

In the meanwhile I had visited Te Puke, for the purpose of examining the cement deposits some time since discovered on the eastern slope of the coastal range north of Fleming's Hill and Clark's. This I found associated with, and lying between, heavy beds of pumice-sand, and in itself consisting mainly of a coarse subangular wash, fully one-half of which is of a rhyolitic character, the rest being andesic material. The area of this auriferous deposit never exceeded 5 or 6 acres, and such of it as has escaped destruction through the cutting-down of the creek valley is less than 2 acres in extent. The amount of gold present is far too little to pay for working the cement band, which would require to be driven out and sluiced by suitable arrangements in the open of the creek channel.

Had this and the like deposits to the east of Lake Taupo been proved to contain gold in payable amount, a vast field of similar deposit would ere this have claimed the attention of the prospector, as over the pumice-covered region between the Rangitika Valley, through Rotorua to the height of the watershed draining into the Bay of Plenty, there are many areas, large and small, over which the same material is to be found, and within which colours of gold are reported to have been found.

These investigations occupied me till the 10th February, on which date I went from Rotorua to Auckland, for the purpose of repacking specimens on closing of the Exhibition, but on its being decided to keep the Exhibition open till the end of February I employed the interval, according to your instructions, in examining a reported gold-discovery at Wade and certain prospecting operations for gems which are being prosecuted near Riverhead.

On the repacking and despatch to Wellington of the exhibits shown by the department, as requested I visited Waihi, Ohinemuri County, for the purpose of examining the seams of coal or lignite recently discovered in the hilly country bounding on its south-west side the Waihi or Upper Ohinemuri Plain. This work has been effected, and the result is the ascertainment of the existence of a number of seams, two of which are of a workable thickness, and—though the coal is not of high quality—in view of the rapid disappearance of timber from the neighbourhood of Waihi and Karangahake and other gold-bearing centres of the Upper Thames District, likely to be of considerable value in the near future.

The Assistant Geologist was engaged during the winter and spring months in matters connected with the preparing for show and cataloguing of the bulky collections of the previous year, and in preparing copies of maps to enable the production of a geological map of the colony showing the work done to the most recent date of publication of detail maps.

During the month of November he was sent to Manaroa, Pelorus Sound, to examine and collect from the rocks of that district, interest having been aroused by the receipt of a slab of rock from Manaroa by Professor Hutton which showed the impression of the foot of a struthious bird of such size that it was considered to be that of a moa. My assistant, however, failed to find rocks of the age indicated in Professor Hutton's letters to me, and subsequently to the Hon. the Minister of Mines, the rocks met with being, excepting modern sea-beaches and coarse alluvial deposits of creeks, of Palæozoic age. Information since received points to the existence of Tertiary rocks some distance further up the sound, and when a further opportunity of examining this part occurs the source of the original boulder showing foot-markings may be ascertained.

On the 15th December the Assistant Geologist was directed to make a survey of the Trooper Range, on the east coast of Wellington, to determine the nature and age of the formations present, and to collect rock-samples, more especially of the igneous intrusions that are known to occur in that range, some of which are of considerable interest to petrologists.

Subsequently the same officer was directed to continue this survey of the coast-ranges of the east district of Wellington South to the gorge of the Pahau River. This work is now in progress, and so far the results show a complex and interesting development of interstratified, sedimentary, and igneous rocks that, important in themselves, are likely also to help to a right understanding of the time when some of the more important gold-bearing rocks of the Cape Colville Peninsula made their appearance.

During the latter part of April I was directed to examine the eastern part of the Mokau Coal-field, that part of it north of the Tangarakau River, and east of the water-divide, between the Mokau and Wanganui Rivers. In connection with this matter I proceeded to Stratford, and there saw the member for the district and such others as were interested in the matter of the application for a survey which had been made. I pointed out the difficulties of carrying out their wishes, especially at this late season of the year, and agreed to make an effort to ascertain the southern limits of the coal-bearing area. With this object I reached into the head-waters of the Tangarakau River and within twelve miles of the outcrop from which samples had been sent to Wellington. As far as the Tangarakau River the rocks are of Tertiary age, while the rocks of the coalfield to the north are supposed to be of older date. The boundary is, therefore, to the north of the point to which I reached and outside the limits of Stratford County.—I have, &c.,

The Under-Secretary, Mines Department.

ALEXR. MCKAY.

REPORT ON A DEPOSIT OF RHODOCHROSITE AT PARAPARAUMU, WELLINGTON.

By ALEXANDER MCKAY, F.G.S., Government Geologist.

SEVERAL years ago I visited Paraparaumu and, accompanied by the general manager of the Manawatu Railway Company, made some exploration of the ranges lying immediately to the east. In what was at the time heavy forest, we came upon an area of rocky soil, with many black boulders of considerable size interspersed. These, on being broken into, showed a pale rose-colour, and the weight of the specimens indicated a metallic mineral. The mineral proved to be rhodochrosite, and on analysis specimens afforded over 80 per cent. of carbonate of manganese. At the