

Machinery and plant employed in alluvial and quartz-mining	...	£508,921
Water-races, exclusive of those maintained by the department	...	727,637
Tail-races ...	...	170,717
Dams and reservoirs ...	...	105,364
Sluices ...	...	16,734

1,529,373

Water-races constructed and maintained by the department	...	370,198
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Total...	...	...	...	...	£1,899,571
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The above arranged in provincial districts gives for—

Auckland ...	...	...	...	...	£250,348
Marlborough ...	...	...	...	...	7,970
Nelson ...	...	...	...	...	590,491
Westland ...	...	...	...	...	428,184
Otago ...	...	...	...	...	622,578

£1,899,571

MINING AND AGRICULTURAL LEASES.

There are 340 licensed holdings, gold-mining leases, and special claims, having an aggregate area of 6,690 acres, on which an annual rental of £5,574 15s. is paid. There are also 345 agricultural leases held within mining districts, whose annual rental is £2,545 14s. 3d.

GOLDFIELDS REVENUE.

The amount of revenue collected for the twelve months ending the 31st March last for miners' rights, licenses, &c., was £17,189 5s. 10d., and from gold-duty £20,108 5s. 10d., making a total of £37,297 11s. 8d. This is paid to the local bodies of the district from which the revenue arises. The total of goldfields revenue collected since 1857 amounts to £2,196,849 9s. 10d.

WATER-RACES.

The water-races controlled and maintained directly by the Mines Department are the Waimea-Kumara, Nelson Creek, and Argyle. The gross receipts from these, derived from sales of water and channel-fees, for the twelve months ending the 31st March last, amounted to £11,897 14s., and the expenditure on maintenance for the same period was £7,843 1s. 5d; thus leaving a balance over the working-expenses of £4,054 12s. 7d. To take these water-races separately, the Waimea-Kumara gives a surplus on the working of £4,125 17s. 4d., Nelson Creek shows a deficit of £128 13s. 8d., and the Argyle a surplus of £57 8s. 11d. The Mount Ida Water-race, which is managed by a Trust, showed last year a surplus of £99 1s. 8d on the working-expenses for the first time since its construction.

The Mikonui Water-race, an extensive work, estimated to cost about £90,000, has only been partially constructed, owing to the difficulties encountered in constructing the long tunnel, about two miles, the work on which has been stopped for several years. The lower end of the race, about three miles in length, having a series of short tunnels, was let to the Mont d'Or Company for £100 a year; but, on consideration of the company re-timbering the tunnels, the rent has recently been reduced to £50.

The total expenditure on all the water-races and drainage- and sludge-channels has been £510,191 10s. 11d., of which amount £469,392 18s. 8d. was expended on works undertaken wholly by Government, and £40,798 12s. 3d. was paid as subsidies and loans to companies and local bodies for the construction of works of this character. The water-races controlled by Government are—

Waimea-Kumara, which cost	...	...	...	...	£173,363	7	1
Nelson Creek ...	...	...	...	...	90,722	10	8
Argyle ...	...	...	...	...	14,701	15	3
Mikonui ...	...	...	...	...	25,644	9	6
Mount Ida, managed by a Trust	...	...	...	...	65,766	3	8
Total ...	...	...	...	...	£370,198	6	2

The surplus on the working of these water-races last year amounted to £4,248 14s. 4d., or nearly 1½ per cent on the capital value.

SCHOOLS OF MINES.

As already mentioned, the miner is confronted with the problem of how to treat the ores in which gold, silver, and other metals occur in combination. One important step towards its elucidation has already been made in teaching him how to recognise the constituent metals in the ores. Dr. Black, Professor of Chemistry and Metallurgy at the Otago University, during each of the summer vacations of the last three years, visited the principal mining districts, delivering lectures on chemistry and teaching miners the tests to apply in the detection of the various metals. The results have been well worthy of this labour, for the miners, from their calling, being of a very observant nature, have profited greatly by the scientific instruction. It has literally been a case of the seed falling on good ground and producing fruit many fold.

It is largely due to Dr. Black's labours and to the attempts at smelting by the La Monte process that the miners of the Thames realised, as they now do, the presence of the silver and other