



THE
NEW ZEALAND
GOVERNMENT GAZETTE,
(PROVINCE OF NELSON).

Published by Authority.

All Notifications which appear in this Gazette with any Official Signature thereunto annexed are to be considered as Official Communications made to those Persons to whom they may relate, and are to be obeyed accordingly.

ALFRED GREENFIELD, Provincial Secretary.

VOL. XIX.

NELSON, MONDAY, DECEMBER 12, 1870.

No. 39.

Superintendent's Office, Nelson,
12th December, 1870.

THE following Report is published for general information.

ALFRED GREENFIELD,
Provincial Secretary.

WANGAPEKA DISTRICT, NELSON.

PRELIMINARY REPORT.

By E. H. DAVIS, ASSISTANT GEOLOGIST.

The district of the Wangapeka Valley has long been recognised as a gold-producing country, but until lately the attention of miners has been entirely devoted to the search after alluvial gold in the beds of the different rivers and creeks. In the spring of last year a prospecting party which had been sent out from Nelson discovered gold *in situ* in a reef on the spur

between Blue and Nuggetty Creeks, near the head of the Rolling River, and about 38 miles in a direct line to the S.W. of Nelson.

The Rolling River is a tributary of the Wangapeka, a branch of the Motueka, which runs into the sea some 25 miles W. of Nelson, and 36 N.E. of the reefs. A township has been laid out on a flat just at the junction of the two creeks, which at present is represented by three or four stores and public houses, which are, however, amply sufficient for the wants of the place, there being only about 150 men at work on the hill, and most of those are very short of money.

The district from a mining point of view may be considered as composed of altered slate, more or less crystalline, traversed in all directions by innumerable quartz veins, the master-lodes running N.N.W. The sides of the spur are so precipitous, that all the reefs might be worked dry, *i. e.*, above an adit; and 300 or 400 yards of fluming would bring in an unlimited supply of water on either creek. The spur, on the lower part of which the reefs now being explored are situated, rises abruptly to a considerable altitude, terminating in one or two bald peaks, which tower up

clear and distinct against the dense bush which covers the rest of the hill.

The annexed section shews the general character of the hill; the limestone which overlies the slate is extremely hard, sub-crystalline, of a dull grey color, and is traversed by numerous veins containing anagonyte; it is also much waterworn on the surface, and in one or two places shows a waterworn vertical section; there are also several caves, through one of which the water of Blue Creek runs for some distance. The strike and dip vary considerably; at the place where the Blue Creek issues from the cave, the strike is N.W., dip 35deg. S.W., and about a quarter of a mile farther up the hill to the North, the dip changes to 10 deg. N. The slate in some places closely resembles that at Bedstead Gully, Collingwood; and at others assumes a more crystalline character, nearly approaching a gneiss; pyrites is commonly disseminated through the mass, and quartz veins and leaders are plentiful; it is evidently much older than the limestone, which latter rests on its waterworn surface, and appears more like a local deposit than the remains of a large sheet which had been denuded away; it reminded me, by its mode of deposition, of the Bala limestone of England, which occurs in isolated though contemporaneous masses throughout a considerable tract of country. I can hazard no conjecture as to the geological age of these deposits, as the time at my disposal did not admit of a very minute search for fossils, which, owing to the metamorphism the limestone and slates have undergone, will, if still existing, be very indistinct and difficult of detection. The metamorphism is probably due to the large mass of granite which crops up in the Wangapeka River about four-and-a-half or five miles to the North, and also at Mount Owen, about two and a-half miles to the South.

THE REEFS.

Most of the claims which have been taken up have been done so with the idea of securing a section of either Culliford's or Doran's reefs; this has been done without exercising much judgment, or making allowances for the rise and fall of the hill; the consequence is that some of the claims are pegged out where the reef intended to be struck cannot possibly exist, and the men are constantly shifting their pegs to suit some new fancy, and very little actual exploration is effected, but this may also be attributed to the want of machinery. Culliford's Reef, on the east or Blue Creek side of the spur, was first discovered in a little stream now called Culliford's Gully, somewhere about 20 chains from the northern extremity of the limestone, and at an elevation of 720 feet above the township. The roof and footwall are both alike, being blue slate with a small quantity of pyrites disseminated through it; the reef runs N.W., with a very irregular dip to the East, the average being about 7deg.; the quartz is not uniform in texture, being very hard and white in some places, and soft and iron-stained in others; there are no defined partings between the slate and quartz, a thin band of mullock here and there may be seen, but it is not constant. I was assured on all hands that very fine specimens of gold are constantly being found, and that sometimes they are quite plentiful in the paddock, but although I searched diligently myself,

the Manager assisting me, I did not find a speck, much less a specimen of gold. I am therefore bound to conclude that the reef is exceedingly patchy, and therefore it is very problematical whether the rich patches will occur often enough to pay for working; it is also an open question yet whether the mass of quartz contains invisible gold in payable quantities or not,—I doubt it myself. The prospects of this claim are also rather damped by the occurrence of a well-marked slide in the drive, which appears to cut through everything, and will strike the reef at a depth of 33 feet or less below the level, when it remains to be seen if it *throws* the reef or not; this ought to be proved before much expense is incurred. To the south of this claim, and supposed to be on the same leader, are Culliford's No. 1 South, and the Golden Crown *alias* Hunted to Death, claims; the leader in this latter runs N.W., and is nearly vertical; it contains a quantity of pyrites, and frequently rich bunches of galena, which vary in size from an oz. to 10 or 12 lbs. weight (I saw one which weighed 14 lbs.) The matrix of the reef is a hard grey quartzite, somewhat resembling a rock at Tararu Point, and also at Coromandel. Culliford's No. 1 North is the only claim which can be said to have struck Culliford's reef, with any degree of certainty.

Doran's Reef, on the western side of the spur, is more easily traced than Culliford's, and consequently a much greater number of claims have been pegged out on it, both above and below the original discovery. When first opened on in Doran's No. 1 claim, the reef exposed a face of quartz and slate mixed, some 15 feet in width; but now that the slipped ground has been taken away, this is reduced to 5 feet 6 inches of solid quartz, running North and South, with a westerly dip of 83 deg. The boundary of the quartz is well defined, both roof and foot wall standing hard and distinct against the quartz; both walls are alike, being a blue-brown gneissic slate; gold may be seen in almost any piece of stone taken at random off the heap, if carefully examined with a lens.

Doran's No. II., supposed to be on the same reef, is, if visible gold may be taken as a criterion of value, one of the richest claims on the field. The reef is very confused, and appears more like a slip than a vein *in situ*, it is also very much broken and dislocated; the strike is more or less North and South, but the dip is any way; at first it was West, and then it turned to the East, and when I saw it seemed as if about to turn back again. The country is slate, like Doran's No. 1; the quartz hard and massive, alternating with a brittle cavernous variety,—it is this latter which contains most of the gold hitherto found; the gold is contained in the cavities, but is quite unattached, so that when specimens are dry it may all be shaken out. This shews, I think, that the gold has been deposited there by precipitation at a low temperature. Good prospects are also washed out of a loose rubbly mullock which accompanies the reef. A most interesting deposit of native sulphur is also found in this claim. Some of the sulphur appears to have been simply deposited by cooling, while other parts have been fused while in their present position. Bearing in mind Mr. Skey's late discoveries, it at once occurred to me that probably the gold in this claim would not amalgamate,

and such has proved to be the case, for on forwarding to him a "prospect" Doran kindly washed out in my presence, it was found to resist all attempts at amalgamation; whether this will affect all the claims in the same way I cannot say, but they are so close together that probably they will all suffer more or less from this cause; immediate attention ought to be paid to this, for it is certain that amalgamation will not save the gold.

The Donkey Reef, below Doran's No. 2, dips East, with a N.W. (N. 35 deg. W.) strike, and closely resembles Culliford's, but is much more clearly defined.

The slate hills on both sides of the spur, that is, on

the East of Blue Creek, and on the West of Nuggetty, are full of quartz veins; several claims have been pegged off on the Nuggetty side. Fawcett's is one of the most developed of these; the reef is hardly defined, being irregular bunches of quartz, with small leaders, in a country of blue slate. The run of the leader is N. 10 deg. W., dip 35 deg. W.

E. H. DAVIS.

Geological Survey Office, Wellington,
23rd November, 1870.