

"The Gem ore is capable of giving good results, provided the stone be sufficiently rich and that a large amount could be put through, and even with the Monowai ore further work will doubtless result in many of the present difficulties being more completely overcome and more satisfactory results obtained. The consumption of cyanide has been heavy, especially in the case of the Monowai ore, the average cost per ton on the total tonnage treated (Gem and Monowai) being nearly 12s. 11d. Both ores contain a certain amount of soluble acid salts which act injudiciously on the reagent, and I would recommend a systematic use of lime on the same lines as I have already tried at Waioimo. In this way the cost per ton for cyanide should be considerably reduced.

"*Approximate.*—Gem: Total value in quantity treated—gold, £238 0s. 9d.; silver, £40 13s.: total, £278 13s. 9d. Left in tailings—gold, £40; silver, £18: total, £58. Left in plant, less leakage—gold, £61; silver, £2: total, £63. Actually saved—gold, £138; silver, £20: total, £158.

"Monowai: Total value in quantity treated—gold, £571 8s.; silver, £103 10s.: total, £674 18s. Left in tailings—gold, £155 16s.; silver, £93: total, £248 16s. Left in plant—gold, £181 12s.; silver, £4 10s.: total, £186 2s. Actually recovered—gold, £235; silver, £6: total, £241, or 35 per cent. of the value."

Although the Monowai ore was not treated successfully by the cyanide, it was not due to its being of low grade, as it gave an assay-value of £3 7s. 10d. per ton prior to its treatment with a cyanide solution; but only about one-third of this value was recovered. This shows that this class of ore is not suitable for treatment by the cyanide process, and that it is an ore which should be subjected to concentration. The concentrates required to be roasted, the gold could then be recovered by chlorination, and the silver extracted afterwards by leaching. Where such large bodies of valuable ore exists as at the Monowai a large concentrating plant should be procured, and the ore treated in such a manner that a fair percentage of its assay-value can be extracted.

Tararua.

This includes Norfolk, City of Dunedin, Day-Dawn, Scandinavian, Chicago, Highland Chief, &c., Mines, where twenty-one men have been working on wages and three men as tributers in this locality during the year. The wages-men obtained 373 tons of stone, which yielded 342oz. 2dwt. of gold, and the tributers 73 tons of stone, which yielded 16oz. 19dwt. of gold. In addition to this, 100 tons of tailings was treated, yielding, by amalgamation, 16oz. 4dwt., and, by cyanide process, 10oz. of gold. The workings of the mines in this locality having already been individually referred to in the report of the Inspector of Mines, there is no need for further comment. The total crushings amounted to 446 tons, the total yield being 359oz. 1dwt. of gold, whereas in the previous year only seventeen men were employed, the crushings being 378 tons of stone, which yielded 291oz. 12dwt., thus showing an increase in this section of the field for last year of 67oz. 9dwt. of gold.

Kuranui.

A considerable amount of work was done in this locality last year, sixty-five men being employed, thirty of whom were working on tribute, resulting in 776 tons of stone and 450 tons of mullock being obtained by wages men, the yield for the same amounting to 994oz. 7dwt. of gold. The tributers obtained 4,109 tons of stone, which yielded 1,281oz. 17dwt. of gold, making a total of 4,885 tons of quartz, and 450 tons of mullock treated, for a yield of 2,276oz. 4dwt. of gold, whereas, for the former year, there were sixty-two men employed, and 8,400 tons of quartz crushed and 3,450 tons of mullock treated, which yielded 4,202oz. 9dwt. of gold, thus showing a decrease in the yield of gold last year of 1,926oz. 5dwt. The principal mines in this locality are Hansen's, Comer's, and Hazelbank. The first two mines are worked entirely on tribute, and the workings are confined to small stringers left in the walls of the old stopes, and also from other leaders running through the country-rock.

Hazelbank.—The principal workings in this locality are confined to the Hazelbank Mine, where thirty-four men are employed, five of whom are tributers. During the year 2,665 tons of stone have been crushed, which yielded 1,000oz. 13dwt. gold. Steps have recently been taken to re-form this company with a larger capital.

Moanataiari.

In this locality is included the following mines: Junction, Alfred, Freedom, New Moanataiari, Orlando, Calliope, New Alburnia, Caliban, New Whau, &c. Altogether a hundred and fifty men have been employed in the mines, sixty-five of whom were working on tribute. The wages-men obtained 4,693 tons of stone and 10,588 tons of mullock, which yielded 3,739oz. 19dwt. of gold, the tributers getting 4,786 tons of stone, which yielded 1,820oz. 5dwt. of gold, making a total of 9,479 tons of quartz crushed during the year, and 10,588 tons of mullock treated, the total yield being 5,560oz. 4dwt. of gold; whereas for the previous year there were two hundred men employed, 13,222 tons of quartz crushed, and 11,520 tons of mullock treated, which yielded 12,624oz. 19dwt. of gold, thus showing a decrease in the yield of gold last year of 7,064oz. 15dwt.

Moanataiari.—This may be said to be the largest mine in the Thames District, there being ninety-eight men employed, forty-six of whom are working on tribute. During the year there was 3,407 tons of quartz crushed for the company, and 10,038 tons of mullock treated, which yielded 2,738oz. 9dwt. of gold; and for the tributers 2,775 tons of quartz were crushed, which yielded 1,152oz. 8dwt. of gold, making the total return from this mine 6,185 tons of quartz and 1,038 tons of mullock operated on for a yield of 3,890oz. 7dwt. of gold, thus showing that, if the total number of tons of material crushed be taken, the returns would give an average of 4dwt. 19gr. per ton. The principal workings during the year have been carried on from Jones's, Dawn of Hope, and the Golden Age foot-wall branch leaders. The latter comprises stringers of quartz from an inch to 10in. in thickness, the whole reef-formation being 6ft. wide between the walls.