

It is interesting in this connection to note that sparse colours of gold can be washed from the débris now issuing from beneath the frontal face of the Franz Josef Glacier, and that there is much coarse gold in the Callery Stream, which joins the Waiho River about two miles below the Franz Josef ice-front. The gravel terraces, too, below the Callery, on either side of the Waiho, contain much fine gold, and doubtless they could be sluiced with success were it not for the difficulty of removing the many huge ice-carried boulders which the gravels contain. It is quite possible that much gold could be obtained from the narrow V-shaped bottom of the Callery River were the water taken by tunnel to the Totara Stream on the north—an expensive undertaking, but one which local miners consider warrantable by the amount of gold which is obtained on the bars of the Callery every successive year, when for a short period in the winter cold the water sinks low enough to lay them bare. In all some 20,000 pounds' worth of gold has been obtained from the river, notwithstanding the difficulty of access to the principal bars, two of which—the Little Beach and the Buster—occur three and eight miles respectively up the stream, and are reached by a rough track through the wild gorges of the river.

The scenery of the Franz Josef is wonderfully fine. From a point of vantage on the ridge in the western side of the glacier one may look down at the much-crevassed blue and green ice, almost free from moraine, and bordered by steep slopes gay with an almost tropical vegetation, and bright in summer with the crimson flowers of the rata. Ever beyond is the background of a maze of lofty snow-peaks girt by great but almost unexplored snowfields.

COAL-BEARING STRATA IN THE WAI-ITI AND WANGAPEKA VALLEYS.

The hasty reconnaissance of the coal-bearing country between Belgrove and the junction of the Sherry and Wangapeka was intended merely as a preliminary examination of an area which it is hoped later to investigate in detail. Coal-bearing strata outcrop in the foot of the hills back of Belgrove, and in the past at a number of places coal of fair quality has been taken out in small quantity. However, as all mining so far conducted has been carried out along the base of the hills, where the strata are very highly tilted and faulted, and not on the flat, where they lie almost horizontal, the utility of the coal-seams can hardly be said to have been properly tested.

Near Tadmor I inspected a seam of coal 2 ft. 8 in. thick in a small tributary of the Wangapeka, which enters on the right bank just below the mouth of the Sherry. There are, I understand, numerous outcroppings of coal on the Sherry, Wangapeka, Baton, and other streams in the locality. The coal is generally sub-bituminous to bituminous in quality. The following analysis shows the quality of the coal of the Sherry River—the sample having been sent some years ago to the Geological Survey Office by Mr. T. McCarthy:—

								Per Cent.
Fixed carbon	..	..	..	..	..	..	..	44.10
Volatile hydrocarbons	..	..	..	..	..	..	..	48.60
Water	..	..	..	..	..	..	..	1.60
Ash	..	..	..	..	..	..	..	5.70
								100.00

Total sulphur, 3.13 per cent.

The whole area from Brightwater to and beyond Tadmor, in the survey districts of Waimea, Wai-iti, Wangapeka, Tadmor, and Gordon, contains an extensive coalfield of considerable promise, but its potentialities can be correctly gauged only after a careful survey.

REPORTS OF FIELD OFFICERS.

MR. P. G. MORGAN, GENERAL GEOLOGIST.

OFFICE-WORK.

From the 1st June, 1908, until the middle of October I was engaged principally in writing and seeing through the Press Bulletin No. 6, on "The Geology of the Miconui Subdivision," North Westland. Among other work, I prepared manuscript indexes to Von Haast's "Geology of Canterbury and Westland," and to Park's "Geology and Veins of the Hauraki Goldfield."

FIELD-WORK IN GREYMOUTH SUBDIVISION.

On the 3rd November I left Wellington for North Westland, and from the time of my arrival in Westland until the end of May, 1909, was continuously employed in field-work in the Greymouth Subdivision. In this work I was assisted throughout by Mr. J. A. Bartrum, M.Sc., Assistant Geologist, who had begun operations in the Greymouth Subdivision about three weeks previous to my arrival. On the whole, a good season was experienced, and by the end of May field-work in the survey districts of Waimea, Hohonu, Brunner, and Arnold was completed. In the other survey districts comprising the subdivision—namely, Greymouth, Cobden, and Mawheranui—a considerable amount of field-work was done, so that at the close of the season not more than one-fourth of the subdivision remained to be surveyed. The remainder, however, contains the greater part of the Grey Coalfield, and it will be necessary to bestow more than ordinary care and attention upon its survey.