

By this route the summit is passed at a distance of 56 miles 13 chains from Saint John, and at an elevation of 150 feet above high water.

§ 9. For a short distance, as already observed, the descent is thence at a rate of 22 feet per mile, and afterwards at the uniform rate of 5 feet per mile, to opposite Hayward's Mills, distant 63 miles 56 chains from Saint John. From thence by a nearly uniform descent of 6 feet per mile, the Line passes Steves' Mill at 66 miles 62 chains, and Steves' Tavern at 69 miles from Saint John.

§ 10. After first touching the Petitcodiac River, the course of the Line will require mature consideration, and will be governed by the result of the Survey of the River. It was a prevailing opinion among the more intelligent inhabitants, that the Table Land on the north side of the Petitcodiac would prove to be favourable. Its general appearance so far sustained this opinion that the fact could be determined only by actual examination.

The chief advantage of this route would be to avoid contact with the Petitcodiac River. A thorough exploration and section were therefore made, the general results of which are as follow :

From Steves' the section presents a series of ascending and descending inclinations, varying from 5 to 25 feet per mile to the Fredericton Road near Pitfield's, at a distance of 77 miles 21 chains from Saint John.

From thence the inclinations vary from 12 to 78 feet per mile, to Hall's Stream, at the distance of 90 miles 22 chains from Saint John; and from thence by inclinations varying from 4 feet to 53 feet per mile, to Milne's Point, Shediac Harbour, distant 105 miles 20 chains from Saint John.

These unfavourable gradients proved not only the necessity of a survey of the immediate Valley of the Petitcodiac River, but also of a thorough re-exploration of the ground between the Bend and Shediac.

§ 11. Two other variations of route between the latter were therefore surveyed and levelled; and thus a comparison of three routes was obtained, each terminating near the mouth of Hall's Stream, at the Bend, and at Milne's Point at Shediac. The courses of these routes will be more easily understood by a glance at the Map than by much description.

The following is a brief summary of their respective merits:

	Distance from Bend to Shediac.	Maximum Gradient.	
		Eastward.	Westward.
1. Mill Stream and direct Route	15 m. 30 c.	38 ft. per m.	53 ft. per m.
2. Babineau Marsh and Scadouck Route,	16 miles.	86 "	30 "
3. Mill Stream and Scadouck Route,	16 m. 54 c.	23 "	30 "

It is probable that a fourth route by way of the Valley of