

think a man going from here with that knowledge, and also a knowledge of the various classes of mining in this country, would obtain more valuable information respecting mining generally. We not only want information as to the proper treatment of our ores, but also to be fully conversant with every class of mining that is carried on here, to see if an improved system cannot be introduced whereby the working of our auriferous drifts and metalliferous lodes can be made to give larger returns.

212. Do you not think that a practical miner with a knowledge of engineering, and having a knowledge of chemistry, going to America, and understanding the systems in operation there, acquainting himself with all the systems in vogue in America, would be of use in giving information here?—If you send a capable man from this colony, a man acquainted with the various processes and treatment of ores, the systems in mining, and with mining-machinery, I think the colony would derive more benefit from sending such a man there than if you were to get a man from America to come here.

213. If a man came from America here he would have to acquaint himself with the different classes of ores and methods of mining in this colony before he could be of any use?—Yes.

214. I presume it would be desirable, if the colony resolved to send a man to America, he should also have a practical knowledge of machinery?—Yes; a man must also have a certain knowledge of chemistry, and he must know how to apply it, or else it would be of no use for him to go. He must have a knowledge of what mining is and the modes of carrying on mining-works; likewise a knowledge of New Zealand auriferous and argentiferous ores and drifts, and the methods of working here. It would be no use to send a man unless he possessed a knowledge of these things.

215. You are aware that there are large smelting works in Saxony and Freiburg: do you think a good knowledge could be acquired by a man going there, or do you think it would be desirable to send a man to both these places?—I am afraid, from what I have seen, that we have very few ores in New Zealand fit for smelting. In Freiburg they get ores from all parts of the world and mix them together, so that the one class of ore acts as fluxes to the other. It is only by mixing these ores up together that they can be economically treated by the smelting process. We have very few ores fit for smelting in the colony.

216. I suppose that five months would be ample time for a man to see all that was required?—A man would see a great deal in five months.

217. *Mr. Allen.*] It would be a nice trip?—Well, I do not know about that. I know that when I was travelling over the Australian goldfields I had to spend, in some instances, night and day in travelling, and I began to think, towards the latter end, it was not altogether a nice trip. Any one going from here to America to gain such information as we require must make the most of the time at his disposal, and be prepared to work hard to make his visit of value to the colony.

218. *Mr. Duncan.*] You said that you got a good deal of knowledge in your trip to Victoria; has that knowledge been applied to any mines with official result; and, if so, what mines?—I must say it is very hard to tell, and for this reason: that the mining class are about the most conservative class in the world. They say, "My father did this;" or "This is what my father did, and I will do the same thing." It is not in a day or a year that you will accomplish anything with them. It is only by time and discussion that these things are brought about. It is hard to say what result may have been obtained; but I think that it has been the means, in reference to the working of pyrites ores, of convincing them that it is necessary to put up roasting-furnaces.

219. *Mr. Allen.*] Have any pyrites works been started here?—I believe there was one at the head of Lake Wakatipu, but it was not a success.

220. *The Chairman.*] Do you think it would be of any benefit for the person going to America to take with him samples of different ores—say of the three classes of ores from the Thames District—to have them treated and tested, so that it might be known what percentage of metal they yield?—I think it would; they would be valuable for the means of comparison, if nothing else.

221. Your evidence is subdivided into two parts: do you think it is possible to get a man well up in chemistry, with a thorough knowledge of smelting processes and the extraction of metals, and a practical knowledge of the means adapted to working auriferous drifts?—They are two different branches. One branch scarcely follows upon the other.

222. Then, in that case, taking into consideration the tenour of Mr. Allen's questions, you would require two men, one in respect of smelting works, the other with a knowledge of workings?—Not necessarily; there might be a man who knows both; but it is essential to have a knowledge of chemistry and also mining machinery and mining in all its branches.

223. *Mr. Allen.*] I do not admit that was the tenour of my questions; but do you mean, Mr. Gordon, to say that a man like Eaglesim does not know both processes?—I question whether a man like Eaglesim would be of much use to us, except as a professor to lecture on the subject; but this is not altogether what we want. I do not think he could show us how to get clear of boulders and carry on hydraulic sluicing operations. I think you could hardly get one man to take up the treatment of ores and go at the same time into all the details of hydraulic sluicing.

224. Is there a possibility of getting one man in New Zealand that has a thorough knowledge of the practical processes and methods of extracting metals from ores?—It would be a very hard thing to get one in New Zealand.

225. With regard to the school of mines, do you think that in the present position of the colony, gold and silver extraction is the only thing that ought to be taught in a school of mines?—That is not the only thing taught there; they are taught a knowledge of other metals; of copper and iron, &c.

226. A knowledge of copper in the school of mines?—That is, knowing copper-ores when they find them, and a knowledge of the modes of extracting the metal.