

part of the gold extracted, the tailings are washed through launders on to copper tables. Should any of the coarse gold have escaped the cyanide it is caught on these tables, and the balance of the material is allowed to run into a swamp alongside the mill.

The mill consists of the following machinery and appliances: Twenty stampers suited for wet- or dry-crushing, their weight being 850 lb.; a revolving automatic roaster; one Gate's No. 2 ore-crusher, with sizing-screen and elevators; four automatic self-feeders; six 22 ft. steel percolating-vats; two steel dissolving-vats, 21 ft. diameter; three concrete sumps, 12 ft. by 12 ft. by 4 ft.; and two zinc towers. The assay-plant is complete—melting-furnaces, oxidizing-pan. All furnaces are built in brick, with brick chimney 40 ft. high. The whole plant is covered by a building 90 ft. by 150 ft. and 60 ft. at the highest part, the building being covered with corrugated iron. The machinery is driven by two Pelton wheels, with a head of water of 140 ft. pressure. The following form also part of the plant: One centrifugal pump, one vacuum pump, vacuum chamber, one 60-light dynamo for lighting up the hill, copper tables, and one berdan.

Te Ao Marama Mine.—This mine has been worked by the Waitekauri Company, and the works carried on are mentioned in Waitekauri Mine report.

Byron Bay Mine.—This land was prospected, and several gold-bearing reefs opened.

Prospecting work was also carried on in the National, Triumph, Queen's Birthday, Komata, Treasury, Royal Mail, and other claims.

Karangahake District.

Woodstock Mine (Area, 72 acres 1 rood 18 perches).—Work in this mine has been vigorously carried on during the year, and development of the different reefs effected in order that in the future a supply of quartz may be maintained to fully employ the new forty-stamp mill. The position of the new mill on the point between the confluence of the Ohinemuri and Waitawheta Streams entailed great expenditure in conveying materials and machinery to the site. Delay from this and other causes prevented the completion of the plant in August last, and crushing was only commenced on the 26th February, 1897. This delay has been the means of causing no return of gold to be possible, and the anticipation that the mine would yield an addition to the returns from Ohinemuri for 1896–97 has not been fulfilled. (The returns that have been obtained for the first cleaning-up show that for next year this mine promises to be one of the best gold-producers.) The mine is carefully and systematically worked, and the series of levels opened between the tramway-line and the outcrop of the reefs have disclosed such an abundance of quartz that no difficulty will be experienced in producing large quantities from the portion of the mine already developed. It is, however, intended to carry on operations below water-level at no distant date, and from the ascertained value of the reefs at the present lowest level there is very little doubt that when a shaft has been sunk developments in low levels will prove that the reefs continue in richness. The mine is at present one of the best conducted in the laying-off and execution of all underground work and machinery, and reflects credit on the manager, Mr. J. McCombie, who has supplied the following particulars:—

The No. 1 level, Maria lode, has been extended south of the cross-cut about 142 ft. on the line of the lode, which measures 4 ft. in thickness, and carries payable ore throughout for the whole of that distance. Two extensive blocks have been timbered and opened up, with ore-passes and travelling-ways for stoping operations, and a winze sunk to connect with the intermediate level a depth of 130 ft. In the intermediate level, Maria lode, a distance of 137 ft. has been driven along the line of the lode south of the cross-cut. For the first 80 ft. of driving the lode was somewhat disturbed, and the ore low grade in consequence. Thence forward it improved steadily in size and value, and now it is fully 6 ft. wide, carrying payable ore from wall to wall, and signs are not wanting of further improvement going southward. During the year the No. 2 level, Maria lode, has been extended 100 ft., making its total length 688 ft. from the starting-place at the surface cross-cut. At this point 19 fathoms of stoping has been done on the lode, which averages 5 ft. in thickness throughout the whole of these workings, and the ore is all of good quality. The No. 2 level cross-cut has been extended westward a distance of 220 ft., making its total length 700 ft. Several gold-bearing lodes have been intersected, and these will be all exploited as opportunity offers. The No. 2 level cross-cut, Woodstock lode, has been driven upon for a distance of 60 ft. south of the cross-cut and 200 ft. north of the same point. Owing to the disturbed nature of the country, and consequent low-grade character of the ore, work here has been suspended for the present. Since writing last annual report the No. 3 level, Maria lode, has been driven southward a distance of 315 ft., making its total length 855 ft. The lode ranges from 3 ft. to 15 ft. in thickness, and it maintains an average grade of high-class ore so far as explorations have gone upon it, with every indication of improvement going downwards. Stopping over the back of this level is in active operation, and 162 fathoms have been blocked out. A rise has been put up to connect with the No. 2 level a height of 156 ft., and two winzes, 80 ft. and 85 ft. in depth respectively, have been sunk till connection was effected with the No. 4 level workings. Over the back of the No. 3 level, Shepherd's lode, about 72 fathoms of stoping have been done, which varies from 1 ft. to 6 ft. in thickness, and there is a high percentage of the precious metals distributed through the whole body of the ore. Steady progress has been made with developments at the No. 4 level, Maria lode, which has been advanced 537 ft. for the year, making its total length 612 ft. The lode here averages 4 ft. in thickness, and the ore coming to hand therefrom is all of good quality. Above this level about 45 fathoms of stoping have been carried out, and the resulting ore is all high grade. The distance driven in the No. 5 level, Maria lode, has been 360 ft., making the total length of the level 438 ft. About 200 ft. of this distance has been driven upon the lode, which is very irregular in size and value, and I do not expect any improvement till the level reaches under the shoot of rich ore now being worked upon at the upper levels. The cross-cut west, No. 5 level, is being driven for the purpose of developing