REPORT ON MR BROCK'S TIN MINE NEAR WELDBOROUGH

This mine is situated on an extended prospecting claim of 320 acres held by A. Richardson. It is located on the north-western flank of Rattler Hill, four miles to the SW of Weldborough, with which township it is connected by road and track.

Granite occupies most of the surface in the vicinity of the mine, the only other rock-type exposed being basalt. The basalt is of Tertiary age and overlies the granite near one of the small dams of the Breisis Central Co. The granite is of Devonian age and forms portion of the batholith of the NE districts of Tasmania.

A shaft was sunk to a depth of 30 feet on a vein of tin ore with a vertical dip and an eastward strike. An adit was driven in a general southerly direction from a point 200 feet north of the shaft. At approximately 160 feet from the entrance a greisen formation was cut on the western side of the adit. It had a general bearing from northwest to southeast with a vertical dip. The course of the adit was changed slightly in order to follow this formation. At 190 feet, another formation with a strike of 90° intersected the above. The east-west formation was cut through and another vein with a southerly bearing followed to the face where it petered out. The south-easterly formation was also followed a short distance to the south-east towards the junction.

All these formations represent narrow altered, or greisenised zones in the granite. The altered granite consists chiefly of quartz and resembles a quartzite, but along some planes and surfaces a micaceous mineral - possibly gilbertite, also occurs. Cassiterite is not visible in this altered granite, nor has it been detected by other means. In the central portions of these formations, veins of quartz occur at certain points. The quartz is clear and glassy and contains abundant cassiterite in intimate association with it. Vughs occur in the quartz and the surface of some show well-developed crystals of quartz penetrating what is now a soft, white, yellowish or greenish, clayey mineral which probably represents the alteration product of felspar crystals. The greisen and the quartz have been formed by the passage of vapours or solutions through fissures in the granite. The quartz and cassiterite represent fissure fillings which may be contemporaneous with, or later, than the alteration of the wall-rock. It is significant that the cassiterite occurs only with the quartz and not with the altered granite.

The quartz attained its greatest width near the junction of the several formations. Of the individual formations it was most plentiful and widest in that with the south-easterly strike in which it was, at some points, 15 to 18 inches wide. This formation was easily the most prominent at the time of the writer's visit, and it was recommended that it be followed in order to test it at, and beyond its junction with the east-west formation.

The east-west formation represents the ore exposed in the shaft and trenches on the surface and is also worthy of further exploration.

The grade of the quartz-cassiterite ore is exceptionally good, cassiterite being distributed freely throughout the quartz. The stocks of ore are, however, generally short in length and otherwise erratic in their occurrence, even though the greisen formation may extend for considerable distances. Further prospecting work on the various formations intersected, was recommended with the object of proving whether the quartz-cassiterite ore-bodies are of sufficient length to render them of commercial importance.

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