

faulty construction of the diamond-drill, but more to the men that were working the machine not being accustomed to or properly acquainted with its working. In boring through the various strata some are soft and broken, while others are solid and hard, and if the drill get into a place between these soft and hard substances it is inclined to run or follow the inclination of the side of the hard seam, and requires special manipulation in the working to prevent this, which the workmen did not understand at the time. This company has done a good deal of work during the year in prospecting and in stoping out portions of the reef; but the returns did not remunerate them for their labour: they consequently are prospecting at the present time with a view of again picking up the reef that was worked in former years, but which was cut completely off in the different levels by a slide. There are twenty-one men employed underground and on the surface. Plans of the underground workings were at the mine, but the weekly record was locked up and the key could not be found, so that I had no opportunity of seeing it. This company and its energetic manager, Mr. Trennery, deserve credit for the plucky manner in which they have erected the most complete machinery for underground mining there is in New Zealand, and have set an example to other companies in this district, who are fast following in their footsteps.

2. *Golden Treasure Company's Quartz Mine*.—21st March, 1884. This company has during the year, constructed a chamber at the bottom of their shaft, which is about 300ft. deep, and driven a main level 400ft. long. This level has been driven for the greater part of the distance without timber, but large flakes of the slate-rock have come down from the sides and roof, which necessitates the tunnel being timbered before further work is proceeded with, and the company are at present getting this done. They have struck a small body of quartz at the end of the drive, which they take for the reef that they have been working on at the higher levels, and are beginning to rise up on the lode. They have a very good winding shaft, divided into three compartments, two for winding, and one as a ladder shaft, in which are placed good ladders with iron rungs, and set at a slight inclination from the vertical, having plenty of foot-hold. There is likewise a good landing platform every thirty feet, but there is no fence round the mouth of the shaft, nor sliding-fences to raise and lower as the cages go up and down. The winding machinery also requires to be fenced, in order to comply with the provisions of the Act. On the 15th April last I wrote to the manager requesting him to have the machinery and mouth of shaft properly fenced. An attempt was made to sink a winze in the lower level of the old workings, but the ventilation was not sufficient to get this done, and they are now abandoned for the present. There are seven men employed underground and on the surface.

3. *Energetic Company's Quartz Mine*.—21st March, 1884. This company has done very little else during the year but prospecting. They stoped out a small portion of a block of quartz from the battery level; but when this was crushed it was found not to be remunerative for working, and all hands were discharged, with the exception of the mine manager and one man, who are driving a prospecting tunnel into the hill at right angles with the strata, to see if any new body of stone can be found. At the time of my former visit to this mine I called the attention of the manager to the unsafe state of the timber in the main tunnel: this has been replaced, and the workings on this level are in a perfectly safe condition. There is no weekly record kept, nor plan of the workings kept near the mine; but, as there is so little work doing at present, I did not insist on these rules being strictly adhered to, but if they commence again to work the mine they will be strictly observed.

4. *Wealth of Nations Company's Mine*.—20th March, 1884. This company has abandoned all the upper workings, and is now engaged in driving a tunnel on the same level as the mouth of the Keep-it-Dark Company's shaft. The tunnel is constructed for 150ft.; it is 4ft. 6in. wide at the bottom, 3ft. 6in. wide at the top, and 6ft. 6in. high, all in the clear, inside the timber. The tunnel is timbered with heart of black birch, having legs and caps ten inches square, and placed 4ft. apart from centre to centre, with black birch laths three inches thick placed behind the sets to prevent the ground from flaking away. Air pipes are at present being fixed to secure good ventilation. There are six men employed underground and two on the surface.

5. *Keep-it-Dark Company's Quartz Mine*.—20th March, 1884. This company has a well-regulated mine, both with regard to safe working and good ventilation. They are principally working from No. 4 level, 150ft. below the mouth of the shaft, and are stoping out the quartz between this level and their original workings, and have still about from 40ft. to 60ft. of back to take out. Their shaft is sunk down to the depth of 340ft. A chamber has been constructed, and a tunnel, termed No. 5 level, 522ft. in length, put in at 300ft., and they are now opening out the quartz lode, so that it will be ready to stop out as soon as the No. 4 level is finished. The mine is exceedingly well timbered, the timber in the main levels being from fourteen to sixteen inches in diameter, and, although the stopes in No. 4 level are getting pretty well taken out, there is not the slightest indication of any of the timber showing signs of weakness. The manager of the mine, Mr. Fitzmaurice, deserves credit for the systematic mode in which the mining operations of this company are carried on. The quartz is broken out in stopes with rock-borers worked by compressed air. This plant consists of an air-compressor (two cylinders), receiver, and three rock-drills, and cost, including erection, about £1,800. The air-compressor is driven by an overshot water-wheel, which also works a crushing battery of twenty heads of stamps. The return from this mine for the year ending the 29th December, 1883, was, 9,378 tons of quartz crushed, yielding 5,588oz. 8dwt. 18gr. of melted gold, or an average of about 12dwt. per ton, and from this return £11,500 was paid in dividends to the shareholders. There are two quartz lodes in this mine, termed the north-and-south reef, which averages about 6ft. wide, and the east-and-west reef, about 4ft. wide. A weekly record is kept, but no plan of the underground workings is at the mine. On the 15th April last I wrote to the manager requesting that a plan be kept at the mine, so that it can be seen when making inspection of the workings. There are likewise no covers on the cages: the manager informed me that he had them on but had to take them off again, as the slack portion of the winding rope used to catch on the covers, and was liable to cause an accident. As the workmen use the ladders in the winze from No. 4 to No. 5 level, I did not insist on the covers being put on at present. In all other respects the provisions of the Act have been complied with. There are twenty-seven men employed underground and five on the surface, exclusive of about six men employed at the crushing battery.