

mining-engine with winding and pumping gear set to work, head-gear (poppet-heads) erected and fitted with safety-cages and detaching-hooks. The pump is 9 in. diameter, with 5 ft. stroke, both lift and force. At present the lifting set only is in use in connection with the sinking, and a cage is in use for lowering the men to a platform at 200 ft. and raising them to the surface. The *débris* from the sinkers is raised in a bucket in a separate compartment. Some new plant is on the ground ready for use as soon as required. It is proposed to cut the reef at 300 ft. As stated in my last report, two tunnels were being driven on the line of reef. These have been continued, and are now in 940 ft. and 1,120 ft. respectively. From this latter tunnel a cross-cut (east) is being driven to the new shaft, and will form an adit for water. This cross-cut passes through an old shaft which has been cleaned out for ventilation. Owing to the fact that the first mentioned (and shorter) tunnel starts from the surface at a considerable distance further up the gully than the other one, it is really leading by about 800 ft., the vertical distance between the two tunnels giving the lower and longer one about 80 ft. of backs. The line of reef is approximately north and south, and very patchy so far as seen. From the upper tunnel a cross-cut has been driven west in the foot-wall for 87 ft., and from the lower tunnel a cross-cut was similarly driven for 121 ft. without meeting with any parallel reef. Some 400 tons of quartz had been taken out of these tunnels, and, I am informed, showed a yield of 14 dwt. per ton. The battery-site is being prepared, and a good portion of the machinery is on the ground. The sinking of the main shaft is also being continued, and at this date is 250 ft. deep. The low-level adit-tunnel, previously named, is now connected by a cross-cut to the shaft at a depth of about 70 ft. from the surface. The pump delivers its water to this level. Both adit-tunnels have been continued on the line of reef, and have passed through old workings into a fair thickness of stone. The battery plant is not yet erected, but portions of this work are in progress."

Rough Ridge.

Great Eastern Mine (Area, 3 acres; owners, T. and H. Perry; mine-manager, T. H. Perry).—This mine is opened up by two shafts at a depth of 235 ft. and 275 ft. The only work done during the year was surface-prospecting, and about 65 tons of quartz was taken out, but has not yet been crushed. The mine has been worked intermittently for the past twenty-eight years with varying success, yielding from 7 dwt. to 3 oz. per ton. The last workings at the lowest level—275 ft.—gave a return of £3,080 from 600 tons of quartz, the reef averaging about 18 in. in width.

The present owners purchased this property in 1891, but they have not been able to open up the mine for want of a proper pumping plant, consequently work has been chiefly confined to taking out surface-blocks, which will shortly be crushed. The battery consists of five heads of stamps, 7 cwt. each, driven by an Eclipse double turbine.

Barewood District.

Barewood Reefs.—Operations have been stopped by the Anglo-Continental Syndicate and the London and New Zealand Exploration Companies jointly, and the plant dismantled prior to its sale. A considerable amount of work has been done, and money spent, without finding anything sufficiently good to warrant further development. Three shafts were sunk parallel to the line of reefs, and a tunnel driven from the Taieri River Gorge. The latter was, approximately, 300 ft. in when stopped. No. 1 shaft was sunk some 200 ft., and a cross-drive driven to cut the reef, but, after being continued to beyond the perpendicular line of reef at surface, failed to meet with any quartz. This cross-cut intersected well-defined walls filled in between with angular fragments of country rock and mullock. This track was driven on in a southerly direction for nearly a chain, where an extra quantity of water was tapped with which the two pumps were unable to cope, although up to this time one pump could effectually deal with the water. When it was found that the water was too much for the pumps the work was stopped. No. 2 shaft was sunk nearly 200 ft., and a cross-cut driven in a similar manner to that at No. 1 shaft, without finding any reef. Two walls, with mullock-filling, were cut through at some 40 ft. from the shaft, and a drive put in northwards for, say, $\frac{3}{4}$ chain without finding any quartz. Both in the shaft and cross-cut the country rock was very hard, and the water less in quantity than in either of the other shafts. No. 3 (or Scott's Gully) shaft passed through 7 ft. of reef at a depth of 150 ft. The shaft was continued to over 200 ft., and at the 200 ft. level the reef was cut a few yards to the east of the shaft, where there is a large body of stone. To the north the reef decreases in width, and was only some 8 in. wide at the face when operations ceased. A large quantity of water was met with at the 200 ft. level. 53 tons of quartz was crushed from time to time, and yielded 10 oz. of gold.

Macrae's Flat and Nenthorn District.

The Bonanza Mine, formerly owned by Phelan Brothers, has been taken over by Beale and Peterson, who have carried on some development work, and reorganized the plant, &c.

Mount Highlay Syndicate.—The owners of this mine, which is situated between Macrae's and Hyde, have crushed a large tonnage of mixed mullock and quartz, 1,880 tons, which yielded 368 oz. 7 dwt. 2 gr. of gold.

Lyders and party still continue to carry on operations at their mine. The work, however, is carried on in an intermittent manner, and the year's operations have not been of great extent. The quantity of quartz crushed was 360 tons, which yielded 62 oz. 7 dwt. 8 gr.

Surprise Mine (Area, 16 acres; owner, Mills and Sons; manager, H. N. Mills, sen.).—This mine has been abandoned, and the late owners are removing the battery to Macrae's Flat, to work freehold land.

Golden Point Mine, Macrae's (Area, 32 acres; owner, George Donaldson; mine-manager, William Donaldson).—The proprietor of the mine reports that the workings are situated on a hill-side; the surface is of a broken character, and the lode very much disturbed, the reef, lying