

more remained above adit, and to the north of the fault. The seam varies from 16 to 7 feet, the average being about $12\frac{1}{2}$ feet in thickness. The average dip is W. 5° N. 1 in 6.

I do not think that any more accessible position than the present one could be found for working this field, especially as three miles of railway have been already made from the mine to water carriage. I am also of opinion that the existence of the fault crossing the field will not deteriorate the value of the mine; for although on the one hand a certain amount of driving through the overlying sandstone will have to be done in order to connect the two sides of the fault, on the other the downthrow of 70 feet will extend the area of the field; and as this portion will be at a lower level, it will probably have a more solid roof than that portion above adit—and the badness of the roof has been, up to the present, a cause of great expense in working the mine.

Whangarei.

The mines at Whangarei have been abandoned for about six years, and there is, I believe, no intention of reopening them.

Superior coal was found some time ago on land belonging to Mr. Frater, on the east side of the range towards Ngunguru; and Mr. Bedlington, C.E., has traced the formation westward, towards Whangarei Harbour, and he is now boring on land belonging to Mr. Dent, on the banks of the Awaroa, a small stream running into Whangarei Harbour, about three miles north of Grahamstown. The position of the bore-hole is about a mile and a half up the stream. At the time of my visit the bore was down 209 feet through brown sandstone, with numerous casts of marine shells, and Mr. Bedlington expected to reach the coal at a depth of 240 or 250 feet.

Waikato.

No material alteration has taken place in this mine since I surveyed it and reported upon it in 1867. Two bore-holes have been put down, which prove the coal to be horizontal. The principal defect of this mine was the height of the shoot, which broke up the coal unnecessarily when loading barges. This is now being rectified by making a new tramway on the southern side of the spur, and by opening up the seam in that direction.

For further information on this and on the Drury Coal Fields, see Transactions, New Zealand Institute, iii. p. 244.

Drury.

The coal mines at this place have been abandoned for about eight years, and the works have all fallen in. The Hon. H. Chamberlin, M.L.C., the owner of the property, has been making further exploration by boring, but nothing has as yet been discovered that would, in my opinion, warrant the reopening of the mine. I have been informed by the former manager that the uneven surface of the under clay, the badness of the roof, and the high freight to Auckland, were the principal causes of this mine being abandoned.

29th April, 1872.

F. W. HUTTON.

Enclosure 3 in No. 3.

Mr. R. W. MOODY to Mr. W. WEAVER, Engineer-in-Chief.

SIR,—

Auckland, 30th November, 1865.

In accordance with your instructions, I beg to submit the following report, for the information of His Honor the Superintendent, touching that portion of the Kawa Kawa Coal Fields in which I have been boring for coal on behalf of the Provincial Government.

My instructions were, on leaving Auckland for this coal field, to prove in the first place an area of about 500 acres, which would enable the Government to lease that portion to a company, leaving the remainder of the field for further consideration.

On my arrival on the ground in the latter part of June, I marked out a portion of the field for boring operations, about 200 acres in extent, and commenced the No. 1st hole, situated 200 yards south-east from the shaft sunk by Mr. Henry Graham; the coal was reached in 1st at the depth of 59 feet 6 inches from the surface, the seam being 13 feet 3 inches in thickness, of fine “hard coal,” with a good sound roof, composed of hard brown sandstone.

After proving the coal in No. 1st, I commenced a bore-hole marked on the plan No. 2, and situate about 300 yards further up the creek on the opposite bank, and about 500 yards south of Graham's shaft, but had not gone down many feet in this hole before I found that we had got into measures quite different from those met with in No. 1st B H, inasmuch as there was a total absence of the “green sandstones” which are so abundant, and which act as a very good guide in the Kawa Kawa Coal Field especially, and coming at a depth of nearly 40 feet into contact with felspar which is very rarely interstratified with the sandstone, and never with the carboniferous measures except in very extraordinary cases. I considered it prudent to abandon this hole, at least for a time, and to try one on each side, with a view, if possible, to determine the course and size of the disturbed ground, as there does not appear at the surface the slightest indication of any irregularity in the stratification. I therefore put down a bore marked No. 3 on the plan, and situate about 70 yards north-east from the No. 2 hole; although the measures in this hole were much more favourable than those of the last, I was obliged to abandon it at 56 feet deep, solely on account of not having “casing pipes” to secure the soft sandstones.

After leaving No. 3, I commenced one on the opposite side of No. 2, marked on plan No. 4, situate about 100 yards from No. 2, in a line bearing S.W. This is the only hole where anything like the English carboniferous measures have been met with in this ground, in which we have 17 feet of blue “argillaceous shale.” The measures seem so mixed with claystone, and sandstones, that I am of the opinion that we were here in close proximity to the coal on one side, and faulty or disturbed ground