

# **Open File Envelope**

## **No. 12,587**

**EL 4622**

**MOUNT GODDARD**

### **COMBINED FIRST AND SECOND PARTIAL SURRENDER REPORT, FOR THE PERIOD 8/12/2010 TO 14/8/2014**

Submitted by  
Perilya Limited  
2014

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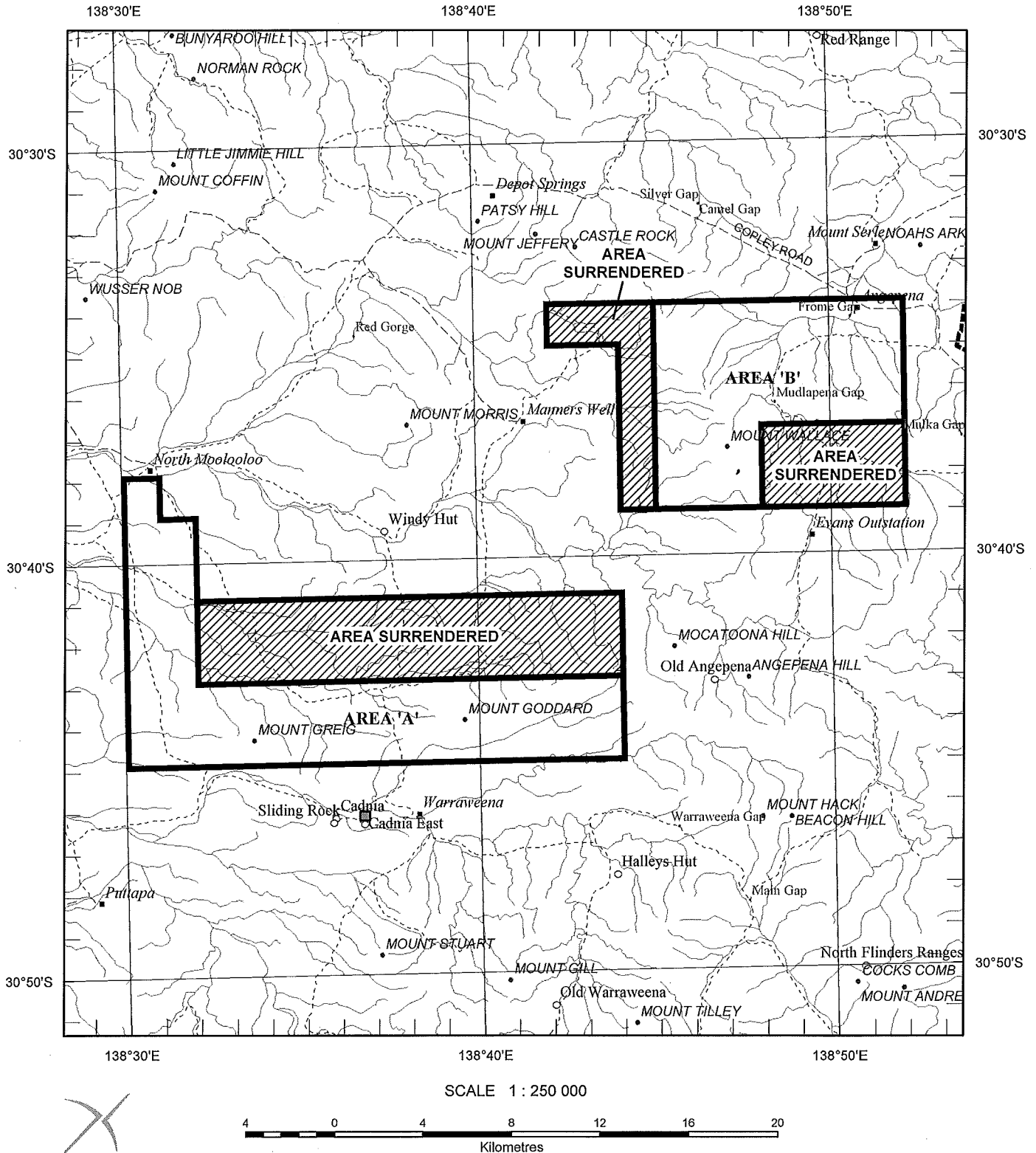
Facsimile: (08) 8204 1880



**Government of South Australia**

Department of State Development

# SCHEDULE A



LICENCE BOUNDARIES IN : DATUM AGD66

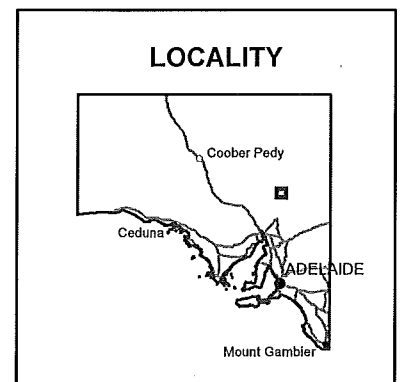
APPLICANT : **PERILYA LIMITED**

FILE REF : **2010/00103** TYPE : **MINERAL ONLY**

AREA : **189** sq km (approx)

1 : 250 000 MAPSHEETS : **COPLEY**

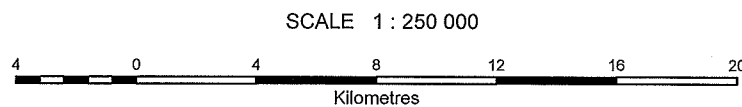
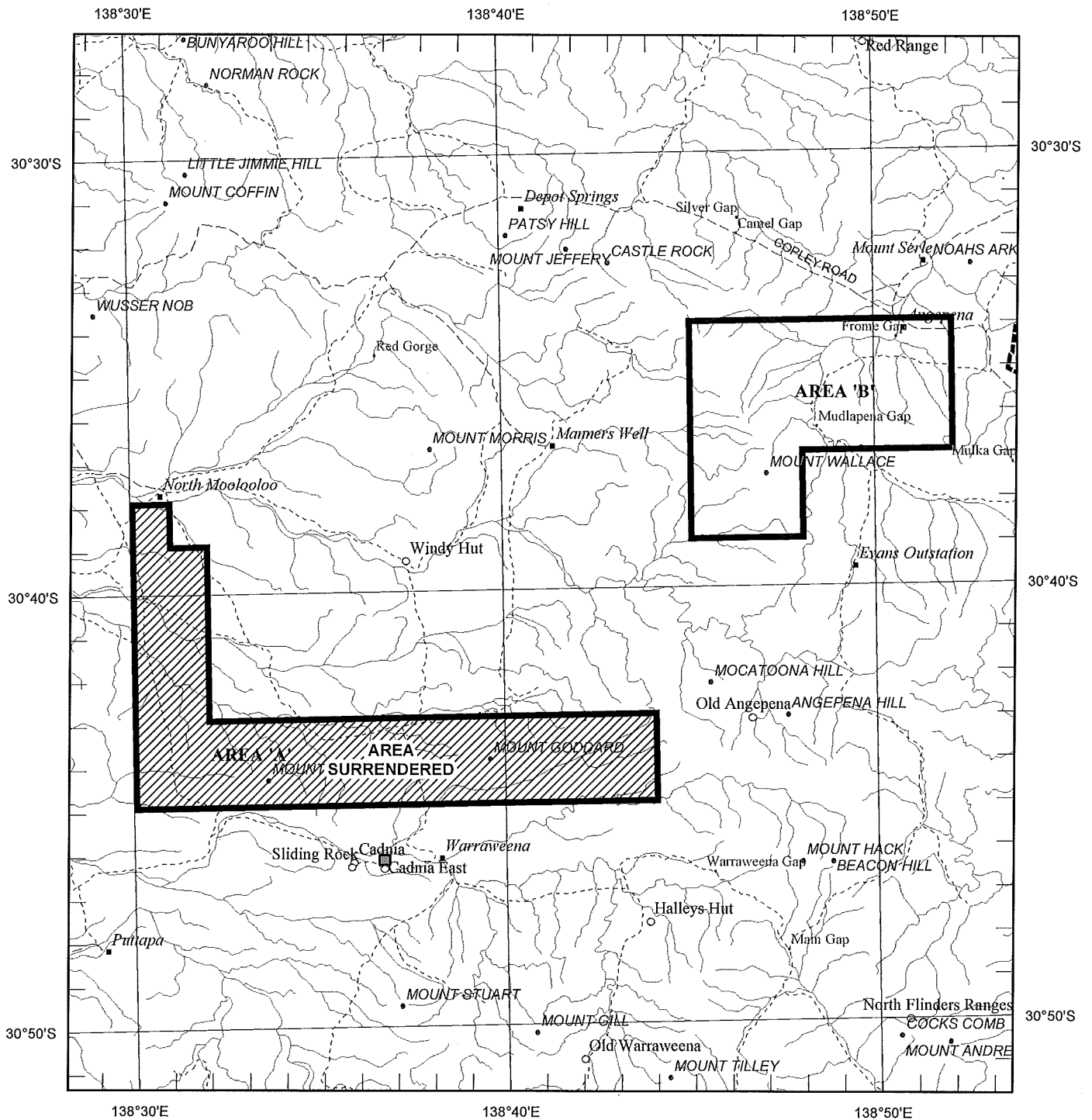
LOCALITY : **MOUNT GODDARD AREA -**  
Approximately 30 km southeast of Leigh Creek



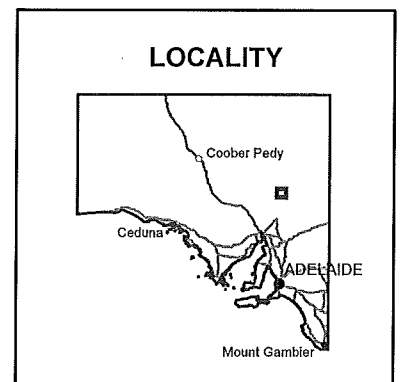
DATE GRANTED: **08-Dec-2010** DATE EXPIRED: **07-Dec-2014**

EL NO: **4622**

# SCHEDULE A



LICENCE BOUNDARIES IN : DATUM AGD66



APPLICANT : **PERILYA LIMITED**

FILE REF : **2010/00103** TYPE : **MINERAL ONLY**

AREA : **80** sq km (approx)

1 : 250 000 MAPSHEETS : **COPLEY**

LOCALITY : **MOUNT GODDARD AREA -**  
**Approximately 30 km southeast of Leigh Creek**

DATE GRANTED: **08-Dec-2010** DATE EXPIRED: **07-Dec-2014**

EL NO: **4622**

# **Partial Surrender Report**

for

**EL4622 “Mt. Goddard Cu”**

**Flinders Ranges Project, South Australia**

## **DETAILS OF LICENSES**

<b>Licence No's:</b>	EL4622
<b>Location:</b>	Flinders Ranges
<b>Licence Holder:</b>	Perilya Limited (100%)
<b>Operator/Manager:</b>	Perilya Limited
<b>Reporting Period:</b>	08 December 2010 – 14 August 2014

**Author:** Dean Rogers

**Date:** 02 June 2014



PARTIAL SURRENDER REPORT FOR PORTIONS OF EL4462 (MT GODDARD CU)  
FLINDERS RANGES

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## 1. INTRODUCTION

This is a partial surrender summary report for portions of EL4622 recently surrendered under the terms of the 2012 and 2013 Flinders Amalgamated Expenditure Agreement renewal periods. The areas were surrendered in two stages between 19 December 2013 and 20 May 2014. The licence area is located approximately 500km north of Adelaide near the town of Leigh Creek in the North Flinders Ranges, South Australia (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.

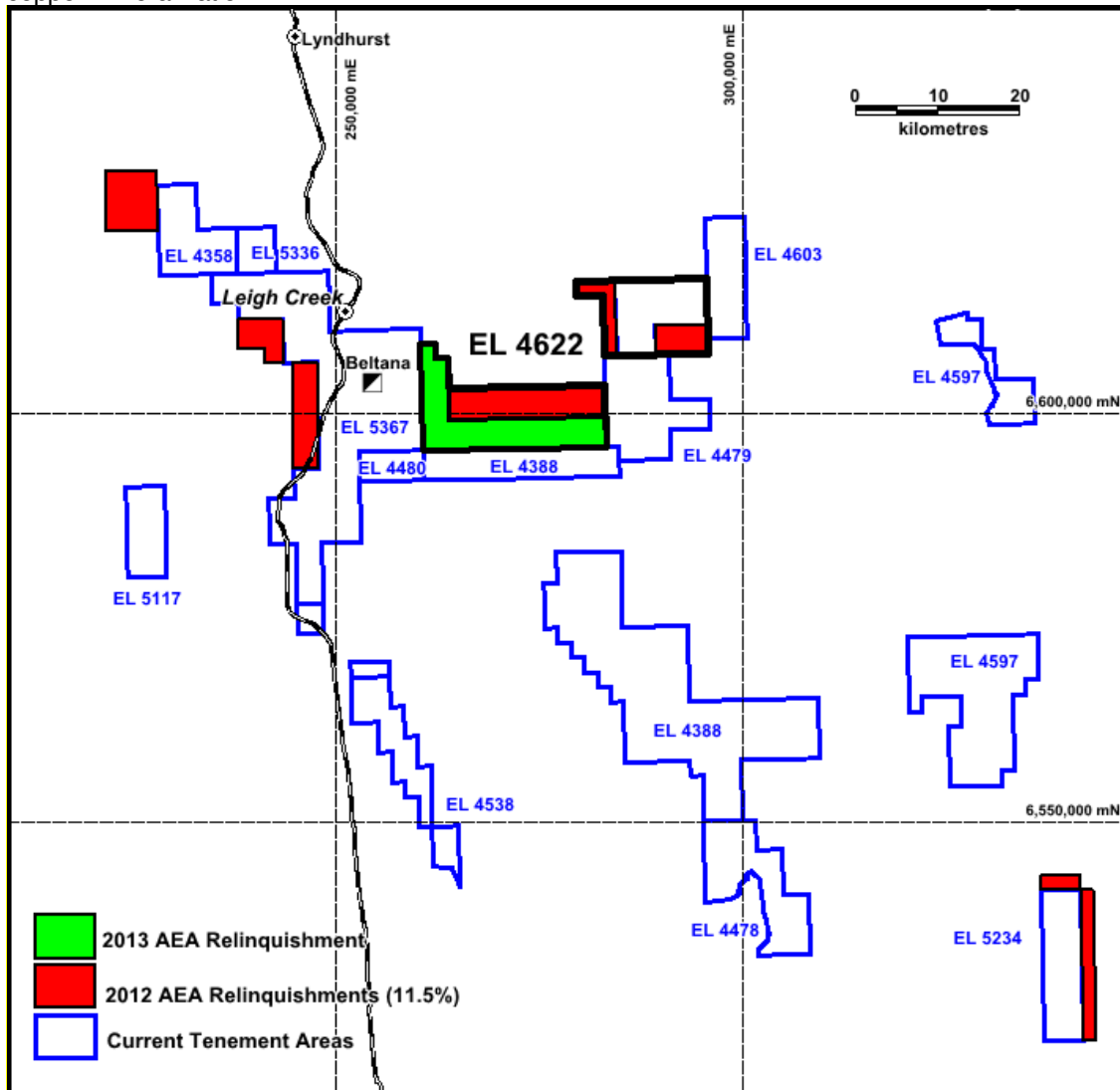


Figure 1 : EL4622 Location and 2012-2013 Relinquishment Areas (MGA94)

## 2. TENURE

The Mt Goddard Cu tenement (EL4622) was granted on 08 December 2010 over an area of approximately 305km<sup>2</sup> and is held 100% by Perilya Limited. The tenement has recently undergone two reductions in size including a relinquishment of 115.7km<sup>2</sup> (37.9%) on 19 December 2013 as per the terms of the 2012 AEA and a more recent surrender of 108.0km<sup>2</sup> (57%) for which Form 14 documentation was submitted to the Department on 02 June 2014 (Figure 2). The more recent relinquishment was undertaken as per the terms of the 2013 AEA renewal period. The current expiry date for EL4622 is 07 December 2014.

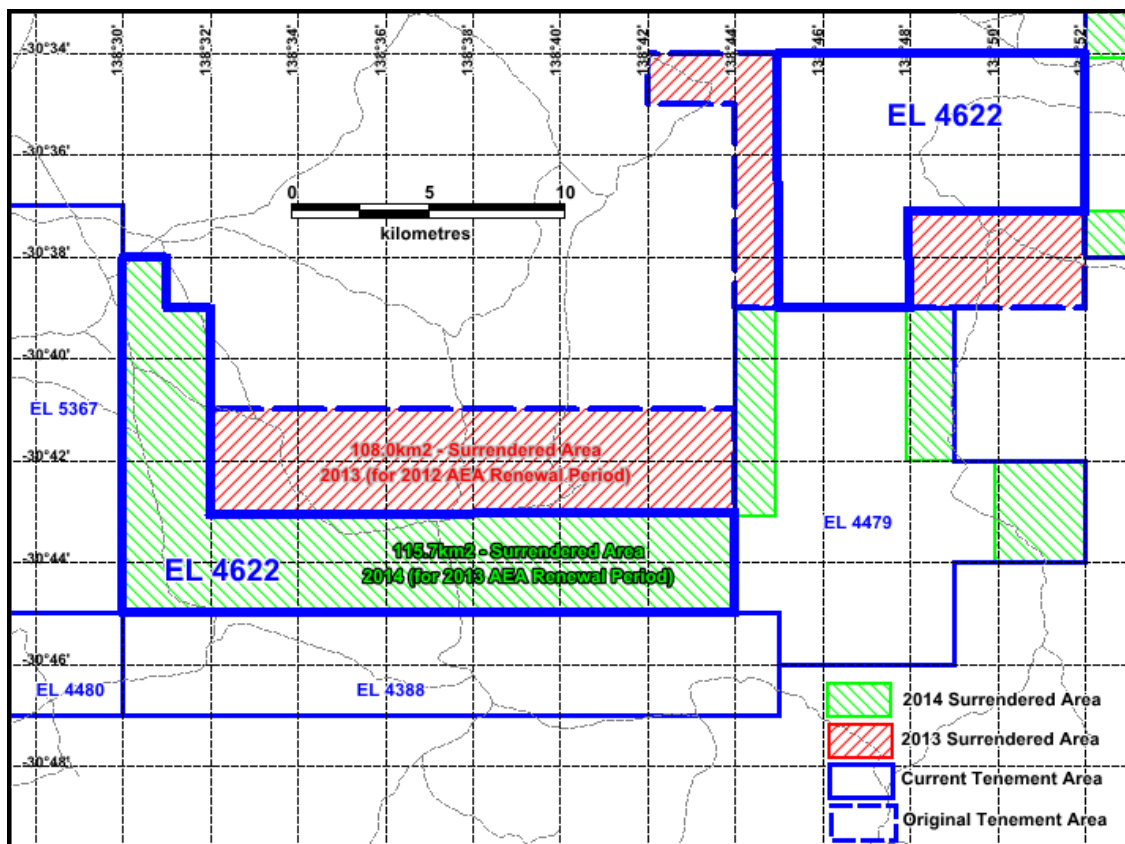


Figure 2 : EL4622 Surrendered Area Details

## 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.

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 EL4622 is illustrated in Figure 3. The regional geology is dominated by a large anticlinal structure trending SSE across the map area. The margins of the anticline are flanked by irregular exposures of Cambrian carbonates in the southern part of EL4479, EL4388 and the northeastern half of EL4622. Carbonate rocks where present are often associated with Callana Gp breccias. Geology within the surrendered portion of the tenement however consist almost exclusively of Proterozoic siliclastic rocks and quartzites. Several historic (Cu +/- Au) mineral prospects occur at the closure of the anticlinal structure, most notably the Angepena Treasure Mine on EL4479.

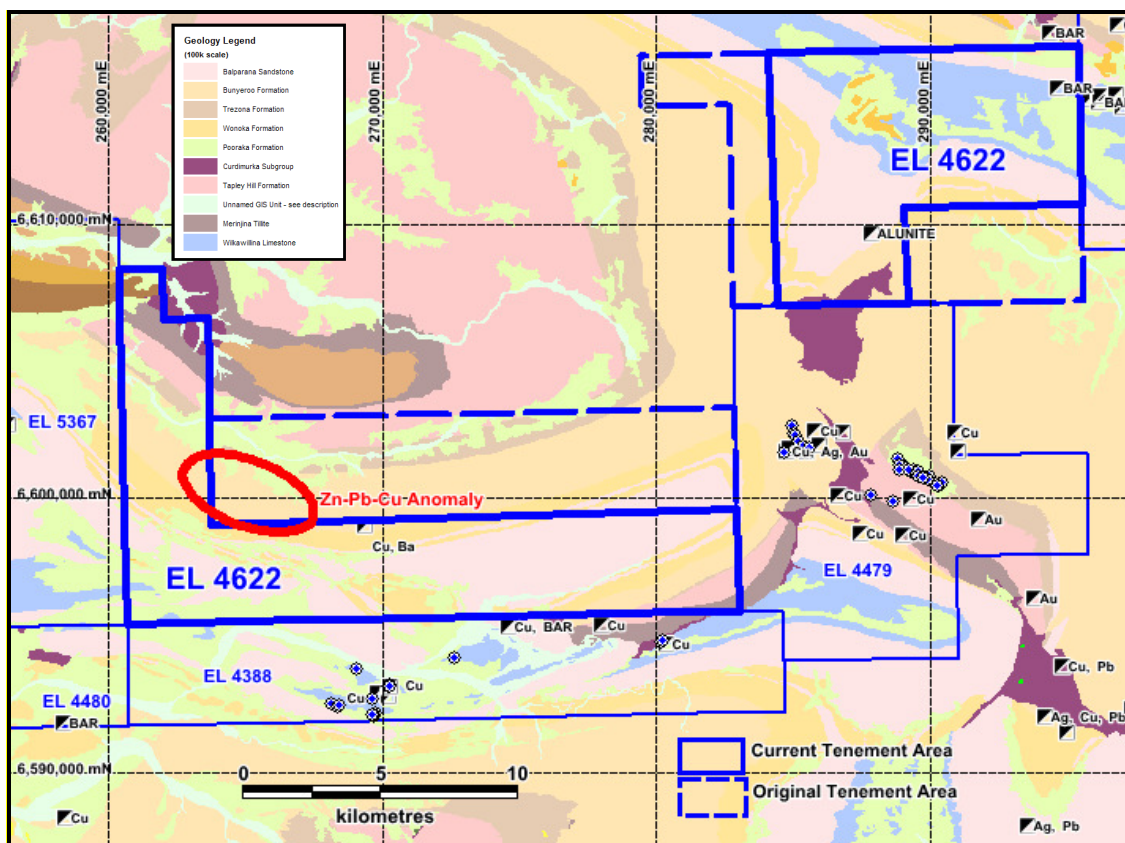


Figure 3 : EL4622 Geology and Historic Work (MGA94)





#### **4. WORK COMPLETED**

No field work was conducted by Perilya Limited on any of the portions of EL4622 being surrendered. The only work completed by Perilya was geological compilation and the purchase of regional Aster multispectral satellite imagery. No environmental liabilities are known to exist.

#### **5. CONCLUSIONS AND RECOMMENDATIONS**

The surrendered portions of the tenement are considered to hold limited potential for zinc oxide mineralization. All known deposits and occurrences are hosted within Cambrian aged carbonate rocks at or near the contact with Proterozoic siliclastic rocks. The area however is almost wholly underlain by Proterozoic rocks with only very small, isolated occurrences of Wilkawillina limestone in the far southwestern corner of the tenement. Remaining portions are covered by aeolian and alluvial Quaternary cover rocks and sediments.

Historic work in the area is minimal. No previous drilling is known to have been completed with only a patchwork of discontinuous stream sediment sampling having been undertaken. Stream sediment sampling revealed a very low level base metal anomaly in the western portion of the tenement (Figure 3). The values are only locally anomalous and are considered low regionally having maximum values of 150ppm, 80ppm and 60ppm for Zn, Cu & Pb respectively suggesting that the anomalism may be stratigraphic in nature and not due to any localized concentration of mineralization. Furthermore, the locations of the samples do not follow any known drainage channels in the area making reliance on the data of dubious value. The only work completed by Perilya over the area was the purchase of Aster multispectral data in late 2011 however no prominent features could be identified which might require ground follow-up.

Given the lack of prospective host rocks and limited amount of historic exploration information it recommended that the proposed area be surrendered.