

1892.
NEW ZEALAND.

GOLDFIELDS AND WATER-RACES

(REPORTS ON, BY WARDENS, INSPECTORS OF MINES, AND WATER-RACE MANAGERS).

Presented to both Houses of the General Assembly by Command of His Excellency.

No. 1.

Mr. Warden BISHOP to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Whangarei, 11th May, 1892.

I have the honour to report that very little work of a practical nature has been done in the Puhipuhi Mining District during the last year, and the results, so far, have been of a most disappointing kind. Various experiments have been made by the Prospectors' Company with a view to extracting silver in payable quantity, but unsuccessfully, and the ore has been found to be of a lower grade than was expected. At the present time experiments are being carried on under the direction of Mr. Hartmann, a silver mineralogist of considerable attainments, and he is very sanguine that he will ultimately succeed in discovering some mode of treatment which will prove an entire success. It is greatly to be hoped that he will do so, for the whole field is languishing and must necessarily soon be closed unless a spurt takes place. Owing to want of funds, very little prospecting has been done, and this is much to be regretted, for there is very promising scope for any practical prospector in the large tract of very likely-looking country between here and Cape Brett. There seems to be a general consensus of opinion amongst experts that large deposits of various minerals will be found all over the North. There is already undoubted evidence that gold, silver, cinnabar, antimony, and manganese are to be found in several parts of the district.

I enclose Mr. Inspector Wilson's annual report upon the field.

I have, &c.,

H. W. BISHOP, Warden.

The Under-Secretary, Mines Department, Wellington.

No. 2.

Mr. G. WILSON, Inspector of Mines, to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Whangarei, 11th May, 1892.

I have the honour to forward the following report on mining in the Puhipuhi Mining District for the year ending the 31st March last:—

Prospectors' Mine.—The chief work carried on during the year was completing the construction of the crushing-mill, water-race, dam, tramway, and calcining-kilns mentioned in my report of last year, extending the drive to the northward on No. 3 reef, at No. 1 level, 500ft., stoping the block between No. 1 level and the surface, and sinking a winze about 50ft. on the Elsie reef. The drive on No. 3 reef, being near the surface, does not appear to have led to any discovery of value, and only the best-looking quartz was sent to the mill. A large quantity of quartz was conveyed to the kilns and calcined, but as the pulverising-machinery was not satisfactorily adjusted at first, only a limited quantity was reduced to a condition fit for amalgamation. The scarcity of water hindered crushing operations after the month of September. The total quantity of quartz crushed and passed through the pans was about 100 tons, for a yield of 1,220oz. of melted silver, valued at 3s. per ounce. The total yield from the mine, including some test parcels, is 1,330oz. The yield per ton did not realise expectations, and operations were carried on in a desultory manner for the last six months of the year. Experiments have, however, been made with a view to the better reduction of the quartz. The pulveriser has been fitted with screens of $\frac{1}{4}$ -in. mesh, and a pneumatic separator is now used to separate the fine dust from the rougher particles of the crushed quartz, the coarser portion being again conveyed to and passed through the pulveriser. Experiments are also being made by a Swiss expert named E. E. Hartmann for the extraction of gold and silver by an adaptation of the cyanogen process, which may lead to the adoption of the method instead of