

6 in. pump operated by a water-wheel. Operations are carried on at the 70 ft. level, and consist of driving a level on the northern strike of the reef, which is 18 in. wide. There is a battery of five stamps, which is run at intervals, the number of men employed and quantity of ground opened not being capable of keeping it continuously running. The treatment process consists of crushing and amalgamation.

*Cox's Reef*.—This holding was sold by auction during the year, and purchased by Messrs. McKnight.

#### BALD HILL FLAT.

*Advance Mine, Obelisk Range* (R. T. Symes, owner).—The 4 ft. reef operated on lies very flat, and the country is much broken. The ground is heavy, and consequently requires careful timbering to keep it open. A small battery of three stamps and a Wifley table compose the reduction-works. Pyrites are saved, and shipped to Australia for treatment, and show a profit. Two men employed.

#### BANNOCKBURN.

*Carrick Gold-mining Company* (J. E. Iles, mine-manager).—This quartz claim is situated in the Carrick Ranges, about three miles from Bannockburn, and is being actively developed. Three reefs, averaging about 2 ft. in width, exist on the property, and are known as the Royal Standard, White Horse, and Caledonia. The principal mine-development consists in the driving of three low-level tunnels to cut the separate reefs. During the year reduction-works have been erected and the most modern appliances installed for the thorough treatment of the mine ores. Various attempts have been made in previous times to deal with these ores, but their refractory nature has baffled the means adopted to extract the values. The new crushing plant consists of a ten-head battery, stamps 950 lb. each, mortar-boxes of the Homestake pattern, and Hoscur self-feeders are employed. Electroplated-copper plates, 6 ft. by 12 ft., are used in front of the mortar-boxes, and inside amalgamation is dispensed with. The pulp, after passing over the plates, goes into a conical separator, 10 ft. deep by 6 ft. in diameter. This cone has a jet of water entering at the bottom, and a good separation is anticipated. From the cone the sand passes to the cyanide-tanks. There have been erected four leaching-vats, 6 ft. high and 25 ft. in diameter, two sumps, and one solution-tank, 3 ft. high and 20 ft. in diameter. These tanks are all made of mild steel, bottoms  $\frac{1}{4}$  in. and sides  $\frac{3}{16}$  in. plate, and are stiffened by  $2\frac{1}{2}$  in. by  $2\frac{1}{2}$  in. by  $\frac{3}{8}$  in. steel angle irons. Two precipitation-boxes are in position, and preparations are made to place in position two tables to carry amalgamating-plates for the tailing to pass over before finally being deposited in the creek. Three pumps and a small vertical engine have been installed, but various details yet remain to be completed. The mine is connected with the battery by a tramway of about half a mile and a self-acting incline. A few hundred tons of old tips, sulphide, and about 70 tons of sulphide ore from the White Horse reef have been crushed, the treatment of which is not yet completed.

*Evans and Ledingham's Quartz-mine*.—This property on the Carrick Range has been developed to some extent with, it was understood, very encouraging prospects. A small battery, driven by an oil-engine, has been erected, and a small amount of stone treated. Small quantities of very rich specimen stone are supposed to have been obtained. 38 tons of ore was crushed for £130.

#### CROWMELL.

*Cromwell Gold-mines Development Company* (T. Cooper, mine-manager).—A low-level tunnel is being driven to cut the reef-system at depth. Several reefs are supposed to traverse the property, on which more or less work has been done at shallow depths. The tunnel, which will hole into the bottom of the existing shaft, will give free drainage, and enable the prospecting of the mine to be carried on at much less cost. The face is now extended to 600 ft., and two small leaders have been intersected. Nine men are employed.

#### MACETOWN.

*New Zealand Consolidated Mines (Limited)* (L. O. Beal, attorney, Dunedin).—No mining of any consequence has been carried out by this company during the year. A little work was done in the early part of the year in the Homeward Bound Mine. A battery from the O.P.Q. Mine at Waipori is erected on the property. The intentions of the company, it is understood, are to commence active mining operations for the development of their properties at no distant date.

*Hamilton and O'Neil's Quartz-mine*.—Preparations were made to convey 9 tons of stone from an outcrop on the property to the battery for a trial crushing.

*General*.—The other known reefs in the district were not worked during the year.

#### SHOTOVER.

The numerous mines in this district have commanded no attention throughout the year.

#### GLENORCHY.

*Glenorchy Scheelite Syndicate* (George Reid, managing director).—The mining properties held by this syndicate have been actively developed during the year.

*Glenorchy lode*: The principal work has been the extension of levels 5 and 6 and a rise from 3 to 5. This connection has made the ventilation very much better. The total amount of driving done in the mine is 2,400 ft., and rises and crosscuts aggregate 1,350 ft. The output from this lode was 33 tons scheelite concentrate (72 per cent.  $\text{WO}_3$ ), most of which came from the stopes in No. 5 level. An average of ten men employed during the year.

*Junction lode* (J. J. Lynch, mine-manager): Very little work was done on this lode during the year, the total driving amounting to 400 ft. since the mine was opened. A fair body of low-grade ore