NORMANDY
WOODCUTTERS LIMITED
ACN 000 828 535

WOODCUTTERS MINE
80km Stuart Highway, via Darwin, Northern Territory 0800
PMB 60, Winnellie, Northern Territory, Australia 0821

Telephone (08) 8976 0088
Facsimile (08) 8976 0108

ANNUAL REPORT FOR YEAR EIGHT
EXPLORATION LICENCE 6431
ACACIA AREA
NORTHERN TERRITORY
04.09.96 TO 03.09.97

Project Name: **ACACIA**

Map Sheets:

DARWIN	**SD 52-04**	**1:250,000**
NOONAMAH	**5172**	**1:100,000**
MANTON DAM	**5172-3**	**1: 50,000**

Commodities: **COPPER, LEAD, ZINC, GOLD**

Author: **K.A. Williams**

Date: **2 October, 1997**

Volumes: **VOLUME 1 OF 1**

Accepted by: J K Butler

Distribution:
1. NT Department of Mines and Energy
2. Woodcutters Mine, NT
3. Normandy Exploration

Report No. 21989

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LOCATION MAP

SUMMARY

Exploration Licence 6431 is located on the northern strike extent of the Woodcutters Structure and is of great strategic importance. A considerable amount of exploration has been carried out targeting mainly gold mineralisation.

The upturn in the price of zinc has, however, seen the focus of exploration swing back to base metals and the exploration effort has concentrated mainly on near mine drilling. At the same time the Woodcutters deposit has been re-interpreted and a new model developed. This work, in combination with the validation of the huge exploration database, is part of the process of generating targets further afield.

Woodcutters is now interpreted to have developed in a thrust tectonic regime with a number of flat laying laminated shears ramping up to the north-south structures that host the massive sulphide lenses. The geometry of the orebody at depth is different and not necessarily controlled by the north-south structures as previously interpreted.

This information will be used in planning further exploration at EL6431.

1. INTRODUCTION

Exploration Licence 6431 is located on the Manton Dam (5172-3) 1:50,000 sheet with the centre being approximately 55km south-south east of Darwin. The south-western corner of the tenement is on the Stuart Highway adjacent to Manton Dam which is 12km north of the Woodcutters silver-lead-zinc mine (Figure 1).

The licence was taken out to explore an area which is in a similar stratigraphic and structural setting to the Woodcutters Mine. The area had base metal soil geochemical anomalies detected during earlier exploration programmes, conducted by the BMR and Geopeko Limited. The purpose of this report is to discuss the work conducted in the eighth year of tenure, present results and propose a work programme and budget for year nine.

2. TENURE

Exploration Licence 6431 was granted on the 4th of September 1989 for a period of six (6) years. The licence originally comprised seventeen (17) graticular blocks. A 50% reduction took place at the end of Year Three, after being granted a deferral from the normal Year Two reduction. A number of mineral claim applications were made over part of the relinquished area. Further 50% relinquishments occurred at the end of Years Four and Five.

In 1995 and 1997 an application for the renewal of EL 6431 for a further two years was granted.

The licence holder is 100% Normandy Woodcutters Limited.

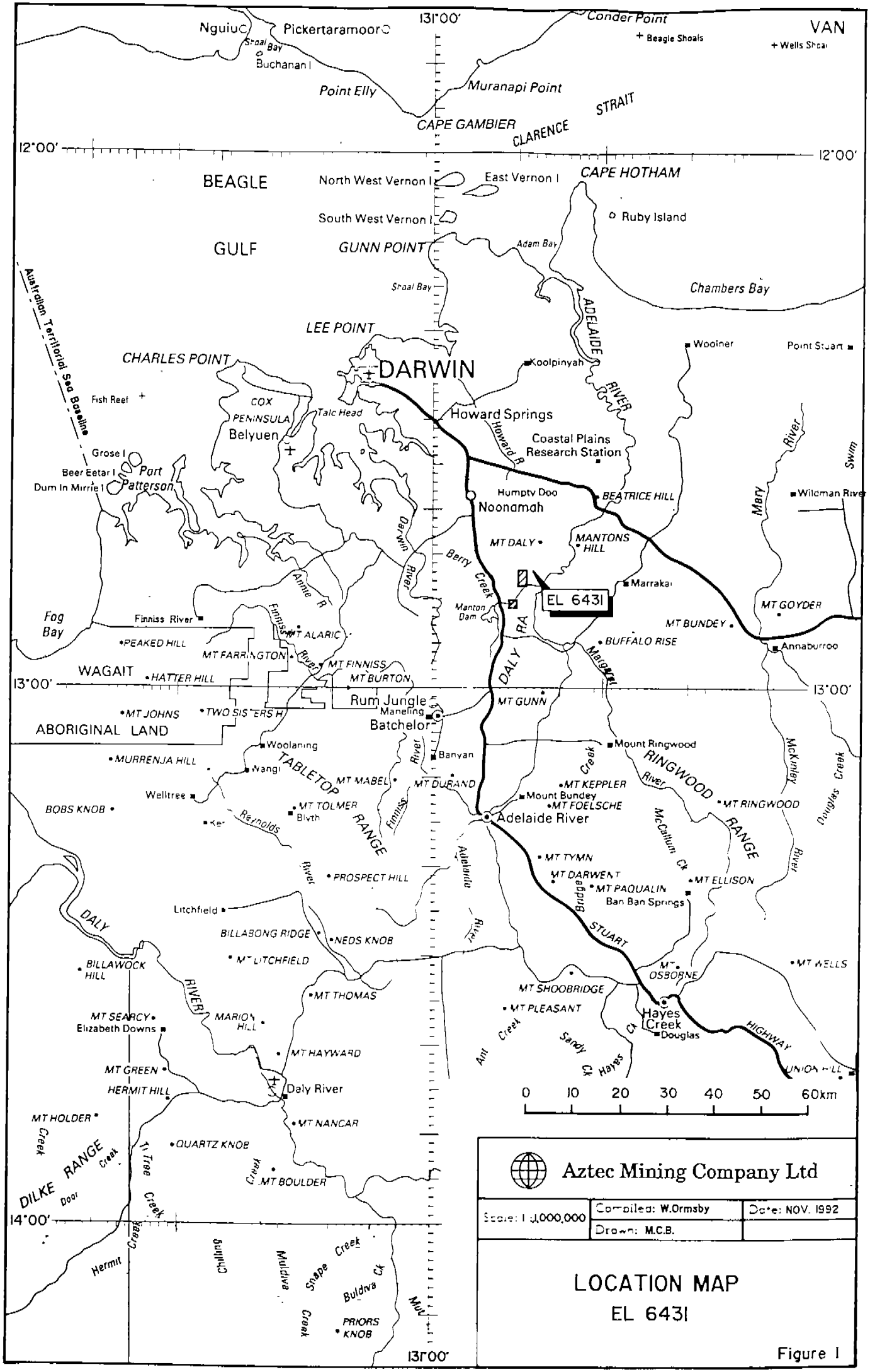
3. CONCLUSIONS

1) The gold mineralisation at Acacia North is associated with a bleached alteration zone. The gold is accompanied by sulphides and quartz veining, within a dolerite sill.

2) The dolerite sill is inttruded into carbonaceous shales of the upper Whites Formation, which is stratigraphically below the first sandstone greywacke unit of the Acacia Gap Quartzite.

3) Anomalous gold and arsenic surface geochemistry has identified a narrow 50m wide anomaly open ended to the south.

4) Carbonaceous mudstones within the dolerite explain the high chargeability IP/resistivity target and not disseminated sulphides.



Aztec Mining Company Ltd

Scale: 1:1,000,000	Compiled: W.Ormsby	Date: NOV. 1992
	Drawn: M.C.B.	

LOCATION MAP
EL 6431

Figure 1

4. PREVIOUS EXPLORATION

The licence area has received a significant amount of attention from previous explorers for base metals and uranium. The BMR located four lead geochemical anomalies (L1 to L4) and tested the L1 anomaly (now known as Acacia South) with three diamond drill holes. No significant mineralisation was found. Subsequently Geopeko Ltd and later Uranerz Australia Pty Ltd also carried out geochemical surveys and geological mapping. Further details are reported in Butler (1990).

During Year One of tenure, Nicron Resources Ltd conducted literature research and reconnaissance field investigations. Anomalous Au (1.58 g/t) and As (1100 ppm) were recorded from rock samples collected in the north-eastern portion of the licence (Butler, 1990).

Data from previous exploration was compiled in Year Two, and geological mapping and further rock chip sampling was undertaken. Stream sediment sampling and follow-up rock chipping confirmed a low grade gold bearing gossanous quartz vein swarm in the NE portion of the licence (Pevely, 1991).

In Year Three, a detailed airborne magnetic and radiometric survey was flown, and a self potential survey, Rotary Air Blast (RAB) drilling and diamond drilling were carried out (Ormsby, 1992).

In Year Four exploration included RAB drilling at the Manton anomaly (Pb Zn), Acacia North (Au) and Acacia Dome (Pb - Zn and magnesite). A semi-detailed gravity survey was conducted over the Manton anomaly.

In Year Five, RAB drilling was conducted over the Acacia North anomaly. Rock chip and soil samples were also taken.

Additional RAB drilling and soil sampling was conducted in year six.

During Year Seven RAB and RC drilling was conducted over the Acacia North prospect as well as an IP/Resistivity Survey. In addition a single diamond hole was drilled at Acacia North to test the high chargeability IP target as well as shallow intersection of gold mineralisation.

No work was conducted during the Year Eight report period.

5. GEOLOGY AND MINERALISATION

EL 6431 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 Namoona 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 consistent with extensional basinal development. A major arcuate fault has been identified in the western portion of the licence from interpretation of aeromagnetic and radiometric data. These structures have been subsequently offset by a later phase of NE-SW trending structures, dominated by the Giants Reef Fault.

5.1 Acacia North Gold Prospect

The Acacia North gold prospect is hosted by a dolerite sill intruded into upper Whites Formation carbonaceous shales. Stratigraphically, it lies immediately below the first sandstone/greywacke unit of the Acacia Gap Quartzite/Wildman Siltstone (see Enclosure 2)

Within the mineralised zone (1000m N-S x 250m E-W) the dolerite is intruded by generally north-west trending, north-easterly dipping quartz veins. From costean mapping, the dolerite appears to trend N-S but due to structural complexity is not of uniform thickness. Diamond drilling has shown the dolerite to be a folded anticline. Petrological analysis indicates that the gold mineralisation is hosted in sheeted K-spar/carbonate quartz veins in the dolerite.

A fault trending NE-SW interpreted from airborne magnetic data, is believed to interrupt the dolerite to the north of the mineralisation.

6. *WORK CARRIED OUT AND RESULTS*

The geological re-interpretation of the Woodcutters deposit, utilising Exploremin as consultants, is ongoing and the interpretation is being refined as more holes are drilled. Woodcutters is now interpreted to have developed in a thrust tectonic regime with a number of flat laying laminated shears ramping up to the north-south structures that host the massive sulphide lenses. The geometry of the orebody at depth is different and not necessarily controlled by the north-south structures as previously interpreted.

The huge near mine database, including all exploration data, is being validated at present and will be part of the process of generating targets for the next field season.

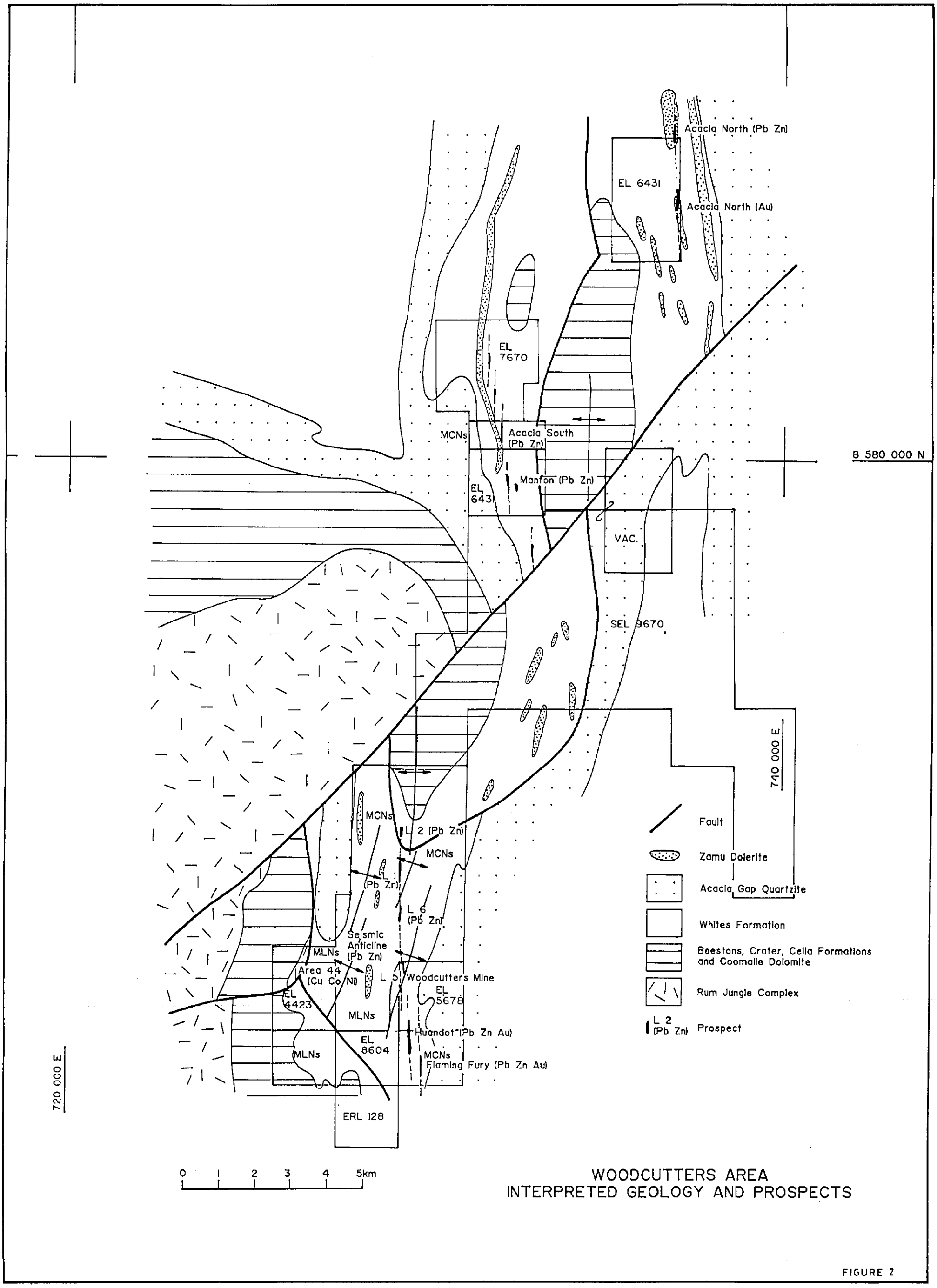
It is planned to expand the area being re-interpreted during the forthcoming Wet season which will include exploration licences held by Normandy Woodcutters Limited along the northern strike extent of the Woodcutters structure, including EL6431.

7. *EXPENDITURE DURING YEAR SEVEN*

Salaries/labour	2,000
Contract Services	1,000
Administration - 15%	450
Total	**$3,450**

8. PROPOSED WORK PROGRAMME AND EXPENDITURE

Additional compilation and interpretation of data	2,000
Costeaning	10,000
Diamond drill testing	20,000
Total	**$32,000**



WOODCUTTERS AREA
INTERPRETED GEOLOGY AND PROSPECTS

FIGURE 2

9. REFERENCES

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732 500mE
735 000mE
737 500mE
8 587 500mN
8 585 000mN
8 582 500mN
8 580 000mN
13°09'
13°08'
12°49'
13°10'

ACACIA NORTH
ACACIA SOUTH
MANTON
Acacia Gap
Acacia
Coomalie Creek
Manton River
STUART HIGHWAY
BYERS ROAD
MCN 4498
MCN 4499
MCN 4500
MCN 4501
MCN 4502
MCN 4503
ANDH3
10800N
10000N
9000N
5500E
6000E
surface soil
o/c cross bedded
(silicified dololutite)

LEGEND

- Subcrop / lag boundary - air photo interpretation
- Limit of outcrop
- Lag / alluvium boundary - air photo interpretation
- Laterite
- Vein quartz rich laterite
- Quartz vein
- Lamprophyre dyke
- Geological boundary - inferred
- Geological boundary - air photo interpretation
- Quartzite marker bed - air photo interpretation
- Trend of anticlinal axis - air photo interpretation
- Trend of synclinal axis - air photo interpretation
- Fault - inferred - air photo interpretation
- Observed strike and dip of bedding
- Observed strike and dip of foliation
- Dip direction of minor fold (with plunge if observed)
- Buildings
- Track / property boundary
- Rivers, creeks
- Billabong
- Fence
- EL boundary
- Observed facing direction

DEPOT CREEK SANDSTONE	Ptd	Pink, friable quartz sandstone - massive bedding. Dark brown with haematite cement where ferruginised - overlies karstic surface of the Coomalie Dolomite
ZAMU DOLERITE	Pdz	Intensely weathered dark purple basic intrusive, often ferruginised on outcrop
ACACIA GAP QUARTZITE MEMBER	Ppa	Orthoquartzite with abundant ex-pyrite casts on outcrop. Base of member represented by dark brown ferruginous quartz-conglomerate
WHITES FORMATION	Ppi	Laminated calcareous argillite and dololutite
COOMALIE DOLOMITE	Ppc	Massive, silicified light grey dolomite invariably associated with dark red brown ferruginised chaotic haematite-quartz-dolomite breccia on outcrop
CRATER FORMATION	Ppr	Dark brown haematitic cross stratified quartz conglomerate, light grey massive arkosic quartz conglomerate

- RAB traverses 1993
- RAB traverses 1994
- RAB traverses 1995
- Diamond Drill Hole

N

0 500 1000 1500 2000 metres

eupene exploration enterprises

Client : Nicron Resources

Scale: 1:25 000	Compiled: S. Pevely	Date: Oct 1991
	Drawn: C.S.D.S.	

EL 6431
ACACIA GAP PROJECT
EXPLORATION SUMMARY MAP

Enclosure 1