

Enclosure 3 in Appendix I.

REPORT ON WATER-RACES.

SIR,—

Public Works Office, Greymouth, 31st March, 1882.

I have the honor to report as follows upon the water-races in the Westland District for the financial year 1881–82. The water-races in question are—

Nelson South-West Gold Fields—

Four-Mile Water-race, Charleston District.

Nelson Creek Water-race, Grey Valley District.

Westland Gold Fields—

New River Water-race, Marsden District.

Hibernian Water-race, Marsden District.

Hohonu Water-race, Greenstone District.

Waimea Water-race, Waimea District.

Waimea Extension to Kumara, Kumara District.

Kanieri Lake Water-race, Hokitika District.

Mikonui Water-race, Totara District.

Four-Mile Water-race.—The maintenance of this race during the financial year has cost £478, £280 has also been expended by Mines Department in repairing the dam, which burst on the 11th May, 1881.

The scheme of improvement of the Argyle Race property, referred to in former reports, has been put actively in hand. A contract for the tunnel deviation of the race, known as Section No. 1, has been let, and the work is being pushed ahead by the contractors.

The improvement of the supply races is also going on as rapidly as possible, and I anticipate that by the end of the year at latest the improvements will all be completed, and a considerable increase in revenue, together with a saving in working expenses, will be the result.

Nelson Creek Water-race.—Length, 16 miles 24 chains; capacity, 60 statute heads. The maintenance of this race has cost £1,356 during the financial year. No construction-works have been done.

There are upon this race several large bridges which are now beginning to require very extensive repairs, and these repairs will be increasing year by year. It therefore becomes a very serious question what is to be done in the matter, as the restoration of all these structures will cost nearly £30,000, and it is very questionable whether the prospects of the race are such as to justify this expenditure.

Having an investigation of the matter now in hand, I find, however, that by deviating the race from its present course it can ultimately be brought upon most of the ground commanded by the present race at a cost of about £20,000. It also appears that, by constructing a branch race, at a cost of about £10,000 to the Ahaura River, much new and payable ground will be commanded, and the prospects of the race much improved. Although not prepared to propose a definite scheme at the present moment, I hope to be able to do so soon, and am strongly inclined to think that the prospects of this race are not nearly so bad as they might at first sight appear to be, in view of the large capital (£90,000) sunk in it, and the comparatively-small returns hitherto received.

New River, Hibernian, and Hohonu Water-races.—These water-races were subsidized by the Government many years ago, but have been abandoned by the promoters.

Waimea Water-race.—Length of main race, 16 miles 4 chains; capacity, 40 statute-heads; length of branch race near Goldsbrough, 59 chains; capacity, 30 statute-heads. No construction-works have been done on this race during year, but a small extension of the branch race is about to be put in hand. Maintenance of race is defrayed by Gold Fields Department. It cost £1,215 during last year.

Waimea Water-race: Extension to Kumara.—Length of main distribution race, 3 miles 1 chain; capacity, 50 statute-heads. Total length of branch distribution races, 4 miles 4 chains; capacity, varying from 5 to 50 statute-heads. Supply race from Kawhaka Creek: Length, 4 miles 60 chains; capacity, 30 statute-heads.

The cost of ordinary maintenance and management of these races during the year has been £1,593, but a sum of £1,100 has also been spent on extraordinary repairs of damages caused by flood in March, 1881.

The main distribution race at Kumara is being enlarged, with the view of improving the revenue by the sale of flood-waters. This increased capacity will be a great benefit to the miners, and the control of a large body of water, even though only available occasionally, will much facilitate the use of the sludge-channel.

During the year the sludge-channel has been completed, and is now in full working order.

The dam in Kapitea Valley, near the Loop Line Road, has not yet been proceeded with. It is a work of considerable importance, as without it the existing population at Kumara can scarcely be retained, and many of the costly preparations made by the miners, evidently on the faith of its being made, would be useless. It is the necessary counterpart of the sludge-channel, as without it the full capacity of that costly work cannot be realized; and, as the sludge-channel is also a perishable work, the desirability of sluicing as much material through it as possible before the timber lining decays, say, six or seven years hence, is evident.

Kanieri Lake Water-race.—This, like the New River and other water-races mentioned above, was a subsidized work, and has been abandoned by its promoters.

Mikonui Water-race.—Main race: Length, surveyed, 16 miles 40 chains; proposed capacity, 40 statute-heads. Branch race and supply-pipe to Ross: Length surveyed, 60 chains; proposed capacity, 20 statute-heads.

The three contracts in progress at end of last year have been completed, and two more have been let since, and are now in progress. These contracts have all been for tunnelling between Donnelly's Creek and Ross. The total length of race constructed and under contract is 1 mile 61 chains.