

divided into three compartments. Winding- and pumping-gear are driven by water-power through the medium of a 5 ft. 6 in. Pelton wheel, working under a head of 50 ft. At the shaft-bottom a roomy chamber has been excavated and thoroughly well timbered. All driving is to the south of the shaft. So far three distinct reefs are known—viz., the Golden Site, the Red Reef, and the New Lode—their general strike being north-north-west to south-south-east, with an easterly underlay of very variable inclination. The main level was driven on the Golden Site reef for some distance from the shaft, when it was found that the reef became split up into a series of stringers, and to take a more easterly direction. The level was then continued in lode formation to its present end (a distance of about 350 ft. from the shaft), where a rise has been put up in the same lode-track, which contains very thin quartz. This rise, having been continued to the surface, will be used as an airway and passage-way for men and mining material. At 70 ft. above the shaft-level a crosscut was driven from the rise referred to, and has cut what is thought to be the New Lode, on which a level (known as the “intermediate level”) has been driven in both directions. The reef appears to be considerably knocked about, and a lode-track of considerable width carries stringers and bunches of quartz. The payable stone is generally got next the foot-wall, but is not continuous; it breaks off, leaving blank patches, then takes on again. Owing to the very patchy nature of the reef the stone cannot be kept clean, and it is estimated that fully half of the stuff put through the battery is mullock. The best return yet obtained is 11 dwt. per ton of gold; value, about £4 per ounce. The battery consists of ten heads of stamps of 600 lb. each and two berdans, the whole being driven by a 5 ft. 6 in. Pelton wheel, working under a head of 50 ft. Four heads of water are brought in from Wilson’s River, and as developments proceed it is intended to cut another race at a higher level so as to get the water at a greater pressure. Twenty-four persons employed. Since my visit there have been two changes in the management, Mr. Wylie being succeeded by Mr. A. Whitley, of Thames. Recent advices state that Mr. Whitley has left, and that Mr. John Hawkins is in charge, only six men being employed at end of March. Work at the shaft, with the exception of keeping the workings drained, has been suspended, and actual mining operations are now confined to surface drives. A small block of stone near the surface was stoped out, but did not prove payable. As the Hesperides reef shows a strong outcrop at surface, an adit was driven to cut it at 80 ft. deep. It was here found very much broken, and a trial crushing gave unsatisfactory results. A level driven on the lode to the south was in 130 ft. at end of March, but no improvement is shown at this distance. Prospecting is still going on.

*Taravera Gold-mining Company, Isthmus Sound* (H. A. Bruce, Christchurch, secretary; J. Wilcocks, manager).—The company have recently sunk a shaft here. It is situated very near the water’s edge, 30 ft. above sea-level, and is 80 ft. deep. Winding- and pumping-gear have been erected, and are driven by a 4 ft. Pelton wheel, working under a head of 75 ft. The pump is a single-acting ram, 6 in. diameter by 3 ft. stroke. A crosscut driven for a distance of 42 ft. from the shaft in a northerly direction cuts the reef, which is from 2 ft. 6 in. to 3 ft. wide, and runs east and west, with an underlay south, and an inclination of about 65° from the horizontal. The reef was found cropping out near the water’s edge. It is highly mineralised, containing silver, copper, galena, &c., as well as gold, and the stone will have to be shipped to a reduction-works for treatment. The proximity of the shaft to deep water favours this arrangement. At my visit very little was being done, pending a thorough metallurgical test of the stone being made. From what I could see the country-rock is likely to be more settled and regular here than at the opposite side of Preservation Inlet (Morning Star and other mines), and is of a totally different character.

#### *Crayfish Island.*

Messrs. Robinson and Williams have been prospecting by surface-trenching, and I was informed recently (April, 1900) that a reef 18 in. wide, showing gold freely, had been discovered. No trial crushing had been made up to the time of my information, therefore its value was not known.

#### *Cuttle Cove.*

Some prospecting-work has been done here. I was unable to visit the place without missing the steamer, and being detained for two or three weeks in consequence, but have since learned that a trial crushing of 5 tons of stone obtained yielded 1 oz. gold to the ton. I have no information as to size of reef.

#### *Gold-saving at Quartz-mines.*

Mr. L. O. Beal, jun., mining engineer, of Dunedin, writes: “The following has come especially under my notice during the past year: Where there is clean stone in quartz reefs, or even fairly clean stone, a fine grinding and amalgamating process, such, for instance, as is accomplished by Messrs. Price Brothers’ (Thames, New Zealand) patent pan, should—or, rather, could—be adopted with very satisfactory and payable results. Small pieces of cyanide of potassium and a little lime should be put in the pan every few hours to assist the quicksilver, and minimise the flouring action, which is sure to occur to some slight extent. From actual experience I have found the yield of gold increased about 15 per cent.”

Mr. Maltman, manager of the Globe battery, Reef-ton, has introduced and patented a system of canvas-covered tables for treating tailings. This is at work with satisfactory results at the Globe battery. A Wilfley concentrator has also been adopted in connection with battery extensions, and is said to be greatly superior to the ordinary vanners.

A novel method of saving gold from tailings (says the *South African Mining Journal*) consists in the employment of a funnel-shaped vessel, with the small end downwards, in which a quantity of water is placed, with a quantity of kerosene on top of it. The tailings are put in from above, half a ton at a time, and the agitation of the fluids causes the separation of the gold, which, for some unexplained reason, takes up a position in suspension between the kerosene and the water.