

located by Messrs. Spofford and Burpee, 136 miles; from Mattawamkeag to Macadam Junction, by European and North American Railway, 62 miles; from Macadam Junction to St. John, by the St. John and Maine Railway, 85 miles. Total distance to St. John *via* Sherbrooke, according to those official documents, 494 miles, out of which there are 216 miles of a new line to be built, namely, 80 miles from Chambly to Lennoxville, and 136 miles from Moosehead River to Mattawamkeag. To the same place on the location proposed by Mr. Light, the combination line, we find the following figures: from Montreal to Chaudière Junction by the North Shore Railway, 172 miles; from Chaudière Junction to Canterbury, 216 miles; from Canterbury to St. John, by the St. John and Maine Railway, 91 miles; making a total distance from Montreal to St. John, by the combination line, of 479 miles, out of which there are 216 miles of new line to be built from Chaudière to Canterbury, the same as in the line to St. Andrews.

From Montreal to Halifax *via* the Sherbrooke line, the distances are as follows: from Montreal to St. Lambert, 22 miles; from St. Lambert to Chambly, *via* the Montreal, Portland and Boston Railway, 20 miles; from Chambly to Lennoxville, 80 miles; from Lennoxville to Moosehead River, *via* the International, 89 miles; from Moosehead River to Mattawamkeag, the Spofford and Burpee location, 136 miles; from Mattawamkeag to Macadam Junction, by the European and North American Railway, 62 miles; from the Macadam Junction to Harvey, by the St. John and Maine Railway, 19 miles; from Harvey to Fredericton, unsurveyed, 18 miles; from Fredericton to Salisbury, unsurveyed, 95 miles; from Salisbury to Halifax, by the International, 201 miles; total, 742 miles, out of which there are 329 miles to be built, namely, from Chambly to Lennoxville, 80 miles; from Moosehead River to Mattawamkeag, 136 miles; from Harvey to Fredericton, 18 miles; from Fredericton to Salisbury, 95 miles. Let us take the same localities, Montreal to Halifax, by the combination line: from Montreal to Chaudière Junction, 172 miles, by the North Shore Railway; from Chaudière Junction to Canterbury, passing by Lake Chesuncook, 216 miles; from Canterbury to Fredericton, a portion of the link that has not been surveyed, 40 miles; from Fredericton to Salisbury, not surveyed, 85 miles; from Salisbury to Halifax, by the Intercolonial, 201; total, 724 miles, out of which 351 miles of new line will have to be built, namely, 216 from Chaudière Junction to Canterbury; 40 from Canterbury to Fredericton; and 95 from Fredericton to Salisbury. The distances which I have given compare as follows: to St. Andrews there is a difference of two miles in favor of the combination line, to St. John 15 miles and to Halifax, 18 miles. This is taking the best view possible of the line through Sherbrooke, because I have taken the new links that are proposed to be built.

If, in order to go to Halifax, instead of using the link from Harvey to Salisbury, it was proposed to use the Intercolonial Railway from St. John to Halifax, the line would be 28 miles longer still, as follows: 66 miles from Harvey to St. John, by the St. John and Maine Railway, and 75 miles by the Intercolonial Railway, from St. John to Salisbury, making 141 miles, against 113 miles from Harvey to Salisbury, by the new line; making 770 miles to Halifax by the Sherbrooke line. I do not, however, want to give that disadvantage to the Sherbrooke line, because I suppose that the new links will be built to shorten the distance.

So much for the absolute distances and lengths of the two lines proposed. Let us now come to the other points to be considered, and the comparison is still more in favor of the combination line. Great stress has been put by the hon. member for Sherbrooke (Mr. Hall) and the hon. member for Stanstead (Mr. Colby) on what they call the air line. They take the map and say: Is not that line shorter, when you go straight, than when you have to go round. That would be very well, if a line of

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railway could be built as the crow flies, but, unfortunately, railway trains do not fly. They have to follow the ground as it is, and it is much more difficult to divert vertically from the straight line than to divert laterally. These gentlemen always speak of a straight line laterally, and they say: Your line will divert laterally from the straight line; but they do not state that their line will have to diverge vertically from the straight line, and that is worse. It will have to overcome an extra summit of 950 feet more than the combination line, making, according to railway authorities, a difference of 47½ miles, at the rate of a mile for each 20 feet of extra summit to be overcome. I have already quoted Mr. Burpee's report, which is to be found at page 40 of the Blue Book, and some of the reports I have had since show that it is worse than that. The difference of the summits to be overcome would be, not 950 feet, but 1,152 feet, which would make the additional length 57½ miles for the line by Sherbrooke instead of 47½ miles. I am not going to insist very much on that; I am only refuting the argument of those hon. gentlemen. I say we are not in a position to judge. The Government should have given a complete tabular statement of the grades and curves and summits, of the heights to be overcome, and even the computation of the railway engineers, of the length on each line, taking into consideration the practical lengthening of each line due to the grades and curves and summits to be overcome. We do not know exactly the comparative length of each line. That should have been given, but we are left in the dark. We have the maximum grades and curves, but the maximum may be realised in one line only once, and in another line it may be realised a hundred times.

Another very important fact which must not be forgotten is this: Supposing there is the same summit to be overcome—but in one line it is to be overcome once and in the other twice—it makes all the difference in the world, because it stands to common sense that when a railway train has gone down a very heavy grade, the power lost is not accumulated for ascending the other grade which must be ascended. It is lost for all practical purposes. Those gentlemen have been insisting very much upon the examination of the map. If we judge by the two lines on the map, it is their condemnation. If we look at the country to be traversed by each line, we find that the line through Sherbrooke crosses the mountain diagonally, whereas the combination line crosses the chains of mountains longitudinally, which makes a great difference. It is not proposed to cross all these mountains with tunnels. The summits of these mountains must be overcome by lengthening the distance to be passed. So the map itself is a condemnation of the line advocated by those gentlemen, unless they are going to cross by tunnels everywhere, in order to have an air line. This shows that their mode of calculation is misleading, and cannot be taken into consideration in making a practical decision.

Again, if we are to pass through American territory, it must be admitted on all hands that we should try to have the shortest possible distance crossing that territory. The combination line has 40 miles less of American territory to traverse than the line passing through Sherbrooke.

The line through Sherbrooke leaves aside the eastern part of the Province of Quebec, east from Montreal. All the benefits supposed to be derived from the Canadian Pacific Railway for the heavy expenditure which had been incurred for that road are going to be lost for all the eastern portion of the Province of Quebec if we allow the line to be constructed through Sherbrooke; whereas if we adopt the combination line, all these advantages will be much greater, not only for Quebec, but for Three Rivers, and all the other localities on the north shore of the St. Lawrence.

Another strong objection, to my mind, against the Sherbrooke line, is that it is sure to be tapped by American lines at Mattawamkeag, as will be seen by looking at the map. From Mattawamkeag to Bangor there is already a