

AUCKLAND.

No. 2.

Dr. HECTOR to Mr. COOPER.

SIR,—

Geological Survey Office, Wellington, 15th March, 1872.

I have the honor to request authority to obtain a report by Captain Hutton on the present state of the following coal mines :—

1. Kawa Kawa—Bay of Islands.
2. Wangarei.
3. Waikato.
4. A newly-opened mine on the opposite side of the Hauraki Gulf from Shortland.

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The Under Colonial Secretary.

I have, &c.,

JAMES HECTOR.

No. 3.

Dr. HECTOR to the UNDER SECRETARY, Public Works.

SIR,—

Geological Survey Office, Wellington, 8th May, 1872.

I have the honor to forward, for the information of the Minister for Public Works, a report by Captain Hutton on the present condition of the Northern Coal Fields.

I also enclose my letter of instructions and the report by Mr. R. W. Moody, dated 30th November, 1865, to which Captain Hutton alludes in his report, as they give further information respecting the Kawa Kawa Coal Fields.

The Under Secretary for Public Works.

I have, &c.,

JAMES HECTOR.

Enclosure 1 in No. 3.

Dr. HECTOR to Captain HUTTON.

Colonial Museum, Geological Survey Department,
16th March, 1872.

SIR,—

I am directed to employ you in obtaining a report on the present state and prospects of the following coal mines :—1. Kawa Kawa; 2. Wangarei; 3. Waikato; 4. Hauraki.

1. At the Kawa Kawa Mine you will be good enough to ascertain and report the (a) amount of excavation that has been done; (b) the quality and thickness of the seam in different parts; (c) estimated quantity still available "level free," or within 600 feet of the surface; (d) whether any steps could be taken to ascertain the existence of coal seams in other and more accessible positions.

You can refer to sheet 1 of the sketch-map of the geology of the district which I furnished to the Superintendent of Auckland in 1866, on which an attempt was made to show the above areas. This map shows that the steep hills that surround the Bay of Islands south of Waitangi are composed of slate rocks. The Kawa Kawa River cuts through this range, and affords easy access to the later stratified and volcanic rocks that lie along the west side of the range. The formation of the valley of the river appears to have been formed by the existence of a fault, as on the north side there is a steep scarp of slate rock rising 500 feet above the river, while the south side of the valley is a gentle slope formed by stratified deposits resting at a low level on the denuded surface of the slates.

The high slate ridge on the north, forming the Kawa Kawa Block, is a plateau with steep sides, except to the north-west, in which direction it slopes gently to the Waimate basin; sandstone beds (with coal?) occur on the top of the plateau at a higher level than they should do if the strike observed on the south were continued across the valley.

Sheet 2 was a plan from actual compass survey of the coal fields from the data which was available in 1866, showing the line of outcrop and relative position of shafts and bore-holes.

It is desirable that this map should be brought up to date by the addition of any further information, and plans of the late workings.

The line of outcrop is pretty clearly indicated by the form of the ground.

The underlying green slates and sandstones are well seen in the tram cutting and valley of the Waioio Creek, and I saw no reason to suspect any local disturbance or "dyke" influence near the outcrop which could account for the dehydration of the coal.

Up the Waioio, heavy conglomerates appear to rest on the slates or replace the coal? or has the coal been denuded off before this deposit?

Sheet 3 shows the position of the various borings that were made, and may be useful for comparing with the underground workings.