

I believe, unusually small. It is difficult to say with any certainty at present, what is likely to prove the average yield of gold, but there seems reason to hope that it may be as much as 4 or 5 dwt. to the load of wash dirt. It is also impossible to say at present in what direction the diggings may extend.

So far as present indications go, it appears that there is either more than one lead, or else that there is none at all in the proper sense, the gold being generally diffused over the bottom. In any case it appears highly probable that a much larger extent of auriferous ground remains to be worked, and the present population may be indefinitely multiplied before the year is out.

Shortly before the beginning of the new Woodstock diggings, much attention was directed to the Humphrey's Gully district, and to the project of bringing in water in the course, or approximately so, of the old Caledonian race. This work has been undertaken by a company which a short time ago was successfully floated, and operations are now in progress. The diggings in this district, which is about twelve miles from Hokitika, will have to be worked by ground sluicing, so that little can be done until the water is brought in. There seems good reason to think that when this is done there will be sufficient ground to profitably employ a very considerable number of men. A large proportion of the auriferous ground is on a reserve belonging to the Hokitika Harbour Board, the revenue of which body it may be hoped will be substantially increased.

I have now to notice the operations of the Ross Flat Gold-Mining Company, who hold a special claim of 100 acres at Ross. This large area was granted to enable the deep strata to be worked to a depth of 300 feet, and to facilitate this, as well as to benefit the whole locality, a tunnel tail-race was to be made for a length of nearly a mile, and capable of draining the flat to a depth of about 90 feet. This tunnel is now almost finished, with a perceptible effect on the drainage of the flat, and there is no doubt that much good will be proved to have been effected by it, even though the deeper levels should never be worked at all. There is, however, good reason to hope that they will be worked, and that very shortly, since the company is proceeding energetically with the main shaft, notwithstanding some difficulties caused by the nature of the ground. I have much confidence that the operations of this company will prove successful, and will constitute an important factor in the future prosperity of the district.

The three centres of operations that I have now mentioned appear sufficiently promising to warrant the hope that the depression which has so long settled over this part of the West Coast is about to pass away, and I hope that my next yearly report may speak of a very decided general improvement. The statistical tables will supply the usual information on the general state of the district.

I have, &c.,

J. GILES,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 13.

Mr. S. H. Cox, Assistant Geologist, to the DIRECTOR of GEOLOGICAL SURVEY.

SIR,—

Wellington, 3rd May, 1882.

I have the honor to inform you that in accordance with your instructions, I have visited the Woodstock new rush as well as the Ross Gold-Mining Company's ground, and the Humphrey's Gully Sluicing Claim, and herewith submit my report on the same.

Woodstock.—The new rush which is at present attracting a good deal of attention at Hokitika, is on the Woodstock Hill, where the Ross Road first rises on to the terrace after leaving the Hokitika River, and claims have been marked out on both sides of the road line for a distance of perhaps three quarters of a mile towards Ross. It is, however, in a westerly direction, along an east and west line, that the greater number of the working claims are situated, and in this direction claims have been taken up for a distance of nearly two miles. At the date of my visit about 300 claims had been marked out, and a population of nearly 1,000 men was finding employment in testing the ground. Out of these 300 claims, sixty shafts were reported to have bottomed on gold which was more or less payable, the yield varying from 4 dwt. to 1 oz. of gold to the load. The thickness of the wash also varied considerably, the limits appearing to be 2 feet and 10 feet, it being from the thinner beds of wash that the richer returns were obtained. The bottom on which the wash rests is generally the brown sands, which form the upper part of the Kanieri series, known locally as the "Brighton bottom," but in a few claims it is resting directly on the blue marls of the Kanieri formation. The sinking is not great, being on an average from 50 feet to 70 feet with, in a few instances, an even less depth, while in the case of the Chinamen's Claim, the furthest one south which had been bottomed on gold when I was there, a depth of 96 feet had been sunk, and the wash struck was thin and poor. The depth of sinking in this case was due to the shaft being sunk on a terrace. In several cases the wash struck at the bottom of the shafts was not payable, but on driving better ground was met with, and generally speaking the miners appear to be satisfied with their prospects. Two or three tunnels have been started from the face of the terrace, in order to work claims which have been proved by shafts, and I may mention, as giving an illustration of the value of the ground, that the distance which these tunnels are expected to be driven is about 1,200 feet. Two water-races (Hanlan's and the Nil Desperandum) are in a position to command the greater part of this ground, and by the system on which the field is to be worked, these should give sufficient water for a large number of claims. Paddocks are being constructed at the heads of the shafts, and water will only be used from time to time, probably about once a week by each mine, to sluice the wash-dirt that has been raised, so that the water can be used by each mine in rotation. Up to the present no claims are connected with the water, but several are cradling their wash as it comes to the surface, with very fairly satisfactory results.

The work which has hitherto been done is not sufficient to determine whether the gold runs in leads or patches; but it is evident that if in leads, whatever may be their course, there are several of them which may perhaps be only branches of a main one. Mr. Mueller proposes, when the works have progressed somewhat more, to make a survey of the claims, and will show on all the information obtainable as a guide to the settlement of this question. As the matter now stands, one is justified