

consequence of a break in the race up the Lauder Stream. The washing-up was not finished when the water was cut off.

*Simes and Morgan's Claim.*—(15/12/93): This is the most southern of the Matakani sluicing claims, where a considerable extent of surface has been sluiced away. Not much was doing. There is no deep sluicing.

*J. Ewing's Claim, Vinegar Hill.*—(16/12/93): A large body of stuff has been washed away during the past twelve months. The depth of face where most of the work has been done is from 70ft. to 90ft., and much of this had to be lifted 25ft. to the main tail-race by a jet. There are now many chains square of ground stripped to a depth of many feet by the use of the nozzle, which stripping, instead of being put through the boxes as is usually done, is cast to one side and thrown on the side of the terrace by the force of the water, where it is not likely to be in the way of future operations. This is, I think, the only claim in Otago where the gravel stripping is so economically removed to such a distance from the face without boxes or jet. A large quantity of wash has to be put through the sluice within a given time to make it remunerative.

On the same day Mr. Ewing's St. Bathans claim was visited, when I found the manager drying and cleaning up the gold from the "Christmas washing." He said, "It is a small washing-up of rubbish." If about 250oz. is the yield of the "rubbish" I would like to see a big washing from the good stuff. There is now a double-jet lift in this claim of 40ft. and 48ft. The size of bottom jet is 1½in., with throttle, when new, of 4in. (now worn to 4¾in.) and up-cast pipe 9½in. Head nearly 500ft. This jet lifts, say, 40ft., to No. 2, which has a nozzle 2¾in. and a throttle, when new, of 6in., which is used till worn to 8½in. in diameter. This lifts 48ft. to head of sluice-boxes, to which the up-cast pipe is 14½in. in diameter. Attached to the bottom jet is a suction-pipe of 7in. diameter. It is intended shortly to start a third jet at the bottom, making three lifts in depth, but the height can be determined only after some experiments have been made. Mr. Ewing deserves every success in his mining ventures.

*Symes's Quartz-mine, Speargrass Flat.*—(21/12/93): A prospecting shaft was lately started in the hill above the old workings, and a reef discovered at a depth of 30ft. from the surface. The sinking is being continued on the stone, and 2ft. of its width is being saved to be crushed. A tunnel is being driven from the face of the old workings to reach the shaft at a depth of from 60ft. to 70ft. In order to do this the estimated length of tunnel will be 270ft., of which 30ft. is now driven. The tunnel is inconveniently small—5ft. by 2½ft. The driving is in broken country, but fairly dry. The line of reef is nearly east and west, and the shaft is on the west side of the old workings about 270ft. The battery consists of five stampers, driven by a Whitelaw turbine 2½ft. diameter. It is generally known as White's Reef, and has been working part of the past eight years.

*Excelsior Quartz-mine, Bald Hill.*—(20/3/93): This mine is south of White's Reef about a mile, and runs parallel with it. The workings have heretofore been open cutting up the face of the hill until last year. Stopping is now being done to a depth of 25ft. below the open cutting. The mine has been working during the past three years. During the first two years the surface was sluiced away to the reef. There are now four men employed in the mine, and the lode is from 3ft. to 8ft. wide. The yield of gold is very good—over 2oz. to the ton. Some parts of the reef resemble rotten granite mixed with sand and clay; in places hard stone is found, but the bulk of the lode is of the soft kind, as stated. The lode so far has been worked to a depth of 45ft. in places, but the surface stone is being removed as heretofore, and will be so mined for some little distance yet, after which an adit will be driven from the face of the hill, which is very steep, at a level to give about 100ft. of backs. The probable length of the adit may be 500ft. when under the old workings. The battery plant consists of a 3ft. Pelton wheel and three stampers, which crush about 15 tons per week by working twelve hours per day. It is intended to start the adit on the line of reef near the battery plant in the hope of finding some stone before reaching the perpendicular of the surface-workings. This mine was again visited on 21st December, 1893, and the workings examined, which are just now quite shallow, and by no means extensive. The lode is from 12in. to 18in. wide. It dips south near the surface, but at a little distance down it gradually turns over and dips to the north. The timber used in the mine consists of planks only, of 7in. by 2in., each set spaced 2in. apart and held in position by nailing on 1in. battens, instead of making a joggle. All this timber is generally taken out after the lode is removed, and the reef walls are allowed to close in. The depth of the present workings from the surface is about 30ft. only, but the lode is sunk on to a depth of 60ft. The workings are in good order, and the stone is of a sugary character. The gold returns are very satisfactory—about 200oz. this season. Eight months of the year only are the men able to work at this elevation.

*The Old Gladstone Quartz-mine, Hindon.*—(5/4/93): This mine is again being worked by a party of three men, two of whom took it up about two years ago. The reef is situated on the township reserve, and runs nearly north and south. The lode is about 18in. wide, and is being worked 100ft. along the line of reef, 45ft. from the surface. At this depth the mine is quite dry. The crushing is done by the party, and the battery plant belongs to Sheppard and Todd. It consists of an overshot water-wheel and six stampers, at a distance of three-quarters of a mile from the reef. The stone yields about 6dw. per ton, which means small wages to the men.

*Begg and Wilkinson's Mine and Plant, Hindon.*—(5/4/93): The battery plant has not been working during the past twelve months, neither has there been any work done in the mine during that time. A number of trucks full of quartz are standing at the battery, showing that the suspension of work must have been very sudden. A portion of the battery plant erected in the bed of a gully has been damaged and covered with gravel by floods and the breaking away of one or two reservoirs. The plant did not work longer than four months after its erection.

*Tipperary Quartz-mine.*—This is my first visit to this old mine, which has been idle for some years. A fresh start was made a few months ago, and a large sum of money spent on the surface before testing the value of the mine; but the mine is now being prospected. I went into the old high-level tunnel about 180ft., and from there up a stope 87ft., where some good-looking stone is