

quartz. Cross-cut to east driven 450 ft., and cuts several reefs, none of which have yet been driven on. Level 50 ft. below Smithy level: A cross-cut has been driven east 206 ft. Level 130 ft. below Smithy level: A cross-cut has been driven east 386 ft. There is no machinery in connection with this mine. The average number of men employed during the eight months previous to amalgamation with the Komata Reefs Company was fifteen.

*Woodstock Mine* (Area, 72 acres 1 rood 18 perches).—Since last annual report 1,974 fathoms of stoping have been done on the Maria lode, and the development work carried out may be summarised as follows: Driving on the lode, 2,379 ft.; rising on the lode, 601 ft.; sinking on the lode, 190 ft. The mine is opened up by six different levels, and the total lengths of same are as follows: No. 1 level, 693 ft.; intermediate level, 798 ft.; No. 2 level, 826 ft.; No. 3 level, 1,036 ft.; No. 4 level, 989 ft.; No. 5 level, 831 ft. These levels have all been connected one with the other, partly by rising and partly by sinking, and the whole of the mine-workings are now splendidly ventilated. The No. 5 is the lowest level obtainable, bar sinking, and the backs available range from 80 ft. on the left-hand bank of the Waitawheta River to 900 ft. at the southern boundary, which is the highest point in the property. A cross-cut 500 ft. in length has been driven west of No. 5 level, and several gold- and silver-bearing lodes have been intersected during its progress. Within the next 20 ft. of driving the Woodstock lode should be met with, and upon this the cross-cut will afford 360 ft. of backs beneath the old workings. The total amount of cross-cutting accomplished throughout the mine is 1,860 ft., and this work has revealed numerous veins and lodes, varying in size and value, and running west of and parallel with the Maria lode. The total quantity of ore treated from all parts of the workings on the Maria lode during the year ending the 31st March, 1898, was 10,923 tons, for a bullion return of 50,400·27 oz.; value, £35,955 1s. Of this, the bullion recovered by the cyanide process amounted to £32,899 11s. 9d., and the value redeemed by amalgamation was £3,055 9s. 3d. Owing to its refractory character, considerable difficulty has always been experienced in the treatment of Woodstock ore, and many processes have been tried with varying success. Dry-crushing with subsequent cyanide treatment, followed up by concentration and amalgamation, gave the best results, but even then the extraction was comparatively low, and the consumption of cyanide made milling operations costly. Early in the present year a start was made to crush wet with a dilute solution of cyanide in the mortar-boxes, as an experiment, and the bullion results were so highly satisfactory that it was decided to adopt wet-crushing. Dry-crushing was then stopped, and wet-crushing started, with twenty head of stampers. For some unaccountable reason the high bullion extraction obtained from the experimental wet-crushing was not borne out by subsequent results with the same treatment on a large scale, and experiments are now being made with a view to ascertaining the cause. Mr. H. H. Adams, who has successfully established a new departure in the treatment of ore by wet-crushing at the Komata Reefs mill, is now trying the same process in the Woodstock mill, and, so far as operations have gone, it looks as if his expectations would be realised. An average of 174 men were employed.

*Crown Mine* (Area, 135 acres 1 rood 31 perches; owners, the New Zealand Crown Mines Company, Limited).—This mine is situated on the Waitawheta River, distant about a mile from the battery and works, which are built on the left bank of the Ohinemuri River, a short distance below the Township of Karangahake. The workings are very extensive, the levels reaching from the Waitawheta River to a point past the trig. station, which is about 1,600 ft. above the level of the adit. The average height of the available backs would thus be about 800 ft., and the reefs will produce great quantities of ore from the portion of the mine opened from the adit, irrespective of the downward extension of the reefs, which, so far as already prospected, are of a highly valuable character. The general manager, Mr. R. H. Daw, has furnished the following account of the operations during the year ended 31st March last:—

“Mining has been confined exclusively, for the year above-mentioned, to the Crown Mines section of the property, and the Welcome Reef south of the Waitawheta River has produced all the quartz milled during that period. The supplies have been drawn principally from the stopes over Nos. 3, 4, and 6 adit levels (the latter being the main level through which the quartz is delivered in the Waitawheta Gorge, its mouth being about 10 ft. above the normal level of the river), the balance of ore having come from the underhand stope in the floor of this level, and in comparatively small quantities from other workings under river-level. Little, however, has been done to develop the resources below river-level pending the further sinking of the main incline shaft, now being pushed down with all possible speed, in order to attack systematically the excellent quartz proved to exist in this section of the property.” The main features in the development for the year consist in the extension southwards on the course of the Welcome Reef of Nos. 4 and 6 adit levels, in the putting up of two main rises from No. 4 level to Coward's No. 3 level (old workings), and in the setting-off, stripping, and timbering the main incline shaft now being sunk on the underlie of the reef 100 ft. in from the mouth of No. 6 level. Since my last report, No. 4 level has been extended 630 ft., making its total length 2,300 ft., and No. 6 level has been driven a further distance of 540 ft., to a total length from its mouth of 2,200 ft. During the year the reef has, generally speaking, maintained its average thickness and value, the whole of the quartz mined from the main levels having been sent to the mill. The two main rises previously mentioned have been completed to Coward's No. 3 level, a total height of about 480 ft., opening up in their course immense blocks of low-grade ore for stoping, besides proving thoroughly efficient in ventilating the main workings below. With the completion of the Upper Waitawheta Water-race, the erection of the air-compressor, and winding-engines, we have been enabled to continue the sinking of the main incline shaft. This shaft measures 29 ft. by 6 ft., inside timbers, and has now reached the No. 7 level, a depth of 60 ft. on the underlie of the reef. When a further depth of 60 ft. has been reached, No. 8 level will be put out from the shaft north and south, and stoping actively commenced. The winding-gear is now complete with double line of rails, incline, cages, &c. For the year, 17,960 tons of ore were mined and sent to the mill. Milling has been carried on continuously during the year with forty heads of stamps. From April to August