

Waiorongomai.

From Waiorongomai, near Te Aroha, I went up the mountain to the reef known as the New Find. The rocks are volcanic products, andesites, &c., like those of the Thames, but harder. Numerous rich patches of gold-bearing quartz have been worked along the mountain-side, but they have not been traced to any great depth. In the lowest tunnel two reefs have been cut—a large one but poor, and a smaller one, which was rich above but poor at the tunnel-level.

The big reef has hard andesite on the outside wall, but beyond the small reef the tunnel passes into soft “kindly” tufaceous rock, which may possibly pass under foot, in which case the reef, on intersecting it, may again be found to contain payable gold.

SECOND GROUP.

The Reefton and Lyell Reefs.

The situation of the Reefton field, its physical character, and geological structure, have been exhaustively described by Mr. McKay in his report, published with the general report of Sir James Hector for 1882. Mr. McKay showed me the various points where the relations of the different formations could be observed, and enabled me to personally verify the conclusions arrived at, which are briefly: that the auriferous quartz-bearing rocks of the locality are those named by Sir James Hector the Maitai series—geologically of Carboniferous age, though not here actually containing coal—and that these rest unconformably against Devonian rocks, of which a long narrow insulated outcrop protrudes through them, extending northward and southward from the head of Murray's Creek.

Both formations are overlaid in patches by Cretaceo-tertiary rocks, accompanied by coal-seams, and, in addition to these, the Maitai rocks are flanked along their western line of exposure by Tertiary and Recent formations, beneath which their downward and westerly extent is unknown.

The Devonian rocks in this region have not yet been proved to contain any auriferous veins, and, though distinctly outcropping in the locality above described, have not yet been met in the deepest mine-workings commenced in the Maitai rocks at even comparatively short distances away from the lines of contact.

The Cretaceo-tertiary, Tertiary, and Recent deposits are more or less auriferous, and have in places been worked for alluvial gold with varying success, though the best yields have been obtained in the Recent formations, or natural concentrations of the older detrital deposits.

Having grasped these general features, my investigations were directed principally to the Maitai or Carboniferous rocks and the mining features of the various reefs or lodes traversing them.

Little could be seen of the upper worked-out portions of these reefs, and observations were only practicable as regards the deeper workings now in progress, so I devoted most attention to the lowest levels of the principal mines, which afforded visible data as to the typical characteristics of the reefs and their containing rocks.

The rocks themselves consist throughout mainly of bluish- or greenish-grey, slaty, and rubbly shales, with occasional bands of both gritty and earthy sandstones. The bedding of the respective layers, though occasionally discernible in open sections and in the mines, is most frequently obscure and obliterated by the crushing, jointing, and faulting processes to which the rocks have been subjected. The cleavage at several places observed does not coincide with the bedding. There is evidence of general anticlinal and synclinal folding of the beds, but on a broad scale and not in a frequently-recurring series.

The reefs examined in the Reefton District may be described as existing in three groups occupying a belt of the Maitai rocks, having a direction somewhat east of north.

The northern of these groups is that at Boatman's Creek, where I inspected the Welcome United and Fiery Cross Mines. Next to the south is the group near Reefton, where I visited the Keep It Dark, the Keep It Dark No. 2, the Wealth of Nations, the Inglewood Extended, the Ajax (now the Golden Pleece Extended), and examined the Low Level Tunnel as far as accessible, which, however, was only a few hundred feet. Further southward I saw the Progress, the Globe, the Cumberland, and the Golden Lead workings, near Merrijigs. Most of the above-named mining properties comprise in each case several smaller holdings formerly worked at shallow depths.

Without entering into a special description of each mine, a few brief notes will serve to show the noticeable features. The Welcome United and the Fiery Cross, at Boatman's Creek, appear to be on the same line of reef, which carries different blocks or shoots of quartz connected by “tracks” or fissure-planes. One block in the Fiery Cross Mine was worked to 700ft., where it is said to have run out, but this part of the workings was inaccessible at the time of my visit. To the northward of this block, and between it and the old Welcome block, an intermediate block was being worked from the 200ft. level. This block is about 100ft. long, with good walls; it has a north and south strike, a northerly pitch, an easterly underlie, and a thickness of as much as 5ft., thinning out either way to a track. This block, if it be continuous, should be struck by extending the lower level further northward.

In the Welcome Mine an inclined adit of 1,800ft., and a level thence of 800ft., reaches the No. 9 level of the old Welcome workings, where there is visible a strong and well-defined track about 2ft. thick, going downwards, and composed of black mullocky material and quartz, from which a crushing of 60 or 70 tons is said to have yielded 3oz. of gold per ton. A blind shaft had been sunk to 245ft. below the level, and drives extended therefrom; but the Welcome track had not been struck as a matter of certainty, though one or two apparent tracks had been met with.

There is, however, nothing in the character of the rocks at the deeper levels here to warrant any fear as to the absolute dying-out of the reef, or that there may not be more blocks of quartz to be met with by means of further sinking or driving.