

progress has been made. Some 6 ft. or 8 ft. have been driven by an Australian miner named O'Donohue, who is going ahead by putting in solid sets one after the other of 9 in. timber in a box form. It is certainly a little more hopeful than before, but still it is hard to say what the final result will be. As he gets further in from the end of the brickwork there seems to be less water. I will report further progress as soon as anything occurs.

CHAS. R. VICKERMAN, Resident Engineer.

Public Works Office, Auckland, 21st February, 1894.

EXHIBIT NO. 27.

Resident Engineer, Auckland,—

Wellington, 2nd March, 1894.

Re MAKARAU TUNNEL.—I am glad to receive the more hopeful intelligence *re* above referred to in your memorandum of 20th ultimo (44/501).

As regards your memorandum of 27th January (44/398) on the same subject, the Engineer-in-Chief minuted the same as follows, viz.: "After standing over an exceptionally wet winter and spring, I do not think that any further damage to the tunnel can result from delay in proceeding with the drive, and so long as the works remain in the hands of contractors it would not be advisable to send any person to advise or instruct them in the management of their works in the tunnel or other parts of the contract, which would in effect be releasing the contractors from the responsibility devolving upon them under the contract."

H. J. H. BLOW,
Under-Secretary for Public Works.

EXHIBIT No. 28.

MEMORANDUM for the ENGINEER-IN-CHIEF.

MAKARAU CONTRACT TUNNEL (Helensville Northwards Railway).—Mr. Witheridge came to my house on Monday night, 28th, having left tunnel at two that afternoon, and stated that the side walls of tunnel, from 44 miles 42 chains to 44 miles 44 chains, or through the clay country, had started on the 26th moving inwards, and in one place had come in about 12 in. on the two sides. This began on the 26th, continued on the 27th, and on the 28th was so bad that he immediately started contractors to timber across with longitudinals at footing, and cross-props every 6 ft. or 8 ft. It is evident that the water and air had reduced what appeared to be an excellent foundation of indurated sea-mud or clay to a very soft mass, and that nothing but an invert would prevent the tunnel collapsing. So I ordered him to have it securely timbered right up to face. Put in the short length (just got ready), 44 miles 44 chains 12 links to 44 miles 44 chains 20 links, with four rings and invert of same, and then start back and put in a 14 in. invert as far back as both sides had shifted, and then a 9 in. invert where one side only had moved. This to be done in short lengths, and with walls securely cross-timbered.

From this I gather that the cracks which we have already noticed are rather from the foundation yielding by spewing inwards than from the weight overhead, although, no doubt, this is very great. So that we shall continue to put in four rings and invert of the same from 44 miles 44 chains 20 links onwards, unless some further change takes place.

CHAS. R. VICKERMAN, Assistant Engineer.

Public Works Department, Auckland, 29th September, 1891.

EXHIBIT No. 29.

ANSWERS by PETITIONER to Mr. WRIGHT's Questions as to State of Account at Time of Petitioner asking to be relieved of his Contract.

	£
Amount expended on contract	27,000
Amount received and due for detention	23,000
Amount of bond	1,500
Amount expended since	(about) 37,500
Amount received	(about) 30,600

EXHIBIT No. 30.

REPORT by the ENGINEER-IN-CHIEF.

Hon. Minister for Public Works.

WITH regard to the matters referred to in this petition it may be remarked—

1. That the petitioners did tender for and entered into a contract on the 26th February, 1890, for the construction of a section of the Helensville Northwards Railway, known as the Makarau Contract, the amount of contract being £26,616, and the date for the completion of the whole of the works the 1st March, 1892.

2. In the works to be executed under this contract there is the construction of a railway-tunnel 28½ chains in length, which is an important part of the works contracted for, though not the principal part in extent and value.

3. The statement that prior to calling for tenders for the contract the Government caused borings to be made to ascertain the nature of the ground through which the tunnel would pass on