

quartz veins in all directions, in which fine gold can freely be seen; and there is besides a considerable quantity of iron and arsenical pyrites present. Good prospects of fine gold can also be washed out of a streak of loose stuff, resembling a casing, on one side of the shaft, whilst the fact that from below the line of the formation down the gully, and on the slope of the range, the alluvial drift has furnished rich returns of angular or not waterworn gold, is a clear proof of the richly auriferous character of the portion of the outcrop removed by denudation. In reviewing all these different points, I think that the proper opening and working of this singular formation—which may likely represent a so-called “blow” leading to a defined lode in depth—would be a very profitable undertaking, more especially as there is a fine water-race near at hand to furnish the necessary supply of water, motive power included, for crushing purposes. If found to extend from the gully into the southern bounding range, it could there be opened and worked by an adit, lying at a vertical depth of perhaps near 400 feet below the top of the range.

APPENDIX 7.

AURIFEROUS REEFS AND COMPANIES OF THE CARRICK RANGE.

Besides the managers of the mines subsequently mentioned, the gentlemen who kindly afforded me information about the reefs were Mr. James Marshall, Mr. Charles Colclough, Mr. William Grant, and Mr. James Stuart, of Cromwell; and Mr. Buchan, of Carricktown. Progressing upward from the foot of the range, the reefs I visited are:—

New Royal Standard Company's Reef.—This strikes N. 20° W., and dips easterly at an angle of about 75°, but runs very irregular and is not well defined. It cuts apparently through the disturbed-looking country rock—a rather soft phyllite—both in strike and dip. In parts of the old workings, which consisted of an open cutting and irregular short drives, extending over several chains in length, it was formed of nothing but leaders of quartziferous mullock, from 15 to 16 feet thick, which yielded on crushing from 6 to 12 dwts. of gold per ton. Several small crushings from narrow places produced, however, up to 2 oz. per ton. As it may likely become more defined, and perhaps richer in depth, it would be advisable to prospect it by an adit from the steep slope of the spur which it crosses.

Crown and Cross Claim.—This is owned by Watson, Herbert, and Co. The reef (worked by a shaft 47 feet deep, which will soon be in connection with an adit, driven from the bottom of the adjoining gully) strikes N. 20° W. with an easterly underlay at 75–80°, cutting through much disturbed phyllite, and ranges in thickness from 6 inches to 3 feet, and over 4 feet in bunches. Its hanging wall is defined and smooth, the foot wall rather uneven. It consists of quartziferous mullock, traversed by occasional small quartz veins, with gold fairly distributed throughout. 200 tons crushed paid at the rate of about 1 oz. per ton. The prospects under-foot and in strike south are very encouraging: a prospect of the mullock from the bottom, washed in my presence, gave a fair quantity of very fine gold, besides several small quartz specimens. At the northern end of the workings, which—small prospecting shafts included—extend about three chains along the reef, the latter was found faulted 10 feet eastward by a clay slide 15 feet in thickness. In a small claim, next adjoining the Crown and Cross on the south, owned by Robert Scott and John Myers, the reef was just struck by a small adit, during the presence of our party on the ground.

This reef is considered to be the continuation of the “White Horse” or “Try Again” Reef, next to be mentioned; but as it runs some distance—about one and a-half chains—sideways of the latter, this can only be the case on its representing a faulted portion of it—a supposition not unlikely to prove correct, judging from the identity in strike, dip, and character of the two reefs, and the frequency of faults in the district.

White Horse and Try Again Reef: Worked by Saltoun, Campbell, McKersie, and Co.—This reef strikes N. 20° W., and dips eastward at an angle of about 75°, cutting through alternating harder and softer beds of phyllite—a feature which renders its course rather irregular; strong turns, both in strike and dip, being very frequent. The walls are in places well, in others badly defined; where well defined, they mostly show polished and striated casings. Its thickness ranges from 9 inches to over 4 feet, and it consists of quartziferous mullock, traversed by broken quartz veins, generally rich in arsenical pyrites, and sometimes pretty thick, carrying good gold, though the latter occurs also finely impregnated throughout the mullock mass.

Touching the occurrence of the gold on the large scale, it seems to be accumulated in shoots, which have a decided dip in strike southward. The average yield of gold has hitherto been about 1 oz. per ton from several hundred tons crushed, and there is no sign of the reef becoming poorer under-foot. The main workings consist of an adit, extending about 300 feet along the reef, from which stoping is being extensively carried on, the height of backs available up to the crown of the hill amounting to nearly 100 feet. Another adit could be put in in the strike of the reef over 100 feet lower down the slope of the range; and this work it would be wise soon to enter upon.

Caledonian Company: Managed by Mr. G. T. Stephenson.—This company is at present engaged in driving from the bottom of a deep gully an adit, which is intended to open the Caledonian Reef 180 to 200 feet beneath the level of the first adit, in which work has been stopped, on account of what was considered payable of the available backs—about 70 feet high—having been worked out. According to the direction of this upper adit, which followed the reef southward a length of 400 feet, the latter runs in a wavy line at a mean strike of S. 30–35° W., whilst several shafts sunk on it from the adit show it to dip very close upon vertical. Its walls seem very well defined, and show thin clay casings. Touching the behaviour of the reef in the old workings, yields, &c., Mr. Stephenson kindly afforded me the following information:—The reef ranged in thickness from 1 to 7 feet, but was in places pinched to a mere casing; and there were also shelves of hard rock, which frequently altered its course in dip, throwing it, step-like, several feet eastward. At end of adit it runs thin, but still looks promising enough to induce a party of miners to drive a deep adit from the opposite slope of the spur, for the purpose of opening it, in depth beyond the company's ground. Above the stopes, towards the surface of the spur, a considerable extent of ground is still unproved. The reef was of a mullocky character, but contained frequently broken veins and bunches of quartz, richer in gold than the rest. There