

PRELIMINARY REPORTonWESTERN PINNACLE PROSPECT, UPPER SCAMANDERIntroduction

A little development work was performed on some of the tin-stone veins exposed on this property by Adelaide Company many years ago. Further attention has been given to the work by local residents within recent years. The property is now in the hands of Messrs. Semmens and H. Hynds of Scamander. Since the acquisition of the property by them more important developments have been made, and it is intended to continue the work at an early date.

Area, Situation, etc.

The property is an 80-acre lease of land situated at Western Pinnacle an outstanding peak rising over 1400 feet above sea-level. It is reached from Scamander by road six miles along the bank of Scamander River, then by steeply inclined track three miles. A formed road, now in state of disrepair, passes close to the property to the old alluvial diggings of Fitzgerald Creek. This could be repaired at a small cost and be made a suitable line of transport.

Geologic Relations.

The deposits are contained in the Dundas series of quartzites, sandstones, tuffs, and volcanic breccias of Cambro-Ordovician age not near any known outcrop of granite. But the tin-bearing granitic rocks of the North-eastern District are not far remote to the north and west, and south of Scamander are the horn-blendic varieties responsible for the deposition of gold at Mathinna and neighbourhood. Doubtless the tin-bearing granites lie at no great depth at Western Pinnacle for their porphyry apophyses protrude through the quartzites in the form of narrow, irregular veins. In these veins tin ore is abundant, but they are very short and narrow, and are not of any considerable value in themselves. The more important deposits of tin ore are those associated with quartz and arsenopyrite.

These veins appear to be branches of one main ore channel and to no great depth may be found to join up.

On both sides of the very sharp ridge leading up to the Western Pinnacle the major streams have been worked for tin ore. From that on the south-western side, Fitzgerald Creek, it is reported that 30 tons of tin ore was obtained by sluicing the gravels.

In that direction no discoveries of tin-bearing veins have been reported, but it is stated that no attempt has been made to explore the lower parts of the valley for veins.

The Tin-bearing Veins

The first to be described is that opened in a trench close to the track a few feet lower than the summit of the ridge. Here is exposed to a depth of six feet and width of 15 feet sandstone, clay slate, and quartzite veined with quartz carrying tin ore.

In a section of four feet the veinlets of quartz are so closely and evenly spaced as to have the appearance of ribbon structure. On the hanging-wall side is a 4 inch band of white Kaolin with particles of quartz (possibly the alteration product of an off-shoot of the underlying granite) containing coarsely crystallised tin ore in abundance. The tin ore occurs in clusters of crystals or crystal aggregates in the Kaolin.

This body appears to be an east west one with a dip to the north at a very high angle, but it has not been traced along its strike.

Two samples of the stone excluding the rich band were taken and assayed and the content was found to be:-

1. from footwall side 11 feet in width 0.1 per cent.
2. "hanging-wall" 4 feet in width 0.32 per cent.

The second deposit was opened in a trench and pit by Semmens Brothers on the south fall of the Pinnacle. Here is a quartz cassiterite vein contained in tuff and quartzite resting upon a sharply defined, smooth footwall. The vein fills a part of a 30-inch fissure that cleaves the rock almost at right angles to its strike. The tin-bearing part of the vein increases in width from 1 inch to 7 inches in 10 feet depth, and the indications are such as to lend encouragement to the idea that a progressive increase to 30 inches in width will be revealed as the vein is opened at depth.

The vein matter consists of hard quartz studded with coarsely crystalline tin ore and with arsenopyrite in fair proportion. Samples of this ore contained tin in the proportions of 2.5 to 9.0 per cent.

This ore-body has been traced uphill in a shallow cut, and 60 feet west of the cut are bands of limonite 2 to 3 inches wide. These limonite bands have not been opened to discover their parent ore.

This vein courses N. 38 E. and dips N.W. at an angle of 55 degrees

An adit has been driven to cut another vein lying about midway between the two described in the foregoing pages. This body was discovered near the summit of the hill and was opened in a shallow trench. It there consists of two feet of quartz veined and flecked with tin ore. The apparent course is 10 degrees W. of N.

An approach of 20 feet leads to the adit which courses the north 69 feet, N. 25 degrees E. to 32 feet, then N. 45 degrees E. to 84 feet. This work was performed 18 years ago by an Adelaide Syndicate who at that time were interested in the Pyramid Mine. Why the course of the adit was altered to east of north is not known. Certainly it could not reach its objective on that course and apparently no other bodies were known in that direction. It cuts through quartzites coursing N. 21 degrees W. and dipping N.E. at 80 degrees. In the face is a 1-inch vein of barren quartz

Future Development Works.

It is rather surprising that no serious attempt has been made to explore the richest of the known veins.

All that has been performed is the sinking of a pit 10 feet deep and 6 feet long and a short trench from the end of the shaft.

All the work can be defined to adit openings, and the veins can be driven on direct without any cross cutting. However, the hill slopes are so steep and the valley so deep that the ore can be attacked at great depth and under rapidly increasing cover.

The prospects are certainly worthy of further attention. The ore veins are very narrow, but they are rich, and there is reason to believe that the increase in width already noted will be progressive.

Before completing this report it is desired to place on record the result of a brief examination of an arsenic prospect lying to the east of the Western Pinnacle Group. This body was opened in trenches and an adit by the late Dr. L. Grey Thompson and David Powell many years ago.

An irregular but large body of quartz, arsenopyrite, and pyrite is exposed in a trench 60 feet long. Apparently this is a part replacement of the containing quartzite and tuff rocks. Much of the arsenopyrite has been oxidised to white arsenious oxide. A sample of the ore did not contain a trace of tin. It is reported that tin was found in the ore cut in the adit.

The ore-body is exposed again in trenches on the East and West sides of the track.

The prospect is not one of any commercial interest.

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