

1885.
NEW ZEALAND.

LECTURES ON THE GOLDFIELDS THROUGHOUT THE COLONY

(CORRESPONDENCE WITH PROFESSOR J. G. BLACK AS TO PROVIDING FOR).

[In continuation of C.-2A.]

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

Professor J. G. BLACK to the Hon. the MINISTER of MINES.

SIR,—

University of Otago, Dunedin, 11th May, 1885.

I have the honour to submit a scheme of instruction for the local schools of mines which I believe would fairly meet, for a few years, the requirements of the mining districts of Otago and the West Coast.

There have already been formed on the West Coast ten clubs, or schools of mines, with funds subscribed (generally £1 for each member). These local schools are at Reefton, Boatman's, Lyell, Westport, Waimangaroa, Greymouth, Kumara, Hokitika, Ross, Goldsborough.

In Otago there are, I believe, eight similar local schools—namely, two at Lawrence, and one at each of the following places: Naseby, Queenstown, Skipper's, Arrowtown, Cromwell, Bannockburn.

The existence of these clubs is strong evidence of the great demand among the miners for special instruction in the branches of knowledge that lie at the root of the mining industry.

It will be much easier to foster these efforts now than to resuscitate the schools after they have collapsed for lack of the necessary support. It is therefore very desirable to take immediate action, and organize an elastic scheme that will grow with the growing requirements of the mining districts. Such a scheme would afford the best kind of technical education on the goldfields. The scheme need not at first be a large one. It should, however, provide for instruction in the following branches of knowledge:—

(1.) *Geology*.—The general subject, the modes of occurrence of the valuable minerals, prospecting by boring and otherwise.

(2.) *Mineralogy*.—The physical characters of useful minerals, the testing of the more common minerals, the blowpipe.

(3.) *Ore-dressing*.—The general subject, gold-saving appliances, the treatment of auriferous sulphides, the preparation of ores for the market.

(4.) *Metallurgy*, including the characters, and modes of occurrence, and chemical composition of minerals and ores containing gold, silver, lead, platinum, mercury, tin, copper, bismuth, antimony, zinc, iron, manganese, cobalt, nickel, &c., and the tests for the above, and the processes for extracting the metals from their ores.

(5.) *The Chemistry* of minerals.

(6.) *Testing and Assaying*.—Wet and dry methods, including practical instruction in the processes for assaying the metallic ores named above, the assay of bullion. In these testing and assaying classes the students themselves would do all the work, under the direction of the instructors. It is for the prosecution of this kind of work that the local schools have chiefly been formed.

(7. and 8.) *Mining and Mine Surveying*.—These could be provided for by one of the instructors, aided (at Reefton, Boatman's, Lyell, Skipper's, and Macetown) by one of the mining engineers in practice in the district. There are two mining engineers at Reefton—namely, Mr. Gardiner and Mr. Watkins, both of whom took a very prominent part in carrying on my classes in the Reefton district, and expressed themselves willing and glad to take any part in the work of these schools that may be assigned to them.

The following are the centres at which I think instruction should be provided. I have marked with an asterisk the places where I have already lectured, and with two asterisks the places at which local schools of mines have been formed. Assuming that Mr. Alexander Montgomery, M.A., and myself, with my laboratory assistant (Goodlet), will be appointed to carry out the scheme, Mr. Montgomery being engaged the whole year, and myself and assistant six months a year, I have proportioned the time at each place to the importance of the district:—