. Gabriel,	1397	226	29,644	9,562	1,474	11	32	2,792	30,815	127	79,887	2,613	13
Total,	12,124	1475	137,543	45,348	9,102	688	3,671	5,127	145,902	2,953	199,641	7,298	168

DEDUCED from the above table :—

162,316	Bushels, grain.	Average
199,641	“ potatoes,	“
10,368	Tons Hay,	“
15,137	Cattle and horses,	“
51	Tons Butter,	“
12,593	Bushels turnips, beets, &c.,	“
21	Tons Sugar,	“
1,793	Bards Beef and Pork,	“

. . . of the land held is under cultivation.
31 Acres cultivated by each farmer on the average.

TS, &c. OF THE DISTRICT TRIBUTARY TO THE RAILWAY.

FFICIAL SOURCES.

Potatoes.	Turnips.	Beets, Carrots, Wurtzel & Beans.	Tons.	Lbs.				Bbls.	No.	Yrds.	AVERAGE PER ACRE.					AVERAGE RAISED BY EACH FARMER.				
			Hay.	Flax.	Wool.	Sugar.	Butter.	Beef and Pork.	Cattle, Horses, &c., &c.	Cloth, Flannel, &c., &c.	Bushels.					Bushels.	Tons.	lbs.	No.	
											Wheat.	Barley.	Rye.	Oats.	Potatoes.					Oats.	Potatoes.	Hay.	Butter.	Cattle
21,839	628	22	677	1,948	756	23,945	6,367	164	2,078	1,639	6½	4	9½	10½	58½	55	73	2½	21	7
49,313	926	2	912	899	1,138	4,205	22,187	286	2,446	1,314	6½	10½	11	18½	82½	100	190	3½	85	9
45,076	2,643	128	7,239	5,675	5,874	13,267	40,412	754	7,633	10,145	9	7½	9	12½	65½	108	70	11	62	12
3,496	488	3	212	.....	136	.....	3,595	26	331	27	9½	..	..	16½	62½	72	125	7½	138	12
79,887	2,613	13	1,328	.....	962	770	29,647	523	2,649	587	8½	..	..	18½	82	137	353	6	131	11½
99,641	7,298	168	10,368	8,522	8,866	42,187	102,208	1,793	15,137	13,712										

Average to each farmer 110 Bushels.

es, " " 135 "
 es, " " 7 Tons.
 es, " " 10½ in number.
 beets, &c., " " 700 lbs.
 Beef and Pork, " " 8½ Bushels.
 " " 280 lbs.
 " " 1½ Barrel.

tion.
 on the average.

EACH

No.

Cattle.

7
9
2
2
14

EACH

No.

Cattle.

7
9
2
2
1 $\frac{1}{2}$

NEW YORK RAILWAYS.

2,500 to 2,700 Miles, (Single Track.)

Cost per mile of road.

	1852.			1853.		
	£	s.	d.	£	s.	d.
Maintenance of way, per mile, single track, (including road repairs and Iron,)	110	0	0	183	0	0
Repairs of Machinery, per mile, single track (including repairs of Engines and Cars, Tools, Oil, Wast., &c.)	128	5	0	128	15	0
Operating, per mile, single track, (including Offices, Agents, Loading and unloading, Porters, Watchmen, Switchmen, Conductors, Wood, and Water, Baggage men, Brakemen, Engine men, Fire men, Fuel and preparing, Losses, Damages to persons and property, General superintendence and Contingencies.)	348	15	0	382	0	0
	587	0	0	643	15	0

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NEW YORK RAILWAYS.

Taken at from 2,500 to 2,700 Miles.

Cost per mile run by Trains.

	1852.			1853.		
	Pass.	Frt.	Avge.	Pass.	Frt.	Avge.
	cents.	cents.	cents.	cents.	cents.	cents.
Maintenance of way, per mile run, including as before,			14			18.72
Machinery or motive power, per mile run, including as before.	16,98	16.53	16.75			18.32
Thus: Engines 7.32 cents average.						
Cars, 5.25 " "						
Tools, 0.67 " "						
Oil and Waste, 1.11 " "						
Incidentals, 2.40 " "						
<u>16.75 cts. avge, as above.</u>						
Operating, per mile run, including as before,			44			48.00
Total per mile run,			<u>75</u>			<u>85.00</u>

That is, to pay all expenses of the road, each mile run by Trains must earn ;
 For the year 1852—75 cents,
 For the year 1853—85 cents.

These roads did earn, per mile run :
 In 1852, \$1.48—leaving profit per mile run, 73 cents.
 In 1853, \$1.56— " " " 71 "
 or, average expenses for the two years, were 52½ per cent of receipts.

NEW YORK RAILWAYS.

taken at from 2,500 to 2,700 Miles.

Cost per mile run by Trains.

	1852.			1853.		
	Pass.	Frt.	Avge.	Pass.	Frt.	Avge.
	cents.	cents.	cents.	cents.	cents.	cents.
er mile run, includ-			14			18.72
power, per mile run,						
2 cents average.	16,98	16.53	16.75			18.32
5 " "						
7 " "						
1 " "						
0 " "						
5 cts. avge, as above.						
run, including as			44			48.00
			75			85.00

l expenses of the road, each mile run by Trains must earn ;

For the year 1852—75 cents,

For the year 1853—85 cents.

n, per mile run :

In 1852, \$1.48—leaving profit per mile run, 73 cents.

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s for the two years, were 52½ per cent of receipts.

REPORT
OF THE SECRETARY

TO THE

*Directors of the Quebec and Saguenay Railway
Company.*

Quebec, 10th Augt., 1854.

GENTLEMEN,

In compliance with your instructions, to draw up, and submit to you a Report, embracing the resources, and general advantages of this Railway, its proposed organization, and, Bye-laws for its management; also, to afford as much statistical information as possible to obtain, with regard to the quantity of firewood annually consumed in this City, and the probable traffic, and amount of agricultural produce likely to pass over the line: I beg leave for much of this information to refer you to the Report of the Chief Engineer, Mr. Fosdick, which will fully enter into all the details with regard to the construction and cost of the road, and afford much general information in connection therewith.

The purposes for which this Company is established are so various and important, that, probably, not until the undertaking is in full operation, and its benefits conferred upon the Public and felt by the inhabitants of this City, will its utility be properly appreciated. The excessively high price of

Avge.

cents.

18.72

18.32

18.00

15.00

firewood last season was severely felt by the citizens of Quebec ; nor does there appear any prospect of the price being less this winter ; it is much to be feared that it will exceed that of last year ; indeed, little probability exists that for many years to come, if ever, the price of firewood, under the present mode of obtaining it, will be reduced to what it was some years ago.

The causes by which its value has increased are various ; in the first place, the rapid strides that this country is making in agricultural improvements, and the numerous public works that are in operation, have so increased the demand for laborers and artizans, that those people, who heretofore could barely obtain a livelihood, now receive full occupation and high wages ; and, consequently, find that they can earn a living with less toil and more profit to themselves near their own homes, than by resorting to the forest in winter to hew wood. Similar causes act upon the habitants ; they find, now that produce is high, and every article raised upon the land brings in the market a full value and a prompt sale, that the culture of their farms is a more profitable occupation, than losing days in the conveyance of firewood to Quebec, too often to the injury of their own health, and destruction to their horses and vehicles. Another reason which will affect the supply of wood by Bateaux, will be the construction of the Quebec and Trois-Pistoles Railway ; for those people who in the summer season supplied this City with the greater portion of its fuel at a small profit to themselves, will hereafter cultivate more extensively their farms, so soon as they possess the facility of a railroad for the conveyance of their produce to market. They will never attempt to compete with this Company in the sale of firewood ; and, as in this rapidly increasing town, the demand for fuel annually

becomes greater, while, at the same time, the forest is receding, it is then to some of the foregoing reasons that the sudden and extraordinary rise in the price of firewood may be attributed.

Such a state of things, if allowed to remain unchanged, would bear most distressingly upon the poor, and be severely felt by that class of persons whose occupations deprive them from benefitting by the general rise in salaries, that has taken place; and it would take from the hard working mechanic a portion of those earnings, which, in time of prosperity, it would be his desire to lay aside as a provision against the casualties of life.

The supply of firewood for the City, is placed first among the advantages to be derived from the construction of this Railway, because the subject is one in which every head of a family is interested,—but, other and very important general benefits will result from it,—for instance, to the shipbuilder, from the immense quantity of wood the country on each side of the line is capable of supplying for the purposes of shipbuilding.

Information derived from gentlemen connected with shipbuilding, makes it appear, that not less than £1,000 worth of timber, consisting of ribs, knees, futtokes, masts, spars, tamarac, elm, &c., are required in the construction of a ship of 1000 tons; all of which is to be found in considerable quantities on the actual line surveyed for the Railway, and which could be supplied at less than one half its present cost; for, it is not the real value of the timber as it stands in the forest, nor the labor of cutting it down, that makes its price when delivered here so great; it arises from the great difficulty of transport, particularly large logs, from the forest to Quebec.

Now let it be taken for granted that in a rapidly advancing port like Quebec, 40 ships will hereafter

be annually launched from her shipyards; and that the value of the timber for constructing them will amount, on an average, to £1000 per ship, or £40,000 for the 40 vessels: at least, then, one half of this valuable wood, could, by means of the railway, be obtained from the forests through which it passes; and, if it can be furnished at a lower price from this source, than it can be obtained elsewhere, the probability is, that as the timber is abundant, and of good quality, nearly the whole will be brought to Quebec by this line, and conveyed along the North Shore Railroad close to many of the Shipyards.

This is indeed a matter of serious consideration to shipbuilders; and it behoves them for their own interests, to give every encouragement and support to the present undertaking; they might then find it advantageous to send their own men to the forest to choose the most suitable wood, and provide a supply with the certainty of obtaining its transport whenever required: also, they might better estimate the price at which they could sell their ships, when certain of the cost of the timber for their construction, which would be of a superior description to what is usually obtained; for, it is a well known fact, that the shipbuilder is often obliged to take inferior wood, when purchasing in lots, in order that he may obtain the good pieces which are mixed up in them.

To the builder, it is also a matter of much consideration. At present, good stone has to be brought to Quebec from a distance, and at a heavy cost: now this Railway passes over, and near to, many superior quarries.

Excellent lime stone is to be obtained on the actual line; and from the forest growing near it, lime might be made and sold at a moderate price, for its transport would always be certain, and the cost for con-

veyance trivial. No material for building is more fluctuating in its price than that of lime—sometimes varying from 50 to 100 per cent from what it sold at, a few days previous; its value in the market much depending upon the state of the roads;—the supply, however, is always uncertain.

Very superior clay for potteries, and brick-making, has been discovered; and there is no doubt, but that in a few years, extensive manufactories will be established there.

The contractor, then, possessing the advantages of rapid and cheap transport for such important items as stone, brick, and lime, may hereafter safely calculate on the certainty of obtaining these materials at his estimated price; and the mills of the company will supply him with every description of small lumber; such as tongued and grooved planks, doors, window-sashes, blinds, laths, studs, shingles, &c., on which he may depend when mechanics are not readily to be obtained. Thus, not only will he be benefited, but his employer will have the satisfaction of seeing his edifice completed at the stipulated time. Too often have some of our best contractors suffered from the great difficulty of obtaining the materials they were bound to supply by the conditions of their contracts.

But to the agriculturist and to the new settler, perhaps greater advantages will accrue than to any other class of society; for there is not a habitant, within some miles of the road, to whom it will not afford a material benefit; as once established, cheap tram lines, answering also the purpose of common roads, could be made; for instance, one might extend along the level line from Lorette to Charlesbourg, and secure the traffic of that portion of the country, which would find its way to Quebec (although by a circuitous route) in one half the time and less than one half the expense

now incurred, other branch roads will in time be extended in various directions, and soon a material change will creep over the country; the habitants will not be long in discovering that were it took them 3 days, with a single horse to bring one cord of 3 feet wood to Quebec, they will hereafter deliver from 12 to 15 cords in the same time on the line of the railroad, and with more profit to themselves; and were it before cost them much exertion to convey hither heavy ship timber; that the shipbuilder himself will purchase it from them when delivered at the rails. No longer will it be necessary for them to bring their produce to Quebec in small quantities, and lose both their own time and that of their horses, which might be otherwise and better employed; a new system of things will be established; the stall keepers, possessing the facilities of conveyance, will proceed to the country and purchase up the produce in large quantities, which will have the effect of establishing better markets, and ultimately a better market place. The agriculturist will thus be enabled to employ that time, which is now lost to himself and in the labor of his horse, in the conveyance in small quantities of the produce of his farm to Quebec, to the more profitable employment of cultivating his land, feeling certain that he will always be able to dispose of its produce, within a short distance of his own door.

Since Railways have been established in England, it has been proved before a select committee of the House of Commons, that the loss of value through the decrease of weight in horned cattle, produced by the fatigue of the journey, which were before driven to the Smithfield market, amounted annually to £675,000. Each animal losing so much per cent according to the distance driven, and the flesh much deteriorated from being bruised by heartless

drovers, and from the animals being slain in heated blood.

The following is an estimate of the traffic likely to take place on this Railway, when extended beyond the Jacques Cartier, and of the profit which may be derived therefrom, and is arranged under the following heads.

Firewood.

In the first instance much pains have been taken to ascertain, as nearly as possible, the actual quantity of fuel annually burnt in the City; and the result of this enquiry proves, that upwards of 100,000 cords of firewood are yearly consumed in Quebec, and which consumption will annually increase as the City becomes extended.

But as the Company cannot depend upon obtaining so large a quantity of wood from the surrounding country, it will be necessary to purchase a large tract of hardwood land (which can be obtained in abundance in the neighbourhood of the Railway) and to organize a party of choppers expressly for cutting the wood during the winter season; and ample work could be found for maintaining these men during the remainder of year, in extending the Railway and constructing other works in connection therewith.

250 men in six months would cut 60,000 cords of firewood, and the remaining quantity required (40,000 cords) to make up the full compliment necessary for the consumption of the City, might be contracted for.

The employment of a party of choppers would prove an effectual check to exorbitant tenders being made for the supply of fuel; as the Company will always have the alternative of increasing the number if necessary, in order to obtain the full quantity required for the use of the City.

Sixty horses, with drivers, could bring to the Cars (in a forest, commencing at the Railway, and extending 2 miles back) on an average 6 cords per day; and 40 men, aided occasionally by the carters, would be ample for loading the carts, and afterwards piling it on the Platform Cars.

When the Company is regularly established, it will doubtless be more economical to furnish provisions for the whole party, and engage the men by the month, on the system of lumbering establishments: but for the present it is prudent to assume the highest rate of laborer's wages as the basis for estimating upon.

And here mention may be made of the advantage the Company will eventually derive by purchasing the land off which they cut their firewood; as much valuable lumber will be found thereon, and the land itself, from its proximity to the Railway, will become so increased in value, as to repay its first cost, after stripped of its timber; and the Company will be enabled to confer many advantages on steady farmers who may settle on the soil.

Many of the men employed on the works will gladly settle down with their families in the locality of their labor, and every inducement should be held out for an extensive colonization of this back country.

The following is an Estimate of the cost of cutting 60,000 cords of wood, and delivering it at the railway.

Interest on £7,500, the assumed value of 20,000 acres of forest land,	£	450	0	0
250 men engaged 150 days in cutting 60,000 cords of wood a 5s. each, per diem,		9,375	0	0
40 men employed 150 days in piling wood &c. a 5s. each per diem,		1,500	0	0
60 horses employed during the year at £25 each, per annum, for forage &c.		1,500	0	0
6 extra horses at £25 per annm. each, for forage, &c.,		150	0	0
60 drivers employed during the year a 5s. per day each,		4,500	0	0
10 extra drivers employed as grooms a 5s. per day each,		912	0	0
15 per ct. interest on £3,000, capital appropriated for purchase of horses, carts, sleighs, harness, &c.		450	0	0
Total cost for cutting 60,000 cds.,	£	18,837	0	0
Add cost of 40,000 cords obtained by contract at 8s. pr. cord,		16,000	0	0
Total cost for 100,000 cords,	£	34,837	0	0

Carters, Conveyance, &c.

There is no doubt but that under a proper system of cartage, fuel could be delivered to the purchaser at a low rate; and a great convenience afforded from such an arrangement. It could also be made a source of profit to the Company.

The proposed mode for carrying out this system, will be found under the head of Bye-Laws; but the following estimate will show that a great saving can be effected to the public, as 80 carters, with good horses, engaged all the year, could deliver 320 cords a day,—mean distance from Depot $\frac{3}{4}$ mile.

80 horses at £25 per ann. for forage &c.	}	£	2000	0	0
80 carters a 5s. per diem each, per annum,		6000	0	0	
5 extra horses at £25 per ann. for forage &c.		125	0	0	
10 grooms a 5s. per diem each, per annum,		912	0	0	
15 per cent on £4000, capital appropriated for purchase of horses, carts, sleighs, &c.		600	0	0	
		£	9,637	0	0
Cartage of 100,000 cords of wood at 2s. 6d. per cord,	}	£	12,500	0	0

leaving a profit, on a very high estimate, of £2,863. And here it may be remarked that the fields in the neighbourhood of the Depot are well suited for meadow land, which, when manured from the stables of the Company, would produce large crops of hay for the establishment.

Black Birch.

That the forest north of Quebec, abounds in fine black birch is a well known fact: the difficulty of transporting this heavy, but valuable timber, has heretofore been the cause of its high price, and a bar to a more extensive trade in that wood; could a certain supply always be depended upon at a fair price, the demand no doubt would be greater.

The average quantity annually exported from Quebec, Parliamentary Statistics shew to be about 5000 tons, but a much greater quantity is of course used in local consumption; the country around Quebec is the only place in Canada from whence this wood is obtained for exportation, and were the means of conveyance better, a larger supply and a far superior quality would be furnished. The profit of conveyance for 5000 tons of this timber might be set down at £1,200.

Shiptimber, Lumber and Building Materials.

The Lumber that will pass along the railway will not only be considerable, but various, consisting of pine, spruce logs, elm, basswood, ash, tamarac,—besides sleepers, scantling, deals, boards, handspikes, treenails, spars, masts, tanners bark, lathwood, shingles, &c.

Excellent quarries of building stone are known to exist in the locality of the line, and limestone is to be found in abundance near Lorette; there can be no doubt but that these materials, of the first importance in building, can be conveyed to Quebec at one half the price it has hitherto cost to obtain them from Cap Rouge or Beauport. A revenue of at least £3000 might safely be calculated upon being received from the conveyance of shiptimber, lumber, and building materials; which, on the aggregate, would amount to upwards of 12,000 tons.

Produce of Lands.

Enquiries from farmers possessing land in the vicinity of Valcartier, with from 80 to 100 acres under cultivation, shew, that they annually send to the Quebec Market, about

300 bushels of Potatoes,
300 bushels of Oats,
500 bundles of Hay, and
2 cwt. of butter,

besides horses, horned cattle, pigs, poultry, &c. A farmer seldom brings into Quebec, (from any point between St. Catherine and Valcartier, distance, 18 miles from the city,) more than 12 or 15 bushels of potatoes, if he intends returning the same day; were he to put a value upon his time in winter, and that of his horse, and calculate on the injury to his sleigh and harness, and the attendant expenses of a journey to town, he would soon find that he loses considerably; that the time thus lost (at least 2 days in the week) he could profitably employ in furnishing the Railway with wood, and all his produce he would send by rail.

Supposing then that he will do so, and that the cost for conveyance is as follows:

300 bushels of potatoes at 3d. per bus.	£	3	15	0
300 bushels of Oats, at 3d.			3	15
5 tons of Hay, at 5s. per ton,			1	5
Horned Cattle,			0	10
Butter, Vegetables, &c.			1	0

£ 10 5 0

Here then might be derived a revenue of £10 5 0 from every extensive farmer along the River Jacques Cartier and the settlements of Valcartier: there are at least in these settlements 200 farmers who would furnish the above, thus giving a revenue of about £2000 for the conveyance of produce, without making any calculation for the Groceries, Flour, Raiment, &c. required by these settlers from the City.

Passengers.

Although not intended as a Passenger line, it is highly probable that a considerable number of people will daily pass over it. The means of rapid communication will induce many to visit the beautiful scenery in the neighbourhood of Jacques Cartier and the River St. Ann on fishing and pleasure excursions: there is no doubt but that country will, ere long, be studded over with country residences.

When it is considered what a number of persons visit Lorette, under whose heights the railway will run, and the number of people residing in the Jacques Cartier and Valcartier settlements, constantly requiring to visit Quebec on private affairs, and when the facilities of a railroad will induce so many to reside beyond Lorette; 40 passengers a day, going and returning along the whole line, might safely be calculated on. Set the average price at 1s. per head, then the revenue for passengers will amount to £730.

Steam Saw Mill at the Depot.

The cost of a powerful Steam Mill, with all the machinery complete, will not exceed £4000; by which logs may be sawn up, planks tongued and grooved for flooring, and doors, window sashes, shingles, laths, &c., made. A Mill of this description will not only be a local benefit, but realize also a handsome profit to the Company.

The following is an estimate of the working expenses, with the sources of profit to be derived from the Mill.

Interest on £4000 the cost of the Mill, allowing 15 per cent, to cover wear and tear,	£ 600 0 0
15 Men, 300 days, each at 6s.	1350 0 0
10 Boys, 300 days, each at 2s.	300 0 0
20 Men employed 300 days, each, at 5s. in sawing firewood,	1500 0 0
10 Boys employed 300 days each, in piling and clearing the wood from the saws at 2s.	300 0 0
Felling in the forest, and conveyance of 10,000 logs, 12 ft. long,—1500 Cords of wood at 7s. 6d. per 96 cub. ft.	562 0 0
Annual Expenses,	<u>£ 4612 0 0</u>

No fuel calculated for the Engine as the slabs and edgings will give an amplex supply.

Sources of Profit.

75,000 cords of fire wood, sawn & split at 1s. 6d. per cord	£ 5625 0 0
10,000 spruce and pine logs, cut into 3 inch planks, would give 50,000 planks, worth on an average £50 per M.	2500 0 0
Other profits from making doors, window sashes, tonguing and grooving planks, &c.	500 0 0
	<u>£ 8625 0 0</u>
Deduct working expenses,	£ 4612 0 0

Leaving a profit (provided the logs
were cut from the Company's
lands,) of £ 4013 0 0

working
e derived

600 0 0
1350 0 0
300 0 0

1500 0 0

300 0 0

562 0 0

4612 0 0

the slabs

625 0 0

500 0 0

625 0 0
612 0 0

013 0 0

Synopsis of the Annual Receipts and Expenses of the Railway.

RECEIPTS.		EXPENSES.	
£	s. d.	£	s. d.
100,000	0 0	Cost of 100,000 cords of wood, as before detailed,	34,837 0 0
Profit on conveyance of this wood to purchasers' residences,	75,000 0 0	Cost of conveyance of above to Quebec, including passengers and produce, being 45 per cent. on assumed profits,	19,302 0 0
Profit on conveyance of 5,000 tons of Black-birch,	2,863 0 0	Interest on £50,000, assumed as money borrowed,	3,000 0 0
Profit on conveyance of 5,000 tons of ship timber (half the consumption) beside large quantities of planks, pine and spruce logs, elm, ash, tamarac, spars, bark, &c., and some thousand tons of building stone and lime,	1,200 0 0	Add 10 per ct. for contingencies,	57,139 0 0
Profit on conveyance of produce,	3,000 0 0	Total expenses	62,853 0 0
Profit on conveyance of Passengers,	2,000 0 0		
Annual sale of Company's lands,	730 0 0		
	250 0 0		
Total receipts,	£ 85,043 0 0		
Total Annual Receipts,	£85,043 0 0		
Total Annual Expenses,	£62,853 0 0		
Net Profit,	£22,190 0 0		

NOTE.—The assumed profits of the Saw Mill, are not included in this Return.

And allowing out of this a dividend of 10 per cent to the shareholders, upwards of £12,000 would remain for continuing the railway, &c.

In estimating for these profits, it must be understood, that they are not considered to arise altogether from the first part of the line, viz: between Quebec and Jacques Cartier; but a portion of them will be obtained when the Railway is extended to the valuable forests beyond that River. It was perhaps unnecessary for me to have given any estimate, as the one to be furnished by Mr. Fosdick will be based upon strict statistical information and on sound experience; however, it will be satisfactory to me, should these figures approach to his. It should be, however, distinctly borne in mind, that no matter what quantity of wood may be expected from other sources, no competition can exist with this company under its proposed organized system; the object of which is, to allow every citizen to participate in its benefits, and who, as shareholders, must, for their own interests, support the Railway; and even were 3 feet wood hereafter to be offered at the market for 15s a cord, it is quite evident that, independent of the shareholders being interested in the undertaking, a preference would always be given to a Company established for supplying fuel, sawn, and carted to the purchasers' residences, when the buyer would be relieved from all trouble beyond the mere payment for the wood at the Treasurer's office; nor will he be necessitated to expend at once, some £30 to enable him to take advantage of the market, when at all seasons of the year he could obtain any quantity (not less than a cord) at one uniform price: it requires but slight reflection to feel, that from no other source can fuel for this City be obtained at so low a rate.

If these then are likely to form such a revenue from the road at its first commencement, what may not be expected from it in the course of a few years? why the whole aspect of the country will become changed; for wherever a railroad passes through a new country, its facilities for conveyance becomes a stimulant towards the discovery of its resources, and much may be discovered of value to the country at present hidden.

The fine water powers of Lorette, Jacques Cartier and the mountain streams around, will soon have manufactories established thereon, from which, also, much may be expected.

Few in Quebec, I believe, are aware of the description of country North West of this City: it is a prevailing opinion that it is rough, stony and mountainous; this is an erroneous idea, the flat table land behind Lorette, and the general height of all the valleys along the whole line of the proposed route, is but a little over that between Quebec and St. Foy; having the advantage, however, of being well sheltered from easterly winds and possessing a far superior soil;—the severest gale of wind that has been felt in Quebec, this season, was entirely unfelt 20 miles hence; and at a season of the year when vegetation was retarded here, good meadow grass was pulled by Mr. Bignell, when I accompanied him on his second exploration early in June, 15 inches long, and that on the slope of a hill at least 300 feet above the River Jacques Cartier. The settlers affirm that the frost now but rarely affects their crops, and as the land becomes more cleared the climate improves.

Between the place where the Railway issues from the pass behind Lorette and the Jacques Cartier, there is an extensive plain, bounded on the north by Hartz or Round Mountain, and on the south by the mountain of Bonhomme; this plain contains about

60 square miles or 38,400 superficial acres; the soil is composed of sand and clay, the whole of it fit for cultivation, and such of it as is at present under crop, bears evidence on its surface that the soil is not unfruitful. In fact, it is peculiarly suited for new settlers; being light, it enables him to cultivate a much greater extent of land than he possibly could do on heavy and stony ground, in a country where labor is not to be obtained. The mountains of Bonhomme and Hartz, are clothed with the finest hardwood, and a ten year's supply of fuel could easily be obtained from these hills without ever crossing the Jacques Cartier.

To form an idea of the effect that the Railway will have in inducing people to settle in that district, imagine the number of persons who have heretofore been employed in various portions of the country in supplying Quebec with fuel concentrated on one plain, feeling certain of a livelihood there, and establishing good farms for their children; this, in itself, in a small lapse of time will form an extensive traffic for the road.

So accustomed are the inhabitants of Canada East to extensive valleys and flat land, that the undulating portions (with the exception of the Eastern Townships,) have been much neglected, when in fact some of the most fertile land lies in valleys, well sheltered by neighbouring hills.

In the wildest and most mountainous parts of the highlands of Scotland, the people were at one time, so poor, and the country so thinly inhabited, as to be totally unable to keep in repair either their roads or bridges. After Surveys and Reports, Parliament determined to defray one half of the expense of constructing roads and bridges for the purpose of facilitating commercial communication. The inhabitants of these remote regions obtained permission to tax themselves to pay for the loans obtained for the

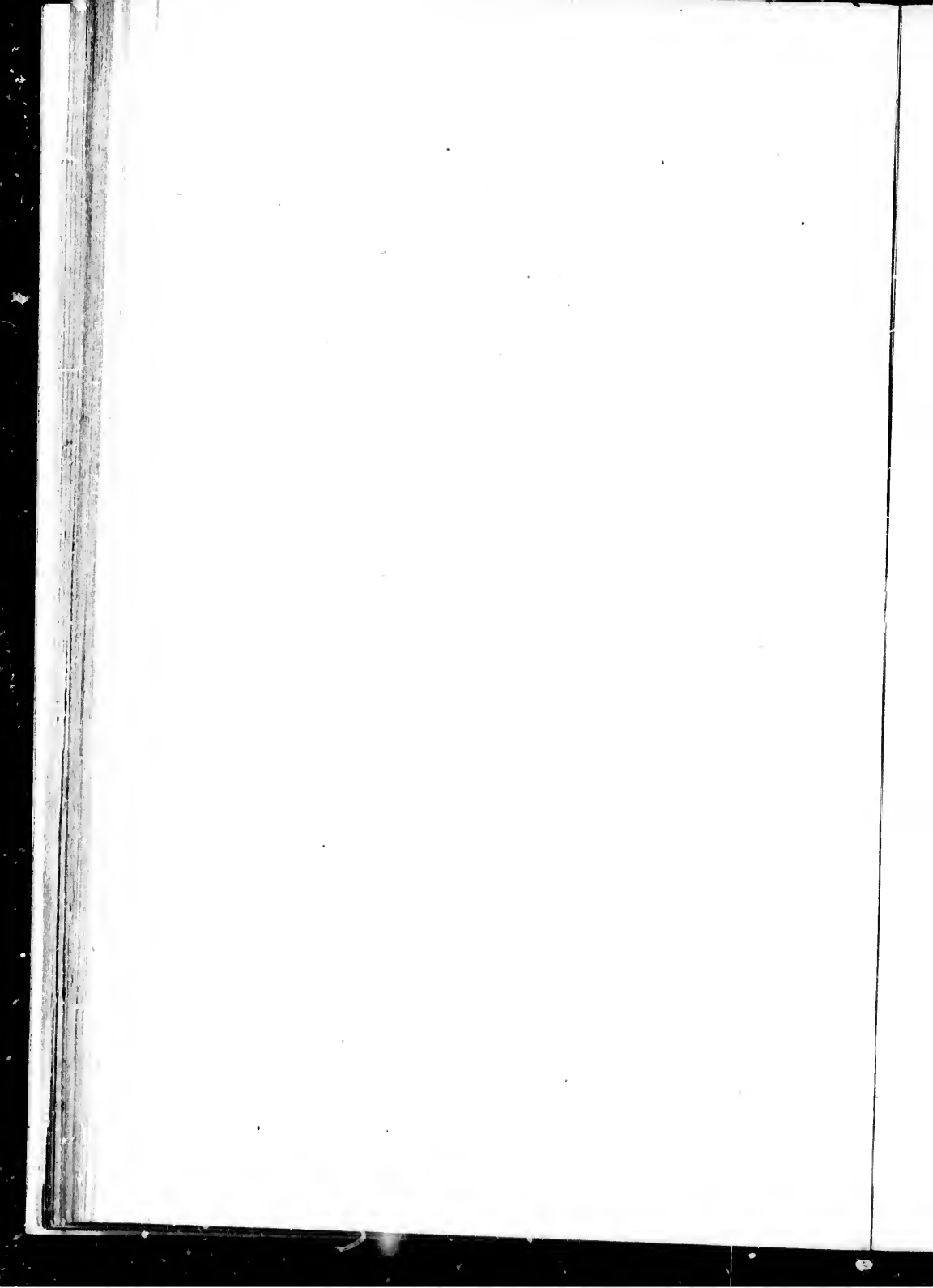
liquidation of the other half of the expense, and in two years, these improvements had extended over 500 square miles, and this country is now one of the most flourishing parts of Scotland.

There are other points, in connection with the management of this Railroad, which would be attended with great advantage if carried into effect; but as the intention is that the road shall be yearly extended in proportion as the funds of the Company will permit, and its wants require, it is unnecessary to lengthen this Report by entering upon the subject, as time and experience will prove the necessity of it or otherwise. The proposed Organization, Rules and Bye-Laws submitted, I feel are very imperfect, as in a new undertaking of this description, experience alone can point out the best system for carrying out a project, which, however favored it may be by circumstances in its commencement, must, ultimately, under a bad working system, or even under a good working system badly conducted, prove a failure; but, if properly carried out, become a boon to the City.

The whole nevertheless respectfully submitted,

F. N. BOXER,

Secretary.



RULES AND REGULATIONS.

The intents and purposes for which this Company is proposed to be established having been stated in the foregoing Report, are now succinctly recapitulated.

VIZ:—

For the construction of a Railway, ^{Preamble.} which, passing through the forest will cross the River Jacques Cartier and St. Ann, in a direction bearing North West-erly from Quebec, with the hope at some future day, of being able to continue the same to Lake St. John, in the District of the Saguenay. Its primary object how-ever, is to unite the citizens into an Association for supplying the City with cheap firewood, shipbuilders with timber suitable for the construction of vessels, and contractors with building materials; also, for the encouragement of manufactories, saw mills, &c., on the numerous water-powers on the route, and, for the promotion of agriculture and the settlement of a vast extent of valuable country.

1st. That the affairs of the Company, ^{Company to} shall be under the control and manage-^{be under the} ment of a Board of seven Directors ^{control of 7} (of ^{Directors of} whom three shall be a quorum) and who ^{whom 3 shall} shall choose among themselves a Presi-^{form a quorum} dent and Vice-President.

Election of Directors to be by ballot; 6 shares necessary to qualify a Director.

2nd. That the election of Directors shall be by ballot, and at such election members shall be entitled to votes in proportion to the number of shares they hold, but no shareholder shall be qualified to be a Director, unless he holds 6 or more shares in the Company.

In absence of President and Vice-President, Directors present to appoint a chairman *pro tem*.

3rd. In the absence of both President and Vice-President, the Directors present at any meeting of the Board, shall have power to appoint a chairman, *pro tem*. and with such chairman, shall be competent to transact the business of the Company.

Manager to be appointed who will also perform the duties of Secretary.

4th. That a Manager shall be appointed who will also perform the duties of Secretary, and to whom, in order to carry out the views of the Company, the whole control, management and supervision of their affairs shall be entrusted.

Two Directors to be appointed annually with whom the manager will consult, with power to call special meetings of the Board.

5th. That two of the Directors shall be appointed, yearly, with whom the Manager will consult on any affairs of moment whenever it may be deemed necessary; with power, if considered requisite, to call together a Special Meeting of the Board.

Directors to meet quarterly to receive Report of Manager.

6th. That the Directors shall meet quarterly, i. e., commencing on the 3rd. of Jany. and on the 3rd. day of the month of every succeeding quarter, when a full Report of the prospect and state of the

Company's affairs, will be laid by the Manager before them.

7th. That when in full operation, upwards of £150,000 will annually pass through the hands of a Treasurer, that a competent person be appointed, to whom will be entrusted the keeping of the accounts, and who will receive and pay all monies for and on behalf of the Company, and his receipt shall be a sufficient discharge.

Treasurer to be appointed who will keep the Books.

8th. That the Treasurer shall give good and ample security to the satisfaction of the Board of Directors, and he shall deposit daily with the Bank all such moneys as he shall receive.

Treasurer to give security, and deposit daily in the Bank all moneys received.

9th. That no money shall be drawn from the Bank without an order from the Manager (or in his absence by any one of the Directors named for that purpose) and countersigned by the President, or in his absence, by the Vice-President or Chairman.

No money to be drawn from the Bank without an order from the Manager countersigned by the President, &c.

10th. That Books shall be opened for keeping the accounts, minutes and other documents of the Company; and duplicate copies of all deeds, plans and important papers shall be made, and deposited in

Regular books to be opened, and duplicate copies of deeds plans, &c., to be made.

11th. That the proceedings of the Company shall be entered in a minute Book in detail, and signed by the President, Vice-President or Chairman as well as by the Secretary.

Minutes of Board to be signed by President and Secretary.

Pay lists
&c., to be fur-
nished month-
ly by Treasu-
rer, &c.

12th. That the Pay Lists and other Vouchers shall be prepared by the Treasurer and submitted on the 26th of every month for the approval of the Manager, whose signature of approval shall be authority for payment; and that a statement on the 1st of every month shall be prepared by the Treasurer, shewing approximately the amount required for the following month's disbursements, and the amount of money lying in the Bank to the credit of the Company.

Officers ap-
pointments to
be permanent,
unless guilty
of misdemea-
nors.

13th. That all officers of the Board shall be considered permanent, and shall not be dismissed unless guilty of a breach of faith, incapacity, or misdemeanor; and then, not until his conduct has been fully investigated into before a Committee of Directors named for that purpose, of whom, the Manager shall at all times form one; and in the event of it being necessary to discharge such officer, due notice of the Board's intention shall be given him, unless the circumstances warrant instant dismissal.

Shareholders
may transfer
their shares.

14th. That any shareholder may transfer his share or shares by causing an entry of such transfer to be made in the books of the Society, in such manner as the Directors may appoint, upon payment of the sum of 2s. 6d. for each share so transferred and of all arrears then due; and thereupon the transferee, (after signing the rules) shall be entitled to all the privileges of the original shareholder.

15th. That in case of the death of any member, the legatee or legal representative of such deceased member, shall, before becoming entitled to the privileges of an original shareholder, procure his place of abode, and the particulars of his title, to be registered in the books of the Society, and shall at the same time exhibit the will or probate thereof, or grant of letters of administration (as the case may be,) for the inspection and satisfaction of the Directors, and pay for such registry the sum of 2s. 6d. per share.

A Member dying, mode of proceeding for a legatee or legal representative to become a Shareholder.

16th. That the Directors elected at the formation of the Company, as well as those hereafter to be elected, shall be indemnified out of the funds of the Company or otherwise, from all expenses in reference to the formation, conduct, and management of the Railway.

Directors not to be liable for responsibilities of the Society.

17th. That, in order to distribute the benefits of this Company generally among the citizens; persons burning less than 10 cords of firewood annually, will be allowed to take a share in co-partnership with any other person whose consumption of fuel is less than 10 cords, both signing in the stock-book.

Persons burning less than 10 cords.

18th. That each member changing his residence shall, within one calender month thereafter, give notice in writing to the Treasurer of such change, and of his new place of abode and address, or in default thereof be fined 2s. 6d.

Change of residence to be notified to the Treasurer.

Manager to
engage labour-
ers, &c.

19th. That no officer of the Company, except the Manager, shall have power to engage any mechanics and labourers for the works, or have power to dismiss any for insubordinate conduct.

Division of
working par-
ties into gangs
&c.

20th. That the parties employed in the bush shall be divided into gangs of ten; every tenth man will be chosen as a working foreman, and receive extra pay for the same, and be answerable for the conduct of the party under his charge.

One foreman
over every 50
men, &c.

21st. That over every 50 men will be placed a foreman, whose duty will be to superintend his party, and to whom will be entrusted the payment of their wages, and he will prepare the pay list of his party on printed forms for that purpose, and be answerable for the correctness of the same; the pay list to be delivered to the Treasurer two days previous to payment.

Workmen to
be paid every
fortnight.

22nd. That payment shall be made to the men every second Tuesday, their accounts being made up to, and furnished by the foremen, every Saturday evening previous.

Promotion
to depend on
sobriety &c.

23rd. That all promotion among the men will depend entirely on sobriety, activity, general intelligence, and marked good behaviour.

CONTRACTS FOR WOOD.

24th. That no Contractor shall be allowed to contract for more than 5000 cords of wood, and shall give security for the delivery of the fuel within the period specified by his contract, under a penalty of £2 per diem for every day he shall fail to deliver the wood after the stipulated time.

No contractor to be allowed to contract for more than 5,000 cords; failing in contracts, &c.

25th. That the wood shall be delivered in any lengths the Company may require and the contractor shall pile at his own cost the wood at such places along the line as stipulated in his contract; and should at any time, the Company's foremen, be of opinion that the wood has not been properly piled, the contractor shall repile the wood at his own cost; and failing to do so within 3 days after receiving due notice in writing from the Manager, the wood shall be re-piled by the Company's men, and if found short in measure, the cost of the labor of re-piling shall be deducted from such monies as may be due to the contractor, and he shall forfeit the sum of five pounds for false measurement.

Contractors to pile the wood at the rails; penalty in failing &c.

26th. In all cases of dispute, whether with the contractors or with their men, or the Company's men, the same shall be immediately reported to the Manager by the officer in charge.

Cases of dispute to be reported to manager.

RULES FOR CARTERS.

27th. That the Company shall employ a sufficient number of carters for the con-

Company to have their own carters.

veyance of the wood to the residences of the purchasers, and who shall be subject to the following rules.

Carters to
were a badge. 28th. Each carter shall wear a badge on his left arm with his number.

Carters to be
supplied with
a book &c. 29th. That every carter shall be furnished with a book, in which will be entered by the Issuer the quantity of wood he has to deliver at any one place, and he will obtain the signature of the party receiving the wood, which will be a full acknowledgement of its delivery. That he shall every Saturday evening, present his book to the Issuer for examination.

Issuer to re-
port to mana-
ger any com-
plaints against
carters. 30th. That the Issuer will immediately report to the Manager any complaints made by purchasers against the carters.

Carters re-
ceiving wood
to sign receipt
for same. 31st. That parties receiving wood will sign for the faithful delivery of the same in the carter's book; and if short of measure will state the same therein, in order that immediate inquiry may be instituted; also, to mention therein any complaints they may have to make.

Company's
carts to be
painted red,
&c. 32nd. That the Company shall possess a sufficient number of carts painted red, properly numbered, and the quantity of wood they can contain registered thereon.

Workmen
to give a re-
ceipt for tools. 33rd. That the Company's workmen shall sign a receipt for all tools, implements, &c, intrusted to them for the execution of their work.

Regulations of the Wood-Yard, and Rules for the purchase and delivery of Fire-Wood.

34th. That the purchase of Fire-wood shall be strictly a cash transaction. Purchase of fire-wood, &c.

35th. That parties requiring wood will give their order and pay for the wood at the Treasurer's office, at least seven days before they require its delivery at their residences. Seven days notice to be given by parties requiring wood.

36th. That no person shall be allowed to purchase less than one cord at a time. Less than 1 cord not to be sold.

37th. That the Treasurer shall furnish the Issuer, regularly once a day, with the orders he has received for delivery of wood; and the Issuer will be responsible for the proper execution of those orders. Treasurer to furnish Issuer daily with orders for wood.

38th. That the wood shall be sold by cubical measure, each cord to contain 96 cubic feet, the price to be regulated by the expences of the Company. Wood to be sold by cubical measure of 96 cubic feet to the cord.

39th. That residences shall be erected at the Depôt for the Issuer, his Foreman and the requisite laborers, who shall reside therein. Issuer, foremen & laborers to have residences at the Depot.

40th. That the Wood-yard shall be open from 6 o'clock, A. M., to 6 o'clock, P. M., between the 1st April and 30th October; and from 7 A. M., to 5 P. M., between the 1st November and 31st March, every year. Hours when the wood-yard will be open.

41st. No smoking to be allowed within the Depôt. Smoking in Fuel-yard disallowed.

Water pipes
to be laid
down. 42nd. That water pipes shall be laid down, with proper hoses for the same; and placed under the particular charge of the Issuer.

Clock and
Belfry. 43rd. That the Issuer be provided with a good clock; and that a belfry and bell be supplied for regulating the working hours.

Breakfast
and Dinner
hours. 44th. That one hour be allowed for breakfast and one hour for dinner, except during the winter period, when the laborers will breakfast before commencing their work.

STEAM SAW MILL.

It being considered that much benefit will be derived by the Company from the construction of a Saw Mill, and also a great convenience afforded to the Public; it is, therefore, proposed, so soon as the road is in operation, to erect a Steam Saw Mill, for the purpose of cutting up lumber into planks and boards, grooving and tonguing planks for floors and ship decks, making doors, window sashes, laths, shingles, &c., and also for sawing and splitting up firewood for the convenience of the purchaser.

Men at the
Mill to be un-
dersame regu-
lations as the
others &c. 45th That the men engaged in this Mill shall be under the same regulations with regard to discipline, as provided for those employed on any other portion of the Company's works.

Sawing tim-
ber, how paid
for. 46th. That in the sawing up of lumber, the men be paid according to the number of pieces or superficial feet of wood sawn per day.

47th. That whenever boys can be introduced and trained on the Works, they shall be employed, and will be particularly selected for promotion on account of long service and good conduct.

Boys to be employed &c.

48th. That the Mill and all the Works be supplied with Gas from the City Gas Works.

Mill to be lighted by gas.

49th. That water pipes shall be placed in convenient places in both stories of the Mill, fixed in frost proof cases, and supplied with hose pipes; so as to be ready at any moment to deluge the building in case of fire.

Water pipes &c.

50th. That the disbursements and profits connected with the Mill establishment be kept by the Treasurer quite distinct from the sale of fire-wood.

Accounts of the Mill to be kept separate.

51st. That all payments for purchase of lumber and for sawing be made through the Treasurer's office.

Payment for lumber to be made through the Treasurer's Office.

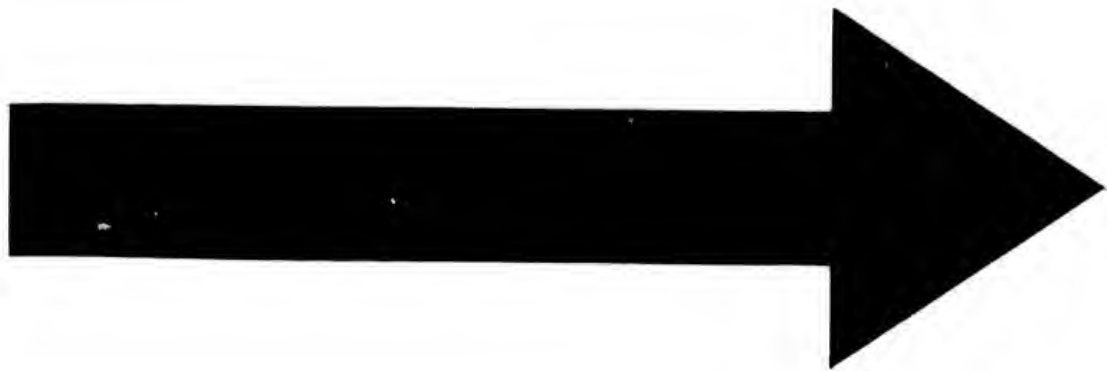
LOCOMOTIVE DEPARTMENT.

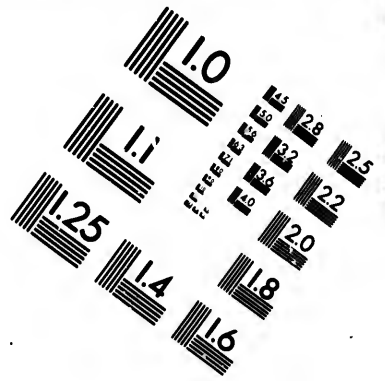
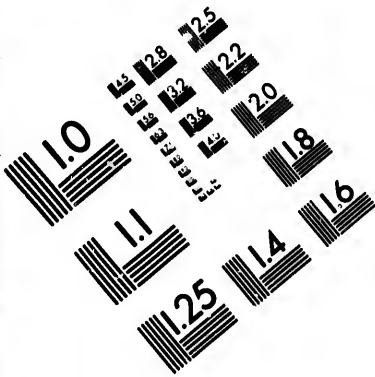
52nd That the usual Rules in force with regard to Management, Signals, &c., used on any of the principal lines in this country be adopted on this; with such deviations therefrom as the nature of the service may require.

Signals, &c.

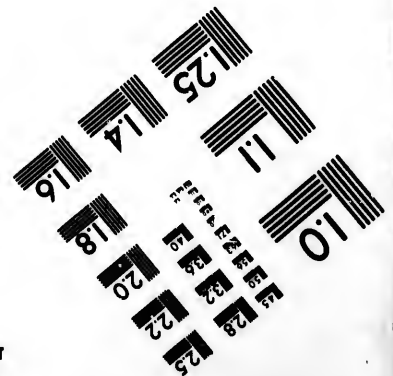
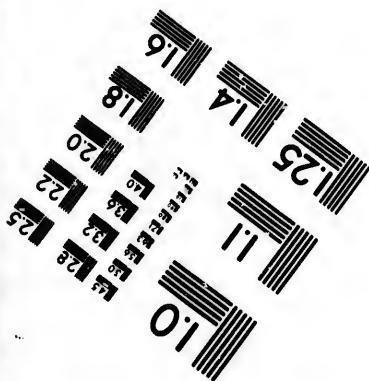
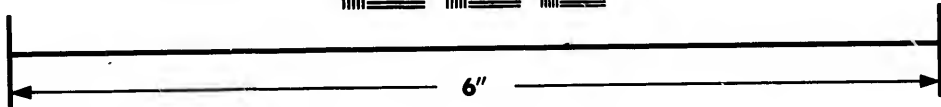
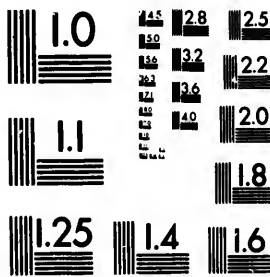
53rd. That the Drivers and all the employes in connection with this Department be under the immediate control of the Manager.

Locomotive Department to be under the manager.





**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

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Company to
have spare sets
of cars.

54th. That the Company be provided with a sufficient number of Platform Cars, so that an engine arriving at the depôt, with a loaded train, can be immediately detached therefrom, and dispatched with a train of empty cars to the forest, where another loaded train will be in waiting to be attached to the Engine: thus, no detention will take place either at the terminus in town or at the depôt in the forest.

Passenger
cars to be at-
tached.

55th. That passenger cars be attached, stopping at such places as may hereafter be deemed advisable; and so soon as the traffic of the Company will warrant the expense, an Omnibus to be provided to convey the passengers from the terminus to the Upper Town.

56th. Tickets for conveyance will be obtained at the terminus. and the hours for starting at either terminus and the time for calling at intermediate stations will be regulated when the speed of traveling has been determined upon.

F. N. BOXER,
Secretary.

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ERRATA.

- Page 20, 4th line, for "track," read tract.
" 30, 13th " " " " " could," read would.
" 31, 27th " " " " " impressions," read impression.
" 32, 30th " " " " " passible," read passable.

