

# Open File Envelope

## No. 9718

**EL 2680**

**MOUNT LYNDHURST**

**ANNUAL AND FINAL REPORTS TO LICENCE  
SURRENDER FOR THE PERIOD 13/12/99 TO 7/7/2004**

Submitted by  
Perilya Ltd  
2004

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J Painter —Compilation  
Records Officer—Release  
T McKenzie—Imaging  
M Griffiths—Indexing  
T McKenzie—Archiving/State Records

### ACTIONED    DATE

P    11-11-04  
E    7-12-04  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## OPEN FILE RELEASE OF COMPANY MINERAL EXPLORATION LICENCE DATA

EXPLORATION LICENCE NO: 2680    EL STATUS: EXPIRED  
ENVELOPE 9718    O/F RELEASE DATE: 11-11-04

### SEPARATELY HELD DATA

- DIGITAL DATA    REPORTS ON DISK
- DATA TAPES (Airborne Geophysical Surveys)

Survey No

Details, etc

DRILLHOLE SAMPLES (held by Core Library)

TRANSPARENCIES (held by Information Services Branch)

Transparency Cylinder No: \_\_\_\_\_

**SUMMARY REPORT ON MINERAL EXPLORATION**

**EXPLORATION LICENCE NO: 2680**

**For Six Months Ending:** 12/6/2002  
**Minerals Sought:** Zinc, Lead, Silver, Copper  
**Operator/Manager:** Perilya Limited  
**Prepared by:** B King, I Groves  
**Date:** 3<sup>rd</sup> June, 2002  
**Phone no:** (08) 9423 1700  
**Fax no:** (08) 9423 1787

This report summarises the fifth 6 months of exploration undertaken by Perilya Limited on the Mt Lyndhurst tenement EL 2680.

**SUMMARY OF OPERATIONS:**

- A review of PIRSA open file envelopes was undertaken to research previous exploration activities. 10 envelopes were ordered from PIRSA.
- Five prospects were investigated these were: Avondale Mine, Avondale East, Avondale South, Great Mt Lyndhurst and White Lead. All prospects were mapped at 1:2500 scale and 9 rock chips were taken from various prospects. 96 soils were taken at Avondale and Avondale South prospects.
- Further field visits are planned in June to review several prospects. Mapping, rock chipping and soil sampling will be undertaken

**SUMMARY REPORT ON MINERAL EXPLORATION**

**EXPLORATION LICENCE NO: 2680**

**For Six Months Ending:** 12/12/2002  
**Minerals Sought:** Zinc, Lead, Silver, Copper  
**Operator/Manager:** Perilya Limited  
**Prepared by:** B King, I Gregory  
**Date:** 5 December 2002  
**Phone no:** (08) 9423 1700  
**Fax no:** (08) 9423 1787

This report summarises the sixth 6 months of exploration undertaken by Perilya Limited on the Mt Lyndhurst tenement EL 2680.

**SUMMARY OF OPERATIONS:**

No field work was undertaken during the period.

- Prospects were evaluated in a regional context
- Soil samples taken from Avondale mine were interpreted. A significant lead and multielement anomaly was defined.
- Several days were spent drafting geological plans, assessing results of rock-chips and open file data.
- Visits to several regional prospects are planned during the next 6 month period.

**SUMMARY REPORT ON MINERAL EXPLORATION**

**EXPLORATION LICENCE NO: 2680**

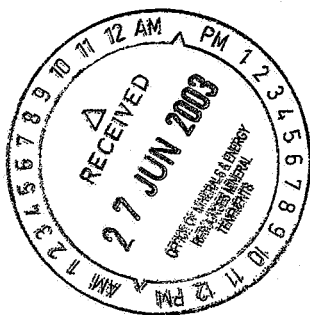
**For Six Months Ending:** 12 June 2003  
**Minerals Sought:** Zinc, Lead, Silver, Copper  
**Operator/Manager:** Perilya Limited  
**Prepared by:** B King, M Cawood  
**Date:** 26 June 2003  
**Phone no:** (08) 9423 1700  
**Fax no:** (08) 9423 1787

This report summarises the seventh 6 months of exploration undertaken by Perilya Limited on the Mt Lyndhurst tenement EL 2680.

**SUMMARY OF OPERATIONS:**

- One day was spent in the field assessing the exploration potential of known mineralized systems including Great Mt Lyndhurst mine, Avondale mine, White Lead mine and Lynda mine.

Following the decision by PIRSA to agree to the amalgamation of expenditure across the Perilya managed tenements in the Nth Flinders Ranges, the focus of exploration has been on tenements containing known economic mineralisation. The discovery of additional mineralization over recent years within EL 2524 has resulted in the majority of exploration being focused in this tenement. The aim is to direct more exploration towards other tenements, including EL 2680, based on exploration models and structural trends resulting from exploration on EL 2524.



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**PERILYA LIMITED**  
**ACN 009 193 695**

**SURRENDER REPORT  
FOR**

**MT LYNDHURST**  
**FLINDERS RANGES PROJECT**  
**SOUTH AUSTRALIA**

**For The Period**  
**13/12/99 - 01/03/04**

**Project Number**  
**EL 2680**

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**VOLUME 1 OF 1**

**Distribution:**

- ☒ **PIRSA (1)**
- ☐ **Perilya Limited SA (1)**
- ☐ **Perilya Limited WA (1)**

**Author: Mike Cawood**

**February 2004**



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## **1. INTRODUCTION**

This report describes the four years of exploration by Perilya Limited on Exploration Licence 2680 'Mt Lyndhurst' for the purpose of relinquishment. The licence area is located 525km north of Adelaide in the Lyndhurst Area, North Flinders Ranges, South Australia (Figure 1).

During the four year period, the licence was examined as part of larger regional exploration programme targeting known mineral occurrences. Exploration conducted over the tenement failed to define zinc targets which warranted further investigation.

## **2. TENURE**

The licence covers 1197km<sup>2</sup> and was granted to Perilya Limited on the 13<sup>th</sup> of December 1999. The land package is 60km NNE of the Beltana area which was targeted by the company as the source of potentially significant Zn and Pb mineralisation.

## **3. GEOLOGY AND MINERALISATION**

The licence lies in the northern part of the Adelaide Geosyncline, a deformed sedimentary basin of Late Proterozoic to Middle Cambrian age, flanked by crystalline basement complexes of the Gawler and Curnamona Cratons (Figure 2).

The Mt Lyndhurst area is structurally complex and contains two major areas of Callana Beds (diapir); the Mt Lyndhurst and Burr Diapirs. Mineralisation is generally associated with the margins of these diapirs in Late Proterozoic rocks of the Umberatana Group.

The licence contains many base metal (Zn, Pb, Ag, Cu) prospects (reported last year). Several other interesting occurrences require further investigation. These include Ni, Sb, Co, Cu prospects at Gill Bluff and copper deposits throughout the area.

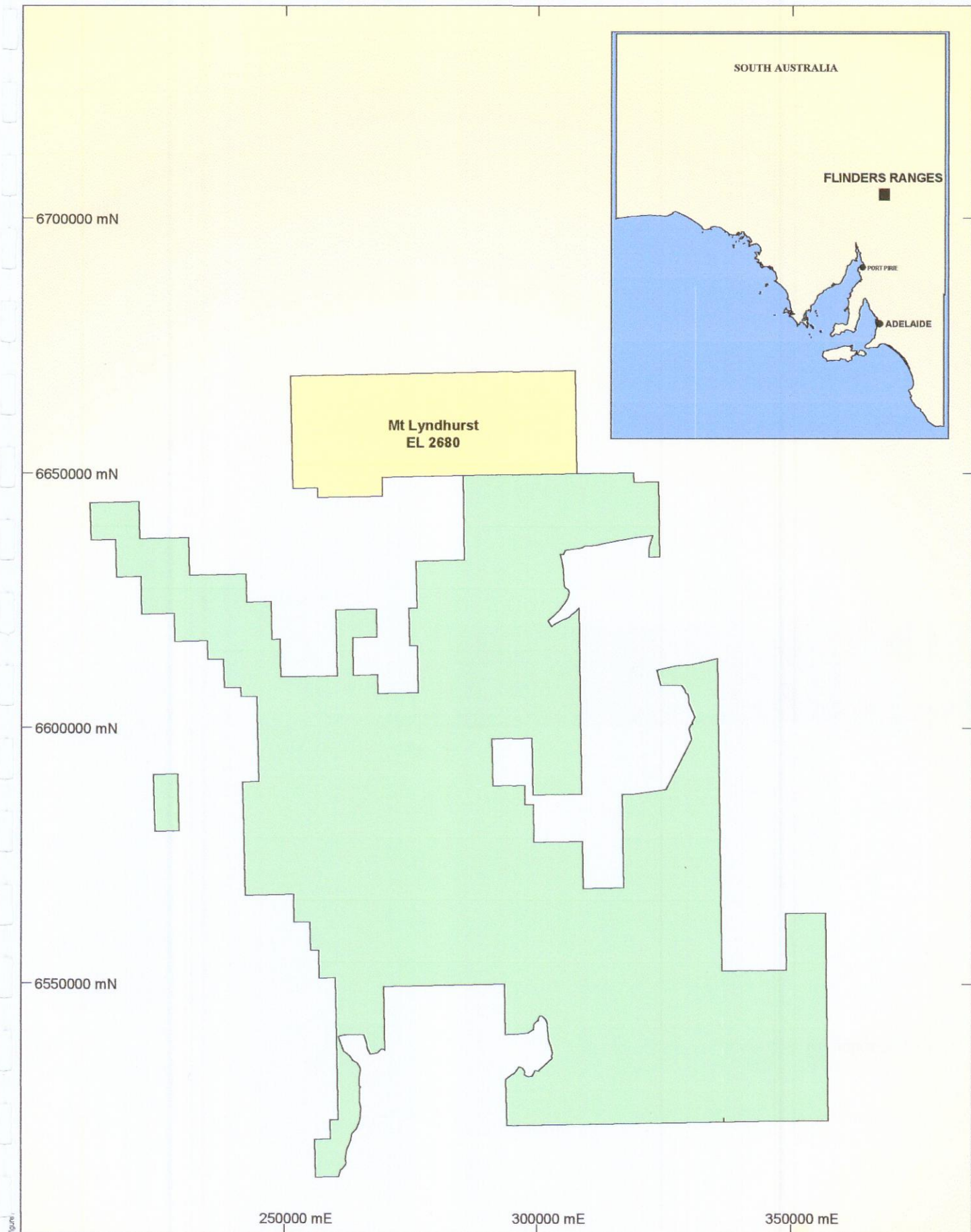
## **4. WORK COMPLETED**

Perilya Limited completed a work program in the licence area as part of a major program aimed at locating base metal deposits. The focus of this work has been to understand the complex geological settings that host mineralisation and to develop solid geological and geochemical targets for drilling.

Work completed in the licence area includes;

- Research for mineralisation potential of the licence was obtained from open file company reports within the licence areas. This resulted in the compilation of a Regional Prospect Database. Appendix 1 documents the data obtained from open file reports that are applicable to the reporting tenement (Figure 3).
- Three days were spent mapping at Avondale Mine, Avondale South, Avondale East, White Lead and Great Mt Lyndhurst Mine. Mapping was undertaken at 1:2500 scale using a 12 channel handheld GPS.

# FLINDERS RANGES PROJECT

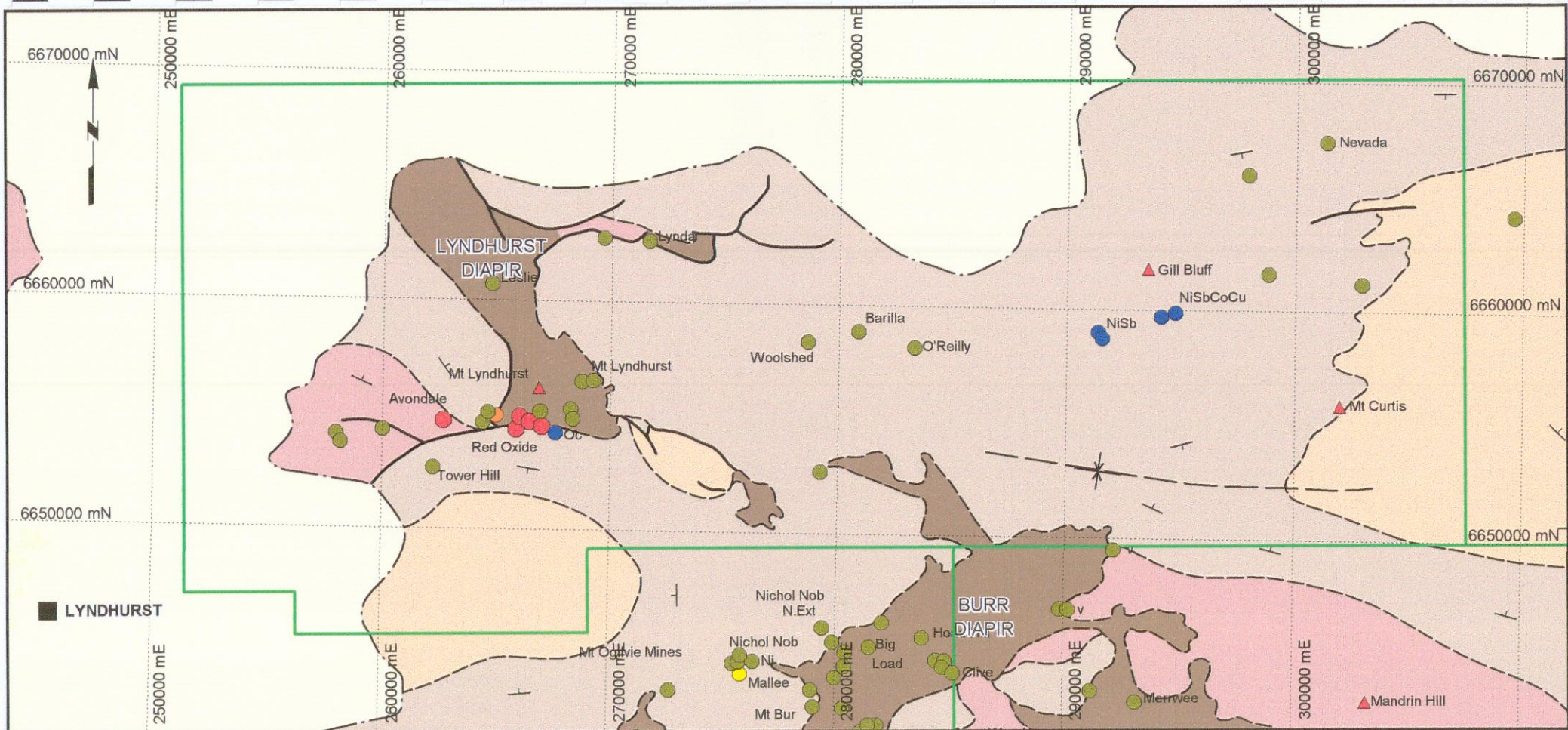


Location

February 2004



Figure 1



### GEOLOGICAL LEGEND

	Tertiary - Quarternary Sediments		Wilpena Group (Late Proterozoic)
	Leigh Creek Coal Measures (Permian)		Umberatana Group (Late Proterozoic)
	Mudnawatana Granite (Ordovician)		Burra Group (Cambrian)
	Lake Frome Group (Cambrian)		Callanna Group (Late Proterozoic)
	Hawker Group (Cambrian)		Mount Painter Inlier (Early to Middle Proterozoic)

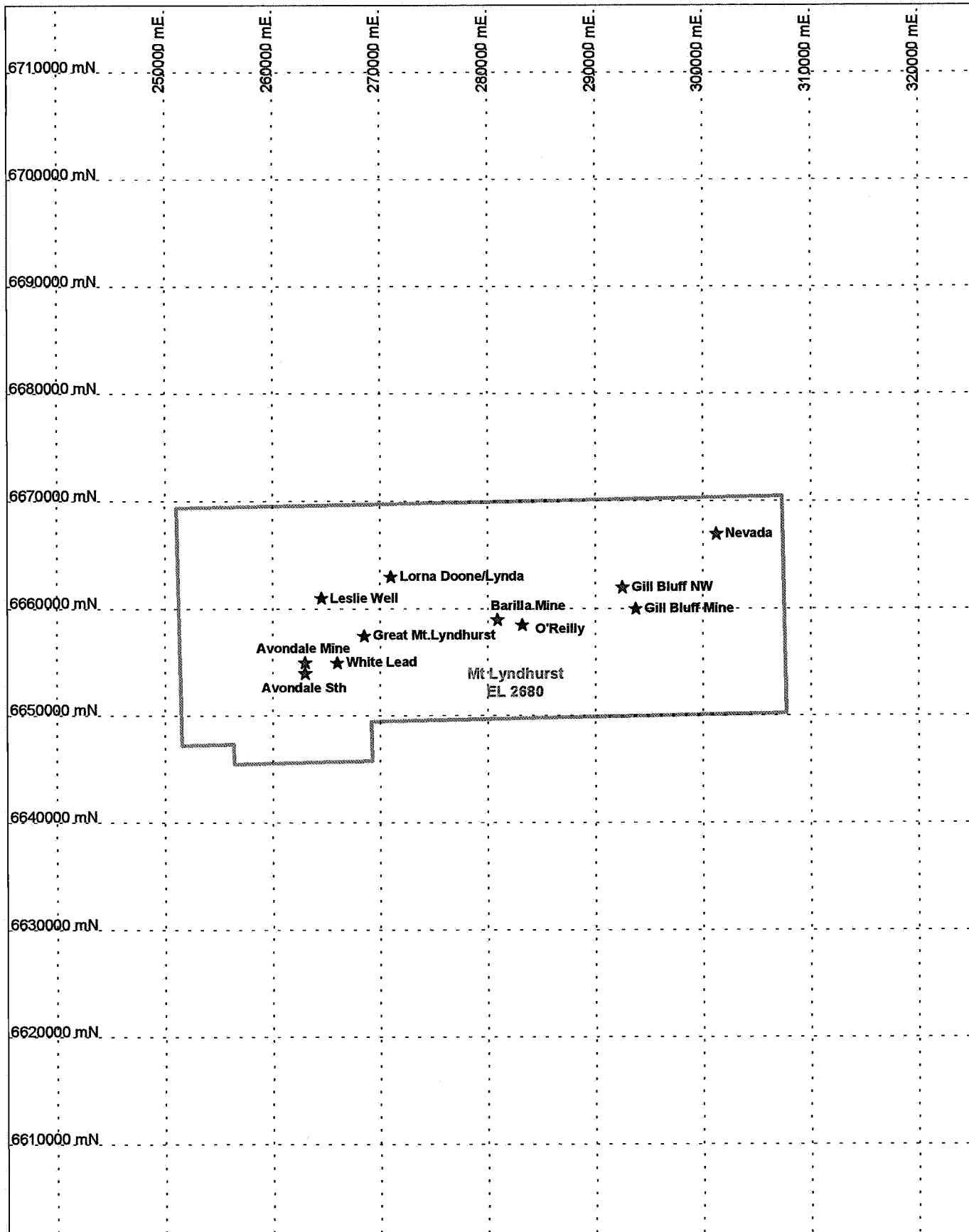
### METALLOGENIC LEGEND

	Zinc (Zn)
	Copper (Cu)
	Lead (Pb)
	Silver (Ag)
	Gold (Au)
	Baryte (Ba)
	Iron (Fe)
	Manganese (Mn)
	Lead (Pb) / Zinc (Zn)
	Mountain
	FX



### FLINDERS RANGES PROJECT MT LYNDHURST PROSPECT EL2680 GEOLOGY AND METALLOGENIC PLAN

Compiled :	Date :	Scale :
30 January 2002	30 January 2002	1 : 250,000
Drawn :	Revision Date :	A.M.G. Map Zone :
N.T.		Zone 54
Drawing Name :	Figure 2	
P:\Nth\Flinders\MtLyndhurst\Report		




Tenement Outline



Prospect Location



 <b>PERILYA LIMITED</b>		
<b>FLINDERS RANGES PROJECT</b> <b>MT LYNDHURST PROSPECT</b> <b>EL2680</b> <b>TENEMENT OUTLINE AND</b> <b>PROSPECT LOCATION PLAN</b>		
Compiled :	Date :	Scale :
	15 December 2000	1 : 500,000
Drawn :	Revision Date :	A.M.G. Map Zone :
N.T.		WGS84, Zone 54
Drawing Path :		Figure 3
P:\WithFlinders\MtLyndhurst\Report		

- One hundred and one soil samples were taken at Avondale South over 2 days. Sampling was completed on a 100 x 100m grid pattern. The samples were sieved using the -2mm+20# size fraction and analysed for Cu, Pb, Zn, As, Sb, Ag, Bi and Cd.
- Fourteen rock chip samples were taken from White Lead, Avondale Mine and Great Mt Lyndhurst Mine. Samples were analysed for Ag, As, Ba, Be, Bi, Cd, Cu, Mn, Pb, S, Sb, V, Zn.

## 5. RESULTS AND DISCUSSION

The Mt Lyndhurst area was explored as part of a regional evaluation during the tenure period. The purpose was to rank known prospects for their potential to host significant mineralisation.

The following prospects were investigated based on their potential for Zn, Pb and Cu mineralisation.

**Avondale Mine** - The Avondale historic workings are hosted within the Tapley Hill Formation, which consist of fine grained laminated green-grey siliceous siltstone/shale. The units strike E-W, and dip steeply north. Mineralisation is associated with N-S oriented, steeply west dipping structures. Three mineralised shears have been identified, outlined by series of adits and shafts. Mineralisation occurs within siderite breccia, containing galena, cerussite(?) and minor sphalerite. Limonite and iron oxide alteration is common within the structure and hematitic/earthy alteration occurs in some locations.

One rock chip sample returned values of 31.9% Zn and 8.8% Pb from mine workings from a sample of sphalerite-galena ore.

**Avondale South** - is located near the contact with the Skillogalee Dolomite (Burra Group) and the overlying Tindelpina Shale (Umbertana Group). The position is lower in the sequence than Avondale Mine, which is hosted in the Tapley Hill Member. The area is characterised by a small ridge of altered fe dolomite, striking E-W and dipping to the north.

A previously reported 6000ppm Zn anomaly was not repeated during the soil program. A peak value of 1719ppm Zn was recorded near the main workings.

**White Lead** - is hosted within bleached kaolinitic siltstone of the Tindelpina Shale on the southern margin of the Lyndhurst Diapir. The Lyndhurst Diapir contact is located in the hanging wall, marked by a thin conglomerate unit. Stratigraphy youngs to the south.

The orebody consist of narrow 1cm wide malachite veins, occurring along bedding and fracture planes, and dips south at 65° and strikes between 110 and 85° and is exposed in workings for over 3km.

Mineralisation is associated with a series of dioritic intrusions to the north of the prospect, which have contorted sandstone and shale units within the diapir. South of the workings are unaltered subcrops of hematitic Tindelpina Shale.

**Great Mt Lyndhurst** - The Great Mt Lyndhurst workings are within the Lyndhurst Diapir. The prospect was mined exclusively for the copper bearing malachite. The ore consists of malachite in vuggy quartz veins and breccias. The best ore is developed in the breccia, and has infiltrated fractures adjacent the structures. Mineralisation and alteration is localised around the faults.

Malachite ore occurs in plunging shoots at the intersection of the 240° trending structure and bedding. Ore occurs in linear shoots dipping at 70° towards 250°. The larger shoots have diameters of only a few metres at surface and are clustered in an area measuring 200 x 100m. The mineralisation is hosted within hematitic and iron rich purple-brown siliceous shale units. No carbonates were observed. Bedding strikes at 140° and dips SW between 60-80°. The iron rich unit has been selectively mineralised. White unmineralised shales and sediments occur on either side of the ore horizon.

A second grouping of shafts is located 600m west of the main workings. They are a small group of shafts, and would have produced less ore than the main workings. The host lithology is a bleached light grey clayey siltstone, which has been intruded and brecciated by copper bearing quartz veins. Bedding strikes between 10-25° and mineralisation is controlled by crosscutting 100° oriented vertical structures. Several Mines Department costeans oriented E-W and N-S traverse the prospect. Directly south of these workings are a number of mafic intrusive plugs, which are the likely source of mineralisation.

Four rock chip samples were taken, returning a 28.2% Cu assay from the main workings, with background zinc values.

## **6. RECOMMENDATION**

The Mt Lyndhurst tenement was explored between late 1999 and early 2004 primarily for zinc oxide and zinc sulphide mineralisation. The Cambrian lithologies prospective for zinc oxide mineralisation are not observed in tenement area. Zinc and lead sulphide mineralisation was recorded primarily around historic workings but these occurrences failed to warrant further investigation. Neoproterozoic willemite mineralisation as observed north-east of the tenement area was not discovered in EL2680.

It is recommended the tenement be relinquished. The style and tenor of mineralisation does not warrant further work.

## **APPENDIX 1**

### **Regional Prospect Database Ledger**

# Prospect

Prospect Name	Lorna Doone/Lynda
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6663000
AMG Easting:	271000
Access:	10 km WNW of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	pC Tapley Hill Fm and Sturtian Tillite?
Associated Rocks:	Mt.Lyndhurst Diapir
Alteration:	
Structure:	Folded sequence with SE plunge partly truncated by diapiric material. Unconformity at contact between Tapley Hill Fm and tillite believed to be common locus for Cu mineralisation - other occurrences in the area at same stratigraphic position .
Mineralogy:	malachite, chrysocolla, azurite, chalcopyrite
Mineralisation Style:	Tabular bodies of supergene remobilised Cu (?) with primary mineralisation related to swarms of quartz veins .
Regolith Profile:	Gossan/Carbonate Zone .
Historical Mining:	Numerous historical workings present .
Exploration Summary:	
Geochemistry:	Soil sampling over prospect area - no Zn anomalism .
Geophysics:	magnetometer and IP survey
Drilling:	Initial drilling (PDH1-8 and PDH11-14) produced anomalous Cu results but negligible Pb,Zn and Ag . Pattern vertical drilling (50*20m) testing Cu-oxide mineralisation only assayed for Cu (results low-moderate ENV.4540) and shallow drilling .
Current Resource/Reserve:	Feasibility study produced a Mineable Ore Reserve (diluted) at 0.4% Cu cut-off for Lynda - 1.0Mt @ 0.8% Cu and Lorna Doone - 1.0Mt @ 1.2% Cu
Target:	
Proposed Work Status	<div><input checked="" type="radio"/> 1-Pending <input type="radio"/> 2-Request Works <input type="radio"/> 3-Approved Works <input type="radio"/> 4-Not approved Works</div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	4
Comments:	
Unable to locate stream info at this time to check for Pb/Zn? However lack of Zn in drilling suggests prospect should be ranked low.	

# Prospect

Prospect Name	Barilla Mine
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6659000
AMG Easting:	280900
Access:	
Pastoral Lease:	
Host Lithology:	Tapley Hill Fm
Associated Rocks:	
Alteration:	
Structure:	quartz vein strike 280
Mineralogy:	malachite, cuprite, chalcocite, bornite, chalcopyrite, native Cu
Mineralisation Style:	quartz vein
Regolith Profile:	
Historical Mining:	old workings
Exploration Summary:	
Geochemistry:	
Geophysics:	IP work considered encouraging for extensive near -surface mineralisation
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	<div><div><div>● 1-Pending</div><div>○ 2-Request Works</div><div>○ 3-Approved Works</div><div>○ 4-Not approved Works</div></div></div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	3
Comments:	
Possibly same structure/vein forms nearby O'Reilly Prospect.	

# Prospect

Prospect Name	Nevada
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6667000
AMG Easting:	301200
Access:	
Pastoral Lease:	
Host Lithology:	Amberooona Fm, Fortress Hill Fm (?)
Associated Rocks:	
Alteration:	
Structure:	
Mineralogy:	malachite, chalcocite, chalcopyrite, gersdorffite
Mineralisation Style:	quartz/carbonate veining
Regolith Profile:	Gossan Zone
Historical Mining:	Cu workings
Exploration Summary:	
Geochemistry:	Rock chip sampling up to 5.10%Cu and 0.11%Co (no Zn). Au values from mine dump of 2.6, 2.7 and 4.9g/t. BLEG sampling produced one result of 1.5ppb - unable to get location .
Geophysics:	
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	<div><div><div>● 1-Pending</div><div>○ 2-Request Works</div><div>○ 3-Approved Works</div><div>○ 4-Not approved Works</div></div></div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	3
Comments:	
Veins considered to be of limited extent - no broad geochem anomalies. Worth a look sometime.	

# Prospect

Prospect Name	Avondale Mine
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6655000
AMG Easting:	263000
Access:	16 km WSW of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	Tapley Hill Formation, Umbertana Group
Associated Rocks:	siltstones, sandstones with dolomitic interbeds
Alteration:	Limonite and Fe Oxides
Structure:	Mineralisation within N -S striking shears /veining dipping steeply to the W. 3 lodes.
Mineralogy:	galena, cerussite +/- sphalerite
Mineralisation Style:	Fault hosted breccia -veins
Regolith Profile:	good outcrop in the area
Historical Mining:	Several hundred tons of high -grade Pb (35-75%) and Ag (9-15oz) extracted before 1927.
Exploration Summary:	
Geochemistry:	
Geophysics:	
Drilling:	Some drilling beneath lodes produced minor anomalism . AVMP 2, 10' @ 0.43% Zn from 70' (to EOH) and AVMP 3, 5' @ 0.4% Zn from 50' (remainder not assayed ).
Current Resource/Reserve:	
Target:	Zinc supergene accumulations and primary sphalerite mineralisation
Proposed Work Status	<div><div><input checked="" type="radio"/> 1-Pending</div><div><input type="radio"/> 2-Request Works</div><div><input type="radio"/> 3-Approved Works</div><div><input type="radio"/> 4-Not approved Works</div></div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	6
Comments:	

# Prospect

Prospect Name Gill Bluff Mine  
Province SA North Flinders Ranges  
Map Sheet (1:100000) Mt.Lyndhurst  
Tenement: Mt.Lyndhurst  
Tenement Holder: PEM  
Tenement Management: PEM  
AMG Northing: 6660000  
AMG Easting: 293700  
Access:  
Pastoral Lease:

Host Lithology: Amberoona Fm

Associated Rocks:

Alteration:

Structure:

Mineralogy:

thin veins trending 065 dipping variable to S .  
ullmanite (Ni/Sb sulphide), minor chalcopyrite, bornite, malachite,  
cuprite and galena  
stringers/blebs in thin quartz veins

Mineralisation Style:

Regolith Profile:

Historical Mining:

shafts and shallow costeans

Exploration Summary:

Geochemistry:

Stream sediment programme for Ni /Co and regional BLEG - no  
significant results . However rock chips from area up to 0.46% Zn  
IP in area did not produce anomaly .

Geophysics:

Drilling:

Current Resource/Reserve:

Target:

Proposed Work Status

- ☒ 1-Pending
- ☐ 2-Request Works
- ☐ 3-Approved Works
- ☐ 4-Not approved Works

Proposed Work Program

Further Actions:

Prospect Rank:

2

Comments:

Considered to be too erratic and not prospective.

# Prospect

Prospect Name  
Province  
Map Sheet (1:100000)  
Tenement:  
Tenement Holder:  
Tenement Management:  
AMG Northing:  
AMG Easting:  
Access:  
Pastoral Lease:

Gill Bluff NW  
SA North Flinders Ranges  
Mt.Lyndhurst  
Mt.Lyndhurst  
PEM  
PEM  
6662000  
292500

Host Lithology:  
Associated Rocks:  
Alteration:  
Structure:  
Mineralogy:  
Mineralisation Style:  
Regolith Profile:

gossanous quartz veining

Historical Mining:  
Exploration Summary:  
Geochemistry:  
Geophysics:  
Drilling:  
Current Resource/Reserve:

Rock chips up to 0.65%Zn.

Target:

Proposed Work Status

● 1-Pending

○ 2-Request Works

○ 3-Approved Works

○ 4-Not approved Works

Proposed Work Program  
Further Actions:

Prospect Rank:

2

Comments:  
Information sketchy.

# Prospect

Prospect Name	Avondale South
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6654000
AMG Easting:	263000
Access:	16 km WSW of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst

Host Lithology:	Burra Group Dolomites
Associated Rocks:	
Alteration:	
Structure:	
Mineralogy:	
Mineralisation Style:	
Regolith Profile:	

Historical Mining:	
Exploration Summary:	
Geochemistry:	Rock chips at surface returned up to 0.6% Zn?
Geophysics:	
Drilling:	Drillhole PDH AVD P 1 intersected dolomitic siltstones and then blue-grey (unweathered?) dolomite to EOH . Best assay was 5' @ 0.1% Zn from 30'.

Current Resource/Reserve:

Target:

Proposed Work Status

- ☒ 1-Pending
- ☐ 2-Request Works
- ☐ 3-Approved Works
- ☐ 4-Not approved Works

Proposed Work Program

Further Actions:

Prospect Rank: 1

Comments:

Drilling seem to indicate very shallow base of oxidation .

# Prospect

Prospect Name Great Mt.Lyndhurst Mine  
Province SA North Flinders Ranges  
Map Sheet (1:100000) Mt.Lyndhurst  
Tenement: Mt.Lyndhurst  
Tenement Holder: PEM  
Tenement Management: PEM  
AMG Northing: 6657500  
AMG Easting: 268500  
Access: 10 km W of Mt.Lyndhurst Station  
Pastoral Lease: Mt.Lyndhurst

Host Lithology: Siltstones/shales  
Associated Rocks: Mt.Lyndhurst Diapir

Alteration:

Structure:

Mineralogy:

NW trending siltstones and black shales dipping steeply to the S  
Sediments cut by Cu -bearing quartz veining striking NE and  
dipping to the W, with with no significant dissemination of ore  
minerals beyond the vein walls

Mineralisation Style: Noted that lodes are pipe -like and form at intersections of veins  
and lithological contacts .

Regolith Profile:

Historical Mining:

Exploration Summary:

Geochemistry:

Geophysics:

Drilling:

Current Resource/Reserve:

Target:

Proposed Work Status

- ☒ 1-Pending
- ☐ 2-Request Works
- ☐ 3-Approved Works
- ☐ 4-Not approved Works

Proposed Work Program

Further Actions:

Prospect Rank: 1

Comments:

Targets in this area seem pretty limited.

# Prospect

Prospect Name	Leslie Well
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6661000
AMG Easting:	264500
Access:	15 km W of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	Mt.Lyndhurst Diapir
Associated Rocks:	
Alteration:	
Structure:	
Mineralogy:	Quartz veins with traces of malachite, chrysocolla and limonite .
Mineralisation Style:	
Regolith Profile:	
Historical Mining:	Shallow workings and dumps over a small area .
Exploration Summary:	
Geochemistry:	Rock chip sampling of quartz reefs revealed one sample of 0.3g/t Au and remainder <detection .
Geophysics:	
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	<div><div><div>● 1-Pending</div><div>○ 2-Request Works</div><div>○ 3-Approved Works</div><div>○ 4-Not approved Works</div></div></div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	1
Comments:	

# Prospect

Prospect Name	O'Reilly
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6658500
AMG Easting:	283200
Access:	
Pastoral Lease:	

Host Lithology:	Tapley Hill Fm
Associated Rocks:	
Alteration:	
Structure:	quartz vein strike 280
Mineralogy:	
Mineralisation Style:	quartz vein
Regolith Profile:	

Historical Mining:  
Exploration Summary:  
Geochemistry:  
Geophysics:  
Drilling:  
Current Resource/Reserve:

Target:

Proposed Work Status	<div><div><input checked="" type="radio"/> 1-Pending</div><div><input type="radio"/> 2-Request Works</div><div><input type="radio"/> 3-Approved Works</div><div><input type="radio"/> 4-Not approved Works</div></div>
----------------------	--

Proposed Work Program  
Further Actions:

Prospect Rank: 1

Comments:  
Possibly same structure/vein forms nearby Barilla Mine Prospect.

# Prospect

Prospect Name	White Lead
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6655000
AMG Easting:	266000
Access:	14 km W of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst

Host Lithology:	pC Tapley Hill Fm
Associated Rocks:	Mt.Lyndhurst Diapir

Alteration:  
Structure:  
Mineralogy:  
Mineralisation Style:  
Regolith Profile:

Historical Mining:	Outcropping vein containing Cu -oxides(?).
--------------------	--

Exploration Summary:

Geochemistry:

Geophysics:

Drilling:

Reconnaissance drilling on a broad pattern with holes to 35m.  
Best results in holes on 1km spaced sections include WL 4, 3m @ 1.41% Cu and WL8, 8m @ 1.14% Cu.

Current Resource/Reserve:

Target:

Proposed Work Status

- ☒ 1-Pending
- ☐ 2-Request Works
- ☐ 3-Approved Works
- ☐ 4-Not approved Works

Proposed Work Program

Further Actions:

Prospect Rank:	1
----------------	---

Comments:

Thin zone of mineralisation running parallel to Mt.Lyndhurst Diapir contact - possible similar structure?

## **APPENDIX 2**

### **Soil Sample Assay Ledger**

# Soil -2.0mm+20# Assay Ledger

SAMPLE_NO	AMG_N	AMG_E	JOB_NO	CU_PPM	PB_PPM	ZN_PPM	AG_PPM	AS_PPM	BI_PPM	CD_PPM	SB_PPM	P75UM_PER
K07504	6654849	262800	0202750	23	1277	1308	0.4	10	0.35	1.5	0.81	
K07505	6654952	262800	0202750	32	85	1695	0.2	8	0.29	1	0.44	
K07506	6655051	262800	0202750	35	127	239	0.2	14	0.33	0.3	1.22	
K07507	6655150	262801	0202750	33	53	170	0.2	16	0.33	0.2	1.33	
K07508	6655101	262701	0202750	33	99	213	0.2	14	0.31	0.3	1.19	
K07509	6654996	262702	0202750	31	941	931	0.2	10	0.34	1.6	0.59	
K07510	6654905	262701	0202750	30	555	584	0.2	14	0.28	1.1	0.6	
K07511	6654801	262701	0202750	15	67	481	0.2	13	0.21	4	0.33	
K07512	6654705	262697	0202750	26	338	523	0.2	10	0.19	1.2	0.55	
K07513	6654600	262700	0202750	26	36	118	0.2	6	0.28	0.3	0.46	
K07514	6654504	262698	0202750	27	42	122	0.2	7	0.23	0.3	0.49	
K07515	6654399	262701	0202750	29	36	279	0.3	9	0.25	1.4	0.52	
K07516	6654302	262701	0202750	35	11	54	0.1	23	0.53	0	0.54	
K07517	6654200	262701	0202750	72	8	45	0.2	21	0.59	0	0.49	
K07518	6654251	262801	0202750	44	17	51	0.1	15	0.56	0.1	0.55	
K07519	6654353	262800	0202750	28	20	54	0.3	10	0.37	0	0.57	
K07520	6654449	262800	0202750	20	19	94	0.2	8	0.12	0.4	0.25	
K07521	6654551	262799	0202750	21	36	183	0.3	8	0.29	0.3	0.51	
K07522	6654651	262799	0202750	28	29	195	0.4	6	0.2	0.3	0.45	
K07523	6654751	262801	0202750	22	156	744	0.3	10	0.27	3.1	0.75	
K07524	6654801	262900	0202750	21	374	1240	0.2	7	0.19	0.7	0.48	
K07525	6654700	262899	0202750	28	1150	835	0.3	15	0.32	0.6	0.6	
K07526	6654601	262902	0202750	16	32	123	0.2	7	0.21	0.2	0.35	
K07527	6654501	262902	0202750	17	67	141	0.4	8	0.14	0.3	0.33	
K07528	6654402	262902	0202750	72	18	212	0.3	15	1.15	0.5	0.43	95.29
K07529	6654302	262903	0202750	31	17	48	0.3	8	0.76	0	0.53	
K07530	6654202	262901	0202750	141	15	45	0.2	66	1.21	0	1.67	
K07531	6654251	263000	0202750	232	16	53	0.1	85	0.5	0	0.74	
K07532	6654350	263000	0202750	79	38	195	0.3	11	0.94	0.5	0.56	
K07533	6654450	263001	0202750	49	35	874	0.5	15	0.31	3.9	1.19	
K07534	6654550	263000	0202750	43	23	399	0.3	21	0.86	0.3	0.78	
K07535	6654651	262999	0202750	31	959	955	0.4	29	0.25	1.3	0.74	
K07536	6654751	262998	0202750	30	87	847	0.3	19	0.22	1.5	0.69	
K07537	6654848	263000	0202750	35	272	592	0.2	20	0.25	1	0.67	
K07538	6654900	262900	0202750	29	608	711	0.3	10	0.35	1.3	0.66	
K07539	6655000	262901	0202750	38	444	156	0.2	16	0.36	0.3	1.16	
K07540	6655101	262899	0202750	34	74	133	0.2	12	0.3	0.2	1.2	
K07541	6655148	263000	0202750	36	165	240	0.2	16	0.32	0.3	1.27	
K07542	6655050	263001	0202750	35	439	333	0.2	17	0.3	0.6	1.35	
K07543	6654948	263001	0202750	34	106	164	0.2	15	0.34	0.2	1.15	
K07544	6655100	263100	0202750	41	281	274	0.2	24	0.32	0.5	1.48	
K07545	6655000	263101	0202750	37	82	178	0.2	17	0.42	0.2	1.2	
K07546	6654899	263102	0202750	31	61	103	0.2	15	0.27	0.2	1.09	
K07547	6654800	263101	0202750	37	72	271	0.3	26	0.28	0.4	1.09	
K07548	6654702	263102	0202750	29	101	356	0.3	22	0.23	1.1	0.71	
K07549	6654604	263104	0202750	24	24	326	0.2	10	0.28	0.9	0.56	
K07550	6654499	263101	0202750	20	26	1217	0.2	12	0.15	3.6	0.42	
K07551	6654400	263101	0202750	89	14	86	0.3	16	0.86	0.2	0.45	
K07552	6654300	263103	0202750	309	13	51	0.1	26	0.7	0	0.67	
K07553	6654200	263100	0202750	52	15	44	0.2	29	0.62	0	1.07	97.35
K07555	6654853	262599	0202750	27	299	986	0.3	16	0.24	1	0.46	
K07556	6654752	262597	0202750	23	159	392	0.3	9	0.23	0.9	0.55	
K07557	6654650	262600	0202750	24	30	115	0.2	9	0.21	0.2	0.43	
K07558	6654551	262600	0202750	26	39	137	0.2	9	0.26	0.3	0.66	
K07559	6654451	262599	0202750	22	28	120	0.2	6	0.19	0.3	0.54	
K07560	6654351	262599	0202750	38	34	424	0.2	7	0.16	0.8	0.76	
K07561	6654251	262601	0202750	16	14	18	0.1	4	0.14	0	0.23	
K07562	6654201	262502	0202750	30	9	38	0.2	9	0.34	0	0.59	
K07563	6654300	262501	0202750	25	44	159	0.2	6	0.28	1.8	0.53	
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K07566	6654602	262500	0202750	22	24	65	0.3	4	0.25	0.1	0.38	
K07567	6654699	262501	0202750	19	45	112	0.2	6	0.19	0.2	0.46	
K07568	6654801	262500	0202750	24	69	230	0.3	9	0.22	0.6	0.5	
K07569	6654900	262500	0202750	24	101	335	0.2	8	0.26	0.8	0.58	
K07570	6655002	262498	0202750	29	166	422	0.3	9	0.24	1.4	0.59	
K07571	6655101	262502	0202750	26	226	478	0.2	14	0.25	1.2	0.56	
K07572	6655200	262500	0202750	35	43	144	0.2	15	0.28	0.2	1.01	

# Soil -2.0mm+20# Assay Ledger

SAMPLE_NO	AMG_N	AMG_E	JOB_NO	CU_PPM	PB_PPM	ZN_PPM	AG_PPM	AS_PPM	BI_PPM	CD_PPM	SB_PPM	P75UM_PER
K07573	6655153	262601	0202750	28	90	118	0.2	13	0.31	0.3	1.08	
K07574	6655052	262601	0202750	34	491	943	0.4	11	0.17	7.6	0.51	
K07575	6654954	262600	0202750	33	730	580	0.3	11	0.24	1.1	0.57	
K07576	6654753	263500	0202750	49	91	443	0.3	24	0.36	2.4	0.96	
K07577	6654650	263499	0202750	50	89	1719	0.2	9	0.32	4.8	0.61	
K07578	6654601	263400	0202750	17	24	287	0.3	9	0.11	0.9	0.34	95.87
K07579	6654703	263397	0202750	86	108	612	0.5	53	0.86	4.9	1.48	
K07580	6654800	263400	0202750	29	32	53	0.4	22	0.27	0	1.67	
K07581	6654899	263399	0202750	82	24	205	0.3	15	0.22	0.5	1.2	
K07582	6655001	263401	0202750	37	19	110	0.2	11	0.34	0.2	1.11	
K07583	6655048	263501	0202750	59	31	169	0.2	18	0.43	0.6	1.13	
K07584	6654950	263499	0202750	31	13	129	0.1	13	0.3	0.2	0.71	
K07585	6654851	263500	0202750	35	38	99	0.3	16	0.32	0.2	1.28	
K07586	6654799	263600	0202750	280	7	53	0.2	10	1.34	0	0.39	
K07587	6654900	263600	0202750	35	61	95	0.3	17	0.3	0.2	1.67	
K07588	6655001	263601	0202750	36	24	71	0.2	12	0.38	0.1	1.59	
K07589	6655054	263694	0202750	31	15	97	0.2	13	0.3	0.1	1.17	
K07590	6655004	263801	0202750	28	20	76	0.2	12	0.3	0.3	1.42	
K07591	6654902	263802	0202750	32	38	58	0.3	18	0.27	0.1	1.42	
K07592	6654801	263800	0202750	136	7	86	0.2	55	1.3	0.8	0.34	
K07593	6654702	263801	0202750	25	7	39	0.2	4	0.16	0	0.35	
K07594	6654601	263802	0202750	21	5	20	0.2	9	0.42	0	0.35	
K07595	6654649	263700	0202750	20	8	24	0.2	4	0.14	0	0.35	
K07596	6654602	263620	0202750	63	11	39	0.2	11	0.5	0	0.57	
K07601	6654699	263599	0202750	61	20	41	0.3	11	0.58	0	0.9	
K07602	6654750	263700	0202750	297	13	38	0.2	19	0.84	0.2	0.53	
K07603	6654850	263699	0202750	38	54	50	0.3	33	0.33	0	2.01	98.09
K07604	6654952	263701	0202750	32	17	65	0.2	8	0.28	0	0.6	

Soil -2.0mm+20# Assay Ledger

Replicates

REP SAMPLE_NO	REP_JOB_NO	CU_PPM	PB_PPM	ZN_PPM	AG_PPM	AS_PPM	BI_PPM	CD_PPM	SB_PPM
K07597	0202750	31	20	57	0.2	11	0.37	0.1	0.5
K07598	0202750	35	64	276	0.3	25	0.28	0.5	1.02
K07599	0202750	25	891	533	0.3	11	0.29	1.1	0.64
K07600	0202750	21	10	34	0.5	5	0.12	0	0.46

Standards

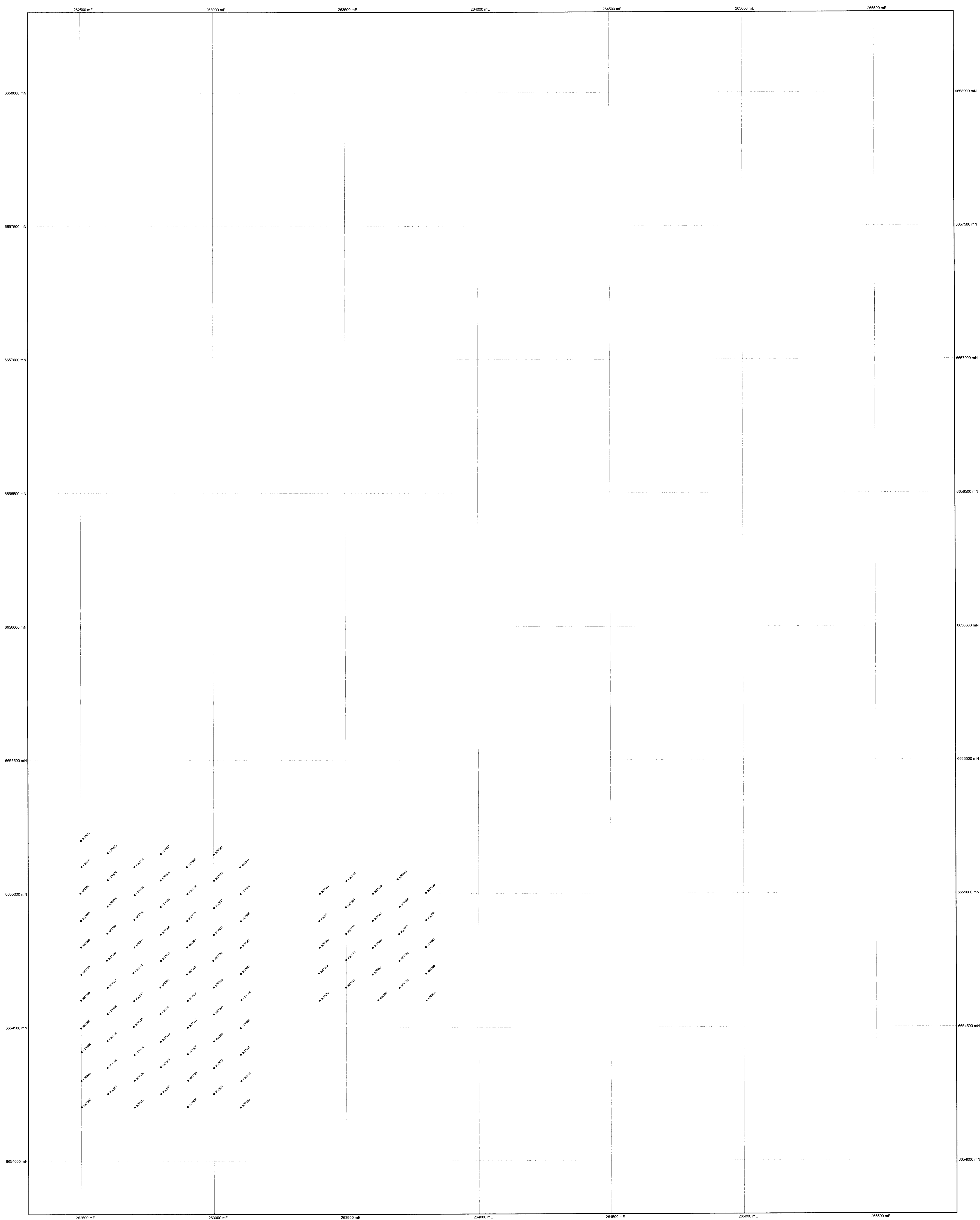
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K07554	0202750	3108	192	118	1.3	162	3.54	0.3	0.79	209

### **APPENDIX 3**

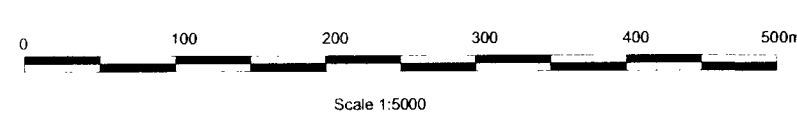
#### **Rock Chip Assay Ledger**

Rock Chip Assay Ledger

SAMPLE_NO	AMG_N	AMG_E	JOB_NO	AG_PPM	AS_PPM	BA_PPM	BE_PPM	BI_PPM	CD_PPM	CU_PPM	MN_PP
G89262	6654440	262998	0202335	1.1	60	1843	1.5	0	5.5	88	120
G89263	6654844	262801	0202335	1.1	74	438	1.5	0	35	91	30
G89264	6654908	262829	0202335	66.8	48	15	2.8	0	725.6	604	76
G89265	6654823	263661	0202335	2.6	46	116	1.1	0	15.8	133	2
G89266	6654858	266742	0202335	0.7	258	536	3.1	0	0	151777	
G89267	6656788	269073	0202751	2.5	74	184	1.8	72	1.2	67500	1
G89268	6656881	269068	0202751	3.2	298	70	0.7	79	10.2	59983	3
G89269	6656861	269099	0202751	0	9	357	3.2	5	0.6	7282	
G89270	6656880	268430	0202751	4.5	334	494	1	470	0.5	281878	



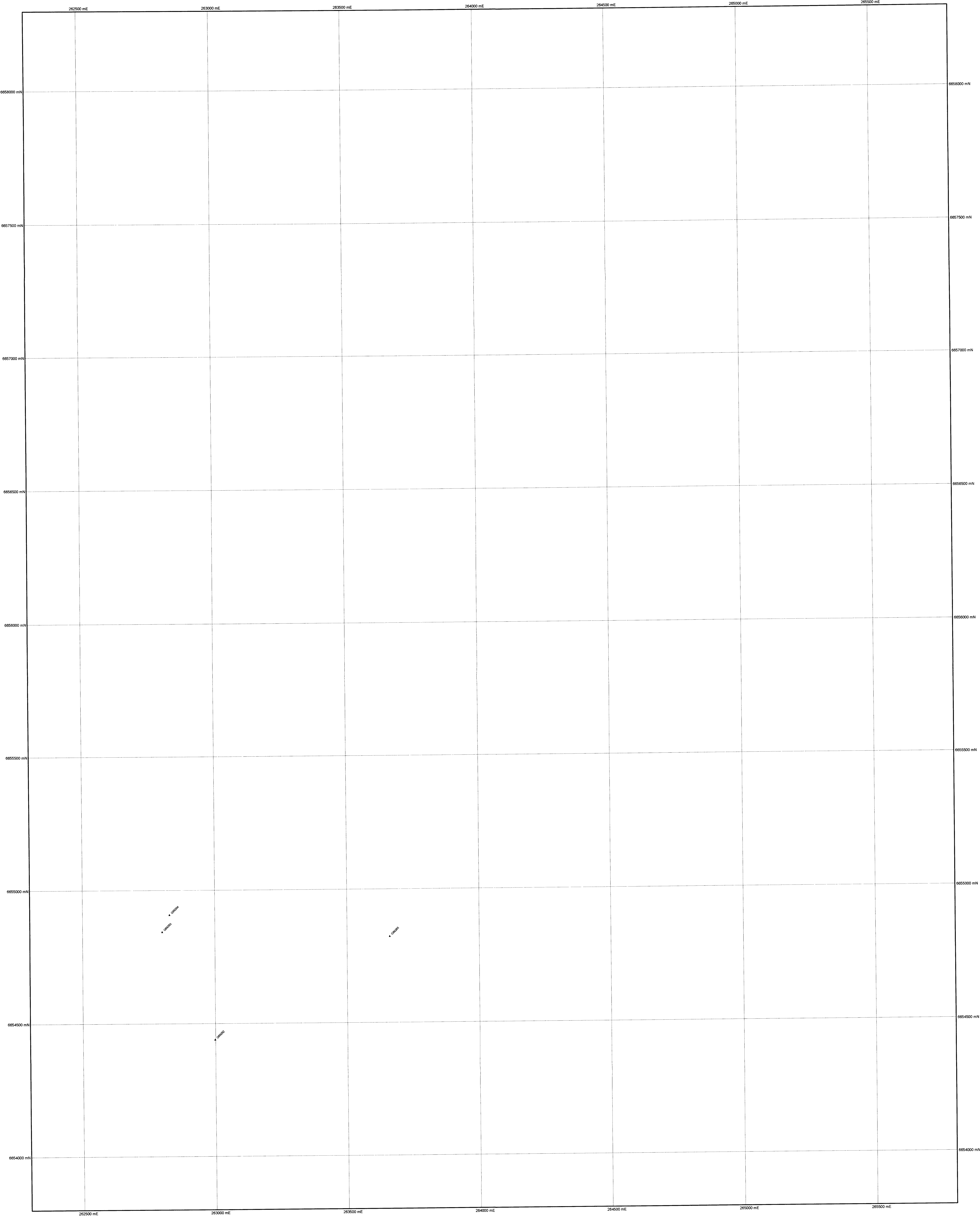
- Soil -2.0mm+20# Sample Location



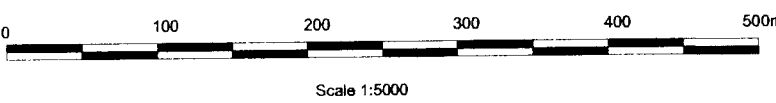
## FLINDERS RANGES PROJECT

## SOIL SAMPLE LOCATION PLAN AVONDALE MINE

Reference Files :	Compiled :	Date : 2 April 2003	1 : 250 000 Sheet Name SH54-09 Copley
	Drawn : E.B	Scale : 1 : 5 000	1 : 100 000 Sheet Name 9637 MI Lyndhurst
Projection and Zone : WGS84, UTM Zone 54	Drawing Path and Name : p:\finders\reports2003\PEM\Report\Plan1 wor		



▲ Rock Chip Sample Location

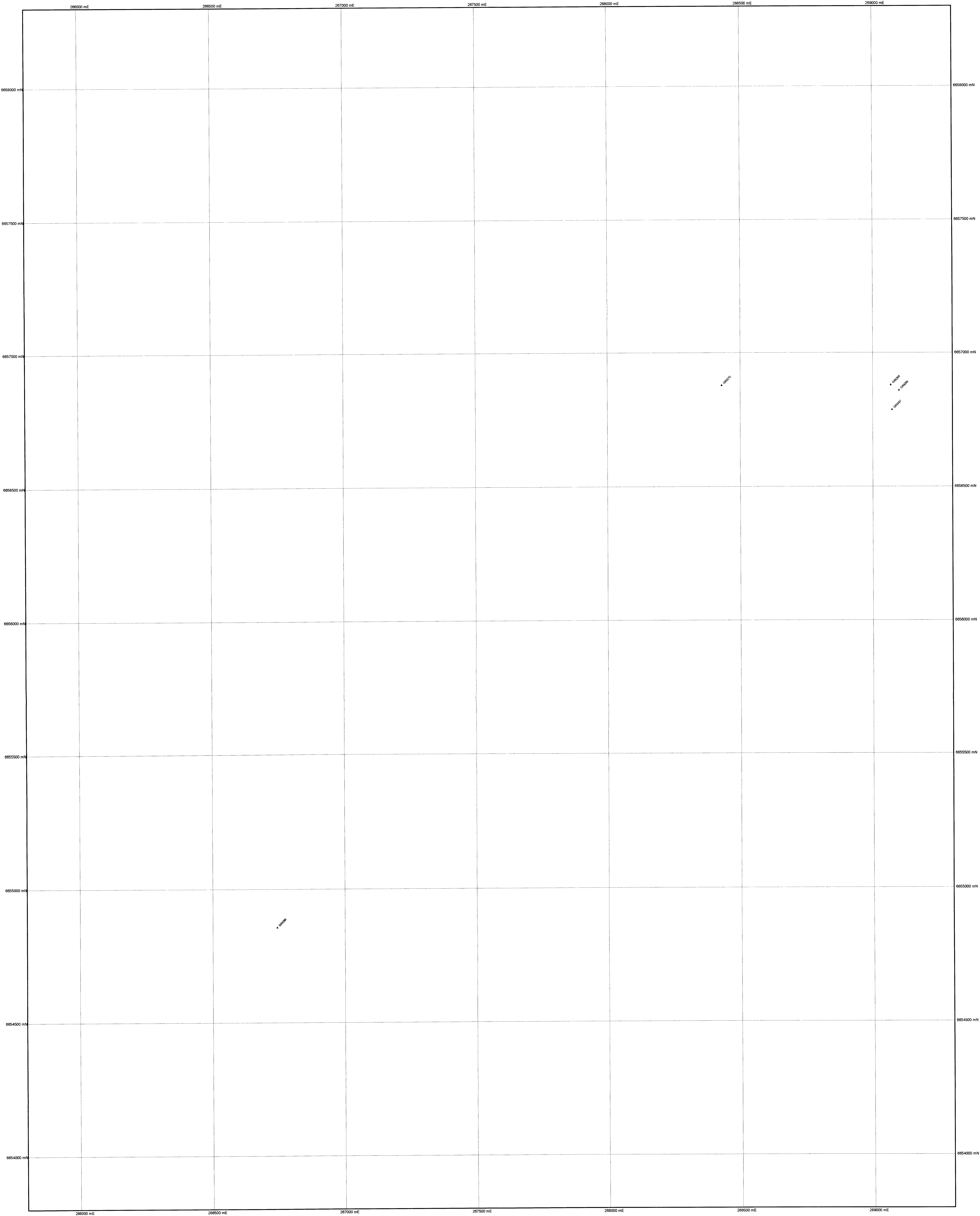


**PERILYA  
LIMITED**

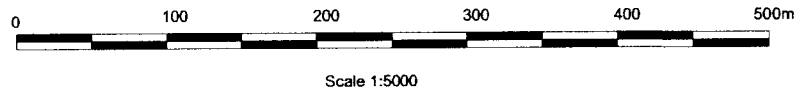
**FLINDERS RANGES PROJECT**

**ROCK CHIP SAMPLE LOCATION PLAN  
AVONDALE MINE**

Reference Files :	Compiled :	Date : 2 April 2003	1 : 250 000 Sheet Name SH54-09 Copley
	Drawn : E.B.	Scale : 1 : 5 000	1 : 100 000 Sheet Name 6637 Mt Lyndhurst
Projection and Zone : WGS84, UTM Zone 54		Drawing Path and Name : p:\finders\reports\2003\FEM\Report\Plan\2.wor	
		2	



▲ Rock Chip Sample Location

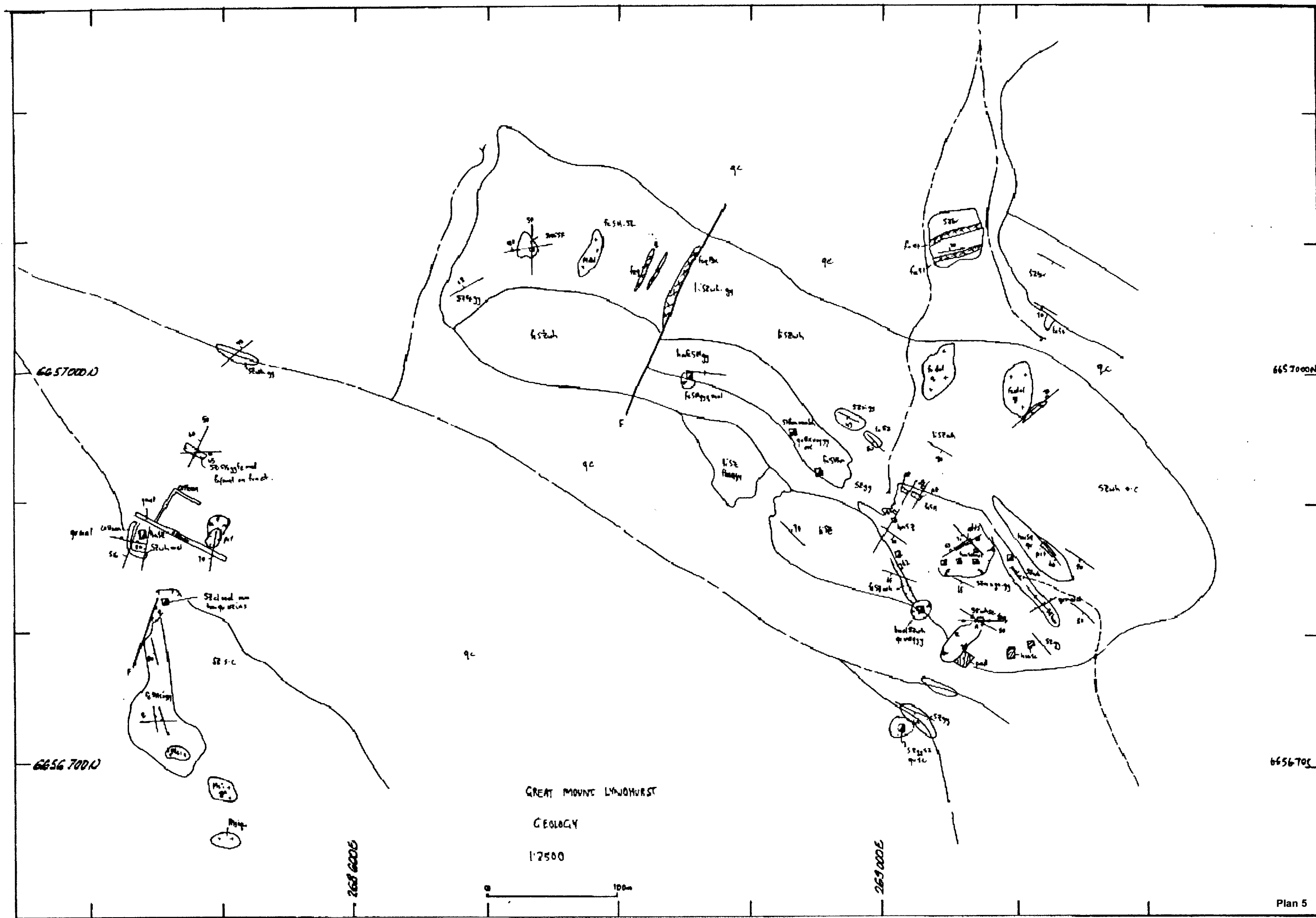


FLINDERS RANGES PROJECT

ROCK CHIP SAMPLE LOCATION PLAN  
GREAT MT LYNDHURST

Reference Files :	Compiled :	Date :	1 : 260 000 Sheet Name
	Drawn :	Scale :	1 : 100 000 Sheet Name
Projection and Zone :	Drawing Path and Name :		
WGS84 UTM Zone 54	p:\flinders\reports\2003\PEM\Report\Plan3.wor		





GREAT MOUNT LYONHURST

GEOLOGY

1:2500



PERILYA LIMITED  
23 JAN 2001

PERILYA  
RESOURCE



**PERILYA**

**PERILYA LIMITED  
ACN 009 193 695**

**ANNUAL REPORT  
FOR**

**MT.LYNDHURST**

**FLINDERS RANGES PROJECT  
SOUTH AUSTRALIA**

**For The Period  
13/12/99 – 12/12/00**

**Project Number  
EL 2680**

**VOLUME 1 OF 1**

**Distribution:**

- 1. PIRSA (2)**
- 2. Perilya Limited (2)**

**Author: Grant Williamson**

**December 2000**

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## **LIST OF FIGURES**

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- FIGURE 2**            Prospects In Regional Prospect Database

## **LIST OF APPENDICES**

- APPENDIX I**            Regional Prospect Database Ledger

## 1. INTRODUCTION

This report describes the first year of exploration by Perilya Limited on Exploration Licence 2680 'Mt.Lyndhurst'. The licence areas are located 525km north of Adelaide in the Lyndhurst Area, North Flinders Ranges, South Australia (Figure 1).

During the year, the licence area was examined as part of larger regional exploration programme targeting known mineral occurrences for zinc mineralisation. Investigations also examined the mineralisation potential of the licence areas with the view for rapidly reducing the ground position of unprospective areas.

## 2. TENURE

The licence area covers 1197km<sup>2</sup> and was granted to Perilya Limited on the 13<sup>th</sup> of December 1999. The land package is 60km NNE of the Beltana area which was targeted by the company as the source of potentially significant Zn and Pb mineralisation.

The licence area was renewed by PIRSA for a second year on the 13<sup>th</sup> of December 2000.

## 3. GEOLOGY AND MINERALISATION

The licence areas lie in the northern part of the Adelaide Geosyncline, a deformed sedimentary basin of Late Proterozoic to Middle Cambrian age, flanked by crystalline basement complexes of the Gawler and Curnamona Cratons.

Zinc, lead and copper mineralisation is found throughout the geosyncline generally associated with lithologies of Cambrian marine shelf carbonate environments. Following the Delamerian Orogeny, diapirism and metasomatism were active which resulted in base metal deposits becoming localised in particular stratigraphic and structural settings.

## 4. WORK COMPLETED IN THE FIRST YEAR

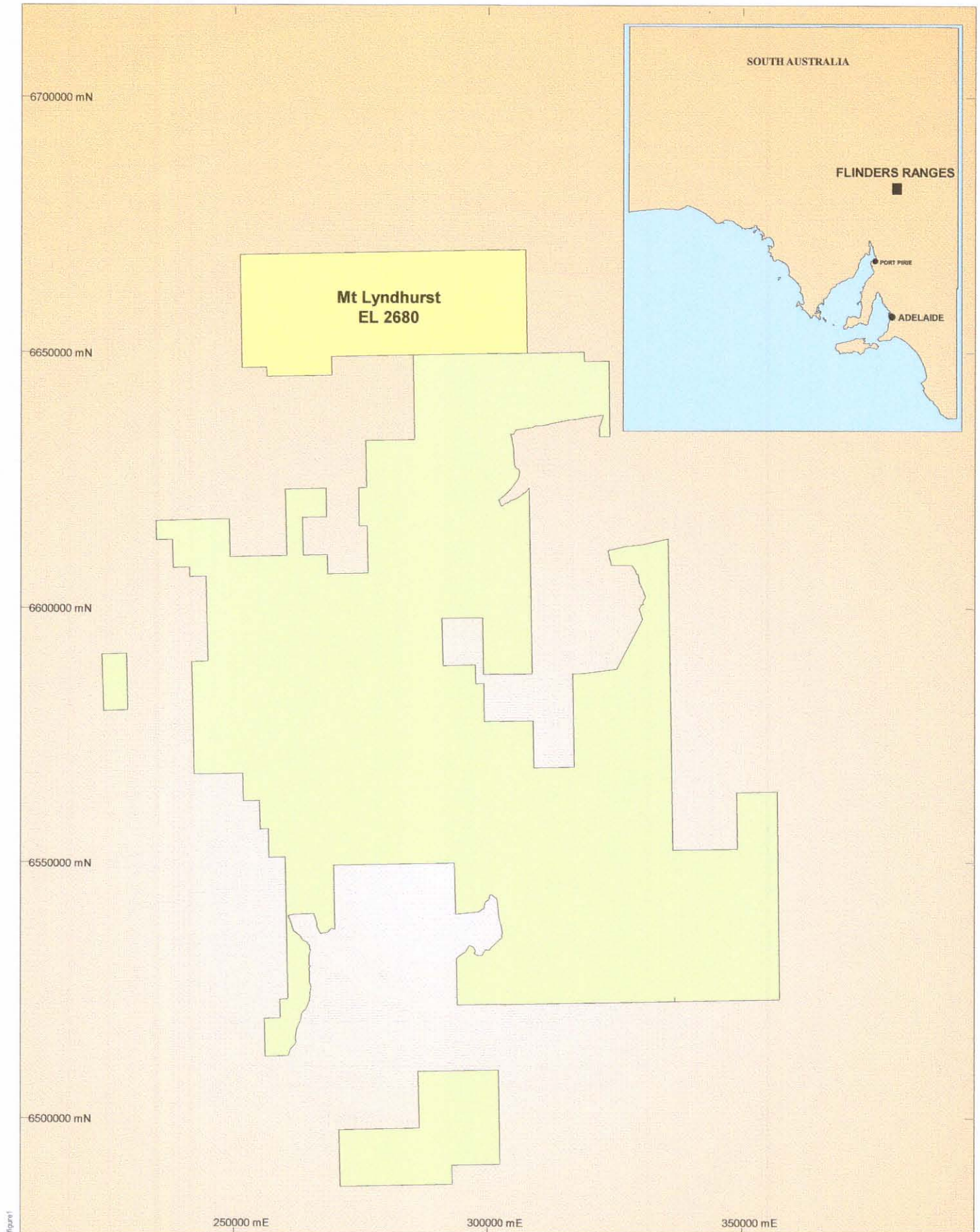
Following the granting of the licence area, Perilya Limited has completed a regional evaluation with the area being examined as part of a larger project land package in the North Flinders region.

Initially research for mineralisation potential of the licence was obtained from open file company reports within the licence areas. This resulted in the compilation of a Regional Prospect Database. Figure 2 shows the prospects identified at this time with Appendix I being a listing of data collected from the Prospect File Database.

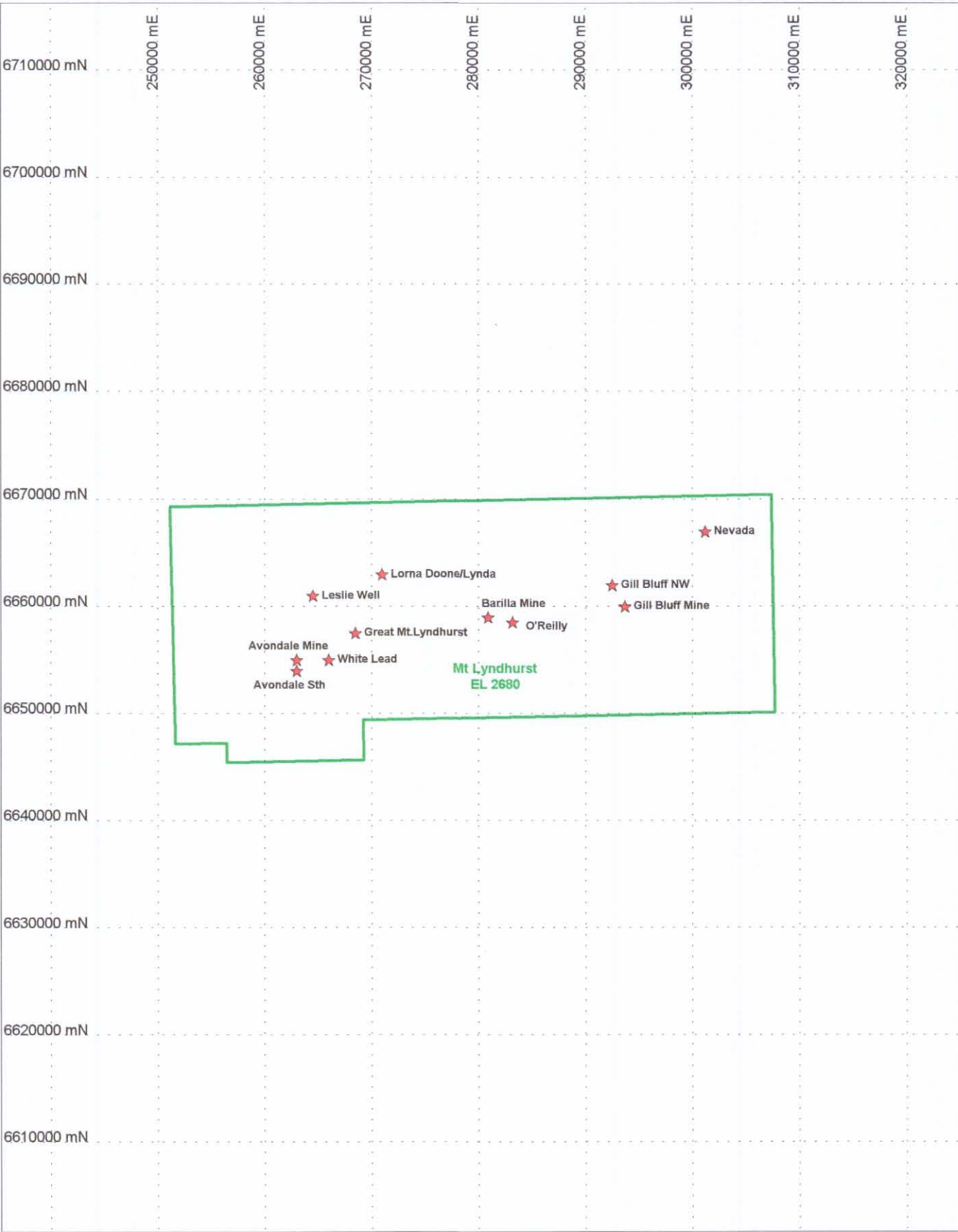
Acquiring, processing and interpreting AGSO geophysical data from the North Flinders was completed. This regional data set will be examined further and in greater detail on specific target areas as the exploration programme continues.

A Landsat image of the entire North Flinders region was acquired to assist in prospect generation. Interpretation of this image is on-going and will assist with the evaluation of the licence area.

# FLINDERS RANGES PROJECT



Location




Tenement Outline



Prospect Location



**PERILYA**  
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**FLINDERS RANGES PROJECT**  
**MT LYNDHURST PROSPECT**  
**EL2680**  
**TENEMENT OUTLINE AND**  
**PROSPECT LOCATION PLAN**

Compiled :	Date : 15 December 2000	Scale : 1 : 500,000
Drawn : N.T.	Revision Date :	A.M.G. Map Zone : WGS84, Zone 54
Drawing Path : P:\WithFlinders\MtLyndhurst\Report		<b>Figure 2</b>

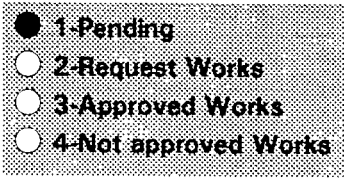
## **5. PROGRAMME FOR THE SECOND YEAR**

Following the commencement of exploration in the North Flinders Region it is anticipated that Perilya's exploration focus of prospect evaluation will move into the more distal licence areas such as Mt.Lyndhurst. Ranked target areas will require ground evaluation and reconnaissance, followed by geochemical sampling programmes to outline their potential. Exploration will then become more prospect specific

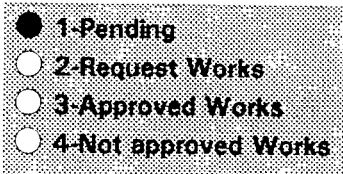
## **APPENDIX I**

### **REGIONAL PROSPECT DATABASE LEDGER**

# Prospect

Prospect Name	Lorna Doone/Lynda
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6663000
AMG Easting:	271000
Access:	10 km WNW of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	pC Tapley Hill Fm and Sturtian Tillite?
Associated Rocks:	Mt.Lyndhurst Diapir
Alteration:	
Structure:	Folded sequence with SE plunge partly truncated by diapiric material. Unconformity at contact between Tapley Hill Fm and tillite believed to be common locus for Cu mineralisation - other occurrences in the area at same stratigraphic position. malachite, chrysocolla, azurite, chalcopryrite
Mineralogy:	Tabular bodies of supergene remobilised Cu(?) with primary mineralisation related to swarms of quartz veins.
Mineralisation Style:	Gossan/Carbonate Zone.
Regolith Profile:	
Historical Mining:	Numerous historical workings present.
Exploration Summary:	
Geochemistry:	Soil sampling over prospect area - no Zn anomalism.
Geophysics:	magnetometer and IP survey
Drilling:	Initial drilling (PDH1-8 and PDH11-14) produced anomalous Cu results but negligible Pb,Zn and Ag. Pattern vertical drilling (50*20m) testing Cu-oxide mineralisation only assayed for Cu (results low-moderate ENV.4540) and shallow drilling.
Current Resource/Reserve:	Feasibility study produced a Mineable Ore Reserve (diluted) at 0.4% Cu cut-off for Lynda - 1.0Mt @ 0.8% Cu and Lorna Doone - 1.0Mt @ 1.2% Cu
Target:	
Proposed Work Status	
Proposed Work Program	
Further Actions:	
Prospect Rank:	4
Comments:	Unable to locate stream info at this time to check for Pb/Zn? However lack of Zn in drilling suggests prospect should be ranked low.

# Prospect

Prospect Name	Barilla Mine
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6659000
AMG Easting:	280900
Access:	
Pastoral Lease:	
Host Lithology:	Tapley Hill Fm
Associated Rocks:	
Alteration:	
Structure:	quartz vein strike 280
Mineralogy:	malachite, cuprite, chalcocite, bornite, chalcopyrite, native Cu
Mineralisation Style:	quartz vein
Regolith Profile:	
Historical Mining:	old workings
Exploration Summary:	
Geochemistry:	
Geophysics:	IP work considered encouraging for extensive near-surface mineralisation
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	
Proposed Work Program	
Further Actions:	
Prospect Rank:	3
Comments:	
Possibly same structure/vein forms nearby O'Reilly Prospect.	

# Prospect

Prospect Name  
Province  
Map Sheet (1:100000)  
Tenement:  
Tenement Holder:  
Tenement Management:  
AMG Northing:  
AMG Easting:  
Access:  
Pastoral Lease:

Nevada  
SA North Flinders Ranges  
Mt.Lyndhurst  
Mt.Lyndhurst  
PEM  
PEM  
6667000  
301200

Host Lithology: Amberoona Fm, Fortress Hill Fm(?)

Associated Rocks:

Alteration:

Structure:

Mineralogy:

Mineralisation Style:

Regolith Profile:

malachite, chalcocite, chalcopyrite, gersdorffite  
quartz/carbonate veining  
Gossan Zone

Historical Mining:

Exploration Summary:

Geochemistry:

Cu workings

Rock chip sampling up to 5.10%Cu and 0.11%Co (no Zn). Au values from mine dump of 2.6, 2.7 and 4.9g/t. BLEG sampling produced one result of 1.5ppb - unable to get location.

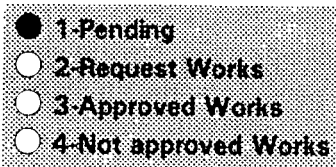
Geophysics:

Drilling:

Current Resource/Reserve:

Target:

Proposed Work Status



Proposed Work Program

Further Actions:

Prospect Rank:

3

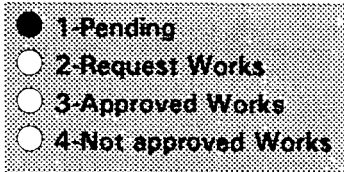
Comments:

Veins considered to be of limited extent - no broad geochem anomalies. Worth a look sometime.

# Prospect

Prospect Name	Avondale Mine
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6655000
AMG Easting:	263000
Access:	16 km WSW of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	
Associated Rocks:	siltstones, sandstones with dolomitic interbeds
Alteration:	
Structure:	Mineralisation within N-S striking shears/veining dipping steeply to the W. 3 lodes.
Mineralogy:	galena, cerussite +/- sphalerite
Mineralisation Style:	
Regolith Profile:	
Historical Mining:	Several hundred tons of high-grade Pb (35-75%) and Ag (9-15oz) extracted before 1927.
Exploration Summary:	
Geochemistry:	
Geophysics:	
Drilling:	Some drilling beneath lodes produced minor anomalism. AVMP 2, 10' @ 0.43% Zn from 70' (to EOH) and AVMP 3, 5' @ 0.4% Zn from 50' (remainder not assayed).
Current Resource/Reserve:	
Target:	
Proposed Work Status	<div><div><div>● 1-Pending</div><div>○ 2-Request Works</div><div>○ 3-Approved Works</div><div>○ 4-Not approved Works</div></div></div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	2
Comments:	

# Prospect

Prospect Name	Gill Bluff Mine
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6660000
AMG Easting:	293700
Access:	
Pastoral Lease:	
Host Lithology:	Amberooona Fm
Associated Rocks:	
Alteration:	
Structure:	thin veins trending 065 dipping variable to S.
Mineralogy:	ullmanite (Ni/Sb sulphide), minor chalcopyrite, bornite, malachite, cuprite and galena
Mineralisation Style:	stringers/blebs in thin quartz veins
Regolith Profile:	
Historical Mining:	shafts and shallow costeans
Exploration Summary:	
Geochemistry:	Stream sediment programme for Ni/Co and regional BLEG - no significant results. However rock chips from area up to 0.46% Zn
Geophysics:	IP in area did not produce anomaly.
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	
Proposed Work Program	
Further Actions:	
Prospect Rank:	2
Comments:	
Considered to be too erratic and not prospective.	

# Prospect

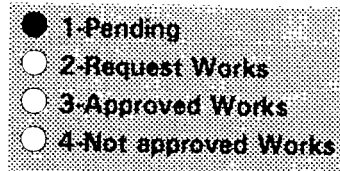
Prospect Name	Gill Bluff NW
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6662000
AMG Easting:	292500
Access:	
Pastoral Lease:	

Host Lithology:	
Associated Rocks:	gossanous quartz veining
Alteration:	
Structure:	
Mineralogy:	
Mineralisation Style:	
Regolith Profile:	

Historical Mining:	
Exploration Summary:	
Geochemistry:	Rock chips up to 0.65%Zn.
Geophysics:	
Drilling:	
Current Resource/Reserve:	

Target:

Proposed Work Status



Proposed Work Program  
Further Actions:

Prospect Rank: 2

Comments:  
Information sketchy.

# Prospect

Prospect Name Avondale South  
Province SA North Flinders Ranges  
Map Sheet (1:100000) Mt.Lyndhurst  
Tenement: Mt.Lyndhurst  
Tenement Holder: PEM  
Tenement Management: PEM  
AMG Northing: 6654000  
AMG Easting: 263000  
Access: 16 km WSW of Mt.Lyndhurst Station  
Pastoral Lease: Mt.Lyndhurst

Host Lithology: Burra Group Dolomites  
Associated Rocks:  
Alteration:  
Structure:  
Mineralogy:  
Mineralisation Style:  
Regolith Profile:

Historical Mining:  
Exploration Summary:  
Geochemistry:  
Geophysics:  
Drilling:

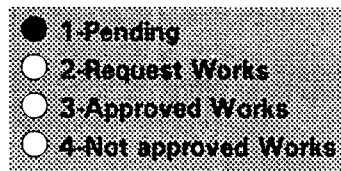
Rock chips at surface returned up to 0.6% Zn?

Drillhole PDH AVD P1 intersected dolomitic siltstones and then blue-grey (unweathered?) dolomite to EOH. Best assay was 5' @ 0.1% Zn from 30'.

Current Resource/Reserve:

Target:

Proposed Work Status



Proposed Work Program  
Further Actions:

Prospect Rank: 1

Comments:  
Drilling seem to indicate very shallow base of oxidation.

# Prospect

Prospect Name	Great Mt.Lyndhurst Mine
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6657500
AMG Easting:	268500
Access:	10 km W of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	Siltstones/shales
Associated Rocks:	Mt.Lyndhurst Diapir
Alteration:	
Structure:	NW trending siltstones and black shales dipping steeply to the S.
Mineralogy:	Sediments cut by Cu-bearing quartz veining striking NE and dipping to the W, with with no significant dissemination of ore minerals beyond the vein walls
Mineralisation Style:	Noted that lodes are pipe-like and form at intersections of veins and lithological contacts.
Regolith Profile:	
Historical Mining:	
Exploration Summary:	
Geochemistry:	
Geophysics:	
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	<div><input checked="" type="radio"/> 1-Pending <input type="radio"/> 2-Request Works <input type="radio"/> 3-Approved Works <input type="radio"/> 4-Not approved Works</div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	1
Comments:	
Targets in this area seem pretty limited.	

# Prospect

Prospect Name	Leslie Well
Province	SA North Flinders Ranges
Map Sheet (1:100000)	Mt.Lyndhurst
Tenement:	Mt.Lyndhurst
Tenement Holder:	PEM
Tenement Management:	PEM
AMG Northing:	6661000
AMG Easting:	264500
Access:	15 km W of Mt.Lyndhurst Station
Pastoral Lease:	Mt.Lyndhurst
Host Lithology:	Mt.Lyndhurst Diapir
Associated Rocks:	
Alteration:	
Structure:	
Mineralogy:	Quartz veins with traces of malachite, chrysocolla and limonite.
Mineralisation Style:	
Regolith Profile:	
Historical Mining:	Shallow workings and dumps over a small area.
Exploration Summary:	
Geochemistry:	Rock chip sampling of quartz reefs revealed one sample of 0.3g/t Au and remainder < detection.
Geophysics:	
Drilling:	
Current Resource/Reserve:	
Target:	
Proposed Work Status	<div><input checked="" type="radio"/> 1-Pending <input type="radio"/> 2-Request Works <input type="radio"/> 3-Approved Works <input type="radio"/> 4-Not approved Works</div>
Proposed Work Program	
Further Actions:	
Prospect Rank:	1
Comments:	

# Prospect

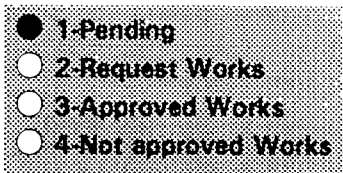
Prospect Name O'Reilly  
Province SA North Flinders Ranges  
Map Sheet (1:100000) Mt.Lyndhurst  
Tenement: Mt.Lyndhurst  
Tenement Holder: PEM  
Tenement Management: PEM  
AMG Northing: 6658500  
AMG Easting: 283200  
Access:  
Pastoral Lease:

Host Lithology: Tapley Hill Fm  
Associated Rocks:  
Alteration:  
Structure: quartz vein strike 280  
Mineralogy:  
Mineralisation Style: quartz vein  
Regolith Profile:

Historical Mining:  
Exploration Summary:  
Geochemistry:  
Geophysics:  
Drilling:  
Current Resource/Reserve:

Target:

Proposed Work Status



Proposed Work Program  
Further Actions:

Prospect Rank: 1

Comments:  
Possibly same structure/vein forms nearby Barilla Mine Prospect.

# Prospect

Prospect Name                      **White Lead**  
Province                              **SA North Flinders Ranges**  
Map Sheet (1:100000)              **Mt.Lyndhurst**  
Tenement:                              **Mt.Lyndhurst**  
Tenement Holder:                      **PEM**  
Tenement Management:              **PEM**  
AMG Northing:                      **6655000**  
AMG Easting:                        **266000**  
Access:                                **14 km W of Mt.Lyndhurst Station**  
Pastoral Lease:                      **Mt.Lyndhurst**

Host Lithology:                      **pC Tapley Hill Fm**  
Associated Rocks:                      **Mt.Lyndhurst Diapir**  
Alteration:  
Structure:  
Mineralogy:  
Mineralisation Style:  
Regolith Profile:

Historical Mining:                      **Outcropping vein containing Cu-oxides(?).**

Exploration Summary:

Geochemistry:

Geophysics:

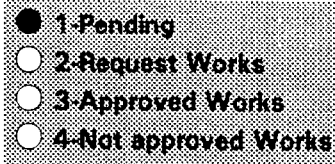
Drilling:

**Reconnaissance drilling on a broad pattern with holes to 35m.  
Best results in holes on 1km spaced sections include WL4, 3m  
@ 1.41% Cu and WL8, 8m @ 1.14% Cu.**

Current Resource/Reserve:

Target:

Proposed Work Status



Proposed Work Program

Further Actions:

Prospect Rank:                      **1**

Comments:

**Thin zone of mineralisation running parallel to Mt.Lyndhurst Diapir contact - possible similar structure?**



**PERILYA LIMITED**  
**ACN 009 193 695**

**ANNUAL REPORT**  
**FOR**

**MT LYNDHURST**

**FLINDERS RANGES PROJECT**  
**SOUTH AUSTRALIA**

**For The Period**  
**13/12/00 – 12/12/01**

**Project Number**  
**EL 2680**

**VOLUME 1 OF 1**

**Distribution:**

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**Author: Iain Groves**

**January 2002**



## **1. INTRODUCTION**

This report describes the second year of exploration by Perilya Limited on Exploration Licence 2680 'Mt Lyndhurst'. The licence area is located 525km north of Adelaide in the Lyndhurst Area, North Flinders Ranges, South Australia (Figure 1).

During the year, the licence was re-examined as part of larger regional exploration programme targeting known mineral occurrences.

## **2. TENURE**

The licence covers 1197km<sup>2</sup> and was granted to Perilya Limited on the 13<sup>th</sup> of December 1999. The land package is 60km NNE of the Beltana area which was targeted by the company as the source of potentially significant Zn and Pb mineralisation.

A renewal for the licence was sent to PIRSA in November 2001.

## **3. GEOLOGY AND MINERALISATION**

The licence lies in the northern part of the Adelaide Geosyncline, a deformed sedimentary basin of Late Proterozoic to Middle Cambrian age, flanked by crystalline basement complexes of the Gawler and Curnamona Cratons (Figure 2).

The Mt Lyndhurst area is structurally complex and contains two major areas of Callana Beds (diapir); the Mt Lyndhurst and Burr Diapirs. Mineralisation is generally associated with the margins of these diapirs in Late Proterozoic rocks of the Umberatana Group.

The licence contains many base metal (Zn, Pb, Ag, Cu) prospects (reported last year). Several other interesting occurrences require further investigation. These include Ni, Sb, Co, Cu prospects at Gill Bluff and copper deposits throughout the area.

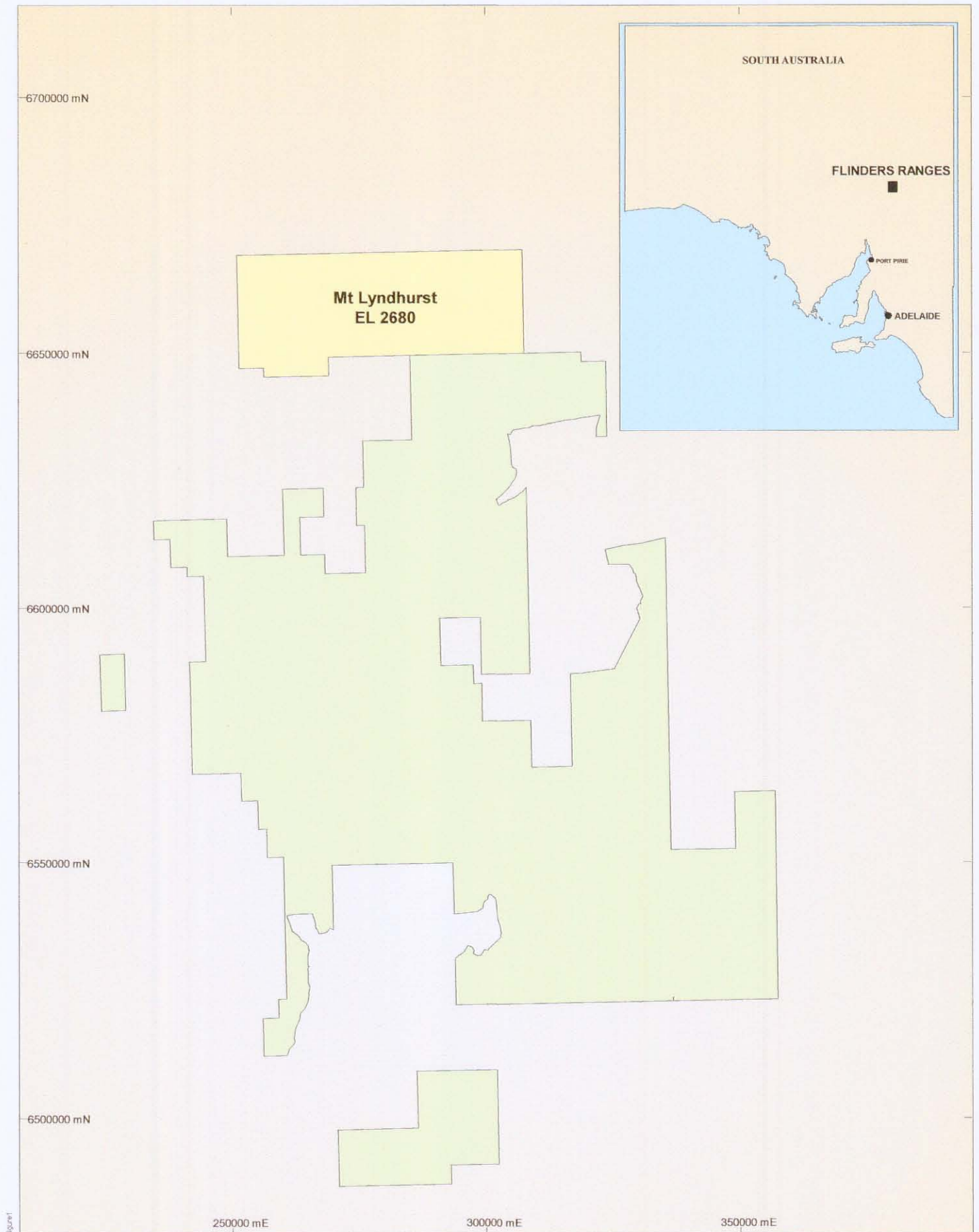
## **4. WORK COMPLETED**

No groundwork was completed in the Mt Lyndhurst area during the reporting period. Exploration work has largely ceased until Native Title issues have been resolved and agreements signed.

## **5. PROGRAMME**

Initially, exploration will involve research into the many varied deposit types on the licence, interpretation of regional Landsat and aeromagnetics, field visits to all areas identified as being prospective, and follow-up stream sediment sampling, soil sampling/handheld XRF and rock chip sampling combined with prospect evaluation and mapping. Nine areas have thus far been identified as prospective for zinc, and other occurrences include Ni-Co and Cu Pb Ag. This work would almost certainly lead to more detailed evaluations including large surface geochemical programs, extensive mapping and drilling.

# FLINDERS RANGES PROJECT



Location

