

Hikurangi Coal Company's Mine.—This mine has been again successfully worked during the year. The chief place from which coal has been produced was in the dip near the railway. The output for the year was 27,980 tons coal, being an increase of 6,723 tons compared with 1895. Mr. T. P. Moody, who is an able manager, gives the following description of the mine and the mode of working: "This mine has been in existence since 1894. The area of land held by my company is 800 acres, all freehold. Up to 1895 the coal wrought was from surface to adit workings, along the outcrop. The seam varied from 7 ft. to 14 ft., and under a roof or cover of from 10 ft. to 30 ft. in thickness. Since then, up to now, the coal extracted is obtained from dip-workings situate north-westerly at a point adjacent to the Government railway. This dip is on a grade of 1 in 12, through the greensand overlying the coal. The area worked from this is under a cover of about, on an average, 40 ft. The seam of coal is from 8 ft. to 16 ft. in thickness, patchy in character, from soft to hard, the hard requiring powder in blasting. The quality of the coal is splendid, being semi-bituminous, as per attached analysis. The roof throughout the workings is not good, being soft, and composed of fireclay and greensands, of a friable character, and, by reason of the undue amount of moisture there, of a treacherous nature, and liable to swelling. The system of working is 'pillar and stall.' Under my system of working I use but little timber. Knowing that my roof is bad, I work narrow bords or working-places. The bords are from 8 ft. to 9 ft. wide; and my pillars vary according to the thickness of the seam and its character, according to circumstances, from 18 ft. to 24 ft. in thickness or width. I am an advocate of narrow working-places and strong big pillars. Narrow working-places and large pillars mean safety to the miners employed; and when the pillars come to be extracted a better class of coal will be obtained and secured; and during the first working the roof is maintained firm, strong, and safe. I use but little timber in my workings. I do not require timber, because my large pillars act as a safeguard to protect the roof. Where the pillars are strong there is safety in the first working, and afterwards in taking out the pillars on the abandonment of the mine, giving safety to the men, and a good class of coal. In my system there can be no crush. Narrow working-places with thick pillars mean safety. The width of a working-place and the thickness of the pillars depend upon the thickness of seam, its hardness, its character, its depth from the surface, and its liability to the action of crushing pressure. These remarks are meant as advisory, for the benefit of those who may not have thought this matter out—perhaps may be outside of my instructions. As regards ventilation, my mine is ventilated artificially, by shafts sunk at points where required. The mine is well aired, securing to the workmen comfortable places in which they can work. The quantity of air circulating in the mine is beyond and above the requirements specified in the Coal-mines Act. I have forty men at work, with fully 10,000 cubic feet per minute circulating for them. There is no inflammable gas present, and no carbonic-acid gas anywhere. My company's mine is safe in all respects, and it is safe in every way, whether as to roof danger or explosion. During the past year the usual work—viz., opening up main roads and exploratory drifts—has been done, as also the sinking of two additional air-openings or shafts for ventilating purposes, and in two of the air-openings I have placed ladders as a means of exit for the men employed, in case of accident. I have also made a cabin or room in which the men, on entering the mine, can remain until they shall have got their eyesight. This I consider an important matter, and one which should be insisted on in all mines, as on entering the workings from the daylight men are always for a considerable time in a manner blind, owing to coming into the darkness underground. I make it a rule (strictly enforced) that the overman examines every working-place before the men are allowed to enter, and either he or his deputy must be the last to leave the mine after it has ceased work."

The following is the report made on the 4th March, 1896, by Sir James Hector of five samples of coal forwarded by Mr. T. P. Moody from the Hikurangi Company's mine:—

"Nos. 1 and 2, top and bottom of new dip seam (thickness, 9 ft. to 14 ft.); No. 3, from near dip fault; No. 4, from splint seam; No. 5, from the fault (iridescent coal). All these coals are almost precisely of the same character, and belong to the class of semi-bituminous coals, as they do not form a compact lustrous coke like a bituminous coal. In purity and usefulness as fuel they are equal to the average West Coast coal, and superior to the coal first mined at Hikurangi, and also to the Kawakawa coal. The following results of analysis have been supplied by Mr. Skey:—

		(1.)	(2.)	(3.)	(4.)	(5.)
Fixed carbon	...	53·29	53·28	54·03	54·26	57·16
Gas and oil	...	41·82	41·89	39·94	38·91	35·70
Water	...	3·62	3·60	3·82	3·01	4·01
Ash	...	1·27	1·23	2·21	3·82	3·13
		100·00	100·00	100·00	100·00	100·00

Evaporative-powers: (1) 6·90, or 11·68; (2) 6·90, or 11·68; (3) 7·00, or 11·91; (4) 7·05, or 11·93 (5) 7·43, or 12·62. The first entry of evaporative-power gives the pounds of boiling water which the coal will evaporate as computed on the old formula, and the second is the result computed by the formula now used in New South Wales. Nos. 1, 2, 3, and 5 are compact laminated coals, with bright lustre and black shining streak. The colour of the ash is light reddish-brown. The brilliant iridescence, or 'peacock-coal bloom,' on No. 5 is caused by thin films of silica on the joints of the coal. No. 4 is a splint coal, and is very compact and hard, so that it would stand handling well. It has a bright pitchy lustre, is without lamination, but is cut by joints coated with lime and films of pyrites. Its ash is light-grey, and the streak is dull-brown."

Christie's Mine.—No work has been carried on during the year.

Rosebery Mine.—The work of further driving into the hill led to no satisfactory results. The coal was irregular, the country being very much disturbed. The company, in consequence, abandoned the mine, and disposed of all plant.