

Stand-by shaft: Owing to the gradual subsidence at the site of the old No. 1 shaft, due to the extraction of the arches and to caving operations on the Martha lode, the question of equipping a shaft as a stand-by in case of trouble at either No. 2 or No. 6 shafts was given consideration, and it was decided to adapt the Grand Junction main shaft for the purpose, and to run a footwall gangway along the whole length of the Martha lode at Waihi Co.'s No. 10 level, the terminal point at the Grand Junction shaft to be a chamber that would be 35 ft. below Junction No. 6 level or 30 ft. below Waihi Co.'s No. 10 level eastern extension. In connection with this scheme, the Grand Junction shaft has been overhauled, the new chamber excavated and equipped, and a start made to drive north-west towards the Martha. At the end of the year the drive was in 44 ft. At the same time driving of the gangway west from No. 4 shaft north crosscut at No. 10 level was put in hand, and at the end of the year it had been extended a total distance of 465 ft.

Exploration: The exploration and dead-work footage for the year amounted to 10,433 ft., of which 5,945 represented general development, the remainder being work in connection with removal of arches, &c.

The quantity of water raised during the year showed a further falling-off, being only 715 gallons for each minute of the 365 days, as against 813 gallons last year.

Output: A total of 180,749 tons of 2,240 lb. was mined and treated, the tonnage from each lode being as follows: Martha, 46,482-14; Edward, 46,323-21; Empire, 25,731-25; Martha north branch, 13,163-39; Royal, 10,908-92; No. 2 reef, 8,781-24; Dreadnought south branch, 5,190-17; Mary, 4,537-50; Dreadnought, 3,815-17; Alexandra, 3,541-07; Welcome, 2,335-70; Empire north section, 1,933-03; Regina section, 1,635-70; north leader, 1,538-39; North lode, 1,268-75; Martha south branch, 1,129-46; Taylor, 824-10; Cameron, 789-28; Surprise, 556-25; J. lode, 145-53; Dominion, 114-29; Edward west branch, 4-46.

The total value of the bullion was £329,603 9s. 2d. The recovery of gold amounted to 69,824 oz. 11 dwt. 9 gr., valued at £293,263 4s. 2d., and of silver 363,402 oz. 11 dwt. 9 gr., valued at £36,340 5s. The company paid dividends during the year to the amount of £99,181 8s., making the total disbursements to date £5,842,283 2s. 6d. The average number of men employed was 541.

A study of these figures, together with that of the information contained in the foregoing description of the various operations, will serve to show that the position at the mine continues to remain very satisfactory. Development on, and stoping of, the new ore-bodies referred to has again enabled sufficient ore to be won to keep the mill going without calling to more than a very limited extent on the reserves, and the prospects are that for the coming year an equally gratifying result will be forthcoming.

*Grand Junction Gold-mining Co., Ltd.* (J. L. Gilmour, Manager).—The Waihi Co. has throughout the year continued to work this company's area under arrangement. A considerable amount of investigation was carried out on various levels, with results that were very satisfactory. The following is a brief summary of the most important operations:—

Waihi Co.'s No. 11 level (36 ft. below Grand Junction No. 7 level): With a view to further investigation at depth of the Dominion lode, and of the country lying between the Martha and Empire lodes in the Grand Junction Co.'s area, the Waihi Co.'s No. 11 level was extended from 206½ ft. east of McNamara's north crosscut to 343 ft. east. Up to the end of the year the work done disclosed a substantial body of quartz, which was, however, of somewhat low grade, the average between the 216 ft. and 327 ft. marks being 19s. per ton, discounting all abnormally high assays. A crosscut at 244 ft. east showed 17 ft. of quartz, assaying, as sampled from the south wall: 0 ft. to 5 ft., 13s. 4d. per ton; 5 ft. to 10 ft., 10s. 3d.; 10 ft. to 13½ ft., £1 4s. 4d.; 13½ ft. to 17 ft., £2 6s. 3d. This drive is being continued.

Waihi Co.'s No. 10 level—57 ft. sub-level (below Grand Junction No. 6 level)—Dominion lode: During the early part of the year a shrinkage stope, extending from 140 ft. west to 25 ft. east of McNamara winze, was opened up. This is known as McNamara block. A total of 3,135 long tons of ore were mined from it and sent to the mill, the ore being of very good grade. The stope is now up within 11 ft. of Waihi Co.'s No. 10 level, but it is estimated to contain a further 3,363 tons of broken ore. This block is the downward continuation of the Weeks Dominion block above Waihi Co.'s No. 10 level extension.

Waihi Co.'s No. 10 level—30 ft. sub-level: As part of the scheme for using the Grand Junction shaft as a stand-by, a crosscut, started at the new chamber at 35 ft. below Grand Junction No. 6 level, has been extended 44 ft. in a north-westerly direction towards the Martha lode. This crosscut will pass through a belt of country between the Empire and Martha lodes in which it is considered there is a probability of payable ore-bodies being located. A drive is also being put out from the new chamber in a south-easterly direction across the line of the Republic and State reefs.

Waihi Co.'s No. 10 level (about Grand Junction No. 6)—State reef: A very promising run of sulphide ore has been opened up in the Grand Junction ground on the extension of Waihi No. 10 level, which is about 4 ft. below the Grand Junction No. 6 level. Starting at 108 ft. south in Grand Junction main south-east crosscut, the floor of which was cut up to permit of trucking out along Waihi Co.'s No. 10 level extension, a drive was put out eastward on what is known as the State reef for a total distance of 330½ ft. Between the Junction main south-east crosscut and 169 ft. east a run of sulphide ore of good grade was developed, samples taken throughout the driving ranging from £1 1s. to £2 18s. 3d. per ton, while crosscuts disclosed widths varying from 7 ft. to 12 ft. of good ore. Eastward of the 169 ft. mark the reef became much smaller and of no commercial value, and had a very flat dip of 1 in 1 to the north. The drive was being continued, however, with the object of testing the ground further ahead by crosscutting. The same reef was tested westward of the main south-east crosscut for a distance of 14 ft., but the values were low.

State reef—south branch: At 261 ft. east in the drive just mentioned a crosscut was put out to the south for 71 ft. and connected to old workings on the Empire lode. Between 55 ft. and 57½ ft. south in this crosscut there was 2½ ft. of sulphide ore, which assayed £2 4s. 7d. per ton. This ore-body was named "South branch." It was subsequently driven on westward a distance of 60 ft., when it connected to a crosscut driven from the main reef at 191 ft. east on that reef. A drive was also extended east on the South branch 47 ft. The reef on the whole proved to be small, ranging from 1 ft. to 3 ft. in width. Some samples assayed well, but in general the branch did not appear to be of much commercial value.

No. 9 level (1,000 ft. below collar of No. 5 shaft): From this level an extensive investigation of the Martha lode in the neighbourhood of the Waihi Co.'s eastern boundary and in the Grand Junction Co.'s area was carried out, with results to the end of the year that were very encouraging. Details of the work have already been given in the report concerning the Waihi Mine, and it will suffice to merely mention here that in the south crosscut from the Martha lode in Waihi Co.'s ground, 440 ft. east of No. 6 shaft south crosscut, sulphide ore of payable value was met with between the 22 ft. and 26 ft. marks. This ore was driven on eastward for 409 ft., the drive entering the Grand Junction ground at 112 ft. The first 69 ft. of driving was on poor ore, but from 69 ft. to 282 ft. the ore was consistently good, ranging from £1 1s. 6d. to £3 per ton. There was another poor stretch of ore from 282 ft. to 339 ft., but from the latter mark to the end of the distance driven values improved again, ranging from £1 15s. 9d. to £2 9s. 3d. per ton. A crosscut at 410 ft. revealed a width of 12 ft. of ore, and the face of the drive was still in good ore.

A total of 1,910 ft. of development work was carried out.

Output: The ore won from the mine during the year amounted to 16,558 long tons, which yielded gold and silver to the value of £48,307 12s. 4d. The gold won was 8,712 oz. 5 dwt. 4 gr., valued at £36,591 9s. 8d., and the silver 117,161 oz. 7 dwt., valued at £11,716 2s. 8d. The average number of men employed was 49, a number of whom were engaged at surface work, dismantling plant, &c.

*Golden Dawn Gold-mines, Ltd., Owharoa* (R. R. Morrison, Manager).—The Rising Sun Mine, now operated by the Golden Dawn Gold-mines, Ltd., was kept in a good state of repair throughout the year, but active mining was only resumed about the beginning of November, when a start was made to get out a parcel of