

Dr. Hector.

14th Aug., 1872.

21. Is there any difference between it and the Grey coal?—Yes, there is. The latter makes excellent coke, and as a gas-producing coal gives an immense volume, but at the same time it contains sulphuretted hydrogen gas; and if this gas is allowed to pass over a red-hot coke, you will have it in part converted into bisulphide of carbon. The smell observed about the Government Buildings a few days ago I attribute to the accidental formation of this gas on one occasion. As a gas-making coal, that of Kawa Kawa is valuable, though I am not prepared to say that it is equal to Newcastle. The best gas coal from Newcastle is better than it and more profitable to use, as it has not the same deleterious gas in its composition, and as a steam-developing coal it ranks about half a pound better than the Kawa Kawa. That is the average of all the samples examined. Of course, if you take a coal sent into the market, you do not get it all of one kind or in one condition, which may give a different result from specimens selected at the pit. The best steam coal of the Kawa Kawa is nearly equal to Newcastle. As regards stowage, I think there is very little difference between it and the Newcastle, but I would point out that though a ton of this coal may occupy more bulk, you get more out of it, as there is less ash. If large masses of pyrites are left in the coal, it will be dangerous for seagoing purposes. The “brass” in the home-country coals is pyrites in thin films, and it is less liable to fire than the other. As to the Kawa Kawa Mine, the result of the boring referred to in Mr. Hutton’s report reached me to-day. The seam apparently diminishes on the east side of the fault, but to what extent cannot be ascertained without further boring. The opinion I expressed on the prospects of this mine in 1866 are given in my instructions to Captain Hutton, page 4, D. 3. Since that was written, a local market has been opened for the coal at the Thames Gold Fields. I would not consider it advisable to begin railway construction till the ground has been more thoroughly tested by boring. It would be useless, because a railway will not warrant the Company in going on till they see whether it will pay them to sink a shaft, and erect machinery.

22. Then if a railway were made, its only security would be the mining plant, which would be useless if there was no coal?—The position of the proposed line would be of service to the country, independent of the coal. It would connect with a good harbour the interior district, and would open a large amount of level country. Still, if the Coal Company, after testing the ground, found it would not pay, it would be unfortunate if a railway had been proceeded with. As to Wangarei, since my previous evidence there is nothing new, save that Mr. Beddington is engaged in boring for a new coal seam, which, from its position, would be extremely useful in relation to the fine harbour there. Mr. Walton went to great expense in erecting wharves, sheds, and otherwise. The coal is inferior to the Kawa Kawa coal, which was opened up at the same time. I think there is every reason to believe they might strike some better in quality. I think the Government, in these and such cases, might assist local efforts.

23. Do you find the quality of coal alter for better or worse as you go deeper?—The depth has nothing to do with it beyond this: that outcrop coal generally is full of the roots of plants, and is inferior. The Coromandel coal has been long known in small seams. It is only recently that a good seam was found, and traced to the hill, but I have no precise information about it. It is a kind which would be moderately valuable for steam vessels; but as yet I have no correct information as to the thickness of the seam. I have nothing to add to the evidence at page 9, D. 3, on the Brunner and other Nelson Coal Fields.

24. Have you any other information on the subject you could give; for instance, the shipping engaged in the coal trade?—I think there is a good deal of misapprehension about the size of vessels in the New Zealand trade with Newcastle. I do not consider it advisable to have very large ships. Into the Grey, for instance, a vessel such as those I understand were constructed for the Hunter River could go quite well. I have been informed that there are several places on the Australian Coast where the difficulties are quite as great as any to be met with on the West Coast, and they have been overcome by contrivances of various kinds. If the Committee could get information of what has been done in such places there, it would be most useful for the country. For instance, I should say, that at moderate expense the Grey bar might be improved very materially, so that a large amount of coal could be taken out of it. I have seen a vessel drawing six or seven feet going in; and one built specially for the purpose would carry a sufficient amount of coal to pay. I have seen one vessel of about 290 tons enter; but the great difficulty in the Grey is, that after floods the bar overlaps, so that a ship runs a risk from broadside seas. If certain improvements were made on it, a vessel might go in and out straight. It would be expensive, but not so great as schemes I have heard of, such as making a railway for taking the coal to Nelson or Lyttelton.

25. Are you aware of anything the Provincial Government is doing to make a tramway on the other side of the river?—I only know of it from report—from Mr. Curtis—that they were going on with it in the meantime, to supply the market till the railway would be available.

26. Do you think that a practicable way of bringing coal to the port?—It will be a much less expensive than the present way.

27. Have you compared the different coal mines on the West Coast, so as to ascertain where the best port was?—There are only two mines at present, the Grey, and the one at Ngakawau, eighteen miles north of Westport. The latter has only been worked since May last. The survey of the upper or plateau coal field in that district is not completed. I mean to proceed with the geological survey of it as soon as the season permits: at present it is covered with snow. Land surveys do not come under my department. I mean to open on the hill face. In the event of the coal extending to the plateau, I would recommend an engineer’s opinion being taken as to the cost of harbour works, so as to make the river available. My report on the Reeftown coal shows it to be one of an intermediate character between the Grey and the other coals. I think there is very little difference in general in these coals. They are all of the lower tertiary or upper secondary formation. I have had two sample bags of the Ngakawau coal sent me. The analysis of this coal is not yet included in the Table, but has been reported on in a letter to the Colonial Secretary, forwarding reports from Captain Leach on the state of the bar at that place. The coal is exceedingly promising, and, except being more friable and drossy, is not otherwise inferior to the Grey.

28. Do you think screw coaling vessels could be employed with advantage?—I cannot say; I think more definite information should be got from Australia.