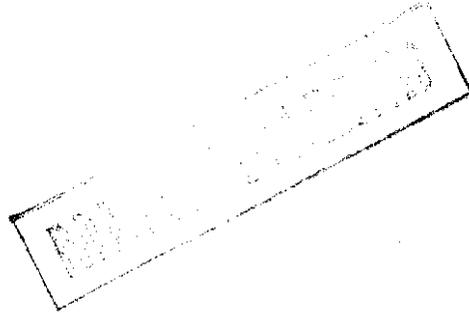


CRA EXPLORATION PTY. LIMITED

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RAPID RIVER EL 1/79NORTH WEST TASMANIAFINAL REPORT ON EXPLORATION

AUTHOR: F. R. Funnell

DATE: September, 1987

SUBMITTED TO: T. W. Dickson

ACCEPTED BY: *[Signature]*

COPIES: CRAE Hobart

CRAE Canberra

Department of Mines, Tasmania

CRAE Report No. 14753

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AMG REFERENCE POINTS ADDED

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## 1. SUMMARY

A detailed programme of exploration was carried out over the Rapid River area in North-West Tasmania. The work included airborne magnetic and radiometric surveys, ground follow-up of all major magnetic anomalies, geological mapping and stream sediment sampling in selected areas.

Commodities searched for included tungsten, base metals, gold and platinum as well as extensions to the Lyons River magnesite trend. No significant mineralisation was located and the Licence was relinquished prior to its full statutory term.

## 2. INTRODUCTION

Rapid River EL 1/79 extends south from the Arthur River to approximately 15km north of Savage River (Plan TASH 2496). The Licence was originally 365km<sup>2</sup> in area and was granted to Geopeko in April, 1979. It became part of the Rocky Cape Joint Venture between CRA Exploration and Geopeko in January, 1982, and was transferred 100% to CRA Exploration in June, 1983, when Geopeko withdrew from the Joint Venture.

The Licence was reduced to 125km<sup>2</sup> in April, 1985.

## 3. CONCLUSIONS

Access to the area is very restricted and many of the critical areas are covered by thick soil, basalt or Permian sediment.

No significant mineralisation was located and many of the magnetic anomalies were shown to be due to small unmapped basalt remnants on hill tops or to Proterozoic dolerite dykes.

#### 4. RECOMMENDATION

The area is to be relinquished.

#### 5. RESUME OF EXPLORATION PHILOSOPHY

Geopeko's original concept was to search for stratiform tungsten mineralisation of the Mittershill type along the Arthur Lineament. The occurrence of basic volcanics, with deep-water quartzite, meta pelite and black shale, were considered favourable but initial sampling was disappointing.

CRA Exploration regarded the Arthur Lineament as a basic volcanic rise within the Pre-Cambrian basin. Carbonate rocks (dolomites and magnesite) are developed along the rise or lineament and pyrite-magnetite mineralisation is developed at Savage River to the south and at Keith River to the north. Massive sulphide (pyrite) beds occur near the Lyons River magnesite. It was thought that shale hosted lead-zinc deposits of the Faro type could occur along the lineament or in the flanking Pre-Cambrian sediments and that, in this environment, they would possibly have some magnetic signature. An airborne magnetic survey was therefore considered the quickest and best way to explore the area, particularly as airborne electrical methods could be swamped by the ubiquitous black shale units.

Some thought was also given to gold-platinum occurrence along the basement high. Trace quantities of gold and platinum occur in the Lyons and Arthur River magnesite bodies, but there is little outcrop and the stream sediments are not ideal for geochemical sampling.

#### 6. SUMMARY OF EXPLORATION

Between 1979 and January, 1982, Geopeko carried out limited mapping and geochemical sampling programmes in the Folly's Hill and Rapid River area in the north and central sections of the Licence. The targets were gold and tungsten mineralisation but no anomalous areas were detected.

CRA Exploration flew a magnetic and radiometric survey over the whole Licence area in February, 1982. A total of 2,380 line kilometres was flown and full specifications, contour plots and computer graphic enhancements are provided in CRAE Report No. 11637.

Twenty magnetic anomalies were selected and modelled and six were dismissed on initial ground follow-up (CRAE Report No. 12276).

The Esso West Coast Input survey was relocated and five anomalies RAPID EAST, RAPID WEST, RAPID, SEDGE and RAPEND SOUTH were shown to have coincident magnetic and INPUT signature. CRAE Report No. 12532 details work carried out on COMSTAFF CREEK ZINC ANOMALY, THE RAPID EAST (May-Input), RAPEND (Mag) 2450/10360 Input anomaly, 2477/10360 Input anomaly, 2465/10360 Input anomaly.

In 1985 the Licence was reduced to 125km<sup>2</sup> and CRAE Report No. 13107 was provided as a report on the relinquished area. It detailed investigations on 28 anomalies within the relinquished area.

CRAE Report No. 13136 provided results on the anomalies within the 125km<sup>2</sup> area that was retained. Work was continued on COMSTAFF CREEK, RAPEND, MT BERTHA, SEDGE, RAPID EAST AND INPUT ANOMALIES 2477/10360, 2465/10360, 526/10480, 2953/10440, 2933/10440, 542/10480, 555/10480 and 2409/10320. Work carried out involved geological mapping, ground geophysics and stream sediment and bedrock geochemistry. No significant mineralisation was located.

In 1985 work was largely restricted to follow up of gold anomalies at Folly Hill, Arthur River and Comstaff Creek. Several lines of Jacro bedrock sampling were established. The magnesite potential was inconclusively followed by Jacro drilling south of the Arthur River and mapping in the upper reaches of Rapid River. Results are provided in CRAE Report No. 13754.

No field work was carried out during 1986 pending the in-house development of a new geochemical sampling technique for gold and platinum. The technique did work well in arid areas of Australia, but was not considered suitable for Tasmania (CRAE Report No. 14379).

<u>ANOMALY</u>	<u>WORK DONE</u>	<u>SOURCE</u>	<u>COMMENT</u>
ARTHUR	Photo Interp/ Modelling	Basalt	
CLEARWATER DOLSOW/ 4009/10760	Field Inspection Field Inspection	Basalt Dolerite	No base metals
DOLWEST	Field Inspection	Dolerite	No base metals
LATLUNG	Mapping, stream sediment, soil sampling	P.E. siltstones Mag source unknown	1400 ppm Ba + 40 ppm Sn out- side Licence area
SAVAGE RV. NORTH	Field Inspection	Basalts	-
SAVTREN	Rock Chip Sampling	Phyllite, Amphibolite	No anomalous geochem.
TRAPID	Interp.	Dolerite dyke	
TRAPID NTH	Interp.	Basalt?	
WRIDGE/ INPUT 3737/10640	Soil Sampling	Black shale	Max 105 ppm Cu 45 PPM Zn
SEDGE/ 813/10760	Field Inspection	Basalt plug	
RAPID EAST/ INPUT 2966/1040	Grid mapping, soil geochem.	Quartz-chloritic schist, meta- volcanic	No anomalous geochem.
INPUT 2450/10360	Soil sampling	Slate, basalt nearby	Low geochem. response
INPUT 2953/10440, 2933/10440 & 555/10480	Field Inspection	Basalt	

INPUT 2166/10561, 2599/10660 & 973/10700	Field Inspection	Basalt	
2477/10360	Grid bedrock geochem.	Phyllite, qtz- chlorite schist	No anomalous geochem.
2465/10360	Grid soil	Quartzite/phyllite	max 130 ppm W
2880/10400	Inspection, stream sediment geochem.	Qtartz-mica schist	Low metal values
3372/10560, 3369/10560, 2215/10561, 2459/10600, & 3457 /10600	Stream sediment sampling	Weakly pyritic slates	Low metal values
2410/10320	Field checking	Black phyllite, basalt	No metal values
Comstaff CK GR 352800mE/ 5417700mN	Mapping, stream sediment geochem	Amphibolite qtz mica schist ironsone	Low order gold not supported in follow-up
RAPEND GROUP	Gridding, soil & stream geochem.	qtz-chlorite schist & quartzite	Low geochem.
526/10480	Field Inspection	Phyllite black shale	-
MT. BERTHA Input anomalies	Drainage geochem.	Black shales, quartzites	No metal values
FOLLY HILL	Mapping, bedrock geochem.	Dolomite/phyllite	Low order gold values

7. ENVIRONMENTAL

The only road access to the area was via the Savage River Pipeline road. Inspection of anomalies and stream sediment sampling was done by helicopter and small reconnaissance grids were established on RAPID EAST 2477/10360, 2465/10360, 2450/10360 and the RAPEND GROUP of anomalies. The grids were kept to minimum width for a man to walk and no soil or ground was removed. The grids were left to revegitate naturally.

F. R. FUNNELL

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CRAE

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LOCATION

Burnie

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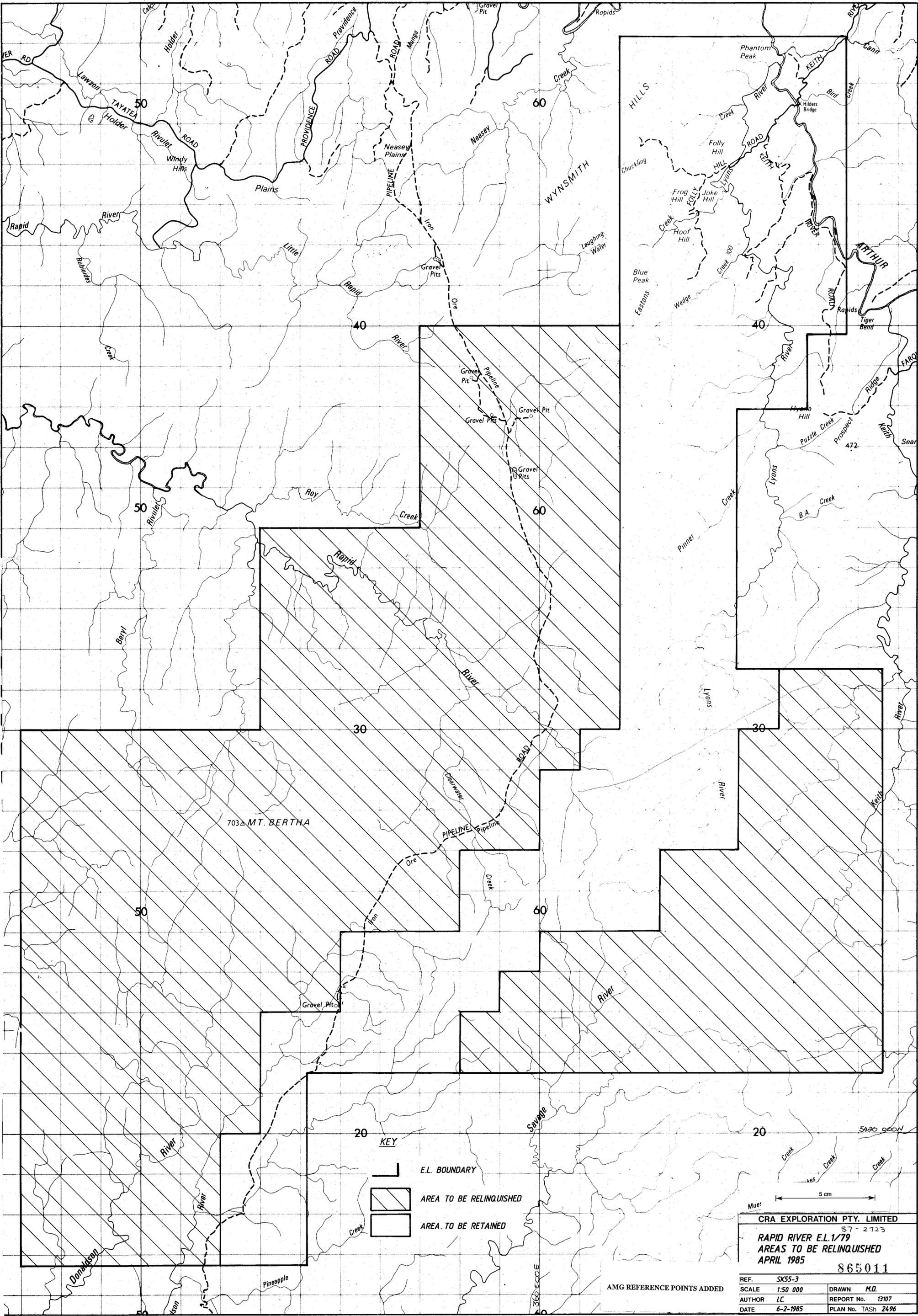
SK 55-3

KEYWORDS

Tin, Tungsten, Base Metals, Gold, Magnesite,  
Exploration General.

LIST OF PLANS

<u>Plan No.</u>	<u>Title</u>	<u>Scale</u>
TASh 2496	Rapid River EL 1/79 Areas to be Relinquished April, 1985	1:50,000



**KEY**

— E.L. BOUNDARY

 AREA TO BE RELINQUISHED

 AREA TO BE RETAINED

5 cm

**CRA EXPLORATION PTY. LIMITED**  
87-2123

**RAPID RIVER E.L. 1/79**  
**AREAS TO BE RELINQUISHED**  
**APRIL 1985**  
**865011**

REF. SK55-3	DRAWN M.D.
SCALE 1:50 000	REPORT No. 13107
AUTHOR I.C.	PLAN No. TASH 2496
DATE 6-2-1985	

AMG REFERENCE POINTS ADDED