

The bill of works and estimates herewith shew that the cost of construction would be about the same on each line.

Both lines could be extended westward to any point on the original line between the Assiniboine and the Saskatchewan at an average cost something less than on the sections above described.

Considered as a line for through traffic, the north-western line for the first 100 miles has the advantage of maximum gradients for traffic, eastwards of 42 feet per mile against 53 feet on the southern line. There will, however, be a gradient rising eastward from the Assiniboine on the northern line, which will be avoided on the other, but this is not expected to be heavy, probably it will be under 30 feet to the mile.

The northern line will also have the advantage for through traffic in being 10 to 15 miles shorter than the other if carried to the north of the Touchwood Hills. This, however, would be neutralized to some extent, if the line were carried as direct as practicable from the mouth of the Qu'Appelle to the elbow of the North Saskatchewan, Caerlaverock or any point further south. But I do not think it would be expedient to carry the line south of the Touchwood Hills, though the cost of construction would be moderate, more than one half the distance between the mouth of the Qu'Appelle and Battleford would be over a very poor and almost desert country of sand, gravel and boulders strongly impregnated with alkali.

The continuation of the line north-westward from the mouth of Qu'Appelle would, for the first 20 miles be over poor sandy soil, after which it would improve, and from the White Sand River to the telegraph line is a rolling park-like country with numerous lakelets and groves of poplar. The soil is generally very good.

The projected extension of the northern line is shown on the plan by the dotted line G. I. J ; it is probable, however, that the gradients on this line in crossing the valley of Shell River would be steep and the work heavy. Both of those defects can be avoided by carrying the line on the course F. H. J.

This would take us 10 to 15 miles north of the broad brown dotted line shewing the approximate centre of the fertile belt and close to the foot of Duck Mountain, on which the land is poor, but it would have the advantage of being so much nearer the forests of spruce and tamarac in which saw mills are being built.

The great drawback to settlement hitherto has been the difficulty of getting lumber for building purposes.

Should this northern line be adopted, I have projected a line diverging from a point near the 8th mile and taking a south-west course which strikes the Valley of the Assiniboine at a point a little above the Grand Rapids. This would be about 33 miles in length, across a plain of rich land on which there are a number of settlements, and construction would be very easy. It is on a direct course to the coal fields of the Souris.