Cardiff Coal Company.—This company purchased the coal-lease which was held by Mr. A. D. Bayfield and others, and during the last year it has spent about £10,000 in opening out the mine and laying down tramways, sidings, and erecting bins for the storage of coal. The whole of the works has been laid out by Mr. Broome, mining engineer, and the mine itself is under the management of Mr. Elliott.

Sidings.—The length of the main line of railway which joins the Mokihinui Company's railway, is 26 chains, and the total length of sidings for holding empty and full railway-wagons is 45 chains. There are three lines of rails under the coal-bins, where railway-wagons can be filled, and the grade on the railway-line from the bins to the Mokihinui is 1 in 100.

Bins.—Substantial coal-bins have been constructed to hold 800 tons of coal. These bins are so arranged that two doors or gates can be opened to allow the coal to fall into each wagon, so that it can be filled in about three minutes. The bins are made with flat bottoms; but there are different compartments into which the coal can be tipped, so as to separate the various classes of coal. There are nine tumblers erected over the bins where mine-tubs are emptied. The bins are erected on the flat ground, and connected by a viaduct to the lower end of the tramway-line or incline on the side of the terrace, the distance being 236ft. The tubs coming down the incline are detached from the rope, and come on towards the coal-bins on a grade of 1 in 64. The empty tubs are sent down another line of rails, which has a steep incline for a few feet, giving them sufficient velocity to run on the level for a certain distance, where they are again attached to the endless rope by merely allowing the rope to fall into double V, which projects above the top of the tubs at each end.

Incline.—The incline-tramway is 46 chains in length from the end of the viaduct to the point where the coal is first cut, the total rise in this distance being 142ft., which gives an average grade of about 1 in 21·4. The steepest portion is at the lower end. For the first 4 chains the grade is 1 in 5·5, and for the next 5 chains it is gradually reduced to 1 in 36·7; and from this point to the mouth of the tunnel, which commences at 40 chains, the grade is reduced to 1 in 44. There is a short tunnel 4 chains in length near the bottom of the incline going through the brow of the terrace to get on to the narrow belt of comparatively flat land on top. The tunnels are made 9ft. wide by 7ft. high.

Otago District.

Kaitangata Company.—This company's coal-mine has been greatly developed during the last five years, and all the modern appliances used to produce the coal at the cheapest rate. The mine was well and carefully laid out when opening it out, and the workings carried on since then in a systematic manner. Great care is essentially necessary in working this mine, as the coal is very liable to spontaneous combustion. All the slack has to be cleaned out of the bords, and pillars showing any signs of crushing have to be watched to see that a fire does not take place. Spontaneous combustion takes place everywhere that atmospheric air can penetrate through or mix with the coal. The mine is, however, divided into districts, which can be cut off from one another in the event of a fire taking place.

There has been a large yearly output from this mine for a number of years, nothwithstanding the coal being of a quality that its consumption is confined to the district in which it is raised. It is not suitable for marine purposes, neither will it stand the weather the same as bituminous coal. There are several seams of coal in the mine overlying one another, but what is termed the main seam has a varying thickness of from 8ft. to over 30ft. The seams are, however, greatly broken up by faults. At what is termed No. 1 fault the displacement shows an up-throw of about 190ft.; and by following on the seams for about 13 chains into the hill No. 2 fault is met with, which causes a down-throw of about 280ft.; and in about 5½ chains further on the seams beyond the No. 2 fault another dislocation is met with, which is termed No. 3 fault. Going in the opposite direction from No. 1 fault towards the shaft, after following the main seam for a distance of about 7 chains, its inclinations gradually get steeper, until getting near the shaft the dip is steeper than 1 in 1; but taking the inclination of the seam between Nos. 1 and 2 faults it is about 1 in 4. Coming towards the shaft two more faults are met with, which cause very slight dislocations. In sinking the shaft and cutting towards the main seam six different beds of coal have been gone through, and the material underlying the main seam indicates that there is a great likelihood of other coal seams, or at least one more seam, under the present workings. The more cover there is on the coal the harder it is likely to be; but there is very little probability of getting bituminous coal under the present beds, although it is likely that a better class of similar coal to what is now being taken out will be got.

The principal output at the present time is from the inclined adit, which is 1,100ft. long, at the bottom of which a main heading is taken in on the level for 1,000ft., when it cuts the main seam beyond No. 2 fault. A dip incline was at the time of my visit being constructed towards the main heading leading from the bottom of the shaft, and only wanted a few yards of being connected with the shaft-workings. When this connection is made a good current of air will pass through, which will give efficient ventilation for some time in the deep working from the shaft.

The cover above the coal is a breccia-conglomerate, of a tough and tolerably hard character, and where it is solid, without joints and shakes, makes a very good roof. The same character of conglomerate is between every coal-bed that has been passed through, but the nodules or pebbles among the material seem to be coarser on the top covering than they are below. So long as this conglomerate occurs under the seams there is always the probability of getting another workable seam of coal lower down.

The machinery and appliances for preparing the coal for market are more complete at this mine than at any other in the colony. The tipplers and automatic screening-machine are all that can be desired. The screening-machine has the upper bars 8ft. long, half an inch in thickness, and 3in. in depth, with 1in. opening between each bar; the screen has a travel of 7in., and makes ninety strokes per minute. The coal that does not pass through the upper grating falls on a travelling horizontal belt, which conveys the coal from screen for a distance of about 30ft., and discharges it into the