

known as "Potts north-west crosscut," was driven 35 ft. north-west from the main north branch, Martha lode. At 31 ft. another part of the north branch was intersected and was driven on westward for a distance of 97 ft. Values proved irregular, however, and the reef became very narrow. No. 3 level: Ore was drawn from the Edward and I lodes. Lovett south crosscut, started at the Edward lode, was driven southward 287½ ft. A number of leaders were intersected, but proved too small to be payable. The two main reefs in this part were also met with—viz., I and J lodes, on both of which testing work was carried out. A stoping-block will be opened up on each lode. No. 2 level: Some 4,689 tons of ore was won from the Edward and north branch of the Martha lode on this level. School drive: This is a surface drive, extended for the purpose of extracting certain remnants of ore on the Martha lode, which work has now been completed. The workings have been extended eastward for the purpose of further testing the Martha lode and exploring the ground for the upward continuations of the north branches thereof. The workings are about 115 ft. above the horizon of No. 2 level. Walker north crosscut was put out to a distance of 122½ ft. from the Martha lode. An ore-body giving fair values was met with at 69 ft. north. Tested for 31½ ft. westward, this proved to be from 2 ft. to 5 ft. in width and to contain payable values. Eastward, a total of 86 ft. was driven to junction with the main Martha lode. This part was irregular in width, with occasional payable samples. The drive crossed the Martha as a diagonal crosscut, the value being 5s. 2d. per ton. A drive was then extended eastward on reef for 116 ft. from the junction with the Martha, the quartz proving to be low grade. The Martha lode was crosscutted at 100 ft. east, and this work is still proceeding. A total of 894 tons of ore was won during the year from this and other surface workings. Extraction of No. 2 shaft pillars: During the year work preliminary to the extraction of some 80,000 tons of ore contained in pillars and arches of the Martha and Welcome lodes at present supporting No. 2 shaft was put in hand. The work consists in sinking a footwall pass (known as No. 7) in the Martha footwall country opposite No. 2 shaft and connecting this by means of crosscuts with the old workings. Output: A total of 181,740 long tons of quartz was mined and treated, from which gold and silver to the value of £398,477 12s. 5d. was obtained. The gold recovered amounted to 51,627 oz. 5 dwt., valued at £367,844 6s., and the silver to 350,095 oz. 1 dwt., valued at £30,633 6s. 5d. Dividends were paid during the year to the amount of £74,386 1s. The average number of men employed was 605. The total yield of bullion (gold and silver) since the beginning of operations, including that won by the Waihi Gold-mining Co., Ltd., is 27,774,191 oz. 8 dwt. 11 gr., valued at £19,773,483 6s. 3d.

*Waihi Grand Junction Gold-mining Co., Ltd.* (W. Morrison, Manager).—The Martha Gold-mining Co. (Waihi), Ltd., continued the working of this mine under arrangement, as in previous years, until the end of July, when it purchased outright all the holdings of the Grand Junction Co. From the 1st August any tonnage won from this area has therefore been included with that won from the Martha Mine. Work in the Grand Junction section to 30th July consisted merely of the extraction of a portion of the small remnant of ore still in that mine. The shaft was maintained in good working-order. An average of two men was employed. Output: To the 30th July, 979 tons of quartz were mined and treated for a return of 323 oz. 4 dwt. of gold, valued at £2,302 16s., and 1,489 oz. 10 dwt. of silver, valued at £130 6s. 8d. Dividends to the amount of £6,906 5s. 4d. were paid. The total value of the bullion won from the mine since the commencement of operations is £2,739,623 5s. 8d.

*Golden Dawn Gold-mines, Ltd., Ouharou* (J. H. Benney, Mine-manager).—No. 3 level: The drive south on No. 4 reef was advanced 9 ft., total distance 155 ft. The reef here was 9 in. wide, but the average values were not payable. The drive south on No. 5 reef was advanced 134 ft., total 194 ft., from the main crosscut. The stone is wider than the drive, and work was undertaken over the west wall portion, which averages 5 ft. in width and in places carries very fair values, but is unpayable on the whole. A crosscut 60 ft. south of the main crosscut was extended for 25 ft. in the east wall and penetrated ore 15 ft. wide. This carried low values and showed signs of splitting into stringers at the point named. No. 1 rise on No. 5 reef, constructed at 46 ft. south of the main crosscut, was put up on reef 3 ft. 6 in. wide to a height of 123 ft. above the level. Values were patchy and unpayable. No. 2 rise, on No. 5 reef, at 101 ft. south of the main crosscut, was put up on stone 3 ft. 8 in. wide to a height of 33 ft. Values were unsatisfactory. Bottom intermediate level (70 ft. above No. 3): The crosscut mentioned in last year's report has been extended for a total distance of 237 ft. in country rock of a favourable character. A reef 8 in. in width was intersected at 59 ft. This carries values, and it is thought that it is an upward continuation of No. 4 reef. From 10 ft. to 15 ft. of additional crosscutting is required to reach No. 5 reef. Stopping operations were carried out on the west wall branch of No. 1 reef, and on Nos. 2 and 4 reefs on the levels mentioned. The average number of men employed was forty. Output: During the year 2,064 tons of quartz were mined and treated for a return of 966 oz. 12 dwt. of gold, valued at £8,674 2s. 7d. and 1,983 oz. 9 dwt. of silver, valued at £189 19s. 1d. No dividends were paid. The company's battery also treated ore for outside suppliers to the total of 123 tons, which yielded 81 oz. 17 dwt. of gold, valued at £572 11s. 1d., and 405 oz. of silver, worth £36 5s. 11d. The total yield from the Golden Dawn Mine since the beginning of operations is 89,854 oz. 6 dwt. of bullion, valued at £238,818 13s. 10d.

*Talisman-Dubbo Gold-mines, Ltd., Karangahake* (R. B. Dunlop, Manager).—For the early part of the year operations were carried out by forty men, but by the end of February, owing to the anticipated early completion of the company's own mill and other factors, ore-breaking was more or less suspended. The number of men underground was reduced to fourteen, just sufficient to keep the mine in repair and to carry on developmental work at Nos. 4 and 7 levels. Stopping was undertaken on a small block of ore situate on No. 2 Talisman level. Dubbo level: Stopping was carried on here from 40 ft. north to 38 ft. south of the main Dubbo rise for a height of 52 ft. above the level. The lode is 10 ft. wide and contains high values. Underhand stopping was commenced at 44 ft. north of the Dubbo rise, west branch. Depth of stope 9 ft., average width of reef 15 in., and values satisfactory. No. 4 Talisman level: This has been cleaned out and retimbered where required from 767 ft. to 1,409 ft. south of the rise which connects with the Dubbo No. 2 level. At 1,074 ft. south in the Crown block, which has not previously been worked, a rise was constructed to test the size and value of the lode. At 20 ft. up the lode is exposed in the hanging-wall, is 24 in. wide, and of good grade. It is intended to commence stopping operations under this block as soon as air is available. No. 7 Hauraki level: Considerable quantities of ore have been drawn from a shrinkage stope on this level, and about 1,200 tons still remain. The level was cleaned out from 930 ft. south to the face at 990 ft. south, the lode being 5 ft. wide. Some stone was drawn from under Hyde's stope at 930 ft. south, but proved to be low grade. At the Talisman Woodstock boundary stopping has been in operation for a length of 50 ft. and has been carried to a height of 12 ft. above the level. The lode here is 6 ft. wide, but only 3 ft. of the footwall is being stoped. The company's battery was completed during the year, and crushing commenced in same. It comprises the following items of plant: One Tel-smith-Wheeling jaw crusher driven by a 25 h.p. motor; a 16 in. Challenge feeder; a Head-Wrightson ball mill, 5 ft. in diameter and 4 ft. long, worked by a 50 h.p. motor; a Dorr-Duplex classifier; one Doreo diaphragm pressure pump to deliver classifier overflow to Dorr thickener tank; eight agitators (B. and M. tanks), each 20 ft. deep by 6 ft. in diameter; and an Oliver filter 5 ft. 4 in. in diameter by 8 ft. in length. The air for the agitators is supplied by an Ingersoll-Rand type thirty automatic compressor. The vacuum for the Oliver filter is supplied by a 7½ h.p. Thompson vertical pump. The filtered solution is delivered by a 1½ in. centrifugal pump to a Merril-Crowe precipitation plant, and the barren solution is returned for wash by a similar pump. The Merril-Crowe plant consists of a clarifying unit, Crowe tank, and Merril bag-type filter, operated by two 1½ in. and one 1 in. water-sealed centrifugal pumps. Precipitation is obtained through a zinc-dust emulsifier and a feeder driven by a ½ h.p. motor.

The average number of men employed was twenty. For the year the company mined 1,667 tons of ore, which yielded 318 oz. 8 dwt. of gold, valued at £2,913 2s. 11d., and 1,370 oz. 10 dwt. of silver, worth £155 3s. 5d. No dividends were paid. The total output since the commencement of operations is 57,291 oz. 15 dwt., valued at £83,870 13s. 4d.