

would have been very light, and would have proved very generally uniform and continuous. The passage, however, for these united rivers, through the Cascade Range is so extremely contracted that it would be a matter of great difficulty to find sufficient space for a railway through the remarkably narrow and rock-bound gorge cleft through the mountain."

We may consider this opinion as sealing not only the fate of these routes, but the doom of New Westminster and Burrard Inlet as the Pacific terminus. In the Report of 1872 Mr. Fleming seemed to anticipate no such difficulties, for he said, "The next important consideration is the establishment of the Railway route from Tête Jaune Cache to the Pacific Coast."

"It has already been mentioned that there will be no difficulty in building a railway with very favourable grades from Tête Jaune Cache to Kamloops. From Kamloops a survey has been made to Burrard Inlet, (the harbour of New Westminster,) except about seventy miles on the extreme western end of the line, and on the latter section no serious difficulties are believed to exist. This survey shows that a practicable line with favourable grades may be had, although the cost, particularly along the cañons of the Lower Fraser River, will be considerably above an average."

It was on such suppositions, the reliability of which has been so early disproved, that a contract was made with the Canadian Pacific R. R. Co., and that England was asked to lend \$150,000,000. Fortunately England would not lend, and the road is not yet begun. Such experience may well teach that delays are not always dangerous.

The next harbor on the coast is at the bottom of Howe's Sound, and from it a route has been surveyed which would cross the Fraser about 30 miles above Lytton, and join the previous routes on the North Thompson; but all thought of the adoption of this has been abandoned on account of frequent and

great changes in level: and therefore the engineer's hopes seem to turn to Waddington Harbor, at the head of Bute Inlet, as the terminus.

Burrard and Howe's Inlets are good harbours, and near the San Juan de Fuca straits, by which vessels will enter the Straits of Georgia from the Pacific, and it is to be regretted, therefore, that they are not as accessible from landward. The mouth of Bute Inlet is 100 miles further north, and the Inlet itself 45 miles deep, which will add seriously to the sea voyage of ships making the railway terminus: but should it be ever deemed advisable to bridge the Straits of Georgia, and make the splendid harbour of Esquimaux or the Alberni canal on Vancouver Island the terminus, Bute Inlet must necessarily be reached; for between its mouth and Vancouver Island lies the Island of Valdes, which so nearly closes the channel that the longest gap to be spanned is only 1350 feet. Nevertheless, though practicable, the bridging of the straits would, as may be judged from the following extracts from Mr. Fleming's report, be so costly as not likely to be undertaken till our Pacific Railroad has monopolised the whole trade of Asia.

"For a distance of about 50 miles from Waddington Harbour, the only course for the line is to follow the base of the high rocky mountains which extend along Bute Inlet. On this section a great number of tunnels, varying from 100 to 3,000 feet in length, through bluff rocky points, would be indispensable and the work generally, even with unusually sharp curvature, would be very heavy.

Careful examination has established the fact that to reach Vancouver Island from the mainland the following clear span bridges will be required:

At Arran Rapids.....	clear span 1100 feet.
Carder's Channel,	
first opening.....	" 1350 "
second opening.....	" 1140 "
third opening.....	" 640 "
Middle Channel.....	" 1100 "
Seymour Narrows,	
first opening.....	clear span 1200 feet.
second opening.....	" 1350 "

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