

3.—*Waimangaroa.*

A party of gold miners when tunnelling under the drift in the side of the valley following the surface of the bed rock, discovered a seam of coal interstratified with gritty sandstone. The position is on the opposite side of the valley, and in the line of strike with the thin seam which I saw in 1866, when the miners were in the habit of using it for sharpening their tools, so that it is probably the same seam which is described in my former report as the 16-inch seam, found at intervals along the seaward face of Mount Rochfort. As it appears to be thicker at this place, and the quality to be somewhat different, being, in fact, identical with the coal from the Ngakawau seam, a drive has been put in for the purpose of cutting the coal in the solid part of the hill. It was expected that the coal should be cut at about 110 feet, and about that distance a shale parting was met with, but no clean coal has yet been struck, although the drive has been extended to 130 feet. The locality is about 30 chains up the gorge of the Waimangaroa, and in a very convenient situation for a coal mine.

The formation containing the coal seam forms a long spur from the south end of Mount Frederick. The strike is N. 10° E., with a dip of 60° to the west; and as the direction of the strike is across this spur, which is less than a mile wide, with an altitude of about 800 feet in the cross section at that part, the extent of the seam above water-level would probably be such as would yield about 100,000 tons of coal for each yard of thickness of seam.

The exploration at this place is still in progress, and, until more definite proof is obtained of the existence of a thick workable seam, the Waimangaroa must not be counted on as a feeder to the proposed railway along the coast. The other coal seam, which is frequently referred to as occurring higher up the Waimangaroa Valley, is only the outcrop of the Coalbrookdale seam, and being at an elevation of 1,800 feet is not easily accessible in this direction.

25th May, 1873.

JAMES HECTOR.

Dr. HECTOR to the Hon. the MINISTER for PUBLIC WORKS.

MR. FISHER, of Westport, telegraphs that the contractors who are putting in the drift to cut the coal seam on the north side of the Waimangaroa River have struck the crossing at 113 feet. This is 13 feet further than I expected, and proves that the coal is not dipping so steeply, or the strike has changed in direction. The contract was only for 15s. per foot, so that the authority for £100 will cover expenses up to 130 feet. I have therefore telegraphed to go on cutting through the coal seam to determine its thickness.

24th May, 1873.

JAMES HECTOR.

MEMORANDUM by Dr. HECTOR to the UNDER SECRETARY.

CASCADE CREEK, referred to in the attached telegram, is a tributary of the Buller River rising on the south slope of Mount Rochfort, and joining the Buller at fifteen miles from the sea. I think this is only the Mount Rochfort seam that has been struck by following up the creek to the position marked on the attached sheet map. The altitude is not stated, but at five miles up I should judge the creek to be 2,000 feet above the sea. If so, it is quite as inaccessible as the Mount Rochfort seams already known, and could not be reached with economy from the south side. This discovery should not divert attention from the Ngakawau seams.

15th March, 1873.

JAMES HECTOR.

Mr. A. D. DOBSON to Dr. HECTOR.

(Telegram.)

GREENWOOD reports 8 feet seam coal five miles up Cascade Creek. Westport, 15th March, 1873. Specimens very good.

A. DUDLEY DOBSON.

Mr. LEECH to Dr. HECTOR.

SIR,—

Harbour Office, Westport, 11th June, 1872.

I have the honor to inform you that, agreeably with your request, I took the soundings outside the River Ngakawau. With the largest rock bearing south, we steered north until the river's mouth bore east. We then kept away, and entered the river (3½ hours flood), carrying 6 feet over the bar.

The soundings were first 4 fathoms, immediately after getting the rocks on the proper bearing—depth nearly the same until past the rocks, then 3½ fathoms, shoaling gradually to 3 fathoms; the river then bore about east; steering in for the bar still 3 fathoms, then 2½ for four casts, then 2 fathoms, then 1½ twice, then 8 feet, 8, 7 (6½, 6, 6, bar; 7, 8, 8, 9, 9, inside). Outside, when sounding, brought up some of the bottom each cast, which proved to be dark sand in all cases. No indications of a rocky or hard bottom being visible.

Next time I go, if an opportunity offers, I shall try again closer in shore.

I have been obliged to go since to Ngakawau (overland), and beacon-off the channel, right up to the Deep Basin. The least water found at high water spring tides, with the beacons any way near in a line, was 8 feet. The bar I found a little deeper than on my first visit, and, as you observed, found it straighter than before. This I attribute to the late floods. In fact, both those good features are caused by the same agency.

The "Luna" can swing in the bay below the shallow place, but she must not be sent until that cluster of snags immediately below the point opposite the wharf are cleared away. Two of the largest are dangerously near the fairway, and lie on the edge of the deepest water. I estimate the cost of their removal at £50.