

in irregular masses, having almost the same inclination as the hill. The workings carried on are within a short distance of the surface. The reef is of varying width, and consists of friable stone. The surrounding country rock is of schist, with a soft casing to the lode. The greater portion of the material between the walls consists of quartz, in which irregular bunches and fragments of scheelite are of common occurrence. This latter is selected, when possible, by hand, but a large portion is subsequently recovered by concentration. The quartz, being of an auriferous character, is first crushed, and the gold saved by means of amalgamating tables. The residue is passed over Frue vanners, where the scheelite, which is of greater specific gravity than the quartz, is readily separated. During the year 600 tons were crushed, but no cleaning up with respect to the gold saved has yet taken place; 40 tons of scheelite were, however, recovered, assaying 67 per cent. tungstic acid—value, £65 per ton, £2,600.

The machinery at the battery consists of ten head of stamps, 7 cwt. each, capable of a speed of seventy blows per minute; one 5 ft. Huntingdon mill; one Giant rock-breaker, 8 in. by 10 in., of a capacity of 6 to 8 tons per hour; one 6 ft. Frue vanner, capable of treating 12 tons a day. Water-power is used for driving the machinery when available, but a Weber oil-engine drives the plant when water is scarce and the supply short. The reef crops out along the line for several miles, and contains gold-bearing quartz and scheelite. The average number of men employed was seven wages-men.

Parker's Reef (Area, 200 ft.; owner and manager, Arthur Parker).—This mine, which is owned by Mr. Arthur Parker, and situated at Blackman's Gully, in the Hindon district, is held as a claim containing 200 ft. on the line of reef. A small vein has been opened near the surface, and about 40 tons of quartz taken out yielded gold to the value of £50. A small battery of four stamps, each stamp weighing 4 cwt., is on the ground, and is driven by an eight-horse-power oil-engine. This mine is not worked continuously, having been idle during three months last winter.

Cunningham's Mine (Area, 16 acres; owner, Cunningham Brothers and George Ross).—Two reefs have been cut in prospecting tunnels, and the owners, confident of their favourable nature, have erected a battery of eight stamps, to be driven by water-power, and which will be capable of a speed of eighty strokes a minute. The owners are at present engaged in cutting a water-race, and it will be two or three months before operations in the mine and battery are commenced. A trial crushing of 30 tons of quartz yielded 30 oz., valued at at £117 15s.

Preservation Inlet.

Morning Star Mine (Area, 77 acres 3 roods 15 perches; owners, Morning Star Gold-mining Company; mine-manager, E. P. Keam).—This mine is situated at Long Beach, and is entered by four levels from the side of a mountain-range. The lowest level is known as No. 2, and connects to the outside by a cross-cut tunnel, from which it has been driven on the line of reef for 499 ft. No. 1 level is 86 ft. above No. 2, and is driven 591 ft. No. 1A level on reef is 138 ft. above No. 1, and 718 ft. in. No. 1B level is 156 ft. above No. 1A, and 192 ft. in. Below No. 2 level a winze has been sunk to a depth of 170 ft., so that the reef has been proved to a vertical depth of 550 ft. below No. 1B level. At the lowest point where the quartz has been cut—viz., at the bottom of the winze—the lode is 6 ft. in width, and assays 4 dwt. to the ton. No. 2 level is said to have never yielded good payable stone. Good stone made at 18 ft. to 20 ft. below No. 1 level, and was as much as 2 ft. 6 in. in width. Between No. 1 and No. 1A the best gold has been won, the reef averaging 20 in. in width. Above No. 1A the stone gets thinner, and at the top of the highest rise is only 4 in. in width. A little lower down it was thinner still. No. 1B was driven some distance without getting any quartz, and when struck the stone cut out again after running about 15 ft. It was from 12 in. to 14 in. wide, and is said to have assayed 9 oz. to the ton. The whole of the four levels are standing at present without stone at their respective faces. It is most desirable that at least one level should be pressed forward to prove the ground ahead. From the present position of the faces, No. 1A level would perhaps be the best to go on with. Unless something of this sort is done, the returns must fall off very materially, as the ground now open will be stope out in the course of a few months. Taken as a whole, the reef appears very patchy, the stone getting thicker and poorer as it gets deeper, and *vice versa*. In working, all the stone is shot down passes to No. 2 level, and is conveyed by a self-acting incline to the battery. An aerial tramway has recently been constructed to convey mining timber, &c., from the wharf to the working. The battery consists of ten heads of stamps, four berdans for grinding and treating the blanketings, and ten smaller berdans for tailings, all driven by a Robey undertype semi-portable engine with a pair of 8 in. cylinders, having a stroke of 12 in.; boiler pressure, 55 lb. The quantity of quartz crushed for the year was 3,733 tons, which yielded 2,060 oz. 4 dwt. of gold. The total number of men employed was fifty-three.

Golden Site Extended Mine (Area, 134 acres 2 roods; owner, Golden Site Extended Gold-mining Company, Limited; mine-manager, William Wylie).—Mr. Wylie, mine-manager, gives the following account of the mine:—

"This mine is worked from a shaft the depth of which is 210 ft., the greatest depth of workings being 200 ft. below the surface. Two levels are opened up. The lower, or 200 ft., level was driven a part of the way in stone, which so far has not proved payable. The intermediate level has been driven for a part of its length underneath a block of stone the enclosing walls of which are in some places 20 ft. apart. The stone thus occurs in wedge-shaped ribs, which usually make in the foot-wall and run over towards the hanging-wall. The foot-wall is well defined wherever quartz is met with, and it carries a few inches of casing or pug. The foot-wall is composed of a black slaty rock, the hanging-wall rock being of a much lighter colour. During the year the levels have been driven a considerable distance. Sundry cross-cuts have been put in, together with rises, as a means of ventilation, and at the same time to prospect the reefs. The motive-power is water. There is a Pelton capable of working up to 20-horse power to drive the stamp-mill, also a Pelton capable of working up to 10-horse power to drive winding gear and pump. The battery consists of ten stamps of 6 cwt. each; average drop, $7\frac{1}{2}$ in. blows, and eighty-six drops per minute; and two 4 ft. berdans.