

Total rise and fall on the Stanstead route, from the point of divergence to the Hatley Gulf, a point at which Mr. Sill's survey commences, according to Mr. Vining's survey ... 506 do.
 Total rise and fall on the portion of the route as surveyed by Mr. Sill, from Hatley Gulf to the Province Line ... 480 do.
 Add to this the rise from the Province Line to Island Pond, assuming, as stated by Mr. Gilbert, that there will be no falling grade, ... 158 do.
 The aggregate rise and fall on the Stanstead route, will be equal to 1144 do.

From this statement, it will be observed that, though the Summit on the Stanstead route, is 191 feet less than that on the Western Coaticooke, yet in consequence of the unfavorable ground for an economical distribution of grades, the total ascending grade exceeds that of the Western Coaticooke by 37 feet.

According to comparison made as to the lengths of ascending and descending gradients on each route, the results arrived at are as follows:—

The total length of ascending and descending grades on the Western Coaticooke route, is ... 28 miles 2860 feet.
 On the Stanstead route, the total length of ascending and descending grades, is ... 46 miles 1620 feet.

Showing clearly that on the Stanstead route the extent of level grades is much less, in proportion to the distance, than on the Western Coaticooke.

I must repeat however that some alterations might arise in the foregoing calculations owing to the imperfect data afforded by the Stanstead deputation, but no material improvement could, in my opinion, be made except by a very objectionable increase in the distance.

From a careful examination of the whole subject, I have no hesitation in summing up the matter in the following manner:—

1st.—That the route proposed by the Stanstead Deputation cannot be constructed without considerably increasing the distance from the point of divergence to Island Pond.

2nd.—That the increased length of 45 feet grades added to the difficulty which exists in securing their economical distribution will increase the expense of working the road considerably, and

3rd.—That the original cost of constructing the proposed route will not, in my opinion be less per mile than that of the route already located.

I have the honor to be,

Sir,

Your obedient servant,

C. S. GZOWSKI,

Chief Engineer.

To A. C. WEBSTER, Esq., Secretary.

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