ANNUAL REPORT EL 7506

FOR YEAR ONE

29 OCTOBER 1991 TO 28 OCTOBER 1992

BY

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OF

EUPENE EXPLORATION ENTERPRISES PTY LTD

FOR

AZTEC MINING COMPANY LTD

PINE CREEK SD 52-8
Batchelor 5171
Batchelor 5171-IV

November 1992

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ENCLOSURES

1. INTRODUCTION

Exploration Licence 7506 was granted to Aztec Mining Company Ltd on 29 October 1991, for a period of six years. The licence comprises 9 blocks and is located approximately 5 km southeast of Batchelor township.

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

This report covers work conducted in the first year of tenure and proposes a work program and expenditure for Year Two.

2. SUMMARY

A considerable amount of exploration has previously been carried out over the current EL 7506. Early exploration was mainly aimed at uranium, and a number of radiometric anomalies were located in the area. Anomalous base metals, were also found in the region.

In the first year of tenure, Aztec Mining Company have conducted literature research, geochemical data compilation, a detailed aeromagnetic and radiometric survey, processing of the airborne data, gridding and mapping, and geological/geophysical interpretation of the data.

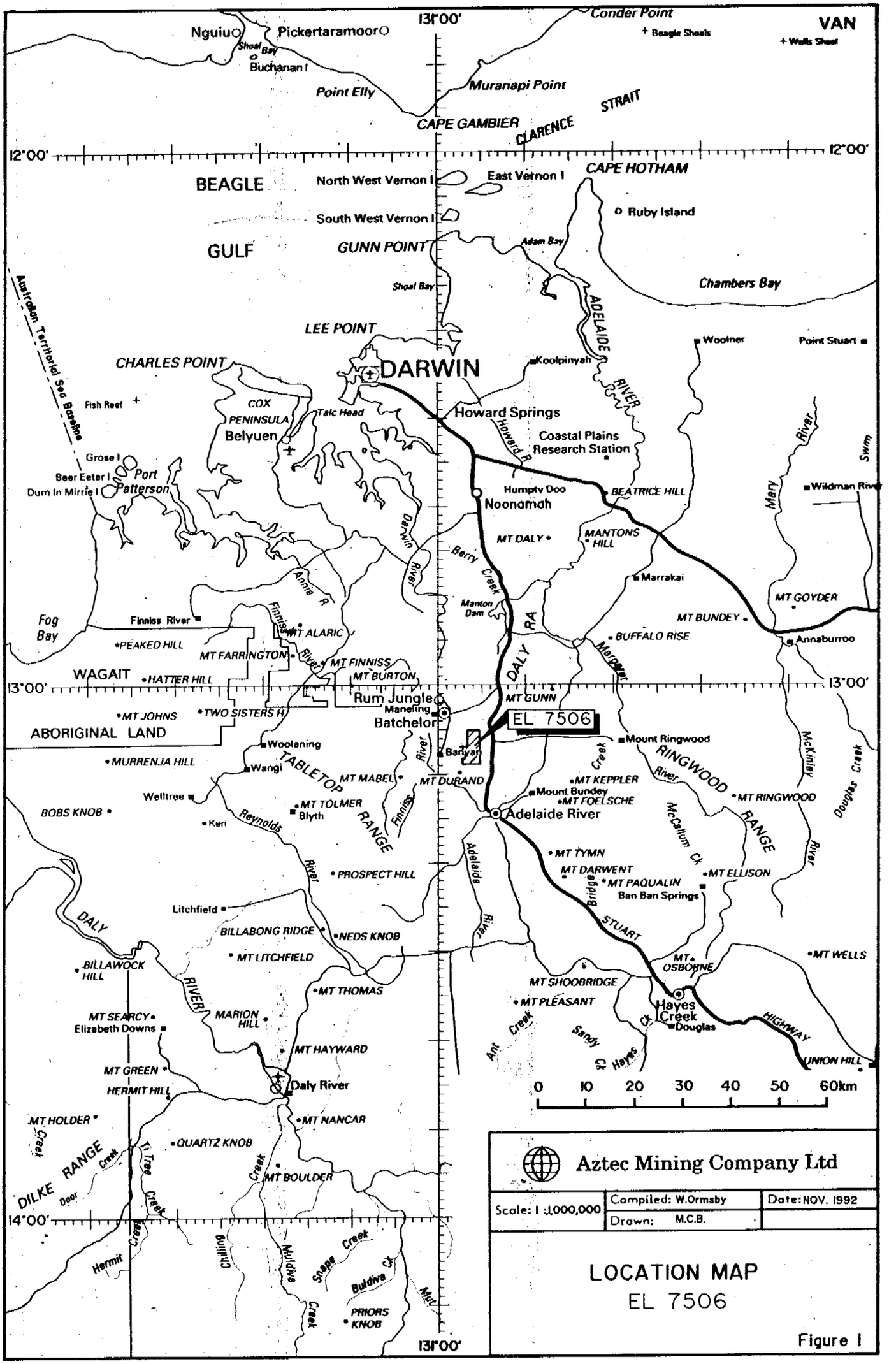
The main outcome of this work is the identification of an area (Mt Minza) which is considered to be prospective for base metals and warrants follow up RAB drilling.

3. CONCLUSIONS

1. The Mt Minza area is considered to be the most prospective for base metals due to:-

   - Being situated along strike from a N-S trending zone of base metal anomalies.
   - The presence of an anticlinal fold closure.
   - The presence of cross faults.
   - Anomalous Cu from previous BMR soil sampling.
   - The likely presence of dolerites which are known to host minor base metal mineralisation in the area.

2. The gold potential of the area has not previously been evaluated. Stream sediment sampling for Au is recommended.


Nguiu
Pickertaramoor
Shoal Bay
Buchanan I
Point Elly
Conder Point
Beagle Shoals
VAN
Wells Shoal
Muranapi Point
STRAIT
CAPE GAMBIER
CLARENCE
13°00'
12°00'
BEAGLE
North West Vernon I
East Vernon I
South West Vernon I
CAPE HOTHAM
Ruby Island
GULF
GUNN POINT
Adam Bay
Shoal Bay
Chambers Bay
Australian Territorial Sea Baseline
LEE POINT
CHARLES POINT
DARWIN
Woolner
Point Stuart
Koolpinyah
ADELAIDE RIVER
Fish Reef
COX PENINSULA
Belyuen
Talc Head
Howard Springs
Howard R
Coastal Plains Research Station
Grose I
Beer Eater I
Dum In Mirrie I
Port Patterson
Humpty Doo
Noonamah
BEATRICE HILL
Mary River
Swim
Wildman River
MT DALY
MANTONS HILL
Berry Creek
Marrakai
MT GOYDER
Manton Dam
MT BUNDEY
Fog Bay
Finniss River
MT ALARIC
PEAKED HILL
MT FARRINGTON
MT FINNISS
BUFFALO RISE
Annaburroo
WAGAIT
HATTIER HILL
MT BURTON
Rum Jungle
Maneling
Batchelor
MT GUNN
EL 7506
MT JOHNS
TWO SISTERS H
ABORIGINAL LAND
Woolaning
Wangi
MURRENJA HILL
TABLETOP RANGE
MT MABEL
MT DURAND
Banyan
Mount Ringwood
RINGWOOD RANGE
MT KEPPLER
Mount Bundey
MT FOELSCHE
MT RINGWOOD
Welltree
BOBS KNOB
MT TOLMER
Blyth
Keri
Reynolds River
Adelaide River
McCallum Ck
MT TYMN
MT DARWENT
MT PAQUALIN
MT ELLISON
Ban Ban Springs
PROSPECT HILL
Litchfield
DALY RIVER
BILLABONG RIDGE
NEDS KNOB
STUART HIGHWAY
MT LITCHFIELD
BILLAWOCK HILL
MT OSBORNE
MT WELLS
MT SHOOBRIDGE
MT THOMAS
MT PLEASANT
Hayes Creek
Douglas
MT SEARCY
Elizabeth Downs
MARION HILL
MT HAYWARD
Daly River
MT GREEN
HERMIT HILL
MT NANCAR
MT HOLDER
QUARTZ KNOB
DILKE RANGE
MT BOULDER
UNION HILL
14°00'
0 10 20 30 40 50 60km
Aztec Mining Company Ltd
Scale: 1 :1,000,000
Compiled: W.Ormsby
Drawn: M.C.B.
Date: NOV. 1992
LOCATION MAP
EL 7506
Figure 1

4. PREVIOUS EXPLORATION

During 1952, the BMR conducted an airborne radiometric survey of the district (Wood and McCarthy, 1952) and identified the Waterhouse No. 1 radiometric anomaly, which is located on the western central part of EL 7506. Follow up geophysical work was carried out in 1957 (Daly and Tate, 1958) and 1960 (Douglas, 1962). In the mid 1960s TEP (a joint venture between the Commonwealth Government and Consolidated Zinc Pty Ltd) completed six diamond drill holes on the Waterhouse No. 1 Prospect and located only traces of uranium and copper mineralisation (Swingler, 1980).

In 1965, the BMR carried out a reconnaissance geological, geochemical and geophysical survey over the western part of the area now covered by EL 7506 (Shatwell and Duckworth, 1966). Auger holes were spaced 122m (400 feet) apart along east-west traverses spaced at 732m (2400 feet) intervals. Bottom hole, "C" horizon samples were collected and assayed for Cu, Pb, Ni, Co, U and P, and holes were radiometrically probed. Electromagnetic and radiometric surveys were also conducted along the regional traverses.

The most intense Slingram (EM) anomalies were initially followed up in 1965 by infill traverses at 122m (400 feet) intervals, with auger holes spaced 61m (200 feet) apart. Samples were assayed for Cu, Ni and Co and holes probed for radioactivity. This work was completed over the southwestern portion of EL 7506 in 1966 (Semple, 1967).

Further EM, ground radiometric, magnetic and I.P. surveys were carried out by the BMR in the region in 1966 (Farrow, 1967).

CRA Exploration held exploration licence 610 in the early 1970s. This licence covered a large area which included the current EL 7506. Work carried out included regional geological mapping, and stream sediment sampling (Marmant, 1973 a & b).

Between 1978 and 1979, most of the current EL 7506 was covered by four separate exploration licences. Occidental Minerals Corp held ELs 1755 and 2201 which covered the northern and eastern sections of EL 7506. Occidental carried out -80 mesh soil sampling on the western side of EL 7506. Samples were assayed for Cu, Pb, Zn, Co, Ni, Mn and U. An approximately north-south tending line of Pb soil anomalies were located immediately to the west of El 7506, whilst several isolated anomalies also occurred within the licence. Geological mapping was done in conjunction with the soil sampling. No new uranium anomalies were located by this program, and it was concluded that the anomalous Pb was probably related to quartz veins. The remainder of Occidental's work focussed on uranium exploration and included: track etch and ground radiometric surveys with RAB and two diamond drill holes for follow up. No significant mineralisation was intersected and consequently ELs 1755 and 2201 were relinquished (Swingler, 1980).

Uranerz held EL 1858 which was located in the southwestern corner of the current EL 7506. Gridding, aerial photograph interpretation, reconnaissance geology and ground radiometrics were carried out. The results were not encouraging, and the licence was therefore relinquished (Uranerz, 1980).

At the same time, Marathon Petroleum Australia Ltd were conducting exploration on EL 1701, part of which was situated in the southeastern corner of EL 7506. An airborne radiometric survey, photogeological interpretation, ground radiometric and radon surveys were carried out. No significant results were obtained.

No further work appears to have been done on the area until the granting of EL 7506.

5. PRESENT EXPLORATION

In the first year of tenure, Aztec Mining Company Ltd have carried out literature research, compilation and interpretation of BMR and Occidental geochemical data, an aeromagnetic/radiometric survey, gridding and mapping.

The results of the literature research work are summarised in Section 4 of this report. All BMR and Occidental geochemical data has been entered into the Woodcutters computer database. This work was done in conjunction with adjoining ELs 7374 and 7385.

A detailed airborne magnetic and radiometric survey was flown by Aerodata Holdings Limited in September 1991 and covered all of EL 7506. The survey specifications were as follows:-

Flight line spacing	50m
Flight line direction	east-west
Tie line spacing	500m
Tie line direction	north-south
Sensor height	60m
Magnetometer resolution	0.001 nanoTeslas
Magnetometer sample interval	7m
Magnetometer cycle rate	0.1 sec
Spectrometer sample interval	70m
Spectrometer cycle rate	1 sec

The magnetics data was presented as residual magnetic intensity contours (Enclosure 1) and has been image processed. The radiometric data was also image processed. The data was interpreted using criteria developed from similar work carried out over the Woodcutters Mine area. This interpretation in conjunction with the BMR data compilation resulted in the interpreted geology shown in Figure 2.

Of particular interest is the western portion of EL 7506 where the Whites Formation/Wildman Siltstone is folded in a south plunging anticline adjacent to Mt Minza. Regional data compilation and interpretation suggests that an approximately north-south oriented base metal-gold mineralised trend may pass through this area. The trend is delineated by Pb soil geochemical anomalies in the adjoining EL 7374 and possibly the Sundance gold mine. Drilling of the largest Pb soil geochemical anomaly in EL 7374 resulted in minor base metal mineralisation associated with a dolerite sill within the Whites Formation. Dolerites in this area are characterised by a positive residual magnetic response and anomalously high Cu. Figure 3 shows the Cu "C" horizon soil geochemistry of the Mt Minza area. The anomalously high Cu in this area may indicate local base metal concentration, probably associated with folded dolerite sills within the Whites Formation. For these reasons, this area is considered to be the primary target for base metal mineralisation. Unfortunately the detailed BMR "C" horizon soil sampling program did not assay for Pb and Zn. The area has therefore been regridded with lines spaced 100m apart and pegs at 50m intervals, in preparation for a RAB drilling program to be carried out in Year Two. The main marker horizon is a chert unit which probably marks the base of the Koolpin Formation in the area. Mapping to date indicates that the chert unit actually comprises two separate chert beds, although usually only one is prominent at any particular locality.

6. GEOLOGY AND MINERALISATION

Exploration Licence 7506 is underlain by Lower Proterozoic sediments of the Mt Partridge, South Alligator and Finniss River Groups. The Mt Partridge Group sediments include carbonaceous and dolomitic shales of the Whites Formation and siltstones of the Wildman Siltstone with interbedded quartzite of the Acacia Gap Quartzite Member. The overlying carbonaceous shales and cherts (possibly altered carbonates) of the Koolpin Formation, light grey mudstones and albitic cherts of the Gerowie Tuff and siltstones and haematitic cherts (banded iron formation) of the Mount Bonnie Formation comprise the South Alligator Group. The conformably overlying Burrell Creek Formation of the Finniss River Group consists mainly of siltstones with interbedded greywackes. Sediments of the Mt Partridge Group have been intruded by largely conformable dolerites of the Zamu Dolerite. Cainozoic laterites and recent alluvial sediments obscure bedrock in places.

The structure of the area is dominated by a south plunging anticline centred on the western side of the exploration licence. A number of major NE-SW trending faults are interpreted to cut across the stratigraphy (Figure 2).

The only recorded mineralisation in the licence area is located at the Waterhouse 1 Prospect, where minor uranium and copper have been encountered (see Section 4).

7. EXPENDITURE FOR YEAR ONE

Consultants	$8,155
Labour	2,767
Contract Services	3,093
Car Hire	880
Store Supplies	2,225
Printing and Stationary	1,015
Administration (15%)	$2,720
TOTAL	$20,855

8. PROPOSED WORK PROGRAMME AND EXPENDITURE - YEAR TWO

The proposed work program for year two is as follows:-

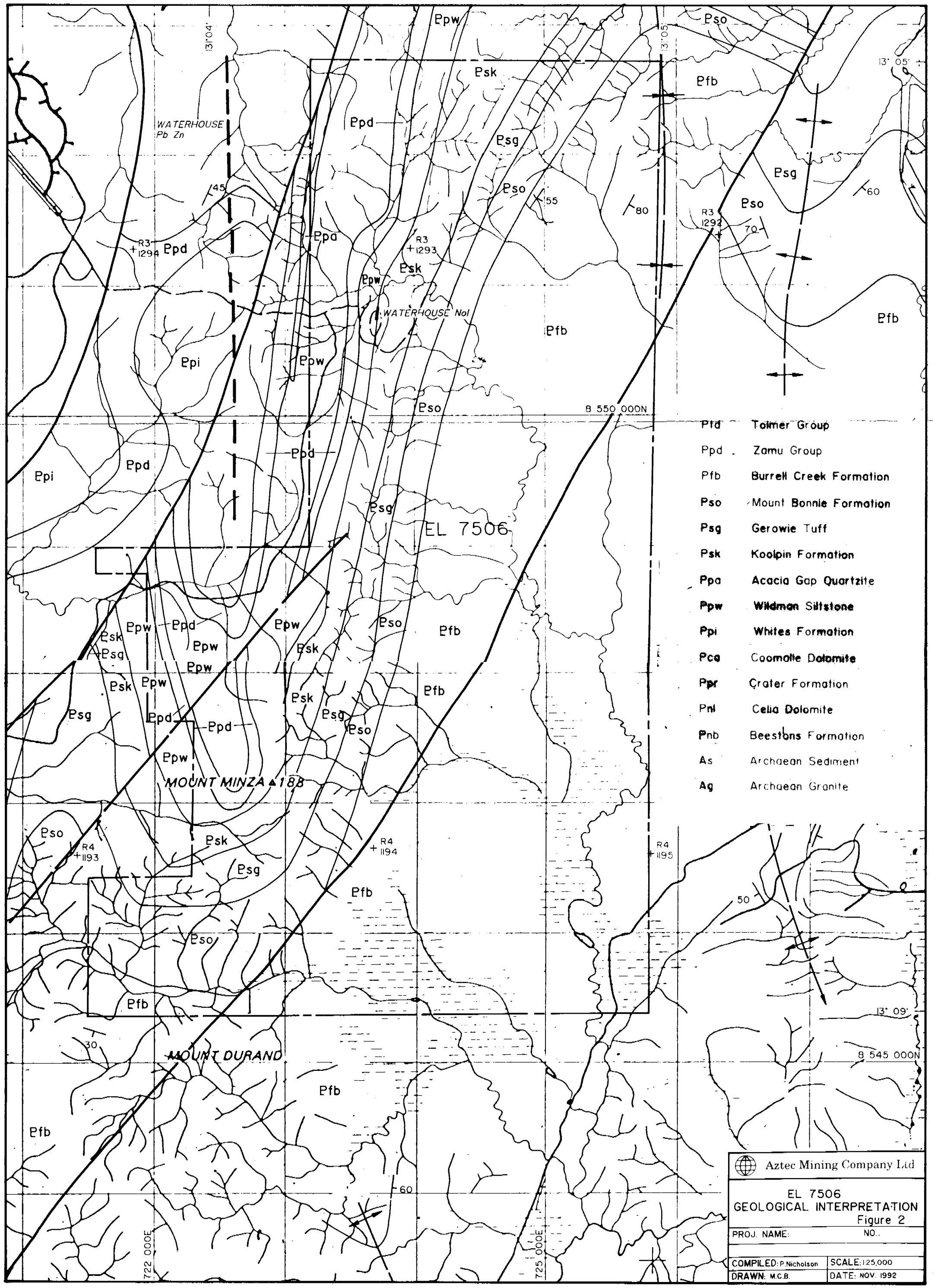
1. RAB drilling of gridded area - Mt Minza area.

2. Completion of mapping of gridded area.

3. Reconnaissance stream sediment sampling for gold.

4. Costeaning and/or drilling if warranted.

The proposed expenditure for Year Two is $10,000.


WATERHOUSE
Pb Zn
WATERHOUSE Nol
MOUNT MINZA ▲188
MOUNT DURAND
EL 7506
13°04'
13°05'
13° 05'
13° 09'
8 550 000N
8 545 000N
722 000E
725 000E
R3 +1294
R3 +1293
R3 1292
R4 +1193
R4 +1194
R4 +1195
45
55
80
70
60
50
30
Ppw
Pso
Psg
Ppd
Pfb
Psk
Ppa
Ppi
Pfd Tolmer Group
Ppd Zamu Group
Pfb Burrell Creek Formation
Pso Mount Bonnie Formation
Psg Gerowie Tuff
Psk Koolpin Formation
Ppa Acacia Gap Quartzite
Ppw Wildman Siltstone
Ppi Whites Formation
Pco Coomalie Dolomite
Ppr Crater Formation
Pnl Celia Dolomite
Pnb Beestons Formation
As Archaean Sediment
Ag Archaean Granite
Aztec Mining Company Ltd
EL 7506
GEOLOGICAL INTERPRETATION
Figure 2
PROJ. NAME:
NO.
COMPILED: P.Nicholson
SCALE: 1:25,000
DRAWN: M.C.B.
DATE: NOV. 1992

EL 7506

4800N

22000E

24000E

0 200 400 600 800 1000m

SCALE: 1 : 10,000

EL 7506
Cu GEOCHEMICAL
COMPILATION

Figure 3

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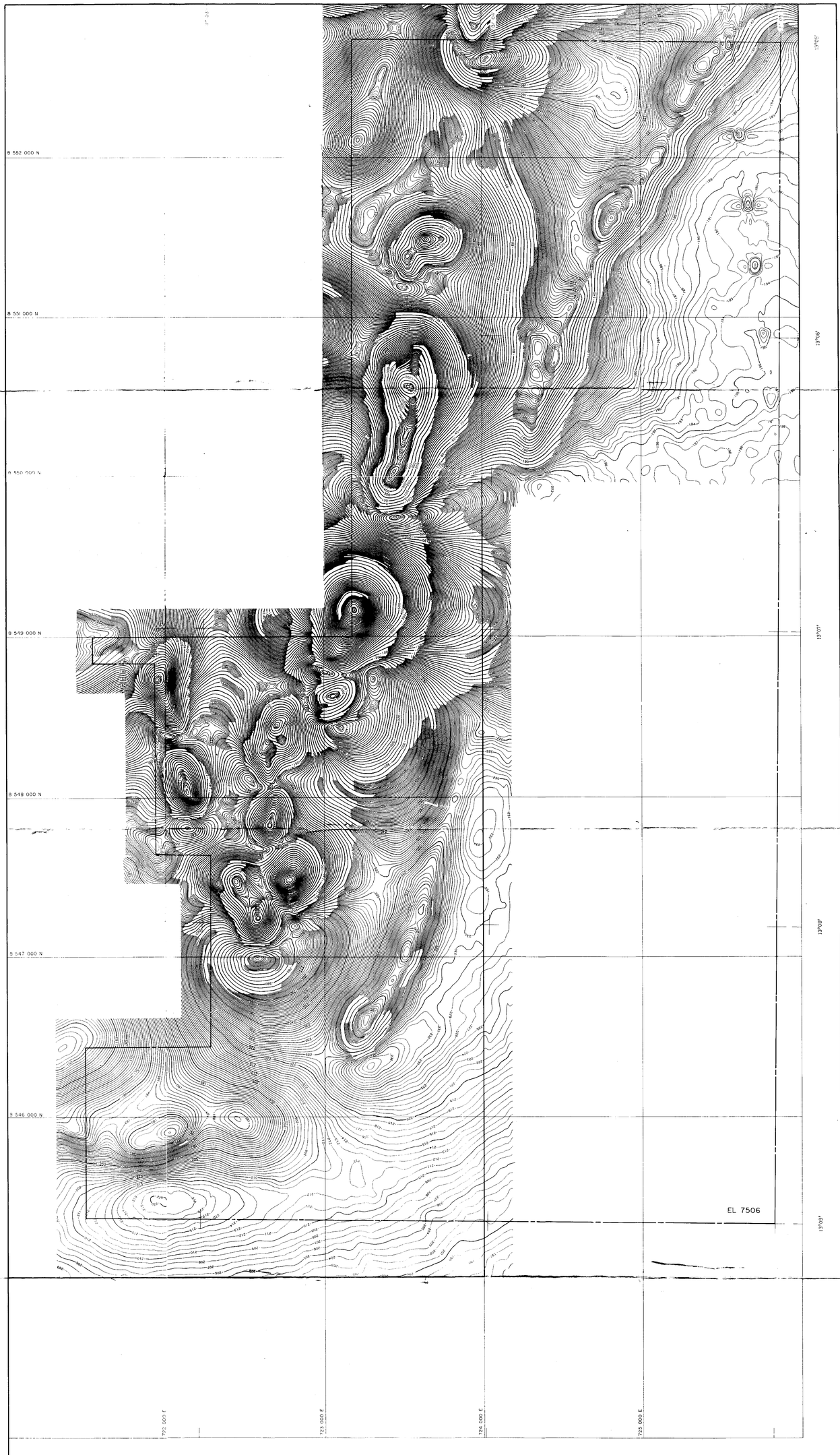

WATERHOUSE
AIRBORNE GEOPHYSICAL SURVEY
NICRON RESOURCES

Surveyed and compiled by MUSTAFIC INTERNATIONAL LIMITED
September, 1991
Job No 2120

austirex

RESIDUAL MAGNETIC INTENSITY

GRID NORTH
TRUE NORTH
MAGNETIC NORTH

North point relationships are shown for the centre of the map
Magnetic north is true for 1990

GRID/MAGNETIC ANGLE 3°23'
GRID CONVERGENCE 0°00'11"
SECULAR VARIATION 0°05'27" west per year

DATA PROCESSING

REGIONAL FIELD	IGRF MODEL 1985 REMOVED
GRID CELL SIZE	15 metres
CONTOUR INTERVAL	1.0 nanoTesla
PARALLAX CORRECTION	3.13 fiducials
DATUM VALUE ADDED	0 nanoTesla

Scale 1:10 000

200 0 200 400 600 800 1000 metres

AUSTRALIAN MAP GRID

SHEET LAYOUT

8562000N
8556000N
8550000N
8544000N
722000E
730000E

Enclosure 1

CR91/638

eupene exploration enterprises

Client : Woodcutters Joint Venture

Scale:1 : 5000	Compiled: S.Pevely	Date: SEPT.1991
	Drawn: C.S.D.S.	

WATERHOUSE PROJECT GEOLOGY FACT MAP

Enclosure 2

SHEET 1 | SHEET 2 | SHEET 3 | SHEET 4

0 100 200 300 400 500 metres

MOUNT MINZA △ 188

EL 7374

EL 7506

9600mN 9500mN 8500mN 7500mN 7000mN 6500mN

5000mE 5500mE 6000mE

50000N 49000N 48000N 47000N 46000N

22000E 23000E 24000E 25000E

Thin Mssl-lf scree on brown soil

Mssl-lf scree and small O/Cs

Thin light brown soils Mssl-h scree/log No O/C

Light brown soils Thin Mssl-h log No O/C

Mssl-lf subcrop

Wooded brown soil Mssl-h float

Well bedded Mssl-lf

Abundant Mssl-h log/fine scree

Orange brown Mssl-lf with concordant? goss.qtz veining

Cleaved Mssl-h

Brown soil flats

Mssl-h scree with small O/Cs

Brown soil flats

Mssl-h scree

Qa

red soil

slst sc

al

red soil mnr dol sc

dol sc

crt sc

crt

crt+ slst sc

sil mst

slst

red soil

lat

red soil

LEGEND

ACACIA GAP TONGUE (WILDMAN SILTSTONE)		Light grey weakly pyritic recrystallised quartzite
ZAMU DOLERITE		Strongly foliated orange brown ferruginised amphibolite - possible surface expression of dolerite intrusives
WILDMAN SILTSTONE / UPPER WHITES FORMATION TRANSITION BEDS	Mssl-Fe	Dark grey brown variably gossanous quartz veined silicic, laminated dolomitic slate, interbedded quartzite*
	Mssl-h	Grey - red brown laminated siltstones and slates
WHITES FORMATION (PPlg-d)		Light grey silicified finely laminated dolomitic slate - often quartz stockworked
		Grey green - light grey porcellanous banded 'laminated' calc silicate
		Light brown laminated sandy dolomite, argillite
		Interbedded silicified dololutite and dolomitic slate
LOWER WHITES FORMATION (PPl)	Ppl_1	Greenish grey laminated dolomitic mudstone
COOMALIE DOLOMITE	Ppc	Light grey coarsely crystalline dolomite/carbonate

dol	dolerite
crt	chert
slst	siltstone
mst	mudstone
sil	siliceous
sc	scree
lat	laterite
al	aluvium

- EL Boundary
- Fence line
- Track
- Stream
- Outcrop
- Quartz vein
- Laterite
- Extent of scree
- Qa — Extent of alluvium
- 60 — Dip and strike of bedding
- 80 — Dip and strike of cleavage
- 40 — Minor fold with direction of plunge
- Anticlinal axis - dashed if inferred
- Synclinal axis - dashed if inferred
- Plunge direction of major fold axis
- Geological contact - inferred
- Fault - inferred
- 60 — Strike and dip of joint
- 75 — Strike and dip of foliation