

are solid and well defined, showing that the country has not been much disturbed. The quartz from this reef has to be carted about three-quarters of a mile to the tramway at the top of the hill, and is then lowered to the battery, which is situated at the edge of the river. Some work was done on the Canada reef at the beginning of the year by sinking a small shaft on the reef, and then driving east for the purpose of getting under the old workings; but, owing to some disagreement upon the mode of working by the party of tributers, work was stopped after crushing about 200 tons, which gave a return of about 5 dwt. of gold per ton. Lawson's reef is being now worked upon tribute, and several small crushings been done, giving from 8 dwt. up to 21 dwt. of gold per ton. Five men are employed.

Burnt Creek, near Waitakuna.

Very little work has been done upon this property during the past year, owing to the company being in liquidation; but what has been carried out was upon the north line of reef. The adit has been driven about 20 ft. further east, but is still in broken country, although the walls of the reef are fairly well defined. Several small crushings of quartz were put through the battery, with the result of about 2 dwt. of gold per ton. Arrangements are about completed to buy the assets of the company, and it is expected that active operations will be resumed.

Waipori.

Bella Reef, Lammerlaw Range (Secretary, Mr. Robert McKeich, Lawrence).—After standing idle for some time, this mine has been reopened recently by a private company. A crosscut from Reef Gully, some 400 ft. in length, cuts the reef, which was formerly worked up to the surface for a limited distance and at a higher level. The present level is below the old stopes, and in solid ground, with nearly 100 ft. of backs overhead. The reef varies from 2 ft. 6 in. to 6 ft. in width, its underlay being about 70° from the horizontal. There is a percentage of scheelite in the stone, but it is not extracted. The battery consists of five heads of 750 lb. stamps, with silvered plates. No blanket-tables used. At my inspection the company were having their first crushing; the results were not known, but $\frac{1}{2}$ oz. of gold per ton of stone was anticipated.

O.P.Q. Mine.—As development-works have been carried on to a greater extent here during the last year or two than at any other quartz-mine in Otago, the following general description will doubtless prove interesting:—

“The O.P.Q. Mine is situate a mile and a half to the south of Waipori Township, on the dividing-ridge between the Waipori River and Pioneer Creek. The name ‘O.P.Q.’ is derived from the initial letters of the name first given to the reef—viz., the Otago Pioneer Quartz Reef, so called from its being the first payable quartz lode discovered in the Province of Otago. From the date of its first discovery till 1897 work was intermittently carried on by small parties, who put in short tunnels from various points along the back of the lode, with, on the whole, good results. In 1869 a shaft was commenced which was afterwards put down 160 ft., and for several years work was carried on by a company formed in Dunedin; 20 chains south of this company's works another shaft was sunk by Mr. J. R. Perry. In March, 1897, a special claim of 74 acres was made over by the then owners to the New Zealand Minerals Company, who soon afterwards acquired a small claim held by Messrs. Eaton and party. The properties were towards the end of 1897 transferred to the O.P.Q. (Waipori) Gold-mines (Limited), an English company, who in the past two years have carried out works on a much larger scale than was before attempted. Prior to the company's commencing operations a small tunnel or adit-level had been driven by Eaton and party a distance of 430 ft. This tunnel was reopened and extended until its total length is now 1,395 ft. Crosscuts put in at different places along the line of the tunnel total in length 246 ft. Five rises have been put up to various heights for purposes of ventilation and opening out stopes; one of these rises communicates with the surface, another with the level above, while the other three are still in course of construction. Another tunnel 55 ft. above the level of Eaton's, after being driven by Ritchie and Black 375 ft., was allowed to collapse. This has now been cleaned out, retimbered, and driven a further distance of 565 ft., making its full length 940 ft. The cross-cutting done from this tunnel amounts to 130 ft. Two rises were put through to the surface and a winze sunk 47 ft. below the level. At the mouth of this tunnel a hopper was constructed to hold 30 tons of quartz. The amount and value of quartz opened up by these two tunnels were sufficient to warrant the exploration of the lode at deeper levels. A shaft has been sunk 285 ft. through a mica-schist rock interlaminated with quartz. At 270 ft. a crosscut 128 ft. long was put in to intersect the lode. From this point of intersection a level has been driven 327 ft. north and 261 ft. south, and 70 ft. of crosscutting has been done from the level. Two rises have been put up to communicate with the lowest level driven from the old shaft of the Dunedin company. The old workings have been partly cleaned out and explored, with the intention of utilising them in future operations. Stopping has been done at the different levels since October last, about 170 tons of quartz weekly being taken out to keep the crushing plant continuously working. A crosscut tunnel was constructed from the main shaft 80 ft. below the collar to connect with Eaton's tunnel. This serves the double purpose of an adit- and haulage-level, the quartz won from Eaton's being sent to the surface through the main shaft, and so saving the trucking to the mouth of the tunnel and thence to the battery. The main working-shaft is vertical, and is divided into three compartments, through two of which hauling is done, while the third is taken up with ladders and pumps. The winding-compartments are each 4 ft. by 3 ft. 6 in., and the pumping-compartment 5 ft. by 4 ft. The ladders are in slanting lengths of 24 ft. each, giving a perpendicular rise of 20 ft., with a landing or platform at each length. The shaft is lined with 9 in. by 3 in. timbers, with a 12 in. by 12 in. pump-bearer set at every 50 ft. These carry a 9 in. Cornish pump, which raises the water through a vertical height of 205 ft. from the sump, discharging at the level of Eaton's tunnel, through which the water runs to daylight. The bucket or draw-lift now in use