

of the solid rock of the country, generally filled up with more or less rounded boulders. Near the sea the hills are covered with fern, but in the valleys, and further inland, by dense forest, which, however, is rapidly disappearing in many localities before the axe of the miner.

“Historical Account.”—Gold had been known to exist at Coromandel, a little north of this district, in 1852, and it had been regularly worked there since 1862. Rumours had also long existed that gold was plentiful in the Thames Valley, and several Maoris and Europeans had brought specimens to Auckland at various times from 1865. In July, 1867, a Native chief named Taipari, stimulated by the offer of the Provincial Government of a reward of £5,000 for any one who should discover a payable goldfield, employed several men, both Europeans and Natives, to prospect his land; and gold was obtained by sluicing in the Karaka and Hape Creeks. This was taken to Auckland and shown to the Deputy-Superintendent and the Native Commissioner, and at the same time Taipari offered to throw open his lands as a goldfield. Satisfactory arrangements having been made with him, the result was that a block of land from the Hape to the Pukehinau Creeks, known as the Karaka Block, was proclaimed a goldfield on the 1st August, 1867, and a town was laid out at the mouth of the Kauaeranga, and named Shortland. Parties at once set to work sluicing on the Karaka, Waiotahi, and Moanataiari, but with indifferent results; when, on the 17th August, four men discovered the gold *in situ* in the Kuranui, on the face of a waterfall, on the spot now so well known as ‘Hunt’s Reef.’ This led to further exploration for quartz veins, and in a month’s time gold had been found in about a dozen places. Further discoveries quickly followed. Sluicing was abandoned, and quartz-mining recognised as the true industry of the field. So satisfactorily did this turn out that at the end of December, 1868, or seventeen months after the first proclamation of the field, not only had two other distinct districts—Tapu and Puriri—been started, but about twelve hundred claims had been taken up near Shortland, between eight hundred and eight hundred and fifty of which were then actually working, and probably six hundred of the number had seen gold in greater or less quantities. Twenty-seven crushing-machines were on the ground, and thirteen others were going up. The yield of gold had exceeded 83,000 oz., valued at more than £200,000; and the population numbered about 18,000 souls. Gold is now being worked at Puriri, in the district between Shortland and the Tararu, and at Tapu. It has also been found in one or two places between Tararu and Tapu; and, as the same geological structure extends over the whole district, there is every probability of it existing much more extensively than has yet been discovered.

“Geological Structure—Slates.”—The oldest rocks found in the district are a series of dark-blue, more or less arenaceous, sub-metamorphosed slaty rocks of a fine grain, rather closely jointed, but not cleaved. At Tapu they strike east 10° south, and are nearly vertical, their dip oscillating to about 80° , in some places to the north, and in others to the south. They here consist of blue, rather friable slates, interbedded with soft brown arenaceous slates, that weather white, and hard green slates traversed by innumerable minute veins of compact white quartz. Near Shortland a small patch of blue and reddish-yellow ribboned slates is seen on the beach, a little north of Tararu, and again up the Waiohanga Creek. On the beach the dip of the beds is 35° south-west. These two are the only localities in the district in which this formation is found. No fossils have as yet been found in these slates, and their age is therefore uncertain. Judging, however, from the lithological characters, they appear to belong to the Maitai series of the South Island (as described by Hochstetter). A few miles north of Hastings, on the coast between the Mata and Waikowhau Rivers, these rocks are cut by several dykes, running within a few points east or west of north, or about at right-angles to the strike of the beds. These dykes are composed of a coarsely-crystallized diorite, generally of a dark-green colour, but occasionally red, with white crystals of felspar (orthoclase?), sometimes more than $\frac{1}{10}$ in. long. They also contain as accessories small quantities of magnetic iron and iron-pyrites. These dykes would be called syenites by many geologists, although they contain no free quartz. The patch of slates on the beach north of Tararu dips towards a mass of fine-grained yellowish-white felstone, containing pyrites, which forms the first point north of the Tararu Creek. This felstone is not seen up the Waiohanga Creek, and probably, therefore, it is an intrusive mass.

“In the Tapu district gold is found in lodes traversing these slates. Pyrites also is abundant in some places, but it is not generally distributed through these rocks. Quartz veins also are by no means so common as in the formation to be next described.

“Trachytic Tufas.”—Lying unconformably on the denuded and waterworn surface of the slates, and covering by far the greater part of the district, is a mass of trachytic breccia, agglomerate, and tufa, in places at least 3,000 ft. thick. This rock, in its normal condition, is a hard, grey, granular rock, with more or less rounded grains of white potash felspar (orthoclase). It passes in places into gravelly tufa, breccia, and agglomerate, the included fragments being pieces of the tufa itself, of dolerite, trachy-dolerite, trachyte, and occasional small pieces of obsidian. Near the older rocks it also contains pieces of slate, and the igneous rocks penetrating them. The junctions of the two formations that are seen on the coast between the Mata and the Waikowhau is very interesting. The tufa here passes into a coarse conglomerate, by far the largest portion of the enclosed fragments being more or less rounded pieces of the slates, while the surface of the slates rises from a very waterworn base into a nearly perpendicular cliff. It appears to have been an old sea-beach when the tufa was accumulating, and, if this be the case, the tufa must have been deposited during subsidence, as the upper portions of the formation are evidently sub-aqueous.

“North of Tararu, where the tufa lays upon the slates, the lower part of the formation is a breccia, containing fragments of tufa, slate, and felstone. This passes upwards, through gravelly tufa, into the ordinary granular blue tufa, at a height of about 30 ft. above the sea. The upper portion of the tufa is decomposed by the action of the atmosphere into a white, or yellowish-white, soft rock, stained red in places by peroxide of iron, which is derived from the decomposition of the iron-pyrites, with which the blue tufa is highly charged. The action of water further