

drill which I saw is one of Naylor and Thorton's, made in Victoria, and is wonderfully effective and compact, being—to use the very apposite comparison of the assistant manager—"not much larger than a good big tom-cat," but capable of boring a $1\frac{3}{4}$ -inch hole, 39 inches deep, in hard quartz, in $12\frac{1}{2}$ minutes.

2. *Golden Treasure Quartz Mine.*—(9th November, 1882.)—The old mine was practically closed, only two shifts being employed on the main level. A new main shaft was in process of being sunk. When finished it will be $9\frac{1}{2}$ feet by 4 feet, divided into three compartments; lining, 3-inch black birch. The ladders were of the most substantial description, made of 4-inch by 2-inch quartering, with 1-inch cylindrical iron rungs, flattened and bored, and screwed on to surface; secured over all with a 2-inch by 1-inch batten nailed on. Unfortunately they were placed in a vertical position, contrary to General Rule 16 and section 35. There was ample foothold, and the platforms were sufficient, but the verticality could not be permitted, so on the 8th January I wrote to the legal manager requiring them to be altered, and also requiring the plan to be kept at the mine, which has not been done, in spite of a former notice. Report duly made, and Act apparently observed. Ten men were employed below ground and three above.

3. *Energetic Quartz Mine.*—(9th November, 1882.)—Only six men were at this time employed prospecting. I went from the battery-level down the ladders, and found one space of 46 feet without a platform. This was soon remedied. The winding-engine is not used for raising and lowering men. The mine, so far as it goes, is in good order.

4. *Wealth of Nations Quartz Mine.*—(30th October, 1882.)—A winze was being sunk on the level near the battery. In this spot some very good stone had recently been found, but, unfortunately, it did not live. The weekly report kept. A number of detached plans and sections were on the ground, but no proper plan showing all the works. To remedy this Mr. Rae promised to get a new plan made. There was a winze being sunk on the Vulcan level, but the whole of the works were merely of a prospecting nature; still everything was in good order. Ten men were employed below ground and five over.

5. *Keep-it-Dark Quartz Mine.*—(27th October, 1882.)—The shaft was not properly fenced, the sliding gate being fastened up: the manager appeared to think it unnecessary during the day. The ladders had been moved out so as to allow 6 inches foothold. A larger amount of ground than desirable was open on timber, but on the 21st November filling-in was going on, and has been completed since. The shaft also was efficiently fenced. The braceman, who also acted as engineman, appeared excessively nervous, and at my request worked the cages a little; he ended by landing one cage up among the head-gear. In reply to a letter on the subject I was informed that his place had been taken by a more reliable man. A nervous engineman is terribly dangerous, especially with head-gear and machinery like this, which (as pointed out in a former report) is not of the best description. A very good indicator was fitted on to the engine, and a weekly report kept. The cage-covers are not used, as they are said to catch the rope. It is easy enough to prevent this; but, so long as men are not raised or lowered, covers are unnecessary. Powder regulations appear to be enforced, and the rope is well secured. The company are sinking the shaft deeper, and will probably for a long time be one of the leading claims on the field. Two accidents occurred here: On the 12th April, 1882, William Lamberton ignited a fuse, and, thinking the shot had missed fire, went to look at it, when the charge exploded, injuring his face very severely. This was gross carelessness, but was equalled by the conduct of William Eddy, who, in the same mine, on the 27th November, 1882, thinking a shot had missed, went to light it again; it exploded and injured him considerably. These are the only accidents on the field in mines under inspection. Thirty-six men were employed in and about the mines, and six at the battery.

6. *Welcome Quartz Mine.*—(13th November, 1882.)—This claim still holds its place as the premier mine on the field. On the above date a total of sixty men were employed, forty-six below and fourteen above. The shaft from No. 6 level was being sunk, and the work was of the most substantial description. The shaft measures 9 feet by 4 feet, and is divided into three compartments (two for winding, and one for ladders). Sloping ladders with platforms every 23 feet. A chamber has been excavated for the reception of the winding-engine. This subterranean enginehouse is 36 feet long, 20 feet wide, and 15 feet high under the arch; the space for poppet-heads being continued to a height of 27 feet. It is built of 14-inch by 9-inch black-birch timber in sections of 2 feet 9 inches. The cost was £1,120, and no accident occurred during the excavation and erection. A steam-engine will be put down to wind and work an air-compressor. It was intended to put down a compressed-air winding-engine, but the expense was found to be too great. The steam and smoke will be taken up 100 feet in 14-inch pipes. A section was at the mine, but no plan. The manager had some costly and elaborate dynamite boxes manufactured, which, however, held 5 lb. On the 12th January, 1883, wrote to the legal manager *re* plan and dynamite tins.

7. *Fiery Cross Extended Quartz Mine.*—(8th November, 1882.)—On this date twelve men were employed below ground and three above. The manager had done a great deal to comply with the Act. The shaft was well fenced, and cages provided with a cover, which, it subsequently appeared, was but seldom used, on account of a prejudice existing against it, as tending to imprison men should the cage be inadvertently lowered into the sump. The way to avoid this is to cover the sump, as provided by Special Rule 29, where, however, "pump" appears, owing to a misprint. The indicator and fence were, the manager said, found to be decidedly useful. The ladders were altered, a plan kept at the mine, and a very full and complete report. Dynamite was, however, in the mine in larger packages than is allowed. The signals were properly arranged. Speaking generally, this mine has very much improved in detail. On the 12th January, 1883, wrote to the legal and mining managers *re* cage-cover and dynamite; and, on the 23rd January, received word from Mr. Moss that the mine manager had been instructed to carry out the rules.

8. *Just-in-Time Quartz Mine.*—(10th November, 1882.)—A cross-cut was being driven from the old Boatman's Creek level to intersect the western reef; this was in 165 feet without air. Two men were also stoping. The old badly-aired dip-workings are closed, so it was unnecessary to continue