

An interesting discovery was recently made in the quarry at "The Wood," Nelson, where a small gongy seam in altered igneous rocks was found to contain both native copper and malachite. A little prospecting has been done thereon, and the seam shows signs of developing into a definite lens of possibly payable ore. Its great accessibility is distinctly in its favour, and renders careful prospecting advisable.

(3.) *Chromite*.—Small deposits of chromite are of widespread occurrence in the mineral belt of the Dun Mountain Subdivision, and the mineral has been mined in the past in many localities—in the neighbourhood of Dun Mountain, on the saddle at the head of Jackson Creek, at the head of Chromite Creek, and on the Serpentine. The deposits consist of segregations (apparently magmatic) in the chromite-bearing peridotites. Both the peridotites and the chromite deposits are cut by nelsonite. From the experience gained by actual mining it may be gathered that the chromite deposits of the Dun Mountain Subdivision differed in no way from the generality of deposits of this nature in being very inconstant and irregular in their boundaries. Much of the richest ore was mined in the sixties, and shipped to England when the price of chromite was high. There are still, however, some small deposits, which might repay mining were there an improved price for the mineral. Notable among these may be mentioned some of the small patches at the south-east of the Dun Mountain and the one on Jackson's Saddle.

(4.) *Coal*.—Coal-bearing rocks fringe the base of the mountains skirting the Waimea Plains on the south-east side, running diagonally across the subdivision from the Brook to Brightwater. It is quite probable, too, that they underlie the Moutere and Recent gravels to the north-westward on the low country.

Coal has actually been discovered at many points, notably in the Brook Street Mine, at the old Enner Glynn Mine, and back of Richmond. In Brook Street mining was carried out about ten years ago in a seam of coal apparently sub-bituminous (lignitic) in quality. The seam dipped everywhere at a high angle, and in places was vertical. The thickness showed remarkable variations. In a prospecting shaft sunk on the outcrop the following thicknesses were noted :—

	Thickness.
	Ft.
At 130 ft.	8
„ 170 ft.	10
„ 260 ft.	11
„ 329 ft.	5

Mining was just beginning to meet with some success when a fire occurred—the mine had to be flooded, and, as a result, no further mining was done.

The old coal-mine in Enner Glynn Creek was worked as far back as the early days of the Nelson settlement, and was examined by Dr. Von Hochstetter at the time of his visit. The seams are said to have in places lain horizontally, but elsewhere at steeper angles, and were, it is understood, much broken and disturbed. It is the writer's opinion that both the Enner Glynn seam and the Brook Street seam have been profoundly influenced by the great fault that runs along the base of the mountains forming the south-eastern boundary of the Waimea graben mentioned before. This accounts for the great irregularity in the dip of the seams and for the shattered nature of the coal. On the Brook the coal-beds have been tilted at very high angles along the base of the fault-line, and have in Enner Glynn Creek actually been overturned. Away from the fault on the low country to the north-west it is thought, from exposures seen near Belgrove, that the coal-bearing rocks will assume either a horizontal attitude or, at least, a very moderate inclination, and it is in this undisturbed locality where it may be suggested that boring for coal should be conducted.

When the careful survey now being done along the base of the mountains is completed sites for drill-holes will be suggested in the completed report of the Dun Mountain Subdivision. The quality of the Enner Glynn and Brook Street coal make it very suitable for household purposes. Though the known coal is not of a high grade for steaming and export purposes, there can be no doubt that the discovery of definite and persistent seams of coal so near Nelson would be of very great commercial value.

(5.) *Cement-materials and Building-stone*.—The limestones of the Maitai Series are widely exposed in the Dun Mountain Subdivision, notably on the Maitai Stream, on the Dun Mountain Tramway, on the Roding, United, Champion, Miner, and Wairoa streams. The limestone, though in places argillaceous or siliceous, is elsewhere of great purity, and suitable for the manufacture of lime. The travertine formed from the limestone on the Miner Stream is especially pure. Its utilisation for cement-manufacture in connection with the adjoining argillites seems quite a possibility, but not an immediate one. Possibly suitable for cement manufacture, though scarcely occurring in sufficient quantity for this purpose, are the limestone and clays on Enner Glynn Creek. The harder peridotites might be utilised with success as building-stones, but their occurrence remote from centres of communication greatly detracts from their commercial value.

THE PAKAWAU COALFIELD.

Coal-bearing strata occupy most of the northern part of the Cape Farewell Peninsula. Coal-seams occur at many places, those at Pakawau, Puonga, Ferntown, and West Wanganui being the best-known. The whole area covered by coal-bearing strata may be known as the Pakawau Coalfield. Early in January a hasty examination was made of the seams exposed in the Otemataura Creek, at the Pakawau Coal Mine itself, and on the Bassett property at West Wanganui.

On the Otemataura Stream, at an altitude of about 1,200 ft., a number of coal-seams are exposed. The lowest visible seam, which is about 3 ft. 6 in. thick, consists of fine lustrous coal rather high in ash. It is overlain by conglomerate, and underlain by shale. Some 8 ft. above is a 1 ft. seam of fair