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CAPRICORN MINING LTD.

**OPEN FILE**

EXPLORATION LICENCE 27/79 - HAMILTON

**MICROFILMED**

PARTIAL RELINQUISHMENT REPORT

YEAR 9

(17 April 1988 - 16 April 1989)

89-2954

89-2954

MINES	
File Ref. EL 27/79	
- 2 MAY 1989	
Doc. Ref.	
Action Officer	Initials
LETTER	
28. 4. '89	
REFERS	
Resubmit to	Date

K.C. MORRISON

V. HOFTO

April 1989

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CONTENTS

	PAGE
INTRODUCTION	1
GEOLOGY	1
CONCLUSIONS	4

## LIST OF FIGURES

	PAGE
Figure 1. EL 27/79, Hamilton - Location Map	2
Figure 2. Stratigraphic columns of Upper Parmeener Supergroup.	3

## LIST OF PLANS

Plan 1. EL 27/79 - Hamilton, 1 : 25,000. Location map and location map of proposed Retention Licence together with results of reconnaissance mapping.	
Plan 2. EL 27/79 - Hamilton, 1 : 42,000. Geological Map, Ouse Valley.	

## INTRODUCTION

Exploration Licence 27/79 was granted to Capricorn Mining Ltd. on the 17 April 1980. The licence area originally covered 870km<sup>2</sup> of the middle reaches of the Derwent Valley (Figure 1) but after several relinquishments at annual renewals, the area currently consists of two blocks totalling 221km<sup>2</sup> (Plan 1). The licence is owned 100% by Capricorn Mining Limited.

No exploration has been conducted since the end of Year 6 due to a general lack of demand for steaming coal in Tasmania and, in particular, a lack of success in developing a market for the Langloh deposit.

At the current (Year 10) renewal the Company is applying for conversion of the most prospective part of EL 27/79 to Retention Licence. If granted, the RL will cover 31 km<sup>2</sup> (Plan 1) including the known and probable extensions to the Langloh deposit.

Little work has been conducted on areas outside the Langloh deposit but this report summarises the Company's views on the coal prospectivity of the 190 km<sup>2</sup> being submitted for relinquishment.

## GEOLOGY

The exploration philosophy applied to the search for coal of saleable quality on EL 27/79 has been based on one geological principle:- i.e. all target seams will be hosted in the uppermost unit of the Parmeener Supergroup, i.e. the volcanic lithic sandstone and coal measures sequence of Carnian age (Figure 2).

The 31 km<sup>2</sup> area under application for Retention Licence (Plan 1) covers the rocks hosting the Langloh coal seams in the southern portion and their predicted northerly subsurface extension below a cover of Tertiary basalt. Older Triassic quartz sandstone outcrops in the southeast corner of the RL. The coal measures rocks are contained in a fault bounded block with Tertiary sediments on the western side and Jurassic dolerite on the eastern side.

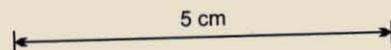
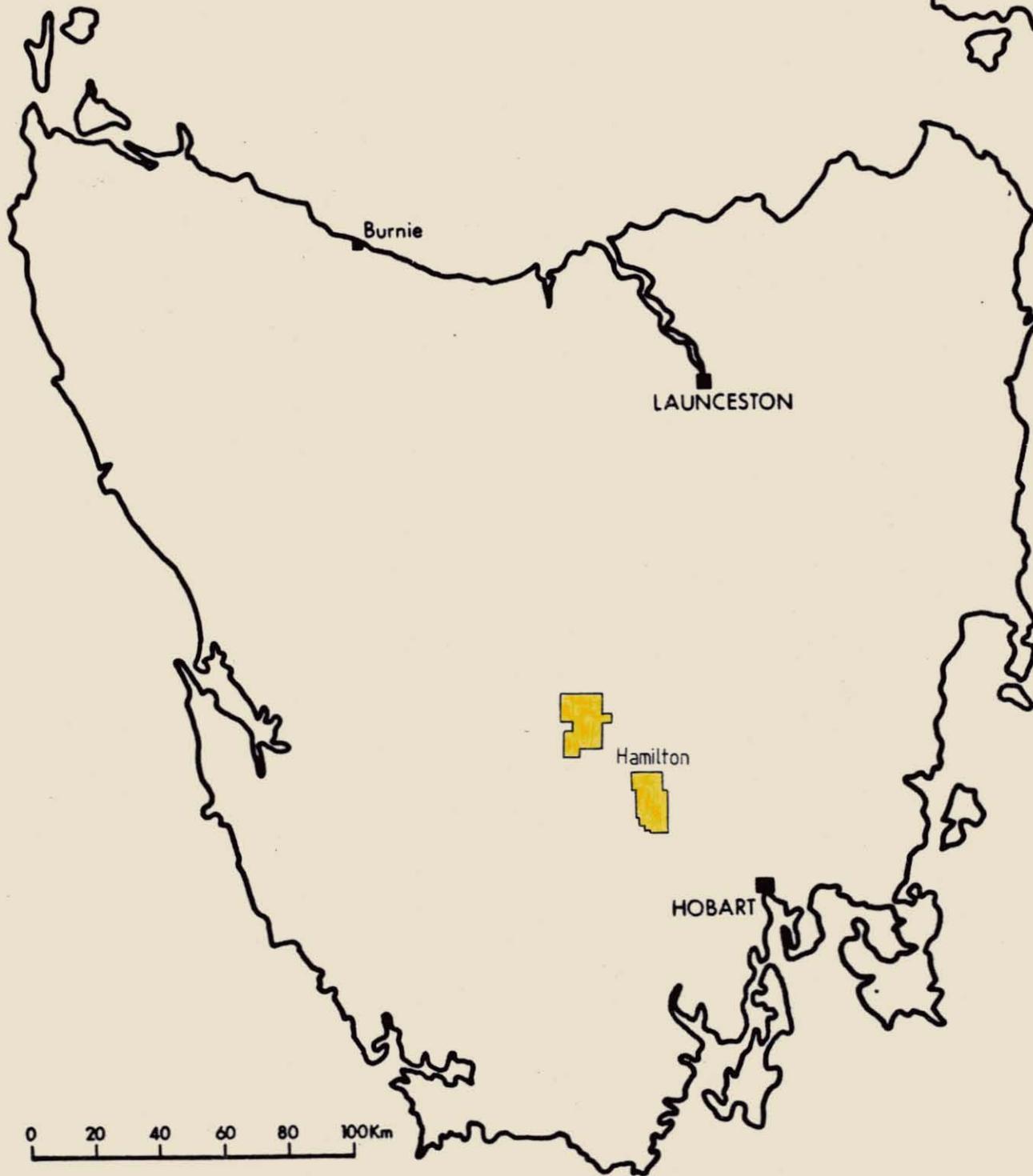
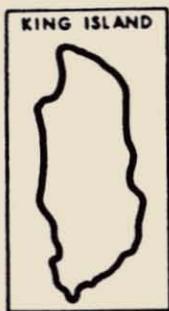


Figure 1. Location Map - EL 27/79, Hamilton

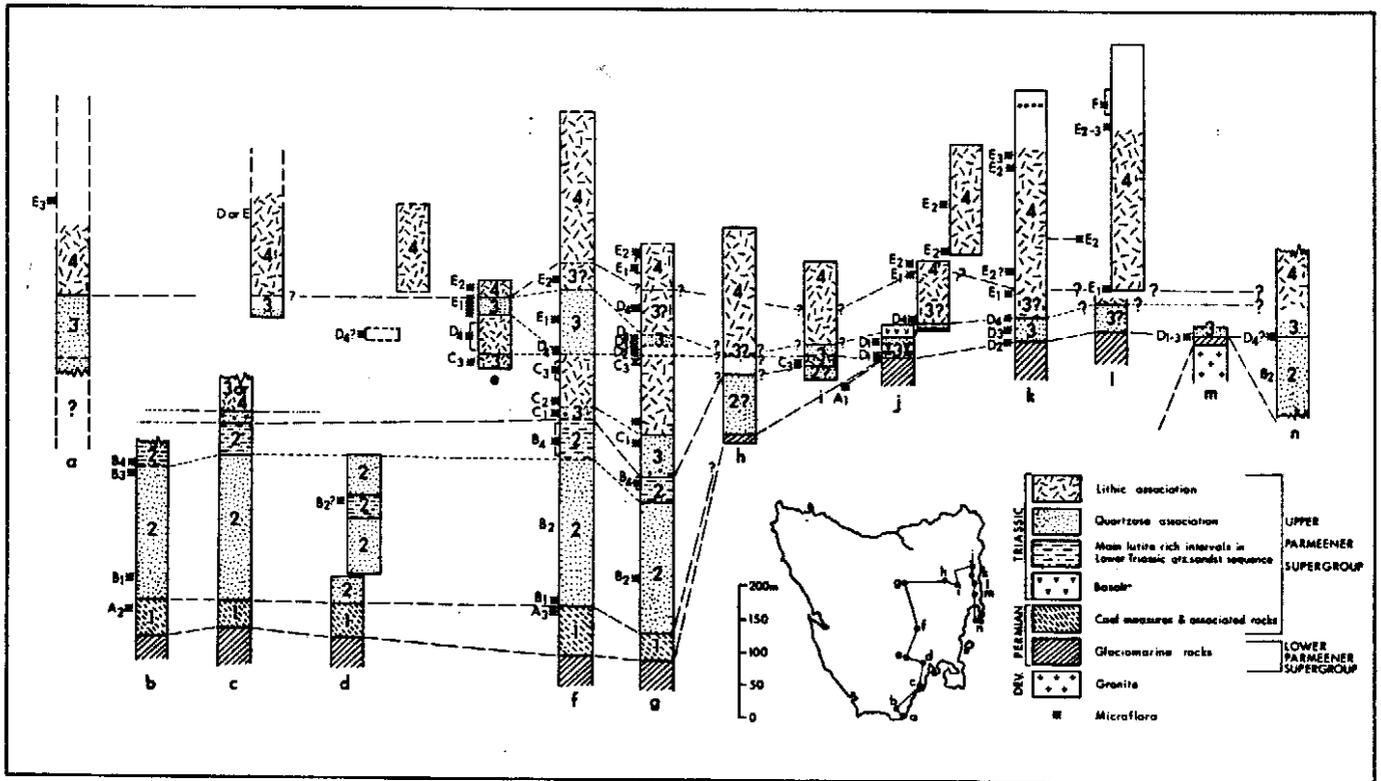


Fig. 2. Stratigraphic columns of Upper Parmeener Supergroup showing palyno-correlation and litho-correlation of main rock units. Data sources: (a) Catamaran area - Perkins (1982, 1983); (b) Mt La Perouse - Davidson (1969); (c) Kingborough area - Farmer (1985); (d) Hobart area - Banks & Naqvi (1967), Camp & Banks (1978), Forsyth (1987), Leaman (1976); (e) Mt Lloyd - Burns (1959), Forsyth (1987); (f) Oatlands area - Forsyth (1984); (g) Poatina - Forsyth (1987), McKellar (1957), Playford (1965); (h) Avoca DDHAV12 - Borman & Murphy (1981); (i) Royal George DDH ICE1 - Anon. (1979a); (j) Nicholas Range - Calver & Castleden (1981), Forsyth (1987), Hale in Spry & Banks (1962), Playford in Threader (1968); (k) Fingal Tier - Playford in Threader (1968), Threader & Bacon (1983); (l) Douglas River DDH GY27, DDH 10 - Bacon (1984), Sansom (1980); (m) Apslaw DDH 963/546 - Leaman & Richardson (1981); (n) Schouten Island - K.D. Corbett, pers. comm.; and Forsyth (unpublished data). 1-4 Main informal lithic units, Unit 1: Coal measures and associated rocks (upper Permian); Unit 2: quartz sandstone sequence and associated rocks (Griesbachian to pre-Anisian?); Unit 3: sequence with quartz and lithic sandstone (?pre-Anisian to Ladinian); Unit 4: volcanic lithic sandstone and coal measure sequence (Carnian).

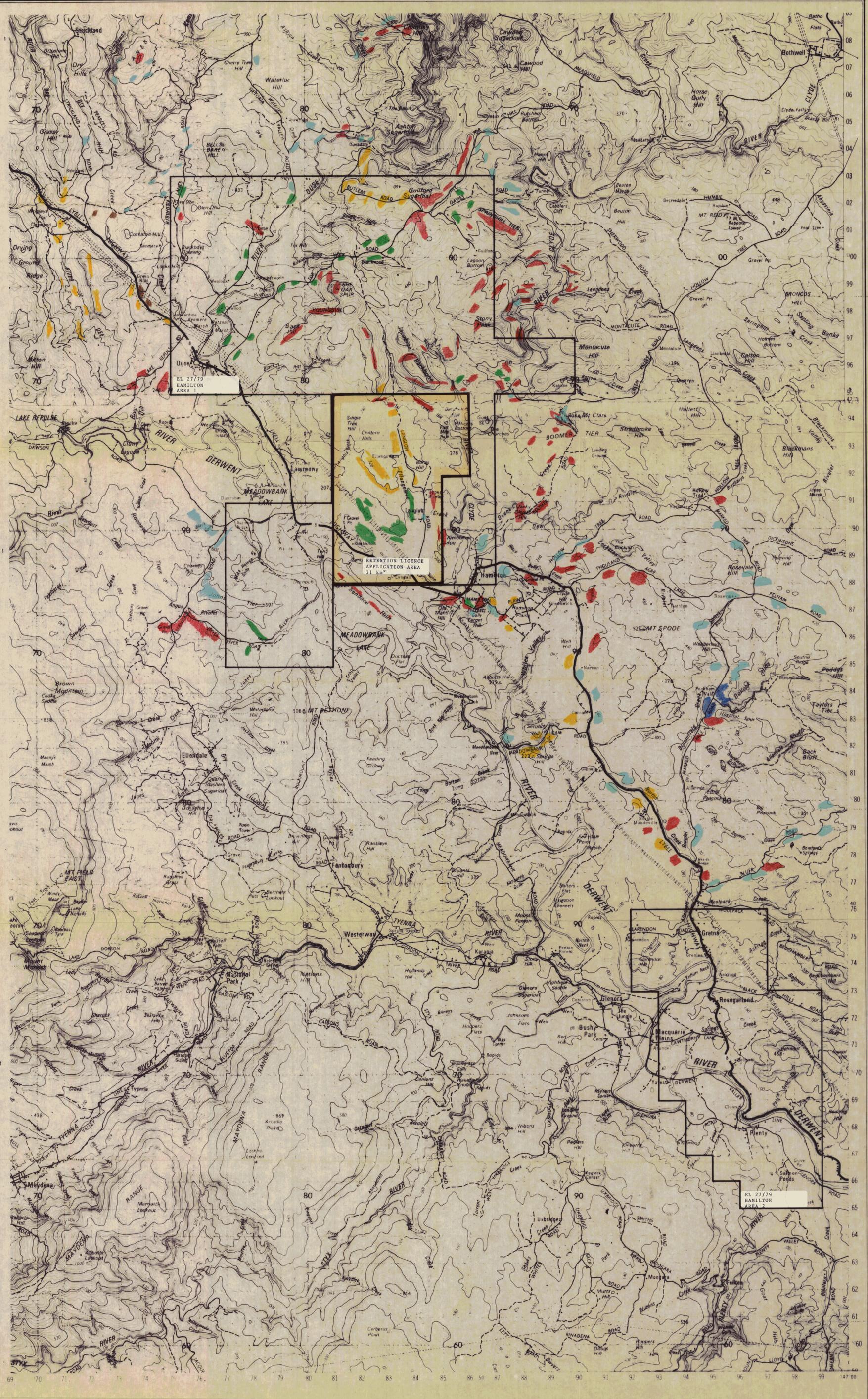
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The Langloh deposit has always attracted the big majority of the exploration effort on this EL. In the early years of the licence, reconnaissance mapping was conducted on some other parts of the EL to define new areas prospective for upper Triassic coal. This work was the basis for the relinquishments between Year 3 and Year 6.

Plan 1 shows the results of reconnaissance lithological mapping in the areas being relinquished as part of the current transfer to Retention Licence. The only target, apart from the Langloh, mapped in any detail was the Ouse Valley. The results of this work are shown on Plan 2. No mapping was conducted by Capricorn in the Gretna area (Part 2 of EL 27/79) but it is known from the Oatlands 1:250,000 Tasmania Department of Mines Sheet that this block encloses a substantial area of Triassic lithic sandstone outcrop.

#### CONCLUSIONS

1. Coal prospective upper Triassic rocks are common within the area being relinquished.
2. There is no incentive to explore new targets until a market for the Langloh deposit is established.

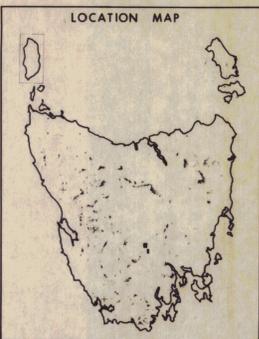


EL 2779  
HAMILTON  
AREA 1

RETENTION LICENCE  
APPLICATION AREA  
31 km<sup>2</sup>

EL 2779  
HAMILTON  
AREA 2

PROJECTION: Universal Transverse Mercator (UTM)  
HORIZONTAL DATUM: Australian Geodesic Datum 1984  
VERTICAL DATUM: Australian Height Datum (AHD) 1985  
EARTH MODEL: WGS 84  
SCALE: 1:50,000  
MAGNETIC VARIATION: True and Magnetic North are shown  
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- LEGEND**
- Tertiary basalt
  - Tertiary sediments
  - Triassic lithic sandstone
  - Triassic quartz sandstone
  - Permian sedimentary rocks
  - Jurassic dolerite

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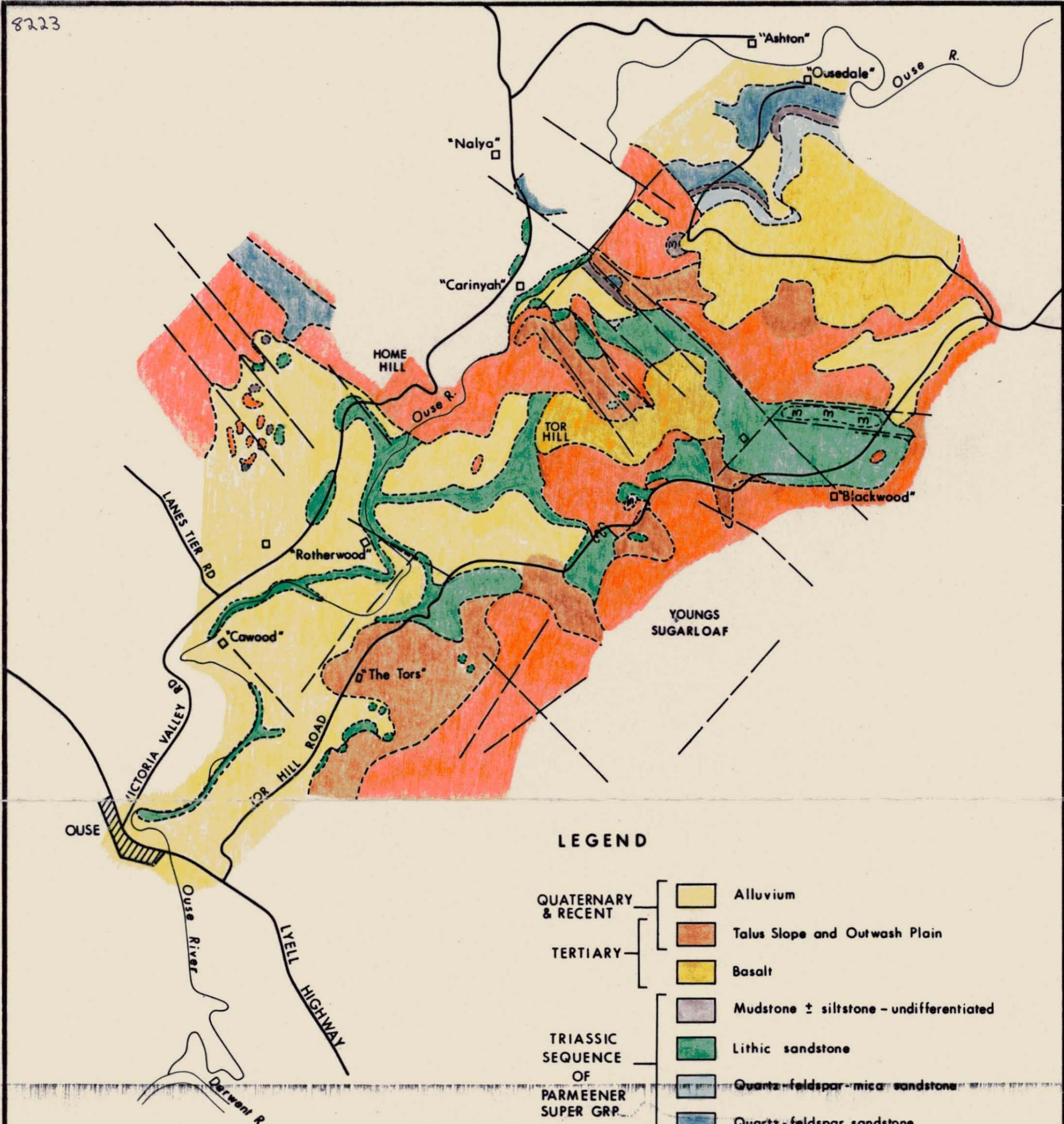
**CAPRICORN MINING LIMITED**

**EL 27/79 - HAMILTON, TASMANIA**

**Reconnaissance Mapping**

COMPILED	VH
DRAWN	VH
DATE	MARCH '89
SCALE	1:50,000
FIGURE	27/79-2

TO ACCOMPANY: PARTIAL RELINQUISHMENT REPORT



LEGEND

- QUATERNARY & RECENT
  - Alluvium
- TERTIARY
  - Talus Slope and Outwash Plain
  - Basalt
- TRIASSIC SEQUENCE OF PARMEENER SUPER GRP.
  - Mudstone ± siltstone - undifferentiated
  - Lithic sandstone
  - Quartz-feldspar-mica sandstone
  - Quartz-feldspar sandstone
- JURASSIC
  - Dolerite
- m Thermal metamorphism (dolerite contact)
- Photolineament



5 cm

CAPRICORN MINING LTD  
 E.L. 27/79 - HAMILTON, TASMANIA  
 GEOLOGICAL MAP, OUSE VALLEY

643009

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SCALE 1 : 42,000

PLAN 2

TGS / JT