

# **Open File Envelope**

## **No. 12,728**

**EL 5292**

**GREAT CENTRAL DESERT**

**FIRST PARTIAL SURRENDER REPORT  
FOR THE PERIOD 25/6/2013 TO 24/6/2015**

Submitted by  
Woomera Exploration Limited  
2015

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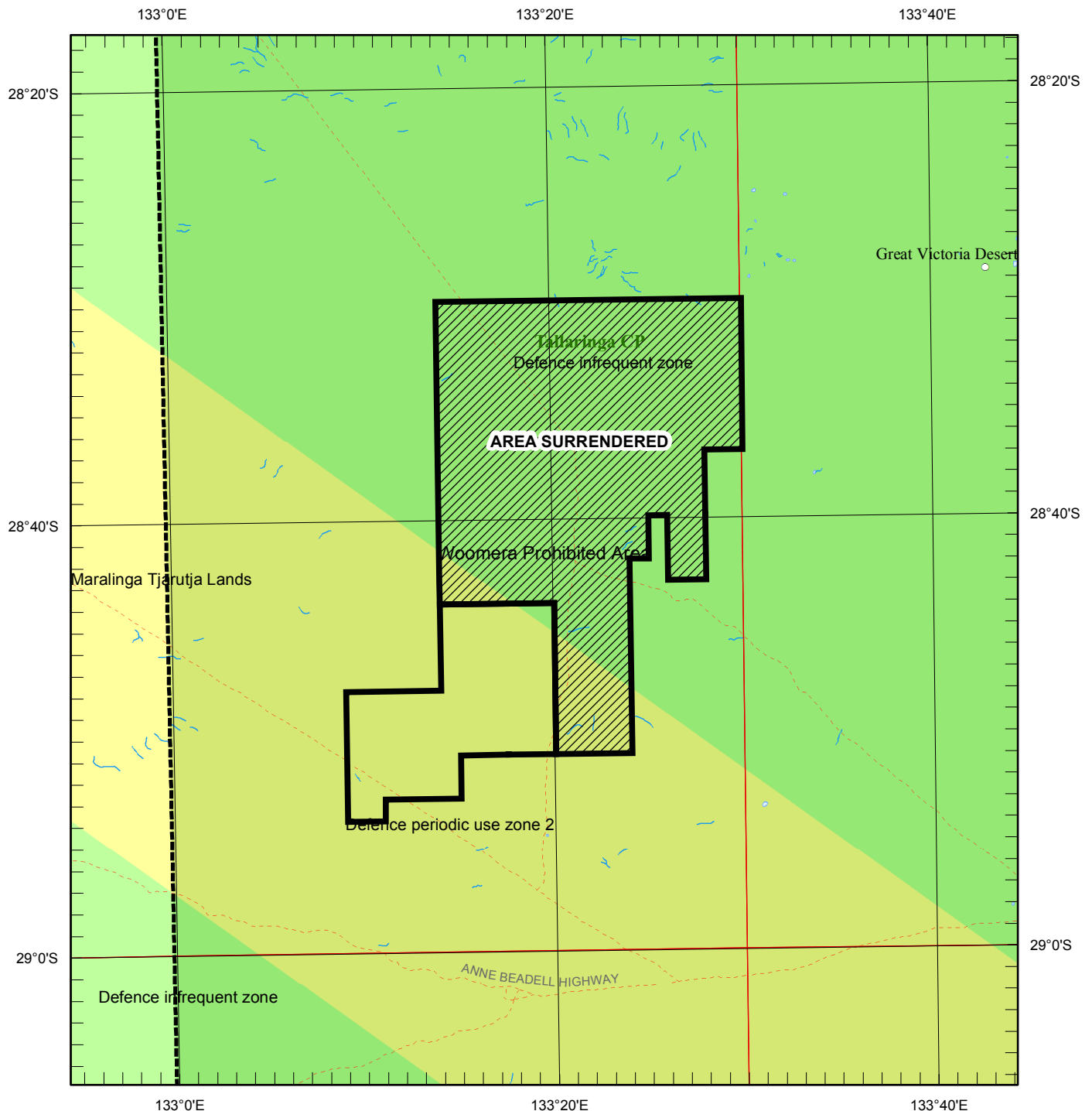
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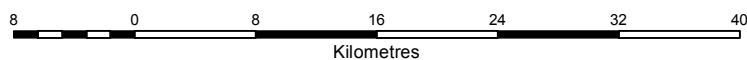


**Government of South Australia**  
Department of State Development

# SCHEDULE A



SCALE 1 : 500 000



LICENCE BOUNDARIES IN : DATUM AGD66

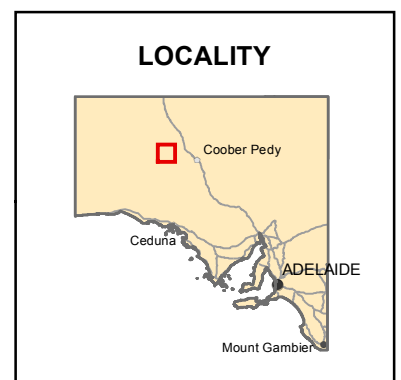
APPLICANT : **NORSA EXPLORATION PTY LTD**

FILE REF : **2012/00118** TYPE : **MINERAL ONLY**

AREA : **213** sq km (approx)

1 : 250 000 MAPSHEETS : **GILES**

LOCALITY : **GREAT CENTRAL DESERT AREA -**  
**Approximately 145 km WNW of Coober Pedy**



DATE GRANTED: **25-Jun-2013** DATE EXPIRED: **24-Jun-2014** EL NO: **5292**



Partial Surrender Report  
for  
Exploration Licence 5292 – Nawa Domain Project  
25 June 2013 – 24 June 2015

Tenement Holder – Norsa Exploration Pty Ltd

Map Sheets:

1:250,000 - SH53-01 (Giles)

1:100,000 – 5540 (Alinya)

Author: Don Triggs

Date: 15 June 2015

## Background

This Partial Surrender report for EL 5292 is submitted by Woomera Exploration Limited (WEX) on behalf of its wholly owned subsidiary, Norsa Exploration Pty Ltd (Norsa).

WEX was registered as a private company in May 2012 then converted to a Public Company in July 2012. Norsa Exploration Pty Ltd was registered in March 2012 and merged with WEX in December 2014. Between October 2012 and June 2013 WEX and Norsa combined secured tenure over 14 Exploration Licences (EL) and two Exploration Licence Applications (ELA) as shown in Table 1 and Figure 1.

Woomera Exploration Limited Tenement Holding January 2015					
Tenement Number	Area (Sq. Kms)	Grant Date	Renewal Date	Mineral Province	Commodities
5113	730	29-Nov-12	28-Nov-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5114	770	29-Nov-12	28-Nov-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5115	420	29-Nov-12	28-Nov-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5116	920	29-Nov-12	28-Nov-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5040	693	11-Oct-12	10-Oct-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5041	768	11-Oct-12	10-Oct-15	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5042	854	11-Oct-12	10-Oct-15	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5286	446	25-Jun-13	24-Jun-16	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5287	595	25-Jun-13	24-Jun-16	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5288	937	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5289	994	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5290	324	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5291	438	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5292	906	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
ELA 2012/00119	929	TBA	TBA	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
ELA 2012/00120	848	TBA	TBA	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
<b>Totals</b>	<b>11,572</b>				

Table 1 – Initial combined tenement holding

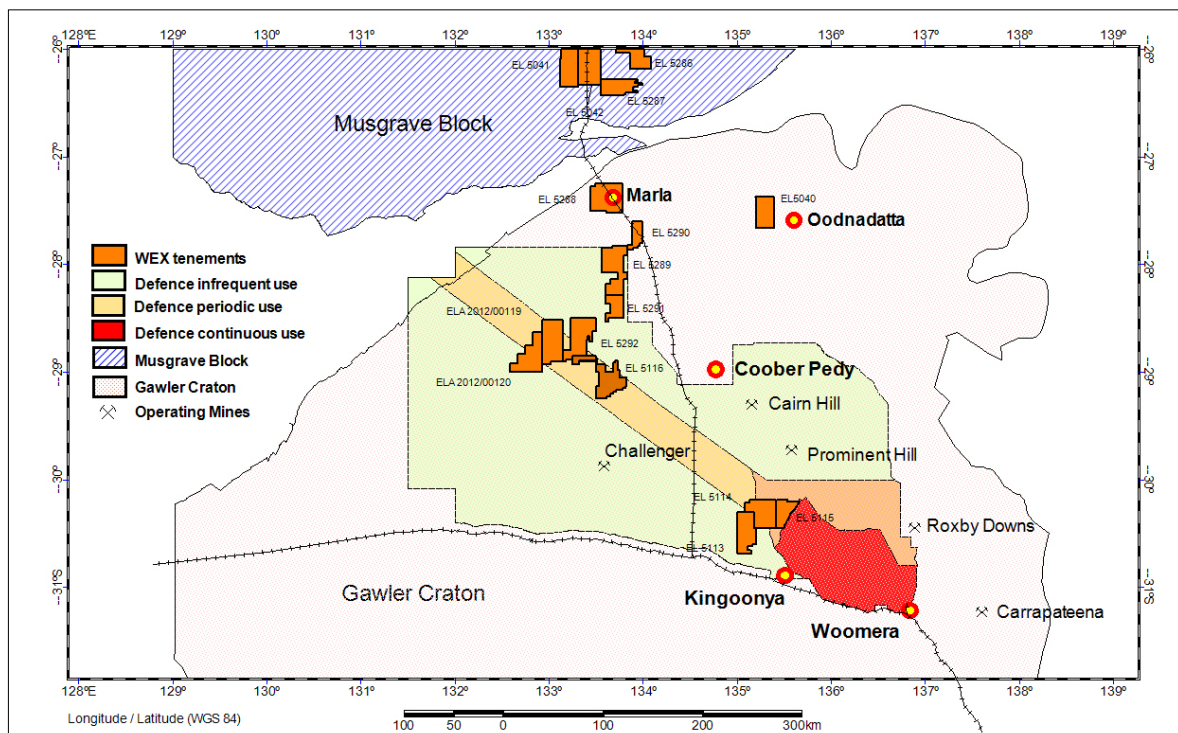


Figure 1 – Initial WEX tenement holding

In February 2015 WEX completed a technical review of the combined holdings and surrendered approximately 50% of the initial ground leaving nine ELs and two ELAs as shown in Table 2 and Figure 2.

Woomera Exploration Limited Tenement Holding April 2015					
Tenement Number	Area (Sq. Kms)	Grant Date	Renewal Date	Mineral Province	Commodities
5113	94	29-Nov-12	28-Nov-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5115	420	29-Nov-12	28-Nov-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5040	196	11-Oct-12	10-Oct-15	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5041	768	11-Oct-12	10-Oct-15	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5042	854	11-Oct-12	10-Oct-15	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5286	446	25-Jun-13	24-Jun-16	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5287	595	25-Jun-13	24-Jun-16	East Musgrave	Ni-Cu-Au-PGE, AG-REE
5288	937	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
5292	216	25-Jun-13	24-Jun-16	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
ELA 2012/00119	929	TBA	TBA	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
ELA 2012/00120	848	TBA	TBA	Gawler Craton	IOCG and Base metals (Ag, Pb, Zn)
<b>Totals</b>	<b>6,303</b>				

Table 2 – Tenement holding post rationalisation

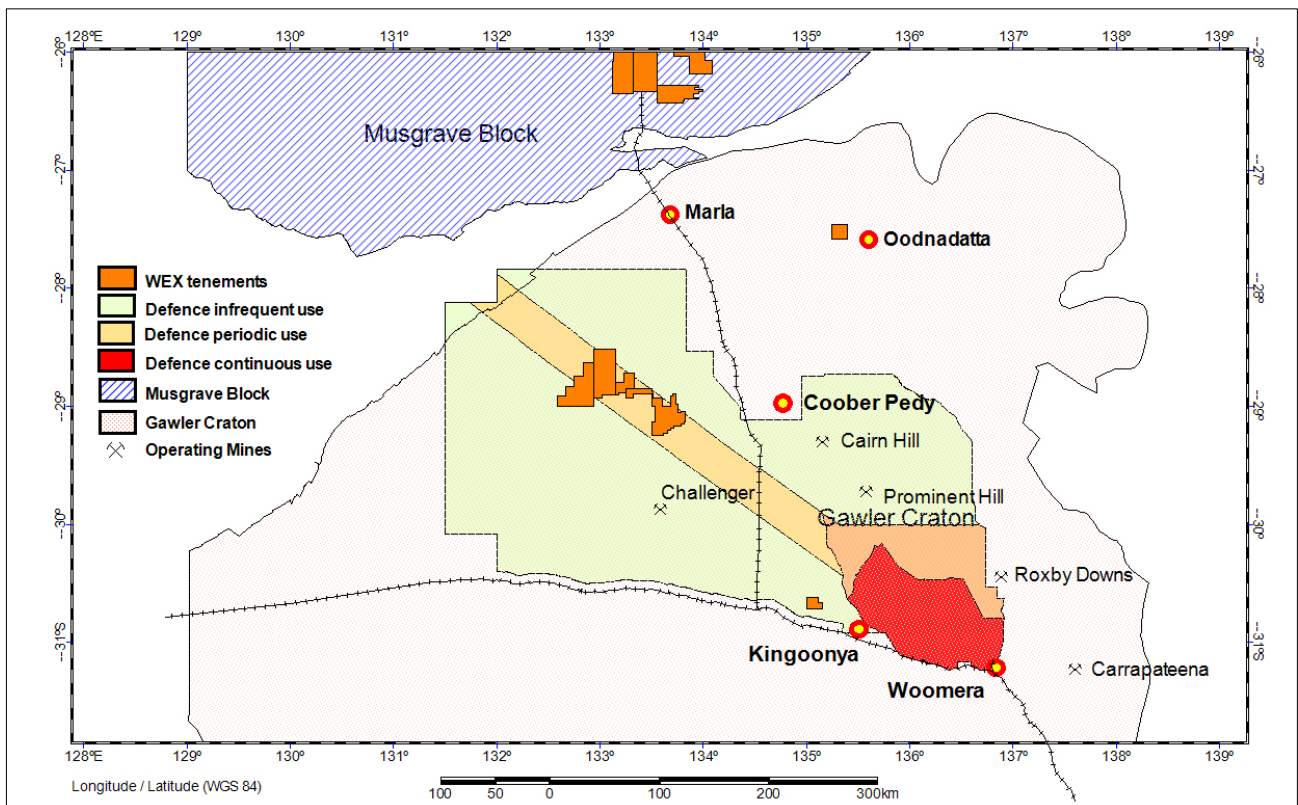


Figure 2 – WEX tenement holding after rationalisation



The company's focus in the Gawler Craton area is:

- Olympic Dam style Iron Oxide Copper Gold (IOCG)
- Mississippi Valley style base metal mineralisation in the Observatory Hill beds of the Officer Basin
- The Challenger style gold deposits in the Archean-Proterozoic Mulgathing Complex

and in the Musgrave Block the focus is:

- Magmatic Ni-Cu-PGE deposits associated with mafic-ultramafic rocks of the Proterozoic Giles Complex
- silver-copper-zinc and rare earth mineralisation that has recently been noted by DMITRE within granites of the Pitjantjatjara Supersuite

Following a review of open file reports, papers and geophysical data, WEX decided to surrender the northern 76% of EL 5292 as the crystalline basement in the area appears to be covered by a thick sequence of Arkaringa and Officer basin sediments making for expensive exploration of the basement rocks.

## Location and Access

EL 5292 lies within the Alimya 1:100,000 sheet in the North-Western Gawler Craton in the area known as the Nawa Domain. This tenement was one of four tenements that constituted the company's Nawa project in the North-West of the Woomera Prohibited Area (WPA) (Figure 4 and Figure 5).

Access is gained via the Stuart Highway approximately 20 Kms North of Cadney Park then West via the Comalco Survey track.

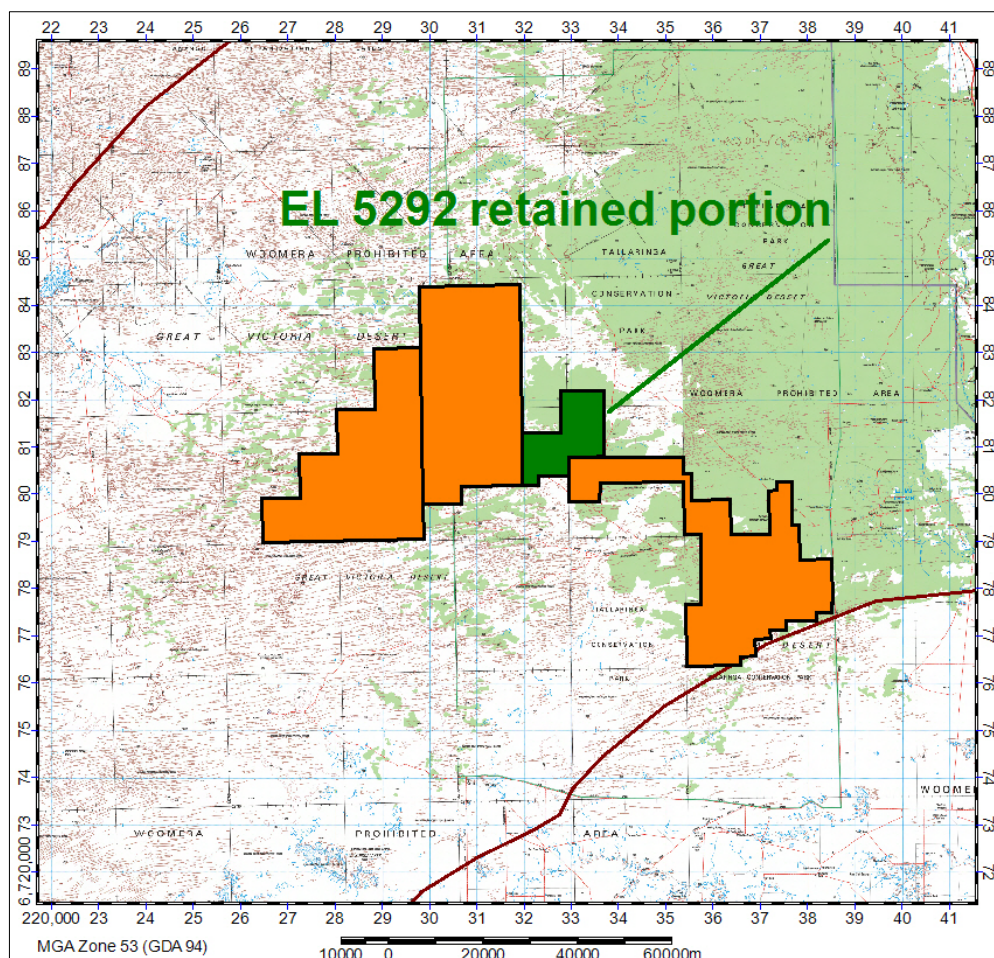
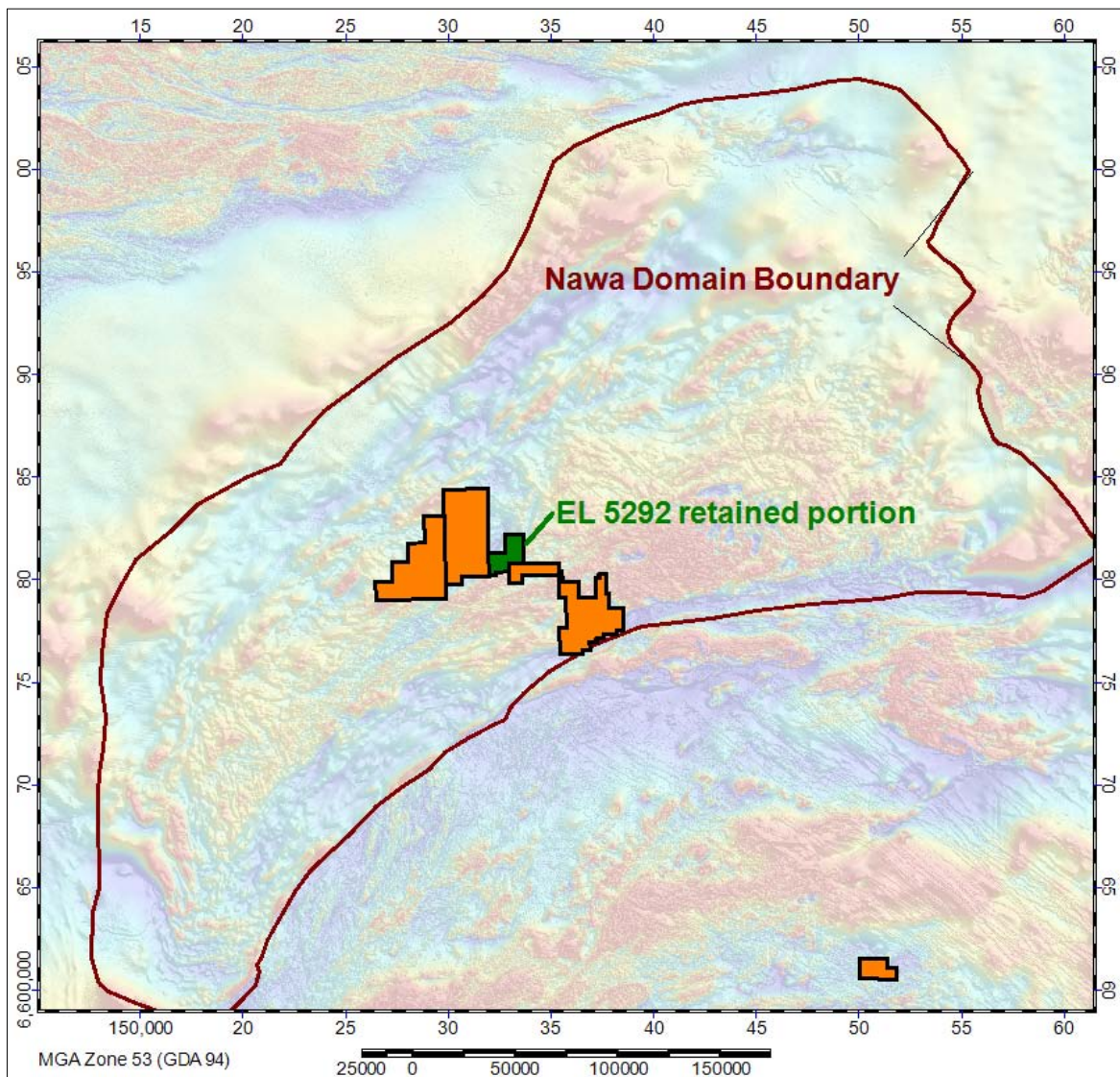


Figure 3 – Nawa Project Location showing EL 5292 after partial surrender

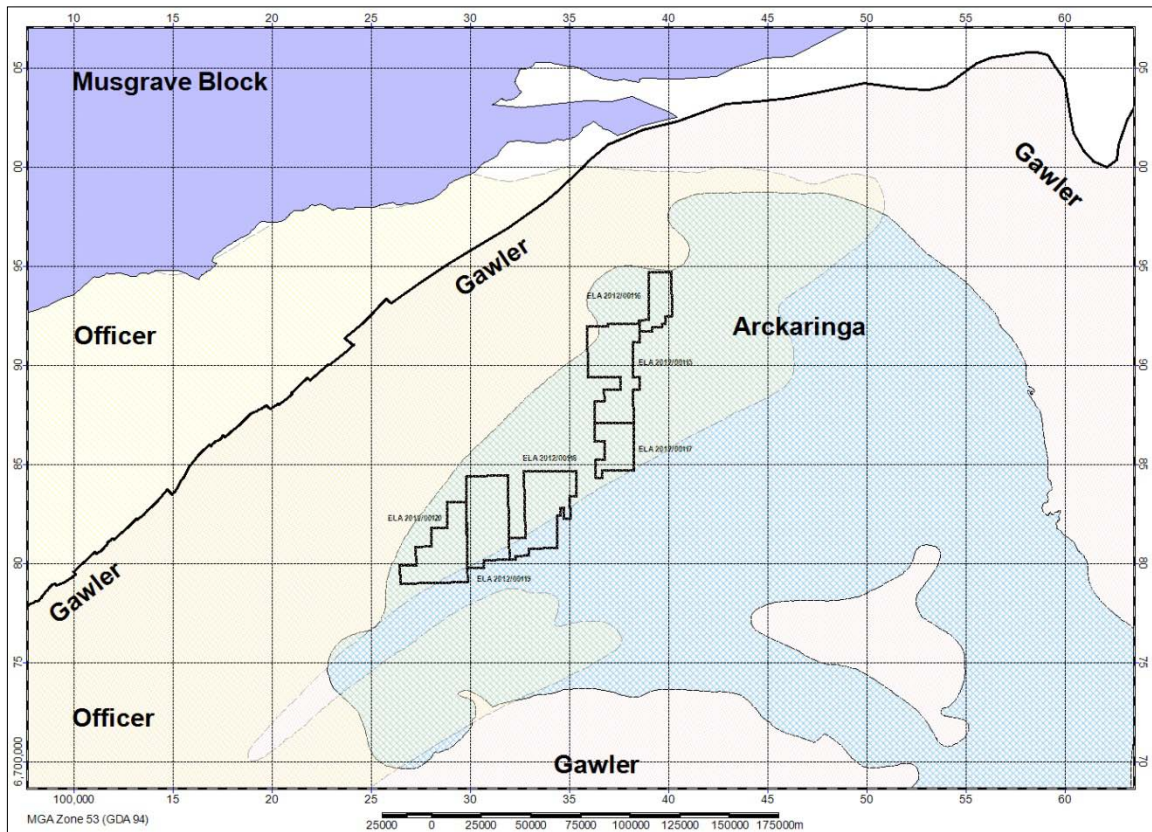
## Geological Setting

The tenements of the Nawa project lie entirely within the Nawa Domain of the North-West rim of the Gawler Craton. The crystalline basement is overlain with sediments of the Officer and Arckaringa basins as shown in Figure 6. Very little is known about the crystalline basement of the Nawa Domain, but the limited information available suggests that it contains a package of variably metamorphosed mudstone and sandstone units aged between 1750 Ma and 1720 Ma.



**Figure 4 – Nawa Project location with TMI**



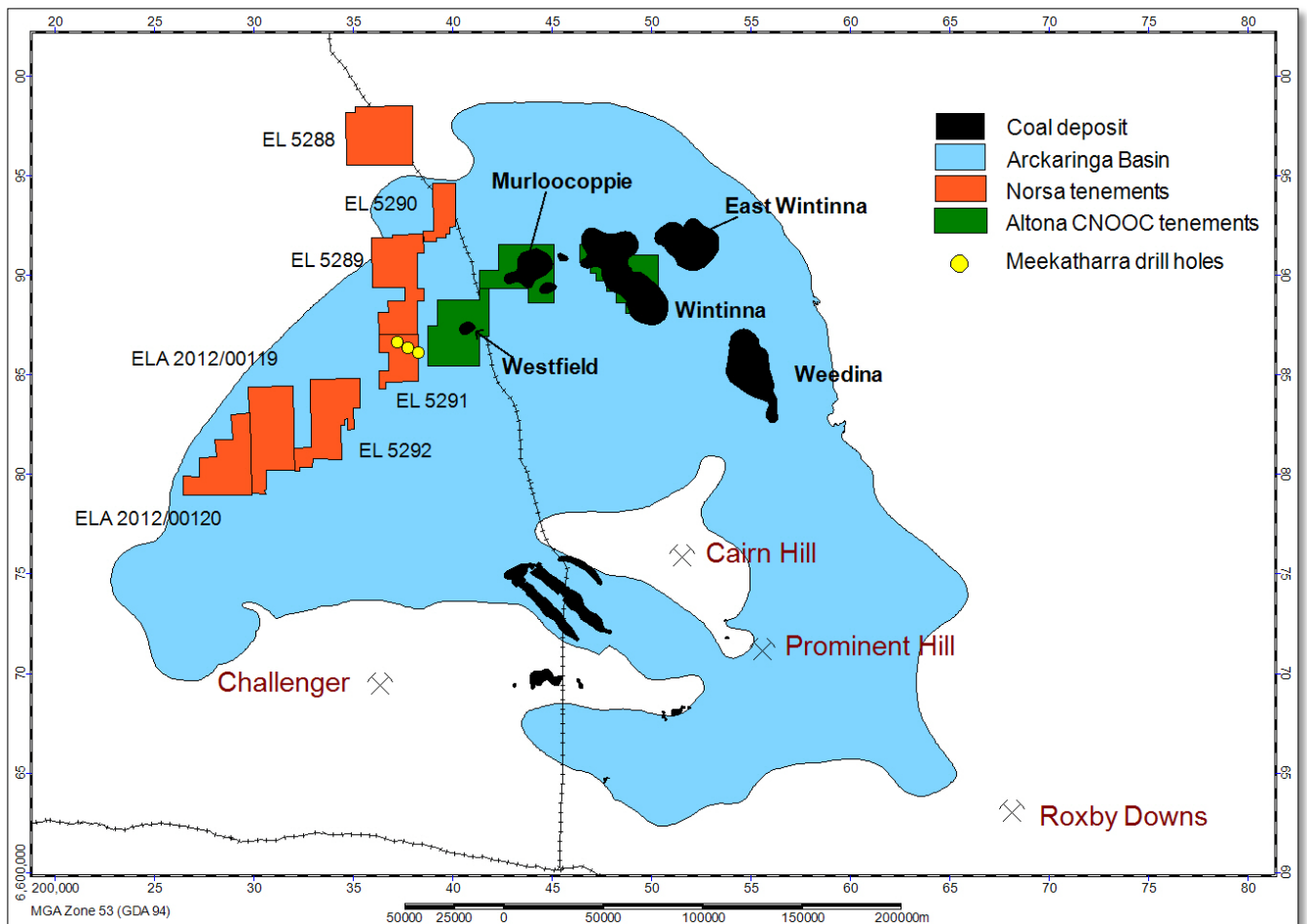


**Figure 5 – Geological setting**

## Previous Exploration

This region has been lightly explored for a variety of commodities over the last 45 years. The initial focus by GSSA, Santos, Comalco and others was on the hydrocarbon potential in the overlying sediments of the Office and Arckaringa basins. The Arckaringa Basin is a Permo-Carboniferous intracratonic basin which covers an area of ~80 000 km<sup>2</sup> overlying the crystalline basement of the Gawler Craton. The thickness of the Permian sediments within the Arckaringa varies from zero to about 1300 metres and significant coal deposits were identified during the mid eighties to the East of the project area (Figure 5).



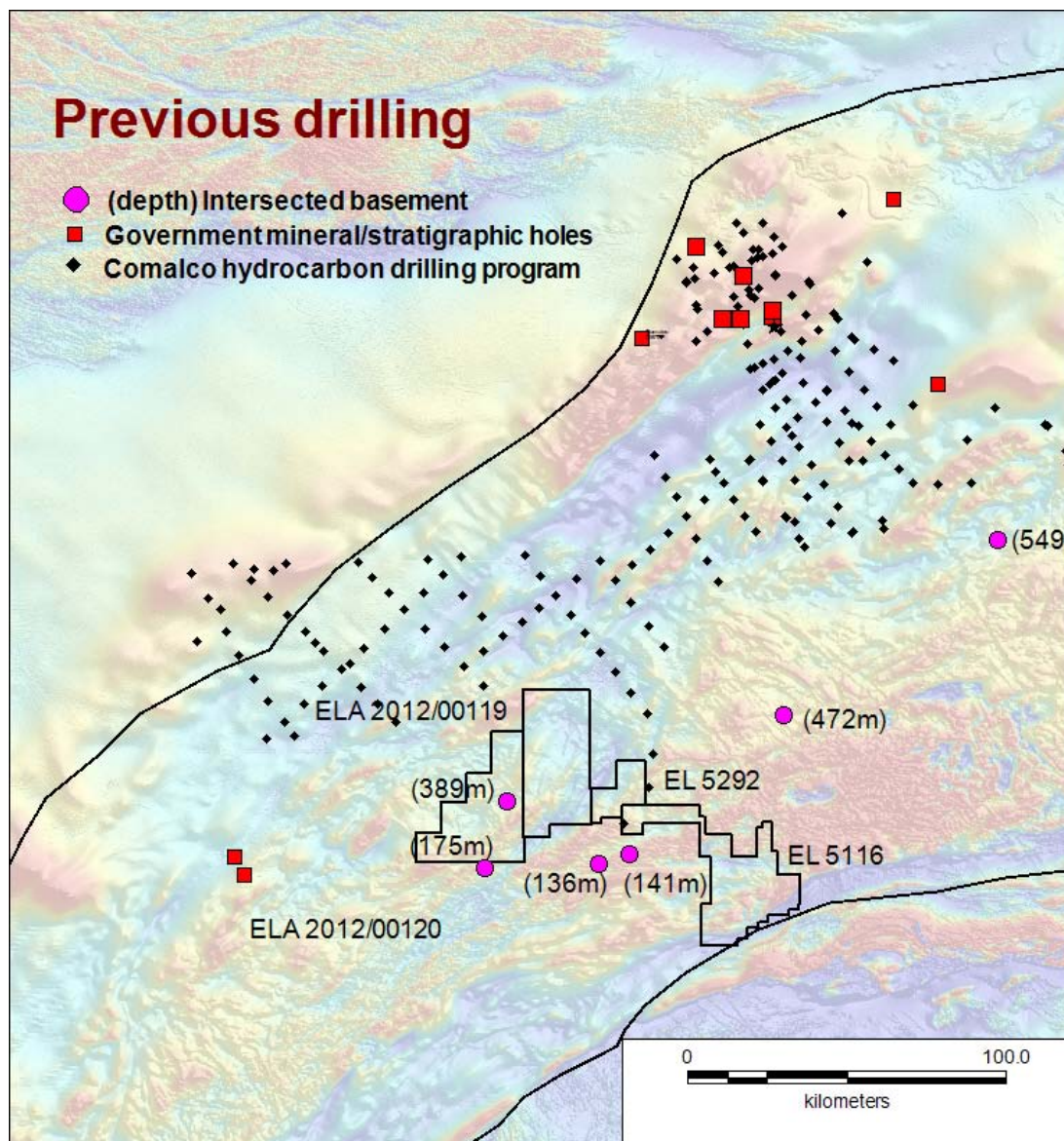


**Figure 6 – Arkaringa coal deposits**

Previous drilling activities in the project area is shown in Figure 7 and summarised below:

- 1974 -75 BP Minerals targeted coal in the Arckaringa Basin
- 1979-82 Western Mining targeted Officer Basin Observatory Hills beds for carbonate hosted Pb-Zn deposits
- 1980-82 Meekatharra Minerals coal
- 1982-85 Comalco coal, evaporites
- 1993 DMITRE stratigraphic drilling
- 2008-10 Diatreme Resources – mineral sands
- 2008- 12 Gawler-Officer-Musgrave-Amadeus (GOMA) research project

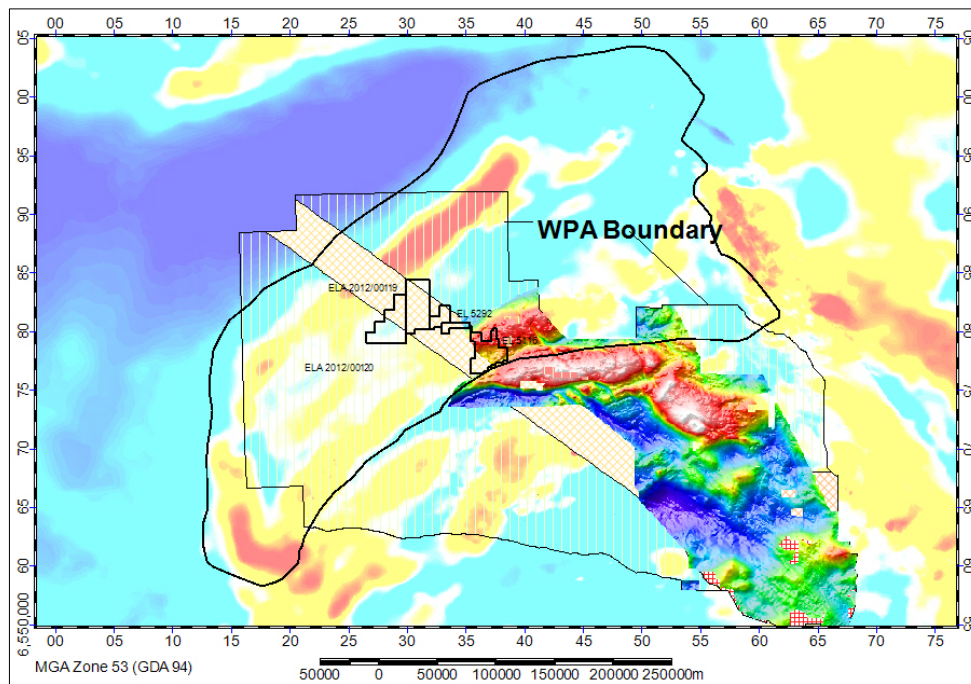
Most of the drilling in the project area targeted the overlying sediments and none lie within EL 5292. Where basement has been intersected nearby to the South of the project area it has been noted as Archean Mulgathing Complex which is prospective for a range of commodities including gold, nickel, copper, platinum group elements and iron ore. The nearby, 1 million ounce Challenger gold mine, occurs in the Mulgathing complex.



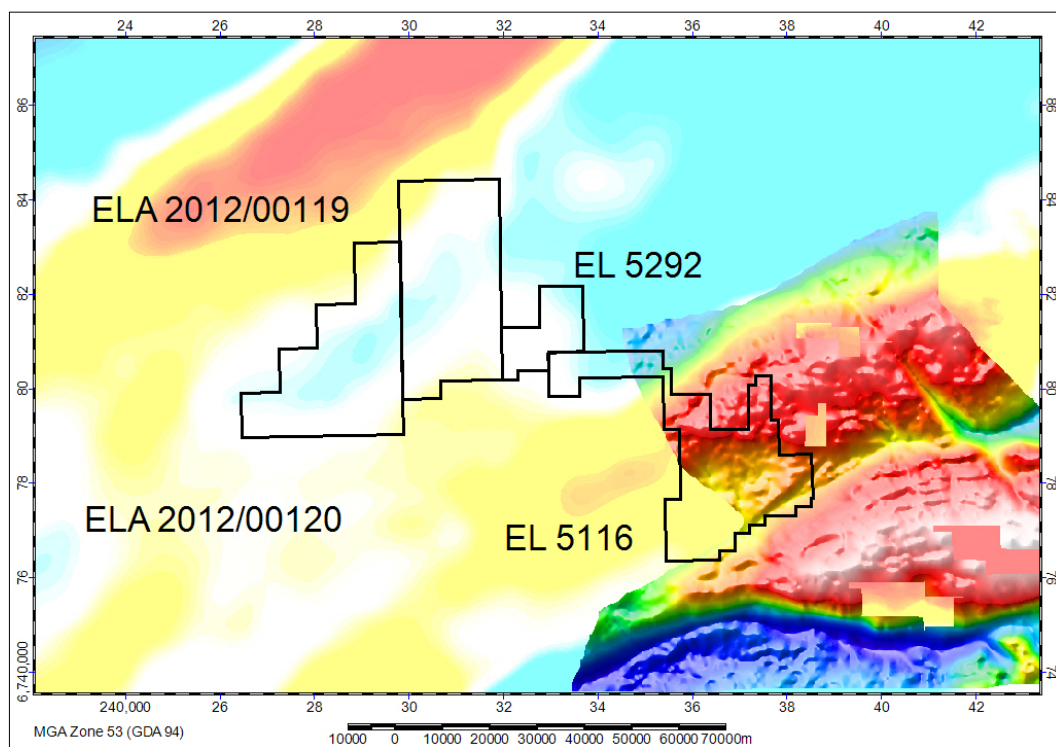
**Figure 7 – Previous drilling**

### **Proposed Exploration**

The Geological Survey of SA released data from a 500x500m grid gravity survey in 2014. Unfortunately the GSSA survey did not extend to EL 5292 (Figure 9 and Figure 10) but it does illustrate the value of collecting gravity data at the higher resolution, consequently WEX intends to extend the 500x500m gravity into EL 5292 to progress target generation in the retained portion of this tenement.



**Figure 8 – GSSA gravity survey**



**Figure 9 – WPA gravity overlap**