



NICRON RESOURCES LIMITED

ACN 000 828 535

**WOODCUTTERS MINE**

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Title

**ANNUAL REPORT FOR YEAR FOUR  
EXPLORATION LICENCE 7670  
ACACIA AREA, NORTHERN TERRITORY  
13.04.95 TO 12.04.96**

Project Name:

ACACIA

Map sheets:

DARWIN SD 52-4 1:250,000

Commodities:

COPPER, LEAD, ZINC, GOLD

Author:

I.K. Butler

Date:

19 March 1996

Volume:

Volume 1 of 1

Accepted by:

*I.K. Butler*

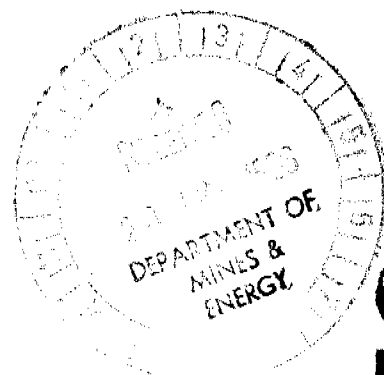
Distribution:

1. NT Department of Mines and Energy
2. Woodcutters Mine, Northern Territory
3. Normandy Exploration, Adelaide

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Report No: 20265

Annual Report EL 7670



OPEN FILE

CR96/229

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## SUMMARY

EL 7670 is part of a contiguous block of tenure in the Acacia area, Northern Territory, which is being explored by Nicron Resources, Woodcutters Mine. The EL is located within the Proterozoic Pine Creek Geosyncline. It is on the northern margin of Archaean basement (Rum Jungle complex) and the Early Proterozoic stratigraphy from basement to top of the South Alligator Group has been mapped or interpreted within the EL. It is prospective for polymetallic vein type Pb, Zn and Ag mineralisation. Recent work in nearby tenements has located stockwork/vein type gold in quartz mineralisation, however analyses of pulps from RAB sampling programmes conducted within EL 7670 has failed to locate any mineralisation.

Previous exploration was mainly targeted at base metals and uranium. Anomalous gold was, however, located by Northern Gold immediately to the north of EL 7670 and only minor follow-up work was undertaken.

Previous work by the BMR and Geopeko Ltd established the presence of anomalous base metals within EL 7670.

Aztec initially carried out a detailed airborne magnetic and radiometric survey over the entire exploration licence.

After compiling previous geochemical data, Aztec re-established the Geopeko baseline and extended previous "C" horizon geochemical sampling over all prospective areas. Two major and several smaller lead anomalies were defined by Aztec.

A detailed gravity survey conducted over the geochemical anomalies has resulted in a reinterpretation of the geology.

Pulps from Aztec "C" horizon geochemical sampling have been re-submitted for Au analyses.

EL 7670 is strategic tenure as it covers the northern most strike extent of the structure which hosts the mineralisation at Woodcutters. Follow-up exploration for polymetallic structurally controlled mineralisation is planned, however most of the work will be initially concentrated closer to the mine.

## **1. INTRODUCTION**

Exploration Licence 7670 was granted to Aztec Mining Company Limited on 13 April 1992 for a period of four years. The licence comprises eight graticular blocks and is located approximately 50km southeast of Darwin (Figure 1). The licence was reduced in size to four blocks at the end of Year Two. A waiver from reduction was granted at the completion of Year Three and it is presently comprised of four blocks.

The licence is considered to be prospective primarily for base metals and gold mineralisation.

This report covers work conducted in the fourth year of tenure and proposes a follow-up work programme and expenditure for the following year.

## **2. CONCLUSIONS**

1. There is little potential for gold mineralisation occurring as polymetallic veins or stockwork/vein type in quartz mineralisation.
2. EL 7670 is strategic tenure as it covers the northern most strike extent of the Woodcutters' structure.
3. Follow-up exploration is required to properly test the area for additional Woodcutters type mineralisation.

## **3. PREVIOUS EXPLORATION**

Modern exploration began on the eastern side of EL 7670 in 1967, when the BMR carried out regional geochemical and radiometric investigations (Semple, 1968). The BMR drilled auger holes at 122m (400 feet) intervals along east-west traverses spaced 731.5m (2400 feet) apart. Holes were drilled to identifiable weathered rock and bottom hole samples collected and assayed for Cu, Pb, Zn, Ni, and Co by AAS. All holes were also probed for radioactivity. The BMR identified one lead geochemical anomaly (L2, max 940 ppm Pb, 410 ppm Zn), and an associated weak copper anomaly (C2, 280 ppm) within the current licence area.

In 1976, Geopeko Limited (EL 384) re-established the old BMR base line and established a metric grid comprising 300m length cross lines at 100m intervals over the anomalous areas in the current EL 7670 (Twist, 1977). The baseline and crosslines were auger drilled with a hole spacing of 25m. Bottom hole "C" horizon samples were collected and assayed for Cu, Pb, Zn, Co and Cd. A maximum value of 570 ppm Pb was obtained from a sample on the western edge of the grid, in the vicinity of the BMR L2 anomaly. The second highest Pb value (300 ppm) was also obtained from the western side of the grid, from the C2 anomaly. Anomalous cobalt (300 ppm) was also obtained from this area. No further work was carried out in the current EL 7670 and the licence was surrendered in 1978.

The western portion of EL 7670 was covered by EL 5854 which was held by Northern Gold NL in 1989 (Monti and Stokes, 1989). Northern Gold reprocessed the BMR aeromagnetics and covered the exploration licence with regional soil sampling (1km x 1km grid). Samples were generally collected from a depth of 40 to 50cm and assayed for Au by BCL and As, Mo, Cu, Pb and Zn by ICP. One anomalous gold result (2.7 ppb) was obtained from a sample located close to the Stuart highway, approximately midway down the western side of the current exploration licence. No other elements were significantly anomalous and no follow up work was conducted on EL 7670 prior to surrender in August 1989.

#### **4. WORK CARRIED OUT AND RESULTS**

Some further pulps from an earlier RAB sampling programme were located and resubmitted for gold assaying. A total of 22 samples were submitted to Assaycorp and assayed for Au(1ppb) by Fire Assay (FA50 method). The locations are plotted on Enclosure 1 and results appear in Appendix I. The remaining pulps from the original programme could not be located. The assays are all low.

Gravity data collected during detailed surveys conducted in 1993 was entered into the large regional gravity database. The data from the EL 7670 grid has been processed and presented on an image (see Figure 3). Further gravity data from earlier programmes conducted by other workers in the area will be compiled to assist in a continuing interpretation of the Woodcutters' structure.

#### **5. GEOLOGY AND MINERALISATION**

EL 7670 lies on the north-eastern margin of the Archaean Rum Jungle and Waterhouse basement complexes. These are overlain by Lower Proterozoic clastic and dolomitic units of the Namoon Group, Crater Formation and Coomalie Dolomite; shales and calcareous shales of the Whites Formation and shales with interbedded quartzite of the Wildman Siltstone.

Uranium and base metal mineralisation at Rum Jungle and Woodcutters is concentrated in structural zones in the Lower Whites Formation just above the Coomalie Dolomite. Gold mineralisation at Sundance, Batchelor, is within palaeokarst collapse breccias above the contact of the Coomalie Dolomite and Whites Formation.

The structure of the area is dominated by an early phase of N-S trending open folds and strike slip faulting. A major arcuate fault has been identified in the western portion of the licence from interpretation of aeromagnetic and radiometric data. It is most likely the fault zone is occupied by Zamu dolerite. These structures have been subsequently offset by a later phase of NE-SW trending structures, dominated by the Giants Reef Fault

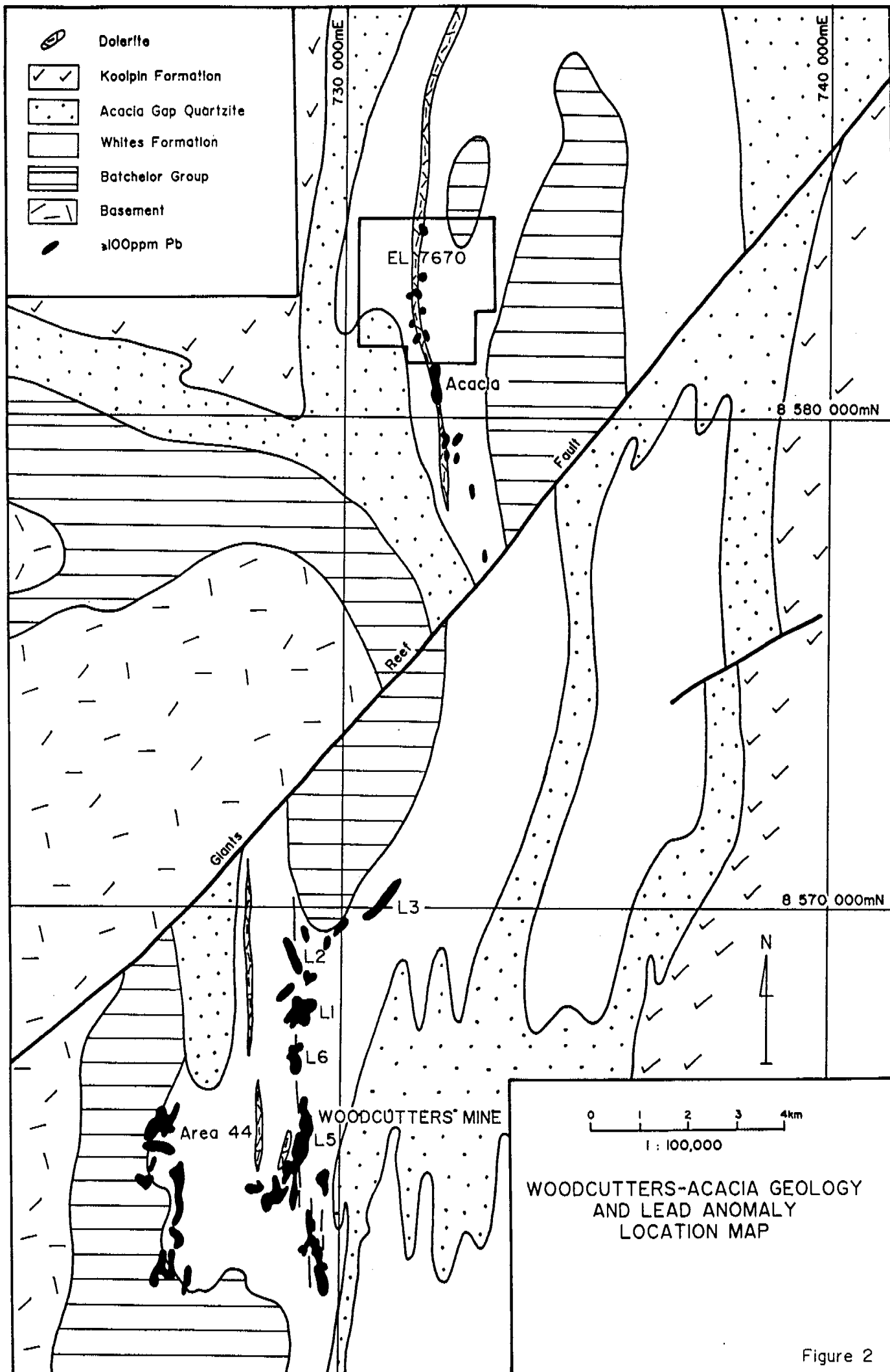
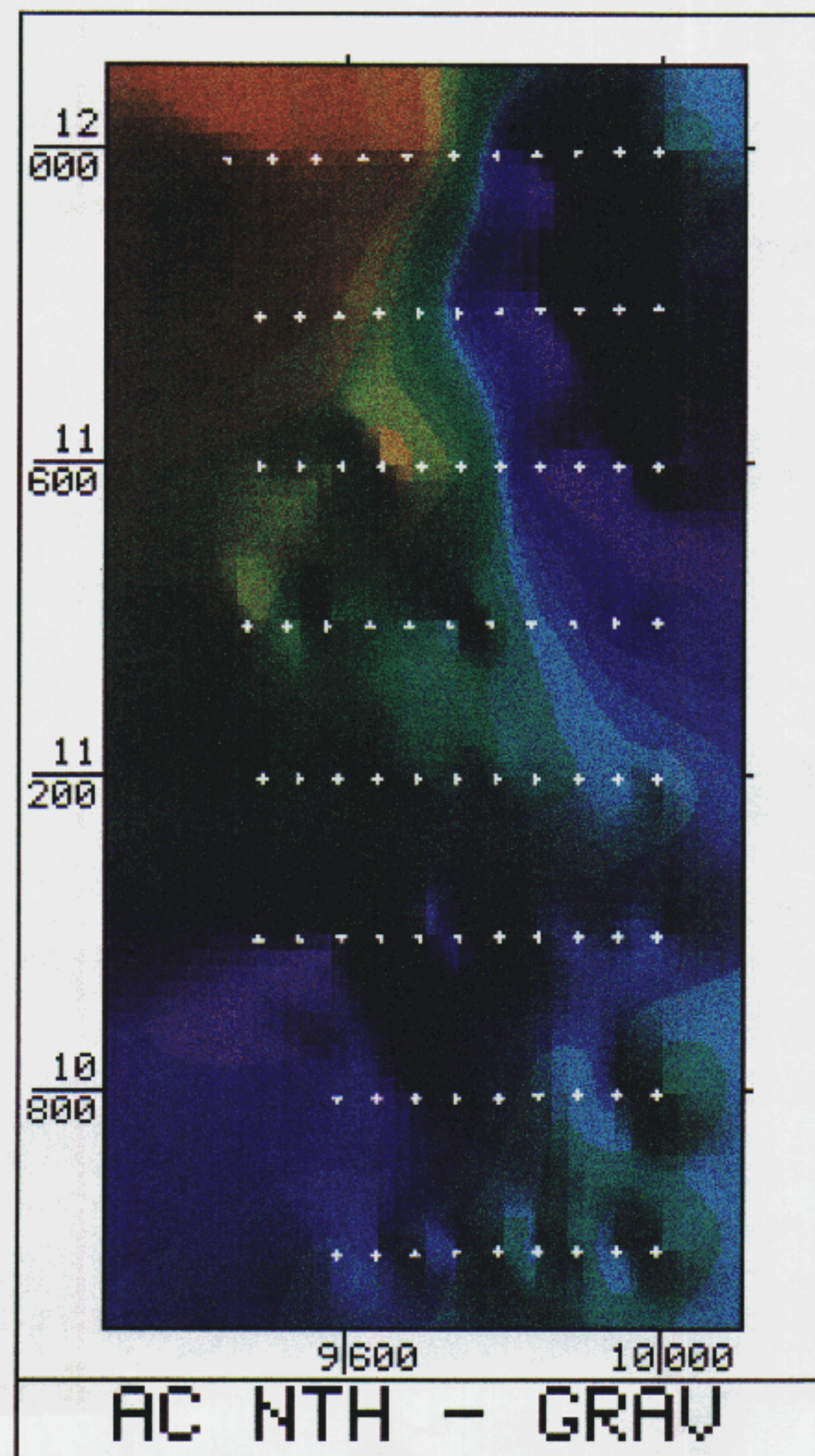
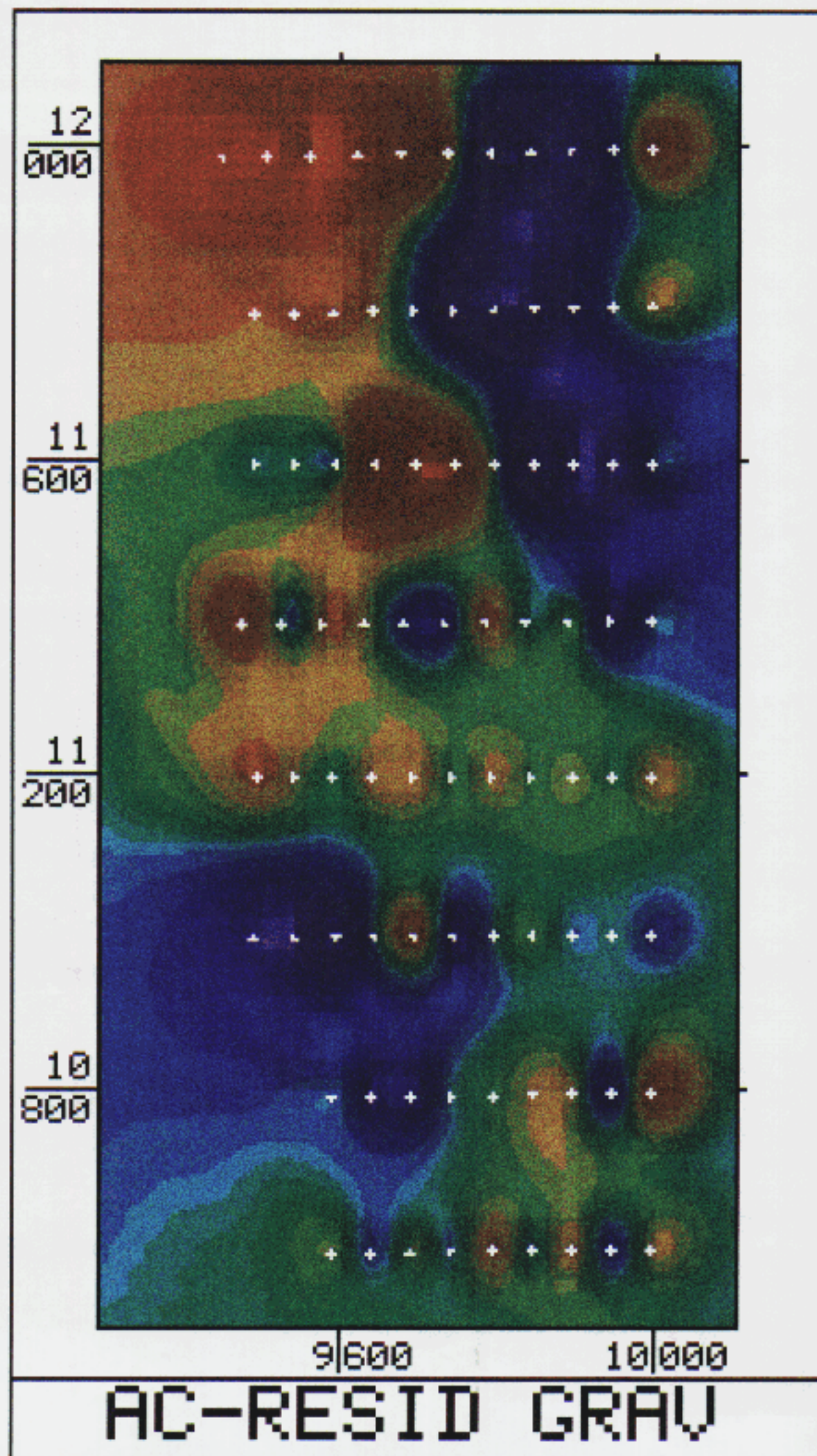


Figure 2





ACACIA NORTH  
IMAGE PROCESSED  
GRAVITY DATA

Figure 3



**6. EXPENDITURE**

Salaries .....	1,250
Contract Services .....	250
Labour .....	320
Vehicle .....	150
Analytical Services .....	300
Administration (15%) .....	<u>340</u>
<b>Total</b>	<b>\$2,610</b>

**7. PROPOSED WORK PROGRAMME AND EXPENDITURE YEAR FIVE**

The proposed work programme for Year Five is as follows:

1. Compilation and interpretation of all the geological, geochemical and geophysical database pertaining to the Acacia area.
2. Costeaning for stratigraphic information in non-outcropping areas.
3. Geological mapping

The proposed expenditure for Year Five is \$10,000



## 8. REFERENCES

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- Twist, R.F., 1977. Report on Area Retained Within EL 384 as at 8th July 1977. Geopeko Limited, North Australia. *Department of Mines and Energy Library Open File Report CR77/126.*

***APPENDIX I***

**ANALYTICAL DATA**

# ASSAYCORP. PTY LTD

A.C.N. 052 982 911

174 Ward Street, Pine Creek, N.T. 0847

P.O. Box 41, Pine Creek, N.T. 0847

Telephone (089) 76 1262

Facsimile (089) 76 1310

ASSAY CODE: AC 21507

Nicron Resources Limited

Distribution

I. BUTLER

EL 6431 / 7670

Client Reference: 8246

Project : *Acacia*

Cost Code: *RAB pulps.*

Date Received:

12/05/1995

Number of Samples:

61

Sample Preparation

Analysis	Analytical Technique	Precision & Accuracy	Detection Limit	Data Units
Au	FA50	Acc. $\pm$ 15%	1	ppb
Au(R)	FA50	Acc. $\pm$ 15%	1	ppb

(56201-244) m.wesc5 (local)  
(56001-073) m.wesc7 (AmG)

Authorisation: Ray Wooldridge

Report Dated: 14/05/1995

ASSAY CODE: AC 21507

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Sample	Au (ppb)	Au(R) (ppb)
561 202	2	
561- 204	2	
561 206	3	
561 208	3	2
561 210	2	3
561 212	3	
561 214	3	
561 216	4	
561 218	4	
561 220	3	
561 222	4	
561 224	3	
561 226	4	3
561 228	3	
561 230	3	
561 232	4	
561 234	2	
561 236	3	
561 238	3	
561 240	4	4
561 242	3	
561 244	5	6
561 01	5	5
561 03	4	
561 05	4	



# Woodcutters Mine

CR 1996-0229

	Init	Date
Surveyor	W.O.	
Drawn		
Checked		
Approved		

EXPLORATION GEOLOGY DEPARTMENT  
EL7670  
RAB SAMPLE LOCATION MAP

File :7670SAM  
Scale :1 : 5000  
Date :06 May 1993  
Enclosure I

