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No. 13,007

EL 2658 / 3275 / 4480 / 5725

MOUNT DECEPTION

**FINAL REPORT AT LICENCE FULL SURRENDER,
FOR THE PERIOD 14/10/1999 TO 27/4/2017**

Submitted by
Perilya Limited
2017

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This report was supplied as part of the requirement to hold a mineral or petroleum exploration tenement in the State of South Australia.

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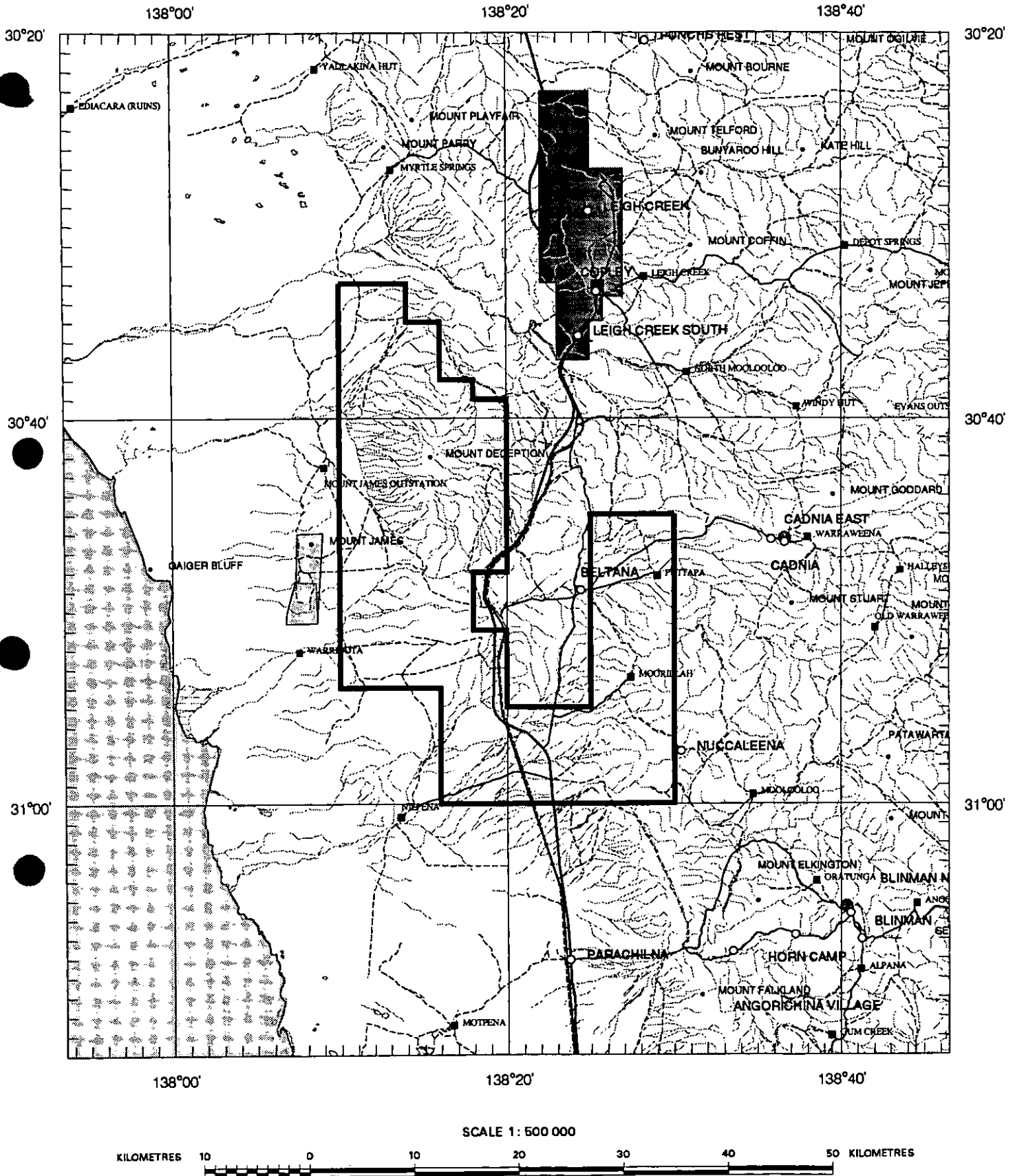
Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880



Government of South Australia

Department of the Premier
and Cabinet

SCHEDULE A



APPLICANT : PERILYA MINES NL

FILE REF : 69/99

TYPE : MINERAL ONLY

AREA : 891 km² (approx.)

1:250000 MAPSHEETS : COPLEY

LOCALITY : MOUNT DECEPTION AREA - Approximately 40 km southwest of Leigh Creek

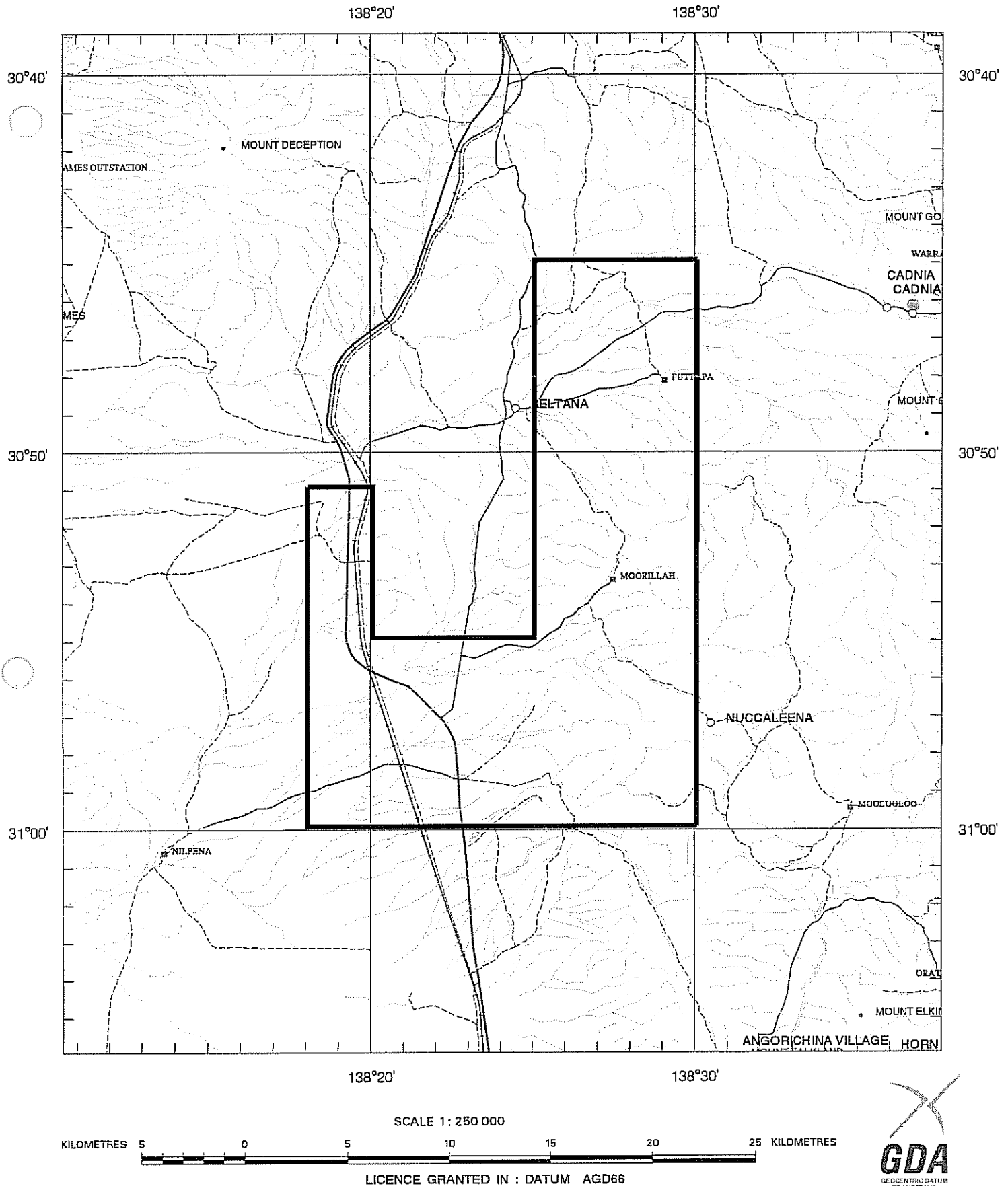
DATE GRANTED : 14 October 1999

DATE EXPIRED : 13 October 2000

EL No : 2658

2004
2002 2004

SCHEDULE A



APPLICANT : **PERILYA LTD**

FILE REF : **651/04**

TYPE : **MINERAL ONLY**

AREA : **348 km² (approx.)**

1:250000 MAPSHEETS : **COPLEY**

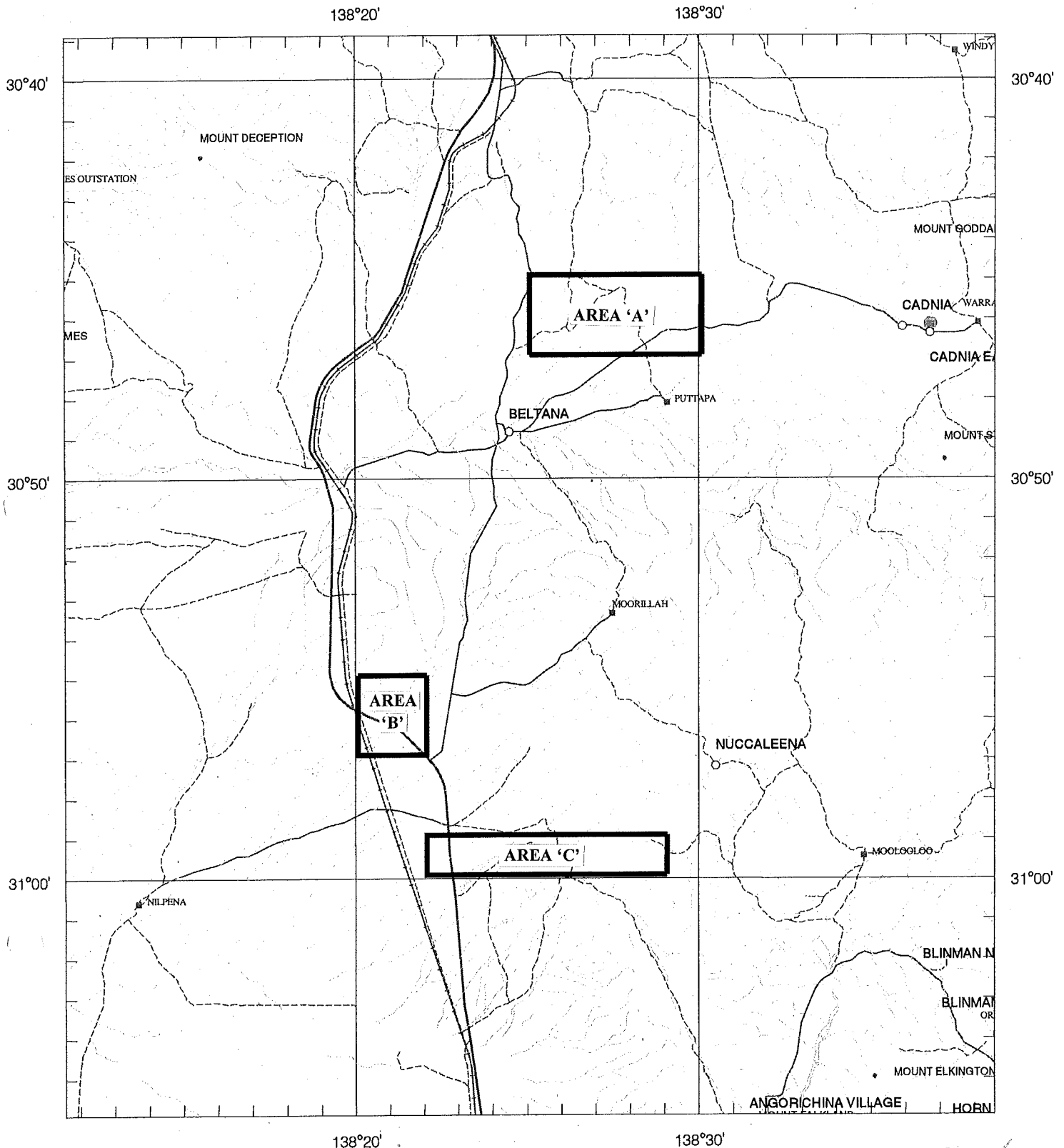
LOCALITY : **MOUNT DECEPTION AREA - Approximately 40 km southwest of Leigh Creek**

DATE GRANTED : **02-Nov-2004**

DATE EXPIRED : **01-Nov-2005**

EL NO : **3275**

SCHEDULE A



SCALE 1: 250 000
 KILOMETRES 5 0 5 10 15 20 25 KILOMETRES
 LICENCE GRANTED IN : DATUM AGD66



APPLICANT : **PERILYA LTD**

FILE REF : **292/09**

TYPE : **MINERAL ONLY**

AREA : **62 km² (approx.)**

1:250000 MAPSHEETS : **COPLEY**

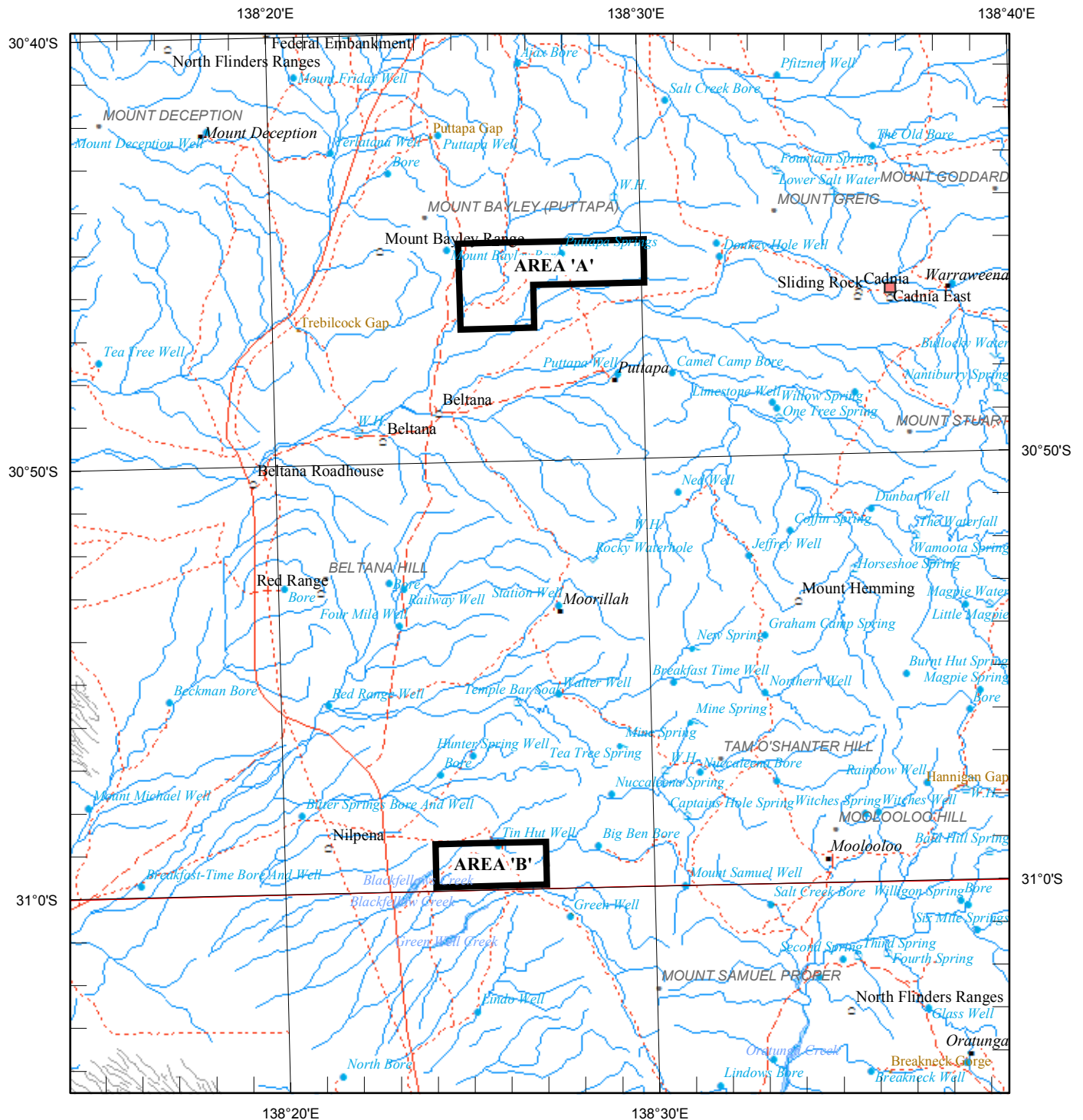
LOCALITY : **MOUNT DECEPTION AREA - Approximately 40 km southwest of Leigh Creek**

DATE GRANTED : **28-Apr-2010**

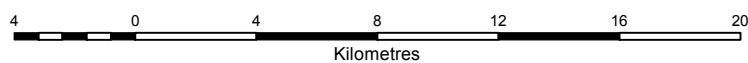
DATE EXPIRED : **27-Apr-2012**

EL NO : **4480**

SCHEDULE A



SCALE 1 : 250 000



LICENCE BOUNDARIES IN : DATUM AGD66

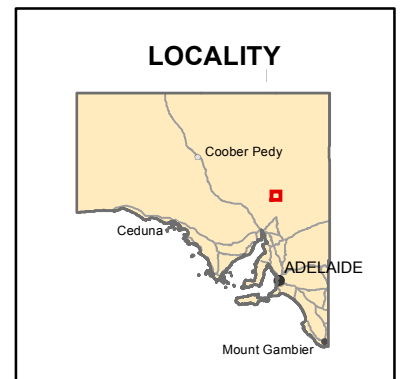
APPLICANT : **PERILYA LIMITED**

FILE REF : **2015/00021** TYPE : **MINERAL ONLY**

AREA : **29** sq km (approx)

1 : 250 000 MAPSHEETS : **COPLEY**

LOCALITY : **MOUNT DECEPTION AREA -**
Approximately 20 km SSE and 45 km south of Leigh Creek



DATE GRANTED: **28-Apr-2015** DATE EXPIRED: **27-Apr-2017**

EL NO: **5725**



FINAL REPORT FOR EL5725 (MT DECEPTION)

Final Report

for

EL5725 “Mt. Deception”

(formerly EL4480, EL3275, EL2658)

Flinders Ranges Project, South Australia

DETAILS OF LICENSES

Licence No's:	EL5725 (formerly EL4480, EL3275, EL2658)
Location:	Flinders Ranges
Licence Holder:	Perilya Limited (100%)
Operator/Manager:	Perilya Limited
Reporting Period:	14 October 1999 – 27 April 2017

Author: Dean Rogers

Date: 21 June 2017

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Appendices

EL5725 2017 Final Report_MainReport_01.pdf
EL5725 2017 Final Report_XRFsoils_02.txt
EL5725 2017 Final Report_RockChip_03.txt
EL5725 2017 Final Report_Soils_04.txt
EL5725 2017 Final Report_FileList_05.txt

Key Words

Beltana, Copley, Flinders Ranges, Zinc Silicate Mineralization, Beltana Deposit, Arrowie Basin, XRF Soil Surveying, Rock Chip Sampling, Red Range Prospect, Mt Bailey Syncline.

1. INTRODUCTION

This report is the final annual and relinquishment report for EL5725 recently surrendered as partial fulfilment of the terms of the 2015-2017 Flinders Amalgamated Expenditure Agreement. The licence area is located approximately 500km north of Adelaide near the town of Leigh Creek in the North Flinders Ranges, SA (Figure 1). The tenement is part of a much larger tenement package currently being explored by Perilya primarily for zinc silicate mineralization similar to the Beltana Deposit although the region is also prospective for lead-zinc sulphide and copper mineralization.

2. TENURE

The current area of EL5725 was originally covered by EL2658, granted on 14 October 1999. Subsequent replacement tenements were issued as EL3275 (granted on 02 November 2004) and EL4480 (granted on 28 April 2010) with the current tenement, EL5725 issued on 28 April 2015 over an area of 29.5km². Partial surrenders were actioned in 2015 (20.6km²), 2010 (11.8km²), 2009 (79.6km²) and 2004 (206.5km²) which are summarized in Figure 2. The final remaining portions of EL5725 were surrendered on 27 April 2017 by not seeking renewal of the tenement upon its renewal date.

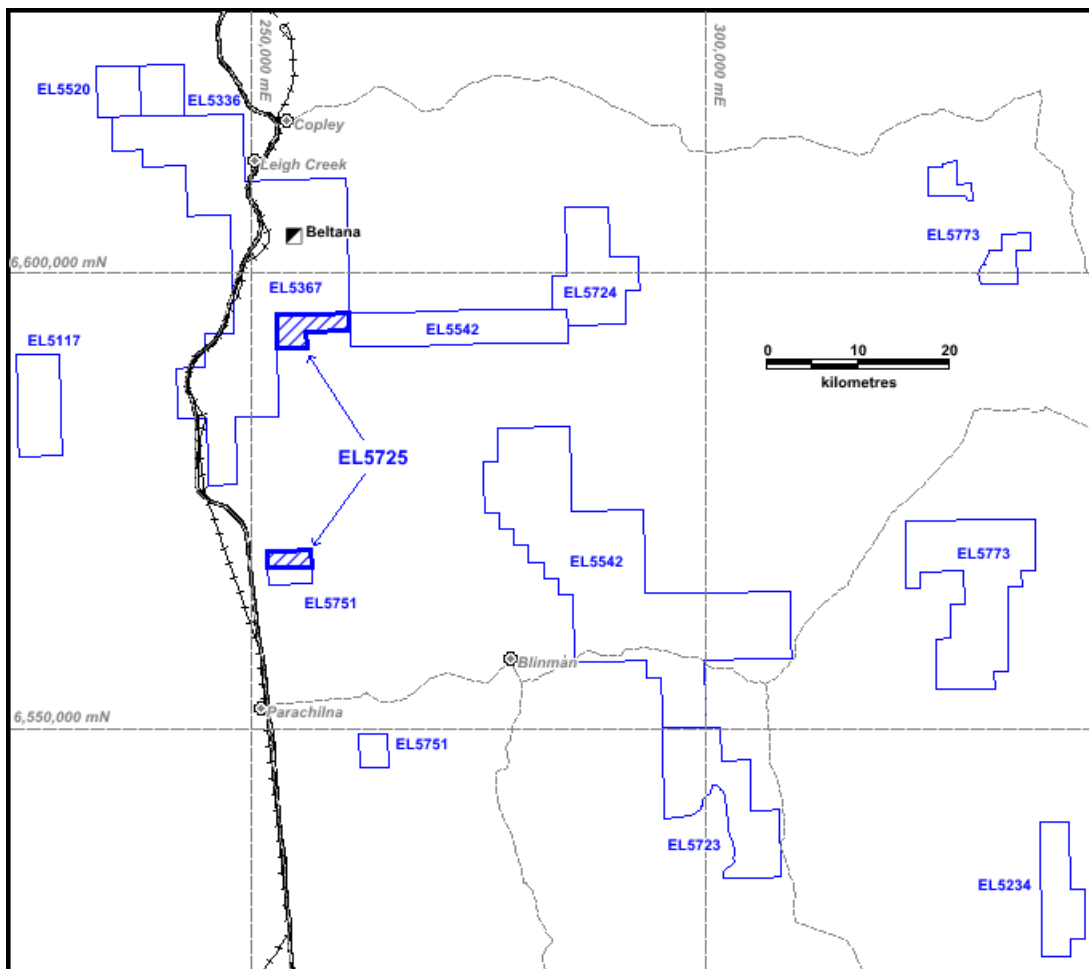


Figure 1 : Perilya Flinders Tenement Package & EL5725 Location (MGA94)

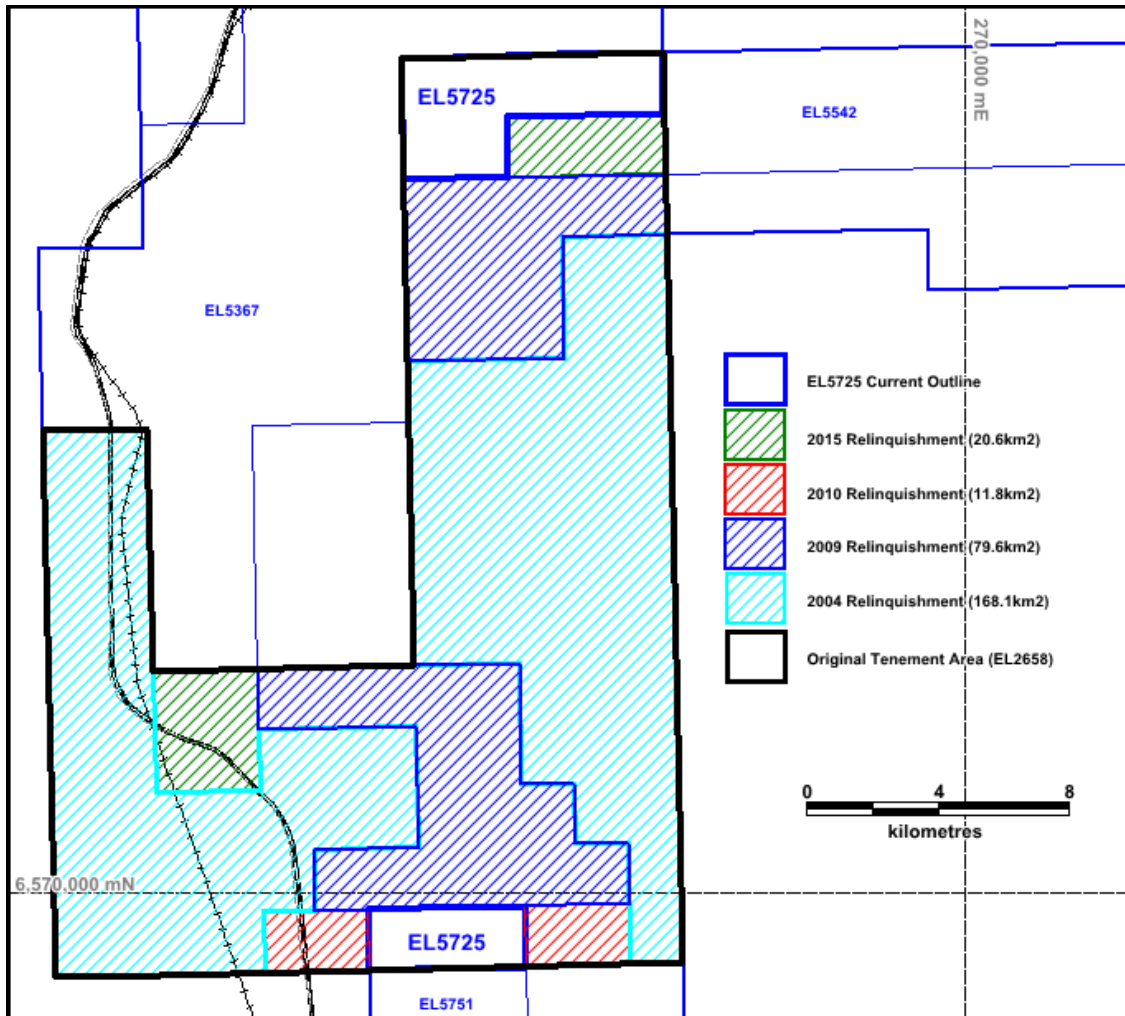


Figure 2 : EL5725 Historic Relinquishment Summary (MGA94)

3. GEOLOGY AND MINERALISATION

The tenement package is located within the Arrowie Basin, Flinders Ranges. The Arrowie Basin consists of an Early to Middle Cambrian succession overlying Neoproterozoic rocks of the northern Adelaide Geosyncline. The sequence of the Adelaide Geosyncline is exposed in the Adelaide Fold Thrust Belt, is bound to the west by the Torrens Hinge Zone, and extending north-south for 600 km to the Fleurieu Peninsula south of Adelaide.

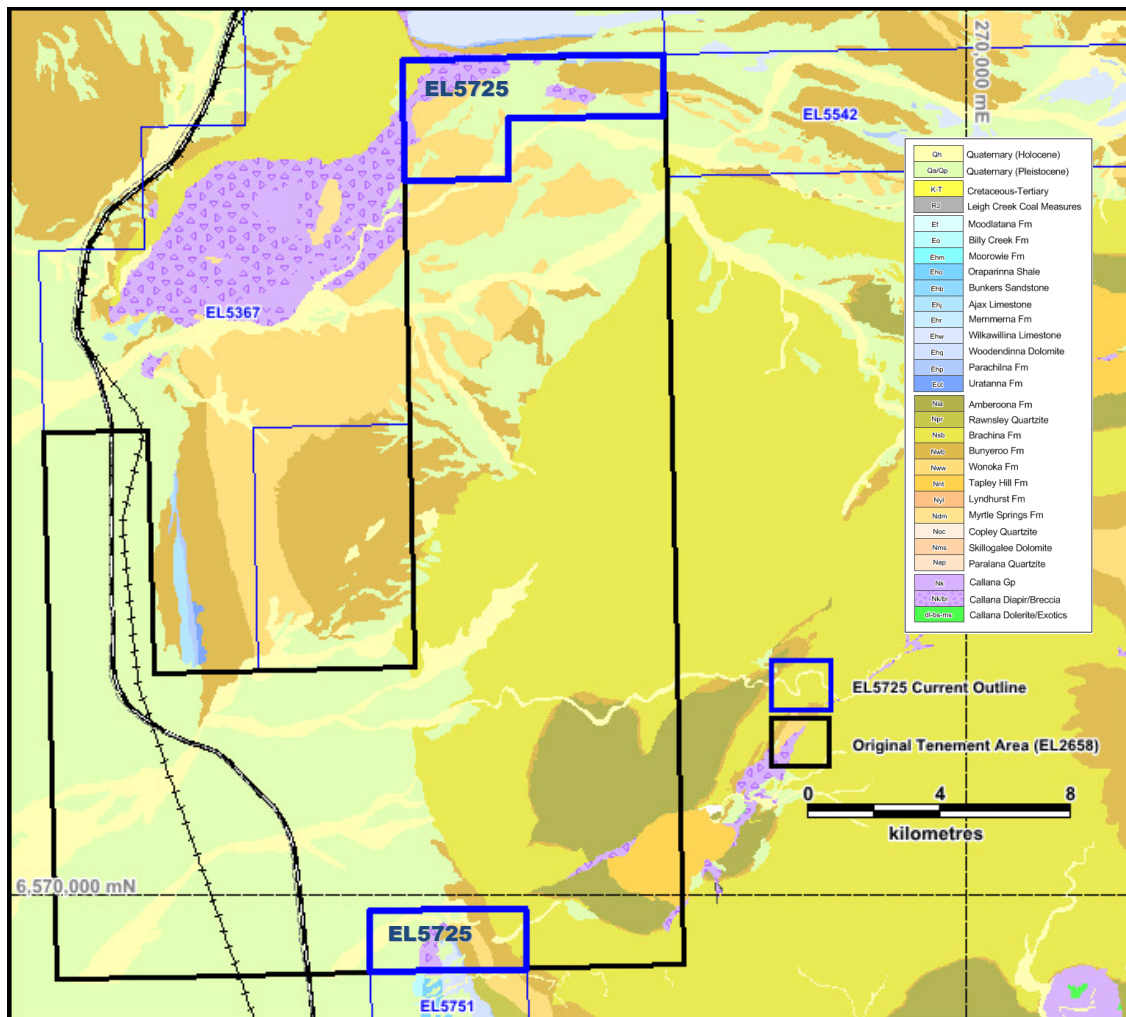


Figure 3 : EL5725 Regional Geology (MGA94)

The Arrowie Basin margins are defined by regional northwest and northeast basement structures. These structures were present at the onset of Neoproterozoic sedimentation and controlled the sedimentation thickness distribution within the basin. During the Delamerian Orogeny (~500 ma) these northwest and northeast structures were reactivated as thrust faults during regional north-south shortening. The shortening caused zones of extension along existing north-south structures close to the basin margin providing a locus for mineralisation.

Significant zinc mineralisation exists within the carbonate sequences of the Early Cambrian Hawker Group, most notably the fossil-rich Wilkawillina Limestone. Mineralisation is most pronounced on the margins of the basin where the stratigraphy thins near major regional structures (i.e. the Norwest Fault). The Beltana-Aroona trend is located in such a setting and is characterised by complexly deformed carbonate sequences hosting zinc silicate mineralisation.

Local geology in the area of EL5725 is illustrated in Figure 3. The tenement is underlain primarily by Proterozoic shales and dolomites of the Wonooka and Brachina Formations. Minor outcropping of Callana Gp breccias occur in the north and southern portions of the tenement. A large portion of the area is also covered by Phanerozoic, sand and gravel rich cover rocks. No significant mineral occurrences or prospects occur within the tenement area.

4. WORK COMPLETED

The earliest field work on the tenement was a program of 'conventional' soil sampling completed at the southern end of the Red Range prospect in 2000 where a total of 182 soil samples were collected. More recent work field on EL5725 has been limited to small programs of XRF soil surveying and rock chip sampling. Overall a total of 745 XRF soil readings were collected and 20 rock chip samples were collected over the tenement area. Work locations are summarized in Figure 4 below. Targets evaluated included those which were developed from Aster multispectral data as well as the historic Red Range prospect and the Mt Bailey Syncline target areas on neighbouring tenement EL5367. Each target is discussed briefly below. Digital data for the conventional and XRF soil surveying and rock chips are included as appendices to this report.

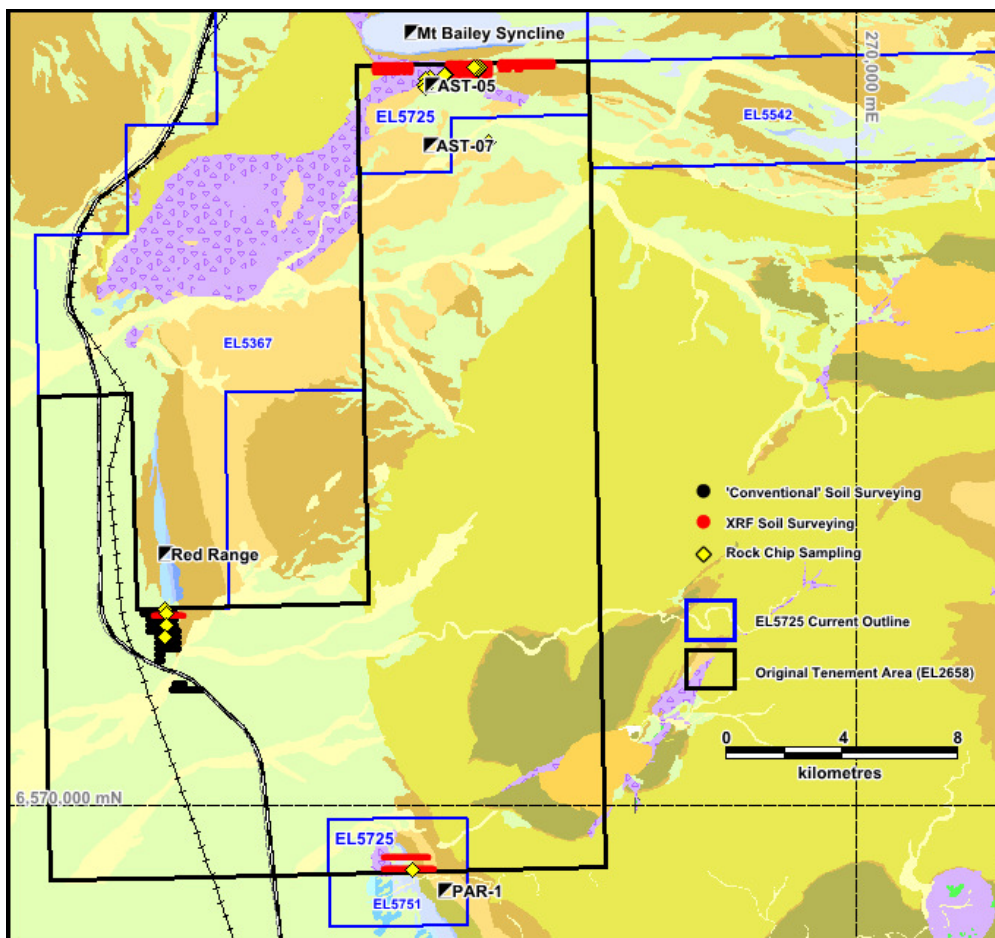


Figure 4 : EL5725 XRF Soil & Rock Chip Sampling (MGA94)

Work in the northern tenement area concentrated on the Mt Bailey Syncline area as well as the AST-05 & AST-07 multispectral targets. An extensive program of XRF soil surveying was completed along prospective Cambrian-Proterozoic contact around the margins of the syncline, some of which extended on EL5725. Although several isolated high Zn readings were returned, no significant anomalism was identified by the surveying (Figure 5). The AST-05 and AST-07 targets were defined by potential hematite anomalism as defined by Aster multispectral iron ratio images (Figure 4B). Field reconnaissance completed over the areas however failed to identify any Cambrian carbonate stratigraphy in the area. Several rock chip samples of Callana Gp breccias were collected from the AST-05 area although no elevated base metal results were returned.

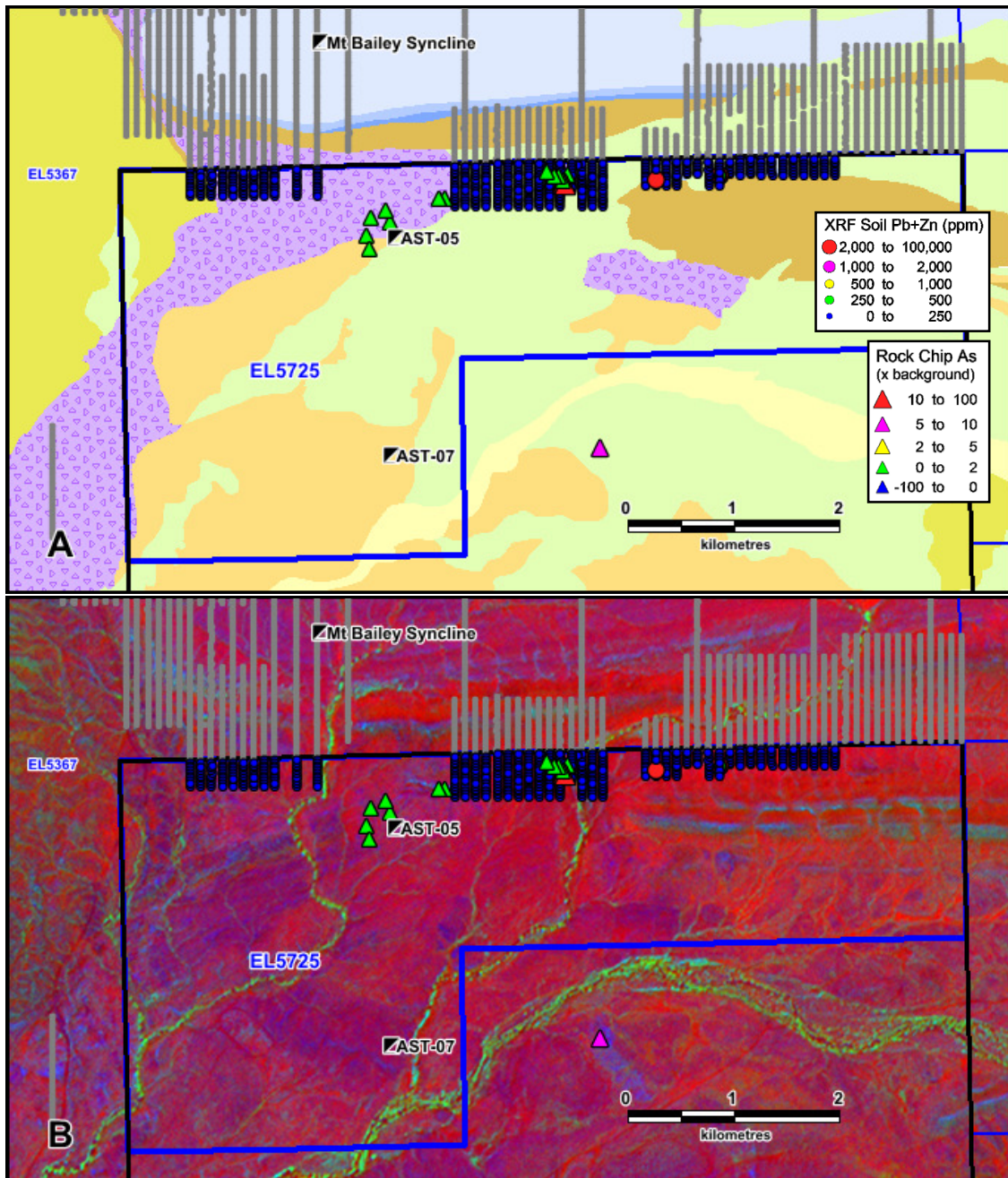


Figure 5 : EL5725 Northern Area XRF Soil Surveying & Rock Chip Sampling (MGA94)

A) Regional Geology & B) Aster Multispectral Iron Ratios

Work in the southern tenement area targeted the southern end of the Red Range prospect on EL5367 as well as the PAR-01 multispectral target on EL5751 (Figure 6). Conventional soil sampling in 2000 on 200m spaced survey lines returned two isolated areas of moderately anomalous results were returned of up to 1,865ppm Zn & 1,050ppm Pb (Fig. 5). A single line of XRF soil surveying was also completed over this area in 2014. No significant anomalism was identified with the strong XRF anomaly defining the Red Range prospect effectively terminating approximately 1km to the north. Several rock chip samples of manganese-rich, gossanous

material were also collected in the area. Although values of up to 0.4% Zn were returned background values within the main Red Range anomaly were typically over 1% Zn.

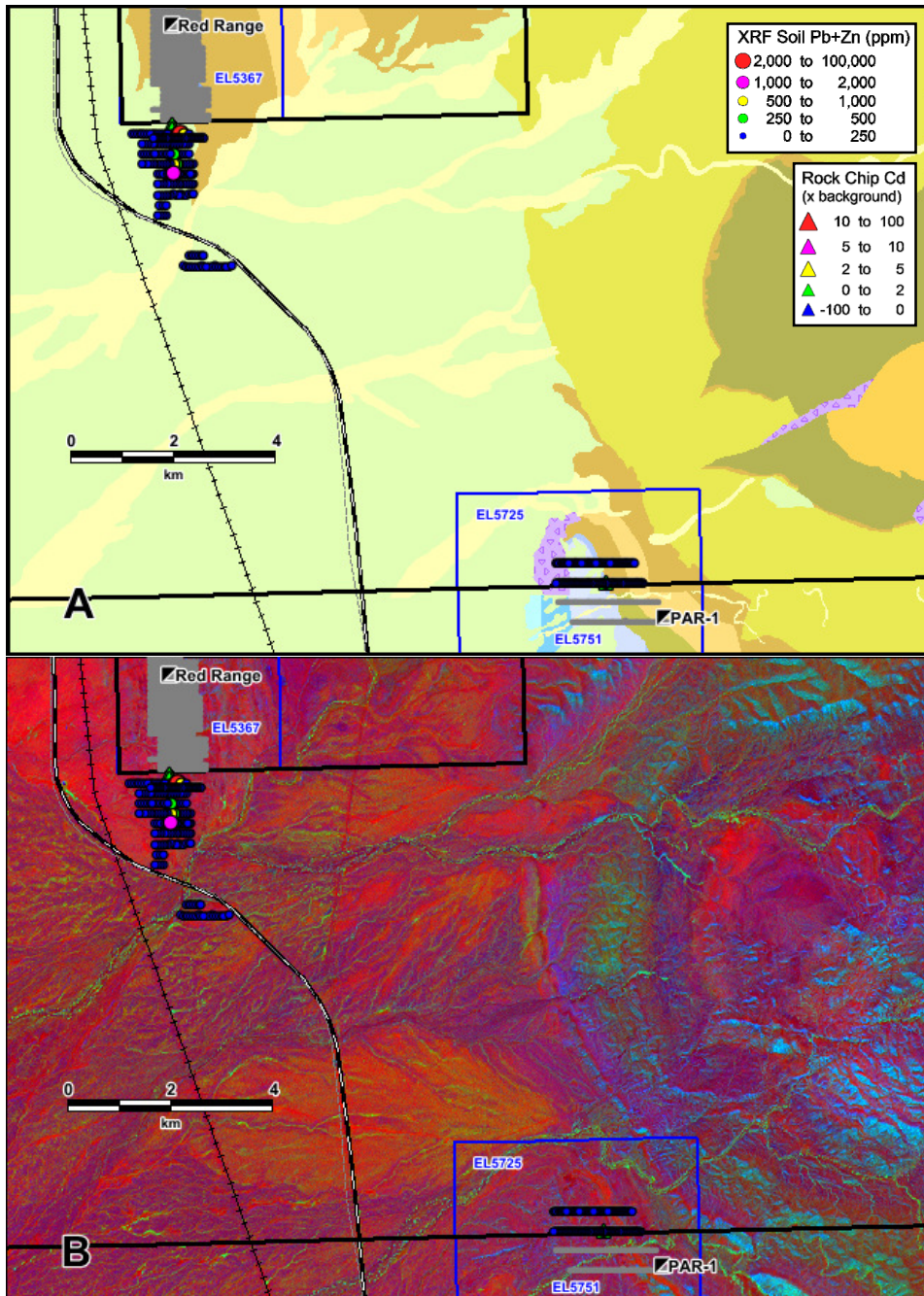


Figure 6 : EL5725 Southern Area Soil Surveying & Rock Chip Sampling (MGA94)

A) Regional Geology & B) Aster Multispectral Iron Ratios

The final area evaluated within the area of EL5725 was the PAR-1 multispectral target on contiguous Perilya tenement EL5751 to the south. The target was again defined by iron ratio images suggesting potential hematite alteration associated with the contact between Proterozoic and Cambrian carbonate stratigraphy. Two lines of XRF soil surveying were completed on



EL5725 as the northern extension of surveying over the greater target area. No anomalous base metal results were returned. A single rock chip sample was also collected although no alteration or elevated base metals were identified.

The only other exploration data collected over the tenement area was the purchase of Aster multispectral data in late 2011 which covered the entirety of Perilya's tenement holdings in the region. As indicated above the data has been primarily used to identify potential carbonate stratigraphy using quartz index ratios and potential hematite alteration using iron index ratios. Digital data for the Aster multispectral data has been previously forwarded to the Department its entirety and has not been included with this report.

5. CONCLUSIONS AND RECOMMENDATIONS

All identified targets on EL5725 have been adequately evaluated by reconnaissance field work and it is concluded that the area contains little potential for hosting of a near surface 'Beltana-style' zinc silicate deposit. There may be limited potential at the south end of the Red Range prospect however limited surface geochemical anomalism is apparent in this area as the prospective stratigraphy plunges below Quaternary surficial deposits of unknown thickness. Evaluating this area at depth would require costly, reconnaissance drilling and is considered to have low potential for success.

Only low-impact XRF and rock chip sampling were completed within the area of EL5725 (including predecessor tenements) and therefore no environmental liabilities are known to exist as a result of Perilya's operations. It is therefore recommended that the remaining portions of the tenement be relinquished.