

PRELIMINARY REPORT ON THE GOLDFIELDS OF LISLE
AND DISTRICT

In the seventies and eighties more attention was paid to the search for gold than for any other metal or mineral in Tasmania. Many discoveries resulted from the early explorations, but few only of commercial importance. Lisle was one of the more important fields, and for long provided lucrative employment for a large number of men. Unlike other fields the deposits were of alluvial and detrital nature, no rich vein or lode having been found in the subsequent search for the source of the metal.

The following particulars relating to the deposits are interesting:-

1. All the gold has been won from alluvial or detrital deposits.
2. Gold-quartz specimens are very rare.
3. Except in the creeks the gold is generally ragged.
4. Gold is everywhere found associated with barren quartz.
5. Ore minerals commonly associated with gold deposits are apparently absent.
6. Gold occurs in a 1 mile section of Lisle Creek and on the talus-covered flank of the ridge occupied by the diorite fringe of the soft granite of the basin.
7. Gold is not found at the slate, sandstone, or tuff contact with the granite.
8. Portion of the gold is of secondary origin and is found under a great depth of talus associated with leaves, charcoal and other organic matter competent to precipitate gold from solution.
9. Iron and manganese oxides are of general occurrence in the talus material.

From the foregoing evidence the following decision has been arrived at:-

Gold was derived from quartz veins in diorite, coursing in a north-easterly direction at right angles to the general trend of the intrusive parent granite. The quartz veins were formed prior to the deposition of gold. These veins are 'crush zones' filled with sulphides and sulphuric sulpharsenides they are referred to as the vein dyke type. Fractures in the quartz vein dyke were filled by sulphides, arsenides and gold; these were shrinkage cracks in a crystallising quartz vein-mass, which afforded loci for the deposition of the last end stage products - gold and its associated minerals. The gold, sulphides and sulpharsenides characteristically occur not in the quartz, but in the little fissures that cut the quartz, whether shrinkage cracks or movement cracks.

Oxidation of the sulphidic minerals cementing the crushed quartz kept pace with the rapid erosion of the granite floor of the basin and much of the associated

gold was carried away in solution and deposited again in other places by agents of precipitation. These veins now have the appearance of 'rubbly' quartz bodies in which the quartz is almost barren and the ironstained clayey interstitial material is comparatively rich. A number of parallel veins (2 to 3 feet wide) of this nature occur at points corresponding with the rich gold leads underneath the talus material flanking the northern and eastern sections of the ridge.

To such veins as that exposed in shafts sunk by Watt Brothers should the search be directed. The paucity of gold in the upper portions of the veins should not be regarded as an indication of the actual value of the deposits below the zone of oxidation.

In regard to the alluvial and detrital deposits in Lisle Basin it may be stated that none is of any present commercial importance as the cost of recovery of the gold is greater than its value.

The investigation of Lisle district was extended to include Myrtlebank, Cradle Creek, Panama, Golconda, Lebrina, and Denison Goldfields. From time to time during the past 30 years the ore bodies of these fields have received attention and today prospectors are engaged in the exploration of the first three mentioned. In order to arrive at an idea of the value of the many veins in these fields they also will be briefly passed in review.

The most promising of the known ore-bodies in Myrtlebank and Cradle Creek areas are seams of gold-impregnated sandstones. These seams are intercalated with slates and tuffs and extend with them indefinitely. The proportion of gold varies greatly from point to point, but the general result of exploration lends encouragement to the idea that sections will prove of commercial importance.

Panama, because of the discovery of very rich specimen stone near the outlet of that basin, has for long excited the attention of prospectors and investors. The source of this stone is a narrow vein in the granite - a vein that will not prove of lasting value. There are one or two quartz-arsenopyrite veins on the west side of Panama Creek that appear promising, but the quantity of gold-bearing stone above creek level is not large. Panama as a goldfield is disappointing.

At Golconda similar ore-bodies occur under similar conditions and are of no real value.

Lebrina and Denison areas contain numerous rich, narrow, veins of gold-bearing quartz, most of which are interrupted and laterally heaved by movements producing faults. They are of no economic importance.

From the brief descriptions given it will be seen that the ore-bodies of promise are the seams of gold-impregnated sandstone at Cradle Creek and M. Falkiner Creek and Myrtlebank, and the rubbly quartz veins traversing the diorite fringe of granite on the side of Lisle Basin.

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