

Moeraki to Dunedin.

* A reconnaissance survey has been made by Mr. Blair, whose report is annexed.

* See Enclosure No. 2.

Dunedin to Clutha.

The works for 5½ miles from Dunedin have been let to Mr. A. J. Smyth, who is carrying out his contract with energy. The grading and bridging are complete, the tunnel only being unfinished. The length of the latter is 946 yards, of which 570 yards are done. The material met with has been a soft sandstone, very favorable for tunnel work.

The next section of 34½ miles has been let to Messrs. John Brogden and Sons.

The work at the Clutha end, 10½ miles long, was let in August last, but the contractor having failed, it was let again in March to Messrs. Blair and Watson, at an advance of thirty per cent. on the first contract. The new contractors are making good progress with their work.

Invercargill to Mataura.

The contract for this line has been let to Messrs. John Brogden and Sons.

Popotuna to Clyde.

At the request of the inhabitants, the work on the Tuapeka branch was suspended, and a reconnaissance survey undertaken, to examine the country between the Invercargill line at Popotuna and Clyde. Mr. Millar, to whom this is intrusted, has not yet reported on it, but I expect shortly to receive his report.

Winton to Kingston.

Surveys have been made to avoid the two crossings of the Oreti River, which were intended in the first surveys, and comparative estimates are being prepared. Sixteen miles of contract survey are ready, and the rest in hand.

Moeraki Jetty.

The materials for this jetty were purchased by the Provincial Government of Otago and transferred to the General Government. The erection is being done by contract, under the superintendence of Mr. Barr, the Provincial Engineer.

The Hon. the Minister for Public Works.

JOHN CARRUTHERS,
Engineer-in-Chief.

Enclosure 1 in No. 1.

REPORT ON THE EXTENSION SURVEY OF THE AUCKLAND AND MERCER RAILWAY.

Mr. J. STEWART to Mr. J. CARRUTHERS.

SIR,—

Auckland, 4th June, 1872.

I have the honor to report that, in pursuance of the directions contained in a minute by the Engineer-in-Chief, of date 16th April last, I proceeded on the 22nd ultimo to Waikato, for the purpose of examining as to which of the frontier settlements there seem most suitable, for the purpose of directing the line of survey, for railway extension.

Regarding the general route from Mercer as far as Ngauwahia, I believe no question can arise,—the proper right bank of the river being the natural line. In detail, for a length of sixteen or eighteen miles between Whangamarino and Rangiriri, two courses may be chosen from—a westerly one by the river bank, or an easterly one inland of the broken range of hills over which the coach road is taken. Both routes are swampy, and of about the same length. The easterly or inland one seems to me preferable, and would in general pass along the ends of the spurs of the hills as they border the Whangamarino swamps; the elevation of these at this line of route being amply sufficient to afford a surface line and good drainage, while the route by the river banks is so low as to be always for a great length flooded by the risings of the river.

In a distance of eleven miles from Rangiriri to the Taupiri Gorge, I believe only one cutting, and that of moderate dimensions, will be found, and only a few small swamps; about ten miles of this length would be mere ditching and forming over plains a few feet above flood level. In Taupiri Gorge also the line is much easier than I had anticipated. It will be of much the same character of works as from Mercer to Whangamarino, namely, cuttings through a succession of spurs crowding on the coach road, and a general difficulty to get room for both. Strong and close fencing would be necessary at both these places between the road and river, to prevent cattle or horses shying and getting over the banks. The bridges are easy on this part, and under the average of those on the line north of Mercer. On the whole, I feel it safe to say that an easier forty miles of railway construction will not be found in New Zealand than from Mercer to Ngauwahia.

From Ngauwahia southwards, the route is necessarily determined in a great measure by the main question of the most suitable place at which to terminate. The frontier settlements are three in number, namely, Cambridge, Kihikihi, and Alexandra. I understand by the term most suitable frontier, in the first place, the position most suitable for future extension into the interior, and in the second place, one that will serve well the wants of the present settlements by running the line to it.

I was very soon satisfied that if the line was taken to Alexandra, it could only be with the view of being hereafter extended over the frontier by way of Kihikihi and Orakau, as however inviting the valley of the Upper Waipa is for railway making—so far as excellence of soil, ease of construction, a certainty of carrying a great population in future, is concerned—the Rangitoto Ranges blending with those of the Upper Mokau, present a barrier against extension towards Taupo far too formidable to think of when easier routes are available. No doubt the immense district of good land lying between Alexandra and Kawhia will eventually want a railway, but it will be a branch and not the main trunk