

Analyses of Dr. Sir James Hector and Mr. Skey :—

Oxide of iron	..	..	..	..	..	..	82.0
Protoxide of iron	..	..	..	..	..	..	
Oxide of titanium	..	..	..	..	..	..	8.0
Silica	..	..	..	..	..	..	8.0
Water and loss	..	..	..	..	..	..	2.0
							100.0

REPORT ON THE PETROLEUM.

Mr. Wm. Cowern, of Hawera, New Zealand, on the 3rd November, 1906, states as follows :—

Referring to Mr. Joshua Jones's property of some 50,000 acres on the Mokau River, New Zealand, and more particularly in its connection with the recent discovery of petroleum oil in the neighbourhood, I understand you would like some particulars within my own personal knowledge. I saw the oil-bore at Moturoa, distant about thirty miles from Mr. Jones's land, some seven or eight years ago. At that time a flow of oil was obtained, but in casing the bore difficulties arose, and it had to be abandoned. This past year another bore was sunk, and, at a depth somewhat greater than the previous one, oil was struck, and is flowing under a pressure of 40 lb. to the square inch, which I notice by the papers has been increased to 170 lb. The quality, I understand, is equal to the best produced, and contains many very valuable by-products. Several companies have been formed to take up rights over a very considerable area of country, and I understand expert authority indicates the existence of a large field, about which much has been written in the local papers. Considering that Mr. Jones's property, embracing so large an area, is so near, and appears to be well within the zone of surface indications, I think it a matter of some urgency for your company at once to put down a trial bore on the property. Should this prove successful the value of the rights over the 50,000 acres can then be hardly overestimated, and in this connection the following extract from the *New Zealand Herald*, of the 26th September, has some significance : " Mr. Fairo, the successful borer and manager at Moturoa, is reported to have said that he thinks he is boring near the edge of the field which extends back towards Mount Egmont, and in a northerly direction under New Plymouth towards the Mokau coalfields." I have sold or otherwise dealt with quite 100,000 acres of land within recent years in the vicinity of Mr. Jones's property, and claim to know a good deal of that class of country. I can state that the surface indications of oil are fairly numerous throughout the northern Taranaki district. New Zealand imports all the oil required, so that the local demand for it would be considerable.

EXTRACTS FROM REPORTS ON THE COAL.

Sir James Hector, C.M.G., M.D., F.R.C.S., head of the Geological Department of New Zealand, in his report to the New Zealand Parliament, states :—

In ascending the Mokau River, which is navigable for twenty miles (14 ft. of water on the bar at the entrance), the base of this formation is found in the Mummilite limestone (Middle Eocene), which again rests unconformably upon the grey marls and the chalk marls which belong to the Cretaceo-Tertiary formation. These rest in turn on greensands, passing downwards into the brown concretionary sandstones of the coal formation, with valuable coal-seams and characteristic fossil plants. Coal-seams were found to crop out at points several miles apart, and in one place on the bank of the Mokau River under such favourable conditions that with very imperfect tools 5 tons of coal were extracted in a few hours and placed on board the steamer " Hannah Mokau " for trial. The seams vary from 2 ft. to 6 ft. in thickness, and the quality of the coal proved to be excellent for steam purposes, being hard and clean, giving out an intense heat and very little smoke. It belongs to the class of non-caking coals, and is considered by practical engineers to have a value exceeding that of the Bay of Islands coal, and approaching that of the coal from the Buller and Grey coalfields. The actual trial of this coal against the Waikato coal showed it to be one-fourth better, 1½ tons of the Mokau coal doing as much work as 2 tons of the best Waikato.

In a further examination of this property by Mr. Park, F.R.G.S., Mining Engineer to the Government of New Zealand, and Dr. Sir James Hector, they state : " The Mokau coal is said to be equal to the Grey (Greymouth) coal for steaming purposes. They describe the thickness of the seams of coal at 2½ ft., 7½ ft., 5 ft., 8 ft., 5 ft., and 5½ ft. respectively, and they say the coal-seams in the Mokau lie very flat, and rise to the north-north-east into sound dry ground, and, with a deep-water channel to the outcrop, offer exceptional facilities for working to advantage, and above the roofs of the seams are hard green sandstone.

Mr. Skeet, an engineer of the Provincial District of Taranaki, in speaking of the area of coal on the Mokau, describes it as about thirty-two miles long by twenty wide; and, according to Sir James Hector, Mr. Park, and Mr. Skeet together, the area of coal upon this Mokau Estate is about 30,000 acres, which area is computed to contain, according to the measurement of the coal, the thickness of each seam as herein stated, and after deducting the small seam of 2½ ft. and allowing one-tenth of the area for waste ground, over 35,000 tons to the acre, or an aggregate of 1,050,000,000 tons upon the whole property. The coal-area so defined is shown on the accompanying plan.

Mr. Thomas Perham, the Marine Engineer to the Government of New Zealand, formerly a coal-mining engineer at Mountain Ash, in Glamorganshire, reports :—

Several seams are on the river, with a slight dip north to south on the south bank. I anticipate from its great depth and consequent density the best coal will be found in most cases. The seams are well defined, between sandstone bed cropping out on the river-banks, and in other places a few chains inwards. The coal is a good hard, bright, colliery cannel coal; a good locomotive or domestic coal; burns well, of great heating-power, and to a clean white ash. The seams vary in thickness from 4 ft. to 6 ft., and in a few cases as much as 8 ft. It is a convenient distance above the water-level, can be got and run out of the mines by trucks, and tipped into the hold of the vessel without any extra handling. I have no hesitation in saying that working the coal alone is a good sound speculation, and that with careful and sufficient outlay a very remunerative one.