

claims have been taken up, and on some of these, now amalgamated, a fair amount of prospecting has been done.

A winze of about 20ft. follows a thin vein of highly mineralized stone, dipping at a low angle to the westward. This, at the outcrop, looked like a segregation between different laminae of the carbon mica-schist and a more quartzose rock. A vertical outcrop running north and south occurred some little distance to the south of the winze, and to the north-east two or three other outcrops of thin flat-lying leaders had been laid bare. One of these outcrops showed a considerable dip of the stone to the southward. These thinner reefs were, according to report circulating among the miners, gold-bearing at the rate of 1oz. to the ton. Samples from the winze, in which was the most promising stone, were taken, and have since been analysed in the Colonial Laboratory at Wellington, and yielded traces only of gold.

At Cavern Head there are a great number of small reefs and leaders forming a "stock-work" in the projecting headland, that, lashed by the sea, is devoid of soil and vegetation. Persistent rumours as to the finding of a very rich auriferous lode at this place circulate amongst the miners in the district. The find as reported was made in 1863, and the stone is said to have yielded at the rate of 37oz. of gold to the ton. In the line of the strike of these lodes and leaders a considerable body of quartz is reported as occurring in the ranges at the back of Te Whara Beach.

V.—MICA SCHIST.

(a.) *Highly Metamorphic Schists north-east of the Granite Belt.*—These rocks extend from the upper valley of the Dawson Burn, some unknown distance to the eastward, and to the north-west they continue throughout the district examined. They were examined at but a few places—viz., in Last Cove, Long Sound, Cunaris Sound, and at the head of Edwardson Sound. Quartz veins are abundant in these rocks at the head of Long Sound. Samples taken did not on analysis show the presence of gold. Prospectors have penetrated the country of this mica-schist belt along Long Burn Valley, and to the eastward, without finding anything more than a trace of gold. In the watershed of the Cunaris Sound the same rocks yield similar results for a greater amount of prospecting; and at the head of Edwardson Sound, in spite of reports to the contrary, those working there informed me that only a colour of gold could be got. In the region around the Lakes Cadman, even Mr. Carrick admits no gold could be found.*

VI.—GRANITE.

Throughout the district, wherever examined *in situ*, the main body of granite appeared uniform as regards its colour and composition, the whole belt from Wednesday Peak to North Port being a flesh-coloured, or, when long weathered, a grey granite, often markedly but never very strongly, porphyritic. From Gulches Head through Red Head to North Port runs a finer grained, darker variety of syenitic granite. The width of this belt is not great, and it has not towards the north been well explored. In the crystalline material of the glacier drifts there is a considerably greater variety of granitic and syenitic rocks than can be collected from the parts of the granitic belt that came under observation.

In Isthmus Sound a mineral lode in the granite trends east and west, and dips south at high angles. This is rather a remarkable lode, and contains gold, silver, copper, lead, iron, and zinc, free or combined with sulphur or arsenic. The lode varies from 2ft. to 3ft. in thickness, and sometimes there is a lesser sub-parallel lode. Mispickel is the most abundant mineral; zinc-blende is next in bulk in the lodes; galena and yellow copper-ore come last, in the order given. The galena may at times form a tenth to a sixth of the entire lode, and were these proportions constant and to be relied on the lode would probably pay to work for the silver and gold contained in it. Samples of the galena, nearly pure, were analysed by Mr. Skey, and gave 120oz. of silver, and as much as 7dwt. of gold to the ton. On the whole of the lode the returns gave but a few ounces of silver and a trace of gold. The lode appears to be very continuous, and Mr. Bradshaw, the prospector of it, states that he has found an outcrop of the lode half a mile distant from where it was first discovered.

The Under-Secretary of Mines, Wellington.

ALEXANDER MCKAY,
Mining Geologist.

APPENDIX B.

MR. F. W. LINCK, my assistant while examining the Wilson River and Preservation Inlet Gold-field, was intrusted with the task of examining the shores of Chalky Inlet and the adjacent coast-line as far as Cape Providence. The results, so far as they could be fully apprehended by me, have been embodied in the report on the above-mentioned goldfields; but, as is apt to be in such cases, inferences may be drawn that the facts stated in the original will not bear out the deductions made. Mr. Linck's report is here published as supplementary to my own on the more extended district.

17th July, 1896.

ALEX. MCKAY.

SIR,—

Cromarty, April, 1896.

Acting under instructions received from you at Seek Cove, Preservation Inlet, on the 27th March, 1896, I left for Chalky Inlet at noon the same day, in company with William and John Robertson, in the cutter "Star of Hope," for North Port.

* "Mines Reports," 1895, p. 148.