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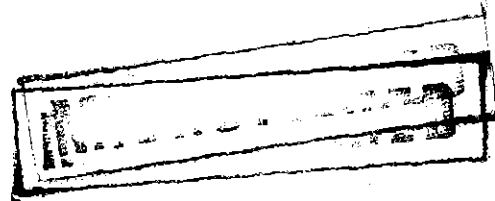
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File Ref.	EL25/87
14 DEC 1988	
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NEW HOLLAND MINING NL



EL25/87

MARRAWAH, TASMANIA

RELINQUISHMENT REPORT

YEAR 1

(15.1.88 - 15.1.89)

Address of licensee
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SUMMARY

EL25/87 is underlain almost entirely by relatively unmetamorphosed Precambrian sediments of the Rocky Cape Group. A small area of Cambrian rocks occupies the extreme northeastern corner of the tenement. Tertiary and Quaternary basalts and sediments occur in the north of the area.

The boundary between the Precambrian and Cambrian rocks is probably represented by the NW-SE Marrawah-Balfour trend - a possible thrust structure of regional significance.

Southeast of EL25/87, the Marrawah-Balfour trend is associated with sporadic and locally significant copper-tin mineralisation. The mineralisation is probably related to Devonian granites.

Although the Marrawah-Balfour trend probably extends through the northern part of the tenement, it is obscured by Tertiary and Quaternary sediments. No granites are known or inferred near EL25/87, and no mineralisation has been reported from the tenement.

Quaternary beach sands immediately north of EL25/87 carry uneconomical grades of heavy minerals. Mineralogy infers a varied prominence, but no obvious sources are known.

The Cambrian rocks on EL25/87 are correlated with similar rocks south of Smithton where interbedded mafic lavas carry anomalous base metals. No economic mineralisation has been reported south of Smithton, and the small, largely obscured Cambrian occurrence on the tenement is of low prospectivity.

No easily tested new mineralisation concepts can reasonably be generated for EL25/87, which should be relinquished.

1. INTRODUCTION

1.1 Tenement Details

Exploration Licence 25/87 (Figure 1) was granted to New Holland Mining NL on January 15, 1988. The Company is sole owner and manager.

The 108 km² of tenement comprises (guide only):

- State Forest 3.7km²
- Private Property 81.7km²
- Crown Land 5.2km²
- Arthur - Pieman Protected Area 16.6km²

and excludes:

- Crown Reserves 0.6km²
- West Point Aboriginal Site 2.3km²
- Mining Leases 58m/85, 59M/85
(both gravel) 0.83km²

1.2 Exploration Aims

New Holland's Year 1 activity was to determine whether the Precambrian rocks on the tenement might contain hosts favourable for replacement base and previous metal ore deposits.

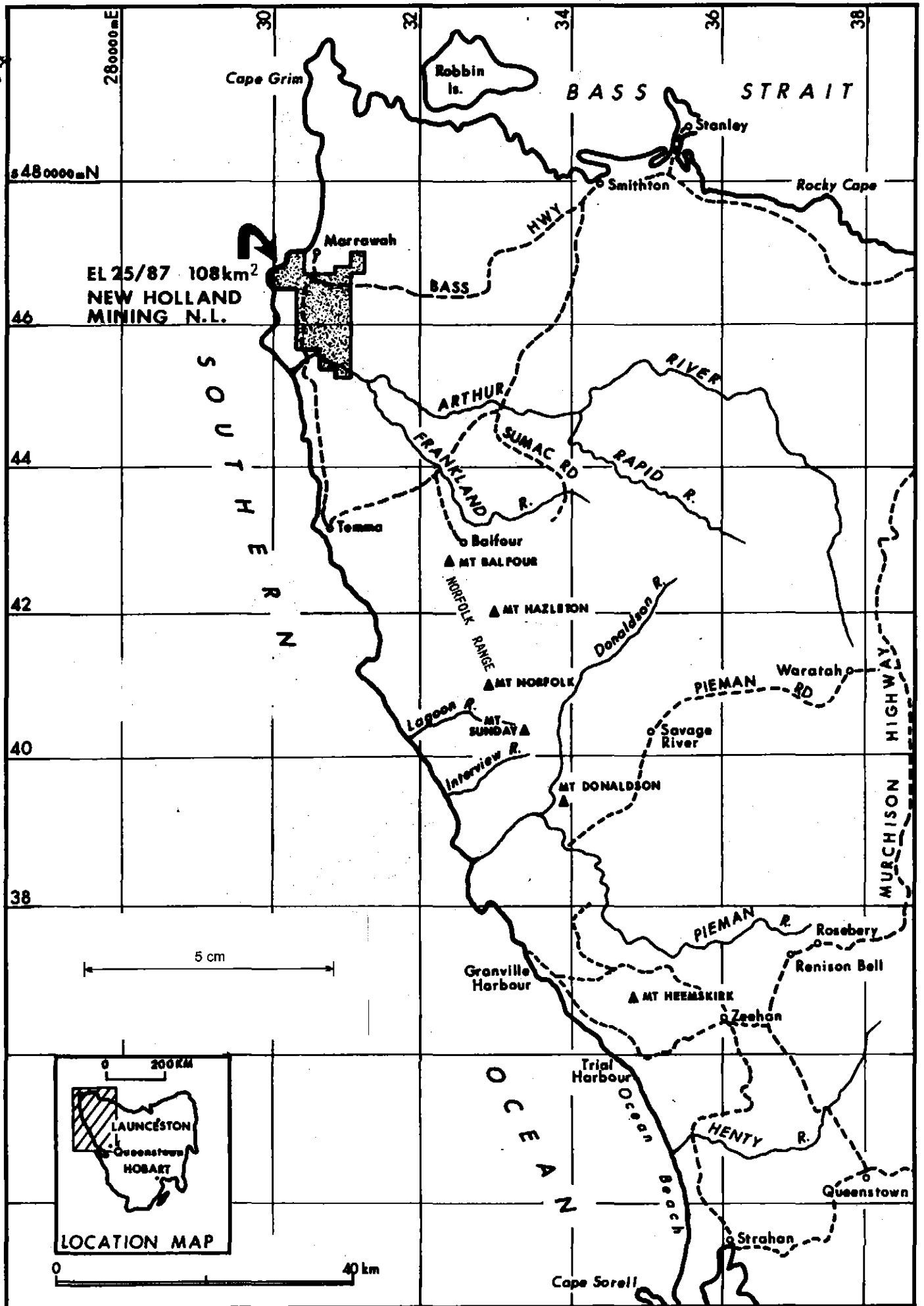


Figure 1. Location map, EL25/87.

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2. WORK COMPLETED IN YEAR 1

2.1 Summary

Year 1 work was restricted to a review of all previous work and the compilation of a prospectivity report (Cromer, 1988).

2.2 Review of Previous Exploration

Since the 1960's several exploration companies have held licences over far northwestern Tasmania, including at various times all or part of the present EL25/87: Pickands Mather (EL16/67), the Australian and New Zealand Exploration Company (ANZECO; EL11/73), CRA Exploration (EL1/77), Aberfoyle Exploration (EL18/78), Comalco Limited (EL24/79), Shell Company Aust. Ltd. (EL49/80) and Geopeko Limited (EL's 25/80, 8/83). Only limited attention has been paid to the area currently covered by EL25/87.

During 1968 Pickands Mather investigated reported cassiterite occurrences in beach sands in Ann Bay immediately north of EL25/87. The company established a heavy mineral deposit of 3.5mt grading 3.6% of limenite, rutile, chromite, zircon and cassiterite (20 ppm). The deposit was considered uneconomic and the area was relinquished (Schmidt, 1968).

The EZ. Co. of Australasia reinvestigated the beach sands in 1970, reporting 2.5mt sand averaging 5.3% heavy minerals including 134 ppm cassiterite. However EZ also dropped the area (Macdonald, 1971).

Rising tin prices in the late 1970's encouraged Aberfoyle Exploration to assess the beach sands a third time. Aberfoyle substantiated Pickands Mather's original grades of 20 ppm cassiterite and also relinquished the area.

In the early 1970's ANZECO explored the Precambrian orthoquartzites on West Point adjacent to EL25/87 for high grade silica (Brandt, 1974). Impurities in the quartzites made the proposition untenable.

The present tenement was included in EL1/77 held by CRA Exploration. As part of the exploration programme, CRAE conducted a regional stream sediment programme over northwestern Tasmania. No anomalous values were returned from the Marrawah area.

Comalco Limited obtained EL24/79 to explore for zeolites but the only work undertaken was a reconnaissance geological report (Poltock, 1980).

Geopeko Limited explored the Cambrian sediments in the western Smithton Trough north and east of EL25/87 in 1981. The target was tin-carbonate replacement deposits of the Renison Bell style in the Cambrian sediments, presumably sourced from sub-surface granites. Geopeko had some geochemical encouragement but the company withdrew from Tasmanian exploration soon after (Pemberton, 1983).

EL49/80 was granted to Shell in 1987 to explore for stockwork/greisen tin or replacement tin-sulphides which might have sourced the anomalous beach sand tin deposits north of Marrawah.

2.3 Tenement Geology

EL25/87 is dominantly underlain by Precambrian rocks. Tertiary basalts and sediments occupy the northern portion and Cambrian sediments crop out and probably occur at shallow depth beneath superficial cover in the extreme northeast of the tenement (Figure 2).

The Precambrian rocks are predominantly undifferentiated sandstone, mudstone and quartzites of the Rocky Cape Group. They have not been studied in detail but recent regional interpretations (e.g. Leaman, 1988b) suggests the Precambrian may be overthrust from the west over Cambrian rocks. The boundary between the two is the Marrawah-Balfour trend, a major NE-SW trending, probable thrust, zone defining the western boundary of the Cambrian Smithton Trough (Figures 1 and 2 and Leaman, 1988a). No major carbonate units have been reported from the tenement.

The Marrawah-Balfour trend probably extends beneath the Tertiary basalts through the northeastern part of EL25/87.

The Cambrian sediments near Redpa are siltstones, mudstones and mafic lavas, and are correlated with similar rocks along the eastern edge of the Smithton Trough (pers. comm. A.V. Brown, Dept. Mines, Tasm.). The Department of Mines is currently mapping in the Marrawah-Redpa area.

The only mineralisation reported from the district is the heavy mineral deposits in beach sands near Marrawah, and south of the Arthur River at Sardine Creek (Green et al, 1988). Limenite, rutile, zircon, chromite and cassiterite have been reported. Grades are uneconomic. The mineral suites suggest a varied provenance including granite, ultramafic, mafic and metamorphic. No obvious primary sources are known and much of the material may be derived from reworked Tertiary deposits.

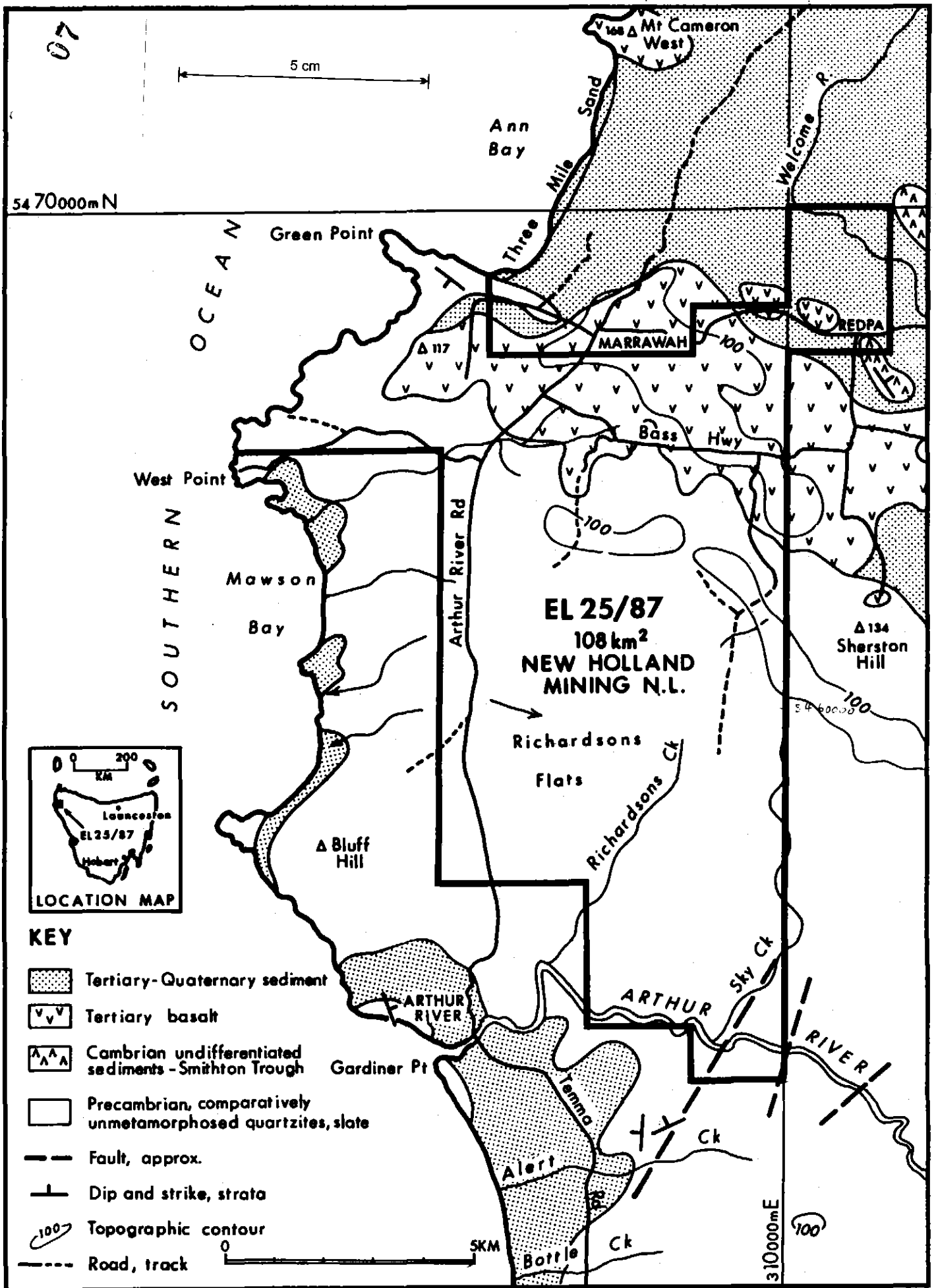


Figure 2. Generalised geology, EL25/87.

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3. DISCUSSION

There are no reports of mineralisation on EL25/87. In view of the tenement geology and previous regional exploration results, it is difficult to generate new concepts in terms of the recognised metallogenic epochs in western Tasmania.

Sporadic and locally significant copper-tin mineralisation is associated with the Marrawah-Balfour trend southeast of EL25/87 in the Balfour-Norfolk Range area, but the northwest extension of this zone in the tenement is obscured by Tertiary and Quaternary rocks. In addition, the Balfour copper-tin mineralisation appears to be related to Devonian granites. No granites are known or inferred in the vicinity of Marrawah.

Anomalous base metal values have long been known from the eastern Smithton Trough where they are associated with mafic lavas in the Cambrian sequence. No significant mineralisation has been found. Correlates of these rocks crop out at Redpa. However, only a small area of EL25/87 is underlain by these rocks which are largely obscured by superficial Tertiary and Quaternary cover.

Tenement prospectivity on EL25/87 must be regarded as low.

4. RECOMMENDATION

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EL2~~5~~⁶/87 should be relinquished.

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