

the Mount Ida Water-race, which has been worked at a loss, the net profits on the working of the other races has been £50,939; while they have been the means of gold being obtained to the value of about £1,170,027, affording employment for an average of 537 miners.

PROSPECTING.

In order to develop the mineral wealth of the colony, systematic prospecting operations have to be carried on, and I propose to amend the mining regulations, so as to give more encouragement to miners' associations and mining companies to carry on a system of prospecting in the superficial deposits, in the alluvial drifts, quartz-reefs, and in testing the lodes at the deep levels.

Encouragement should also be given to prospect ground with diamond drills, as in many instances these drills can be used very advantageously in prospecting deep leads and lodes: in underground workings, where the latter are lying at a high inclination, horizontal bores can be, in many instances, put in to test the ground far cheaper than by driving, especially where there is hard rock to be gone through.

Further encouragement should also be given towards the development of new metal-liferous or diamondiferous discoveries, in the direction of offering larger rewards where such discoveries are made a certain number of miles distant from any known workings.

It is only in very few instances that individual miners can afford to carry on prospecting for any length of time, and, accordingly, the miners' associations in several mining districts are taking more interest in trying to open up new ground, as they are specially interested in the districts they reside in, and if any new discovery is made some of their number would receive a direct benefit from it. There are large areas of auriferous country where no prospecting has yet been done, both in the North and Middle Islands, and it is only by complete organization and systematic operations that prospecting can be carried on successfully. Everyone engaged in this work must have an interest in the undertaking, the men actually engaged in the work giving a portion of their wages towards a general fund, the miners' associations in their respective districts contributing a certain amount, and these moneys to be supplemented by Government out of funds appropriated by Parliament for that purpose, as well as by contributions from the local bodies, which receive the goldfields revenue. It is only by holding out good inducements that the necessary funds can be raised to carry on works of this character; and as the lodes on the upper levels in the various quartz-mining claims now worked are gradually getting taken out, a special effort should be made to have the deeper ground tested before the mining population leaves the locality.

GEOLOGICAL EXPLORATIONS.

Geological explorations were made last year of the northern portion of Westland by Mr. McKay, Mining Geologist, which have resulted in discovering a large belt of cupriferous schist on the range facing the Arahura River, about twelve miles through the first gorge. Some specimens from this belt were analysed at the Colonial Laboratory, and were found to contain 10 per cent. of copper.

The auriferous drifts on the low-lying lands from Greenstone to Ross have also been carefully examined, and, from the evidence obtained, it is shown that there is a large area covered with these drifts where gold is likely to be found in payable quantities. A detailed account of the Mining Geologist's explorations will be found embodied in the Goldfields Report. A geological map of this portion of the district, and several interesting photographs of mining claims, showing the method of working the ground, are also published.

MINING MACHINERY.

As improvements are constantly being made in mining machinery, and appliances for the reduction and treatment of auriferous and argentiferous ores, I have directed that full publicity should be given to any new methods likely to reduce the cost of working the mines and extracting the precious metals as may from time to time be brought under the notice of the department, as it is by these improvements we may hope to work our low-grade ores more economically. Several descriptions of mining machinery and processes for the treatment of ores, accompanied with plans giving full details, will be found in the report of the Inspecting Engineer.