

HALIFAX RAILWAY, AND PUBLIC WORKS IN CANADA. 37

BRITISH
NORTH AMERICA.

the water-shed between the Tobique and Miramichi Rivers, 1205 feet above the sea at the 30½ mile.

The Otella and Beaver Brooks take their rise on this height of land, being tributaries of the Tobique, and the line attains its summit level 1216 feet above the sea, at the small lake which is the source of the Otella, at the 31st mile.

A small ridge divides this lake from the waters of the Beaver Brook, which would have to be cut through.

From this point commences the descent into the valley of the Tobique.

The direct descent by the valley of the Otella, &c., had been found impracticable, the fall being far too rapid.

The most favourable gradient which can be maintained is one of 58 feet per mile, for nine miles, by keeping along the side of the hills as far as the River du Chute, crossing several streams, one of which, that of Beaver Brook, will require heavy bridging.

After crossing the River du Chute, which will also require a heavy bridge, the line descends at a gradient of 15 feet per mile for three miles.

Here it has to cross the valley of the River Wapsky, about two miles wide, which will involve an ascending and descending grade of 66 feet per mile, each one mile, and a bridge 40 feet high across the stream.

This point (C 2 on the plan) is the water-shed between the Wapsky and the Little Gulquac, and the line descends at a gradient of 48 feet per mile for five and a-half miles to the River Tobique by the valley of the Little Gulquac.

The Tobique, which the line crosses at the 50th mile, will require a heavy bridge, 50 or 60 feet high; the river is about 242 feet wide: on the south side the bank is bold, and favourable for bridging; on the north is an interval flat, which will increase the length of the bridge or viaduct to about feet.

After crossing the Tobique, the line, keeping to the westward of that actually explored, ascends for the first five miles at a gradient of about 20 feet to the mile, through a dry level tract of country.

From this the grade increases to 44 feet per mile for three miles to the point E, from which the line ascends by the valley of the west branch of the stream, called the Two Brooks, for four miles, at a grade of about 43 feet per mile.

It continues so ascend at this grade for four miles (to the point (a)), the water-shed between the Tobique and Salmon Rivers, being 12 miles south of the former, and 418 feet above it.

Thence the line keeps westward of the exploratory line, avoiding the high ground crossed by it, following the vallies of the Salmon and Grand Rivers.

The first of these, it is calculated, will involve an ascending and descending grade of 20 feet per mile, each four miles.

The line will ascend to the water-shed between the Grand River and Beaver Brook, a tributary of the Restigouche River, about 920 feet above the sea, by an easy grade of about eight feet per mile.

From this point at the 78½ mile (b on plan), it descends to the Restigouche River by the valley of Beaver Brook.

It is calculated that the first 4½ miles will require a grade of 45 feet to the mile, and thence one of about 24 feet to the Restigouche River, about 11 miles. The whole distance being about 94 miles from the Miramichi Lake.

Other valleys also exist by which it is believed the Restigouche may be reached, after leaving the Tobique valley, and by about the same grades.

The valley of Boston Brook would bring the line to the Restigouche more to the westward; that of Jardine's Brook would carry it more to the eastward and nearer to the valley of the Kedgwick River, which is the only tributary of the Restigouche, by which it is believed a practicable route can be obtained through the highlands between the Restigouche and St. Lawrence Rivers on this general direction.

The tract of country which this line passes through, and would open up north of the River Tobique, is very excellent soil, and offers fine land for settlements.

(Signed)

G. W. W. HENDERSON,
Captain, Royal Engineers.Major W. Robinson, R.E.
&c. &c.

APPENDIX No. 3.

(Sketches attached.)

Report of Mr. Wilkinson.

SIR,

Fredericton, December 31, 1847.

I HAVE the honour to state to you the general results of the exploratory survey in which I have been engaged, under your direction, during the past summer and autumn, with the view to the discovery in part of a line favourable for a railway between Quebec and Halifax. In doing so, I will as much as possible observe the brevity which you desire me to regard as sufficient.

Passing by the subject of preliminary arrangements, and the circumstances which controlled the selection of the lines examined, it will be sufficient to say, that the general object was to