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**DERWENT**  
**MINERALS PTY. LTD.**



EXPLORATION LICENCE 46/86  
 (DIAL RANGE)

ANNUAL REPORT-YEAR 2  
 19 March 1988 - 18 March 1989

89-2926

**OPEN FILE**

89-2926

MINES	
File Ref. E.L. 46/86	
20 MAR 1989	
Doc. Ref.	
Action Officer	Initials
Refer to	
Renewal App	
13.3.89	
Resubmit to	Date

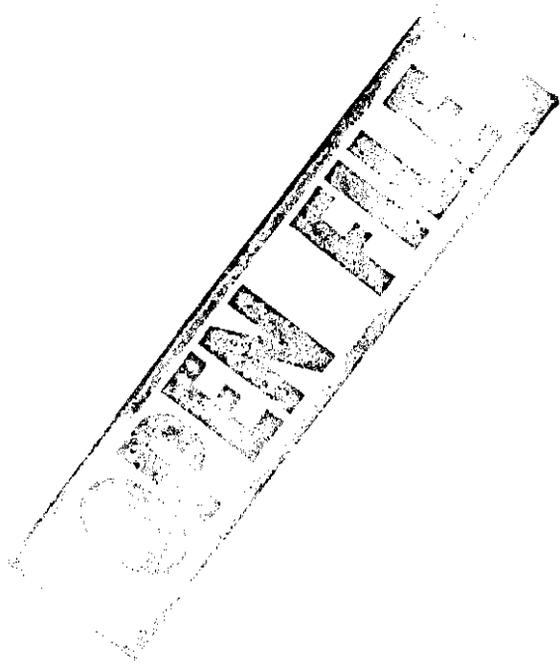
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REVIEW OF ACCESS TO GEOPHYSICALLY IDENTIFIED PROSPECTS

## i. Prospect B ,GR215360

The prospect has been delineated by anomalous stream sediments in the Leven river ,figure 4, and shows gold shedding off the region immediately to the east of Mount Lorymer. The region also has a distinct radiometric and magnetic anomalies, Figure 3, and is also anomalous by its lack of geophysical and geological trends and linears.

It is intended to follow up this prospect with a tight geochemical drilling programme, figure 4

## ii. Prospect C ,by Walloa Creek GR190333

Prospect B was also identified by its geophysical and geological anomalies together with anomalous geochemical stream samples.

It is also intended to carry out a gridded geochemical drilling programme over this region, Figure 5.

## iii. Prospect D, Mount Duncan GR190390

The prospect was identified by alteration and radiometric anomalies and has presumably not been investigated due to the isolated nature and inhospitable terrain.

It is intended to carry out another gridded geochemical drilling programme around the region, Figure 6.

## METALLOTECT PROVINCE STUDIES

The Dial Range region has a great potential for a economic deposit since it contains the intersection of the Dial Range Trough indicated by gravity and the Devonian granitoid tin belt, indicated by the magnetic trend, Figure 7.

However this Devonian unroofing may masks the original Cambrian signature. Currently Derwent is conducting fluid inclusion studies of samples from across the Mount Read Trough including the Rosebery, Mount Lyell and Que River mines ,together with samples from the Tasmanian tin belt.

The analysis is being carried at the University of Leeds ,England and the results will enable Derwent to identify deposits of massive sulphide and decide weather the Devonian unroofing cycle affects these potential deposits.

## PROPOSED FUTURE EXPLORATION

A more selected stream sediment sampling programme is envisaged in regions which have already been identified as anomalous by previous stream sampling and then followed by an intensive geochemical drilling programme on a 100m x 100m grid is intended over the four prospects outlined below:

- i. The region to the east of Revells/Keddies/Dial
- ii. The region to the east of Mt Lorymer
- iii. The region to the north of Mt Duncan
- iv. The region around Walloa creek.

## TENEMENT INFORMATION

EL 46/86 is a 93 km tenement located in the Dial Range /Leven River region, south of Penguin in NW Tasmania. Access from the major towns of Ulverstone and Devonport is by the Bass highway to the edge of the licence and then by sealed tracks and forestry track within the licence itself, the journey takes 20 and 30 minutes respectively.

The licence is held 100% by Derwent Minerals Pty Ltd, this the second year of holding the licence.

## EXPLORATION PHILOSOPHY AND OBJECTIVES

Derwents exploration of EL 46/86 is two fold

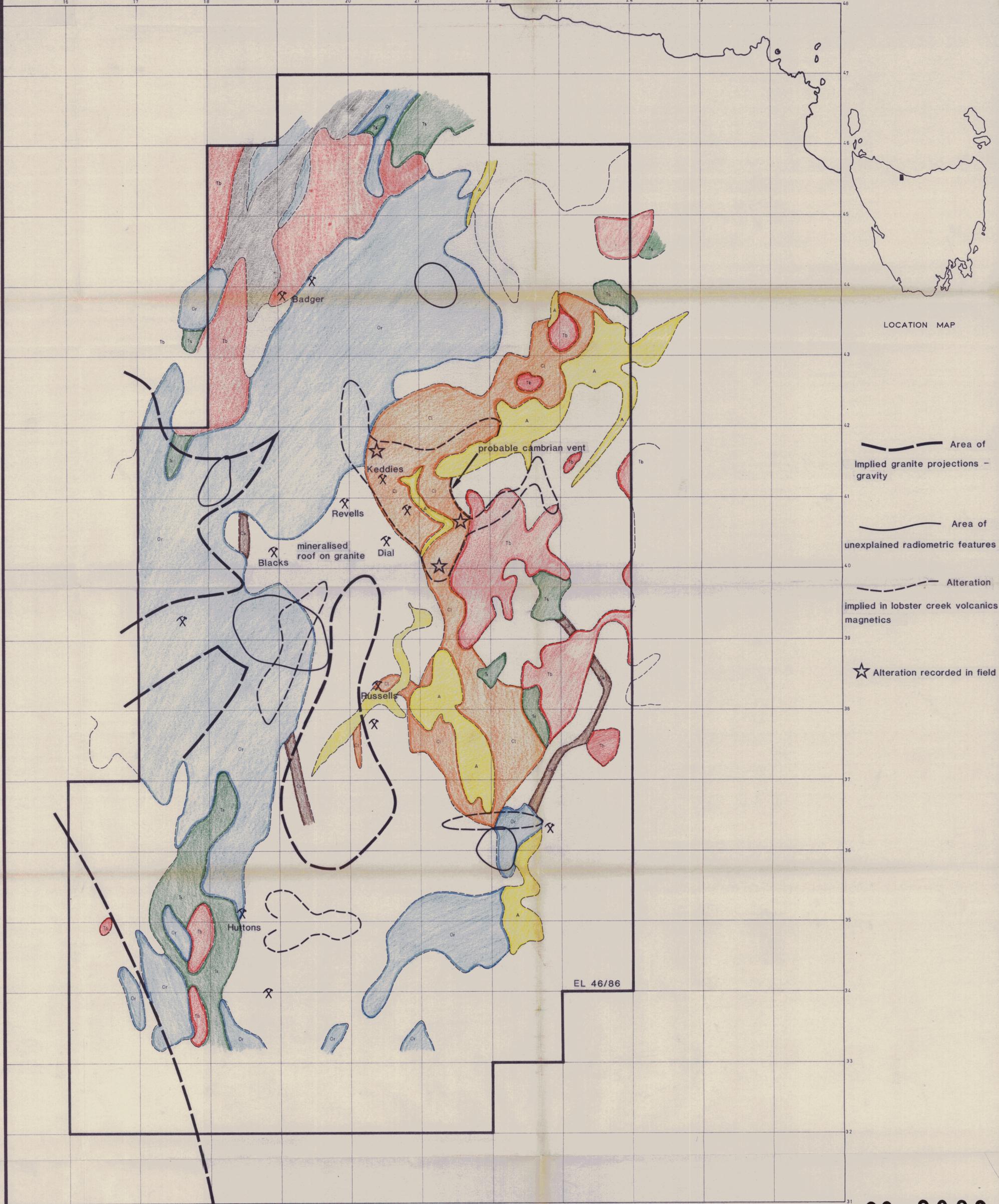
- i. Re-evaluation of historically known prospects with a view to re assessing the mode of formation of this deposits in order to give an overview of metalliferous prospectivity of the region with respect to the identification of a high tonnage body at depth.
- ii. Exploration of anomalous regions as indicated by gravity and radiometrics but as yet uninvestigated by the previous tenement holders.

## SUMMARY OF WORK COMPLETED IN YEAR 2.

The exploration programme over the past year consisted of:

- i. A geological mapping and geochemical sampling programme around the old workings of Keddies and Revells.
- ii. An inspection of the possible means of access to four regions where a gridded geochemical drilling programme is to be undertaken with reference to the environmental impact of such a programme.
- iii. A region study of the style of mineralisation in the eastern side of Tasmania in both the Mount Read trough and the Devonian granite related tin belt.





LOCATION MAP

-  Area of Implied granite projections - gravity
-  Area of unexplained radiometric features
-  Alteration implied in lobster creek volcanics magnetics
-  Alteration recorded in field

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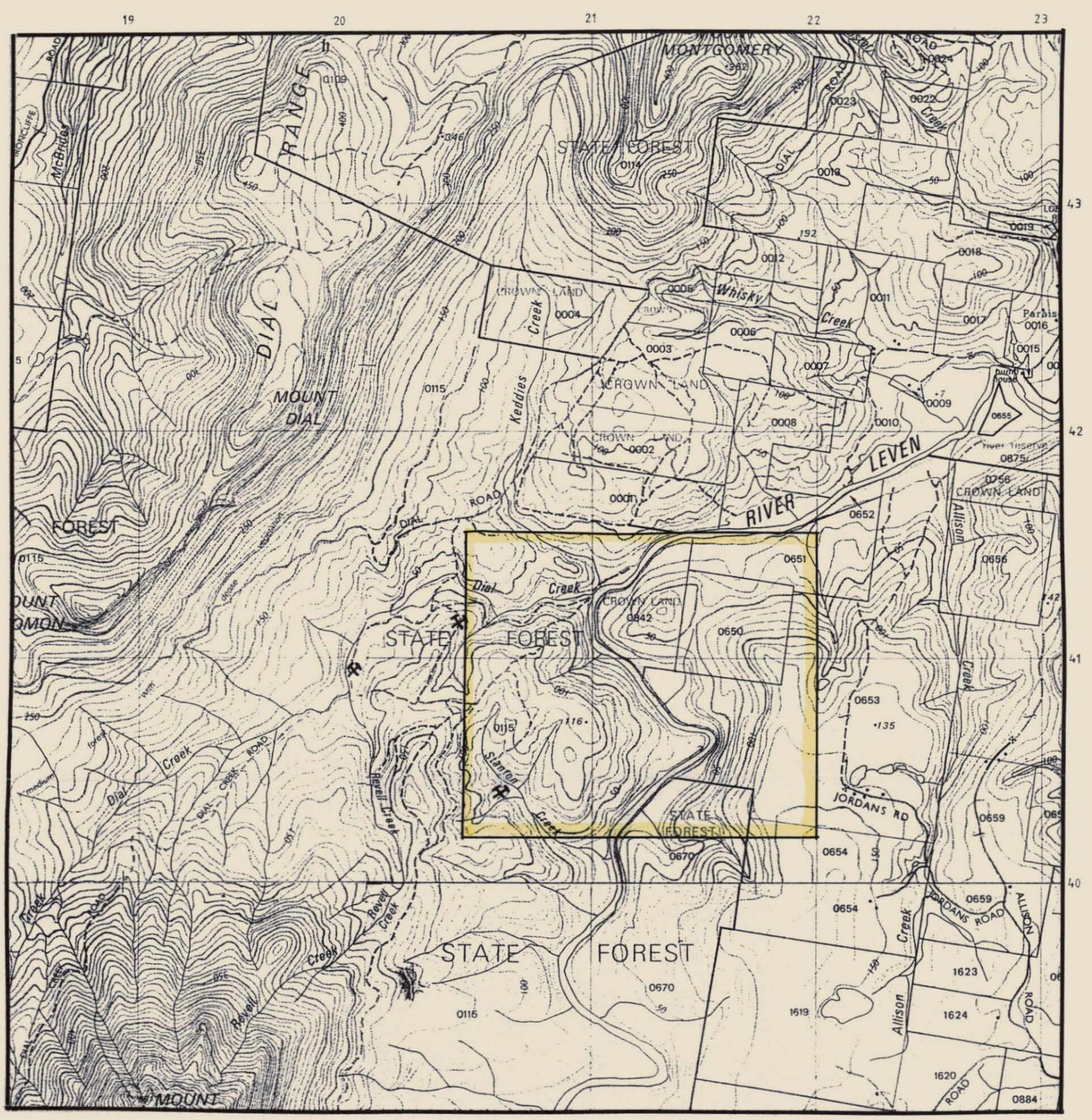
- |  |  |
|--|--|
|  Alluvium           |  Ordovician & derived debris (Quartz talus) |
|  Tertiary sediments |  Kerrison volcanics (Cambrian)              |
|  Tertiary basalt    |  Lobster creek volcanics (Cambrian)         |
|  |  Precambrian                                |

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EL 46/86 , DIAL RANGE      670007

**Simplified gravity and magnetic interpretation map**

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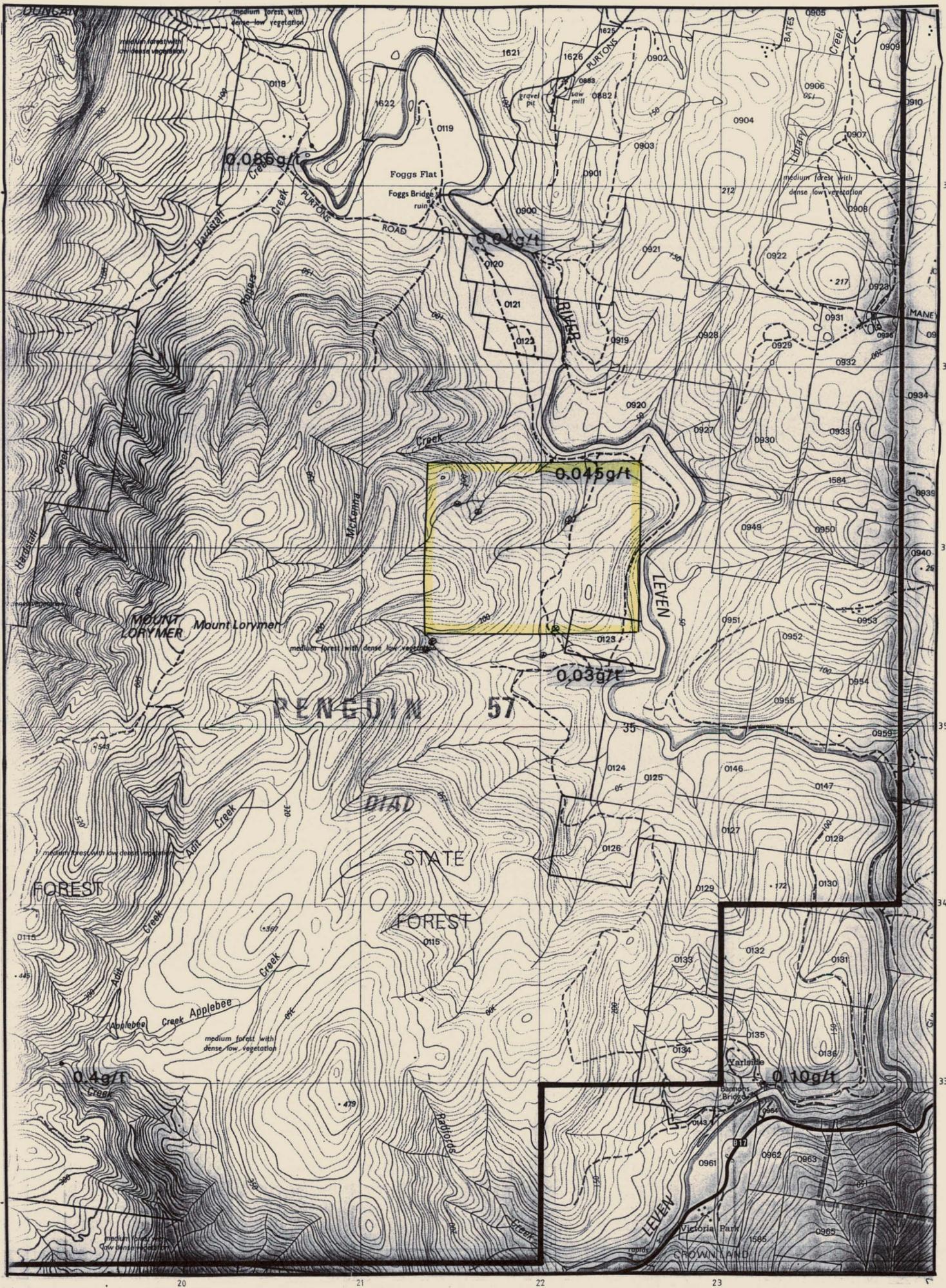
 Region outlined for 100 x 100m geochemical drilling programme

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FIGURE 3

<b>DERWENT MINERALS</b>
<b>Prospect A</b> Region around Keddies and Revells with historically known mineralisation

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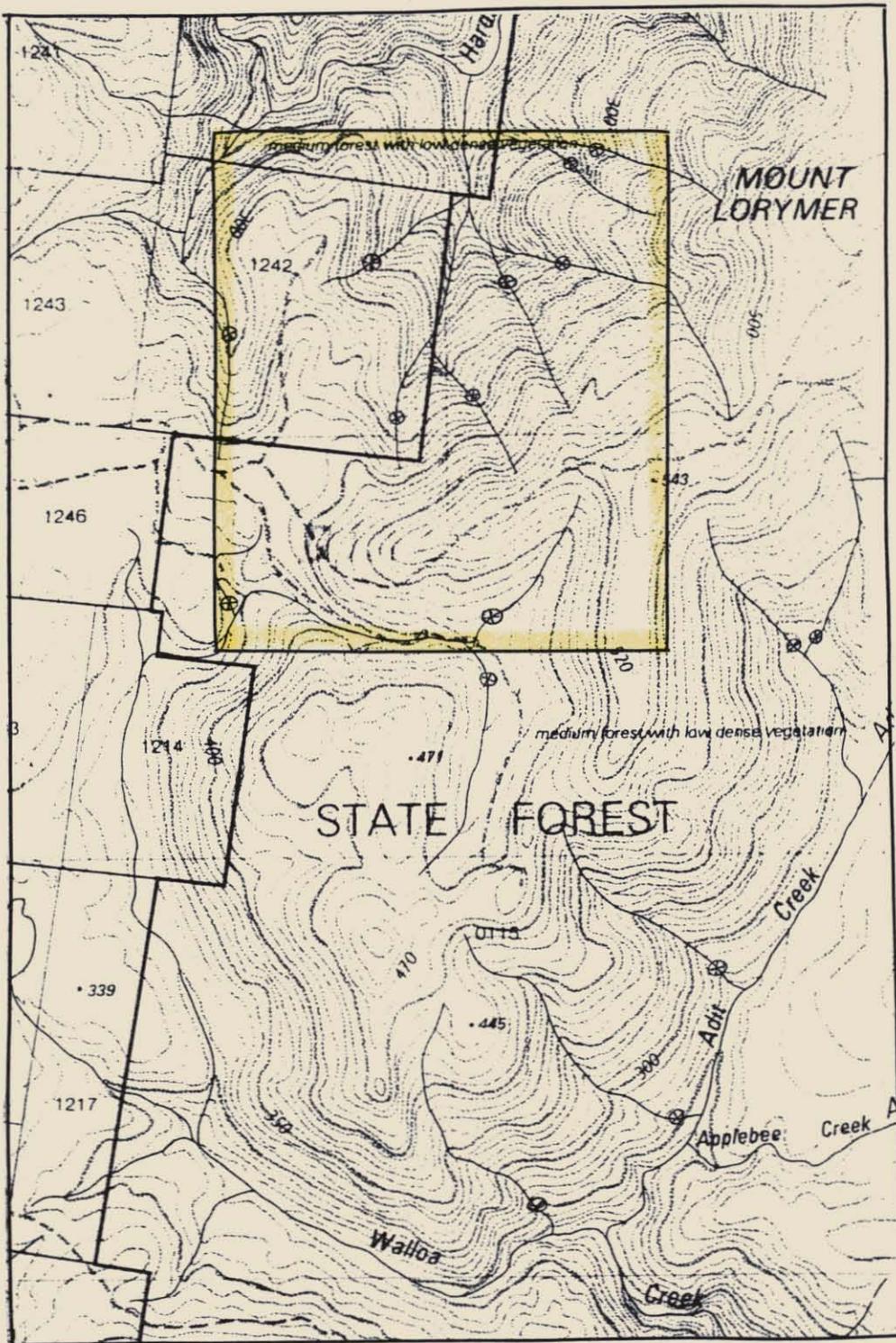
- Region outlined for 100 x 100m geochemical drilling programme
- Proposed stream sediment sampling

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**Figure 4  
Prospect B showing gold anomalies  
in streams draining off Mt Lorymer**



**LEGEND**

-  Region outlined for 100 x 100m geochemical drilling programme
-  Proposed stream sediment sampling

Figure 5 670010

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Prospect C North of Walloa Creek

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Region outlined for 100 x 100m geochemical drilling programme

Proposed stream sediment sampling

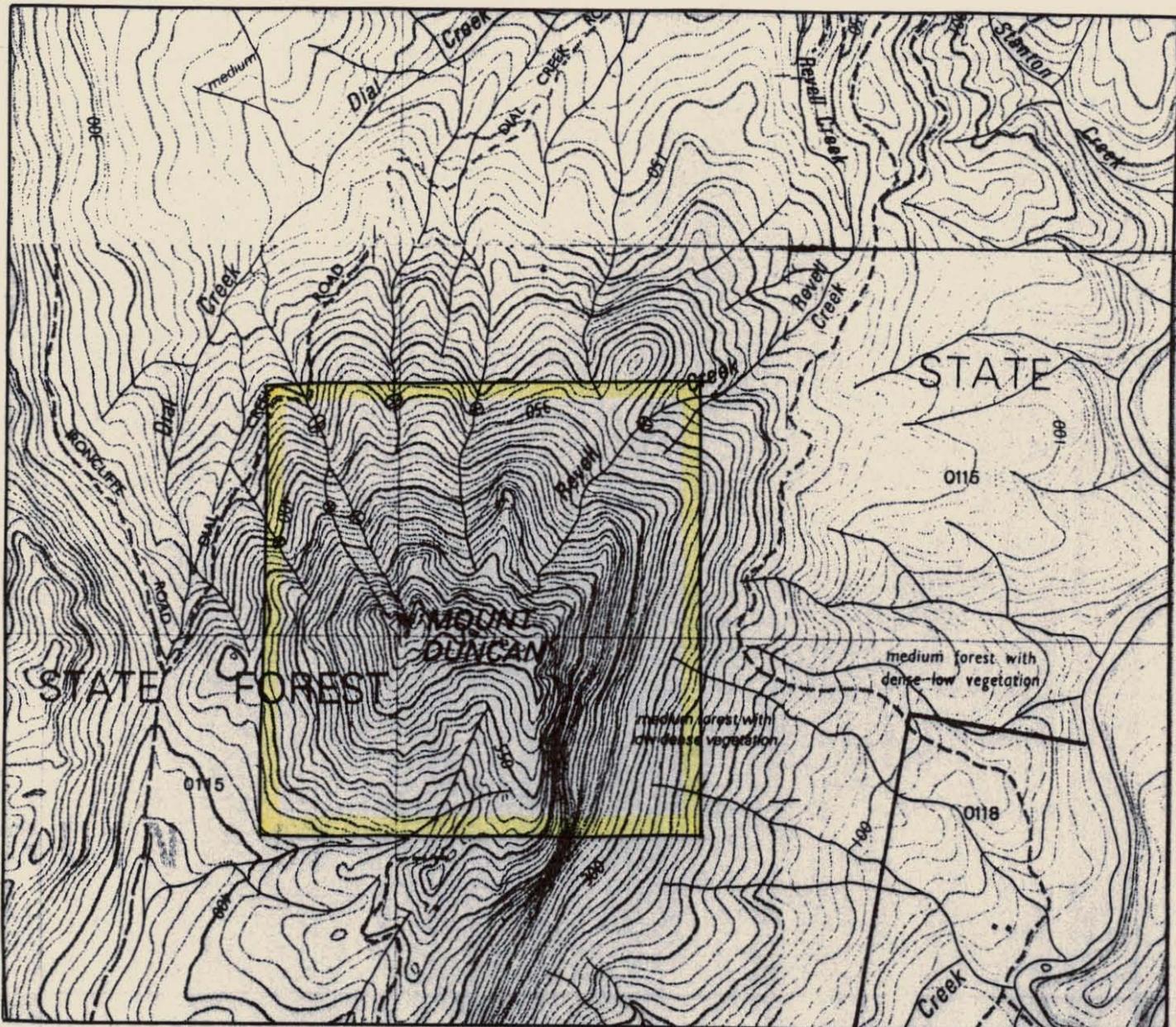
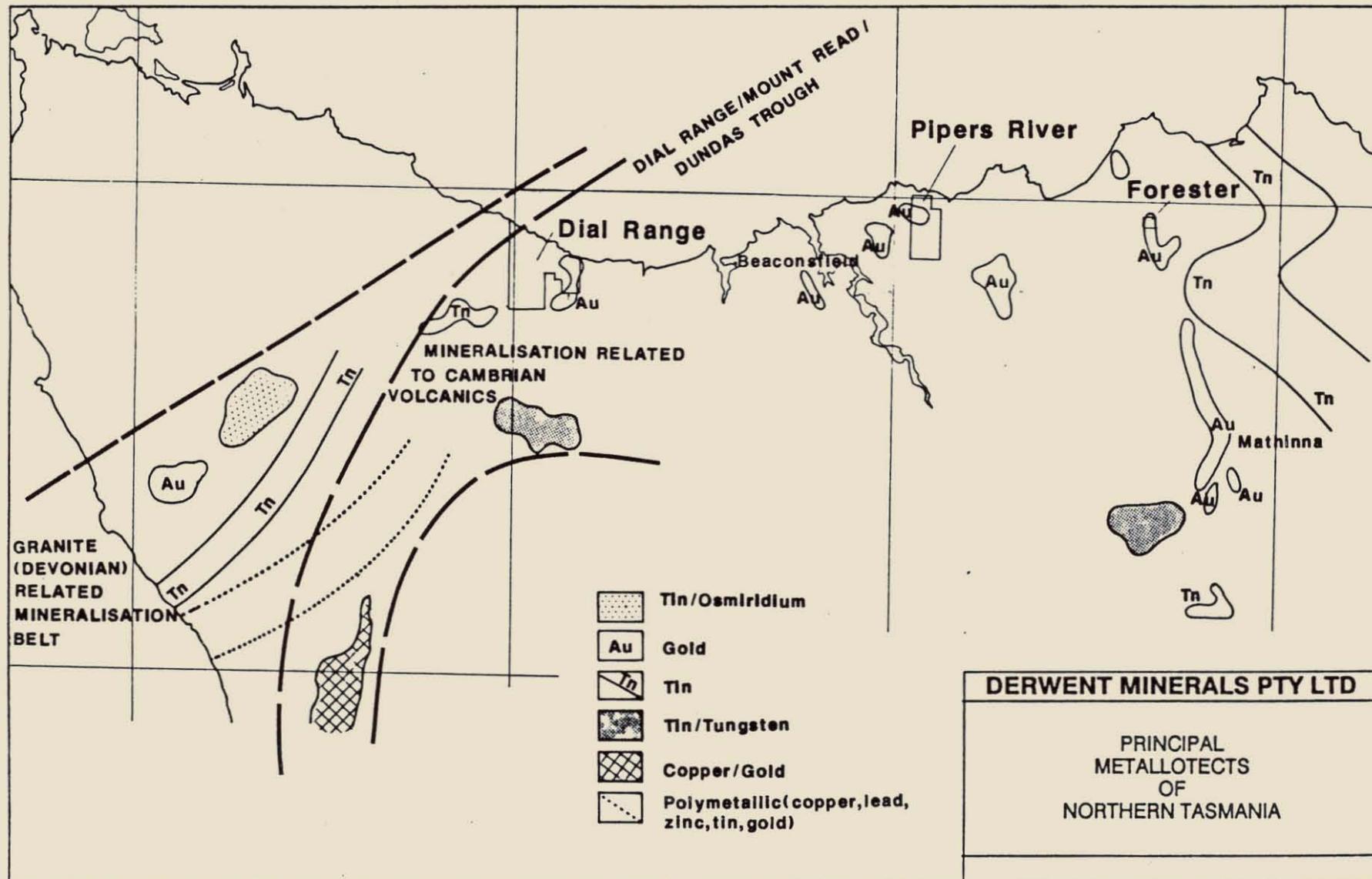


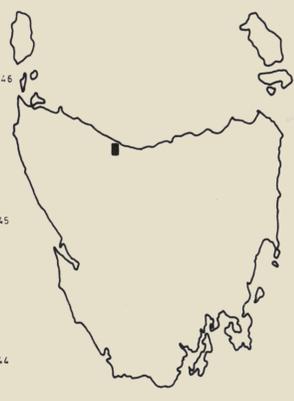
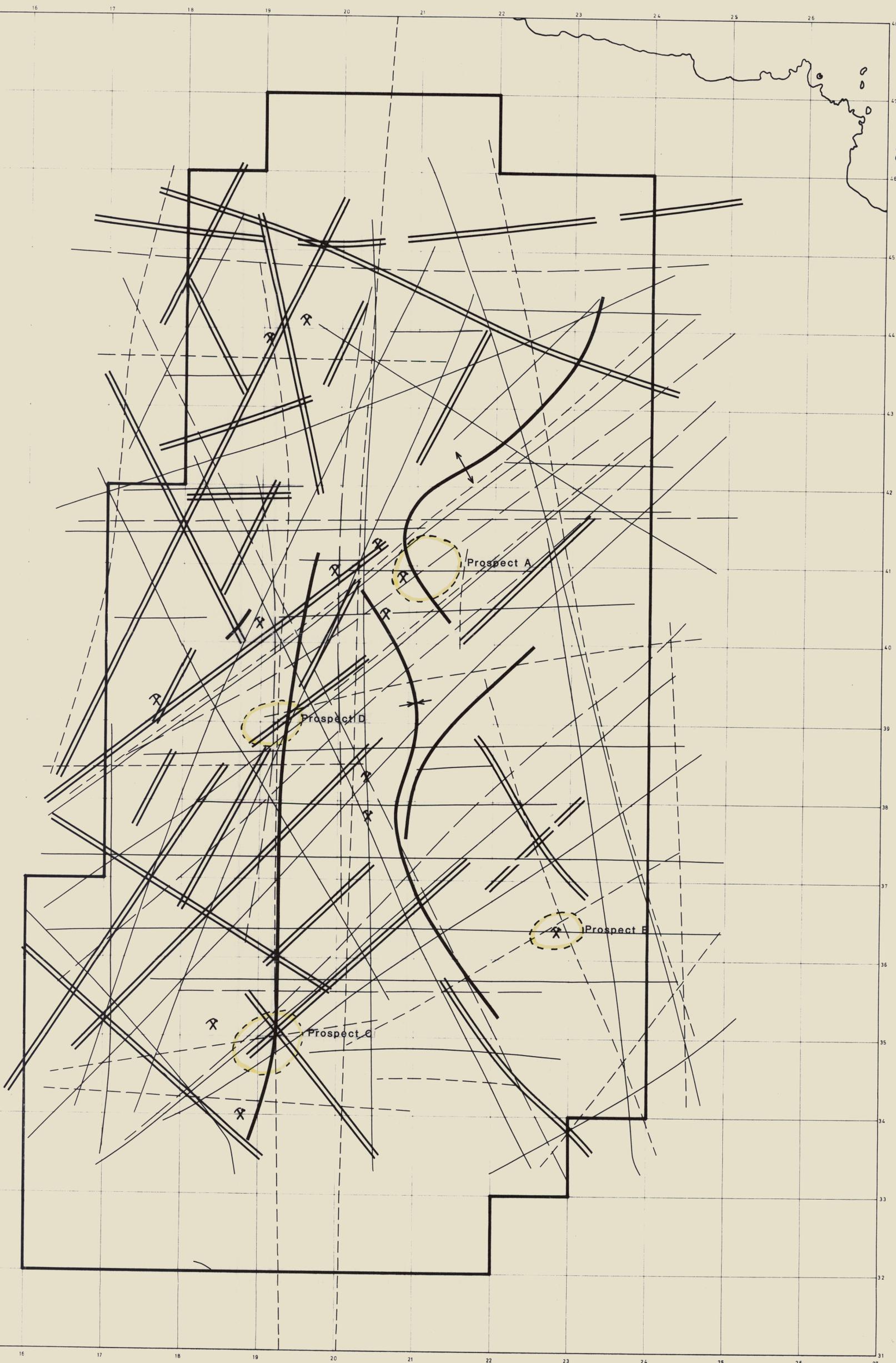
Figure 6

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Prospect D	
Mt Duncan	

Figure 7



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LOCATION MAP

-  Radiometrics
-  Mines dept. magnetics
-  Geopeko magnetics
-  Gravity
-  Geology (folds/faults)

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<b>DERWENT MINERALS PTY LTD.</b>		
Figure 8	EL 46/86 , DIAL RANGE	670013
Lineament and trend map showing the four prospects		
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## GEOLOGICAL INVESTIGATION AROUND THE KEDDIES/REVELLS REGION

A geological investigation around the Keddies/Dial region was undertaken to determine the style of mineralisation to give a handle on intrusive mode and metal source.

The workings at Keddies showed a mineralised zone of brecciated coarse pyroclastics within the Lobster Creek formation, with mineralisation of quartz, pyrite and chalcopyrite, Plate 1. The coarse pyroclastic layer appears to have been used as a structural horizon through which siliceous fluids moved precipitating metals as they went, however the outcrop is too small to give any indication as to the source of the fluids.

The workings at Revells showed the mineralised zone to be in a sedimentary sequence overlying the Lobster Creek formation, part of which was conglomeratic and inferred to be the lateral equivalent of the Isandula conglomerate, but the majority of the sulphide mineralisation was of the replacement style in fine grained pyroclastics as shown in Plate 2..



Plate 1. Pyroclastic breccia at Keddies

At Davies adit GR210423 as reported by Smith 1899 there is a syenite of "zoned oligoclase and chloritised hornblende in a fine matrix of plagioclase and quartz". Smith interpreted this as the root system of the tuffs. However Derwent suggests that this may be a partial melt from a more basic intrusion associated with the Cambrian vent system identified by Leaman. Thus these little intermediate bodies are just reworked metals from depth, producing these minor replacement or brecciated deposits as seen at Revells and Keddies respectively, which may be obscuring the larger body at depth.

It is also possible that these syenites may be associated with the Housatop Granite in which case it may be a Devonian reworking of Cambrian material.

A geochemical drilling programme is to be conducted over the region identified by Leaman as a site of a Cambrian vent system, Figure 3, prospect A.



Plate 2. Replacement sulphides in fine grained pyroclastics near Revells