

BRITISH
NORTH AMERICA.

Shubenacadie. The Dartmouth Lakes, the first of the chain, empty themselves into Halifax harbour, being 65 feet above high water, the rise from them to the summit level Lake Charles is only 25 feet, the distance being one mile.

After reaching the northern extremity of Lake William, nine miles from Dartmouth, the line crosses to the eastern shores of Lake Thomas, the next in the chain, and thence by the eastern shores of Lake Fletcher to the Grand Lake.

The western shores of these two lakes are bold and rocky, with deep water. The eastern are easy as respects curvatures, and the water is shallow, should it be necessary to build into them.

The railway will, however, probably interfere with the present line of road.

Should the terminus be in the city of Halifax, the line thence would join one coming from Dartmouth at the northern extremity of Fletcher's Lake, 15 miles from Dartmouth, and 19 from Halifax. The latter would be consequently the longest by four miles.

The summit level in the line from Halifax, between the waters flowing into Halifax Harbour and those falling into the Shubenacadie, is 232 feet above tide-water in the former. The gradients will be consequently more severe.

For the first seven miles after leaving Halifax, the line follows the shores of the Bedford Basin, a portion of Halifax Harbour, which are broken and rocky. To obtain curves of half a mile radius, heavy embankments will be necessary across the deep bays; for the remainder the expense and difficulties will be about the same with the line following the lakes.

After leaving Bedford Basin, the line ascends the valley of the Sackville River for about three miles. On the east side of this valley is the ridge of land separating the Halifax and Shubenacadie waters.

The most favourable point ascertained for crossing this is about $5\frac{1}{4}$ miles from the head of the basin, and is 232 feet above its waters. The heaviest grade involved to reach this will be 43 feet per mile for three miles. It will also involve a heavy embankment, about 700 feet long, between the summit level and the shores of the Long Lake, from which it will descend to the north end of Lake Fletcher, by the valley of the Rawdon River, where it joins the line from Dartmouth.

Between the north end of Fletcher's Lake and the point where the line will strike the Grand Shubenacadie Lake are three ridges projecting into the lake, which will require to be cut through; the two next the Grand Lake being about 30 feet deep. Thence it follows the shore of the Grauk Lake for about three-quarters of a mile. The high land comes out close on the lake, but the water is shallow.

Leaving the lake shore at the $17\frac{1}{2}$ mile it crosses to the west shore of the Gasperean Lake. There is a low ridge between the two which will require cutting.

It will be necessary to carry the line along the shallow water on the west shore of the Gasperean Lake, leaving which it again strikes the shores of the Grand Lake at Sandy Cove, and follows it for half a mile to the outlet of the Shubenacadie River, which flows into the Bay of Fundy.

After leaving the Grand Lake, the line for 19 miles follows the general course of the valley of the Shubenacadie River, as far as the mouth of the Stewiacke River.

About two miles from the Grand Lake, it crosses the Shubenacadie River, and then follows the western side of the valley, which comes in with an easy slope to the river, and offers no obstruction. An embankment of some 8 or 10 feet high will be required across the valley of the Nine-mile River, from which to Barney's Brook, at the 27th mile, the valley is broad and open, and nearly flat, and thence for a mile it will be on the level margin of the river.

At this place, Black-rock Point, the land runs out high upon the river on both sides. A cutting will be necessary on the eastern side, about 30 feet deep, and a quarter of a mile long.

The rock being plaster of Paris, with a covering of clay, it will be easily quarried. The line then crosses the river, the valley of which is crooked below this point, and passes through the highland on the western side by a grade of about 30 feet per mile, for less than a mile, and thence descends into a broad flat.

Between this and the mouth of the Stewiacke River it crosses the Shubenacadie twice; the ground offers no obstructions, except an embankment, which will be required at the 31st mile, about 6 feet high, for one mile, where the line crosses the broad marshes of the Shubenacadie, which are flooded by high freshets.

Between the crossing of the Stewiacke River, about 38 miles from Dartmouth, and the head of Truro mill-stream at the 50th mile, which is the water-shed of the Truro and Shubenacadie waters (145 feet above high-water at Halifax), there will be several cuttings of from 15 to 20 feet deep, so that none of the gradients may exceed 40 feet in the mile, and these will be short.

From the 50th mile the line descends by the valley of the Truro mill-stream, by an easy grade of about 17 feet per mile, to the village of Truro, at the 55th mile, which it will pass about a quarter of a mile to the westward, and cross the head of the Cobequid Bay by a bridge which will require to be about 500 feet long. From thence it commences the ascent of the range of hills known as the Cobequid Hills, which run north-east and south-west, nearly parallel with the bay, and directly across the line of the railway.

The rock formation through which the first portion of the line passes ceases at the Grand Lake; from thence to Truro the country, generally speaking, is of a fertile description, the hills being composed of a strong clay, with here and there limestone and gypsum rocks. The soil of the fertile valley in which Truro is situated, as well as the shores of the Cobequid Bay, is red sandstone.

After crossing the head of the Cobequid Bay the line passes along the southern slope of the