

north-west crosscut, and a stoping-block 110 ft. long, known as "Leather" block, was opened up. On the Regina section of the Martha lode, and starting from a point 530 ft. in No. 4 shaft, north crosscut, a crosscut, known as "White's north-west crosscut," was driven 216½ ft. across the Regina lode and connected to old workings on the Martha lode, the purpose of the work being to further test the Regina lode. Crosscuts from No. 8 level, sublevel 70 ft. above White's crosscut, had disclosed quartz varying from 18 ft. to 24 ft. in width, of an average value of £1 7s. per ton. The considerable amount of driving now done eastward and westward from White's crosscut has exposed some very good ore on No. 9 level, and it is expected that a useful stoping-block will be opened up. What the quantity and average value of the ore to be won from here is likely to be cannot yet be estimated with any accuracy, mainly owing to the very soft nature of the whole formation making it difficult to confine stoping to the truly payable portion.

No. 8 Level (852 ft.).—North leader: What is known as the "Peach" block, on this leader, estimated to contain 7,720 tons, was added to the ore reserves during the year, and ore of good grade has been won from it. Peach winze, situated 52 ft. east of Hogson north crosscut, on the same ore-body, has been sunk in ore to a depth of 50 ft. Assays ranged from 9s. 5d. to £2 14s. 4d. per ton, and averaged £1 7s. per ton. At 49 ft. down in the winze a crosscut was put through the ore-body, the full width of which was 19 ft., 5 ft. in the south assaying £1 0s. 11d. per ton, the balance being low grade. The southern section contained a band of sulphide ore of good value, which justifies further investigation. This north leader is now being investigated below, at No. 9 level.

No. 7 Level (702 ft.): The Mary lode, which is a small foot-wall branch of the Martha lode, leaves the main lode within the Waihi Co.'s ground about 200 ft. from the eastern boundary. It runs into the Junction Co.'s ground, and was worked by that company in former years. With a view to testing it in the Waihi Co.'s ground, the Dye north crosscut was driven 22 ft. from the Martha lode. The Mary lode was met at 17 ft., where it proved to be 3 ft. wide and of an average value of £2 1s. 9d. per ton. It was then followed eastward for 205 ft., entering the Junction Co.'s ground at 182 ft. The width along the 250 ft. varied from 2 ft. to 5 ft., and the average value was £1 10s. per ton. The reef was also followed westward for 77 ft., when it died out against a carboniferous seam. A shrinkage block, to be known as the "Comet" block, 116 ft. long, was opened up on the most promising part of the lode. As the result of investigations on No. 6 level, 40 ft. sublevel, a block, to be known as the "Memmott" block, was opened up for stoping on the Martha lode, north branch. It is estimated to contain 2,194 tons of ore, of an average value of £2 8s. 3d. per ton.

No. 6 Level: On this level a shrinkage block, known as the "Whiteson" block, was opened up from 20 ft. east of Rickard crosscut to 68 ft. west of same. It is estimated to contain 1,928 tons of ore, of an average value of £1 11s. 9d.

No. 5 Level: On the 56 ft. sublevel, a shrinkage block, known as the "Rudd" block, was opened up during the year on the north lode. It is estimated to contain 1,257 tons of ore, of an assay value of £1 11s. 9d. per ton. On the 32 ft. sublevel, a shrinkage block, known as "Jennings" block, was opened up. This block is estimated to contain 1,009 tons of ore, of an assay value of £1 14s. 4d. per ton.

Surface workings: Operating from an incline known as "Hogan's" dip, an arch of ore was opened up on the Martha lode. This has been named the "Merry" block, and is estimated to contain 4,007 tons of ore, of an assay value of £1 9s. 6d. per ton.

Diamond-drilling: In addition to the two holes already referred to as having been drilled from No. 14 level, the following bore-holes were drilled in other parts of the mine:—

No. 20 borehole, No. 11 level: This was started in the northern end of Brook's north crosscut, on the Empire lode, about 50 ft. inside the Waihi Co.'s ground, its purpose being to test the Martha lode in that part of the property. The borehole was horizontal, and its direction 5° east of true north. Its total length was 279½ ft., and various reef formations were passed through. From 9 ft. to 16½ ft., quartz and a mixture of quartz and country were cut, assaying 3s. per ton. At 24 ft. to 38½ ft. the Martha lode was intersected, 14½ ft. of quartz and country, and quartz and calcite, assaying 1s. per ton. Between 170½ ft. and 175½ ft. a further mixture of quartz and country was met, which probably represented the Mary lode. Assays revealed only a trace of bullion. The country rock penetrated was generally of a soft nature, brecciated in places, the final 16 ft. being light-grey andesite.

No. 21 borehole, No. 8 level: This borehole constituted an important test of the country north of the Martha lode. It was started in the chamber in the northern end of Hopkin's crosscut on the Martha lode, the chamber being 320 ft. inside the Waihi Co.'s northern boundary. The total length of the borehole was 435 ft. It crossed the boundary at 320 ft., and the final 115 ft. was in Junction Co.'s extended claim. The borehole was horizontal, and its direction approximately north-north-west. The country rock penetrated was a light grey to whitish andesite, containing much iron-pyrites. Between 72 ft. and 80 ft. the drill penetrated a zone of silicified country containing leaders of calcite. This formation showed only traces of bullion. Small leaders of quartz were met with, but were of no importance. At 386 ft. a 10 in. leader, which assayed 3s. 10d. per ton, was met, and another, 12 in. wide, at 387 ft., assays from which gave values up to 6s. 8d. per ton.

No. 22 borehole, No. 10 level (small drill): The starting-point of this borehole was in the Edward cross-lode at a point 1,967 ft. south from No. 2 shaft, the purpose being to cross the line of the main Edward fissure, which had been followed to a point 190 ft. to the north, and to determine if this reef continued southward. The borehole was horizontal, and its direction south-east. It was put in a total distance of 210 ft., well past the Edward line, but no sign of the fissure was met with.

Output: A total of 181,479 long tons of ore was won and treated, the quantities from each lode being as follows: Martha, 65,851.7; Edward, 47,983; north branch, Martha, 25,345.5; No. 2 reef, 8,600; Empire, 7,166.9; Royal, 5,901.7; Surprise, 4,112.5; North, 3,635.7; south branch, Dreadnought, 2,562.5; North leader, 2,369.6; Jellicoe, 1,655.4; Alexandra, 1,400.9; Mary, 1,394.7; Regina, 1,050.9; south branch, Welcome, 936.7; north section, Empire, 900; Welcome, 368.8; right-hand branch, Welcome, 137.6; Dreadnought, 104.5.

The total value of the bullion recovered was £317,818 15s. 6d. The recovery of gold was 67,321 oz. 17 dwt. 9 gr., valued at £282,751 17s. 4d., and of silver 350,669 oz. 1 dwt. 9 gr., valued at £35,066 18s. 2d.

The company paid dividends during the year to the sum of £99,181 8s., making the total disbursements to date £5,643,920 6s. 6d. The average number of men employed was 553.

*Grand Junction Mine* (J. L. Gilmour, Manager).—The claims held by this company have been worked throughout the year by the Waihi Co. Comparatively little development work was carried out, the more important items being the extension on No. 14 level of the Waihi Mine of the drive eastward from No. 4 shaft, north crosscut, for 125 ft. in Junction ground; the extension of the 600 ft. east crosscut on the Empire lode on Waihi No. 13 level 327 ft. into Junction ground; the investigation of the Dominion lode in the company's area from Waihi No. 12 level; the extension of the drive on West reef on No. 10 level, Waihi Mine, 196 ft. into the Junction; the investigation of the Republic and Wower lodes; the extension of the drive on the south branch of the Dreadnought lode 32 ft. into Junction ground on No. 10 Waihi level; and the extension of the Worthington north-north-east crosscut into Junction area on No. 9 Waihi level.

Some 22,762 long tons of ore were won, which yielded bullion to the value of £45,762 6s. 9d. The amount of gold produced was 9,504 oz. 14 dwt. 14 gr., valued at £39,919 17s. 3d., and amount of silver 58,424 oz. 14 dwt. 14 gr., valued at £5,842 9s. 6d. The average number of men employed was fourteen.

*Rising Sun Mine, Owaharoa* (R. R. Morrison, Manager).—The formation of a new company having been effected, underground operations were resumed in this mine in April. The mine-workings were found to be in very bad order, and considerable expense was entailed in putting them in repair; work was practically confined to the bottom