The engines now in use crush, or are capable of crushing, about 300 tons per diem, or 1,800 tons per week, which, at 1 dwt. per ton, gives 90 oz., at £2 10s. = £225.

Boiler.

The water at present used for boilers is very bad, and causes a heavy expenditure for repairs, as much in one case as £200 a year for a 20 h.p. engine; but as the Province of Auckland has just completed a water supply for the town which will furnish pure water for boilers, no large revenue can be expected from this source—say 17 companies at 5s. per week, £4 5s.

There will be further savings by the use of water in general management, but they will be uncertain and not of great extent, and it will be safer not to take them into account; there therefore remains only the proportions of the above which could be levied by the Government as water rate.

Fuel.—Owing to the uncertainty of water supply, it is not likely that more than a quarter of the total saving could be collected, and this only for 40 weeks in the year.

	£	s.	d.
$\frac{£145}{4} \times 40$ weeks ... ... =	1,450	0	0
Gold.—Perhaps half of this saving could be collected.			
$\frac{£225}{2} \times 52$ weeks ... ... =	5,850	0	0
Boilers.—£4 5s. × 52 weeks ... ... =	178	10	0
Miscellaneous ... ... =	104	10	0
Total revenue	£7,583	0	0

Of the total cost of the race, a sum equal to £28,000 will be for timber works, which cannot be expected to last more than nine or ten years; there will therefore be required a renewal fund of £2,200 per annum. The annual expenditure will be as follows:—

	£	s.	d.
Renewal Fund	200	0	0
Maintenance, 12 miles at £20	240	0	0
Management	760	0	0
Total expenditure	£3,200	0	0
Total revenue	7,583	0	0
Profit, at over 13⅓ per cent.	£4,383	0	0

It will be remarked that over 77 per cent. of the expected revenue is from water required for the tables. Now, it appears from the evidence of all the managers who have spoken on the subject, that sea water is as good as fresh for the purpose, and many consider it better.

The total quantity required for 317 stampers is only 3,170 gallons per minute, which would have to be raised an average height of 30 feet. A 30 h.p. engine (actual) with a duplicate engine in case of accident of equal power, would be able to pump this quantity from the sea at a cost of probably less than £2 5s. per million gallons; while the revenue above expected is equal to £5 10s. per million gallons. In order to compete with a company proposing to supply in this manner, the Government would have to halve their rates for the table water, which would reduce their revenue from £7,583 to £4,658 ($\frac{5850}{2}$=£2,925), reducing the profit to less than 4½ per cent.

Out of the whole 317 stamps, 140 are within 10 or 12 feet of the sea level, and it does not appear to me likely that these companies would use water from the race for their tables.

Should they not do so, a deduction of £2,583 must be made from the estimated revenue. This would reduce the profit to somewhat under 5½ per cent.

HIGH-LEVEL RACE.

There are at present 363 stamps at work which would be served by the high-level race, or only 46 more than by the low level. The total power required to work them is 363 h.p. It is proposed to bring in 20 heads of water, which, with the available fall, would give more than the power required. Of the total 363 h.p., not more probably than 200 h.p. would adopt water power as supplementary to the steam, and the revenue estimate will be formed on this supposition. Water power would be available for say 40 weeks in the year.

There are required for the tables 3,630 gallons per minute, or 9½ heads. During the summer months not more than 2 heads can be depended on, so the mines will have to trust to their present supply at the season when this is at its worst.

The revenue estimate is made on the supposition that the full supply will be available for 46 weeks in the year, and half the supply for the remaining 6 weeks. This would require that the water should pass through two sets of tables.

Revenue.

The estimate of savings on the same data as for the low-level race will stand as follows:—

Fuel.—200 h.p. for 108 hours per week at 15 lbs. per hour=145 tons at 25s.=£181 5s.

Gold.—The engines now in use crush, or are capable of crushing, 363 tons a day, or 2,178 tons a week; this, at 1 dwt., gives 2,178 dwt.=108 oz., at £2 10s.=£270.

Boilers.—21 companies, at 5s.=£5 5s.