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26 MAY 1982

CAPRICORN MINING LIMITED
RELINQUISHMENT REPORT
COAL EXPLORATION LICENCE 28/79
OATLANDS TASMANIA

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CAPRICORN MINING LIMITED

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RELINQUISHMENT REPORT

COAL EXPLORATION LICENCE NO. 28/79

OATLANDS, TASMANIA

AMG REFERENCE POINTS ADDED

May 1982

1. INTRODUCTION

E.L. 28/79: covers an area of 1,561 km² in the southern Midlands of Tasmania (Fig. 1). The Licence was granted to Capricorn Mining Ltd. for coal only, on 21st April 1980. During the six-month period ending 16th October 1981, nine scout exploration holes were drilled under supervision of General Geological Services. The results of this drilling, together with that for drilling conducted in the other three coal E.L.s held by Capricorn at the time, are contained in the six-monthly report (CAP 704/20), submitted to the Department of Mines on 15th January 1982.

An application for licence renewal had been made on 12th October 1981, about the same time that the Mines Department implemented twelve-month renewal periods.

In March 1982, Petrecon Australia Pty. Ltd. assumed responsibility for operating the Capricorn Mining E.L.s. At that time the renewal application was still being considered by the Department of Mines.

After considering the results of the previous exploration, together with what was known of the regional geology, it was decided that the chance of finding viable coal within 28/79 was unreasonably low. Consequently, the Department of Mines was informed on 21st April 1982 of the intention to relinquish the E.L.

This report summarises the previous exploration and presents the rationale behind the decision to relinquish.

2. EXPLORATION HISTORY

2.1 EXPLORATION PHILOSOPHY AND PROGRAMME

An exploration programme for E.L. 28/79 was planned in conjunction with three other coal licences granted to Capricorn Mining Limited in southern Tasmania. The scope and direction of the exploration proposed in the initial programme were to be progressively updated as results were obtained during work carried out simultaneously in all the licence areas. From the outset, an integrated work schedule was obviously desirable from technical and financial viewpoints, and the proposed joint exploration programme for the four areas met with the approval of the Department of Mines.

The work programme originally proposed (Reports CAP 704/1: September 1979; CAP 704/2: October 1979 and CAP 704/3: December 1979) contained four stages, the first stage being a regional geological appraisal.

Proposed expenditure for the regional appraisal and the planned follow-on evaluation programmes is shown in Table 1, as follows:

Table 1: Proposed Combined Expenditure - Capricorn Mining Coal E.L.s

Stage 1 - Regional Geological Appraisal	\$100,000
Stage 2 - Engineering & Reserve Economic Studies	\$ 20,000
Stage 3 - Detailed Evaluation of Coal Deposits)) \$200,000
Stage 4 - Feasibility Studies	
Total proposed expenditure	<u>\$320,000</u>

A suggested time schedule for completion of the above listed work and study programmes was Stages 1 and 2 in Year One and Stages 3 and 4 in Year Two.

2.2 REGIONAL GEOLOGY

Several zones of mapped and potential coal-bearing late-Middle and Late Triassic sub-lithic and lithic sandstones were outlined prior to scout drilling. These targets were taken from the Brighton and Oatlands 1:50,000 Geological Survey of Tasmania maps. The largest area of confirmed lithic (coal measures) sandstone is in the York Plains area in the N.E. corner of the Licence area. Most of the large area of Triassic sandstone outcropping around Oatlands, to the S.W. of York Plains, can be demonstrated by rapid reconnaissance to be quartz sandstone types and as such is assumed to be older and lower in the sequence than the coal measures.

Several N.W.-S.E. trending linear belts of lithic sandstone occur south of Oatlands and to the west of the Coal River Valley. They are often fault bounded against dolerite or older rocks within the Upper Freshwater Sequence of the Parmeena Supergroup.

2.3 SCOUT DRILLING

Nine scout holes were drilled on targets considered to offer the highest chances of encountering coal close to the surface, and of avoiding dolerite. Where possible, these holes were located near abandoned mine sites to obtain stratigraphic and assay data on coal sections. Five of the holes were used to test the hypothesis that the York Plains area is large and flat enough for open cut mining should sufficient coal exist close to the surface.

Where possible, holes were geophysically logged using S.P., resistivity density and natural gamma ray tools.

Table 2 is a summary of stratigraphic information obtained and Table 3 contains individual coal ply proximate analyses.

2.4 INTERPRETATION OF EXPLORATION RESULTS

The holes at Colebrook, Jericho and Mike Howes Marsh encountered no significant coal and produced no evidence to justify further drilling. The main prospect, York Plains, produced coal in all five holes, with coal-bearing intervals ranging from 0.52 to 6.30 metres. Assuming a maximum tolerable overburden : coal thickness ratio of 10:1, Holes 0-01, 0.02, + 0.03A encountered coal with open cut potential. Holes 0.02 and 0.03A show sections which are thick enough to be considered working sections for underground mining.

Correlation of seams is difficult and any interpretation requires drastic lateral seam variation and/or vertical fault displacement. The best intersection (H-02) is collared on a local topographic high at the eastern edge of York Plains and cannot satisfactorily be correlated with any of the other coal sections.

Table 2 shows that although the raw ash in the main coal-bearing sections is acceptable, i.e. averaging around 30%, the % volatiles is variable but generally very low. This suggests the possibility that the coal has been de-volatized at the time of dolerite intrusion. The volatiles content is considered by Newcastle coal technologists, Marchioni and Associates, to be a major limiting factor in the market potential for York Plains coal.

Table 4 shows incurred programme expenditure.

3. CONCLUSIONS

1. The scout drilling, when considered together with the regional geology, and topography, has effectively eliminated the Jericho, Colebrook and Mike Howes Marsh areas.
2. The scout drilling at York Plains indicates that some encouraging coal-bearing sections exist, however the coal has a low % volatiles and appears to be laterally variable and/or displaced by faulting. The area has not yet been fully tested.
3. At least one additional body of lithic sandstone sequence, S.W. of Oatlands, remains to be tested by scout drilling.
4. It is considered that although the coal potential of the E.L. has not been fully tested, all evidence to date suggests that the chances of finding viable coal are low. A thorough investigation would be costly and Petrecon takes the view that its exploration resources would be more efficiently used if concentrated on one area with apparently higher chance of success. Consequently, it is recommended that this Licence be relinquished.

*Other reports
use the prefix
0-02 for
at Colebrook
drilling.*

Scale: 1:500,000

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AMG REFERENCE POINTS ADDED

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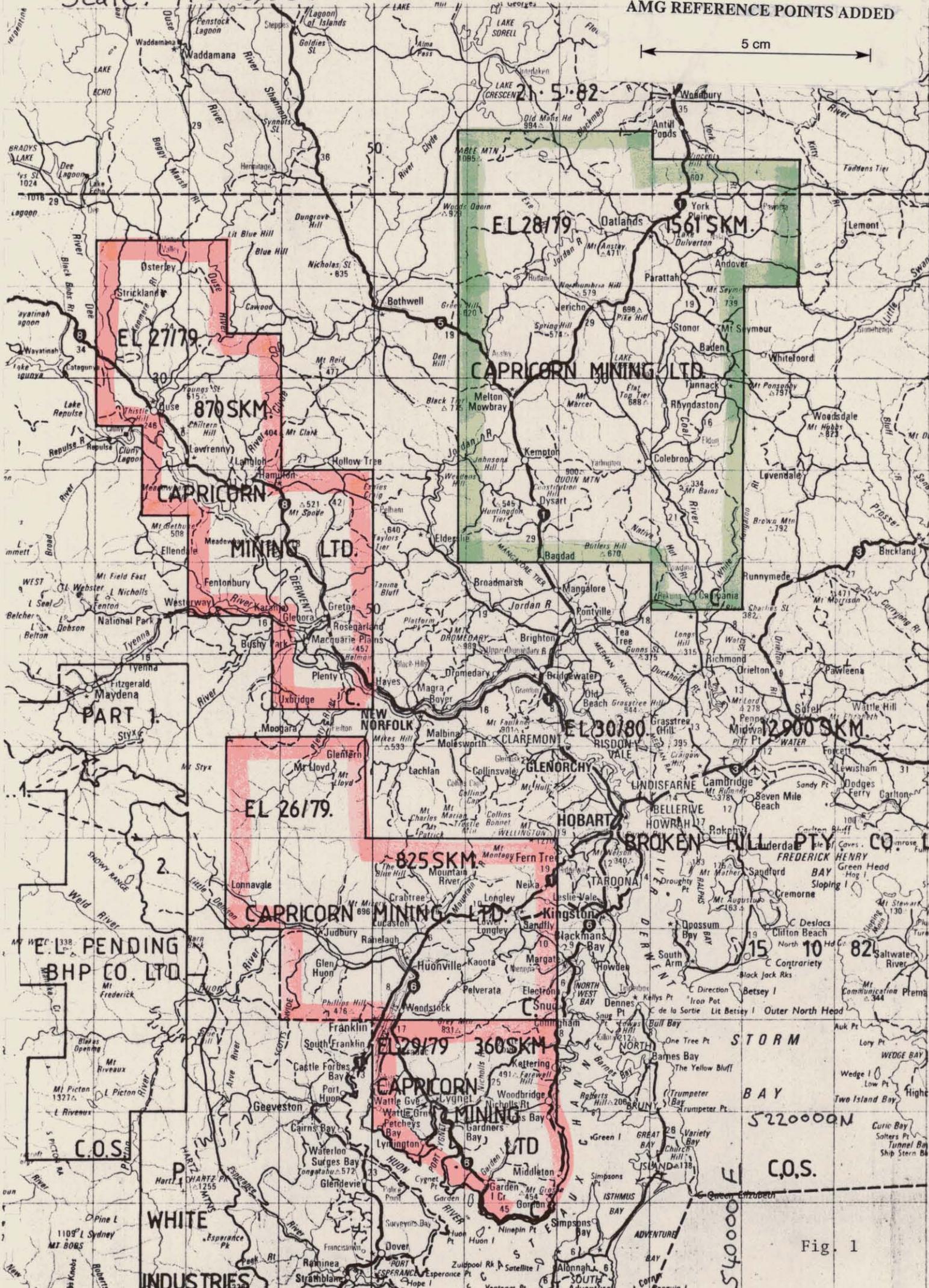


Fig. 1

TABLE 1

ole No.	Location	T.D.	Lithology at T.D.	Cumulative Coal Thickness	Thickness of Main Coal-Bearing Interval(s)	Depth of Main Coal-Bearing Intervals
0-01	York Plains	54.59 m	Sandstone	1.63 m	1.03 m	5.85-6.88 m
0-02	York Plains	48.63 m	Sandstone	4.52 m	6.30 m	31.07-37.37 m
0-03A	York Plains	48.02 m	Sandstone	1.92 m	3.11 m	37.36-40.47 m
0-03B	York Plains	53.40 m	Sandstone	0.52 m	0.52 m	34.35-34.87 m
0-04	Mike Howes Marsh	50.73 m	Siltstone	0.12 m	-	-
0-05	Jericho	51.00 m	Siltstone	nil	-	-
0-06	York Plains	46.15 m	Dolerite	0.75 m	0.98 m	32.45-33.45
0-07	Colebrook	47.34 m	Dolerite	nil	-	-
0-09	Colebrook	100.00 m	Sandstone	0.42 m	0.40 m	26.62-27.02

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TABLE 2

Individual Ply Raw Coal Proximate Analyses

Hole No.	Depth in Metres	Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Relative Density
0-01	5.85- 6.88	3.6	34.6	8.9	52.9	1.58
	36.42-37.02	3.3	25.3	11.8	59.6	1.47
0-02	8.01- 8.70	3.5	29.3	13.7	53.5	1.50
	31.07-31.49	2.4	24.7	14.4	58.5	1.52
	31.60-31.76	3.3	52.2	9.2	35.3	1.75
	32.98-33.31	2.3	20.2	12.2	65.3	1.48
	33.34-33.45	4.9	48.4	10.0	36.7	1.75
	33.62-34.20	2.4	26.8	13.6	57.2	1.53
	34.35-34.57	3.0	35.4	13.9	57.7	1.52
	34.68-35.18	1.9	32.0	12.0	54.1	1.55
	35.26-35.51	3.1	28.5	11.6	56.8	1.49
	35.60-36.30	2.4	23.2	13.1	61.3	1.47
	36.86-37.37	3.3	28.5	12.1	56.1	1.51
	39.88-40.13	2.0	25.2	12.7	60.1	1.48
	41.36-41.43	2.3	36.5	8.9	52.3	1.62
0-03A	37.36-37.52	3.9	35.4	13.9	46.8	1.62
	37.60-37.74	4.9	36.9	13.3	44.9	1.60
	37.84-37.96	8.9	56.1	8.7	21.3	1.80
	38.14-38.35	3.8	33.3	14.4	48.5	1.60
	38.48-38.85	3.9	34.5	13.0	48.6	1.56
	39.11-39.34	2.2	20.0	13.5	64.3	1.46
	39.52-39.72	3.1	24.9	13.2	58.8	1.49
	39.86-40.47	2.3	19.3	14.8	63.6	1.45
0-03B	34.35-34.87	2.3	21.4	14.6	61.7	1.48
0-06	11.08-11.35	2.5	40.8	14.9	41.8	1.66
	32.45-32.75	3.5	39.3	7.3	49.9	1.61
	33.25-33.43	3.1	49.5	9.0	38.4	1.70
0-09	26.62-27.02	8.7	21.2	23.0	47.1	1.45

TABLE 3Expenditure Incurred, E.L. 28/79April 1980 to October 1981

	<u>\$</u>
Administration	6,125
Field Studies	60,818
Office Studies	<u>28,369</u>
Total	<u>95,312</u>