

1882.  
NEW ZEALAND.

BROCKLEY COAL FIELDS, MALVERN HILLS DISTRICT  
(REPORT ON, BY S. H. COX).

*Return to an Order of the House of Representatives, dated the 24th day of August, 1882.*

"That a copy of Mr. Cox's report on the Brockley and adjacent Coal Fields, in the Malvern Hills District, be laid before this House and printed."—(Mr. McMillan.)

SIR,—

Colonial Museum, Wellington, 16th August, 1882.

I have the honour to forward a report by Mr. Cox, Assistant Geologist, on the Brockley Mine, Malvern Hills, which he examined last week in accordance with your instructions (of 2nd instant) for the purpose of ascertaining the quality of the coal and the probable extent of the workable seams.

In compliance with your further instructions of 8th instant, a short description is also given of the other coal deposits in the same district.

It will be observed that Mr. Cox reports that 300,000 tons of coal is the amount available in the Brockley Mine as at present opened out. The quality of the coal is intermediate between the Grey River coal of the West Coast and the Shag Point coal of Otago—for steam purposes.

I have, &c.,

The Hon. the Minister for Public Works.

JAMES HECTOR.

REPORT ON THE BROCKLEY COAL MINE AND SURROUNDING DISTRICT, BY S. HERBERT COX, F.C.S., F.G.S.,  
Assistant Geologist.

SIR,—

Wellington, 15th August, 1882.

I have the honour to inform you that, in accordance with your instructions, I have visited the Brockley Coal Mine, and that I took the opportunity of a spare day to pay a flying visit to the Rakaia Gorge and Acheron River coals.

The Brockley coal seam is situated near the Hororata River, at the south-eastern end of the area of brown coal shown on Dr. Von Haast's map of the Malvern Hills District (Geological Reports, 1871–72, page 88), as extending from the Selwyn to the Hororata River, on the north-east side of the Wairiri Valley; and in Section IV. of the same report he shows at this point beds of brown coal, altered by dolerites. I have practically very little to add to this report from a geological point of view, except to state that the Brockley Mine is worked in a vertical seam 6 feet thick, striking west by south, included between a dyke, which also strikes west by south, and the quartz porphyries, which form the ridge between Brockley and Washpen Creeks, called Pullwool Peak on Dr. Von Haast's map. The tilting of this seam of coal by means of the dyke has taken place during more recent times, probably contemporaneously with the formation of the dolerites of the Harper Hills, and it has been attended by local alteration in the character of the coal. When this is considered, we are enabled to arrive at some estimate of the possible quantity of altered coal in the Brockley seam, for it is at once evident that beyond the boundaries of the dyke along its strike no alteration will have taken place, and this is borne out by the occurrence of seams of brown coal in the direction of the Selwyn. It is obvious that, in whatever manner the coal seam may have been dislocated between the dyke and the porphyries, it cannot have a greater extent than the superficial distance between these rocks, and if for convenience of calculation we assume that the coal has been inverted so as to lie vertical and parallel to the dyke throughout, we get the greatest amount possible. This would give us an outside measurement of 120 chains by 35 chains, or about 420 acres of coal 6 feet thick, equivalent to 2,520,000 tons, but this quantity could not be taken as a basis for any calculations, since up to the present time the coal has only been proved along its strike for a distance of half a mile, and the depth of 35 chains=2,800 feet, would, even if the coal occurred to that depth, make the cost of working too great to prove remunerative for many years to come.

Allowing then that coal has been traced for a distance of half a mile, and may be worked to a depth of, say, 1,000 feet, we should have 300,000 tons of coal available in the Brockley Mine.

To the southward of the Brockley Mine there is another outcrop of altered coal, known as Ayers's (Lee's) Mine, which is dipping to the southward at an angle of about 30°.

At this point there are two seams, one of which is reported to be 6 feet thick when it was opened out, but the drive had fallen in, and when I visited the locality, although some trouble had been taken to clear the place up, the outcrop only could be seen, and a fair estimate of the quality of the coal could not be made. There is, however, one seam at least 4 feet thick and another about 2 feet in thickness,