

TR6-43-46

**PROPOSED DRILLING PROGRAMME  
AT THE ANCHOR MINE, BLUE TIER**

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**INTRODUCTION**

The Anchor Mine includes the most extensively mined zone of tin granite in the Blue Tier tinfield. Nearly 1,800,000 tons of granite have been mined for the production of 2,322 tons of metallic tin valued at £347,453. The average grade of ore treated is 0.20 per cent metallic tin. There has been no significant production

since 1942. At the time of writing the mine area is included within Special Prospector's Licence 7/59 of 35 sq. miles held by Electrolytic Zinc Co. Ltd.

Despite the extensive workings, very little data is available concerning tin values in zones of the granite into which any further development would be obliged to extend. The proposed drilling programme is based on recommendations made by D. E. Thomas (1943). It is aimed at sampling the tin granite immediately north of the workings where an extensive area of granite approximately 800 feet long by 300 feet wide is exposed with only a shallow soil cover. The granite can be reasonably inferred to extend to a depth of at least 200 feet. Approximately 3,000,000 tons is available for open-casting without the necessity of stripping overburden.

It is felt that the prospects for the revival of mining at the Anchor Mine, and in other areas of the Blue Tier, would be largely dependant on the results of systematic evaluation of this zone of granite. If it could be established that values comparable to those encountered in the previous workings were available, then some tangible inducement could be offered to any large company that may be interested.

#### NATURE OF MINERALIZATION

Examination of the Anchor Mine, and other mines in the Blue Tier while work was in progress led to a fairly clear picture of the nature of tin mineralization within the tin granite. Cognizance of this must be taken in planning any drilling programme. The cassiterite is widely disseminated throughout the granite but is sporadically distributed in rich horizontal and vertical shoots and in pipes that vary in diameter with depth. Development of the Anchor mine showed that the richest values often occurred in horizontal floors beneath pegmatite veins which presumably have exerted some measures of control on the movement of ore-bearing fluids. Values in the floors usually die out laterally within short distances.

Rich mineralization also occurs in steeply-dipping greisen zones with a general trend slightly east of north. There is evidence that a pipe-like enrichment, which decreased in diameter with depth, was worked at the Syndicate Face. The overall pattern is that of horizontal and vertical shoots of limited thickness and impersistent lateral extension separated by zones of near-barren rock. Open-cast mining involves the careful selection of milling ore.

#### PREVIOUS DRILLING

A summary of the drilling results of Tasman Tin N.L. was given by D. E. Thomas. The company closely sampled the south-western corner of the tin granite by chases and shallow vertical jumper holes. Assay planes of this sampling accompany Thomas's report. In addition the company sank nine vertical drill holes to depths between 200 and 87 feet. These holes and the close sampling revealed the highly variable nature of the mineralization. Several enrichments were detected but the extent of these was not determined.

NORTHERN SECTION ANCHOR MINE  
SHOWING PROPOSED DRILL SITES

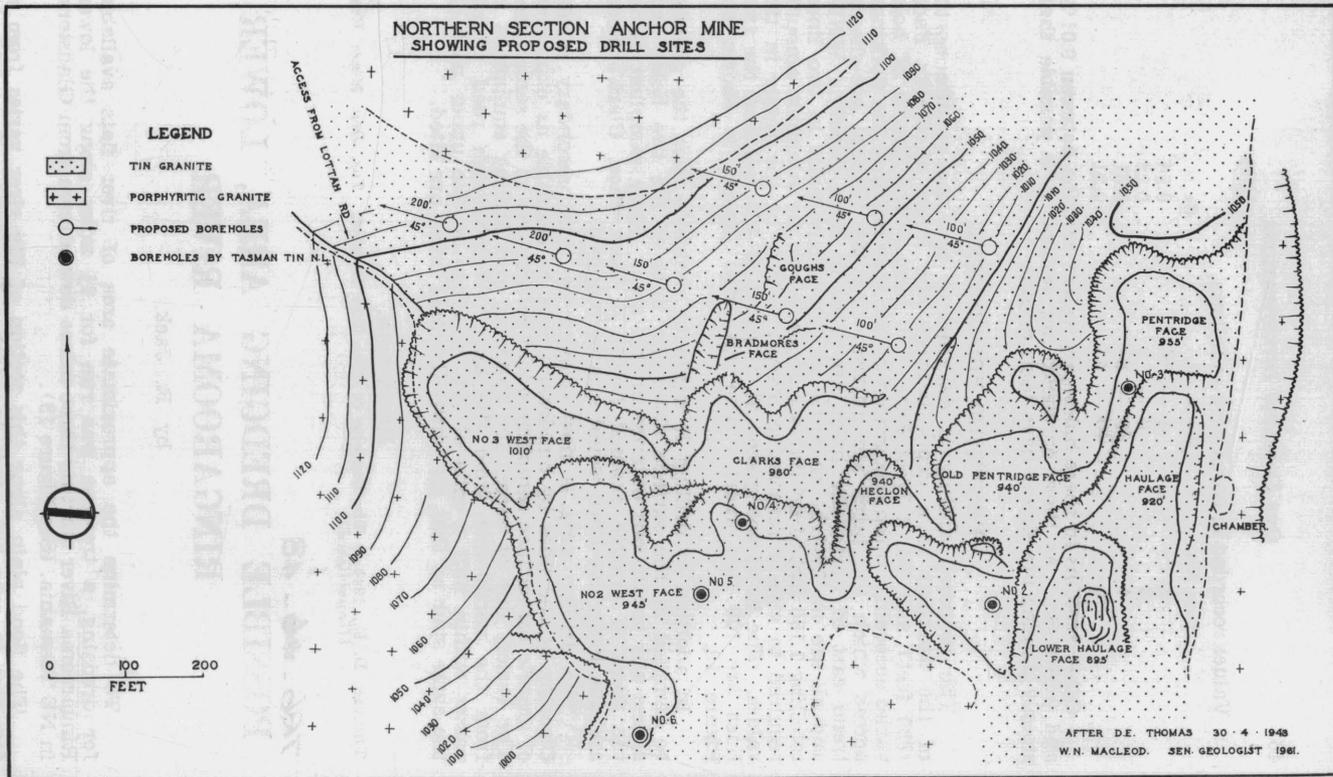
- LEGEND**
-  TIN GRANITE
  -  PORPHYRITIC GRANITE
  -  PROPOSED BOREHOLES
  -  BOREHOLES BY TASMAN TIN N.L.



0 100 200  
FEET

5 cm

FIGURE 12.



AFTER D.E. THOMAS 30 · 4 · 1948  
W.N. MACLEOD. SEN. GEOLOGIST 1961.

Values recorded in bores were as follows,

Bore No.	Depth (ft.)	Sn %
2	4 — 10	0.54
3	0 — 5	0.25
4	60 — 65	0.61
5	40 — 45	0.31

Other sections in these holes gave values ranging between 0.01% and 0.20% Sn. As these boreholes are vertical it is possible that steeply dipping ore shoots have been missed.

### PROPOSED PROGRAMME

The proposed drilling is designed to test the granite north of the workings to a depth between the levels of Clarks Face (980 feet) and No. 2 West Face (945 feet). The length of hole varies according to the topography of the spur north of the workings across which the holes are aligned. As the vertical ore-shoots trend east of north the holes are sited in lines trending WNW and all are inclined at an angle of 45°. Eight holes in two lines totalling 1,150 feet of drilling are suggested as the minimum amount required to give a reasonable overall picture of the range in tin values. The holes are spaced at intervals of 150 feet and the two lines are 150 feet apart. The suggested lay-out is shown on Figure 12.

In addition to drilling it would be desirable that the granite be sampled at the surface along the lines of the two holes and across any continuous outcrop in this area. Some sampling along the faces of granite exposed in No. 3 West Face, Clark's Face and the Pentridge Face would also be required.

The drilling area is now covered by thick secondary scrub. Clearing of the lines by bulldozer would be desirable as exposures of granite for surface sampling would be provided at the same time. The easiest line of access for bulldozer and drilling equipment is from the north-west from the Lottah-Weldborough road which passes within half a mile of the workings on the upper part of the same spur as that on which the drill holes are sited.

### REFERENCES.

- THOMAS, D. E., 1943.— Tin Deposits of Blue Tier District. *Tas. Dep. Mines Rep.* (Unpublished).