

There is a clean sweep up of everything in the shape of *débris*, and I have the greatest confidence in the gold-saving appliances in the sluice-boxes. I think the loss of gold must be very small indeed. The whole of the work so far is well done, and for the efficient working of the claim in the future nothing has been left undone from the start. I again visited the claim in August, and found that a tunnel had been driven from the level of the jets through the saddle into the deep ground near the high face, and a large body of water drawn off, but not to the bottom by many feet. The sluicing is now gradually approaching the high face, consisting of more or less cemented layers of fine gravel. I do not think a jet of water with the pressure available will disintegrate this cement sufficiently to free the gold; therefore, quick crushing in some simple way will have to be tried with a view of getting all, or practically all, the gold from the *débris* when sluiced after leaving the crusher. I am of opinion it will take time to perfect a plant capable of doing all required and make it pay.

*J. Ewing's St. Bathans Sluicing Claim* (28th April, 1891).—Mr. Ewing was not in St. Bathans on the day of my visit; I was therefore unable to get any detailed information about the mine. I walked over the ground to see the workings and the fall in tail-race, &c. There appeared to me a considerable waste of fall between the discharge-pipe and the creek-bed, some considerable distance below the claim, which, if taken advantage of, should very much reduce the height of jet-pipe at the workings. There appears to be any quantity of good plant on the ground, and other indications of a thorough miner at the head of affairs. Mr. Ewing has since kindly promised to show me over the works when I again visit the locality, a treat I am now looking forward to.

*J. Ewing's Claim at Tinker's* (29th April, 1891).—I learned here that Mr. Ewing was at Black's for the day. I looked over the claim and plant, also workshop and appliances for making pipes, &c. The same thorough go-ahead system so noticeable in St. Bathans is also to be seen here on and about the claim. All the work done by Ewing on this claim appears to me to be comparatively recent, as if he had not long been in possession; nevertheless, everything was in thorough-going order, and two nozzles doing good work in the face. The great difficulty to be overcome in working these kind of claims at deep levels is a plentiful supply of water at a high level. Query: Where is it to be got from? I looked over some of the claims close to Ewing's, where a very large block of ground has been sluiced away. There was some talk of three companies—Matakanui, Reid's, and Deep Lead—amalgamating in order to work to a greater depth by the combined volume of water available from the two claims first named. I was told that a shaft had been sunk in the ground of the Deep Lead Company to a depth of 200ft., and cross-cuts put in through the gold-bearing layers, which were found to be equal to the surface for gold. This indicates a long life to this and the adjoining claims, if there be sufficient gold to pay for the extra appliances that will be required to lift the *débris* from greater depths than the present water-supply is capable of doing.

*Black's, Ryan's Reef* (30th April, 1891).—I visited the spot where the reef is said to exist. The shaft, said to be 45ft. deep, was nearly filled with water at the time of my visit. There were several surface-trenches cut a few feet deep close the shaft, but I did not see any reef in any of them; all the work I saw seemed to be confined to prospecting.

*Bendigo Quartz-mine, Cromwell* (4th May, 1891).—Accompanied by the manager, Mr. Hosking, I went down the shaft to the 520ft. level, where a cross-cut is being driven south, and now in a distance of 197ft., where the country is very hard and wet overhead. In this cross-cut, at 132ft. from the shaft, a small leader was met with, and has now been driven on to the west 51ft., where the stone is from 12in. to 18in. thick, and gold bearing. The workings here are also very wet overhead and underfoot. The pump is a 9in. Colam. The first lift is 250ft., the next 214ft., and 68ft. drawing-lift. The main rods are heart of kauri, 9in. square. The pump has to be kept constantly going to keep the water below the floor of tunnel. The air is good and the Act well observed. The average number of men employed, twenty-two. There was one man, William Campbell, killed in this mine on the 28th March last; this was investigated by me, and my report thereon sent in on the 8th April.

*Sew Hoy, Big Beach, Company* (8th May, 1891).—Three of the four dredges were working at the time of my visit, and I am sorry to say it does seem to me a blind way of working ground. It is, however, giving employment to many men directly and indirectly, and circulating money in the district, but I fear the cost of fuel (£1 11s. per ton), and other expenses inseparably attached to heavy plant worked by steam, is very much against the scheme proving a paying one to shareholders in the end. These remarks apply to all the steam-dredges I saw in the district.

*Phoenix Quartz-mine in Skipper's Creek* (13th May, 1891).—The workings are 150ft. from the surface, where the stone is 10ft. thick. A winze is sunk 100ft. below these workings, in good stone all the way. The workings are quite dry. There are twelve men getting stone, four in the winze, eight driving a prospecting level, and thirty-six otherwise employed: making, in all, sixty men in or about the claim. During the past ten months 3,200 tons of stone were crushed, which yielded an average of 15dwt. per ton. The battery is kept going night and day. The mine is well timbered, and the very heavy roof necessitates plenty of it to keep the mine open. The winding is done by an engine driven by compressed air supplied by the dynamo. The reef runs east and west. This reef should pay well with a less number of men and the same output of stone, which, I think, could be easily done.

*Sandhills Dredge, Shotover River* (13th May, 1891).—This plant raises 60 tons per hour, and is working continuously night and day. The dynamos are driven by a Pelton water-wheel, which has a head of 500ft., and is said to be equal to fifty-horse power. The dredging is being done 16ft. deep, and on the bottom. The machinery works very smoothly and steadily. It is certainly the neatest plant of its kind I have yet seen, and the cost of working it must be very much below the cost of the steam-dredges. The yield of gold per week at the time of my visit was from 40oz. to 50oz.

*Gallant Tip Quartz-mine* (13th May, 1891, and 20th April, 1892).—There are two faces getting stone, at about 100ft. above the adit-level. The block now being stoped out is about 70ft.