

general northern course as far as the Desert River. Hull City, the depot of the great lumbering interests of the Ottawa Valley will be, for the time being, the main depot. Leaving Hull, it will pass through the township of that name, thence through Masham, Wakefield, Low, Aylwin, Wright and Bouchette Townships, and on through the Indian Reserve, known as Maniwaki, to the Desert River, the point from which, at present, all the trade of that northern part of the Continent is carried on. Above the Desert, there is a fine country rich in precious metals, as well as abounding in lumber, and other natural products common in this region. The Ottawa and Gatineau Valley Railway, would more particularly serve a valuable agricultural district on the west side of the Gatineau River. The line of the Ottawa Colonization Railway was adopted, after careful and exhaustive explanatory surveys, thus tapping the Gatineau Railway line at or near the out-crop of the three phosphate of lime and iron belts. This Railway will therefore commence from the line of the Canadian Pacific Railway, near Buckingham, and is proposed to operate on a line intersecting the whole phosphate region in a northerly and westerly course, to the township of Aylwin before mentioned, furnishing means of transport to the many rich mines in the townships of Buckingham, Templeton, Wakefield, Bowman, Denholm, and Hincks. (See prospectus of Ottawa and Gatineau Valley and Ottawa Colonization Railway Companies).

There is, further, a point of extreme importance to be considered in connection with the enterprise, I allude to the vast field for settlement which this fine country affords, and to the fact that without the construction of the entire line, large tracts of fertile lands must remain undeveloped, and immigration (so far as this section of the Province of Quebec is concerned), be materially retarded.

I have at the request of the Directors, carefully examined all the maps, profiles, plans, estimates, and other details in the Companies' offices, and find them complete and satisfactory. The fact, however, that the Government of the Province of Quebec has finally guaranteed the land subsidy to the Companies (under the Act of 1882), would be a sufficient recognition of their good faith, and the correctness of their data; but I wished to make an inspection of the same, in order to be in a position to vouch personally for them.

I find, on a careful examination of the profiles that the building of these roads will not necessitate what is usually termed heavy work, except for a short distance through ridges in Wright and Hincks Townships, where I am informed, every indication tends to show the cutting to be gravel, well suited for ballast, in which case its extra depth of "cut" will not be objectionable, as it is, I understand, the only material of the kind met with between the above mentioned points and Desert River.

The route adopted by your engineer is, on the whole, free from the difficulties which are usually to be found in so rough a country as that which your line traverses.

The alignment shows careful consideration, the objective points well chosen, the curvatures flat, and grades easy enough.

The total length of line is 127 miles. With respect to cost of "construction" as the districts which the line will traverse possess abundant supplies of the timbers usually employed in railway building (viz., tamarack, cedar, pine and oak, &c), and the soils are of such a nature as to be handled economically; also considering the present low values generally in the country for produce, I shall place my estimate at \$18,000 per mile. This may be reduced, however, by laying in sharper curves at certain points, and by raising gradients to eighty feet as the maximum; thus placing the formation level both in excavation and embankment nearer the surface, which would bring the estimate down very considerably.

I remain, gentlemen, your obedient servant,

A. L. LIGHT,

*(Member of the Institute of Civil Engineers, and*

*Member of the American Association of Civil Engineers.)*

*Chief Eng'r Gov't. Railways, P. Q.*