

There are several sluicing-claims on this Flat, on the edge of the terrace facing the Little Kapitea Creek; but these are working on a false bottom. The ground is too deep to allow them to be worked to the main bottom by sluicing, and there is no possibility of getting sufficient fall to admit of this being done. Several of the miners are waiting anxiously for the Callaghan's branch of the Waimea Water-race to be completed, in order that they can take up ground in this locality. On the top of the range, at the head of Italian's Gully, there has been some very rich ground, but the scarcity of water here makes the working of the ground a very slow process. Some of the claims have been worked here for the last twenty years, and still give payable returns.

Waimea and Stafford.

A good number of miners are still employed in this locality, but the ground is getting back so far into the terrace that the fall for the tail-races is so little that the same quantity of material cannot be shifted as was done in former years, hence the returns from the claim are gradually getting less. The ground is also getting deeper, and the same area of bottom cannot now be got over as was done in the shallower ground. The water-race is at a sufficiently high level to admit of the water being taken directly from it in pipes, but no one cares to go to the expense now to do this, as the fall for tailings is so little. The bed of the Waimea Creek is so filled up that any one who had been working there in the early days would not distinguish the place where they had been at work.

There is still a considerable area of ground higher up the valley, but very little prospecting has been done in this direction, as there is no water to be got to carry on sluicing operations, even had payable ground been found. There is also a large flat in the middle branch of the Waimea Creek, in which gold is known to exist, and some parties have been working it from shafts, but the ground has to be tolerably good to pay for working it by this method. However, as soon as the branch of the Waimea Race is constructed so as to command this ground, it will give facilities for its being taken up and worked, and no doubt many of the miners who are now working ground lower down the valley will turn their attention to this ground as soon as the water is in. There is very little ground in this locality that is not auriferous, but it requires plenty of water, with a good head to wash it away in a wholesale manner, to give wages for working it.

On Kelly Terrace Mr. Batchelor has gone to considerable expense in opening out his claim, and he is now in a fair way of working. He sluices the material into a paddock, in which there is a large well, where the water passes down through a tunnel tail-race, and the tailings are lifted by bucket-elevators. These elevators are worked by an over-shot water-wheel, and the same water which is used on the wheel flows into sluice-boxes at the head of the elevators and carries the tailings away. He purchased this claim from the Wheel of Fortune Company some years ago, and informed me that it has cost him, up to the date of my visit, about £4,000, including the plant he has erected. The water-wheel that he uses gives, however, too little power to work his elevators, but if he were to get a Pelton wheel he could easily get sufficient power to do all that is required. The ground that he is working is highly-cemented gravel, and the head of water on the sluicing-nozzle is not sufficient to break it down and disintegrate it so as to let the particles of gold free. He, however, contemplates making further improvements, to get a larger quantity of material put through.

Gillam Gully.

On the northern side of the Arahura Valley, near its mouth, the southern slopes of the hills lying between there and the Waimea Valley, at Stafford Town, are first river-terraces resting towards the east on Miocene sand, or on the overlying gravel formation known as "old-man bottom." More to the north-west the same beds necessarily overlie the northern continuation of the marine terraces, of which the Hau-Hau Terrace is the most important development in this part of the Westland District.

The marine auriferous beds show in Ballarat Terrace, and thence strike across the valley at the lower end of Stafford Town, north of which they are gradually restricted in the breadth of their exposure.

In Gillam Gully the Stafford Prospecting Association have been carrying on prospecting operations for some time past, and recently they have been successful in obtaining gold of a very coarse character. Skipper and party, who were employed in sinking a shaft and driving, showed me a sample of the gold they obtained, and from its character there is little doubt but that they are not far from a rich auriferous deposit. The Association have taken up a claim of 6 acres, and have agreed with Skipper and party to give them $1\frac{1}{2}$ acres of the ground and to carry on further prospecting in this locality.

Humphries Gully.

The beds forming the Humphries Gully deposit have been frequently described. They consist of coarse gravels and beds of finer grit and sand resting on a grey or blue laminated sediment, a silt on plastic clay. In this underlying clay there are subordinate bands of fine or coarse brecciated material, chiefly granite, but which differs from the gravel beds of the higher part of the Kanieri series in this respect—namely, that the latter, though chiefly of granite material, show always well-rounded gravels. The great thickness and weight of the gravels near the open face of Humphries Gully Claim presses on the plastic clay underlying, so that it tends to escape from underneath the gravels, and near the working-face rises into mounds and hillocks, illustrating many curious problems in stratigraphical geology; but, at the same time, doing no little damage to the pipe-lines conveying water to the nozzles at the working-face.

Scattered over the higher slopes of the range east and south of Humphries Gully there are morainic deposits that have been greatly denuded, but of which there yet remain many large blocks of schist and other rocks, which, with finer material of the same description, may be a source of gold to Humphries Gully, but which need not be considered in making an estimate of the future productiveness of the Humphries Gully Company's claim.