with double-discharge mortars). The remainder of the plant on the machine-site consists of two wooden cyanide-vats, each 16 ft. in diameter (part of the old plant), and four new cyanide-vats each 22 ft. in diameter, into the latter of which the ore is fed by means of a revolving ore-conveyor, a horizontally-laid pipe 8 in. in diameter, to the inner surface of which a worm is fitted. Over each of the four new vats there is an adjustable door in the revolving pipe, through which the ore passes when desired into a canvas hose lowered into the vats. The use of this form of conveyor obviates the necessity for the use of trucks in this part of the works, thus greatly reducing the amount of dust in the atmosphere of the building. The tailings, after treatment by the cyanide process, pass over amalgamated copper-plates for the extraction of the coarser gold, and the blanketings are subsequently treated in berdan-pans, of which there are three, 4 ft. in diameter, on the machine-site. Water for the driving of the mill is conducted from the company's dam on the Waitawheta River first through a tunnel 90 ft. in length, then through an open cutting 20 ft. in length, passing finally into a wrought-iron pipe 4 ft. in diameter and 925 ft. in length, delivering the water into a concrete-walled turbine-pit 28 ft. in depth. The motive-power is generated by means of two Victor vertical turbines, 21 in. and 12 in. in diameter respectively, the latter being used for the operation of a dynamo generating electric light for the works and offices, and for the transmission of power to the cyanide works on the special site. The cyaniding plant on the special site (to which ore, after its passage through the mortars, is conveyed by covered tram *viâ* the Howe truss bridge, newly erected over the Waitewheta River) consists of six wooden vats, each 22 ft. in diameter, with the usual accessories, including amalgamated copper-plates and three 4 ft. diameter berdan-pans. The sumps are substantially built of concrete. The centrifugal and vacuum pumps on this site are driven by an electric motor operated by the dynamo on the machine-site. Water for vat-sluicing, &c., is brought to the special site from the Hauraki Creek by means of a pipe 3 in. in diameter. It is expected that the mill will be able to treat a minimum of 25 tons per day, and it is hoped that the stamps will eventually prove equal to as much as 30 tons. A No. 5 Krupp ball mill, recently received from England, will shortly be erected, and may be expected to increase the crushing-capacity of the plant by at least 20 tons per day. In addition to the buildings, machinery and plant, bridge, &c., above referred to, suitable office premises and residences for the mine and battery managers (Messrs. W. Goldsworthy and C. H. Taylor) have been erected since the property was taken over by the new company.

*Crown Mine* (Area, 135 acres 1 rood 31 perches).—This mine, which now includes the Earl of Glasgow ground, is situated on the north and south sides of the Waitawheta River. The river flows through a very deep gorge, the rock on either side being nearly perpendicular, and its direction generally contrary to the run of the reefs. The gorge is virtually a natural cross-cut made by the river, and shows the reefs and veins of quartz as they lie in the rock on both sides. Extensive operations are being conducted. The mine development is expeditiously carried on. The splendid water-power obtainable from the Waitawheta is being utilised in driving air-compressing machinery, and the power developed will provide a supply of compressed air to work all the machinery required at the mine. The battery now consists of forty stamps, and is being converted to suit wet-crushing and the use of cyanide solution in the stamp-boxes. One hundred and ninety-five men were employed. Mr. Daw, the general manager for the New Zealand Crown Mines Company (Limited), has furnished the following short description of the mine-workings, &c.:—

During the year ended the 31st March last the mine has been worked continuously to provide quartz for the mill, and for the opening-up of reserves. The principal mining operations consist of the pushing-forward on the course of the Welcome reef of Nos. 4 and 6 tunnels, south of the Waitawheta River, and the putting-up of two main rises to connect with Coward's old workings, the latter in order to provide ventilation and to open up the immense blocks of valuable stoping-ground between the river-level and Coward's No. 3 level above. No. 4 level has been extended south on the reef about 340 ft., making its total length 1,670 ft. The reef, it will be remembered, was picked up about 60 ft. west of the point at which it was cut off by the great fault mentioned in last report, and, while its characteristics are similar to those north of the fault, its value has greatly improved. Its average thickness is 4 ft., varying from 2 ft. to 10 ft.

The reef in No. 6 level, which has been extended 370 ft., was intersected by a cross-cut put out west after striking the great fault, and its position was found to agree generally with the reef in No. 4 level above. It continues to maintain its average width, and the quartz from this tunnel and the stopes above and below it continues to be the most valuable received from the mine. Two main rises are being put up from No. 4 level to Coward's No. 3 level above, a total distance of about 480 ft. on the underlie of the reef. No. 1 of north rise has been risen 150 ft., and No. 2 210 ft. These rises, when completed, will be valuable for ventilation and stoping, as well as for passing filling for the workings below river-level. Stoping has been carried on in the backs of Nos. 4 and 6 levels, the quartz mined yielding an average assay-value of about £4 per ton. Little or no stoping has been done north and south of the winze below the river-level, owing to the incapacity of the small Tangye pump to cope with the inflow of water. During the year 11,737 tons of ore has been mined, of which 10,432 tons was milled, and yielded 7,691 oz. of gold and 9,040 oz. of silver, valued at £33,368. Over 1,600 tons of quartz is stocked at the battery, but, owing to the limited paddock-accommodation, it has been found impossible to take advantage of the full output obtainable from the mine in its present state of development. Twenty heads of stamps were in operation up to the 10th August last, and since that date forty heads. At the reduction-works the battery, which is now a dry-crushing plant, is being converted into one of wet-crushing; the experiments in this direction up to the present have given most satisfactory results. In the No. 6 level north of the Waitawheta River a chamber has been stoped out for an air-compressing plant. The compressor to be erected is a Riedler horizontal two-stage tandem type, having cylinders of