

September, 1880, from which was washed 28oz. of gold. Since then 93,426oz. of gold have been obtained, £209,700 paid in dividends, and £29,000 in royalty to the proprietors of the freehold where the mine is situated; and since this discovery numerous mines have been opened in that district, all giving handsome returns. These drills have likewise been very successful in finding coal in New South Wales; but they do not seem to have been greatly employed in that colony in boring through metamorphic-schist formations, or if so, I could not get returns to base any data upon.

With respect to their use in New Zealand, the surface-drills could be utilized to advantage in testing the coal measures, and likewise they might be advantageously employed in searching for marble, good building-stone, &c.; but, as far as testing the quartz-reefs is concerned, the rough and broken nature of the country, where no roads exist, is in itself a sufficient bar to their being used to any profitable advantage. In the Australian Colonies they can be comparatively easily transported to any part; but in New Zealand the quartz-reefs are so broken, and the country generally where they are found so precipitous, that prospecting can be carried on equally as advantageously by hand-labour, and especially with the use of compressed-air rock-drills.

The underground drills, being light, might in some instances be employed to advantage; but even this is open to question, as the general feeling in districts where they have been used is that it is better to prospect with compressed-air rock-drills. Notwithstanding this, where there is a large body of water to contend with, such as that found in the deep levels at the Thames, they could be employed to advantage, the formation there being an igneous rock, better suited for their use. In the Australian Colonies there is very little water to contend with in comparison to what there is in the deep quartz-mines at the Thames, and accordingly the cost of prospecting is considerably less.

The Victorian Government have ten surface diamond drills, five of which were manufactured in the colony at a cost of £1,250 each, including boiler; and five underground drills, four of which were also made in the colony at a cost of £1,100 each, including air-compressor: but it must be borne in mind that this price does not provide for any duplicate parts, and only 200ft. of rods, which is the recognized length supplied with drills in America and in the Australian Colonies. Anything over that length is considered extra, and charged for accordingly.

The regulations issued by the Department of Mines and Water Supply, dated Melbourne, the 1st August, 1884, for the use in Victoria of these drills are as follows:—

“1. Every application for the use of a drill shall show for what purpose the machinery is required, and shall contain an undertaking on the part of the applicants to make good all losses for diamonds, to keep the machinery and appliances while under their charge in good order and condition, and, whenever required by the Minister, to return them to the Department of Mines in a perfect state of repair; and, further, to give such other guarantee as the Minister may consider necessary for the fulfilment of the conditions.

“2. On the approval of an application, the drill and appliances shall be handed over to the applicants, who shall undertake such removal of the machinery as may be necessary, and also the careful supervision of the boring operations.

“3. No diamond drill shall be used except under the direct charge and supervision of an authorized foreman; and all such foremen in charge of the working of the machinery shall be appointed by and be under the control of the Minister of Mines; and every such foreman shall be subject to removal or dismissal by the Minister if he shall be considered to have worked the drill under too great pressure, or to have caused undue destruction of diamonds, or to have been guilty of any misconduct in the performance of his duties, or if his services shall no longer be required.

“4. The rates of payment of all employés in connection with drills shall be subject to the approval of the Minister.

“5. Any company working a drill shall defray the cost of all necessary renewals and repairs, and of the working and removal of the machinery.

“6. All fittings needed for the drills shall be obtained either from the stock in the Department of Mines, or from some person or company who may contract with the Government to supply such fittings, so as to insure that all the renewed parts of the machinery shall be in accordance with the regulation pattern and sizes.

“7. The Department of Mines will allow the use of the drills and appliances free of all rent-charges, and will subsidize such companies employing the same for gold-mining purposes to the extent of one-half, and for coal-mining to the extent of two-thirds of necessary expenses incurred in removals, repairs, and working of the machinery, if such companies shall be engaged in prospecting operations, and shall not be working their mines profitably; but the cost of all necessary tubing shall be borne entirely by the company employing the drill.

“8. The amount of subsidy shall be based on approved vouchers of expenditure, and any claim for such expenditure may be amended, or it may be rejected if it appear to the Minister to be excessive and inadmissible.

“9. The payment of subsidy up to the amount of £100 shall be deferred, and the money shall be retained until the drill and appliances shall be handed over to the Department of Mines, and any portion of the whole amount of the subsidy so retained shall, on the order of the Minister, be applied to making good any apparent deficiency in the machinery or appliances, or in defraying any necessary cost incurred by the department through any breaches of the conditions on the part of the company.

“10. The Department of Mines will also from time to time allow the use of diamond drills and appliances to companies who may be working their mines at a profit; and the use of such drills and appliances shall be subject to these conditions, except that no money subsidy shall be allowed in part payment of the working and other expenses of the machinery.

“11. The machinery shall at all times be subject to the inspection and supervision of the Superintendent of Drills or any other officer authorized by the Minister, and mining operations shall be suspended or absolutely discontinued, and the machinery shall be removed from the control of the company, at any time on the order of the Minister.

“Note.—Not more than three drills shall be used at any one time in boring for coal.”