

REPORT

on

THE PRIDE OF THE HILLS LINE OF REEF, MATHINNA

Location and Access. The Pride of the Hills line of reef occurs on sections last held as 169G, 170G and 1039/93G. The principal workings are situated on section 170G.

The sections enumerated are located one and a half miles south of the Mathinna township and are about 700 to 800 feet above it. They may be reached by following the top of the ridge which extends in a general southerly direction from the Old Boys Mine. A cart track extends for a short distance up this ridge after which a narrow foot track may be followed to the mine workings.

Previous Literature. A description of the earlier workings may be found in Tasmanian Geological Survey Bulletin No. 2, by W.H. Twelvetrees.

Geology. In the vicinity of the leases the rocks consist of slates and quartzites of the Mathinna series. Judging by the surface exposures the quartzites predominate.

The Lodes. The main lode consists of a quartz vein varying in width from six inches up to three feet. It has an average width of one foot. It contains gold, pyrite, galena and arsenopyrite. It strikes N 18 deg W and has been traced over a total distance of approximately 1100 feet. The dip is practically vertical but in places it may be 75 to 85 deg. west.

The earlier workings consist of a shaft, an adit and several trenches. The shaft is situated in a north-east corner of section 170G and was sunk on the reef to a depth of 70 feet. Here the vein varies in width from six inches to one foot. The adit is situated about 330 feet lower down the hill; its length, measured from the portal, is 51 feet. Over the length of the adit the vein maintains a width of 16 to 20 inches. The quartz is white and vitreous and contains only a little pyrite. The trenches extend between the shaft and the adit, to the north of the shaft and to the south of the adit. Where exposed in these trenches the vein consists of glassy white quartz and varies in width from a few inches up to three feet.

Twelvetrees report states that about eighty or ninety tons of quartz were broken from these workings and that fifteen tons were crushed for a return of 15 dwts. of gold. Thus the average gold content of the reef would be about 1 dwt. per ton.

The present workings on this lode consist of a shaft 6 feet deep which has been sunk on the northern end of the reef. This is situated about twenty feet north of the northern boundary of section 170G. Here the reef formation is about eight inches wide. It consists of a narrow vein of vuggy quartz on either side of which is a few inches of cherty quartz. The major portion of the gold occurs in the latter part of the formation. Samples taken from the northern and southern ends of this shaft, over widths of six and eight inches respectively, were assayed with the following results, viz:

North End	Gold	0 ozs.	1 dwts.	20 grns.
	Silver	0 ozs.	0 dwts.	6 grns.
South End	Gold	0 ozs.	1 dwts.	7 grns.
	Silver	0 ozs.	0 dwts.	3 grns.

Small gold bearing veins also follow joints in the quartzites in which this shaft has been sunk.

A vein, which is probably the southern continuation of this reef, has been picked up in a small creek at a point about nine chains south of the adit and about two chains west of the fork in the creek. When first found this vein was eight inches wide. It contained pyrite, arsenopyrite and galena but dish prospects failed to reveal gold. In order to open up the vein, a trench was put into the north bank of the creek for a distance of 14 feet. This work revealed a quartzose formation about 15 to 18 inches wide which petered out towards the northern end of the trench. Dish prospects from this formation also failed to reveal gold. No attempt was made to trace this vein on the south side of the creek.

A second vein occurs about three chains east of the 70' shaft described above. A shallow shaft has been sunk on it and it has been traced by trenching over a distance of approximately 250 feet. The work on this vein appears to have been carried out about the same time as the earlier work on the vein described above.

The workings described are shown on the accompanying plan.

Conclusion Although this reef has been traced over a considerable distance, its gold content is exceptionally low and there appears to be nothing to justify further work on it. At the same time it is a pity that the trench in the creek could not have been extended a few feet into the south bank. The presence of galena in the Mathinna quartz veins is generally regarded as a favourable indication for gold and this portion of the vein contained galena when first discovered. The extension of the trench should not involve more than two days work.

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The quartz is a typical white rock quartz, and often has a peculiar fine-grained subhedral appearance.

Gold is the principal mineral of economic importance in the latter four reefs, while cassiterite and wolfram occur in the Wolfram reef. Cassiterite is the Royal Standard reef. Some amount of cassiterite is present in all reefs. The gold is probably also present in all reefs. The gold is not visible to the naked eye, and apparently occurs finely disseminated throughout the quartz and also associated with the sulphide minerals.

The most abundant sulphide is arsenopyrite. In the Victoria workings on Finucane's reef, it occurs in pieces up to one inch in size in the quartz. A fairly clean sample was picked out and assayed (387/32) and found to contain 10 dwts 5 grs of gold and 2 dwts 5 grs of silver per ton. Pyrite is also present, but to a much less extent. Chalcopyrite occurs in the quartz from the Bonfield shaft and also in the West vein in the Long adit (North Tasmania) driven to cut the Royal Standard reef. It is also present in Fleming's reef.