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HELLYER E.L. 46/82

EXPLORATION REPORT FOR YEAR ENDING 15TH JULY, 1984.

FIRST AND FINAL REPORT

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INTRODUCTION

EL 46/82 covers an area of 497 sqr km in north west Tasmania and is centred on the Hellyer Gorge, where the Murchison Highway crosses the Hellyer River.

Access to the area is mainly via the Murchison Highway, with minor variable status forestry roads and tracks.

The dominant physiographic feature of the area is the major westerly draining Arthur River, which, with its tributaries (including the Hellyer River), have dissected a basalt plateau to expose Parmeener Super Group rocks in the western portion of the EL.

Northerly drainage is effected by the Inglis, Cam, St. Marys, St. Josephs and Guide rivers.

The north west boundary of EL 46/82 adjoins EL 43/70 held by Mineral Holdings Aust. Pty. Ltd., and field activities in EL 46/82 consisted of limited traverses along public roads in the central portion of the area.

EL 46/82 lies mainly in the Burnie and St. Valentines quadrangles, of which the Burnie geological sheet has been published by the Geological Survey of Tasmania, and the St. Valentines sheet is in press.

EXPLORATION OBJECTIVES

CRAE Pty. Ltd. require a black coal deposit with the following characteristics:

1. An in situ resource of 50 million tonnes;
2. Individual coal seam widths of 1.0m;
3. A depth of overburden sufficiently thin to allow extraction by open pit methods of mining. In effect this means a maximum overburden thickness of 50m.

COAL POTENTIALA. LOWER MARINE SEQUENCE OF THE PARMEENER SUPER GROUP1. Distribution and Lithologies

The Lower Marine Sequence in the area consists of the Wynyard Tillite and the Inglis Siltstone; the former is a 400m thick unit of tillite, with lesser sandstone and laminated siltstone/claystone (rhythmites).

In the northern portion of the EL, Gulline (in Gee 1977) recorded coal or carbonaceous fragments in one of the sandstone associated with a rhythmite sequence.

Sandstone/rhythmite successions are also present in the southern portion of the EL (P.W. Baillie pers. comm.), and the sandstone/rhythmite occurrence near the Hellyer River at 478 500E, 5435 500N was seen to consist of thin bedded, variably pebbly grey/black mudstone, overlying fine grained micaceous quartz sandstone, with minor siltstone and mudstone.

The sandstone contains limonitic clasts, pebbles, and in places shows current bedding. (Further details are given in Figure 1).

2. Coal Potential

Although lutites overlie the sandstone at the above locality, their pebbly (?dropstone) nature suggests cold conditions, and that these mudstone are probably marine in origin.

The absence of plant fossils in the minor mudstones associated with the

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sandstone, and the absence of carbonaceous or coaly fragments in the latter, in conjunction with the inferred limited duration glacio-fluvial and glacio-lacustrine environment, combine to render the coal potential of this subordinate component of Wynyard Tillite non prospective.

B. FRESHWATER SEQUENCES OF THE PARMEENER SUPER GROUP

Regional mapping by the Geological Survey of Tasmania (Gee, 1977 and P.W. Baillie et al, pers. comm.), has shown the Lower Freshwater, Upper Marine, and Upper Freshwater Sequences of the Parmeener Super Group to be absent in the area of EL 46/82.

6.

CONCLUSIONS AND RECOMMENDATIONS

1. Lower Marine Sequence rocks have a zero potential for the coal target as defined.
2. Both freshwater sequences (Lower and Upper) are absent in EL 46/82.
3. EL 46/82 has a zero coal potential, and accordingly it is recommended that EL 46/82 be relinquished.

Reference

Gee, R. D. 1977: Burnie, Explan. Rep. Geol. Surv. Tas.

6. KEYWORDS

Coal, Sub-bituminous, Permian, Reconnaissance

7. LOCATION

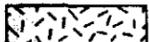
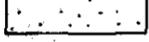
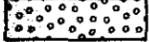
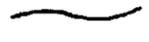
Burnie SK55-3

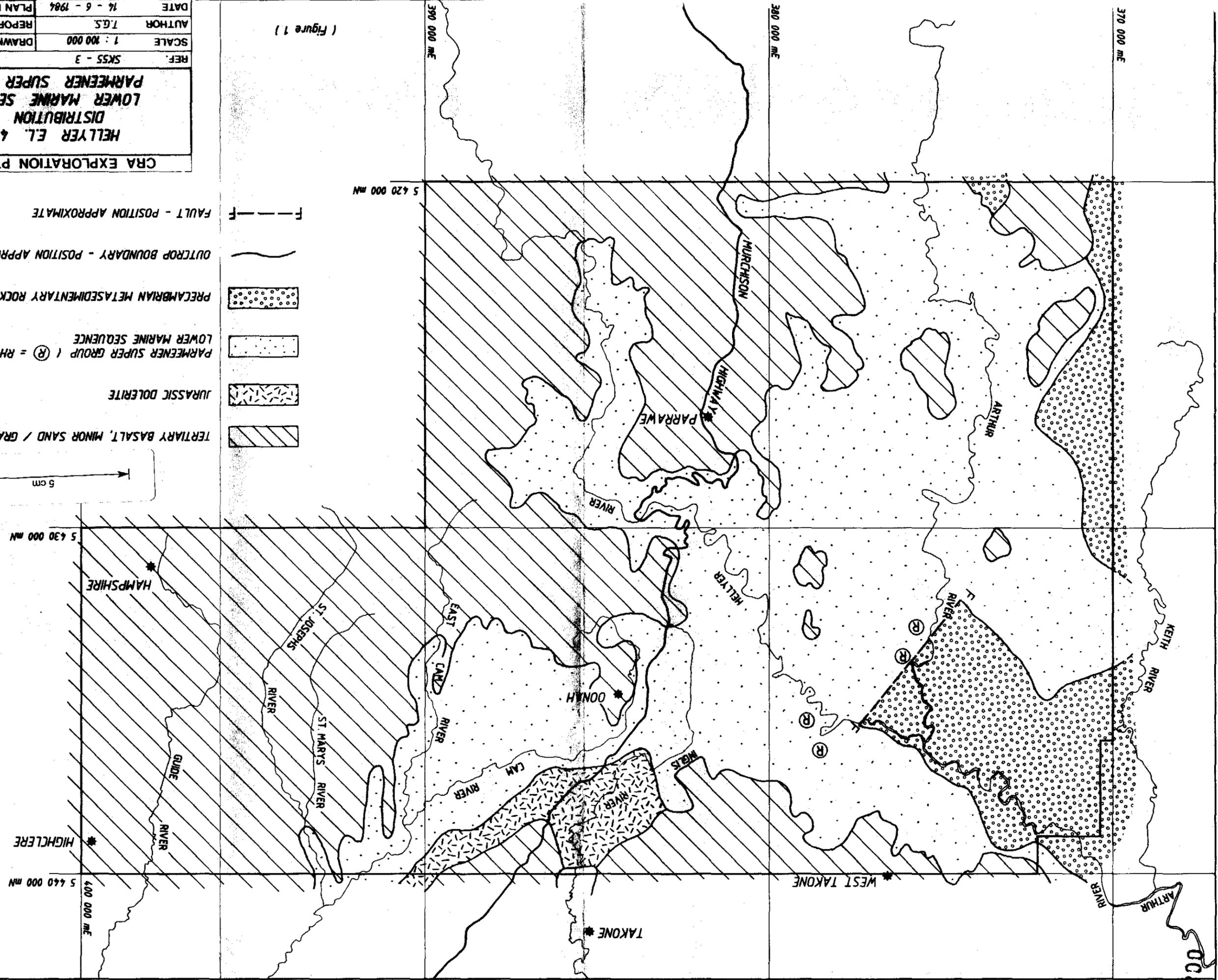
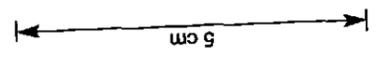
8. LIST OF PLANS

1. Hellyer EL 46/82 Distribution of Lower Marine Sequence TASH 1789
Parameener Super Group

REF.	SK55 - 3
SCALE	1 : 200 000
AUTHOR	T.G.S.
DATE	14 - 6 - 1984
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PLAN No. TASH	1789
HELLER E.L. 46/82 DISTRIBUTION OF LOWER MARINE SEQUENCE PARMEENER SUPER GROUP	
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(Figure 1)

- TERTIARY BASALT, MINOR SAND / GRAVEL. 
- JURASSIC DOLERITE. 
- PARMEENER SUPER GROUP (R = RHYTHMITE) LOWER MARINE SEQUENCE. 
- PRECAMBRIAN METASEDIMENTARY ROCKS. 
- OUTCROP BOUNDARY - POSITION APPROXIMATE. 
- FAULT - POSITION APPROXIMATE. 



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