

costs, leaving a profit of 4s. 8·789d. per ton. The total working-cost for this property amounts to £1 5s. 7·942d. per ton milled. The high cost being accounted for by the very mean width of quartz stoped. No alterations of importance have been made in the surface equipment of this mine during the year.

*Progress Mines of New Zealand (Limited).*—Development-work has been pushed in an energetic manner on the following levels Nos. 3, 4, 5, 6, 7, 8, 9, and 10, and resulted in the opening-up of large ore-bodies on Nos. 3, 4, 6, 7, and 9 levels in the eastern portion of the mine. The total footages driven are as follows: Driving and crosscutting 3,672 ft.; raising and sinking 927 ft.: total, 4,599 ft.. Stopping has been carried out from No. 3 level down to No. 9 in a very general manner, and the stopes have continued to yield quartz fully up to our expectations, as far as tonnage is concerned. In the eastern end of the mine large quantities of low-grade quartz cannot be worked at a profit under existing conditions, this material has to be used as filling. On No. 6 and No. 7 levels east, the continuation of our north-east ore-body has been located, and the stone on both levels extracted to ascertain the dimensions of the reef on these two levels. No. 9 east has also opened up a very valuable ore-body which was previously unknown. We have recently been trying to locate the same ore-body on No. 10 level and have partially succeeded. A diamond drill worked by compressed air has been at work for the last three months which has aided us in the search for dislocated ore-bodies. By this means we have traced two blocks of stone which previously we had not been able to find. On the surface the equipment at the mine has been increased by the addition of the second half of the 14 in. by 22 in. Rand air-compressor, converting the single into a duplex compressor. This alteration has greatly aided developments as there is now no difficulty in keeping the supply of air at 80 lb. pressure when six machines are running. The engine at the old shaft has been transferred on to a concrete bed and turned round so as to face the work. At the battery the only additions of importance have been at the cyanide-works where two new tanks 25 ft. diameter by 7 ft. high have been built, making the number of treatment-tanks in use up to twelve; besides this another tank is now in course of construction. An additional sump 20 ft. by 8 ft. has also been erected. This is used for storing strong solution. The cyanide-house has been enlarged to cover over the tanks erected, and a small shed placed over the new sump. The whole of the company's plant has been maintained in good order, and the output of the mine exceeds that of any previous year. The year's work resulted in the mining, transportation, and reduction of 57,114 tons of quartz, which yielded by amalgamation 21,298 oz. 15 dwt. 22 gr. of gold, valued at £88,738 12s. 11d. 1,060 tons of concentrates was treated, yielding 2,866 oz. 1 dwt. 13 gr. of gold, valued at £11,851 15s. 4d. At the cyanide-works 26,547 tons of coarse battery sand has been treated, yielding 3,181 oz. 6 dwt. 19 gr. of very base bullion, valued at £7,769 11s. 1d. The working-costs amount to 2s. 4·704d. and the profit to 3s. 5·537d. per ton treated, making the yield equal to 5s. 10·241d. During the year a small experimental shipment of 13 tons of roasted slimes forwarded to the smelter realised £142 14s. 8d. A general summary of the aggregate working-cost, yield, and resulting profit in milling 57,114 tons, and cyaniding 26,647 tons during the year is as follows: Total working-cost, exclusive of capital and development expenditure—Incurred in mining, milling, and chlorinating, including bullion charges and office expenses, £45,971 2s. 9d., or 16s. 1·176d. per ton milled; cyaniding, £3,175 1s. 4d., or 1s. 1·342d. per ton milled: total, £49,146 4s. 1d., or 17s. 2·518d. per ton milled. Profit—Mining, transportation, milling, concentrating and chlorination works, including office expenses and bullion charges, £54,619 5s. 6d., or 19s. 1·517d. per ton milled; cyaniding, £4,594 9s. 9d., or 1s. 7·307d. per ton milled: total, £59,213 15s. 3d., or £1 0s. 8·824d. per ton milled. Summary—Total working-cost, £49,146 4s. 1d., or 17s. 2·518d. per ton milled; profit, £59,213 15s. 3d., or £1 0s. 8·824d. per ton milled: yield, £108,359 19s. 4d., or £1 17s. 11·342d. per ton milled. On capital expenditure £8,115 2s. has been spent during the year; of this amount £6,508 16s. 7d. was incurred directly in mine-development. The milling time during 1903 was very good, and would have been better but for a serious break in the water-race which accounted for 4 days 8 hours during July. This was the only break of any importance. The total number of days the mill ran was equal to the theoretical time with the exception of 12·62 days. This loss of time represents the total delays caused by the monthly clean-ups, daily scrapes, water-race breakages, and incidental stoppages. A successful and prosperous year for 1904 is confidently looked forward to, when the same policy will be pursued as heretofore, with the exception of the mine-development which will be pushed even more energetically than during the period under review.

*Welcome Gold-mining Company (Limited).*—Operations during the year were confined to stoping the quartz exposed above the low-level tunnel, Specimen Hill, and the No. 5 level Welcome, besides which a winze was sunk from the intermediate level a distance of 115 ft. connecting it to the low level. This winze was put down to endeavour to locate the position of the northern end of the stone on the low level. During the first nine and a half months of the year the company mined and milled 1,445 tons of quartz, which yielded 546 oz. 5 dwt. 21 gr. of gold, valued at £2,247 3s. 4d. The coarse sands from which, amounting to 1,044 tons, were cyanided and yielded gold to the value of £1,089 8s. 9d. During October the whole plant and mine were let on tribute to O'Leary and party who, up to the end of the year, had mined and milled 185 tons of quartz for a return of 271 oz. 8 dwt. 21 gr., valued at £1,097 7s. The sands were run away to the cyanide plant and were still under treatment at the end of the year. During the year the Welcome Company was absorbed by the parent company, the Consolidated Goldfields of New Zealand (Limited), so that the former has now ceased to exist. In the new year the tributers will continue to work the mine as heretofore, and run the battery the necessary time to reduce the quartz when mined.

*Last Chance.*—Messrs. James Morris and Alexander Fleming, the owners of this mine, report that during the year 1903 the level has been driven 120 ft., and 40 ft. has been stoped from level to level. The claim is worked by only two men.