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1.0 INTRODUCTION

1.1 OVERVIEW

Exploration Licence 29/91 covers a sequence of Cambrian mafic and felsic volcanics, volcanoclastics and epiclastic sediments which are prospective for volcanic hosted massive sulphide (VHMS) mineralisation. The licence is located 5 km northwest of the mining town of Rosebery in northwest Tasmania .

Exploration of the tenement is managed by Sipa Exploration NL (Sipa) pursuant to a Farm-in and Joint Venture Agreement with A J Hosking.

1.2 LOCATION AND ACCESS

Exploration Licence 29/91 covers an area of 23 km² running from 5 km northwest to about 15 km northwest of the town of Rosebery in northwest Tasmania (Dwg 1319).

Access to the southern part of the licence is provided by the east-west Pieman Road. The central area of the tenement can be reached by a west-bearing track from the Pinnacles Mine-Burns Peak area. A track to the Silver Falls Mine provides access to the northeastern corner of the licence (Dwg 1405).

1.3 TENURE

The registered holder of EL29/91 is Mr Anthony John Hosking, who has entered into an agreement with Sipa whereby Sipa may earn up to a 100% interest in the tenement. Sipa are the *managers/operators of the licence pursuant to the Farm-in and Joint Venture Agreement.*

The tenement covers 23 km² and was granted on 29 May 1992. It lies in the Land Districts of Russel and Montague.

State Forest (Multiple Use Forest Land) largely covers the licence, except for a small area of Hydroelectric Commission land in the southeastern corner.

2.0 GEOLOGY

Exploration Licence 29/91 overlies Late Precambrian (?) to Early Cambrian rocks of the Crimson Creek Formation in the west and Middle to Late Cambrian Rosebery Group in the east, separated by a major north-south fault, the Bobadil Fault (Dwg 1405). A fault-bounded wedge of Late Precambrian Oonah Formation occurs in the northwestern corner of the tenement.

The Oonah Formation is largely made up of sandstones and mudstones and their metamorphosed equivalents.

The Crimson Creek Formation consists of mafic volcanoclastic, tholeiitic basalts, siltstones, mudstones, shales and minor carbonate rocks.

The Middle to Late Cambrian Rosebery Group is believed to have formed in a proximal position to and be contemporaneous with the Mount Read Volcanics, as well as being correlatable with the Dundas Group, which interfingers with and overlies the Rosebery Group (Brown, 1986). The Rosebery Group has been subdivided into six formations, namely:

925004

380 000 mE



EL29/91 →

Pieman Road

Rosebery

ROSEBERY

Renison Sn

Henty Au

5 360 000 mN

5 360 000 mN

TULLAH

Mt. Lyell

QUEENSTOWN

380 000 mE

5 cm

LOCALITY DIAGRAM



0 5 10 20km

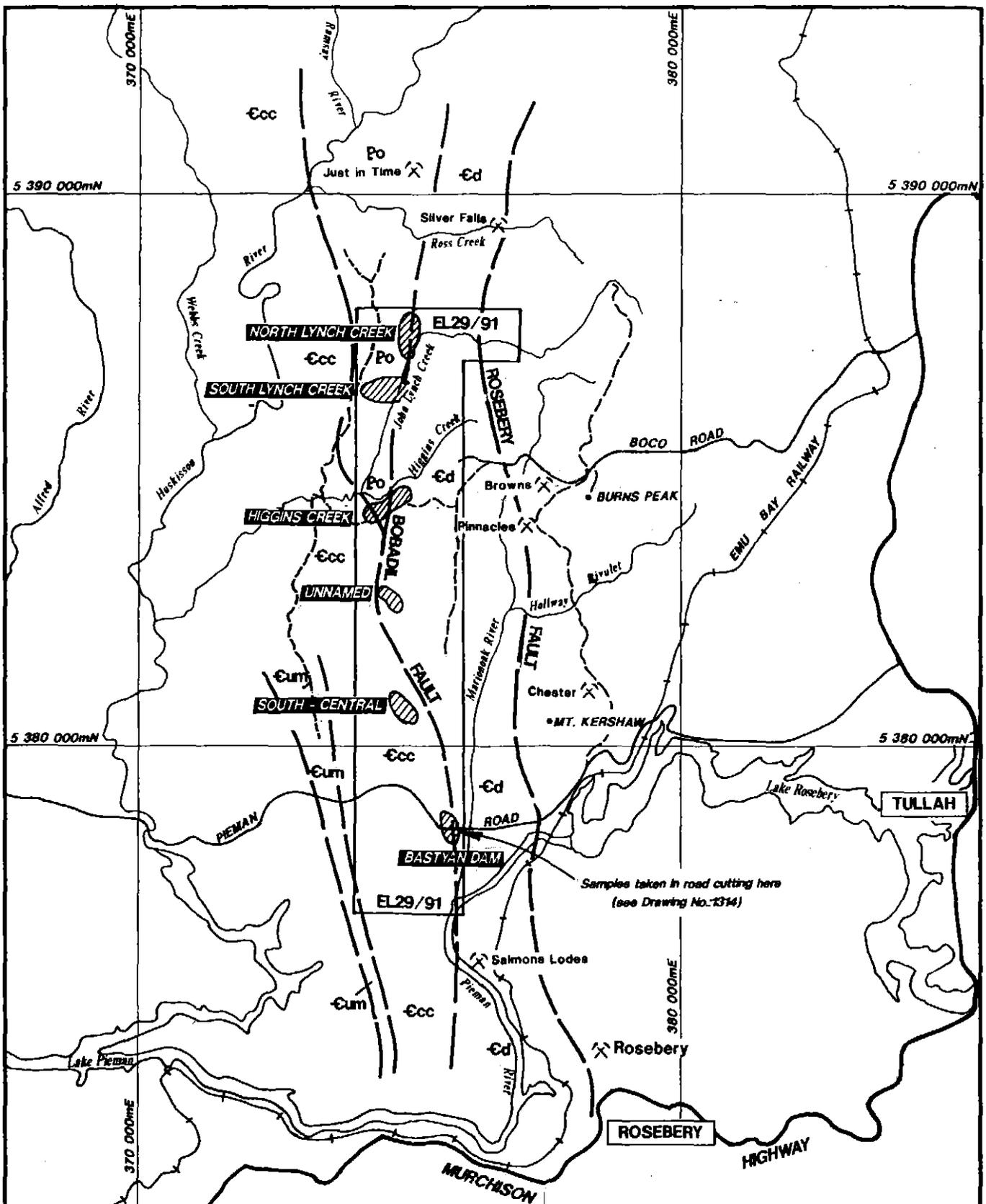
SCALE 1 : 250 000

 Sipa Exploration N.L.

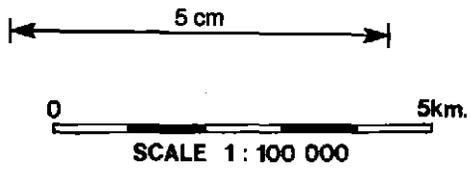
**LOCATION OF EL29/91
AND
MAIN TASMANIAN MINES**

Geologist : MGD	Date : JUNE 1993	DRAWING No. : 1319
Prepared : PDEA	Revised :	

925005



- KEY**
- Fault
 - Stream sediment anomalies
 - Cd** Middle to Late Cambrian
- Rosebery Group
 - Ecc** Late Precambrian(?) to Early Cambrian
- Crimson Creek Formation
 - Cum** Cambrian Intrusive ultramafic rocks
 - Po** Late Precambrian
- Oonah Formation



Sipa Exploration N.L.

EL29/91

**GEOLOGY & LOCATION OF
COMINCO/ABERFOYLE
STREAM SEDIMENT ANOMALIES**

Geologist: S.B.W.	Date: April 1994	DRAWING No.
Drawn: EP	Revised:	1405

Primrose Pyroclastics and Slate
 Stitt Quartzite
 Natone Volcanics
 Wescott Dolomitic Beds
 Munro Creek Slates and Quartzite
 Chamberlain Shale

This sequence of rocks are poorly outcropping and faulted, making interrelationships uncertain. Within the licence area, the Rosebery Group is represented by felsic and mafic pyroclastics, volcanoclastics and epiclastics with the felsic volcanic component being a largely unknown quantity.

3.0 MINERALISATION

The Rosebery, Que River, Mt Lyell and Hellyer VHMS deposits occur within 5 to 35 km of EL29/91 (Dwg 1319). The base metal ore mined at these localities is hosted by the Mount Read Volcanics, which has affinities to the Rosebery Group volcanics.

In addition, several base metal deposits occur in close proximity to the licence (Dwg 1405), namely:

Just in Time	- Pb, Ag, Ba
Silver Falls	- Pb, Ag, (Ba, Zn, Cu)
Pinnacles	- Zn, Pb, Cu, Ba, Ag, Au
Browns (Thomas) Workings	- Au, Zn, Pb, Ag, Cu
Chester	- Pyrite
Salmons Lodes	- Pb, Zn, Cu

The Lynch Creek Prospect, identified by Cominco Exploration Pty Ltd (Cominco) and Aberfoyle Exploration Pty Ltd (Aberfoyle), occurs within the exploration licence. Two significant Pb, Zn, Cu anomalies found in stream sediment sampling were explored to reveal that siltstones and black shales were the host rocks (Teakle, 1984).

4.0 PREVIOUS EXPLORATION BY OTHER COMPANIES

The licence area was previously held by CRA Exploration Pty Ltd in the 1950's, Asarco (Australia) Ltd as part of EL5/73 and Comstaff as part of EL5/63. These companies, together with Electrolytic Zinc Co. of Australasia Ltd who held the ground as part of their evaluation of the Rosebery area, carried out stream sediment sampling programmes.

Aberfoyle and Cominco, in joint venture, explored EL29/91 from 1975 to 1980. They held the ground as EL22/74 and carried out a programme of stream sediment sampling and aerial EM and magnetics surveying. Five base metal anomalous zones were delineated as a result of the sampling programme, namely: Silver Falls, Lynch Creek, Higgins Creek, South-Central and Rosebery (Bastyan) Damsite (Dwg 1405).

The Silver Falls and Lynch Creek anomalies were followed up by a programme of gridding, soil sampling, costeaning, geological mapping, petrography and IP surveying. In 1980 the Shell Company of Australia (Shell) entered into a Joint Venture with Aberfoyle and Cominco and completed a Dighem survey which produced a number of anomalies. A stream sediment survey

of largely the southern half of the licence delineated four areas of Pb and Zn anomalism. These areas were soil and rock chip sampled. Some petrography was also done. Shell concentrated its remaining efforts on the Bastyan Dam area (Dwg 1405) where they gridded, soil sampled and carried out ground magnetic, gravity, IP and UTEM geophysical surveys. Three diamond holes were drilled before the joint venture ceased its operations in 1987.

5.0 PREVIOUS EXPLORATION BY A J HOSKING

A literature search was carried out during 1992 by Mr A J Hosking, which involved the researching of the Tasmanian Geological Survey investigations and other companies exploration activities (see Section 4.0). From this work it was concluded that although previous explorers carried out a substantial amount of exploration, their data has not been sufficiently conclusive to downgrade the potential of the area and certain prospects, e.g. North Lynch Creek, require further work (Hosking, 1993).

Future exploration was suggested to be directed at locating felsic volcanics and determining their relationships with base metal mineralisation. In addition, the delineation and sampling of the Bobadil Fault was recommended to enable assessment of any gold mineralisation potential.

6.0 EXPLORATION BY SIPA

A brief field inspection of the tenement was undertaken in May 1993 by Sipa in order to assess whether the Company was interested in pursuing a joint venture with Mr Hosking. Nine rock chip samples were collected from a cutting along Pieman Road in the vicinity of Shell's Bastyan Dam anomaly. One sample (21429) from a zone of iron staining assayed 3100 ppm Zn and 825 ppm Pb. The analytical results are shown on Drawing 1314 and enclosed as Appendix 1.

As a result of the above preliminary field inspection and limited literature research, Sipa entered into a Farm-in and Joint Venture Agreement. To enable Sipa's geologist to become familiar with the geology of the Mount Read Volcanics, which are believed to have affinities with the prospective Rosebery Group volcanics within the exploration licence, the geologist attended a course on the "Volcanology and mineralisation in volcanic terrains", presented by the Centre for Ore Deposit and Exploration Studies Key Centre, Geology Department, University of Tasmania from 13 to 18 March 1994.

The course was field-based and concentrated on the Mount Read Volcanics in western Tasmania. The main themes of the course were (McPhie and Gemmel, 1994):

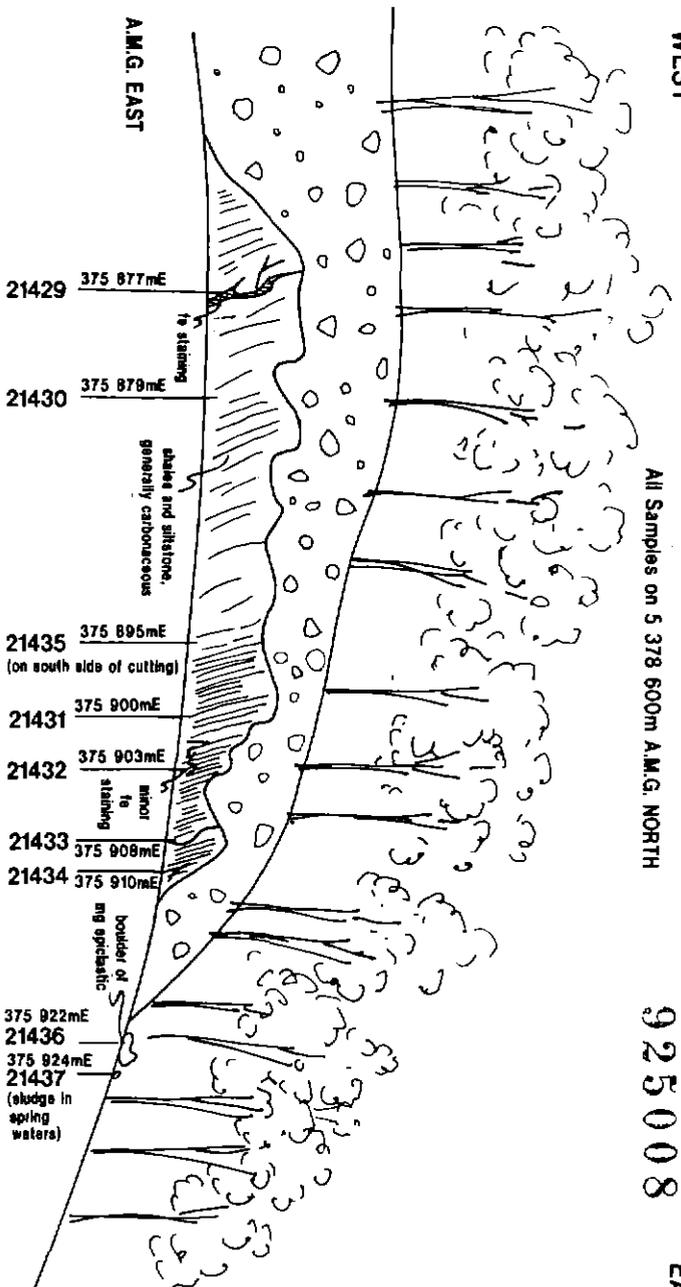
- the origin and significance of clastic textures in volcanic rocks, sedimentary rocks, and strongly altered rocks of unknown association;
- interpretation of volcanic facies associations in terms of emplacement processes, depositional environment, proximity to source volcanic vents, and character and setting of source volcanic vents;
- the special processes that accompany submarine volcanic eruptions;
- the origin and characteristics of syn-eruptive and post-eruptive resedimented volcanoclastic deposits.

WEST

All Samples on 5 378 600m A.M.G. NORTH

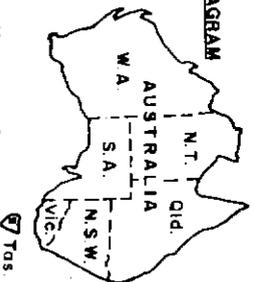
925008

EAST



Cd ppm	Se ppm	Te ppm	Ag ppm	As ppm	Pb ppm	Zn ppm	Cu ppm	Mn ppm	Fe ppm	Co ppm	Ni ppm	Cr ppm	Ba ppm	Sb ppm	Sn ppm	Bi ppm	Mo ppm	W ppm	Au ppm
16	<10	<0.2	2.0	99	825	3100	117	4690	19.0%	40	98	170	82	52	2	0.4	2.5	1.0	<0.01
1.0	<10	0.4	<0.1	6	85	314	109	7800	8.96%	43	70	110	224	3.8	3	0.4	1.0	1.0	0.01
<0.5	<10	<0.2	<0.1	6	10	221	12	2970	10.8%	68	104	160	238	1.2	3	<0.2	0.5	<0.5	<0.01
0.5	<10	<0.2	<0.1	19	755	111	23	1370	2.81%	8	12	180	266	30	3	0.2	11	4.0	0.02
<0.5	<10	<0.2	<0.1	9	80	121	156	169	9.20%	50	76	200	220	5.0	3	0.2	9.5	1.5	<0.01
<0.5	<10	<0.2	<0.1	5	55	135	100	1940	8.94%	23	60	150	128	2.4	2	<0.2	1.5	<0.5	<0.01
<0.5	<10	<0.2	<0.1	2	20	74	11	797	8.77%	11	187	50	32	0.6	<1	<0.2	3.0	<0.5	<0.01
<0.5	<10	<0.2	<0.1	5	20	164	12	841	3.37%	8	10	90	804	1.4	2	<0.2	2.0	1.5	0.01
2.0	<10	<0.2	<0.1	37	295	1310	513	378	24.8%	266	182	250	614	4.4	<1	0.4	5.5	<0.5	<0.01

LOCALITY DIAGRAM



Sample Dispatch Advice: SRL 00306

Sipa Exploration N.L.

EL29/91

NORTH WEST TASMANIA

SAMPLE LOCATION DIAGRAM



Geologist: MGD. Date: MAY 1993. DRAWING. No. 1314

Profile: PPSA. Revised:

The knowledge gained from this course will be used specifically in the exploration of EL29/91.

During April 1994 preparation for field activities, which are due to commence on 2 May 1994 (see Section 7.0), were undertaken. This included the acquisition of maps, aerial photographs, literature, etc., as well as general field logistics.

7.0 PROPOSED EXPLORATION PROGRAMME

The following exploration programme is designed to determine: the affinities of the felsic volcanics in the exploration licence with the Mount Read Volcanics; the possible affinities of vein mineralisation as having been remobilised from a VHMS deposit; and to assess the untested geochemical anomalies identified by previous explorers.

An initial programme of geological and geochemical reconnaissance will commence on 2 May 1994 and extend over a period of roughly four weeks. This programme will include rock chip, soil and stream sediment sampling, with each sample being less than 5 kg in weight and less than 200 samples to be collected in total. Geological mapping will be undertaken by using available aerial photography and by completing foot traverses across the tenement at regular intervals. In areas of incoherent stratigraphy or where extensive Cainozoic cover limits exposure, individual outcrops will be mapped. Total coverage of the tenement by the above methods is hoped to be achieved during this first programme.

An assessment of the results from the initial mapping and sampling of the licence area will be made prior to the commencement of a second field programme of follow-up detailed geological mapping and sampling. Up to 200 rock chip, soil and stream sediment samples are expected to be collected during this second phase of work. It is envisaged that this programme will be conducted over a period of four weeks and will commence in July or August 1994.

A total expenditure of \$65,000 on the exploration of EL29/91 is planned for the 1994 anniversary year.

No detrimental effects on the environment are expected as a result of the above exploration.

8.0 EXPENDITURE

Expenditure on Exploration Licence 29/91 for its second year, that is from 29 May 1993 to 31 March 1994 (April 1994 not included), was as follows:

	\$
Geologist (8 days)	3,988.50
Meals & Accommodation	311.70
Travel Expenses	665.00
Communications	15.30
Courier & Freight	113.20
Mines Dept Fees	<u>695.00</u>
Total	\$ <u>5,788.70</u>

9.0 REFERENCES

Brown, A.V., 1986: Geology of the Dundas - Mount Lindsay - Mount Youngbuck region. Bulletin 62, Tasmanian Geological Survey.

Hosking, A.J., 1993: EL29/91 - Marionoak, Tasmania status report. Unpublished.

McPhie, J. and Gemmell, B., 1994: Facies interpretation of ancient volcanic sequences field guide II Mount Read Volcanics, western Tasmania. Master of Economic Geology Course Work Manual 9, 3rd ed., University of Tasmania, Centre for Ore Deposit and Exploration Studies.

Teakle, M.G., 1984: Report on the status of Exploration Licence 22/74, Marionoak, Tasmania. Aberfoyle Exploration Pty Ltd, Open File Report, Tasmania Department of Mines.

APPENDIX 1

Analytical Results of Rock Chip Sampling



Blaine ...
820/90

925012

RECEIVED 20 MAY 1993

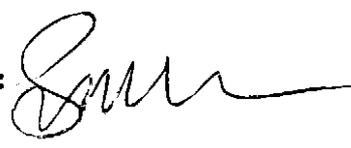
Reference Number : 55941
Samples Received : 05/05/93
Results Reported : 19/05/93
Order Number : 00306

Report Analyte Codes:
L.N.R. Listed but not received
I.S. Insufficient sample
for analysis
*SS Duplicate sample analysed
(from second split)

Mr M G Doepel
Sipa Resources Limited
PO Box 1183
WEST PERTH

WA 6005

ANALYSIS REPORT FOR MINERAL SAMPLES

Approved Signature: 
for

Samantha Claudius
Senior Chemist - Quality Control

These results are issued in accordance with terms and conditions
as defined in our Schedule of Services, dated August, 1992

MULTILAB Pty Ltd
A MEMBER OF THE SCIENTIFIC SERVICES GROUP A.C.N. 008 746 610

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CAVE TWO
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FACSIMILE (08) 279 107

MT MAGNET:
LOT 530, CRIDDLE STREET
MT MAGNET, W.A. 6435
TELEPHONE (08) 634 035
FACSIMILE (08) 634 049

Order Number : 00306
Project Code :

Job Number: 55941

ANALYTICAL REPORT

Page 1 of 5

Element	Au	Ag
Units	ppm	ppm
Det.Lim	0.01	0.1
21429	<0.01	2.0
21430	0.01	<0.1
21431	0.02	<0.1
21432	<0.01	<0.1
21433	0.01	<0.1
21434	<0.01	<0.1
21435	<0.01	<0.1
21436	0.01	<0.1
21437	<0.01	<0.1
*SS 21429	<0.01	2.1

Scheme

A25AAS A25AAS



Order Number : 00306
Project Code :

Job Number: 55941

ANALYTICAL REPORT

Page 2 of 5

Element	Zn	Cu	Ni
Units	ppm	ppm	ppm
Det.Lim	1	1	2
21429	3100	117	96
21430	314	109	70
21431	111	23	12
21432	121	156	76
21433	135	100	60
21434	74	11	16
21435	221	12	104
21436	164	12	10
21437	1310	513	182
*SS 21429	3400	116	90

Scheme

M50AAS M50AAS M50AAS



Order Number : 00306
Project Code :

Job Number: 55941

ANALYTICAL REPORT

Page 3 of 5

Element	Mn	Fe	Cr	Ba
Units	ppm	ppm	ppm	ppm
Det.Lim	1	10	10	2
21429	7600	19.0%	170	62
21430	1370	8.96%	110	224
21431	169	2.81%	180	266
21432	1940	9.20%	200	220
21433	797	8.94%	150	128
21434	2970	8.77%	50	32
21435	841	10.6%	160	238
21436	376	3.37%	90	804
21437	4690	24.6%	250	614
*SS 21429	7540	18.4%	160	58

Scheme

M500ES M500ES M500ES M500ES



Order Number : 00306
 Project Code :

Job Number: 55941

ANALYTICAL REPORT

Page 4 of 5

Element Units Det.Lim	As ppm 1	Pb ppm 5	Sb ppm 0.2	Sn ppm 1	Bi ppm 0.2	Mo ppm 0.5	W ppm 0.5
21429	99	825	52	2	0.4	2.5	1.0
21430	6	65	3.8	3	0.4	1.0	1.0
21431	19	755	30	3	0.2	11	4.0
21432	9	80	5.0	3	0.2	9.5	1.5
21433	5	55	2.4	2	<0.2	1.5	<0.5
21434	2	20	0.6	<1	<0.2	3.0	<0.5
21435	6	10	1.2	3	<0.2	0.5	<0.5
21436	5	20	1.4	2	<0.2	2.0	1.5
21437	37	295	4.4	<1	0.4	5.5	<0.5
*SS 21429	97	870	49	2	0.4	2.0	1.0

Scheme

M50MS6 M50MS6 M50MS6 M50MS6 M50MS6 M50MS6 M50MS6



Order Number : 00306
Project Code :

Job Number: 55941

ANALYTICAL REPORT

Page 5 of 5

Element	Co	Cd	Se	Te
Units	ppm	ppm	ppm	ppm
Det.Lim	1	0.5	10	0.2
21429	40	16	<10	<0.2
21430	43	1.0	<10	0.4
21431	6	0.5	<10	<0.2
21432	50	<0.5	<10	<0.2
21433	23	<0.5	<10	<0.2
21434	11	<0.5	<10	<0.2
21435	68	<0.5	<10	<0.2
21436	8	<0.5	<10	<0.2
21437	266	2.0	<10	<0.2
*SS 21429	39	16	<10	<0.2

Scheme

M50MS6 M50MS6 M50MS6 M50MS6



Job number : 55941 Order number : 00306

Scheme code : PD2 - Sample drying

Sample drying (1-2kg)

Scheme code : PJ2 - Jaw crush (2kg)

Jaw crush (2kg)

Scheme code : PH2 - Hammer mill (2kg)

Hammer mill (2kg)

Scheme code : PR3 - Pulverise 300g R/Lab

Rotary split 300g, pulverise in Rocklab bowl.

Scheme code : A25AAS - Analysis by AAS

A 25g sample is digested in aqua regia, extracted into DIBK; the DIBK layer is then analysed by atomic absorption spectrophotometry (AAS).

Scheme code : MAD50 - Mixed Acid Digest

Approx. 0.50 of sample has been made up into 50mLs solution with a mixed acid digest.

Scheme code : M50AAS - Analysis by AAS

Approx 0.50g sample made up to 50mL solution with mixed acid digest, has been analysed by atomic absorption spectrophotometry (AAS).

Scheme code : M50OES - Analysis by ICPOES

Approx 0.50g sample made up to 50mL solution with a mixed acid digest, analysed by inductively coupled optical emission spectrometer (ICP-OES)



Job number : 55941

Order number : 00306

Scheme code : M50MS6 - Analysis by ICP.MS

Approx 0.50g sample made up to 50mL solution with
a mixed acid digest, analysed by inductively
coupled plasma mass spectrometer. (ICP.MS)

