There has never been enough of coal produced to meet the demand at Grey River. The coal has hitherto been brought down the river in barges, and, owing to the shallowness of the river, only a few tons could be taken at a time.

40. Is there any difficulty in the formation of a tramway?—None at all. A line for a railway has been surveyed along both sides of the river. The estimated cost of a locomotive line on the north side is, I believe, £21,000.

41. What would be the cost of a tramway adapted for horse-power?—About £7,000 or £8,000.

42. In that case would there be any difficulty in supplying the local requirements of the Grey River?—Certainly not; the supply at present is limited only by the difficulty of the transit down to the mouth of the river. The bar at the mouth of the Grey River would prevent any large export?—It might cause an interruption of traffic from time to time; but vessels drawing ten feet could carry a large quantity of coal—that is, they could be constructed so as to be able to convey a large quantity of coal. I understand that natural difficulties equally great have been overcome in delivering coal from the mines in New South Wales.

43. On what other part of the West Coast has coal been worked?—Near Collingwood. At Pakawau, seven miles north of Collingwood, thin, irregular seams were explored many years ago, but the formation is very disturbed and broken at that point, and no large amount has ever been obtained. At West Whanganui, a four-foot seam has been worked, but as it cropped out below high water-mark, the coal was obtained under very great difficulties. The whole of the West Whanganui inlets are surrounded by the coal formation, and several small coal seams are known to exist, so that it is not improbable that valuable seams might yet be discovered. The coal formation in this district is, however, characterized by a tendency to false bedding, by which is meant the horizontal substitution of a deposit of one nature for another, so that shales pass into sandstone or conglomerates within a very short horizontal distance, and in like manner the coal seams would probably prove of limited area. The last-opened mine is on the west side of Ahuriri River. The seam, which is from 4 feet to 6 feet thick, is dipping into the brow of the hill at an altitude of 600 feet. The coal is of excellent quality, but it is divided into two subordinate seams by a middle band of shales. If an admixture of this with the coal be not carefully guarded against, it will depreciate the value of the coal. The coal formation occurs along the West Coast of the Island in isolated patches. One of these, north of the Buller River, known as the Mount Rochfort Coal Field, deserves mention, from its containing a 10-foot seam, the coal from which is of the best quality yet obtained, being better even than the Grey River coal. It occurs, however, at an altitude of 2,300 feet, the formation being on the surface of a flat-topped range of mountains extending parallel with the coast. The coal is dipping to the westward, and I think there is some chance of its being yet obtained at a lower level. Probably this coal might be profitably worked if a tramway were carried as far as possible on the level towards the position where the mine is to be established, and communication effected with the top of the hill by wire tramways or inclined planes, such as those in use at the Thames Gold Field. The great advantage of working this coal would be its vicinity to the excellent outlet afforded by the Buller River.

44. Is there any encouragement that could be afforded by the Government which, in your opinion, would be calculated to promote the speedy development of this mine?—What is wanted to insure the coal being favourably received and preferred for use by the steamboats on these coasts, is simply that the supply should be sufficient, which it never has been hitherto. In order to effect this, increased facility for transport between the mine and shipping place is the primary requisite. The first extraction of coal involves a small cost compared to that of its subsequent land carriage and repeated handling. I think if some means were devised for inducing the bringing of these coals to market in the different ports of call of the interprovincial steamers, there is no doubt that they would use them. The supply, however, would require to be ample, as it might be necessary for them to make some alteration in their furnace bars. One of the great advantages of the Grey and Buller coal, from past experience, is the comparatively small amount of stoking that is required. If too much disturbed, it does not burn in the furnaces so well, and probably this may account, to some extent, for the prejudice which many stokers have shown against its use.

TUESDAY, 26TH JULY, 1870.

James Hector, Esq., M.D., F.R.S., in attendance, and examination resumed.

45. *The Chairman.*] You have already given the Committee valuable information respecting the existing coal mines in the North Island: will you be so kind as to resume your narrative, and refer to such coals as you know to exist in other parts of the Colony?—The coals in the eastern side of the Middle Island and in the Province of Otago are chiefly brown coals—those which contain so much water as to make them comparatively inferior as fuel. There are, however, a few localities where a better quality of coal occurs. In the Malvern and Clent Hills there are a number of detached basins containing coal seams, the quality of the coal in some of them being very valuable. The extent of these deposits in any one place appears very small. The coal which has been recently tested in the House of Representatives is from one of these detached basins which intersects the Selwyn River. The area of this coal basin is limited, and the coal occurs in several well-defined but thin seams, the thickest seam being less than two feet. Near Lake Coleridge, which is in the western part of the same district, a coal seam occurs which has been converted into a true anthracite by the influence of volcanic dyke. This seam of of anthracite is four feet in thickness. Throughout this district which is very much disturbed by volcanic rocks, there will no doubt be found many other places where the coal has been altered and rendered of superior value as fuel. The Malvern Hills are forty miles from Christchurch, and are easily accessible. I traced the outcrop of coal seams of varying quality in these hills over a district thirteen miles in extent.

46. Does the coal in the Malvern Hills exist in sufficient quantity to render the working of the mines remunerative?—The chief difficulty arises from the prevailing thin character of the seams, and the detached localities where they occur. They are scattered about over a rather broken country.

47. *The Hon. Mr. Gray.*] Is the small area of which you spoke the particular locality from which the coal tested in the House of Representatives was obtained?—Yes; it is known as Hart's coal.