10. Does this coal not pulverize when exposed to the atmosphere?—To some extent it does. Company's report reads that the coal is improving as they go deeper; and it is just possible that when Mr. Williamson.

Mr. Kebbell used the coal it was being mixed with casing that caused the burning of the furnace bars I know that Mr. Firth can produce more from the slack or refuse than from 9th Aug., 1872. ordinary Newcastle coal, and would recommend that he be communicated with and asked to give his

Hon.

11. Can you give any information as to the use of Kawa Kawa coal for gas purposes?—I cannot give that information; I am not aware of its qualities for producing gas. We have another coal mine in the north, called the Waikato Mine, but it is in such a position at the present time that it is only useful in the locality. It was working during the war, and since then is used in the steamers on the Waikato and for household purposes along the river. The quality is not so good as the Kawa Kawa coal, but it is an excellent household coal, is easily reached, and seems to be unlimited in quantity. I think Dr. Hector's report says there is some 800,000,000 tons of coal in that district.

12 Have you heard anything of a coal field in Drury?—Yes; it is lighter than the Waikato coal,

and inferior in quality.

13. Have you heard of ironstone being found there?—I have not heard of ironstone in the vicinity of the Drury coal; I have heard of it at or near the Wangarei Mine. There was another coalfield in the North which was worked for a time, but it is now closed because it was not paying. The coal is not equal to the Kawa Kawa. The high price at the Kawa Kawa pits is on account of the want of proper plant in working them. I do not see how it should cost more put on board than in Newcastle. If the coal was carried from the mine by rail at the same price, the advantage to the consumer should be in the cost of freight along the coast as compared with the freight from Australia.

14. On what terms is the field held?—The company have a lease of twenty-one years, and they pay a royalty to the Government of sixpence per ton over all. I do not recollect the quantity of

ground they have, but they were negotiating for an increase.

15. Is the mine paying?—No; it is some £6,000 in debt. To work it on a large scale would require a different class of plant, and they do not wish to go to that expense till they get a railway to the water. As soon as that is done, a much larger engine would be required, but that would cost little more in working than a small one, because at a coal pit there is always plenty of waste to work it with. If they had better power, they could deliver in Auckland with the greatest ease 50,000 tons a year.

16. Do you think they could compete with the supply from other quarters?—Supposing they were not attempting to compete in the Christchurch and Dunedin Markets, they would have ample field in Auckland and the North. The mines in the South could not compete with mines in the North for the supply of the North. Her Majesty's ships had used this coal, and reported favourably upon it on the whole. There was one unfavourable report. One captain had said that he would rather use it than Newcastle coal, because there was less trouble with it. The only thing is to fire light and

17. What price could this be delivered at?—If the railway was made, it could be delivered free on board at 8s. a ton. When I saw it it was not a hard coal to work, but I have not seen it for two or three years. I think they are now at the third level; in the deep levels a pump would have to be always kept going. There is a large swamp in the neighbourhood which possibly supplies the water.

## Wednesday, 14th August, 1872.

Dr. Hecror, F.R.S., in attendance, and examined.

Dr. Hector.

18. Dr. Hector stated:—The Kaiou coal seam, near Wangaroa Harbour, belongs to the same formation which is found at Kawa Kawa. This is mentioned in my recent report, and a description of it will be found on page 25, letter D. No. 3, of this year's Parliamentary papers. There is a continuance of what I take to be the Kawa Kawa coal, about thirty-seven miles south of that place, and it is continued south to even a greater extent. The seam at the Kaiou is now being opened up under my direction, and a Committee has been formed in the district to superintend the working. The Government has given £200 to discover if it can be made available for the shipping in Wangaroa Harbour. The report explains the nature of the coal. The extent of the Kawa Kawa coal is being tested as described in Captain Hutton's report, page 5 of papers quoted. Since then I have received a further report, and now produce the original plan of the field which I made in 1866. (The dip &c. of the coal, and where it was worked, explained on the map.) The result of boring down 277 feet was, that they had found only a five-foot seam of coal. Supposing that to be the main seam which they have hitherto been working, it shows that the coal soon thins. The borings are done by the company, which, of course, has the advice of the Geological Department when they wish it. The company has made about three and a half miles of railway, which is the least expensive piece of the proposed railway work, as the remainder of the line is carried round the spurs of the hills. The Wangaroa seam is the same coal formation. I cannot say that it is the same seam. From near Mongonui right down to Matakana, outcrops of coal have been found at intervals.

19. Can you state if there is any difference between the Kawa Kawa coal and the Newcastle coal? It has a greater heating power than the Newcastle, but it sometimes contains 5 per cent. of sulphur, frequently in nodulated masses of pyrites, which are apt to combine with the furnace bars. This is not exactly the form of pyrites which some coal miners call brass, and which is often found in the Newcastle coal; but the reason why the sulphur does more damage in the Kawa Kawa coal is because of the latter being a tender, caking coal, so that it keeps dripping through the furnace bars, catches fire beneath, and keeps the bars red hot. If the bars were kept clean and not allowed to clog, they would

not be so liable to be burned.

20. Can this defect be remedied in any way?—Yes, it can be obviated by proper stoking. If the coal was used in sea-going vessels, where they would not be always able to replace furnace bars, great care would be required in firing, so that it should not choke the bars.