

not satisfactory. A cyanide plant was then erected, but it was found that the large reef was of too low a grade to pay, and the battery shut down. Since then a good deal of prospecting has been done on the small leaders in the west side of the hill and in No. 3 level. The Blucher reef was intersected and found to cross the Severs reef at almost right angles. This reef gives highly encouraging assays. The company have had twenty men employed.

PAKIRARAHU.

Chelmsford Gold-mining Company (Limited).—This company's mine, situated on Kauri Timber Company's freehold, has been well prospected, with very encouraging results. The main reef, which averages 3 ft., has been driven on for 60 ft., and 60 tons of quartz saved. No. 2 reef has been opened up for a distance of 80 ft., and 20 tons saved. Gold has been freely seen in the stone while breaking out, so that it may be assumed that the ore is highly payable. A ten-stamp battery with complete cyanide plant is approaching completion, and crushing should soon be commenced.

WHANGAMATA.

Whangamata Gold Corporation (Limited).—The payable run of ore having been worked out in October last, the battery was shut down pending the results of the development scheme now being carried out. A shaft is being sunk from the No. 3 level, which it is intended to carry down to 100 ft., thus making a total of 400 ft. below the crown of the hill. It is then intended to open out. A good deal of exploring-work has been done in various parts of the mine, but nothing payable has been found.

Mananu Gold-mining Company (Limited).—This mine has been steadily worked with fifty-two men. The results have been very satisfactory, 1,002 tons of ore having been treated for a return of £2,605 12s. 4d. The principal work has been on the Nos. 1 and 2 reefs, and the levels between. Good payable blocks of ground have been opened up. The reef varies from 4 in. to 12 ft. in thickness, and is very irregular. The company intend erecting ten stamps additional, and, encouraged by the prospects, to more vigorously develop their property.

TE AROHA.

Mining in this district has been confined to the claims situated at Waiorongomai, the others having been either abandoned or not worked.

At Waiorongomai the claims owned by Mr. E. H. Hardy, which he personally supervises, have been most systematically worked. During the year an average of twenty men have been employed, and wages to the amount of £175 a month have been paid. The work has been spread over various undertakings. The water-race has been flumed and deepened and put in first-class order from end to end. Large additions have been made to the battery, both outside and in. The heavy timbers inside the battery have been replaced by new. The county tramway, having been continuously employed carrying quartz to the mine, has earned sufficient to maintain it in good order.

At the Premier Mine the bulk of the work has been done. A gold-bearing stope has been carried along horizontally 250 ft., and 153 ft. in height, which has produced payable returns, the width of the reef varying from 3 ft. to 9 ft. A level 85 ft. below these workings has intersected the reef, and payable ore has been met with. A rise and winze are being made to connect these levels. Water has been led about 500 ft. from a waterfall adjoining the mine to provide ventilation for the lower levels.

Prospecting has been done in the Colonist and New Find portions of the property, with gratifying results. These in due time will be systematically worked as soon as the battery is sufficiently enlarged to crush the ore.

A portion of ground has been worked, called the Big Blow Claim, at the end of the big quartz outcrop above the plain at Waiorongomai. A face of payable quartz has been excavated as an open-cut, being 60 ft. long by 20 ft. high and 4 ft. thick, in excellent ore which, assayed all through, proves it to be payable. 200 tons have been extracted preparatory to crushing. The object in carrying on the works at the Big Blow is to provide a supply of quartz near the battery in case of any stoppage of the tramway connecting the more distant mines.

The total amount of ore crushed for the year amounted to 1,641 tons, valued at £3,419 3s. 9d., averaging £2 1s. 6d. per ton. Everything taken out of the mine has been crushed to produce the results stated, the object of the proprietor being to ascertain the bulk value of the mine as it stands.

Considerable improvements are contemplated for the ensuing year, the most important being the erection of a new ten-stamp battery, with grinding- and amalgam-pans, &c. This plant is now on the ground awaiting erection. The making of an aerial tramway to the Big Blow Claim will be proceeded with, 5,000 ft. of stationary wire rope and 2,000 ft. of tail-rope having already been purchased.

The battery has been taxed to its utmost day and night. On account of the very fine grinding required to insure the best extraction of the fine gold, the crushing-power of the stampers has had to be restricted within the limits of the pans. As soon as the new ten stamps are erected the number of men employed will be increased.

The process adopted for the extraction of bullion at the battery is as follows: The gold is fine, interspersed with fine iron-pyrites, copper-pyrites, and silver-sulphide. Cyanide process is not suitable for the extraction of this gold, because of the presence of copper, which interferes with zinc precipitation of the gold. The use of carbon for that purpose, however, has not been tried on a practical scale. The quantity of concentrates will be about 1 per cent. The ore is crushed in a Blake-Marsden rock-breaker into hoppers holding 150 tons; it then passes through two Challenge ore-feeders to a battery of ten stamps, weighing 850 lb. each; thence the crushed