

tract was let for the supply of four sand-pumps for raising the pulp from the mortar-boxes to the trestle launder. An elevator-wheel 25 ft. in diameter, for lifting the slimes into the slime-tanks, has been constructed at Waikino. During the year the permanent rolling-stock has been increased by the addition of twelve side-tip ore-trucks, six coal-trucks, four goods-trucks, and two pairs of bogies. There has been an average of 1,079 men employed. The sum of £165,000 was paid in dividends for the last year, making a total of £795,629 4s. 3d. since the commencement of the mines.

Union-Waihi Gold-mining Company (Limited).—This mine was vigorously worked up to the end of September by the company, but as the quartz operated on was barely sufficient to pay expenses, and the company having previously found a large sum of money to purchase the Waihi Silvertown Mine and crushing plant, the capital became exhausted, and they found it was necessary to apply for six months' protection to give time, and thereby enable the directors to find ways and means to further carry on contemplated works. The Waihi Company holds a large interest in the above-named mine, and it is now rumoured they have taken the property over, and no doubt in a short time further development will be proceeded with to prove the value of the reefs at lower levels. The following is a summary of operations carried out: In the two sections of the property a total of 238 ft. of shaft-sinking has been made. The No. 1 shaft, which stood at 612 ft. at the commencement of the year, has been sunk 55 ft., making a total depth of 667 ft. The Silvertown shaft has been deepened 183 ft. The depth of this shaft at the commencement of the year was 367 ft. Its present depth is 550 ft. During the year a total of 19,418 tons has been crushed at the mill. This tonnage has been obtained from the various reefs in the following proportions*: Union reef, 16,150 tons; Amaranth reef, 1,337 tons; Silvertown reef, 1,931 tons: total, 19,418 tons. The above figures are based on dry weight after deducting the percentage of moisture contained in the ore. The product was 22,685·7 oz. of bullion, valued here at £27,996 10s. 4d., which is equal to an average value of £1 4s. 9d. per ounce. The weight of bullion produced is equivalent to 13 cwt. 3 qr. 15 lb. The value has been computed on the basis of gold at £4 4s. and silver at 2s. per ounce. The mill comprises a total of forty stamps. An average of 36·87 stamps was employed full time, the daily average duty per stamp being 1·84. Steam-power was required for 133½ days, the water-power during the drier months of the year being of very little assistance. Coal has been used for steam purposes. With the exception of a short period, when 30-mesh screens were used on the mortar-boxes, the ore was crushed through screens of 40-mesh. The total value actually recovered from the commencement of milling in September, 1900, to the end of September, 1901, was as follows: Gold, £26,697 5s. 3d.; silver, £1,299 5s. 1d.: total, £27,996 10s. 4d. The actual yield per ton was £1 8s. 10d. Of the total value of bullion recovered, 31·8 per cent. was obtained from the plates and 68·2 per cent. by the subsequent cyanide treatment. For the period ending the 23rd March, however, the plates were in use for only nine days, and treated 670 tons. During that period 1,750 tons of ore was treated, so that 1,080 tons was not passed over the plates. Details of the saving by amalgamation (plates) were as follows: Gold, 2,094·58 oz.; value, £8,797 4s. 8d. Silver, 1,132·34 oz.; value, £113 4s. 10d. Total value, £8,910 9s. 6d. The following is the tonnage treated and bullion produced from the 30th September to the end of the year 1901, prior to which the mill had been stopped: For period ending the 2nd November, 2,134 tons; bullion recovered, 3,152 oz.; value, £3,677 4s. 3d. For period ending the 31st December, 549 tons; bullion recovered, 3,486·5 oz.; value, £4,303 14s. 7d. Total, 2,683 tons; bullion recovered, 6,638·5 oz.; value, £7,980 18s. 10d. Regular stoping has been carried on on the Union lode, and about 2,000 fathoms of ore-ground has been stoped out. From No. 3 shaft at No. 1 level the Mascotte lode has been driven on west 204 ft. from the shaft. The second contract for sinking the Silvertown shaft was finished on the 23rd July, making a total depth below No. 4 level of 215 ft. A chamber was then opened out at a point 200 ft. below No. 4, leaving 15 ft. for the pump-sump. Here a second drawing-lift was placed, which pumps the water up into a cistern at No. 4 level, and from this cistern the No. 1 drawing-lift pumps to the plunger cistern at No. 2 level. The country formation passed through in sinking this 215 ft. is a highly mineralised andesite, and the crosscut to the lode is being driven through the same kind of formation. The following is a summary of the work done: Shafts sunk, 238 ft.; crosscuts driven, 861 ft.; drives (footage), 1,660 ft.; rises, 438 ft.; winzes, 218 ft.; new pump and pit work put in from No. 3 to No. 5; new pump and pit work from No. 4 to No. 6 (Silvertown section).

Waihi Grand Junction Gold-mining Company (Limited).—This mine has been steadily worked, although in the early part of the year there was a large quantity of water to contend with, which greatly retarded the work in the Grand Junction section. The main shaft has been sunk a further distance of 136 ft., making it a total depth of 635 ft. Sinking has been stopped for some time, the company having decided to direct operations to opening up and developing the reef at the 500 ft. level, where it was intersected some time ago; but owing to the large quantity of water coming out of the reef they were then unable to proceed with this work. Since operations were again resumed here the reef has been cut through at the end of the crosscut, and found to be 24 ft. in width at this place. It has been driven on in a north-easterly direction for a distance of 134 ft. This is being extended with all possible speed to a point underneath a level that has been driven from No. 2 shaft at a depth of 336 ft., where a rise will be put up to connect with the level named, for an outlet and for the purpose of ventilating the mine. The reef has also been driven on for a distance of 96 ft. to the western side of the crosscut. Here it is compact, the quartz having a promising appearance, and said to carry a fair value. The south crosscut at the 500 ft. level has been extended a further distance of 694 ft., making a total distance of 947 ft. This is nearly up to the company's boundary, and in conse-

* There is a crushing included in the above product sent in in the month of January, and does not appear in the returns.—J. COURTS.