

Central Mill.—The quartz-mill and cyanide-works of the company are now nearly completed, and will be working regularly in June. The amalgamation portion of the plant was finished in March, but through great delay in getting out the material for the cyanide-vats from Europe a start was not able to be made with the putting together of these until the 21st March.

“The ore brought from the mines by the railway is tipped from the trucks into a large ore-bin of nearly square section, capable of holding 710 tons. From this it passes down over four grizzlies to the rock-breaker floor, where it is shovelled into two Blake rock-breakers, 15 in. by 9 in. Beneath these is another ore-bin of triangular section, capable of holding 250 tons, from which eight shoots deliver the stone to as many suspended automatic feeders, which again pass it into the mortar-boxes. There are eight batteries of five stamps each, the stamps weighing 1,150 lb. each. The mortar-blocks are 13 ft. in length, made of single pieces of kauri, 5 ft. by 2 ft. 6 in., and each pair of blocks rest upon a block of concrete 2 ft. 6 in. thick. The crushed ore passes over amalgamated copper-plates, 12 ft. long, into four sets of spitzluten and settling-boxes. There are two spitzluten, which separate out the coarsest sands escaping from the stamps, placed tandem, in each set. The settling-boxes are 15 ft. square, with nine pyramidal-pointed boxes let into the bottom of each. The function of these is to settle the slimes and fine sands as much as possible, and to get rid of the excess of water coming from the stamps before the stuff is elevated to the cyaniding tanks. The coarsest sand from the spitzluten runs into a 5 ft. Huntingdon mill, where it is further ground. The crushed material is next raised by a bucket elevator 45 ft., to a set of launders, which carry it to eight collecting-vats set in two rows. Into these it is passed through eight of Butters and Mein's patent distributors. The collecting-vats are of mild steel, $\frac{3}{8}$ in. thick, and are 22 ft. 6 in. in diameter and 6 ft. deep. They have four bottom-discharge doors, through which the stuff, after settling, can be shovelled down into the percolating-vats. The collecting-vats are placed vertically over the percolating-vats, and are supported by a very heavy wooden framework. The percolating-tanks are the same size as the collecting-tanks, but have only one discharge-door each, which is placed at the side to admit of the leached material being sluiced out into the main tail-race. There are three solution-tanks, 20 ft. diameter and 10 ft. deep, placed at a level slightly above the tops of the collecting-vats. The solutions from the leaching-vats pass through 3 in. mains to three vacuum-drums and three collecting- or settling-tanks, and thence to the zinc boxes, of which three sets are provided. The vacuum-drums are made from the shell and flue of an old Cornish boiler, 22 ft. 3 in. by 5 ft., and the collecting-vats are 8 ft. diameter by 6 ft. high. From the extractors the solutions pass to three sumps, of steel, 30 ft. diameter and 6 ft. deep. Two centrifugal pumps raise the solutions from these to the solution-tanks, and the pipes are arranged so that solution can be pumped directly on to any of the collecting- or percolating-tanks without passing through the solution-tanks. For the treatment of the slimes from the zinc boxes an acid-treatment plant has been provided, consisting of acid-tub, tubular heater, and Johnson filter-press; but there is also an oxidizing furnace for the dry treatment more usual in this colony. There are two melting-furnaces and two assay-furnaces, also an American retort furnace. The whole forms a very complete mill.”

Matarangi District.

Prospecting has been carried on to a limited extent in this district. The Matarangi Mine was let on tribute to Noble and party, but their operations proving unprofitable, the battery in connection with this mine was sold and removed to Maratoto.

Kuaotumu District.

Mariposa Mine (Area, 101 acres; owners, Mariposa Gold-mining Company; mine-manager, John Goldsworthy).—Operations in this mine during the year past have been steadily carried on. The work of most importance has been the erection of machinery for pumping, sinking, and winding. The shaft has now attained a depth of 59 ft. The machinery consists of one 30-horse-power steam-engine; one 50-horse-power steam-boiler, with heater, feed-pump (Knowles's), and connections; one sinking-pump (Knowles's patent), 5 in. delivery, 6 in. suction, $2\frac{1}{2}$ in. steam and exhaust, 12 in. cylinder, 16 in. stroke. The plant for sinking purposes is erected at No. 4 level, in a chamber the dimensions of which are 55 ft. by 20 ft., of a height of 13 ft. The poppet-heads are 40 ft. high from the floor of the chamber, the distance being 50 ft. from the engine to the pulleys. The smoke-passage from the boiler to the surface is 400 ft. in height, and is fitted with an iron funnel for a distance of 340 ft. The chamber is securely timbered with heavy timber; and a water-tank constructed for feeding the boiler is 14 ft. by 6 ft. by 7 ft. The pump and all the machinery are found to work in a very satisfactory manner. In addition to the pump there is an iron tank available for baling purposes. It is expected that the reef will be cut when the shaft attains a depth of 150 ft. from No. 4 level. The number and depth of levels opened are four—No. 1, 110 ft.; No. 2, 190 ft.; No. 3, 330 ft.; No. 4, 460 ft. The reefs worked are five—namely, Fluke lode, East lode, No. 2 lode; Red Mercury, east branch; Red Mercury, west branch. The lodes are generally hard solid quartz cased in blue or brown sandstone country. The development work done during the year consisted of—driving, 1,127 ft. 6 in.; rising, 279 ft.; sinking main shaft, 59 ft.; stoping, 2,944 ft.; sinking winzes, 129 ft.; excavation and surface work, 177 ft. The quantity of quartz crushed for the year was 2,812 tons, producing by amalgamation 770 oz., valued at £1,754 5s. 10d., and 858 oz. 18 dwt. by cyanide, valued at £1,986 7s. 4d. A quantity of old copper plates melted down produced bullion to the value of £16 11s. The average number of men employed was thirty-three, including both mine- and battery-hands.

Kapai-Vermont Mine (Area, 35 acres 3 roods 19 perches; owner, Kapai-Vermont Gold-mining Company, Limited; mine-manager, James R. S. Wilson).—This company is in liquidation, and since the 31st March, 1898, no work, mining or development, has been prosecuted. Three men are engaged making necessary renewals and repairs. This mine adjoins the Mariposa. The same line of reef has been worked to a considerable extent from the No. 4 level upwards, and several runs