

is successful in striking the coal, the seam may be either opened up at that place, or two other bores be put down in order to get the dip of the seam. When the dip of the seam is ascertained at that point, but little difficulty will be experienced in hitting off the position of the seam at the level of the plains at the Jacob's River, and a drive put in there will be the best position for opening a mine.

4. *Oropuki District*.—In this district the coal is situated at about a height of from 150 to 200 feet above the sea, and about five miles from the beach. It occupies a portion of the valley of the Waimeamea River, and it is about three miles in length and one in breadth.

The coal is exactly similar in appearance and quality to that of the Wairaki District, just described. At present it is only exposed in water races, some of which have fallen in, and in no place was I able to measure its thickness. It is however evident that this is considerable, and, according to the miners, from 10 to 15 feet. It is covered with dark very tough shales, and the floor is composed of chocolate-coloured shales. The upper part of the formation is soft green sandstone. The dip is about 12° S.S.W.

This coal is of good quality, but not superior to that from the Wairaki District, while it is neither so accessible in position, nor so extensive in quantity. As the country in which it occurs is well covered with bush, it is not likely that this coal will be used, even for local purposes, for some time.

It appears to me, therefore, that the only coal field of any commercial value at present known in Southland is in the Wairaki district; and I think that this could be at once opened up with great advantage to the country.

F. W. HUTTON,
Assistant Geologist.

Wellington, 6th March, 1872.

No. 12.

Dr. HECTOR to the UNDER COLONIAL SECRETARY.

SIR,—

Geological Survey Office, Wellington, 6th April, 1872.

With reference to my letter of the 15th ultimo, I have the honor to attach a map to accompany Captain Hutton's report on the Southland Coal Fields, explaining for the information of the Minister for Public Works the position of the Nightcap Hill (where it is proposed to make further exploration for coal), with reference to the existing and proposed railway lines.

The line A B on the map is that which will require to be constructed if the existence of a mine is proved, and no coal of sufficiently good quality is found in any more accessible position.

I am inclined to think that Captain Hutton does not sufficiently estimate the difficulty and expense of this proposed line; for though the country it passes through is level, it is very swampy for a great part of the year, and one very bad shingle river (the Oriti), which is subject to heavy floods, will have to be bridged.

After my examination of the district in 1869, I had some hope that coal might be found in a position more accessible to the railway than that at Nightcap Hills. Captain Hutton's report does not, however, favour the prospect of getting the coal at any nearer locality; but before taking any steps to survey a line connecting that place with Winton, it will be necessary to ascertain definitely that the coal at the Nightcap Hill, which is at present only seen from a superficial outcrop in a drain, really occurs in as valuable a seam as it does at Morley Creek.

The work required to prove the coal at this place, as suggested by Captain Hutton, can be executed by a coal-viewer or practical mining surveyor.

I have ascertained from Mr. Pearson, Commissioner of Crown Lands, that arrangements can be made locally for having the necessary excavations made; and I beg to recommend that I be authorized to commence them at once, on the following terms:—

The required levelling and excavation, as described in Captain Hutton's report, to be contracted for at a definite and moderate rate of payment, the amount to be doubled in the event of a sufficiently valuable seam for the supply of the railways being discovered.

The total expense of this should not, in my opinion, exceed £200.

The Under Colonial Secretary, Wellington.

I have, &c.,
JAMES HECTOR.

No. 13.

The Hon. W. GISBORNE to His Honor J. MACANDREW.

SIR,—

Colonial Secretary's Office, Wellington, 10th May, 1872.

I have the honor to forward to your Honor copies of the instructions given to Captain Hutton on the 22nd of December last, and of the reports which have, in accordance therewith, been forwarded to the Government.

As a large portion of the land around Nightcap Hill (where it is proposed to make further exploration for coal) is freehold, the Government will be glad to be favoured with your Honor's views before directing the proposed further exploration to be commenced.

His Honor the Superintendent, Otago.

I have, &c.,
W. GISBORNE.

No. 14.

Mr. W. O. BALL to the Hon. W. REEVES.

SIR,—

Dunedin, 19th January, 1872.

I have the honor to submit to you, on behalf of the Preservation Inlet Coal Company, a request that you will grant a sum of money, as provided for in Part VIII. of the Immigration and Public Works