

8 PAPERS RELATIVE TO THE QUEBEC AND

BRITISH
NORTH AMERICA.

along it will not be above 368 feet, while the distance by each from the province line at Bay Verte, to the Restigouche River (the northern limit of New Brunswick) will be as nearly as possible the same, there being only a difference of one mile in these two routes through this province.

The rocks composing this chain of mountains are granite, various kinds of slates, grauwacke, limestone, sandstone, &c.

5. The fifth and last obstacle to be overcome, and which cannot be avoided by any of the routes, is the mountain range running along the whole course of the river St. Lawrence, in a very irregular line, but at an average distance from it of about 20 miles. It occupies, with its spurs and branches, a large portion of the space between the St. Lawrence and the Restigouche River. The rocks and strata composing the range are of the same character and kind as the Tobique range. The tops of the mountains are as elevated in the one range as in the other.

The exploring parties failed in finding a line through this range to join on to the direct line through New Brunswick, but succeeded in carrying on the Eastern or Bay Chaleurs route, owing to the fortunate intervention of the valley of the Metapédic River.

The line which tried and failed was across from the Trois Pistoles River, by the heads of Green River, and down the Pseudy, or some of the streams in that part, running into the Restigouche River.

A favourable line from the Trois Pistoles was ascertained along the Eagle Lake and Torcadi River, as far as the Rimouski, and it is probable that by ascending this river, and descending the Kedgwick River, this line (route No. 4) could be completed.

But it is most improbable that it could compete in favourable grades with the Metapédia.

It will be allowing it sufficient latitude to suppose it will be equal in engineering merits, and that if accomplished it will give the route No. 4 an apparent advantage of 40 miles in distance.

A very striking characteristic in the geological formation of North America, and which has been noticed in the writings of persons who have described the country, is the tendency of the rock strata to run in parallel ridges in courses north-easterly and south-westerly.

On referring to the General Map No. 1, and confining the attention more particularly to that portion of country east and north of the St. John River, through which any line must pass, this general tendency cannot fail to be remarked.

The river St. Lawrence, the main Restigouche River and intermediate chain of mountains, the Tobique River and mountains, and all the streams in New Brunswick (the main trunk of St. John, and a branch of the Miramichi excepted).

The Cobequid Range, the Bay of Fundy, and the high and rocky range along the Atlantic shore have all this north-east and south-western tendency.

It will be evident, therefore, that any line from the coast of Nova Scotia to the St. Lawrence has a general direction to follow, which is the most unfavourable that could have occurred for it, having to cross all these mountain ranges, streams, and valleys at right angles nearly to their courses.

The lines explored for the direct route through New Brunswick were obliged, on this account, to keep the elevated ground crossing the upper parts of the streams.

By so doing a line was found to the Restigouche, which may be considered just within the limits of practicability, but having very unfavourable summit levels to surmount.

And the peculiar formation of the strata and general course of the valleys and streams renders it most improbable that any further explorations to improve this direct line through New Brunswick would be attended with much success.

Very fortunately for the Eastern line, one of the branches of the north-western Miramichi presented itself as an exception to the general tendency, and enabled that line to reach the coast of the Bay Chaleurs.

The distance across in a direct line from the coast of Nova Scotia to the St. Lawrence has been stated at about 360 miles, forming the difficult and unfavourable portion of the line. When the St. Lawrence mountains are passed, then the tendency of the strata and courses north-easterly and south-westerly becomes as favourable for the remaining 200 miles along that river as it was before adverse.

The general character of the ground between the St. Lawrence River and the mountains, is that of irregular terraces or broad valleys rising one above another by steep short banks, having the appearance as if the river had at some former periods higher levels for its waters.

The streams run along these valleys parallel with the course of the St. Lawrence until, meeting some obstruction, they turn suddenly off and find their way over precipices and falls to the main river.

Having described such of the physical features of the country which form obstacles in the way of the lines under consideration, it is proper next to describe those features and other resources which are advantages, and should be sought for by competing lines.

The geological systems which prevail through the intermediate country to the mountain ranges are the carboniferous and new red sandstone.

They include large deposits of red marl, limestone, gypsum, freestone of excellent quality for building purposes, and extensive beds of coal. Indications of the latter are met with in abundance from the banks of Gay's River (20 miles from Halifax) up to the Restigouche River, and along the shores of the Bay Chaleurs.

Wherever these systems and minerals are found a strong and productive soil, favourable for agricultural pursuits and settlement, is sure to accompany them.

The surface of such a country, too, is generally low or moderately undulating, and therefore the more of such a district that a line can be led through the better for it.