Further down the Selwyn River, on what is known as the Church Reserve, a thicker seam of coal occurs, but it is of the quality of brown coal—similar to that obtained in Jebson's mine, close to Waimakiriri River, seven miles further north. I think it probable that this brown coal seam is more or less continuous in this district. Jebson's mine has been worked in sixteen-inch and two-foot seams. Two of these seams were worked together in the same drive, the intervening shale being excavated. All round the western border of the Canterbury plains, outcrops of the same brown coal formation are of frequent occurrence, and it is probable they may extend a considerable distance to the eastward, underlying marine formations and the superficial shingle deposits. This is an important character, as it renders the tracing of these seams in depth more promising than if they were merely ordinary tertiary lignites.

48. What would be the scientific name of Hart's coal?—Non-caking bituminous brown coal.

49. For what purpose do you think it would be suitable?—I believe for any purpose except the manufacture of coke. It is quite as useful for ordinary fuel as the coal imported from New South Wales.

50. Does it contain such a quantity of sulphur as to render it unfit for blacksmith's work?—No, not in the samples I have examined. There is a larger quantity than I have hitherto operated on undergoing analysis at present, and I shall be able to give the result to the Committee before it closes its proceedings. Sulphur frequently occurs in these coals as sulphuret hydrogen, and not in combination with iron to form "brass," which is so objectionable.

51. *The Chairman.*] Are any of these coals adapted for steam purposes?—Hart's coal is adapted to any purpose for which coal is usually applied as fuel. It is not a bulky coal. If it could be had in quantities, and be equal in quality to the samples I have seen, it might be used by ocean-going steamers.

52. What we are to gather from your statement is, that the coals upon the eastern side of the Middle Island are adapted more for local supply than for purposes of export?—Yes; that is my opinion. In Otago, deposits of very superior brown coal occur at the mouth of the Clutha River, the seams having a total thickness of 50 feet. They were at one time extensively worked. Within six miles of Dunedin, seams of the same coal have been worked for many years to a very considerable extent for local supply of the City of Dunedin, for household purposes. At Shag Point, forty miles north of Dunedin, several seams of a still better quality of coal have been worked, varying in thickness from 4 to 7 feet. This coal contains a large percentage of gaseous matter and illuminating oil. The formation in which these seams occur extends for at least fifteen miles in a northerly direction, dipping to the eastward under the marine formations which I have before described. This coal is more adapted for gas purposes than any of the other coal mentioned.

53. *Mr. Stafford.*] Do you know the reason why the working has been discontinued?—It is still being worked, but only to a small extent, owing to the difficulty of shipping the coal—the coast being very much exposed, and there being no land communication.

54. *The Chairman.*] How far is it away from an available port?—Seven miles north is Port Moeraki, where there is a jetty with a draught of eleven feet of water alongside and safe shelter. Owing to the occurrence of building stone and lime stone, as well as this coal, in the district, it is very desirable that it should be opened up by a line of railway running parallel with the coast.

55. What length of railway would be sufficient to open up that country?—About 60 miles of railway would connect Oamaru with Dunedin, but less than 40 miles of railway would be sufficient to connect Shag Point with Dunedin.

56. *Mr. Stafford.*] The Shag Point Coal Mines are of greater depth than the ones at Molyneaux?—None of these mines go to a greater depth than water-level.

57. I do not mean the mines; I mean the coals?—I expect the coals run to a very great depth. The same coal as that found at Molyneaux is also worked at Tokomairiro, being in fact a continuation of the same field. The same formation also extends westward almost continuously towards Preservation Inlet, and is worked at several points along the southern slopes of the Hokanui, Takutimo ranges. In the latter locality, at Morley Creek, the seam is 10 feet thick, and is of better quality than is usual in brown coal, owing to the large quantity of resinous matter which it contains. It has been successfully tried for the locomotives in the Bluff Railway Line. There is an older formation flanking these hills which also contains coal seams, but none of great thickness or value. One of these was worked for a short time at Wakava, where there is a good harbour. The seam occurs in the sandstone, and is very irregular in thickness, but the quality is very good. It resembles Hart's coal. The same coal seam as at Wakava has been partly explored on the Otapiri Creek, north of Invercargill, but the seams there present the same objections as that at Wakava. At Preservation Inlet there is a small patch of this older coal formation, forming what is known as Coal Island, and also occurring at several points on the mainland. The seam of best quality in this locality is only 4 feet in thickness, and is irregular. The coal is good, but is somewhat dirty, containing a considerable admixture of iron pyrites and ash. On the south side of the Inlet the seam is much thicker and more steady, but its quality is the same as that described as being found on Morley Creek; it, in fact, passes into a brown coal. The only other coal deposits that require mention in Otago are the lignite beds, occurring throughout the interior. They are only of local importance.

58. *Mr. Macfarlane.*] Why?—They would not be worth the expense of carrying to any distance.

59. *The Chairman.*] Is there any particular coal mine to which you think the attention of the Government should be specially directed, in order to render the Colony independent of foreign supplies?—I think the mine best adapted for being immediately worked is that on the Grey River, but I doubt if it could be worked immediately so as to render the Colony independent of foreign supply.

60. Upon what do you base that opinion?—The coal from a newly-opened mine worked under difficulties would be successfully competed with by coal from the long-established mines which are in full working order in Australia. The difficulties that would have to be encountered in opening a mine extensively in this country would only be discovered as the works are proceeded with.

61. *Mr. McGillivray.*] Have the results been satisfactory of the coals used in the locomotives on the Bluff Railway?—It was only a small experiment, and the report of the Engineer I considered