NICRON RESOURCES LIMITED
ACN 000 828 535

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

Phone (089) 760 088
Fax (089) 760 108

ANNUAL REPORT FOR YEAR FOUR EXPLORATION LICENCE 7506 MOUNT MINZA AREA NORTHERN TERRITORY

29 OCTOBER 1994 TO 28 OCTOBER 1995

Project Name: MOUNT MINZA

Map Sheets: PINE CREEK SD 52-08 1:250,000

Commodities: LEAD, ZINC GOLD

Author: I.K. BUTLER

Date: 28 November, 1995

Volumes: VOLUME 1 OF 1

Accepted by: J.K. Butler.

Distribution:
1. NT Department of Mines and Energy
2. Woodcutters Mine, NT
3. Posex Adelaide

Report No: 20017

CONTENTS

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Title: ANNUAL REPORT FOR YEAR FOUR
EXPLORATION LICENCE 7506
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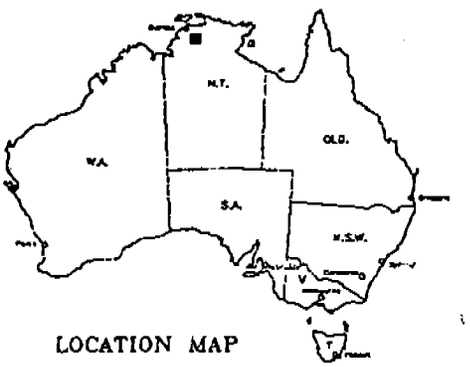
Author: I.K. Butler

Date: 29 November 1995



LOCATION MAP

SUMMARY

EL 7506 is part of a contiguous block of tenure in the Waterhouse-Mt Minza area south of Batchelor, Northern Territory which is being explored by the Woodcutters Operation. The licence is prospective for Woodcutters vein type and stratiform base metal mineralisation.

The geology of the licence dominantly comprises sediments at the lower Proterozoic Pine Creek Geosyncline. They are carbonaceous mudstone, dolomite, chert, iron formation and greywacke of Whites Formation and South Aligator Group intruded by Zamu dolerite and later lamprophyre dykes. The sediments have been folded into a broad south plunging anticline.

Earlier exploration outlined a prominent co-incident lead-zinc C horizon geochemistry anomaly. Exploration during Year Three involved the drilling of two diamond drillholes to test the geochemical anomalies. The drilling revealed base metal sulphides are associated with strongly altered and sheared mafic igneous rocks that intruded a folded sequence of variably dolomitic carbonaceous mudstone. Exploration during Year Four was directed towards evaluating the gold potential and comprised stream sampling and analyses of pulps from earlier RAB programmes. The results were disappointing.

1. INTRODUCTION

Exploration Licence 7506 is located approximately 5km southeast of Batchelor. The licence was granted to Aztec Mining Company Ltd on 29 October 1991, for a period of six years. Aztec Mining Company was taken over by Posgold in early 1994 and the Woodcutters operation is now owned by Normandy Metals, the metals arm of the Normandy Group. The licence has been subsequently transferred to Normandy Metals. A partial relinquishment at the end of Year Two reduced the EL to six blocks and a further partial relinquishment at the end of Year Three reduced the EL to four blocks.

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

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

2. CONCLUSIONS

1. Lead and zinc C horizon geochemistry anomalies at Mt Minza are sourced from base metal sulphides located in strongly altered and sheared mafic igneous rocks which intrude folded sediment of Whites and Koolpin Formation.

2. Petrological work has revealed the timing of the base metal mineralisation to be before deformation.

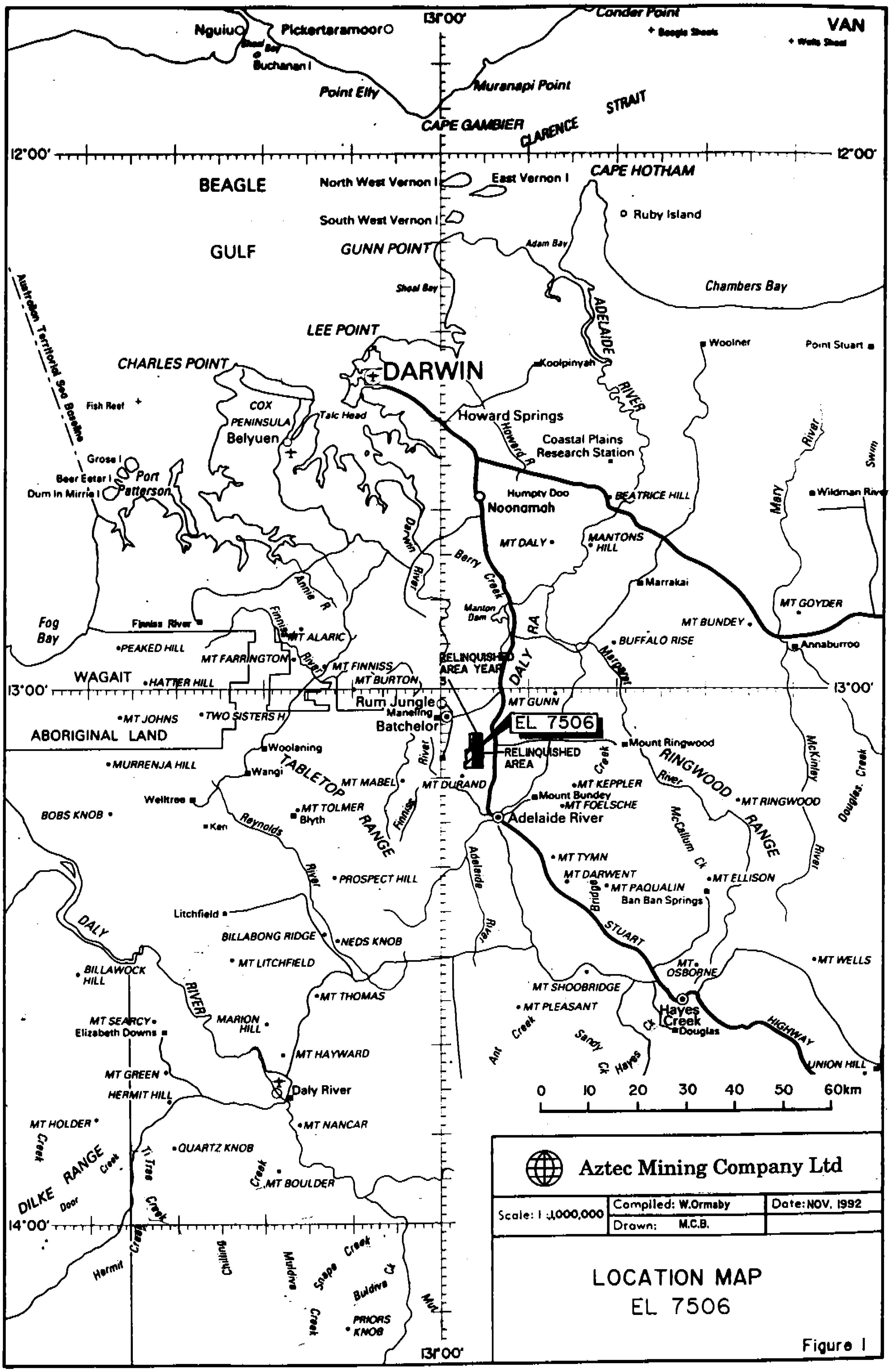
3. Poor BLEG stream sample results has downgraded the potential for gold mineralisation within EL 7506.

4. Further diamond drilling is required to test structural and stratigraphic targets at the Mt Minza base metal geochemical anomaly.

3. 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.



131°00'
Nguiu
Pickertaramoor
Buchanan I
Conder Point
Beagle Shoals
VAN
Point Elly
Muranapi Point
CAPE GAMBIER
CLARENCE STRAIT
12°00'
BEAGLE
GULF
North West Vernon I
East Vernon I
South West Vernon I
CAPE HOTHAM
Ruby Island
GUNN POINT
Adam Bay
Shoal Bay
Chambers Bay
ADELAIDE RIVER
Australian Territorial Sea Baseline
LEE POINT
CHARLES POINT
DARWIN
Koolpinyah
Woolner
Point Stuart
Fish Reef
COX PENINSULA
Talc Head
Belyuen
Howard Springs
Coastal Plains Research Station
Grose I
Beer Eater I
Dum In Mirrie I
Port Patterson
Humpty Doo
Noonamah
BEATRICE HILL
Wildman River
Mary River
MT DALY
MANTONS HILL
Darwin River
Berry Creek
Annie R
Marrakai
MT GOYDER
Fog Bay
Finniss River
MT ALARIC
Manton Dam
MT BUNDEY
BUFFALO RISE
Annaburroo
PEAKED HILL
MT FARRINGTON
MT FINNISS
RELINQUISHED AREA YEAR 5
DALY RA
WAGAIT
HATTER HILL
MT BURTON
13°00'
Rum Jungle
MT GUNN
Manelling
MT JOHNS
TWO SISTERS H
Batchelor
EL 7506
ABORIGINAL LAND
Mount Ringwood
RELINQUISHED AREA
Woolaning
MURRENJA HILL
Wangi
TABLETOP RANGE
MT MABEL
MT DURAND
MT KEPPLER
RINGWOOD RANGE
Mount Bundey
MT FOELSCHE
MT RINGWOOD
McKinlay River
Douglas Creek
Welltree
BOBS KNOB
MT TOLMER
Blyth
Ken
Reynolds River
Adelaide River
MT TYMN
McCallum Ck
MT DARWENT
MT PAQUALIN
MT ELLISON
Ban Ban Springs
PROSPECT HILL
Litchfield
BILLABONG RIDGE
NEDS KNOB
STUART HIGHWAY
DALY RIVER
BILLAWOCK HILL
MT LITCHFIELD
MT OSBORNE
MT WELLS
MT SHOOBRIDGE
MT THOMAS
MT PLEASANT
MT SEARCY
Elizabeth Downs
MARION HILL
Hayes Creek
Douglas
Ant Creek
Sandy Ck
Hayes Ck
MT HAYWARD
UNION HILL
MT GREEN
HERMIT HILL
Daly River
0 10 20 30 40 50 60km
MT HOLDER
MT NANCAR
QUARTZ KNOB
DILKE RANGE
Door Creek
Ti Tree Creek
MT BOULDER
14°00'
Hermit Creek
Chilling
Mudva Creek
Snape Creek
Buldiva Ck
PRIORS KNOB
Aztec Mining Company Ltd
Scale: 1:1,000,000
Compiled: W.Ormsby
Date: NOV. 1992
Drawn: M.C.B.
LOCATION MAP
EL 7506
Figure 1

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 EL's 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 EL's 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.

In the first year of tenure, Aztec Mining Company conducted literature research, geochemical data compilation, a detailed aeromagnetic and radiometric survey, processing of airborne data, gridding and mapping and geological/geophysical interpretation of the data. In the second year, Aztec Mining carried out infill RAB drilling which delineated large Cu, Pb and Zn geochemical anomalies. In the third year Normandy Metals drilled two diamond holes to test the coincident Cu, Pb, Zn geochemical anomalies. Base metal sulphides are located in altered igneous rocks.

4. WORK CARRIED OUT - YEAR FOUR

4.1 STREAM SAMPLING

A total of eleven BLEG (Bulk Leach Extractable Gold) and four -40# stream sediment samples were collected from streams draining EL 7506 (see Figure 2 for location). The BLEG samples comprised approximately 5 kgs of -2mm sized active stream sediment. The samples were high in organic material and consequently they were split into two 2 kg samples in order to carry out orientation work on the effect of pre-leaching the material to remove the organics. The results are presented in Appendix I. A comparison between results from the pre-leached and high organics shows little difference, however further orientation work is required. The BLEG samples were leached at the Normandy Exploration Laboratory in Perth and analysed at Analabs by AAS aqua regia digest, Method GG346. The -40# samples were analysed at Assaycorp, Pine Creek for Au by Fire Assay (FA50 method) and Cu, Pb, Zn, Ag, Ni, Co, Mn and Fe by AAS (MA3 method).

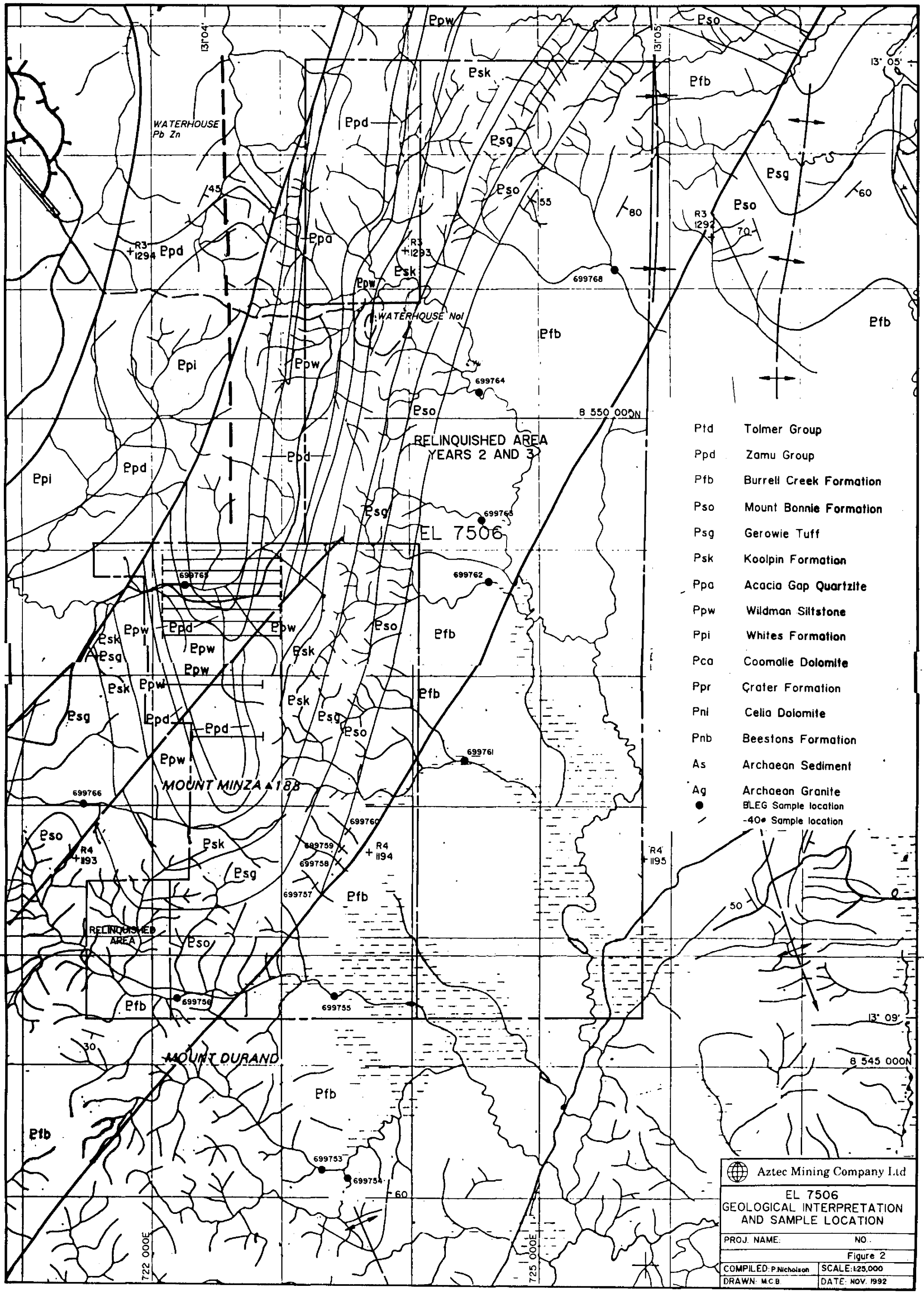
The gold values are low and have downgraded the potential for gold mineralisation within and adjacent to EL 7506.

4.2 PULP ANALYSES

Pulps from RAB drilling conducted during Year Two were retrieved and analysed for gold at Assaycorp by Fire Assay (FA50 method). The location of the samples are plotted on Figure 3 and analytical results are in Appendix II. The gold values are all low.

4.3 PETROLOGY

A total of 8 samples from diamond drill hole MMD2 were submitted to R. England in Townsville for petrographic descriptions (see Appendix III). The base metal sulphide mineralisation is associated with mafic igneous rocks that have been strongly altered and deformed, however there is evidence that the mineralisation occurred before the peak of deformation. The mineralisation was initially interpreted to occur in primary carbonate lithologies.


Ppw
Psk
Pso
Pfb
Ppd
Psg
Ppa
Ppi
Pca
Ppr
Pnl
Pnb
As
Ag
WATERHOUSE Pb Zn
WATERHOUSE Nol
MOUNT MINZA ▲188
MOUNT DURAND
RELINQUISHED AREA YEARS 2 AND 3
RELINQUISHED AREA
EL 7506
131°04'
131°05'
13° 05'
13° 09'
8 550 000N
8 545 000N
722 000E
725 000E
699768
699764
699765
699763
699762
699761
699766
699760
699759
699758
699757
699756
699755
699754
699753
R3 +1294
R3 +1293
R3 1292
R4 +1193
R4 +1194
R4 1195
45
55
60
70
50
30
Ptd 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
Pca Coomalie Dolomite
Ppr Crater Formation
Pnl Celia Dolomite
Pnb Beestons Formation
As Archaean Sediment
Ag Archaean Granite
BLEG Sample location
-40# Sample location
Aztec Mining Company Ltd
EL 7506
GEOLOGICAL INTERPRETATION AND SAMPLE LOCATION
PROJ. NAME:
NO.
Figure 2
COMPILED: P.Nicholson
SCALE: 1:25,000
DRAWN: M.C.B.
DATE: NOV. 1992

5. 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.

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 3).

6. EXPENDITURE FOR YEAR TWO

Salaries/labour	2,312
Consultants	710
Contract Services	350
Vehicle Costs/Fuel	350
Assays	1,380
Consumables	110
Administration (15%)	781
TOTAL	**$5,993**

7. PROPOSED WORK PROGRAMME AND EXPENDITURE - YEAR FIVE

The proposed work program for Year Five is as follows:-

1. Re-evaluation of the Mt Minza base metal anomaly

2. Follow-up drilling if warranted.

The proposed expenditure is $5,000

Woodcutters Mine

EXPLORATION DEPARTMENT

EL 7506 MT MINZA

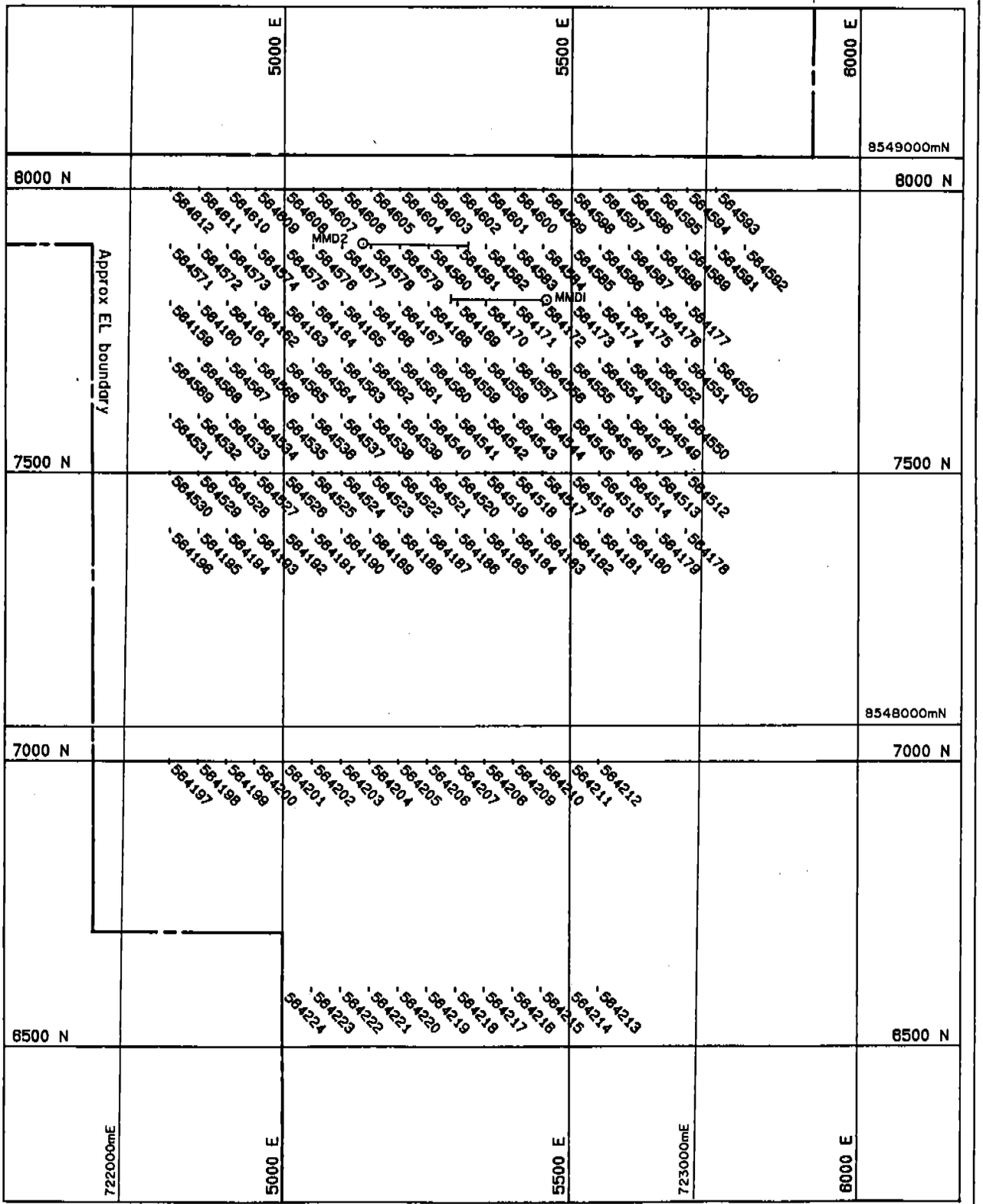
RAB AND DIAMOND DRILL HOLE LOCATIONS

File :MINZABAN

Scale :1 : 10000

Date :08 Nov 1988

Figure 3



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APPENDIX I

STREAM SAMPLES AND

BLEG ORIENTATION WORK

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

20 OCT 1995

ASSAY CODE: AC 24874

Nicron Resources Ltd - Woodcutters Mine
Private Bag 60
Winnellie NT 0821

EL 7506

Distribution
Ian Butler

Client Reference: 10114
Project : WATERHOUSE
Cost Code: -40# Stream

Date Received: 05/10/95
Number of Samples: 4

Sample Preparation

Analysis	Analytical Technique	Precision & Accuracy	Detection Limit	Data Units
Au	FA50	Acc. ± 15%	1	ppb
Au(R)	FA50	Acc. ± 15%	1	ppb
Cu	AAS/MA-3	Prec. ± 10%	1	ppm
Pb	AAS/MA-3	Prec. ± 10%	2	ppm
Zn	AAS/MA-3	Prec. ± 10%	1	ppm
As	AAS/MA-3	Prec. ± 10%	1	ppm
Ni	AAS/MA-3	Prec. ± 10%	2	ppm
Co	AAS/MA-3	Prec. ± 10%	1	ppm
Mn	AAS/MA-3	Prec. ± 10%	2	ppm
Fe	AAS/MA-3	Prec. ± 10%	0.01	percent

NUMBER
CHECKED
APPROVED BY
AUTHORISED
DATE

Authorisation: Ray Wooldridge
Report Dated: 13/10/95

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 24874

Sample	Au (ppb)	Au(R) (ppb)	Cu (ppm)	Pb (ppm)	Zn (ppm)	As (ppm)	Ni (ppm)	Co (ppm)
699757	2		43	4	19	10	25	26
699758	2	2	35	5	14	8	24	25
699759	3		37	4	16	7	26	27
699760	1		34	12	18	7	23	23

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 24874

Sample	Mn (ppm)	Fe (%)
699757	2170	2.89
699758	1470	2.38
699759	1960	2.66
699760	1710	2.49

FILE EL'S 06

NORMANDY EXPLORATION LIMITED
A.C.N. 006 306 690
WELSHPOOL LABORATORY
3 Bellows Street, Welshpool
Western Australia 6872
Phone (09) 356 2074
Fax (09) 356 2216

MEMORANDUM

To: Ian Butler,

From: Bill Griffin

Copy: Nigel Radford

Date: Tuesday, October 24, 1995

SUBJECT: BLEG SAMPLES. 699753 - 699770.

IAN,

REFER TO ASSAY REPORTS PE 010811 and 12.
AND DATA SHEET SUPPLIED.

I have examined the data and an obvious relationship is not apparent to me.These samples have the following problems;

Variable oversize containing both inorganics and organic trash.
The natural pH is acid, probably caused by water soluble organics.
Alkali reagent consumption is high due mainly to organic reactions.

Pre Leach Experiment.

In an attempt to clean up these samples ,I took a separate 2kg sample and pre conditioned it with chemicals, then disposing of the solution before leaching the the residue in the usual manner. The PL results show no real reduction in the background problem. Do either set of results meet with your expectations ?

Suggestion;

We must try to find a way of cleaning up this type of sample, either with a physical or chemical procedure before bleg leaching ,I propose we discuss the problem with Nigel and plan some sort of orientation study.

REGARDS,
BILL.

Regards
Bill Griffin

TO; IAN BUTLER. 23/10/95.
FROM; BILL GRIFFIN.
COPY; NIGEL RADFORD.

SUBJECT; BLEG SAMPLES. 699753 - 699770.
REFER; ASSAY REPORT. PE 010811 AND 12.
SOME SPECIFIC DATA.

SAMPLE NUMBER	+ 500	- 500 + 200	- 200 + 50	- 50um	MAGS. + 50um	NAT. pH	ALK. CONS
	%	%	%	%	%		g/kg.
699753	47.8	21.4	9.5	21.3	0.2	5.1	2.4
54	8.0	10.4	29.0	52.6	0.1	4.2	4.7
55	1.1	3.5	29.1	66.2	0.0	4.4	4.7
56	3.0	14.7	36.1	46.2	0.0	4.6	4.4
699761	14.3	12.9	14.7	58.1	0.0	4.1	4.6
62	45.4	9.5	13.1	32.0	1.1	5.1	4.3
63	5.7	6.9	21.4	66.0	0.1	4.3	4.9
64	7.1	13.1	31.0	48.8	0.3	6.4	4.3
65	3.8	4.8	27.6	63.8	0.2	5.0	4.0
66	21.6	10.0	20.5	47.9	1.2	4.3	4.9
67							
68	4.0	9.6	22.2	64.2	0.1	4.4	4.2
69							
699770							
END.							

REGARDS,
BILL.

Analabs
Analabs Pty. Ltd.
ACN 004 591 664
52 Murray Road, Welshpool
Western Australia 6106
P.O. Box 210, Bentley, W.A. 6102
Telephone : (61 9) 4587999
Facsimilie: (61 9) 4582922

Job No: **PE010811**
Project Code: 065.000.1110.4097
Order No: 24448
Date Received: 19/10/95
Date Reported: 20/10/95

ANALYTICAL REPORT

I Butler

Normandy Exploration Ltd
PO Box 1143
West Perth

WA 6872

Number of pages of report : 1 (excl cover sheet) First Sample: 699753
Number of Samples : 14 Last Sample: 699770

Invoice to:
I Butler

Normandy Exploration Ltd
PO Box 1143
West Perth

WA 6872

Electronic Data Transmission :
Modem / /
Facsimile / /
Disk Report / /

Results to:
Bill Griffin

Normandy Exploration Ltd
PO Box 1143
West Perth

WA 6872

Results to:

Remarks :

Authorised by .....
On behalf of:

Mr Nigel Ball
Manager-Minerals

This report relates specifically to the sample(s) tested in so far as that the sample(s) is truly representative of the sample source as supplied.

Analabs

ANALYSIS DESCRIPTION

Job number : PE010811 Order number : 24448

Scheme code : GG346 - Zincon/AAS

Zincon/aqua regia digest/AAS

Au : Gold
Cu : Copper
Ag : Silver

Analabs
Analabs Pty. Ltd.
ACN 004 591 664
52 Murray Road, Welshpool
Western Australia 6106
P.O. Box 210, Bentley, W.A. 6102
Telephone : (61 9) 4587999
Facsimilie: (61 9) 4582922

Order No: 24448
Project Code: 065.000.1110.4097
Report Date: 20/10/95
Report Status: Final
Page: 1 of 1

Job No: PE010811

ANALYTICAL DATA

Sample	Au	Cu	Ag
699753	0.30	0.20	11.0
699754	0.80	0.19	29.5
699755	0.80	0.46	32.0
699756	0.90	0.40	27.5
699761	0.40	0.41	13.5
699762	0.45	0.36	25.5
699763	0.45	1.09	16.0
699764	0.60	1.17	41.5
699765	0.30	0.72	98.5
699766	0.40	1.17	15.5
699767			
699768	0.40	0.25	15.0
699769			
699770			

Method	GG346	GG346	GG346
Units	ppb	ppm	ppb
Detection Limit	0.01	0.01	0.5

Notes:
N.A. = not analysed
-- = element not determined
I.S. = insufficient sample
L.N.R. = listed not received

Analabs
Analabs Pty. Ltd.
ACN 004 591 664
52 Murray Road, Welshpool
Western Australia 6106
P.O. Box 210, Bentley, W.A. 6102
Telephone : (61 9) 4587999
Facsimilie: (61 9) 4582922

Job No: **PE010812**
Project Code: 065.000.1110.4097
Order No: 24449
Date Received: 19/10/95
Date Reported: 20/10/95

ANALYTICAL REPORT

I Butler

Normandy Exploration Ltd
PO Box 1143
West Perth

WA 6872

Number of pages of report : 1 (excl cover sheet) First Sample: PL53
Number of Samples : 14 Last Sample: PL70

Invoice to:
I Butler

Normandy Exploration Ltd
PO Box 1143
West Perth

WA 6872

Electronic Data Transmission :
Modem / /
Facsimile / /
Disk Report / /

Results to:
Bill Griffin

Normandy Exploration Ltd
PO Box 1143
West Perth

WA 6872

Results to:

Remarks :

Authorised by .....
On behalf of:

Mr Nigel Ball
Manager-Minerals

This report relates specifically to the sample(s) tested in so far as that the sample(s) is truly representative of the sample source as supplied.

Analabs

ANALYSIS DESCRIPTION

Job number : PE010812 Order number : 24449

Scheme code : GG346 - Zincon/AAS

Zincon/aqua regia digest/AAS

Au	: Gold
Cu	: Copper
Ag	: Silver

Analabs
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Western Australia 6106
P.O. Box 210, Bentley, W.A. 6102
Telephone : (61 9) 4587999
Facsimilie: (61 9) 4582922

Order No: 24449
Project Code: 065.000.1110.4097
Report Date: 20/10/95
Report Status: Final

Job No: **PE010812**

ANALYTICAL DATA

Sample	Au	Cu	Ag
PL53	0.60	0.29	16.5
PL54	0.75	0.21	30.5
PL55	0.85	0.34	32.0
PL56	0.95	0.38	32.5
PL61	0.55	0.53	17.0
PL62	0.55	0.31	27.5
PL63	0.45	1.08	16.0
PL64	0.75	1.08	40.0
PL65	0.35	0.61	99.0
PL66	0.50	0.72	16.5
PL67			
PL68	0.30	0.20	13.5
PL69			
PL70			

Method	GG346	GG346	GG346
Units	ppb	ppm	ppb
Detection Limit	0.01	0.01	0.5

Notes:
N.A. = not analysed
-- = element not determined
I.S. = insufficient sample
L.N.R. = listed not received

APPENDIX II

ANALYTICAL RESULTS

RAB AND DDH SAMPLE PULPS

ASSAYCORP PTY LTD
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Telephone (089) 76 1262
Facsimile (089) 76 1310

ASSAY CODE: AC 19398

Nicron Resources Limited

EL 7506

Distribution
IAN BUTLER

Client Reference: 8223
Project : MT MINZA
Cost Code: Check sampling for Au

Date Received: 27/01/1995
Number of Samples: 278

Sample Preparation MMD 1, MMD 2 and RAB drilling (1993)

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

Authorisation: Ray Wooldridge
Report Dated: 27/01/1995

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Sample		Au (ppb)	Au(R) (ppb)
MMD1	0-2	1	
MMD1	2-4	1	
MMD1	4-6	2	
MMD1	6-8	1	
MMD1	8-10	2	1
MMD1	10-12	1	
MMD1	12-14	2	
MMD1	14-16	1	
MMD1	16-18	1	
MMD1	18-20	1	
MMD1	20-22	1	
MMD1	22-24	1	
MMD1	24-26	<1	
MMD1	26-28	1	
MMD1	28-30	1	
MMD1	30-32	<1	
MMD1	32-34	<1	
MMD1	34-36	1	
MMD1	36-38	<1	
MMD1	38-40	<1	<1
MMD1	40-42	<1	
MMD1	42-44	<1	
MMD1	44-46	<1	
MMD1	46-48	<1	
MMD1	48-50	1	<1

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ASSAY CODE: AC 19398

	Sample	Au (ppb)	Au(R) (ppb)
MMD1	50-52	<1	
MMD1	52-54	1	
MMD1	54-56	<1	
MMD1	56-58	1	
MMD1	58-60	<1	
MMD1	80.5-81.0	1	
	585751		
	585752		
	585753		
	585754		
	585755		
	585756		
	585757		
	585758		
	585759		
	585760		
	585761		
	585762		
	585763		
	585764		
	585765		
	585766		
	585767		
	585768		
	585769		

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Sample		Au (ppb)	Au(R) (ppb)
	585770		
	585771		
	585772		
	585773		
	585774		
	585775		
	585776		
	585777		
	585778		
	585779		
MMD2	60.1-62.3	<1	
MMD2	62.3-65.4	<1	
MMD2	65.4-68.5	1	
MMD2	68.5-71.6	<1	
MMD2	71.6-73.4	<1	
MMD2	73.4-75.1	<1	
MMD2	75.1-77.4	1	1
MMD2	77.4-80.5	<1	
MMD2	80.5-82.4	<1	
MMD2	82.4-84.1	<1	
MMD2	84.1-87.1	<1	
MMD2	87.1-90.1	1	
MMD2	90.1-93.1	<1	
MMD2	93.1-96.1	<1	1
MMD2	96.1-99.1	1	

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	Sample	Au (ppb)	Au(R) (ppb)
MMD2	99.1-102.1	<1	
MMD2	102.1-105.1	1	
MMD2	105.1-108.1	2	
MMD2	108.1-111.1	<1	
MMD2	111.1-114.1	4	
MMD2	114.1-117.1	1	
MMD2	117.1-120.1	<1	
MMD2	120.1-123.1	1	
MMD2	123.1-126.1	1	
MMD2	126.1-129.1	1	
MMD2	129.1-132.1	1	
MMD2	132.1-135.1	1	1
MMD2	135.1-138.1	1	<1
MMD2	138.1-141.0	<1	
MMD2	140.0-144.0	1	
MMD2	144.0-147.1	1	
MMD2	147.1-150.1	<1	
MMD2	150.1-153.1	1	
MMD2	153.1-156.1	1	
MMD2	156.1-159.0	<1	
MMD2	166.1-168.1	1	
MMD2	168.1-171.1	3	2
MMD2	171.1-174.1	1	<1
	564551	<1	
	564552	1	

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Sample	Au (ppb)	Au(R) (ppb)
564553	2	1
564554	5	7
564555	4	5
564556	1	
564557	1	
564558	<1	
564559	1	
564560	<1	
564561	<1	
564562	<1	
564563	2	
564564	<1	<1
564565	<1	
564566	<1	
564567	3	4
564568	<1	
564569	1	
564570	1	
564571	<1	
564572	1	
564573	1	
564574	<1	
564575	<1	
564576	<1	
564577	<1	

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Sample	Au (ppb)	Au(R) (ppb)
564578	2	4
564579	1	
564580	<1	
564581	1	
564582	<1	<1
564583	1	
564584	1	
564585	<1	
564586	2	1
564587	1	
564588	1	
564589	3	4
564590	1	
564591	<1	<1
564592	<1	
564593	<1	
564594	5	4
564595	2	4
564596	<1	
564597	<1	
564598	<1	
564599	<1	
564600	<1	
564601	1	1
564602	2	3

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ASSAY CODE: AC 19398

Sample	Au (ppb)	Au(R) (ppb)
564603	<1	1
564604	<1	
564605	<1	
564606	<1	
564607	2	
564608	4	5
564609	<1	
564610	1	
564611	<1	
564612	<1	
EL 7374 ↓ 564613		
564614		
564615		
564616		
564617		
564618		
564619		
564620		
564621		
564622		
564623		
564624		
564625		
564626		
564627		

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Sample	Au (ppb)	Au(R) (ppb)
564153	1	
564154		
564155		
564156		
564157		
564158	3	
564159	3	2
564160	6	5
564161	3	
564162	1	
564163	1	
564164	1	
564165	2	
564166	1	
564167	2	2
564168	1	
564169	2	
564170	2	
564171	1	
564172	1	
564173	<1	
564174	1	
564175	1	
564176	4	4
564177	3	2

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ASSAY CODE: AC 19398

Sample	Au (ppb)	Au(R) (ppb)
564178	2	
564179	2	
564180	2	
564181	3	
564182	<1	
564183	2	
564184	3	
564185	1	
564186	1	
564187	4	5
564188	5	6
564189	1	
564190	2	1
564191	2	
564192	3	
564193	2	
564194	1	
564195	1	
564196	1	
564197	1	
564198	1	
564199	1	
564200	<1	
564201	1	1
564202	1	

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Sample		Au (ppb)	Au(R) (ppb)
	564203	4	5
	564204	2	
	564205	3	
	564206	6	5
	564207	3	
	564208	8	7
	564209	<1	<1
	564210	2	
	564211	1	1
	564212	4	3
	564213	3	
	564214	3	
	564215	5	3
	564216	2	
	564217	3	
	564218	2	
	564219	2	
	564220	3	
	564221	6	4
	564222	4	4
	564223	6	7
	564224	1	
MMD1	295.2-297.2	1	
MMD1	296.2-297.2	2	
CLEANOUT	1	3	

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ASSAY CODE: AC 19398

Sample		Au (ppb)	Au(R) (ppb)
CLEANOUT	2	1	2
CLEANOUT	3	2	
CLEANOUT	4	4	

APPENDIX III

PETROGRAPHIC NOTES

MMD2 SAMPLES

PETROGRAPHIC NOTES FOR 11 SAMPLES FROM THE PINE CREEK INLIER

Prepared for Ian Butler,
Nicron Resources Ltd..

MMD2. Mainly highly deformed dolerite or lamprophyre intruding dolomitic Koolpin or lower Whites Formations.

MMD2, 74.4 m. Dolomite(?)-chlorite-quartz augen schist with disseminated sphalerite.

Carbonate (60%) forms 0.5-5 mm augen consisting of 0.1-3 mm anhedra. Chlorite (20%) occurs as trains of <0.5-mm flakes whose preferred orientation defines a very strong schistosity which anastomoses around carbonate augen. Quartz (15%) forms 10-100 µm anhedra, mainly in <0.2 mm-thick streaky layers associated with chlorite.

Anhedral 10-µm to 0.5-mm sphalerite (2%) occurs mostly with chlorite and quartz. Cores are usually fairly Fe rich (red-brown) but rims tent to be pale. Patchy blackening with fine chalcopyrite disease is very common. Slightly less common than pyrite is <0.1-mm anhedral to cube-shaped pyrite, some sprouting tiny needles of late marcasite. Traces of <10-µm chalcopyrite occur with sphalerite. Tiny traces of <10-µm flaky graphite occur mainly at the margins of carbonate augen.

Roughly prismatic <0.1-mm rutile (1%) is strongly concentrated in some chlorite trains.

The carbonate here and in may other samples in this suite shows a reaction to acid which is intermediate between those of calcite and dolomite. Much less reactive than the calcite at 121.2 m, it may be a particularly magnesian member of the dolomite-ankerite series.

The composition would be consistent with a dolomitic sediment, or a brecciated, then highly sheared dolerite or lamprophyre, in which the carbonate augen were amygdales.

MMD2, 94.0 m. Dolomite(?)-chlorite-quartz augen schist.

Most of the core sample is like the one from 74.4 m, though with less quartz, more rutile, and only the odd cluster of <0.2-mm sphalerite (some grains of which have very fine chalcopyrite disease at their margins).

The section contains a couple of 30-60 mm siliceous ?nodules, distinctly flattened into the foliation. They are dominated by 10-30 µm granoblastic quartz, with prominent <50 µm-thick streaky lenses, parallel to the schistosity, of randomly oriented <30-µm chlorite flakes. Some rare similar biotite flakes, and a slight dusting of rutile in some chlorite suggest that some at least of the chlorite may be a retrograde alteration product of

biotite. Quite common <0.1-mm whitemica flakes lie parallel with the schistosity. A dark, chloritic layer in the less siliceous ?nodule contains prominent mm-scale streaky clusters of 1-30 µm anhedral sphalerite and minor galena.

A 1 mm-thick stringer, probably a veinlet, of <0.1-mm anhedral and cube-shaped pyrite, and minor anhedral sphalerite lies at a low angle to the schistosity.

Lenses up to a few mm are rich in chlorite and very rich in <0.1-mm rutile prisms. These could be flattened clasts of brecciated Ti-rich dolerite or lamprophyre as at 121.2 m.

MMD2, 110 m. Chlorite-carbonate-whitemica schist with abundant leucoxenised ilmenite.

The rock consists mainly of <0.1-mm chlorite and subordinate whitemica flakes lying parallel to a very strong schistosity. Granular <30-µm quartz is quite minor. Anhedral <0.1-mm carbonate (20% of the rock, and probably dolomite) occurs in streaky lenses parallel to the foliation, most of them only 10-50 µm thick. A few of these up to 1x5 mm, containing prominent whitemica, may be highly flattened clasts. A few others up to 0.2 mm-thick are much more continuous and may be veinlets, since they cut the foliation at a very narrow angle, and commonly contain <0.1-mm anhedral-subhedral pyrite. Minor pyrite also forms disseminated 1-mm clusters slightly flattened in the cleavage.

About 10% of the rock consists of 2-50 µm leucoxenised tabular ilmenite tablets, also parallel to the cleavage. Minor <0.2-mm clusters and lenses of these may be metamorphosed igneous Fe-Ti oxide grains.

There has probably been some concentration of Ti by loss of other components (especially silica) during cleavage development. Yet I tend to think that this is an intensely sheared, altered Ti-rich basaltic rock. It may have been fragmental, as seems to be the case for the 121.2-m sample. Retrograde alteration of ilmenite to leucoxene, and biotite to chlorite may have occurred together. Fresh ilmenite and biotite are preserved at 121.2 m where igneous fragments are recognisable.

MMD2, 121.2 m. Metamorphosed, sheared breccia of fine-grained Ti-rich basalt or lamprophyre fragments.

This rock consists mainly of <0.1-mm biotite, chlorite, and whitemica flakes lying parallel to a very strong schistosity. Granular <30-µm quartz is very minor. Anhedral <0.1-mm calcite forms streaky layers and lenses parallel to the foliation, most of them only 10-50 µm thick: it fizzes much more strongly in acid than the ?dolomite in many other samples. A 1.5 mm-thick example is clearly a veinlet, isoclinally folded with an axial plane parallel to the foliation. 1-50 µm anhedral to tabular ilmenite (5%) is disseminated through the schist, but also forms <1-mm clusters (igneous relics?) slightly flattened into it. A small proportion of ilmenite is leucoxenised.

Prominent 1-30 mm basalt clasts have been flattened into

lenses parallel to the foliation. They are distinguished by 0.1-0.3 mm laths of albitised plagioclase, albite overgrowths with undulose extinction, <0.1-mm calcite and biotite, and 5-10% of 1-100 µm anhedral to tabular ilmenite. Biotite generally shares the foliation with the surrounding schist, which anastomoses around the pip-shaped fragments.

Minor <0.1-mm veinlets of fibre calcite cut the cleavage at a high angle, and are displaced slightly as they pass through the fragments. They almost certainly formed during the deformation. They pass through the isoclinally folded veinlet, which has a central zone containing prominent minor 1-100 µm subhedral pyrite and anhedral sphalerite blackened with a little chalcopyrite disease. Minor <50-µm chlorite flakes in the folded veinlet lie parallel to the axial plane. This places the timing of the Zn mineralisation early, before the peak of deformation.

The rock may have been a brecciated basalt, lamprophyre or fine dolerite. An intrusive breccia is possible, but perhaps brittle deformation was followed by a ductile event.

MMD2, 132.0 m. Chlorite-carbonate schist with abundant leucoxenised ilmenite.

This is a relative of the sample from 110 m, coarser grained and lacking whitemica. Evenly disseminated ilmenite (5-10%) occurred mostly as 0.1-0.5 mm tablets strongly aligned in the chlorite foliation. All these are altered to clumps of 1-50 µm rutile (leucoxene).

Minor tabular <200-µm masses of pyrite, also aligned in the foliation, may be retrograde alteration products of pyrrhotite. Rare <20-µm anhedral chalcopyrite is weakly concentrated in some layers.

It seems likely that this is a metamorphosed, intensely sheared Ti-rich fine-grained dolerite, basalt, or basaltic fragmental rock.

MMD2, 154.5 m. Mineralised, metamorphosed, carbonated, lightly deformed amygdaloidal basalt or intrusive breccia.

About half the rock consists of 0.3-3 mm roughly spherical amygdales of <0.5-mm anhedral and sparry calcite, some with cores of radiating chlorite and <0.5-mm anhedral quartz. Surprisingly, few are flattened into the chlorite foliation (q.v.). The cell walls consist of 10-50 µm granular quartz and minor ?dolomite, and abundant <100-µm flaky chlorite, with about 10% of <150-µm tabular leucoxenised ilmenite and clumps of granular rutile. A moderate schistosity is defined by the preferred orientation of chlorite in the cell walls but not in the amygdales themselves, which may be loci of later replacement. A few mm-thick trains dominated by chlorite lie parallel to the foliation.

Sulphides disseminated through the amygdales and cell walls are anhedral 1-200 µm sphalerite, pyrite (some roughly cube-shaped), galena, and chalcopyrite. Combined Zn, Pb, and Cu (in that order of abundance) probably form 2% of the rock.

Coarse fragments may be hard to distinguish: it is possible that the rock was an intrusive breccia.

MMD2, 166 m. Mineralised, metamorphosed, carbonated highly deformed amygdaloidal basalt.

This seems to be a more deformed relative of the rock at 154.5 m. Abundant 20-µm to 1-mm anhedral ?dolomite includes some flattened <2-mm augen enveloped by trains of <0.1-mm chlorite flakes dusted with prominent <50-µm rutile. Parallel <1 mm-thick trains of chlorite occur every few mm. Granular <50-µm quartz is quite minor.

Disseminated sulphides are <0.2-mm roughly cube-shaped pyrite (2%), and <0.5-mm amoeboid aggregates of fine sphalerite (<0.5%). Some sphalerite is red-brown (i.e. Fe rich), some is colourless (Fe-poor), and some is blackened by very fine chalcopyrite disease. It generally occurs in carbonate-rich lenses.

MMD2, 178.0 m. Mineralised, metamorphosed, carbonated highly deformed amygdaloidal basalt.

This is a relative of the 166-m sample, in which <50-µm whitemica flakes supplant more than half the chlorite. Some whispy trains of whitemica are blackened with mainly submicron graphite. Quartz is rare but coarser grained (0.1-0.3 mm).

The Fe-Ti assemblage is pyrite-rutile. Rutile is fine grained (1-30 µm) but very prominent. Pyrite forms masses of <1-mm anhedra and smaller subhedral cubes. Massive pyrite forms a 1.5 mm-thick veinlet cutting the foliation at a narrow angle. The walls of this veinlet are lined discontinuously with anhedral <0.5-mm ?dolomite and anhedral to prismatic <0.1-mm quartz. It is hard to see any sphalerite amongst the fine-grained rutile.

The graphite may be a reaction product of basalt and petroleum.

SAD 1. Pyritic altered lower member of the Coomalie Dolomite beneath unconformity.

SAD1, 128 m. Fairly massive (partly goethised) pyrite with minor quartz and sericite.

About half of the rock consists of 1-100 µm cubes and anhedra of pyrite. The finer-grained pyrite, especially that associated with whitemica (q.v.) is weathered to goethite. Pockets up to several mm across are dominated by <0.5-mm anhedral and fibre quartz with <50-µm subordinate whitemica flakes and minor rutile prisms.

Relict <0.5-mm laths of an unknown mineral, replaced by aggregates and less commonly single grains of quartz and whitemica, occur in pyrite masses. They suggest that the original rock replaced by pyrite etc. may have been basalt or dolerite.

GENERAL COMMENTS

Zn mineralisation

The evidence of veining in the important sample MMD2, 121.2 m, places the mineralisation before the peak of deformation. Mineralisation may have coincided with petroleum maturation.

Such high Zn/Cu is very odd for mineralisation associated with basalt/lamprophyre. It suggests that the igneous rocks are not the source of the metals. I have interpreted the carbonate augen as amygdales, and some ?fragmental igneous textures as intrusive breccia, suggesting that the mafic magma may have intruded soft sediment or more consolidated rocks containing abundant formation water. The dykes may have provided the thermal energy for the hydrothermal system. Dykes can also act as dams, localising and focussing mineralisation.

SAD 1.

The high Ni contents suggest that the mafic rock was a primitive one. Combined high Ni and Ti are much more compatible with an alkali basalt (i.e. lamprophyre) magma that a fractionated tholeiite, which could have high Ti but would be low in Ni.

REFERENCE

BURRUSS, R.C. (1981). Analysis of phase equilibria in C-O-H-S inclusions. *In* HOLLISTER, L.S. & M.L.CRAWFORD (Ed). Fluid inclusions: applications to petrology. Calgary May 1981. Mineral. Assoc. Can. short course handbook No. 6.

R.N.ENGLAND,
11 Victor St.,
Cranbrook
(Townsville),
Queensland 4814.
(077)735407
December 31, 1994