

at the Thames there is available for this purpose a shaft, the property of the Government, already equipped with winding-engine and cage, and pumps capable of dealing with 2,000 gallons of water per minute.

The following is a statement showing the quantity of quartz treated, the value of bullion yielded, and dividends paid by the principal quartz-mines during 1906 :—

Name of Mine.	Tons of Quartz treated (2,000 lb. to a Ton).	Value of Bullion.	Average Value per Ton.	Dividends paid.		Number of Persons ordinarily employed.
				1906.	Total to End of December, 1906.	
Northern District—						
Waihi Gold-mining Company (Ltd.)	328,866	£ 781,553	£ s. d. 2 7 6	£ 347,135	£ 2,271,753	1,465
Grand Junction Gold-mining Company (Ltd.)	8,144	13,794	1 13 10	238
Waiotahi Gold-mining Company (Ltd.)	18,002	223,678	12 8 6	183,000	274,800	155
Talisman Consolidated (Ltd.) ...	49,573	152,011	3 1 3½	60,000	90,000	275
Komata Reefs (Ltd.) ...	20,490	45,448	2 4 2½	...	26,664	160
New Zealand Crown Mines (Ltd.)	22,080	40,735	1 15 0½	...	70,000	142
New May Queen (Ltd.)...	3,333	10,715	3 4 3	...	Unknown	39
West Coast District—						
Keep-it-Dark Quartz-mining Company (Ltd.)	13,300	18,887	1 6 10	9,000	154,666	50
Progress Mines of New Zealand (Ltd.)	59,100	91,200	1 14 5	34,375	261,250	330
Consolidated Gold-fields of New Zealand (Ltd.)	19,401	36,307	1 17 5	12,119	137,606	182
Big River Gold-mining Company (Ltd.)	2,037	7,904	3 17 7	2,332	49,698	28
Other quartz-mines ...	41,965	71,855	...	6,011	Unknown	651
Totals, 1906 ...	586,291	1,494,087	2 10 11	653,972	...	3,715

At the Waihi Gold-mining Company's mine, the most productive gold-mine in Australasia, a continuously increasing output at an increased yield of 1s. per ton has to be recorded, but it is not apparent whether this increased yield is due to richer ores as depth is attained, or a higher rate of extraction at the mills and cyanide-works. The total quantity of ore treated at this mine during 1906 was 328,866 tons, of which the Martha reef contributed 146,409 tons, or 44·5 per cent., the balance being obtained from fifteen other reefs on this property.

A description of the workings of this mine unaccompanied by plan and sections would be somewhat complicated, as the Martha reef, which averages over 90 ft. in width, and is developed to a depth of 800 ft. or more, and for a length exceeding 1,400 ft., forms but one of a series of interlacing veins, the workings of which are often connected. The only data upon which to base deductions as to the maintenance of values by such great ore-bodies is the evidence disclosed by the development of somewhat similar ore-deposits elsewhere, which information is more accessible to and as well understood by the intelligent and travelled miner as by the professional geologist. In magnitude there is nothing analogous known to the vein system here existing; but as evidence upon which to form an estimate of the continuity in depth and ore-values of such strong quartz veins, we have the Beaconsfield and Golden Gate reefs in Tasmania, the Great Fingall reef in Westralia, and several instances in Western America all known to the writer. The evidence unfolded by mining operations at depth on all these veins is extremely favourable to the permanence of the Waihi reef system: beyond this no one can speak. Quartz veins are profitably mined in Victoria at a depth of 4,175 ft., and the "Martha" reef is stronger than any vein in Victoria. The total production from this mine to the end of 1906 was £5,355,254, as a result of treating 1,921,670 short tons (of 2,000 lb.); and £2,271,753 has been paid in dividends. During the year the number of feet driven, risen, and sunk at this mine amounted to 19,347, or 3·66 miles; and 1,465 men were ordinarily employed. No further addition has been made to the milling-power of 330 head of stamps and six tube mills, but to add stability to the batteries heavy anvil-blocks have been placed under the mortars throughout. The substitution of the vacuum slimes plant (with rectangular tank and basket) in place of the filter-presses has proved a success. It is proposed to increase the number of tube mills, and in connection therewith to erect a 1,000-horse power (Crossley) producer-gas plant. It is also proposed to equip the No. 5 shaft for winding "skips" to facilitate rapid discharge by an engine of two cylinders, 30 in. diameter, with 6 ft. stroke. The two Cornish pumps employed on the drainage of this mine raised during the year a total of 697,707,996 gallons.

At the Grand Junction Mine, which adjoins the Waihi property, operations are being carried out upon an extension of the same vein system which has been here proved to a depth of 811 ft. It is pro-