

from this inwards, supplemented by the reservoir, was turned on to the mines on the 16th August. The sod-work done in widening the race from the reservoir has stood the winter very well, preventing but little of the high sidelings from coming away, enabling this portion of the race to be cleaned out at a small cost compared with previous expenditure. From the reservoir upwards to Hill's Creek I gave it a heavy side-trimming: this was done so as to carry as much water as possible in order to make the most of that stored in the reservoir when the dry season set in. Owing to the scarcity of labour I was unable to finish the cleaning-out of the race until the 10th October.

Up to the 28th September the weather was very dry, with continuous frost at night. On this date the weather broke and continued rough and wintry, with a phenomenally wet season and several falls of snow on the range, until the first week in February, when dry weather set in with occasional days of extreme heat, continuing dry, with the exception of a few heavy showers of rain during the latter half of March.

The number of days on which no water was supplied to the miners was: Widening race, forty; Christmas holidays, two; New Year, one; Good Friday, one; winter, fifty-five: a total of ninety-nine days. The time lost in widening the race, and the reduction from the 15th January of one-third in the price per head of water, more than account for the difference in revenue of this compared with that of last year.

There has been a sufficient supply of water during the year to meet all the demand for day water; although four more elevating claims than those at work last year have been supplied, the amount stored in the reservoir enabling this to be done.

As almost all the payable ground commanded by the Government head race (where fall could be got for ground-sluicing) is worked out, the principal workings are carried on by hydraulic elevating in the flat beds of the creeks. The principal scene of operations is main or Hogburn Gully, in which there are eleven of these plants at work. There are also three in Enterprise and two in Coal-pit Gullies, making a total of sixteen in all, thirteen of which are supplied with water from the Government race. I believe all the claims are doing fairly well.

With the exception of three breaks in the race during the year—one of which, on account of the scarcity of labour, took eleven days to build up—the race has been kept in a good state of repair by the maintenance men. No new ground has been opened up in the district other than extending downwards along the already known creek-flats.

BLACKSTONE HILL WATER-RACE.

The total sales of water from this race during the year amounted to £91 15s. The total cash received was £88. The total cost of maintenance and repairs was £14. The approximate quantity of gold obtained was 120 oz., valued at £462. The average number of miners supplied with water from this race during the year was 4·27.

The race, having become so full of bottom-weed and side-growth from the falls to Blue Gully, had to be cleaned out in January, with other slight repairs in February and March. I expected to have had the remaining portion (from Blue Gully to where it crosses the Mount Ida Water-race) done before the end of March, but owing to the scarcity of labour this could not be effected. I need five or six men to do what is chiefly required—a good side-trimming. It would take a lesser number too long, and thus keep the claims of R. Johnstone and C. Rose too long idle for the want of water. The race is still capable of carrying a sufficient quantity to supply them. G. Martin ceased to take water in October; only R. Johnstone and C. Rose are now being supplied.

I have, &c.,
R. MURRAY, Manager.

WATER-CONSERVATION.

Mr. T. PERHAM, A.M.Inst.C.E., to the UNDER-SECRETARY for MINES, Wellington.

SIR,—

Mines Department, Wellington, 6th June, 1901.

I have the honour to forward my fourth annual report, for the year ending the 31st March, 1901.

NORTH ISLAND.

Domestic Water-supplies, Thames-Hauraki Goldfields.

The Ohinemuri County Council submitted plans, specifications, and estimates to the department for a domestic water-supply for Mackaytown. They were revised and approved, and are now being carried out, with minor extensions since authorised in consequence of the necessity of providing for numerous new dwellings, principally constructed by the mine-workers from Karangahake, where suitable land for private residences is very limited. A subsidy of £1 for £1 has been granted for this work, to the extent of £351 on a total expenditure of £702.

Other domestic water-supplies initiated and now completed by the Ohinemuri County Council are Karangahake, Waitekauri, and Waihi. The two former have been examined, and, as temporary supplies both for the suppression of fire and domestic purpose—considering the sizes of the mains and storage-tanks, together with the raised elevations of reticulation—were found satisfactory, and approved, pound-for-pound subsidies have been paid to the extent of £607 6s. 5d. for Karangahake, and £445 2s. 5d. for Waitekauri; total, £1,052 8s. 10d.

An application for assistance towards the cost of the Waihi supply was refused on account of the doubtful purity of the water, and insufficient elevation of the intake for fire-extinction purposes. The temporary supply laid down by the Council is now quite inadequate to the requirements of this rapidly growing township, and a better and more permanent supply is greatly needed. With this object in view, an application has been made to the department to proclaim a reserve of 115 acres