



Annual Technical Report  
for  
Exploration Licence 5292 – Nawa Domain Project  
25 June 2013 – 24 June 2014

Tenement Holder – Norsa Exploration Pty Ltd

Map Sheets:

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

1:100,000 – 5540 (Alinya)

Author: Don Triggs

Date: 29 September 2014

## Background

This is the first Annual Technical Report for EL 5292. It is submitted by Woomera Exploration Limited (WEX) on behalf of its wholly owned subsidiary, Norsa Exploration Pty Ltd (Norsa).

Norsa Exploration Pty Ltd (Norsa) was registered in March 2012 with the explicit aim of exploring for minerals in the Gawler Craton and Musgrave Block. Norsa applied for nine tenements in May 2012. Seven of these were granted in June 2013 and two remain as applications pending access negotiations with the Maralinga Tjarutja. (Table 1)

Tenement ID	Area (Sq. Kms)	Committed Expenditure Yr 1	Grant Date
5286	446	75,000	25-Jun-13
5287	595	90,000	25-Jun-13
5288	937	120,000	25-Jun-13
5289	994	125,000	25-Jun-13
5290	324	60,000	25-Jun-13
5291	438	70,000	25-Jun-13
5292	906	120,000	25-Jun-13
ELA 2012/00119	929		
ELA 2012/00120	848		
<b>Totals</b>	<b>4640</b>	<b>\$660,000</b>	

**Table 1 – Norsa Tenement Holding**

During the first 12 months of holding these tenements the Company has conducted a desktop review of previous exploration activities and Government reports for the areas covered by these tenements. As part of this process it has developed a comprehensive in-house spatial database to assist in identifying and ranking exploration targets on these tenements and planning in-field exploration work.

In June 2014, all of the issued capital in Norsa was purchased by Woomera Exploration Limited (WEX) with the intention that the WEX and Norsa projects be merged.

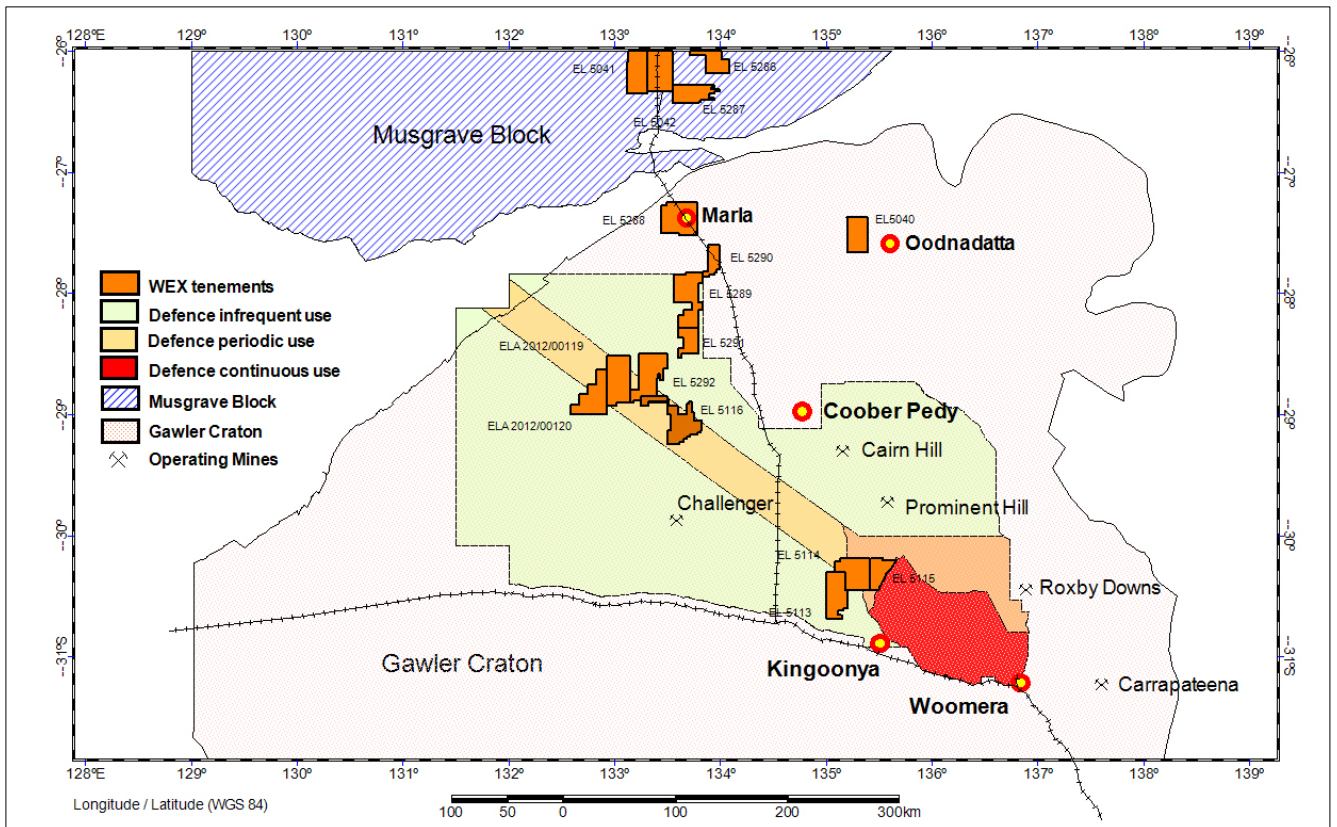
The company's focus in the Gawler Craton area is:

- 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 Archaean-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

The combined project areas are shown in Figure 1.



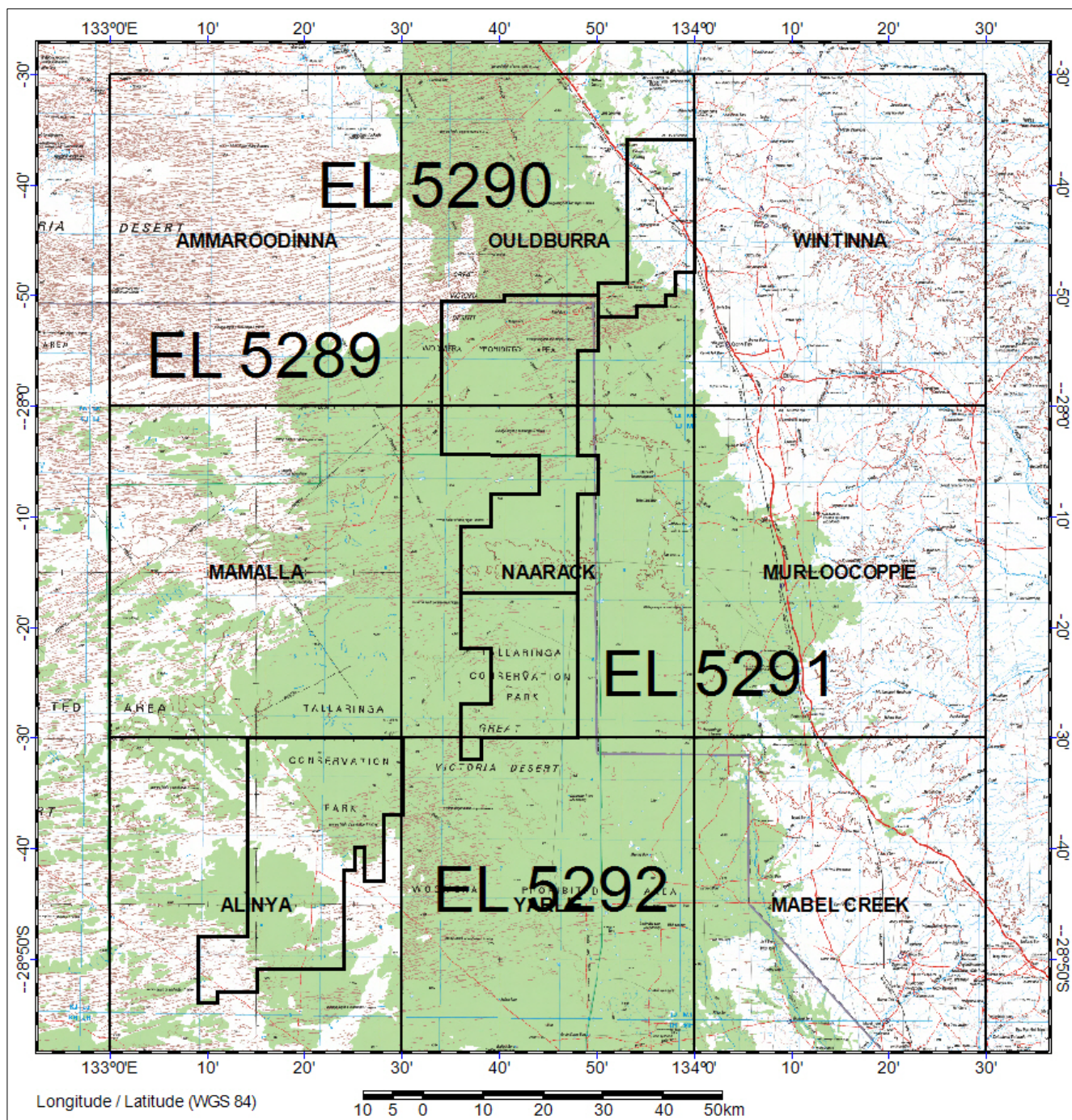
**Figure 1 – WEX and Norsa combined project areas**

## 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 is one of four tenements that constitute the company's Nawa project in the North-West of the Woomera Prohibited Area (WPA). (Figure 2 and Figure 3).

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



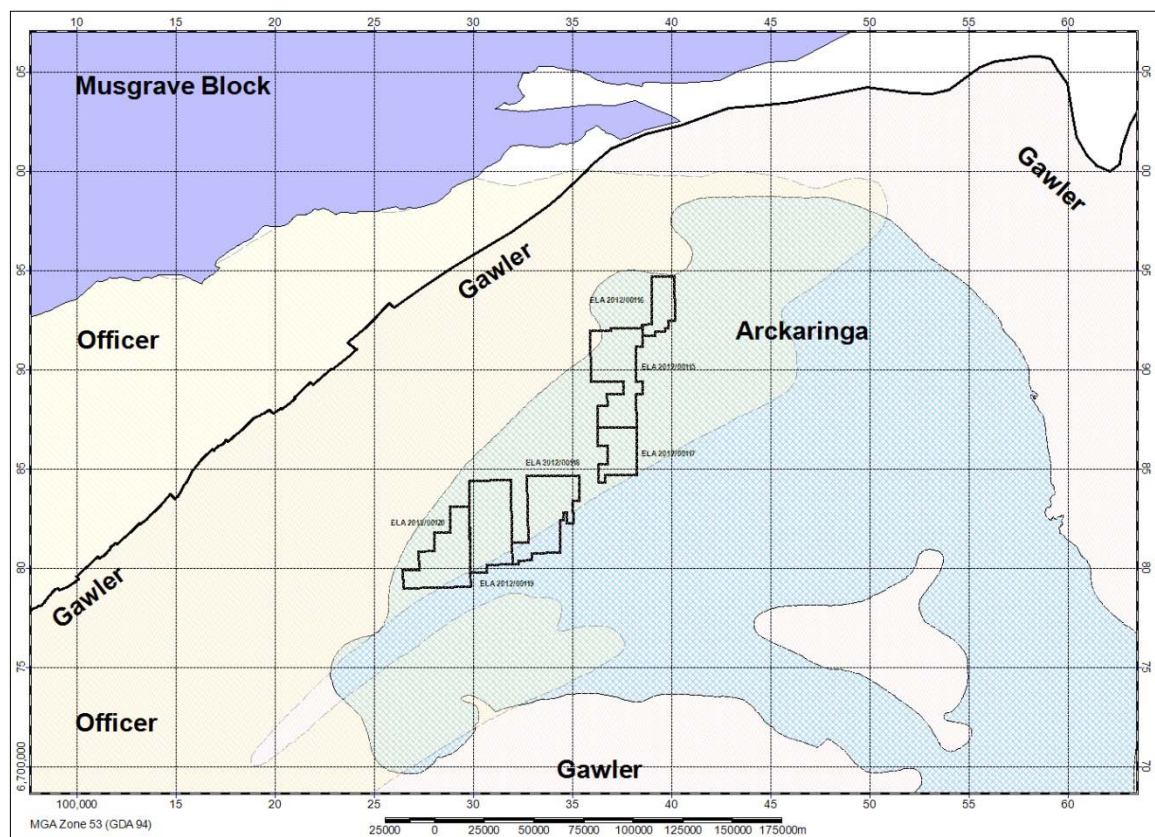
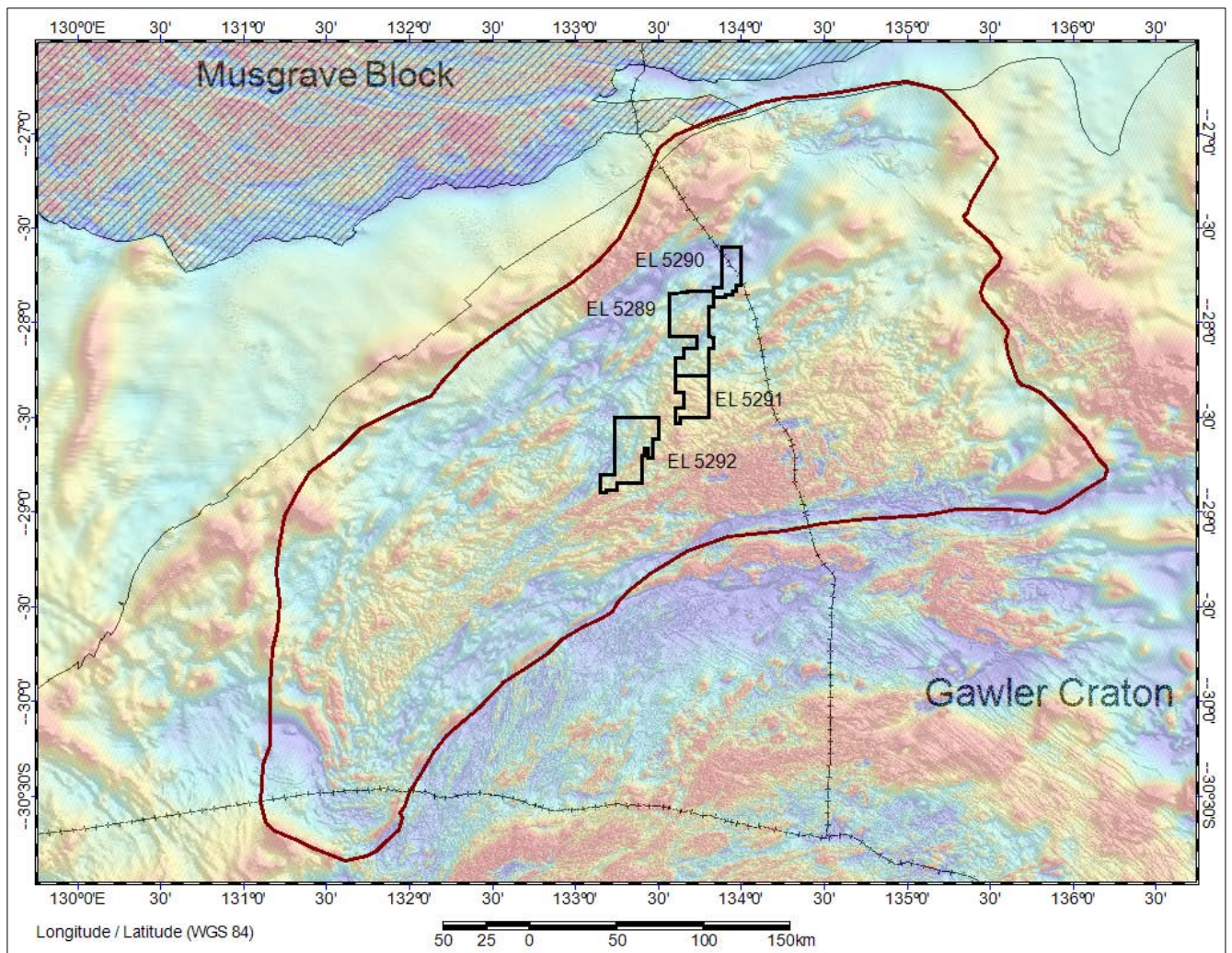


**Figure 2 – Nawa Project Location**

## 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 4. 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.



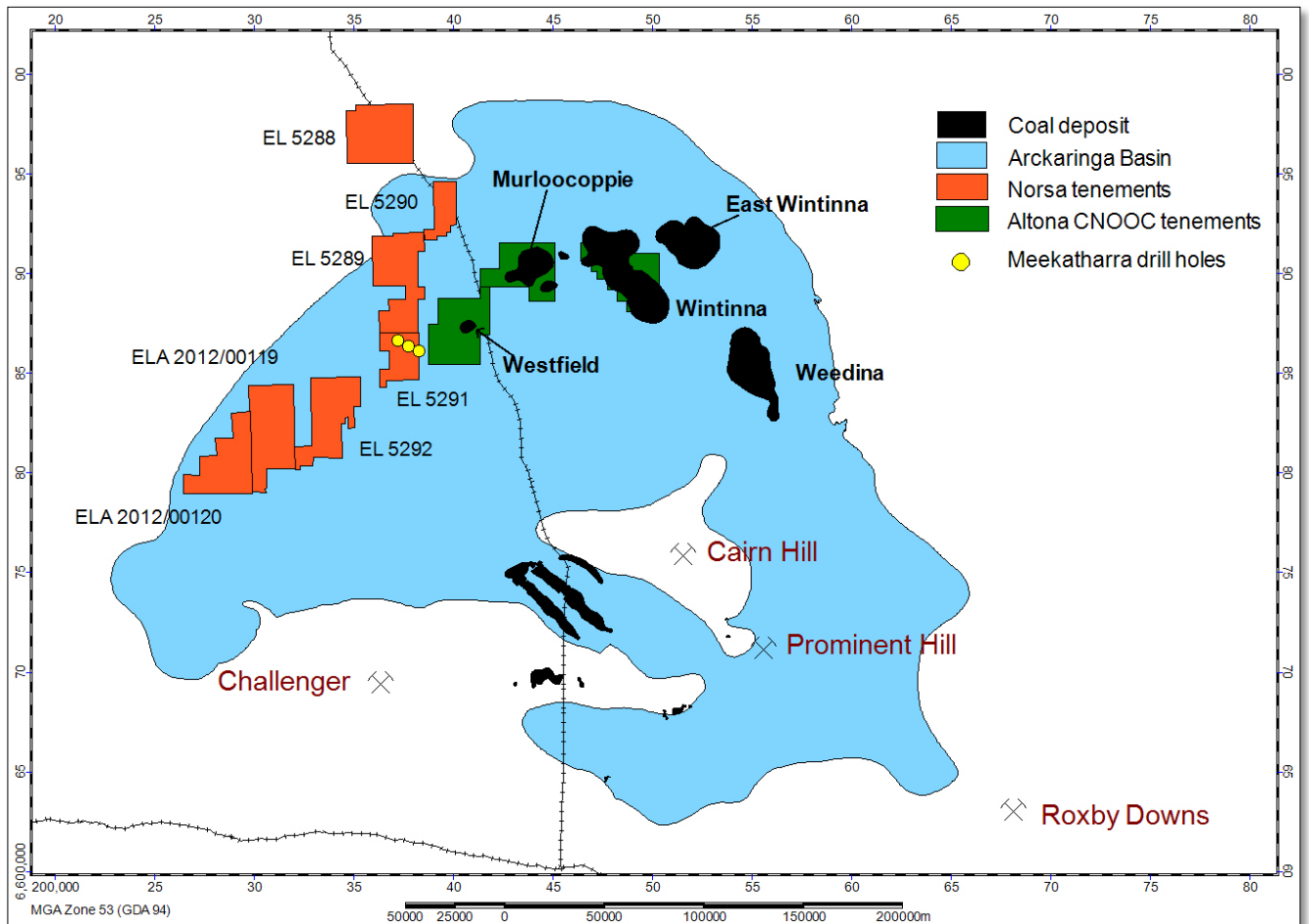




**Figure 4 – Geological setting**

## Previous Exploration

This region has been lightly explored for a variety of commodities over the last 45 years. The initial focus by DMITRE, 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). The basement rocks of the project area are virtually untouched.

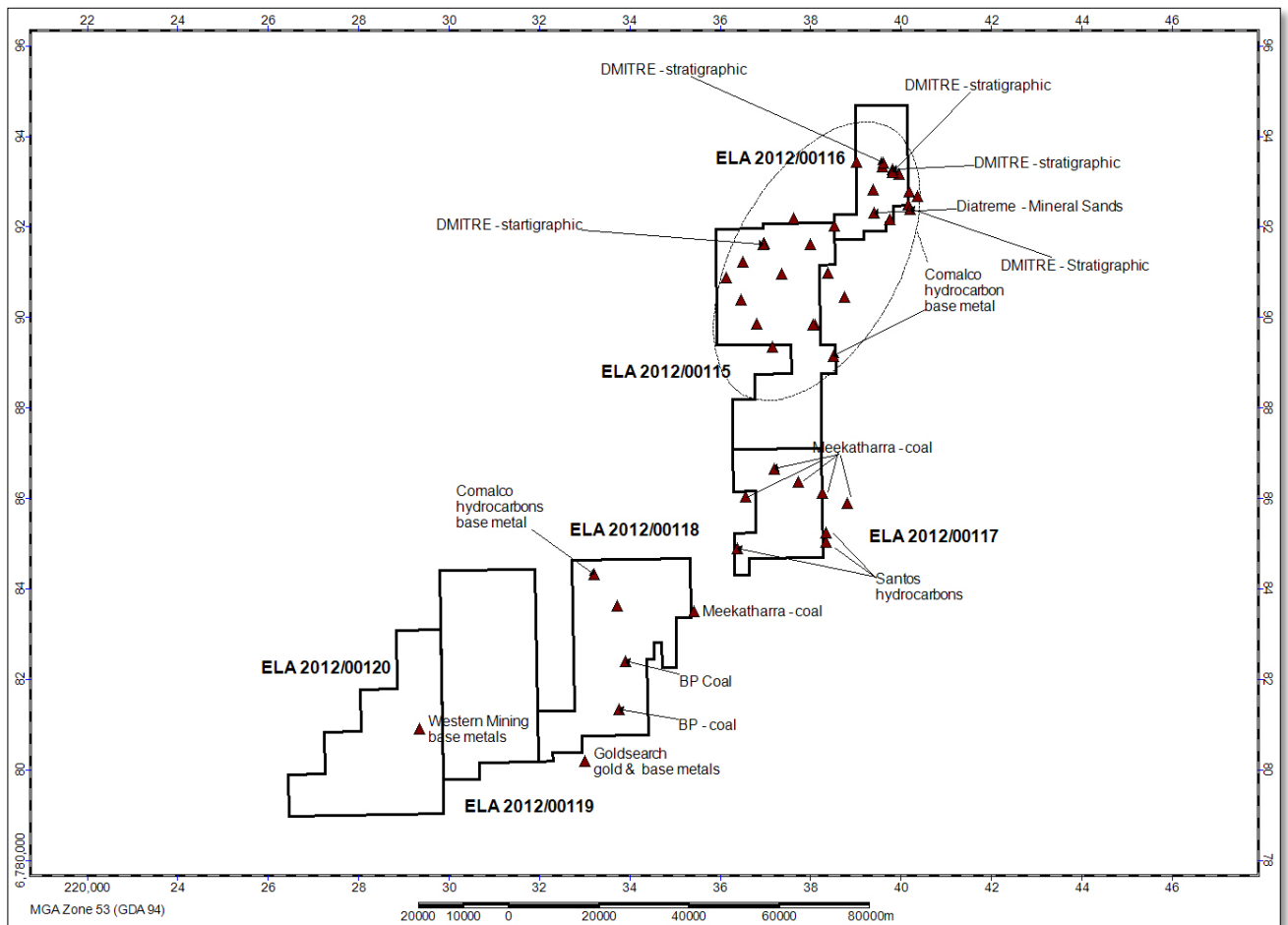


**Figure 5 – Arckaringa coal deposits**

In the early 1980's Western Mining Corporation (WMC) explored the potential of the Officer Basin Observatory Hill beds for stratiform or Mississippi Valley type base metal mineralisation. WMC conducted ground magnetic and gravity traverses on and south of the project area and subsequent drilling confirmed the existence of shallow basement as inferred from magnetic and gravity data, however, they did not intersect the Observatory Hill beds over the basement ridge. Eight holes drilled on the basement ridge intersected the Archean Mulgathing Complex at depths ranging from 100 to 180 metres. A ninth hole drilled away from the basement ridge (Figure 8) intersected the Observatory Hill beds at around 200 metres and entered the archean basement at 389 metres.

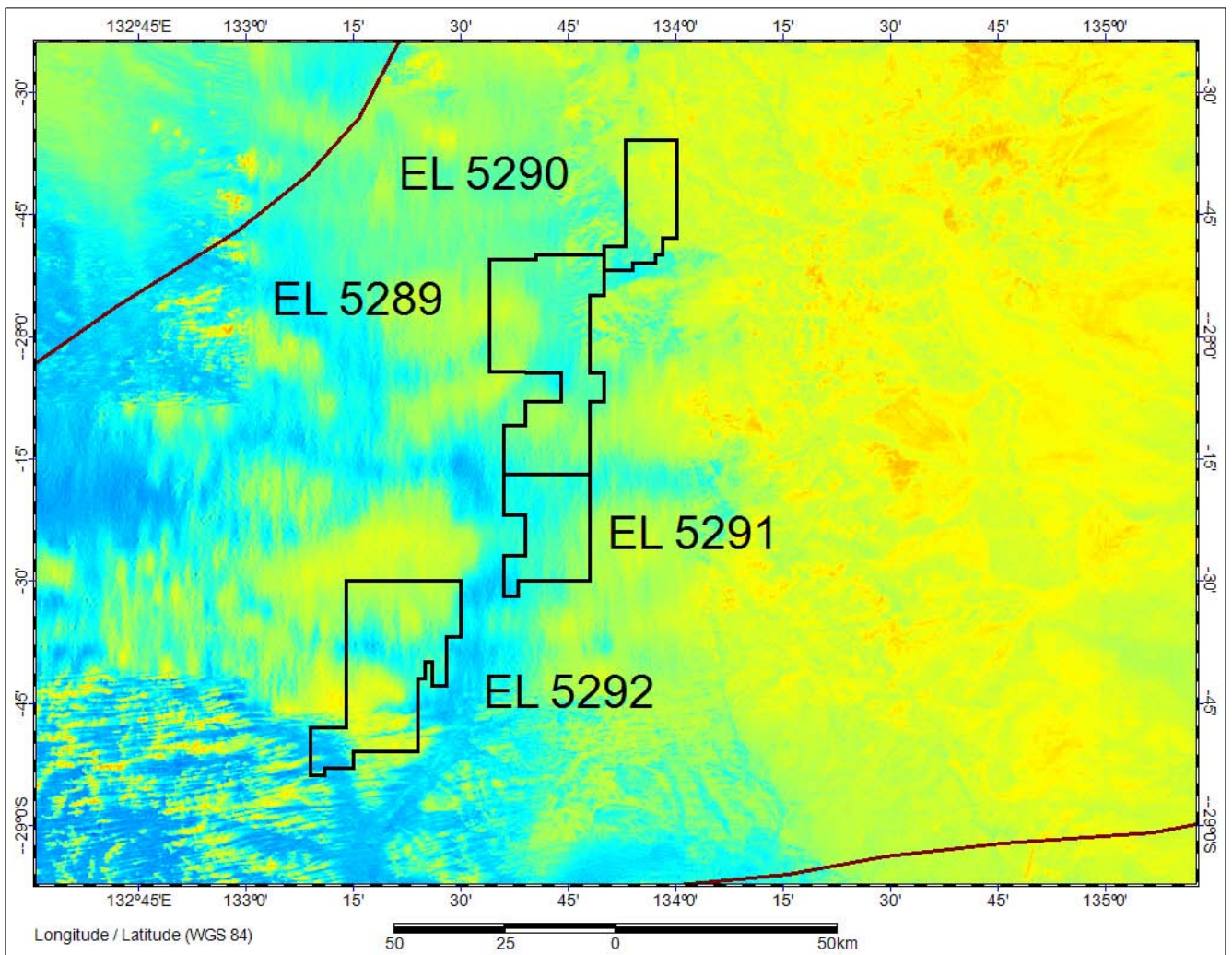
The Mulgathing complex is prospective for a range of commodities including gold, nickel, copper, platinum group elements and iron ore. The nearby, 1 million ounce Challenger gold mine, occurs in the Mulgathing complex.

Boreholes drilled in the project area are shown in Figure 6 but most of these targeted the overlying sediments.



**Figure 6 – Previous drilling**

Past explorers do not appear to have targeted uranium deposits in this area. The Tallaringa paleochannel forms part of the drainage pattern in this area and appears to be ideally located to collect uranium rich material from the surrounding basement rocks. Figure 7 shows the total count radiometric data and this appears to be above background level over much of the project area.



**Figure 7 – Total Count radiometric image**

## Proposed Exploration

WEX/Norsa will employ a multi commodity exploration approach on these tenements with the following targets as priority:

- 1) Stratabound Cu-Pb-Zn
- 2) Uranium
- 3) Mineral sands
- 4) Gold, nickel, copper and platinum group elements in the archean basement.

WEX/Norsa's plan for this tenement is to identify areas where the Observatory Hill beds are close to the surface and in these areas trial ground EM and IP methods for delineating sulphide accumulations in these areas. The electrical results will be tested with RC drilling.

In the south of this tenement WEX/Norsa plans to re-assess the calcrete sampling and the geophysical data collected by previous explorers with the aim of identifying potential shallow basement rocks in the area.

Digital data sets comprising magnetic, gravity, radiometric and geochemical information have already been collected from archived data and integrated into a Graphical Information System. Historical exploration reports have also been collected and scrutinised.





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1:100,000 – 5540 (Alinya)

Author: Don Triggs

Date: 22 September 2015

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## Background

This Annual Technical 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)
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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

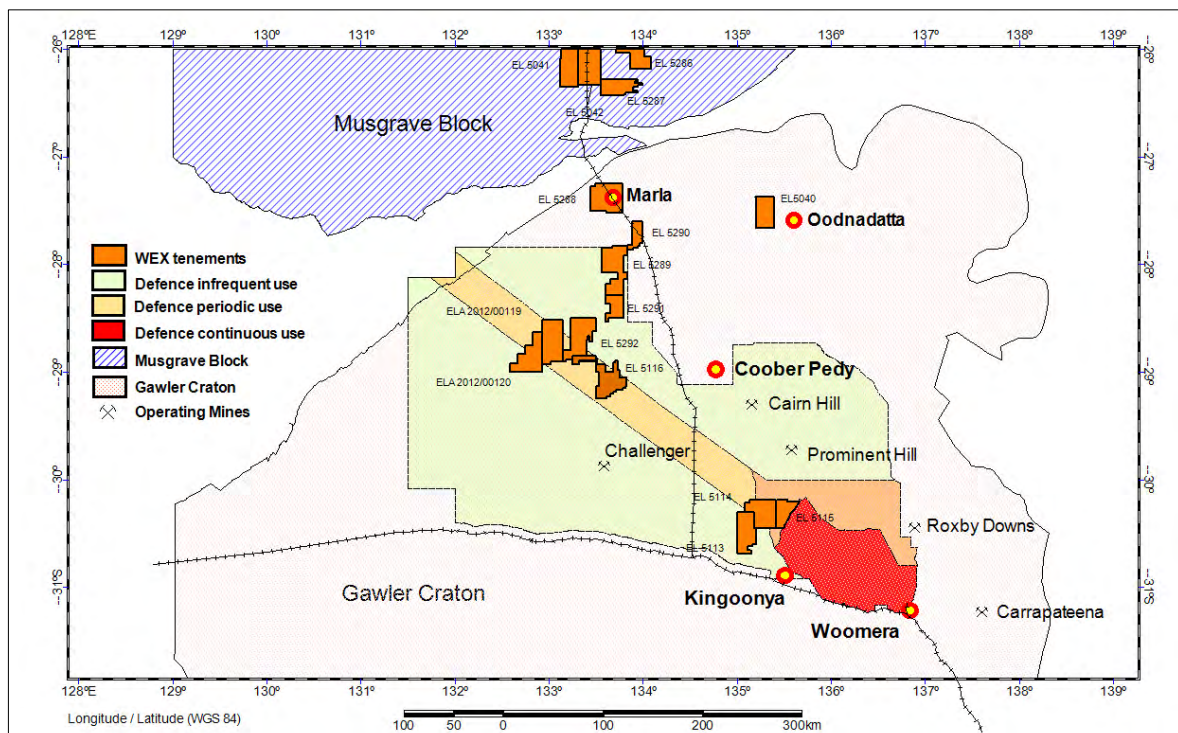


Figure 1 – Initial WEX tenement holding

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

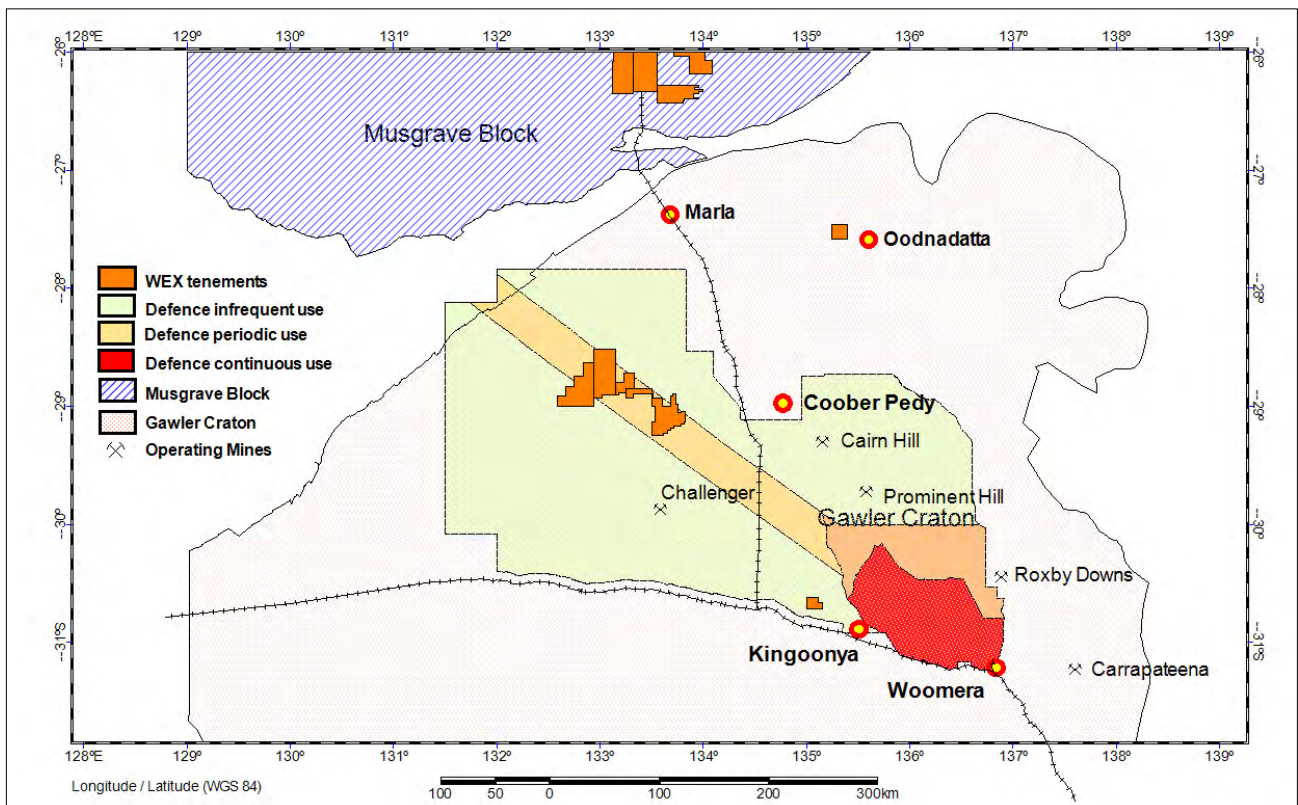


Figure 2 – WEX tenement holding after rationalisation

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
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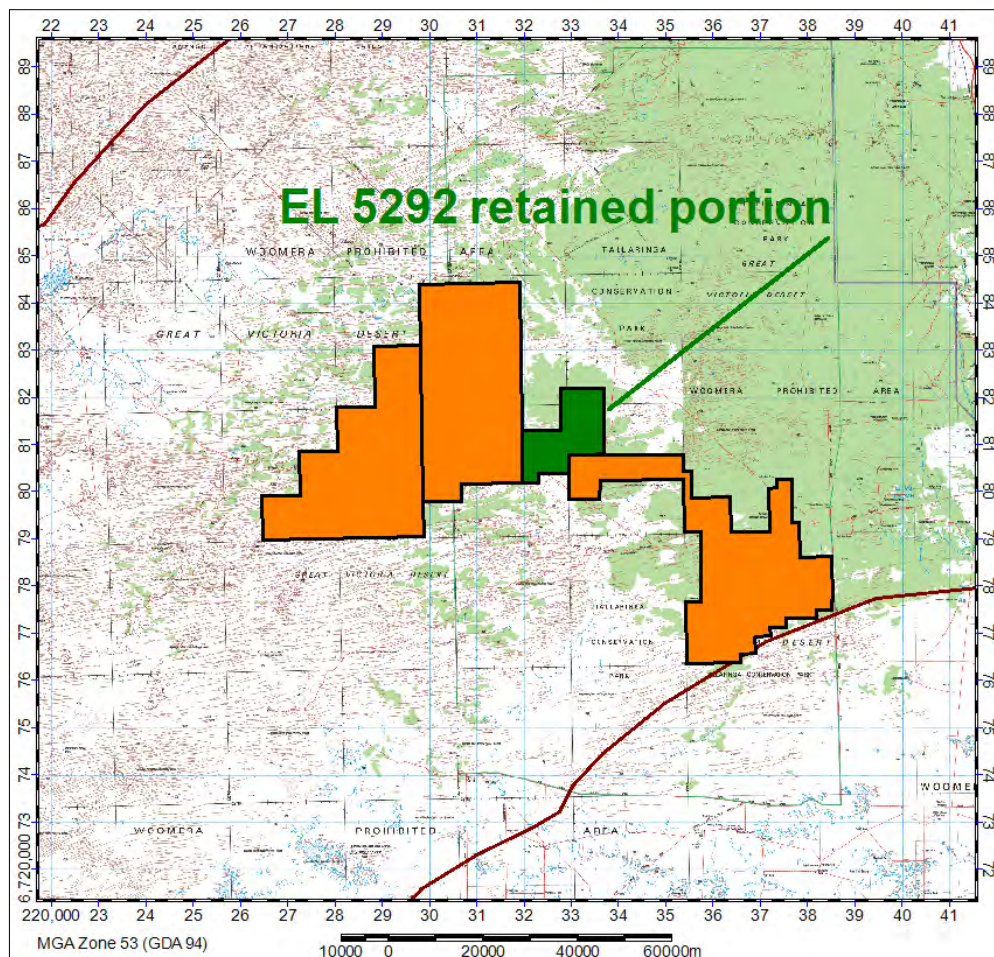
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- silver-copper-zinc and rare earth mineralisation that has recently been noted by DMITRE within granites of the Pitjantjatjara Supersuite

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 Arckaringa and Officer basin sediments making for expensive exploration of the basement rocks.

## Location and Access

EL 5292 lies within the Alinya 1:100,000 sheet in the North-Western Gawler Craton in the area known as the Nawa Domain. This tenement is one of four tenements that constitute the company's Nawa project in the North-West of the Woomera Prohibited Area (WPA). (Figure 3 – Nawa project location showing retained portion of EL 5292).

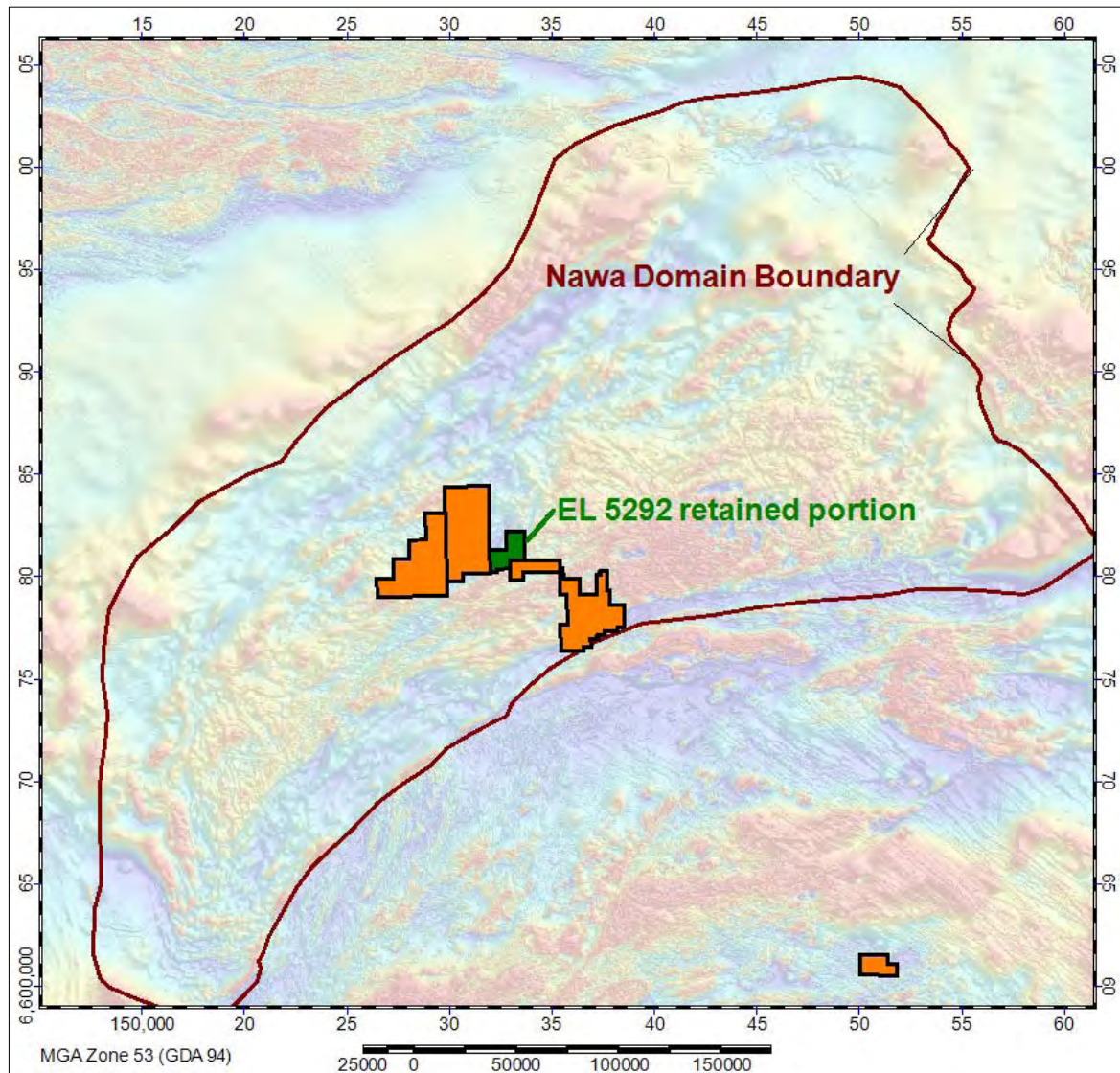
Access is gained via the Stuart Highway approximately 20 Kms North of Cadney Park then West via the Comalco Survey track.



**Figure 3 – Nawa project location showing retained portion of EL 5292**

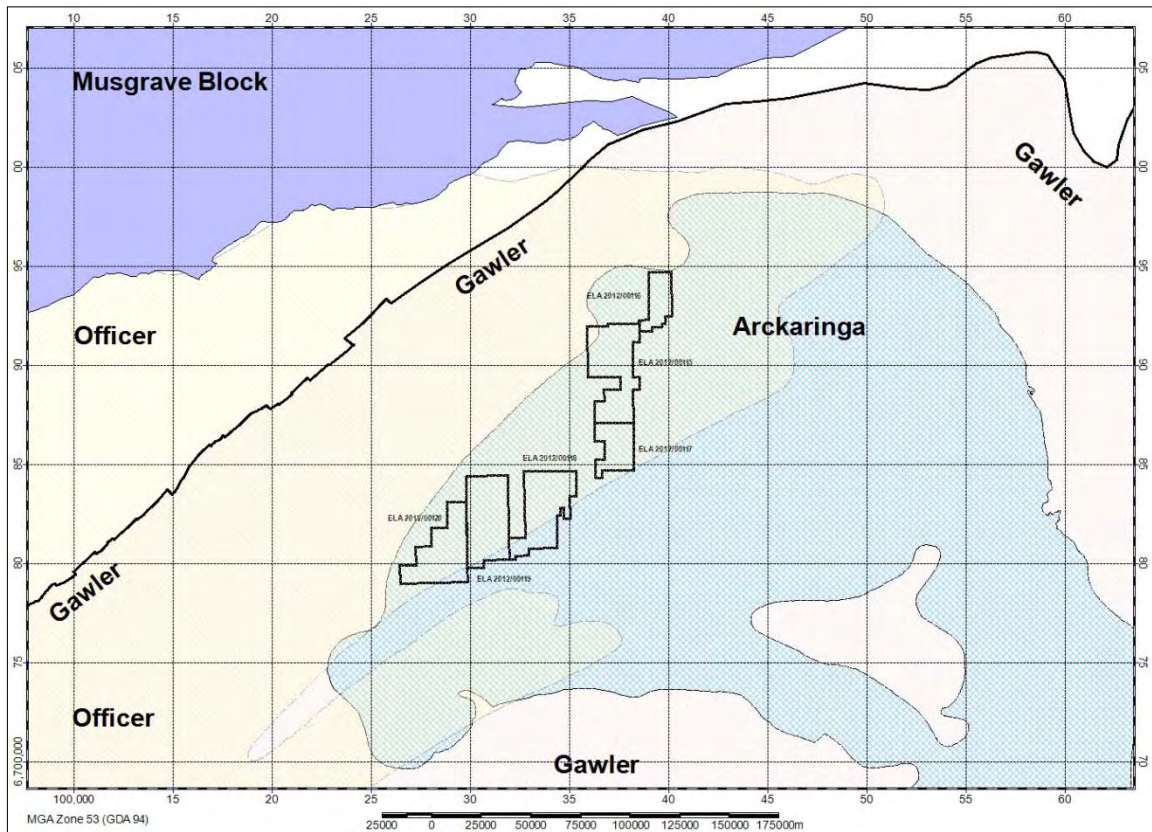
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**Figure 4 – Nawa Project location with TMI**

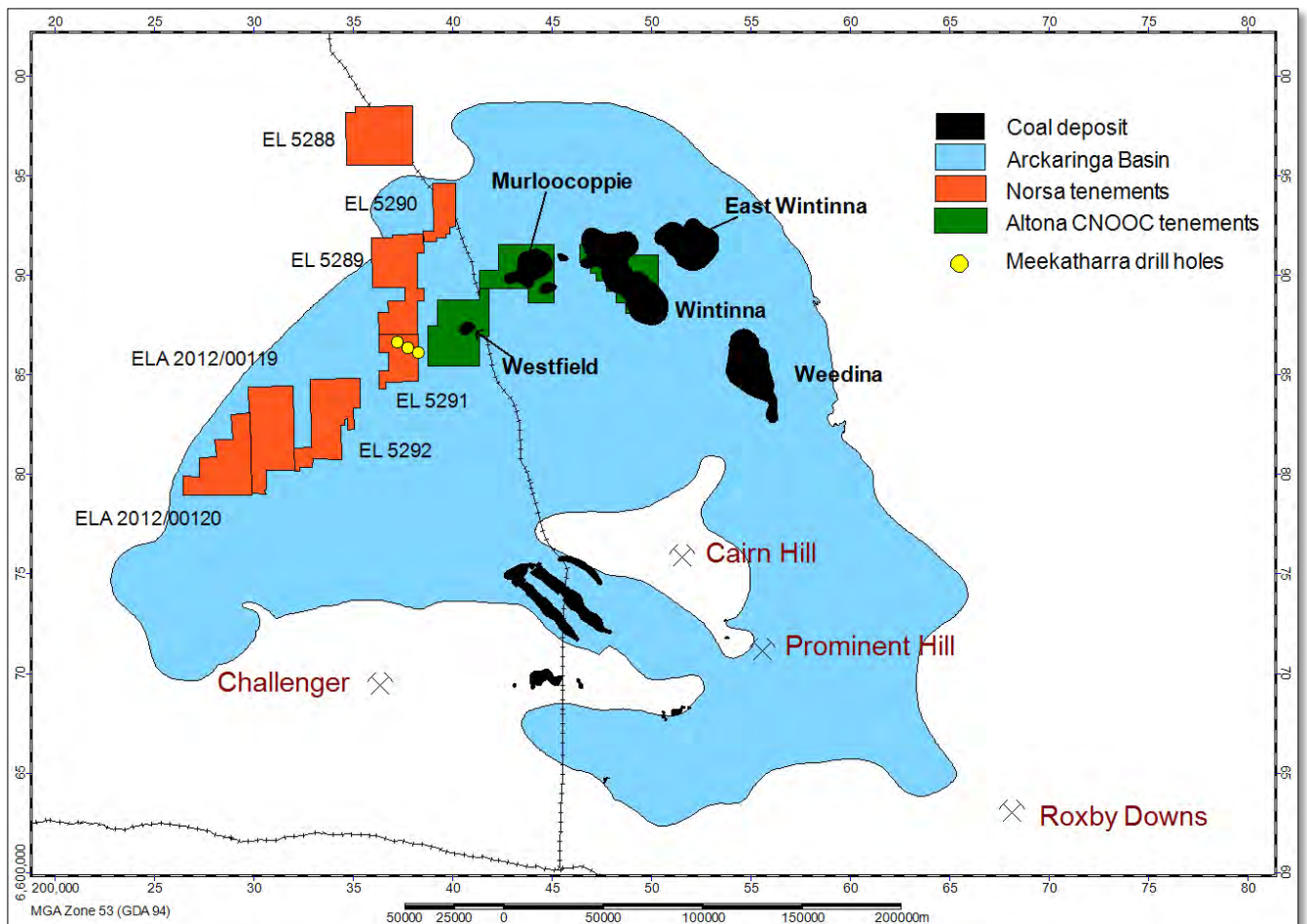




**Figure 5 – Geological setting**

## 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 7).



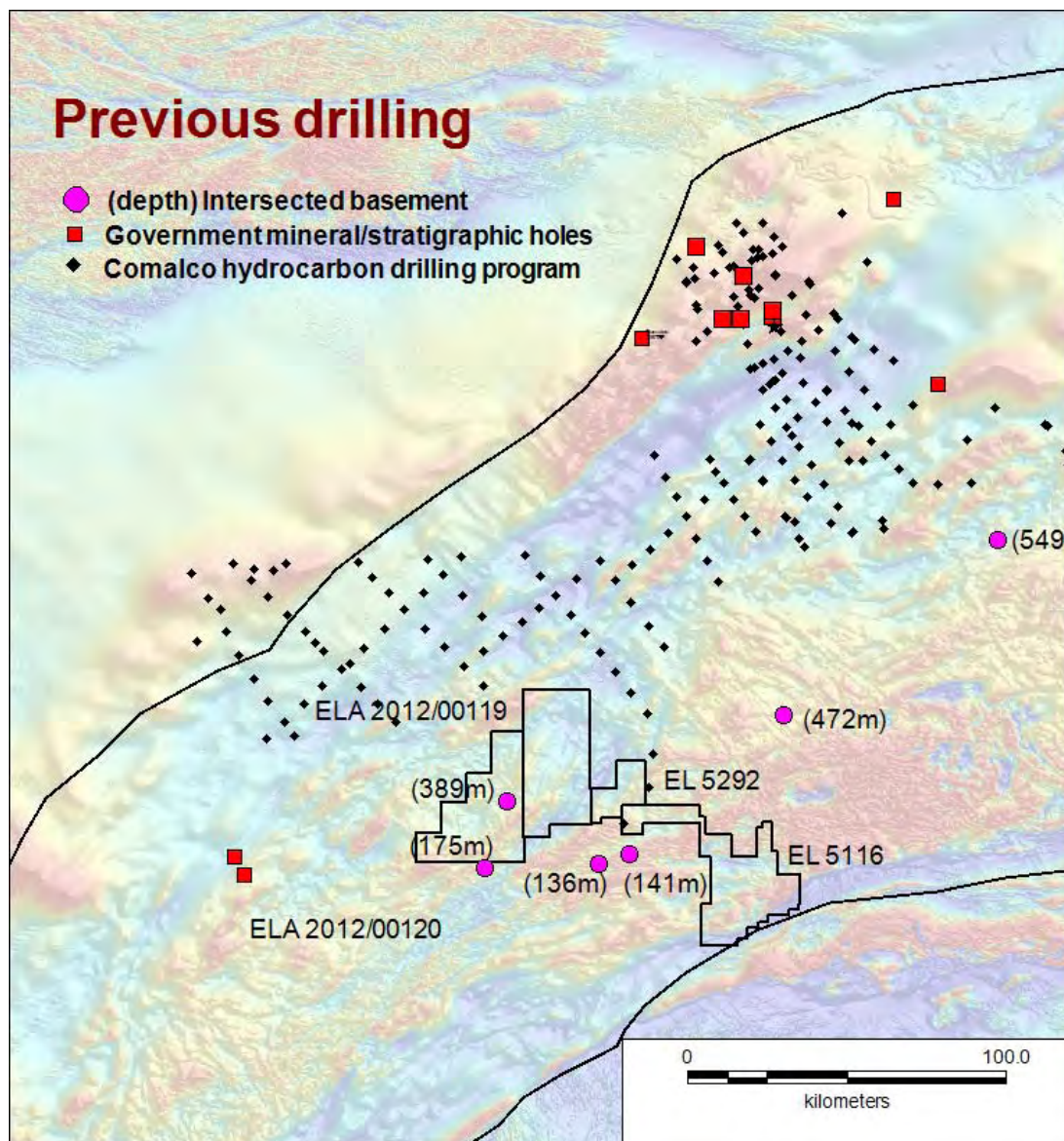
**Figure 6 – Arkaringa coal deposits**

Previous drilling activities in the project area is shown in Figure 8 and summarised below:

- 1974 -75 BP Minerals targeted coal in the Arkaringa 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.





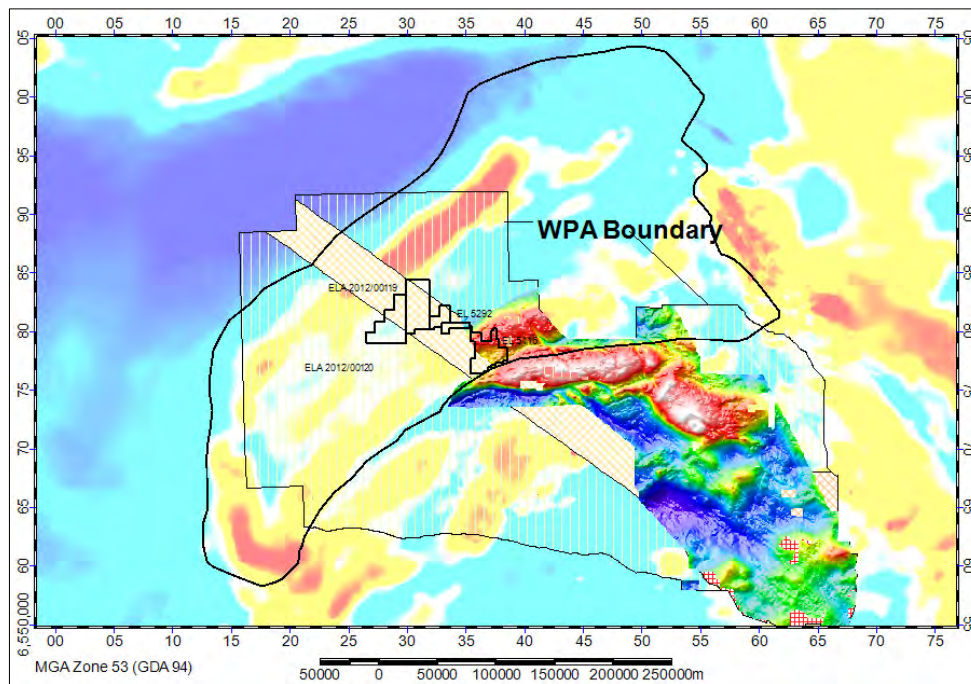
**Figure 7 – previous drilling**

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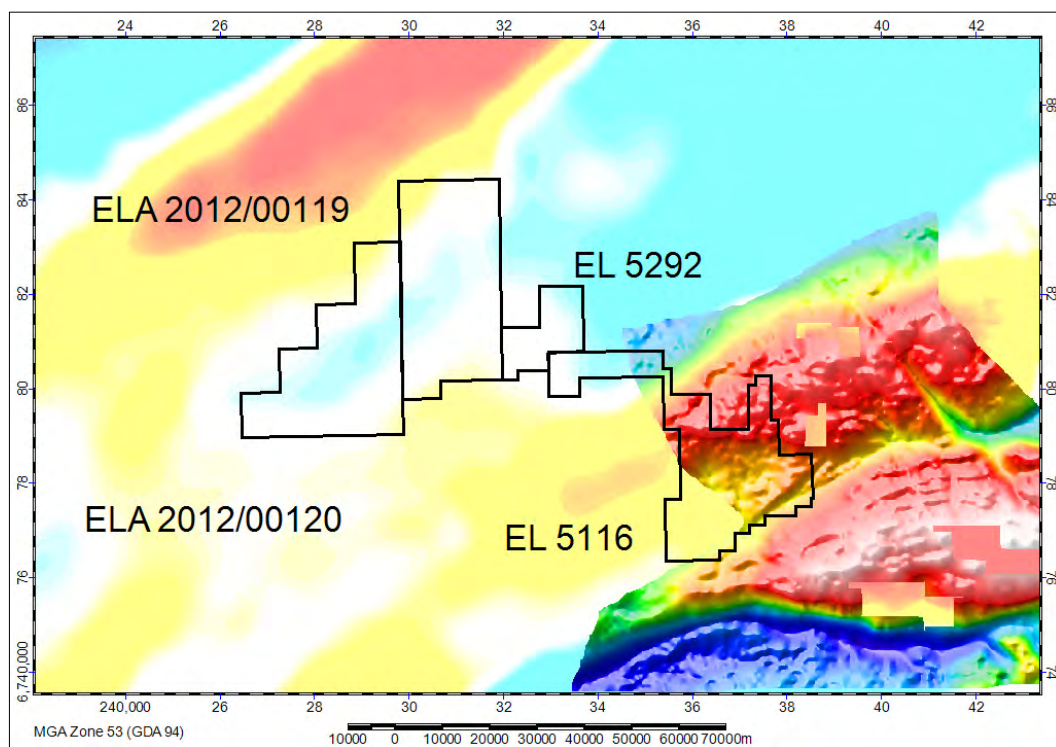
## **Proposed Exploration**

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**



5 October 2016

Attention: Nella Petruzzella

EL Reporting Officer  
DSD Mineral Tenements  
GPO Box 320  
Adelaide, SA 5001

**EL 5292 – Final Annual Technical Report for the period ending 24/6/2016**

On behalf of Norsa Exploration Pty Ltd I advise that there was no on-ground exploration conducted on the abovementioned tenement during the 12 months ending 24/6/2016.

Don Triggs  
Director  
Woomera Exploration Limited