GEOPHOTO MINERALS REPORT 1973/10

STATUS OF THE BLUE TIER TINFIELD - E.L.6/68, N.E. TASMANIA

Prepared by

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for

TEXINS DEVELOPMENT PTY. LIMITED

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AMG REFERENCE POINTS ADDED

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INTRODUCTION

This status report summarizes the status of the Blue Tier prospect as of June 1973.

GENERAL SUMMARY

The area is well documented.

General opinion is that most of the ore bodies have been eroded and the remnant economic mineralization mined out.

Past production figures suggest that tonnages and grades of possibly remaining ore bodies would not support a modern large scale operation.

The area has been examined by three companies engaged in large scale tin mining and in each case has been rejected.

It seems any expense incurred in exploration of the Blue Tier prospects will be expended in the hope of proving at best a marginal deposit.

PREVIOUS WORK

A. Other Companies and Agencies.

1. Mt. Lyell, Mining and Railway Co. 1904 carried out a programme of trenching and mapping. A value contour map was prepared.

2. Tasmania Dept. of Mines. Bulletin No. 38. Geological Survey 1928. 'Blue Tier' Tinfield, by McIntosh, Reid and Henderson.

3. Tasmania Dept. of Mines. Unpublished Report 1943. 'Tin Deposits of the Blue Tier District', D.E. Thomas.

4. Electrolytic Zinc Co. of Australia. 'Blue Tier Tin Prospect 1962' by P.S. Laver. Carried out mapping and sampling of the 'Tin Granite'. Structural controls determined. Area rejected as having little value.

5. Aberfoyle Tin Development Partnership. Report No. 4, 1966, by R.G. Taylor. Drilled Anchor Mine extensions. Insufficient tonnage and grade to establish a large scale operation.

6. Geochemical Evaluation of Tin Bearing Granites, Blue Tier Batholith - D.I. Groves.

B. Geophoto Work.

1. Reports 1969/13, 1969/34, Rattigan and Herd. Main interest appears to have been in molybdenum and tungsten. Work carried out was of a desultory nature, with no discussion of results, such as they are.

2. Report 1970/75, I. Mortimore. Several prospects examined including the New Moon, Australia and vein deposits. The veins were found to be narrow and the mineralisation very patchy. Some 20 Cobra holes (depth 5') were put down at the New Moon Mine, and 50 rock samples collected in the old workings. Of the 70 samples, only 14 were found to contain tin and these came from the old working or their immediate vicinity, indicating

the restricted and erratic nature of the mineralization. Even allowing that this sampling was probably an ineffective method of assessment for flat lying 'floors' of tin mineralization, the results are not encouraging. It was recommended that the area east of the New Moon workings be explored by percussion drilling on 100' centres. It is thought that the situation of the mine is at the apex of a partly exposed cupola and that the "tin granite" could occur over a large area beneath porphyritic granite east of the mine. Mt. Lyell's work indicated a zone 44' wide yielding 0.44% tin.

3. Report on the Australia Mine, I. Mortimore, 1971. General quartz and greisen veins form a mineralized zone some 40' wide, strike 072°, dipping north near vertically. The area was investigated by Cobra drilling and by rock sampling. Considering the nature of the orebody, Cobra drilling is not a suitable method of sampling the exposed mineralization nor for testing for extensions of the mineralization. The drilling indicates a value of 0.04% tin in the "tin granite" surrounding the mine. Of the 63 rock samples taken in the old workings, only 10 contained tin values greater than 0.10%, ranging up to 0.41%. The linear nature of the tin distribution in a narrow zone is evident from the sampling. To be tested effectively the deposit would require diamond drilling, which would entail considerable site preparation due to the steepness of the terrain.

4. A Status Report on the Blue Tier was compiled by I.R. Mortimore on 23rd March, 1973 (see Status Report 1973, Series I).

Some Pertinent Facts

1. Past production figures indicate the field produced some 2,000,000 tons of 0.2% tin. Values were erratically distributed and mining highly selective to achieve even this grade of 0.2%.

2. Laver's structural investigation of the "tin granite" shows it to be an intrusion within porphyritic granite. It indicates that the tin deposits occur erratically in a number of favourable traps in the form of cupolas. Tin is associated with pneumatolitically altered "tin granite" and in general is confined to the uppermost section of the tin granite near its contact with the overlying porphyritic granite. (The Mt. Michael Mine appears to be an exception). Tin occurs along and in proximity to vertical contraction joints and horizontal planes termed "floors", the intervening blocks of granite being only poorly mineralized, if at all. It is postulated that the vertical joint acted as channels for the mineralization which spread out into "floors" on being impeded in its ascent by the overlying pegmatites and porphyritic granite.

3. The Anchor Mine (N.B. is not contained within the present licence) was the chief producer on the field, yielding 1,400,000 tons of 0.15% tin. Aberfoyle Report No. 4, 1966, states that diamond drilling had indicated 337,000 tons of 0.66% Sn. Allowing 15% dilution and recovery of 60% Sn, the effective figures are 388,000 tons of 0.34%. Projection reserves for completion of programme were 1.5 million tons of 0.34% Sn. These figures are for ore at above 0.4%, in the ground. If the cut off is taken at 0.1%, the projected reserves would be of the order of 4 million tons of 0.2% Sn, again allowing for 15% dilution and 60% recovery.

The target was 2 million tons of 1% Sn and was considered minimal for establishment of a large scale operation.

(The tin price at the time of Aberfoyle Report 4 was E£1200/ton (A$3000), value of 0.34% ore was £4/15/0 per ton. Mining costs were:- opencut £7/7/0 per ton, underground - £5/12/0 per ton. The present price of tin is E£1700/ton (A$2960). Whilst the value of tin has remained the same in relation to the Australian dollar, mining costs have increased and the deposit remains uneconomic.)

Conclusions

All evidence points to the tin deposits of the Blue Tier being too small and/or too low in grade to sustain a modern large scale operation.

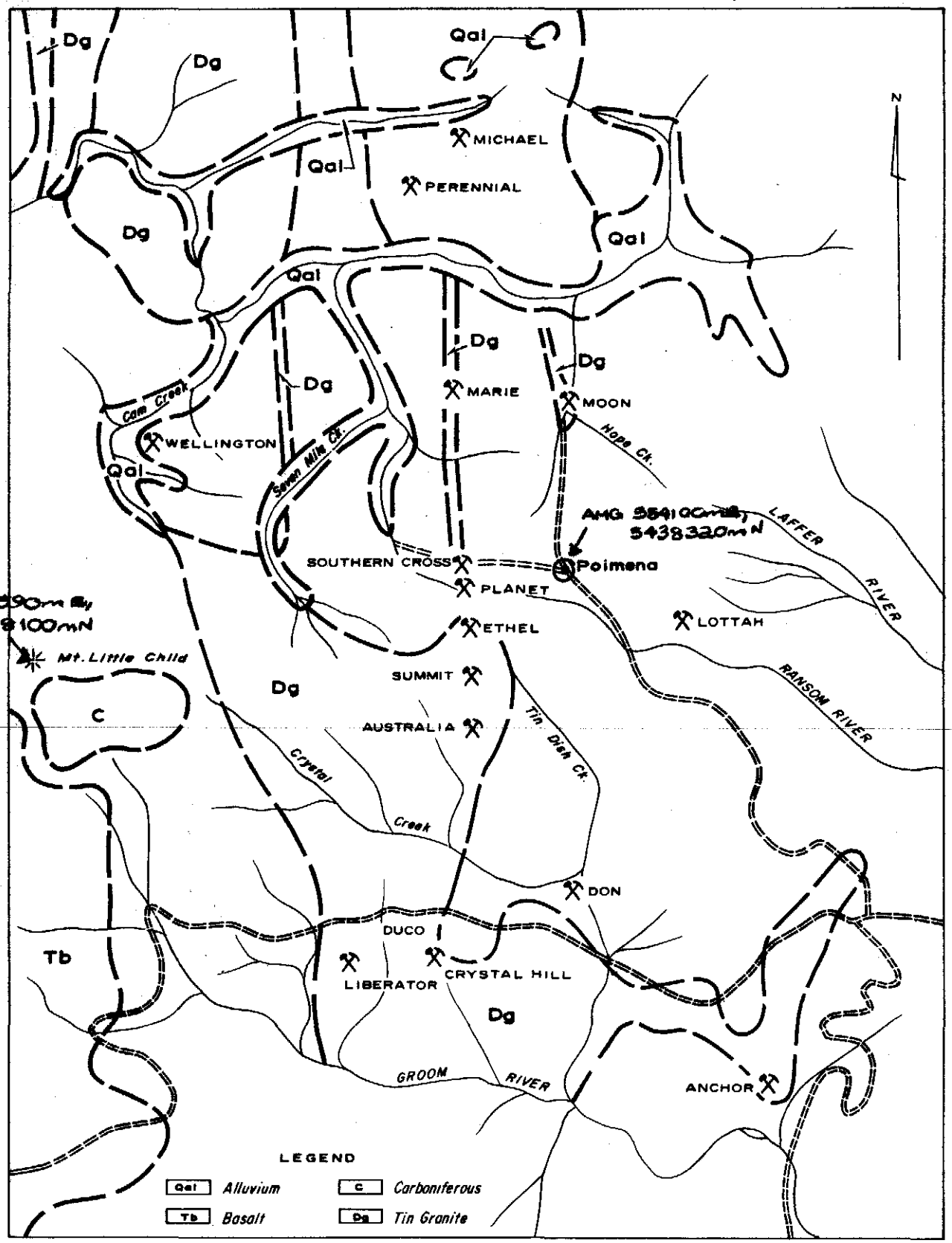
Tin occurs erratically in the known deposits and mining has been very selective to achieve this low overall grade of 0.2%.

There is no geological evidence to hope for the existence of a deposit of greater magnitude or grade than those known. Faulting is post "tin granite" intrusion.

Deposits similar to those known probably exist in the margins of the main tin granite outcrops, in favourable traps. The size and grade of these deposits do not appear to warrant investigation, which would necessarily involve costly close spread diamond drilling.

No further work is recommended.

AUBREY COX.



AMG REFERENCE POINTS ADDED

BLUE TIER TINFIELD

Scale 1:31680

5 cm

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