

C.R.A. EXPLORATION PTY. LIMITED

ANNUAL REPORT

ALROY E.L. 1184

FOR YEAR ENDING 28/12/1978

MICROFILMED

DATE:

17/12/81

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N.T. Department of Mines
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1. SUMMARY

E.L. 1184 is being explored by C.R.A. Exploration Pty. Limited as part of a joint venture agreement with Australian Ores and Minerals Limited.

The target is ironstone hosted copper-gold deposits of the Tennant Creek type.

Brief regional gravity and magnetic interpretations suggest a thinning of Cambrian cover over possible favourable Pre-Cambrian Warramunga Group stratigraphy.

A low level airborne magnetic and radiometric survey has been flown over the E.L. to enable detailed interpretation to generate targets suitable for ground follow-up. The data is currently being processed.

2. INTRODUCTION

E.L. 1184 (Alroy) was granted to Australian Ores and Minerals Limited (A.O.M) on 29th December 1977. On 28th August 1978 C.R.A. Exploration Pty Limited entered a joint venture agreement with A.O.M. to manage the exploration of the E.L. Approximately 95% of the area has since been included within the Warramunga/Alyawarra Aboriginal Land Claim which was lodged with the Land Commission on 20th November, 1978.

Exploration is aimed at ironstone hosted copper-gold deposits similar to those of the Tennant Creek and newly discovered Rover Fields. Magnetic trends in B.M.R. aeromagnetic data obtained from a survey surrounding the E.L. to the south and east suggested that the Pre-Cambrian Warramunga Group, which hosts the mineralization at Tennant Creek and Rover, may underly the surface cover of Cambrian Wanara Beds and Cainozoic soil in the area.

3. LOCATION AND ACCESS

The E.L. is located between 19°45' and 20°00' latitude and 135°05' and 135°30' longitude on the Alroy 1:250,000 sheet S.E. 53-15, and is centred approximately 105 Km south-west of Alroy Downs homestead. (see location plan NTd 1006).

Access to within 25 km of the northwest corner is by the Barkley Highway to approximately 190 km from Tennant Creek. No formal access exists from the Barkley Highway to the E.L.

4. GEOLOGY

The E.L. covers an area of very poor outcrop. B.M.R. geological mapping (Alroy 1:250,000 sheet S.E.53-15) indicates three isolated areas of outcropping Middle Cambrian Wanara beds which consist of silicified limestone and dolomite, siltstone, chert, silicified shale and leached carbonate rocks. Surface cover is Cainozoic sand, soil, travertine and detrital laterite.

The linear trends observed in the magnetic data suggests that the Cambrian rocks may overlie Pre-Cambrian Warramunga Group. This group contains greywacke, siltstone, shale, acid volcanics, quartz-feldspar porphyroid, hematitic shale and ironstone hosted copper-gold deposits.

5. WORK DONE

5.1 Gravity Interpretation

Interpretation of B.M.R. gravity data indicates a lineament striking northeast diagonally through the E.L. The lineament is defined by gravity highs which may indicate a basement ridge and corresponding thinning of Cambrian cover.

5.2 Magnetic Interpretation

Magnetic contours from an airborne magnetic survey carried out in 1963 by Adastra Hunting Geophysics Pty. Ltd. for Barkley Oil Company Pty. Ltd. were inspected. The survey was flown at a mean ground clearance of 1200ft (365 metres) with line spacing of two and five miles (three and eight kilometres). The data confirmed that the magnetic linears apparent on the surrounding B.M.R. data do continue into the E.L. In addition two magnetic anomalies were apparent outside the northeastern and southwestern boundaries. Consequently two small E.L's (E.L.A. 1951 - Alroy North and E.L.A. 1952 - Alroy West) were applied for to cover the anomalies.

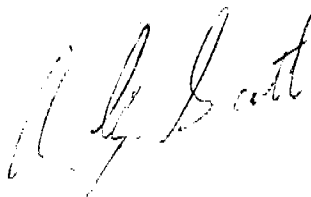
5.3 Airborne Magnetic and Radiometric Survey

Although the Adastra Hunting survey was useful in indicating the possibility of a favourable basement stratigraphy, it was too regional to be suitable for a detailed interpretation leading to targets for ground follow-up.

To enable such an interpretation a low level airborne magnetic and radiometric survey was carried out by Geometrics Int. Corp. The survey was flown at 90 metres above ground level with line spacing of 500 metres

and utilized a doppler navigation system. Radiometric data collection using 2000 cu. inch crystal detectors was carried out for Thorium, Potassium, Bismuth (Uranium) and total count as a matter of course.

The data is currently being processed but results are not yet available.



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KEYWORDS

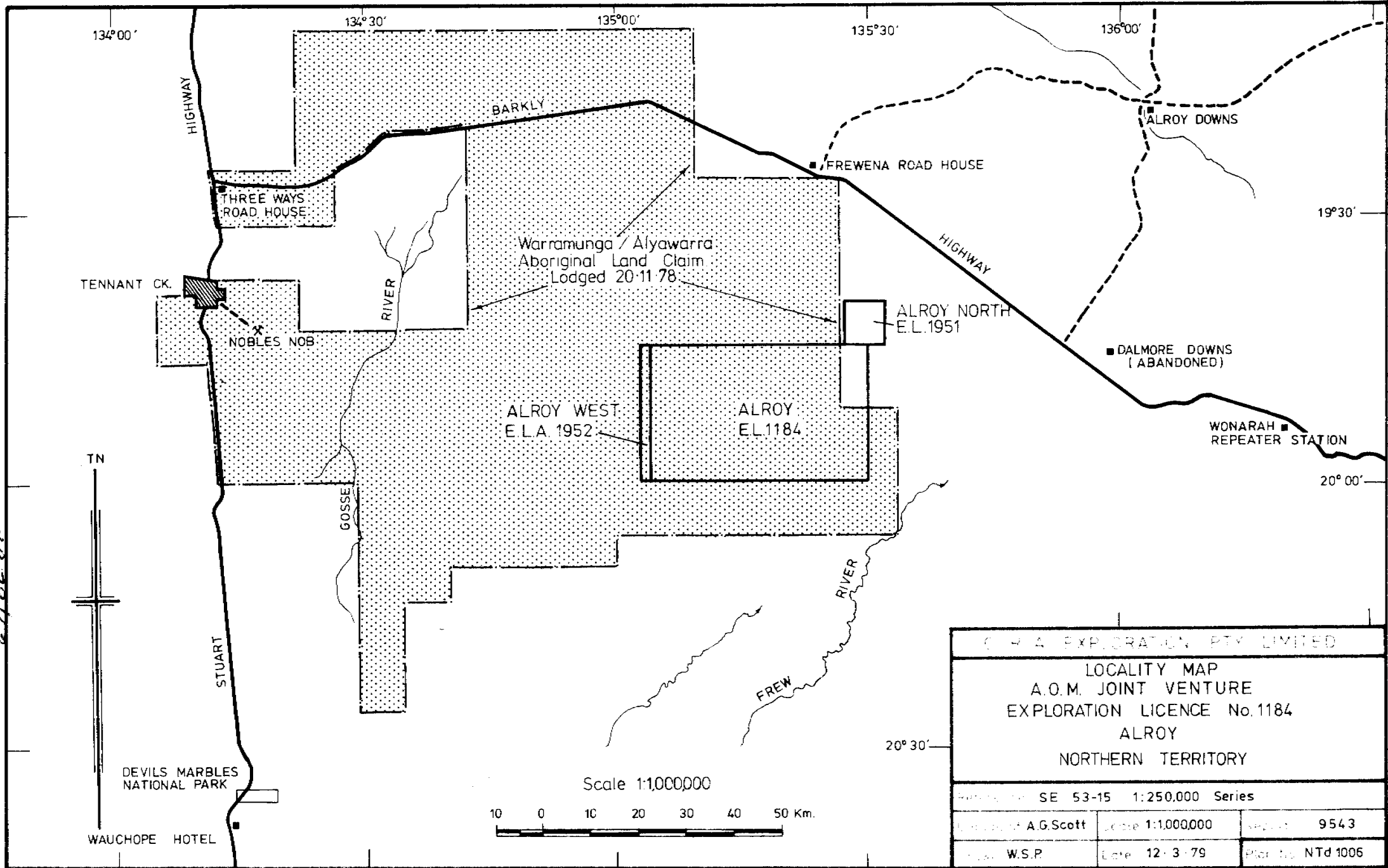
Copper, gold, geophys-grav, geophys-mag, geophys-rad, airborne.

LOCATION

Alroy SE 53-15 1:250,000 sheet

LIST OF PLANS

<u>Plan No.</u>	<u>Title</u>	<u>Scale</u>
NTd 1006	Locality Map A.O.M. Joint Venture E.L. 1184, Alroy, N.T.	1:100,000



G & A EXPLORATION PTY LIMITED		
LOCALITY MAP		
A.O.M. JOINT VENTURE		
EXPLORATION LICENCE No. 1184		
ALROY		
NORTHERN TERRITORY		
Map Sheet SE 53-15 1:250,000 Series		
Drawn by A.G. Scott	Scale 1:1,000,000	Sheet 9543
Checked by W.S.P.	Date 12.3.79	Plot No. NTd 1006

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