KUMARA WATER-RACE.

The total sales of water from this race during the year amounted to £4,106 11s. 3d., and the expenditure on maintenance for the same period was £1,943 8s. 7d., leaving a profit over working-expenses of £2,163 2s. 8d. The average number of miners using water from this race was 101, and the approximate quantity of gold obtained was 6,045oz., valued at £23,575 10s. Royalty to the value of £24 8s. 10d. was collected on timber cut on the Reservoir Reserve during the year.

Besides the sales of water above referred to, water to the value of £1,129 19s. 4d. was supplied to claims having a succession of poor washings, and water to the value of £332 15s. was given as assistance towards the construction of No. 4 channel. In all cases where assistance was given to poor claims, the yield of gold and the expenses connected with the production of the same was fully inquired into.

The total value of water supplied from this race during the year was £5,569 5s. 7d., exclusive of water for flushing, washing down and fire purposes, leakage, and waste.

For four working-days no water was supplied from this race for sluicing, and for forty days there was no water for the channels owing to dry weather. Besides the above, the miners observed eighteen days as holidays during the year.

One claim has been worked out during the year, using eight sluice-heads of water; and one claim has ceased sluicing, owing to poor washings, using twelve sluice-heads of water: making twenty sluice-heads in all. Some of the claims had to cease work for a few months during the year, owing to the difficulties in connection with closing the old Larrikins Road, and this to a large extent will account for the decrease in the sales of water and in the yield of gold.

During the past year water was lost over the dams on seventy-three separate days, and during that time the total quantity of water lost would have given a full supply to the field for 83½ days if it could have been impounded.

Considerable repairs were necessary during the year on the head race tunnel, and a large number of intermediate sets had to be put in to render the tunnel safe. A portion of the Kumara race in earthwork gave way on account of the settlement of the old worked ground underlying it, and this had to be replaced by fluming. Besides the above, repairs had to be made on many portions of the race to maintain it in a good and efficient state.

The 30in.-syphons have required constant attention and repair during the year, and it has been necessary to use large numbers of new iron pipes to replace those that were beyond repair. The whole of the steel syphons now in use will require to be rearranged and renewed at once, as the expense of keeping them in a fit state for carrying water is becoming too great.

KAPITEA HILL RACE.

This race has not been extended during the year, and a portion of the water now being used in No. 4 main tail-race is now being supplied from it, but an extension of 8 or 10 chains will be necessary before water can be supplied to No. 5 main tail-race.

NARDOO FLAT SYPHON.

There is no water now being supplied from the Government race to any of the claims on Nardoo Flat, and the syphon leading thereto, which is in a good condition, can be removed and utilised for the conveyance of water from the Kapitea Hill Race to No. 5 main tail-race when it is completed. As the water now being supplied to the Borough of Kumara for fire purposes is taken from the Nardoo Flat syphon, arrangements would require to be made to take such supply direct from a tank on the race.

No. 4 Main Tail-race.

The No. 4 main tail-race was completed in July last, and is now being used by three parties, and two more parties are making preparations to run into it. The total length of the tail-race is 2,729ft., and its dimensions are 7ft. high by 4ft. 3in. wide in the clear. The boxing is 3ft. by 3ft., with blocks 8in. in thickness, and the gradient is 5in. per box, or 2.29ft. per chain.

No. 5 Main Tail-race.

This work is now in course of construction. Its total length, when completed, will be 4,290ft., of which about one-half is constructed. Starting from the outlet end, a length of 8 chains has been constructed in open cutting, and the whole of the remainder will be in tunnelling. The work in tunnelling has been securely timbered and slabbed, and the whole of the completed portion has been boxed and partly blocked. The dimensions are 7ft. high by 4ft. 6in. wide in the clear, and the boxing 3ft. by 3ft., with a gradient for the first 46 chains of $3\frac{3}{4}$ in. per box, or 1.718ft. per chain, and the remainder 4in. per box, or 1.83ft. per chain.

There is no doubt that the richest of the ground, as far as at present known, has been worked, and there are now only a few chains that are paying more than 10s. per man per day; but there is still a very large area of ground that will, with economical working, pay small wages. No. 4 main tail-race will enable a very large area of comparatively poor ground to be worked, and a still larger area of similar ground will be opened up as soon as No. 5 main tail-race is completed.

I have, &c.,

ALEXANDER AITKEN,

The Under-Secretary, Mines Department, Wellington.

Manager, Water-races.