



# Woomera Mining Limited

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23 April 2018

ASX Announcement

## CORPORATE UPDATE PRESENTATION APRIL 2018

Please find attached a corporate update presentation on the recent activities of Woomera Mining Limited (ASX:WML).

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### **About Woomera Mining Limited**

Woomera Mining Limited (Woomera) is an ASX listed exploration company based in Adelaide, South Australia with an extensive minerals tenement portfolio prospective for Copper, Lithium, Gold, Uranium, Iron Ore, Nickel and Cobalt. The Woomera tenement package includes four tenements in the Musgrave Province of South Australia with several drill ready targets (**Musgrave Project**) which is the subject of a binding Heads of Agreement with Oz Minerals (ASX: OZL) where Oz Minerals can elect to expend up to \$7.5m in exploration to gain up to 75% of the Joint Venture in the Musgrave Province with Woomera. Five tenements make up the Gawler Craton package (**Gawler Craton Project**) which are prospective for IOCGU deposits, Cu-Ni-Co deposits, RE and Precious Metals. Woomera's tenement portfolio also includes 8 granted tenements and two tenement applications including 3 tenements in the Pilbara region of WA (**Pilgangoora Lithium Project**), 2 lithium tenements near Ravensthorpe (**Mt Cattlin Lithium Project**) and several WA lithium brine prospects over Lakes Tay, Sharpe, Dundas, Cowan and Dumbleyung (**Lakes Lithium Projects**).

# Woomera Mining Limited



*Exploring the highly prospective Gawler Craton and Musgrave Province in South Australia and extensive lithium tenement portfolio in Western Australia*

April 2018

# Important Notice



## **This Presentation**

The information in this presentation (**Presentation**) has been prepared by Woomera Mining Limited (**Company**).

The mineral tenements of the Company as described in this Presentation (**Tenements**) are at various stages of exploration, and potential investors should understand that mineral exploration and development are high risk undertakings. There can be no assurance that exploration of the Tenements, or any other tenements that may be acquired in the future, will result in the discovery of economic ore deposits.

## **General Information Only**

This Presentation provides general information to assist you with your own evaluation of the Company's exploration assets. This Presentation is not, and is not intended to be, advice on legal, financial, taxation or investment matters nor is it intended to be financial product advice from the Company or any of its directors, employees, agents or advisers.

We are not responsible for any errors in or omissions from the Presentation, whether arising out of its negligence or otherwise. We make no representation or warranty, express or implied that the Presentation is accurate, reliable or complete; or is sufficient or appropriate for your purposes or contains all of the information that a prospective investor may require. You should not rely on the information in this Presentation. We have no duty of care to you or your advisors for the Presentation or anything in it. We are not responsible to you or anyone else for any loss (however caused, including as a result of our negligence) you or anyone else may suffer or incur if you rely on the Presentation.

## **No Recommendation**

This Presentation is not intended to be and is not a recommendation from either the Company or its directors, employees, agents or advisers regarding the Company.

# Competent Persons Statement



## Competent persons statement

*The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr Gerard Anderson, Managing Director of Woomera Mining Limited. Mr Anderson is a Member of the Australasian Institute of Mining and Metallurgy who has over forty-two years experience in the field of activity being reported. Mr Anderson has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' relating to the reporting of Exploration Results. Mr Anderson consents to the inclusion in the report of matters based on his information in the form and context in which it appears.*

## Forward looking statements

*The information in this presentation is published to inform you about Woomera Mining Limited and its activities. Some statements in this presentation regarding estimates or future events are forward looking statements.*

*Although Woomera Mining Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results and outcomes will be consistent with these forward-looking statements.*



## **Woomera Mining Limited Company Outline**

### **Musgrave Alcurra-Tieyon Project**

- OZ Minerals HoA
- Musgrave Alcurra – Tieyon Project Cavanagh Target
- Musgrave Area 3 Target
- Musgrave Area 4 Target

### **Gawler Craton**

- Labryinth Project
- Nawa Domain Project

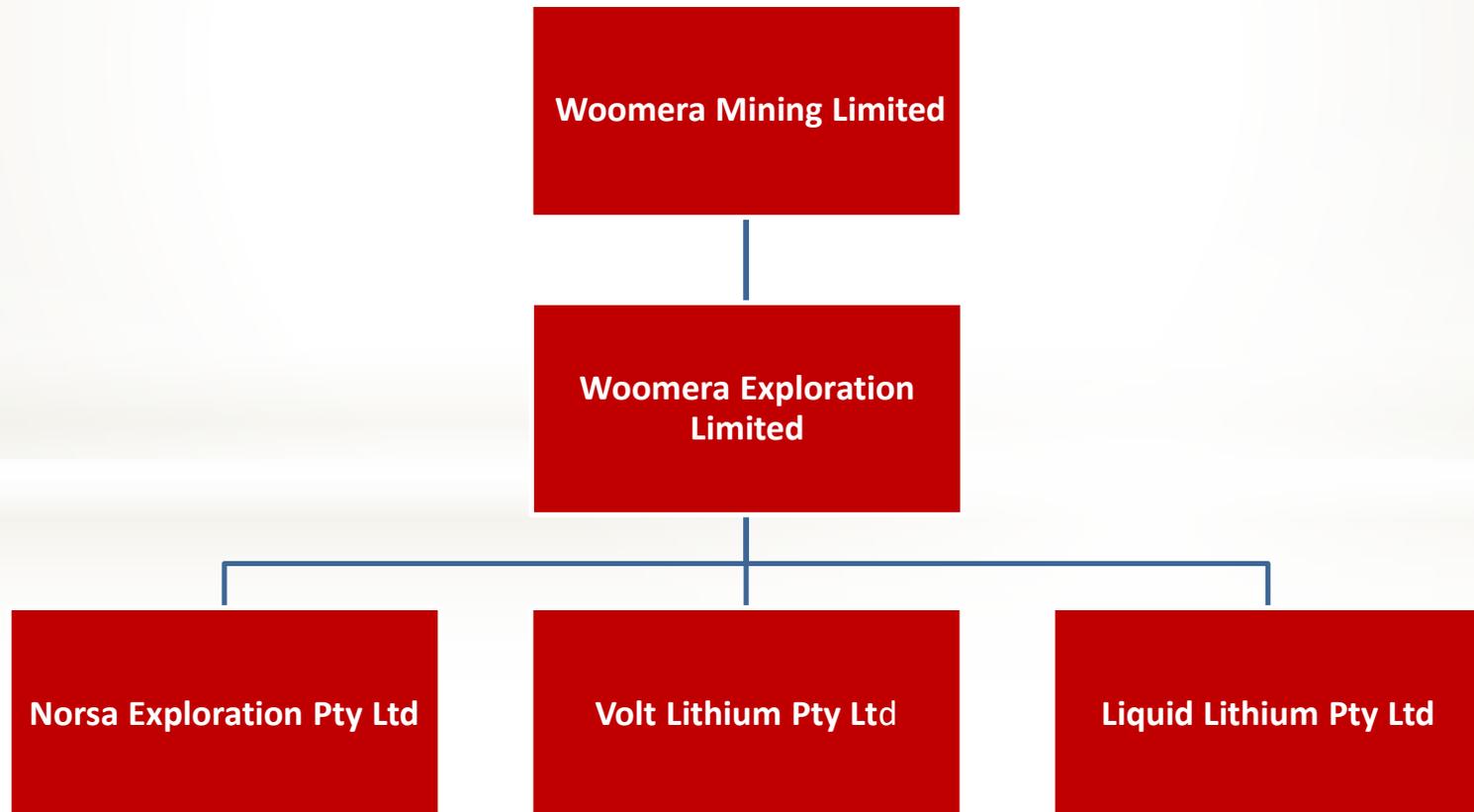
### **Hard Rock Lithium Projects**

- Pilgangoora Lithium Project
- Mt Cattlin Lithium Project

### **Q4 Exploration Plan**

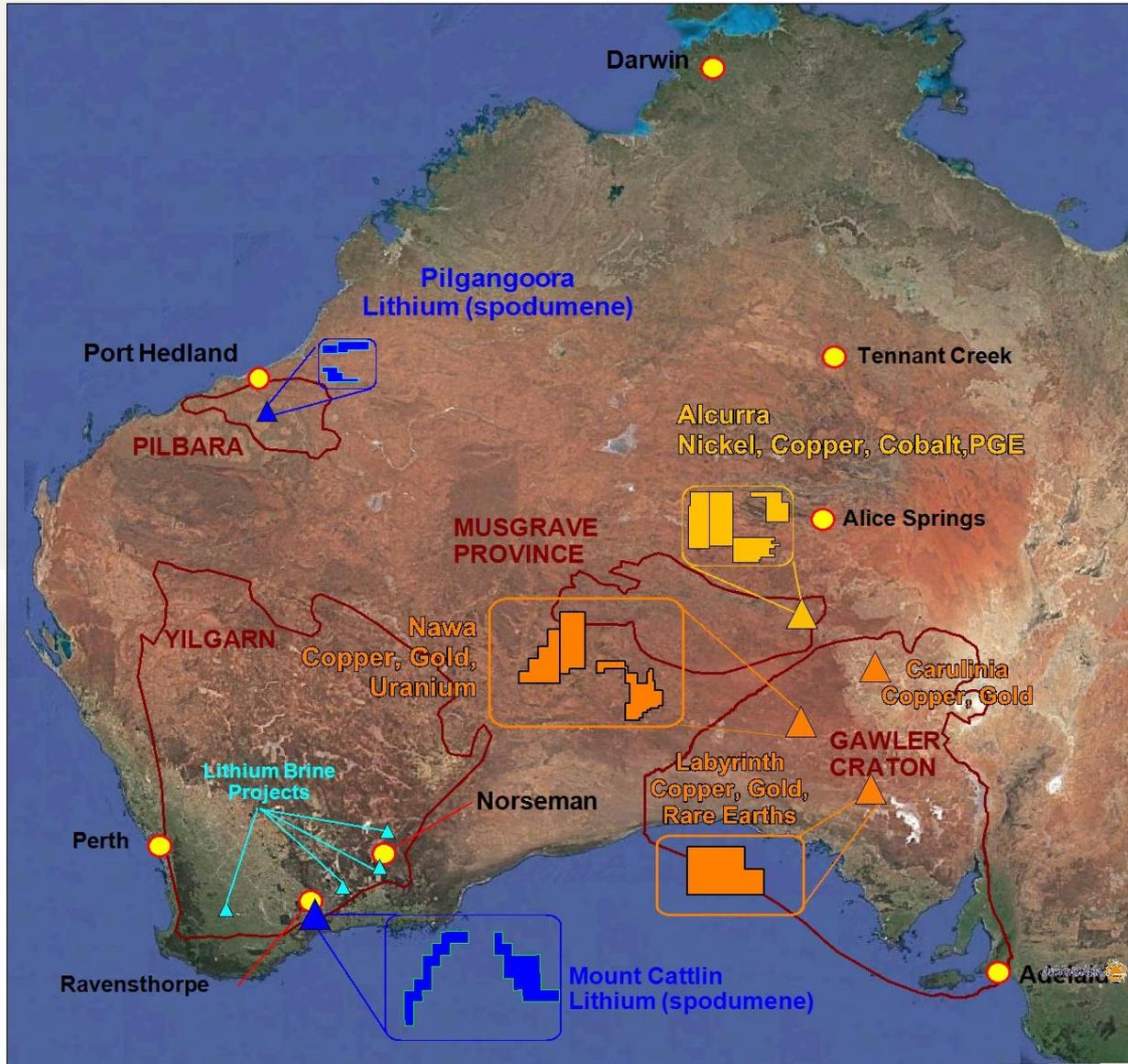


## Company Structure



**The Company successfully listed on the ASX on 5<sup>th</sup> March 2018. Focus on copper, nickel, cobalt, lithium and gold.**

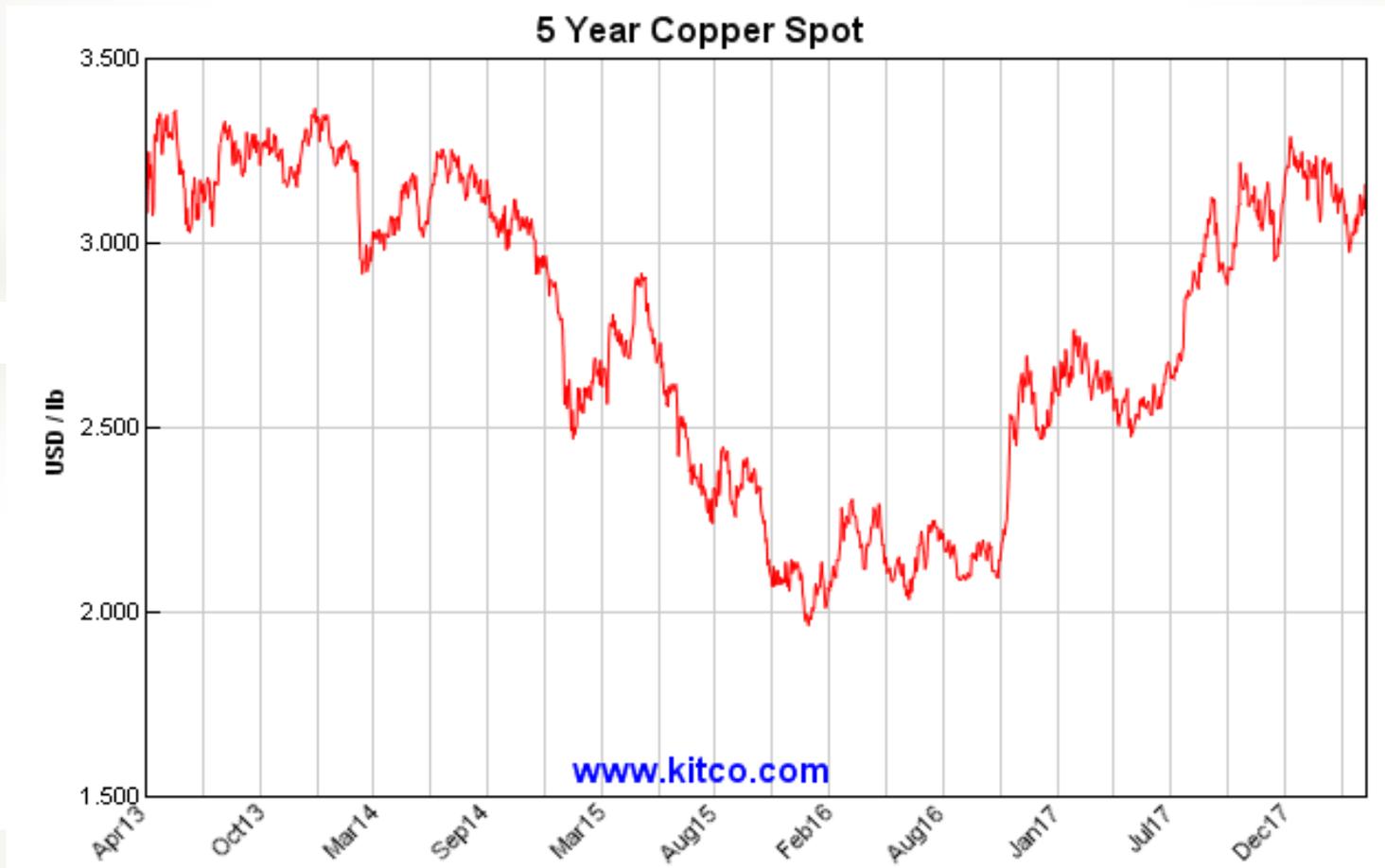
# 19 Tenements - Musgrave Province, Gawler Craton, West Pilbara and SE Yilgarn tenements - numerous drill-ready targets



- **PILGANGOORA LITHIUM PROJECT** - three tenements along the same structure controlling several major hard rock pegmatite deposits
- **MT CATTLIN LITHIUM PROJECT** Tenements around 16Mt Mt Mount Cattlin Lithium Tantalum deposit
- **LAKES LITHIUM PROJECTS** Tenements over Lakes Tay, Sharpe, Dundas, Cowan and Dumbleyung
- **MUSGRAVE ALCURRA-TIEYON PROJECT** –Binding HoA with Oz Minerals.
- **GAWLER CRATON** - Coincident gravity and magnetic anomalies at Carulina, Labryinth and Nawa to be drill tested

# 5-Year Copper Price

- The unique properties of copper mean that it remains the preferred metal in power generation and transmission, construction wiring, telecommunications and electric and electrical products.
- The global demand for copper continues to grow.



# 5-Year Nickel Price

- Nickel is not widely used in the production of stainless steels accounting for two-thirds of all uses. Other sectors of first use include other alloyed steels, high nickel alloys, castings, electro-plating, catalysts, chemicals and batteries.
- Nickel demand is continuing to grow around an annual growth rate of 5%.



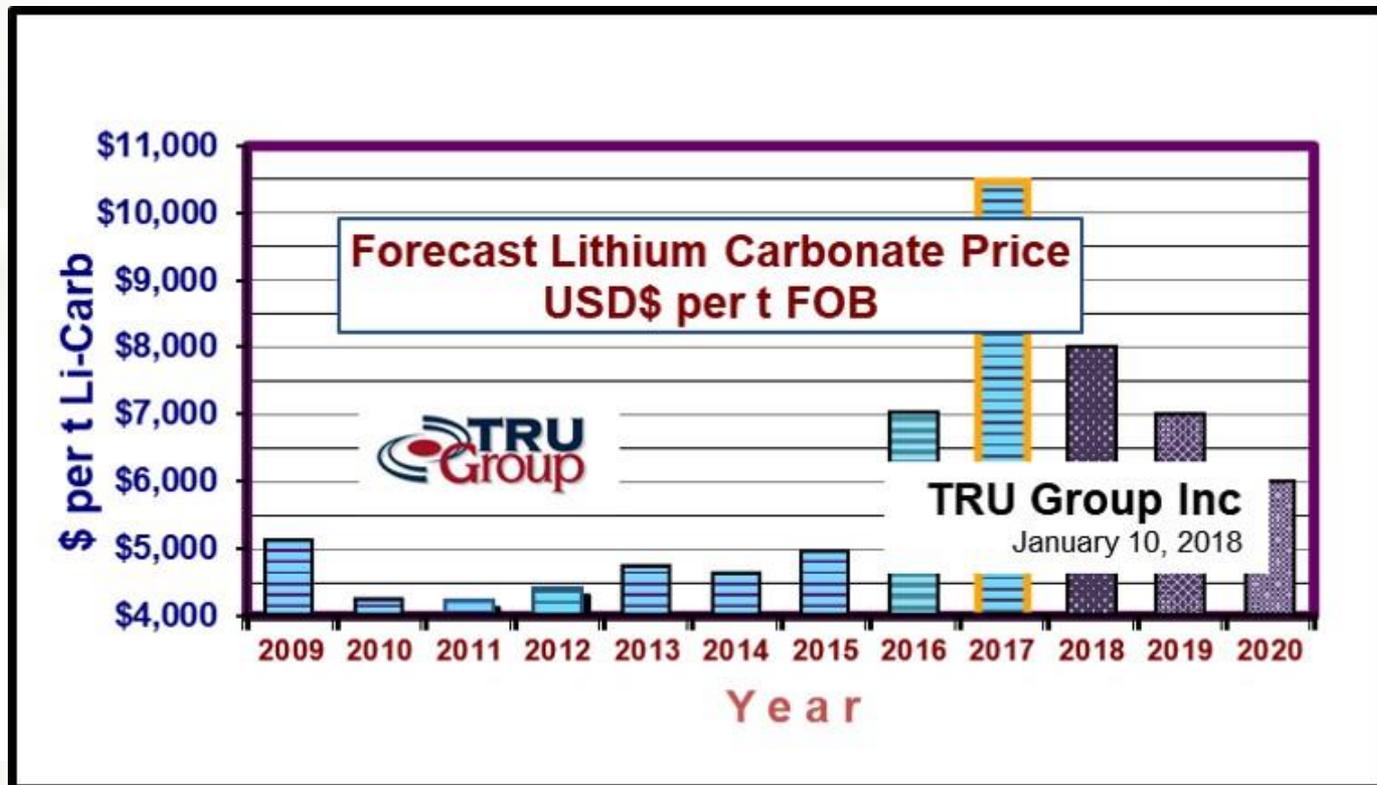
# 5-Year Cobalt Price

- Cobalt is primarily used in the preparation of magnetic, wear resistant and high strength alloys and batteries.
- The Democratic Republic of the Congo accounts for 60% of the World's production.
- Strong growth is predicted in the rechargeable battery and aerospace industries.



# Projected Lithium Carbonate Price - 2020

- Lithium is the lightest of all metals. It is never found in its elemental form.
- Lithium is usually extracted from chloride salts that can be found in brine pools or from fractionated igneous rocks (usually as spodumene-bearing pegmatites).
- Lithium has many uses going into glass, ceramics, pharmaceuticals, and aluminium and manganese alloys. The highest potential for growth is in lithium-ion batteries.

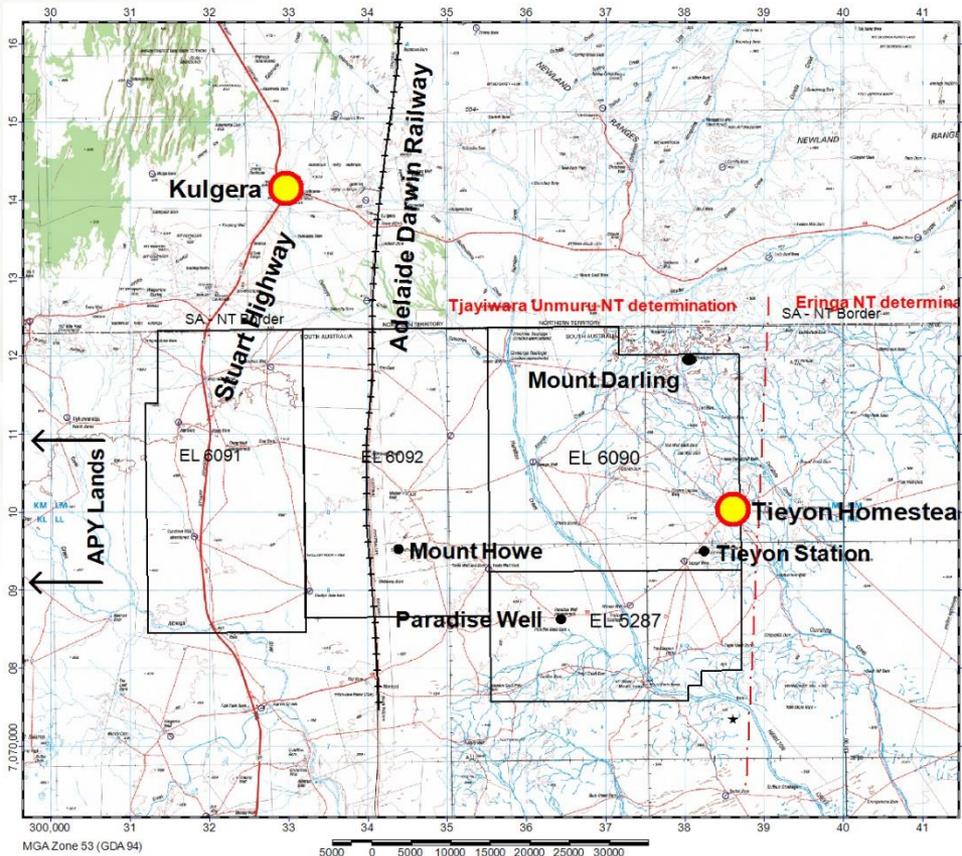




# Musgrave Alcurra-Tieyon Project

Four tenements prospective for nickel, copper, cobalt, gold, silver-lead-zinc, platinum group elements (PGE) and rare earths.

Adelaide to Darwin railway and Stuart Highway pass through the tenements



- Numerous drill ready targets identified from geophysics and government drilling
- Highly anomalous silver-copper-zinc-antimony rock samples reported in GSSA 2014 field study
- Recent discoveries in western Musgrave: **Nebo-Babel (203Mt @ 0.41% Ni 0.42% Cu)** and **Wingellina (187 Mt @ 1% Ni)**
- Musgrave Province – the least studied of Australia's Proterozoic Provinces.

## Musgrave Alcurra-Tieyon Project Tenements

# Musgrave Alcurra-Tieyon Project OZ Minerals HoA



On 11 September 2017, WEX entered into a binding heads of agreement with OZ Exploration Pty Ltd (ACN 137 626 914) (**OZ Exploration**) (a wholly owned subsidiary of ASX listed OZ Minerals Limited (ASX:OZL)) covering WEX's granted tenements and tenement applications tenements in the Musgrave Province in South Australia. OZ Minerals HOA is conditional on the execution of a Native Title Mining Agreement (**NTMA**) with the Tjajiwara Unmuru.

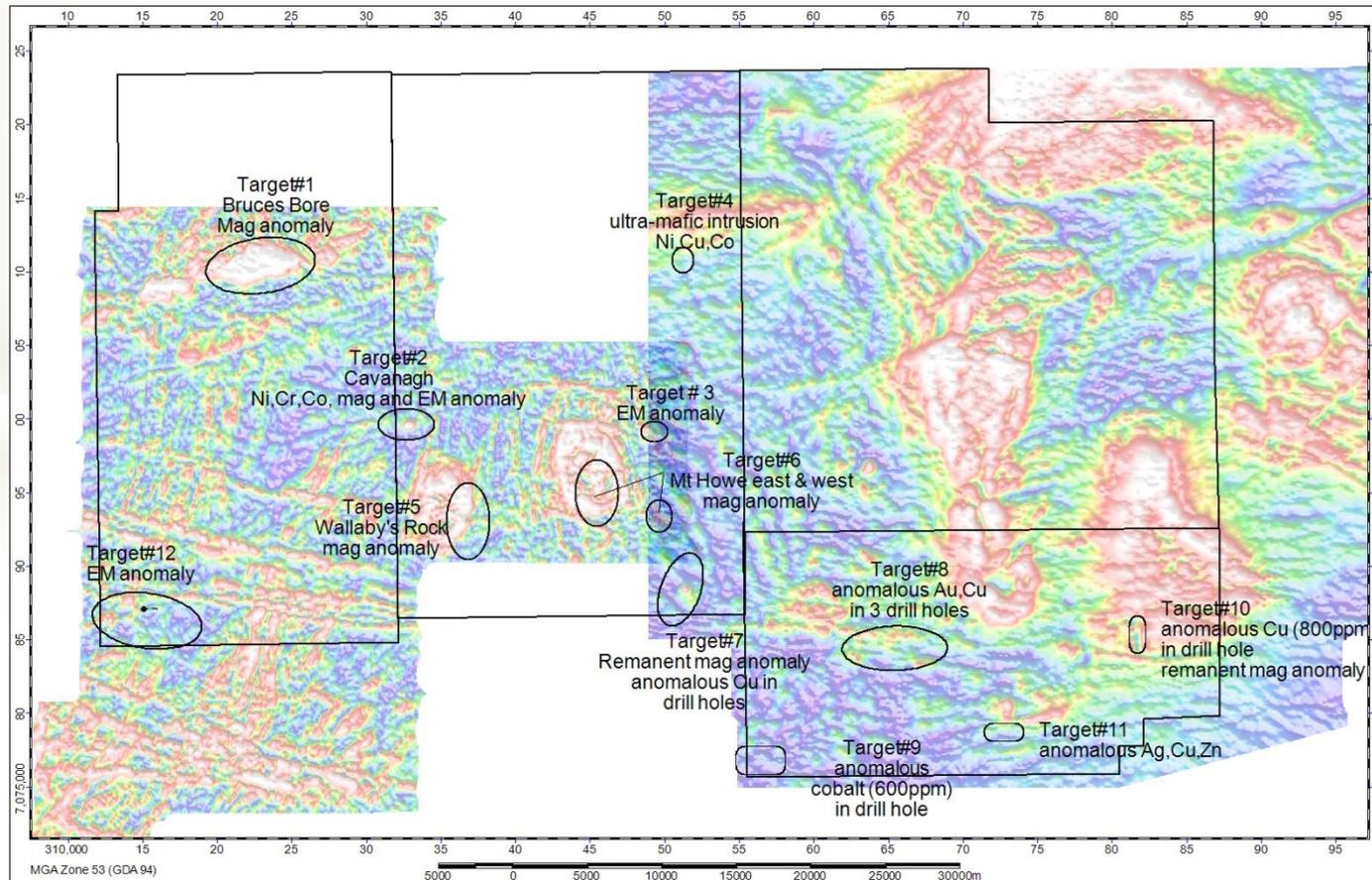
The key terms of the OZ Minerals HOA are as follows:

- **Stage 1 Commitment** – within 12 months after signing a NTMA , OZ to fund exploration which will be managed by WEX and will consist of detailed ground EM and the drilling of 3,850m RC drilling of seven of the 12 targets identified thus far.
- **Stage 2 Commitment** – OZ to fund \$2,500,000 of exploration expenditure (inclusive of the Stage 1 Commitment expenditure) within 18 months. When OZ Exploration has met its Stage 2 Commitment, OZ Exploration entitled to a 51% interest in the Musgrave Tenements. On Oz Exploration earning a 51% interest in the Musgrave, a joint venture will come into effect with the initial joint venture interest being: OZ Exploration 51% and WEX 49%;
- **Stage 3 Commitment** - Within 60 days of the commencement of the joint venture, OZ Exploration may elect to earn a further 24% interest in the Musgrave Tenements by spending a further \$5,000,000 on exploration within 24 months of the commencement of the joint venture. Upon meeting its Stage 3 Commitment, OZ Exploration will become entitled to hold a 75% interest in the Musgrave Tenements and the parties must execute all documents required under the South Australian Mining Act 1978 (SA) to effect such outcome.

# Musgrave Alcurra-Tieyon Project – Targets

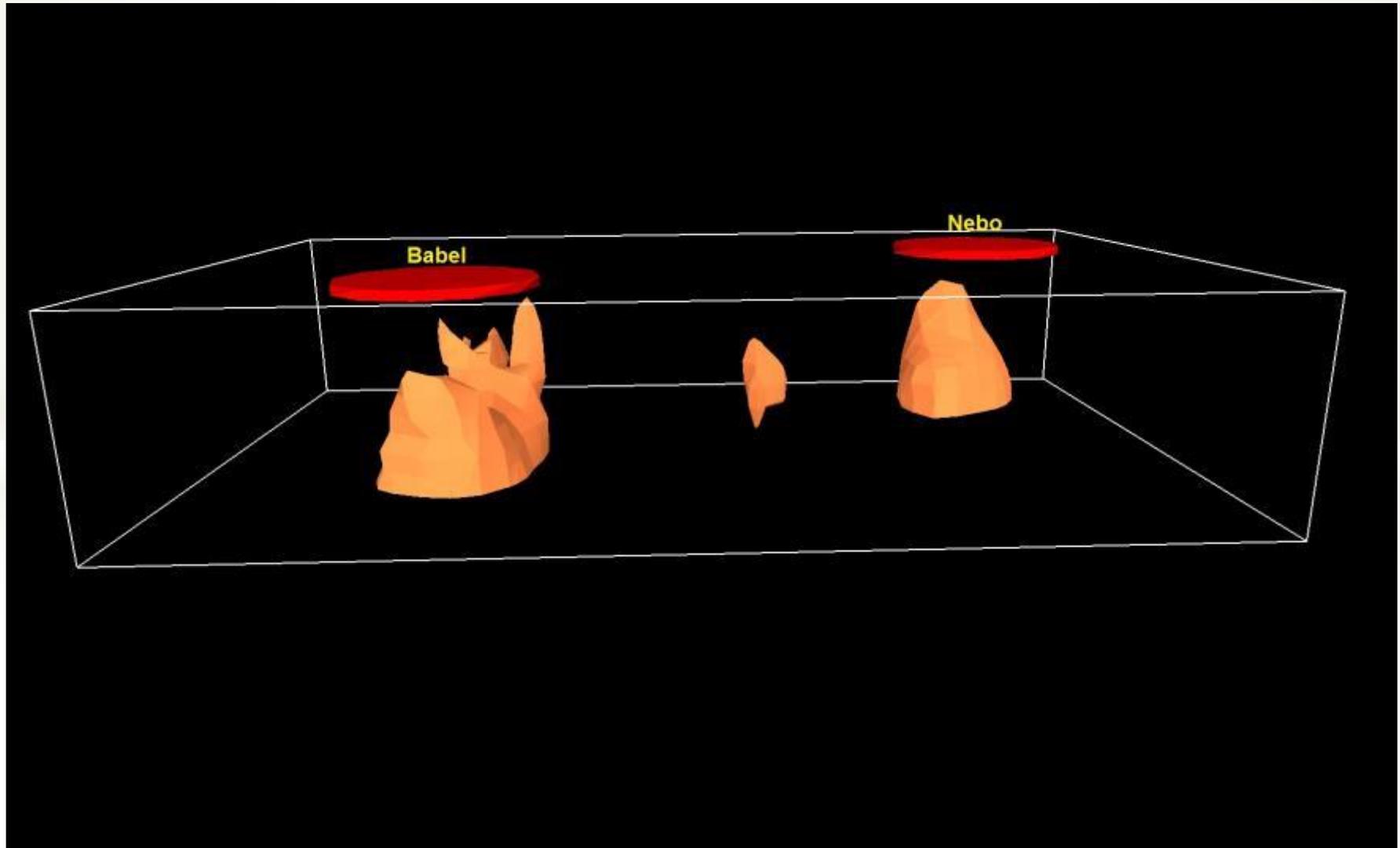


Woomera has identified **12 exploration drill targets** based on historic geophysical and geochemical data. Strong evidence of extensive Giles Complex ultramafic intrusive rocks with excellent potential for Ni, Cr, Cu, Co, Au and PGE deposits.



**Vector Residual Magnetic Intensity (VRMI)**

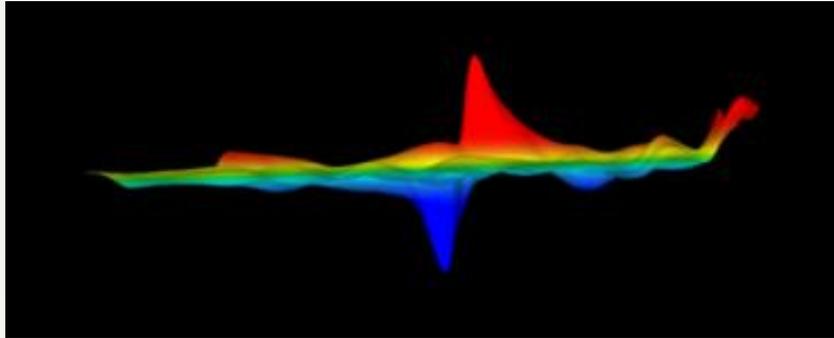
# Musgrave Alurra-Tieyon Project – VRMI processing of magnetic data over Nebo-Babel reveals high quality fit



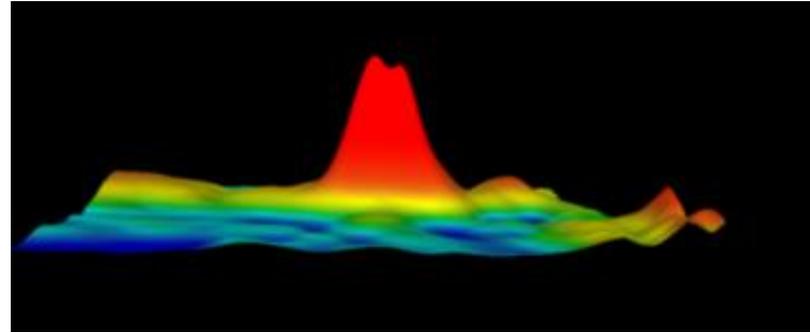
# Musgrave Alcurra-Tieyon Project – priority drill target Cavanagh (Area#2)



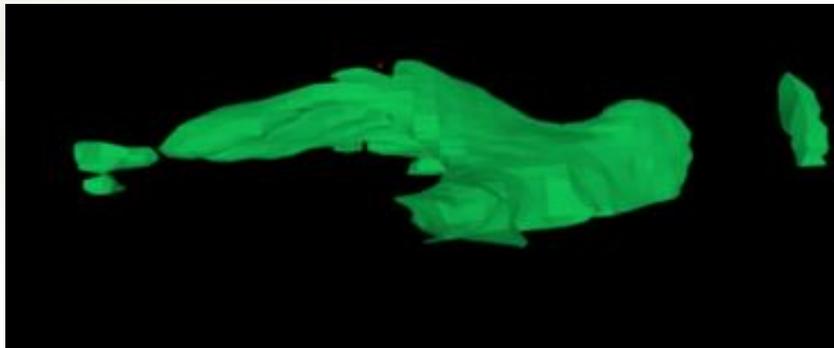
As with much of the project area there is strong remanent magnetism at Cavanagh together with high assay values of Ni, Cr, Co, Cu and Pd recorded in a 28m RC drill hole



TMI magnetic dipole



Magnetic field after VRMI correction



Evidence of remanence



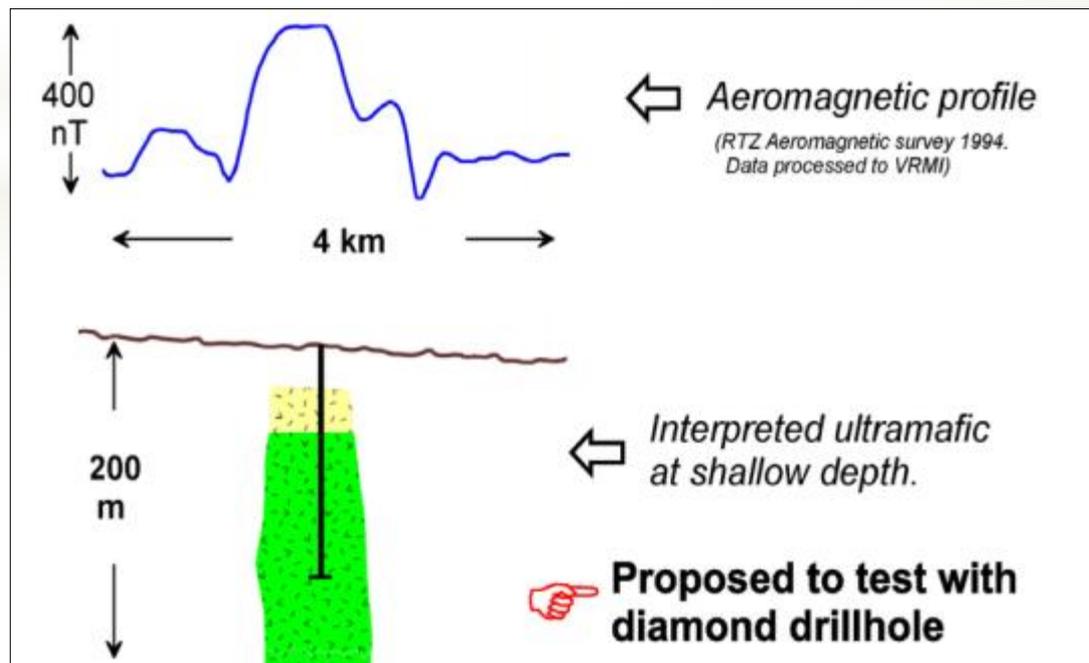
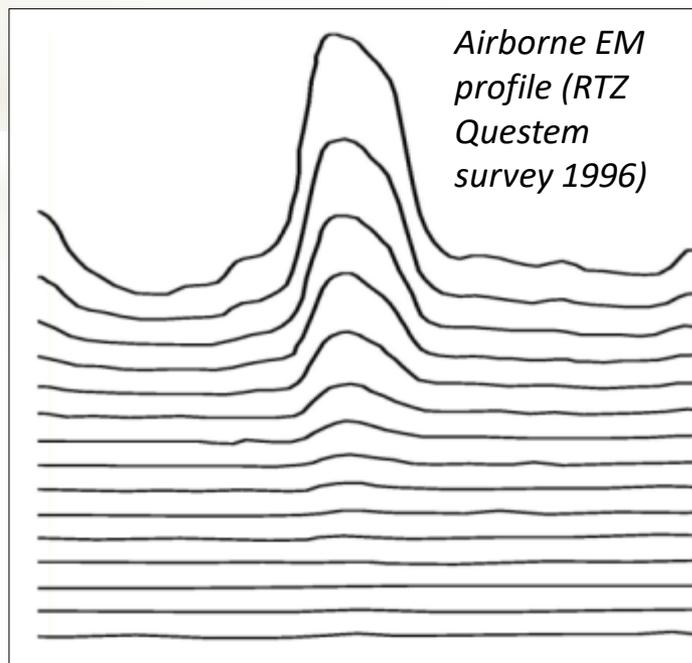
Modelled body with CRAE drill hole (~400m wide)

- The reverse dipole as observed in the TMI was investigated by CRAE around 1995
- Using 3D Inversion methods and VRMI filters WEX has modelled the magnetically susceptible body that causes the dipole

# Musgrave Alcurra-Tieyon Project – priority drill target Area#3



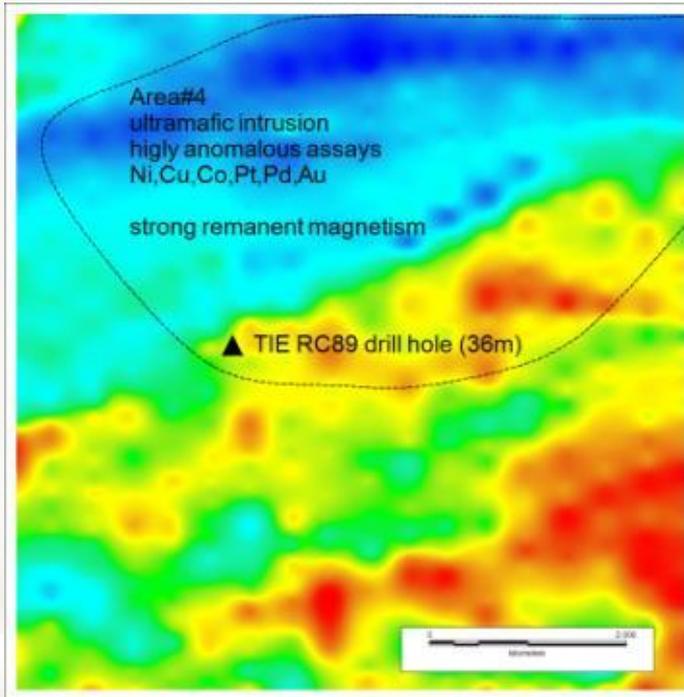
- First noted by RTZ in 1997 after flying four experimental EM lines.
- RTZ recommended follow up but was abandoned at the time of RTZ/CRA merger.
- Interpreted as layered ultramafic complex with potential for Ni, Cu and PGEs.
- Magnetic 3D inversion modelling allowing for remanence predicts a susceptible body at ~100m and several hundred metres in length
- Plan to follow up with more EM to delineate conductor and test with DDH.



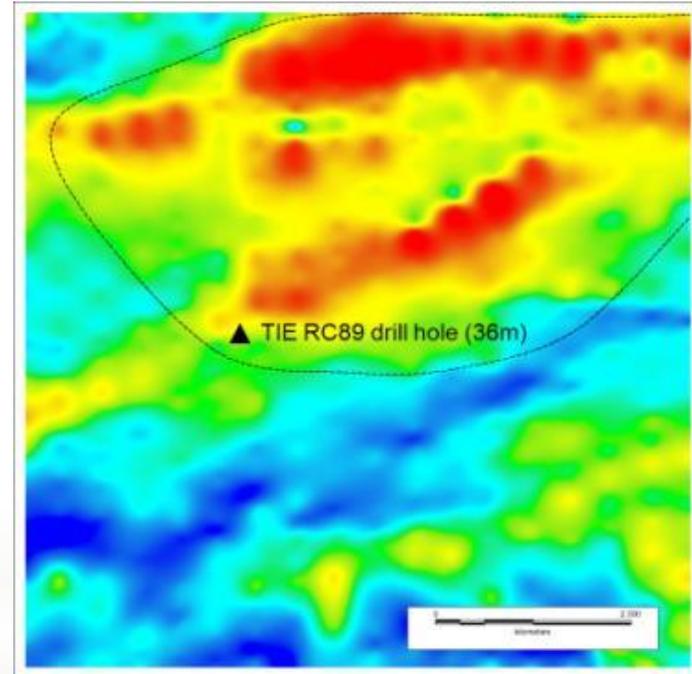
# Musgrave Alcurra-Tieyon Project – priority drill target Area#4



TMI



VRMI

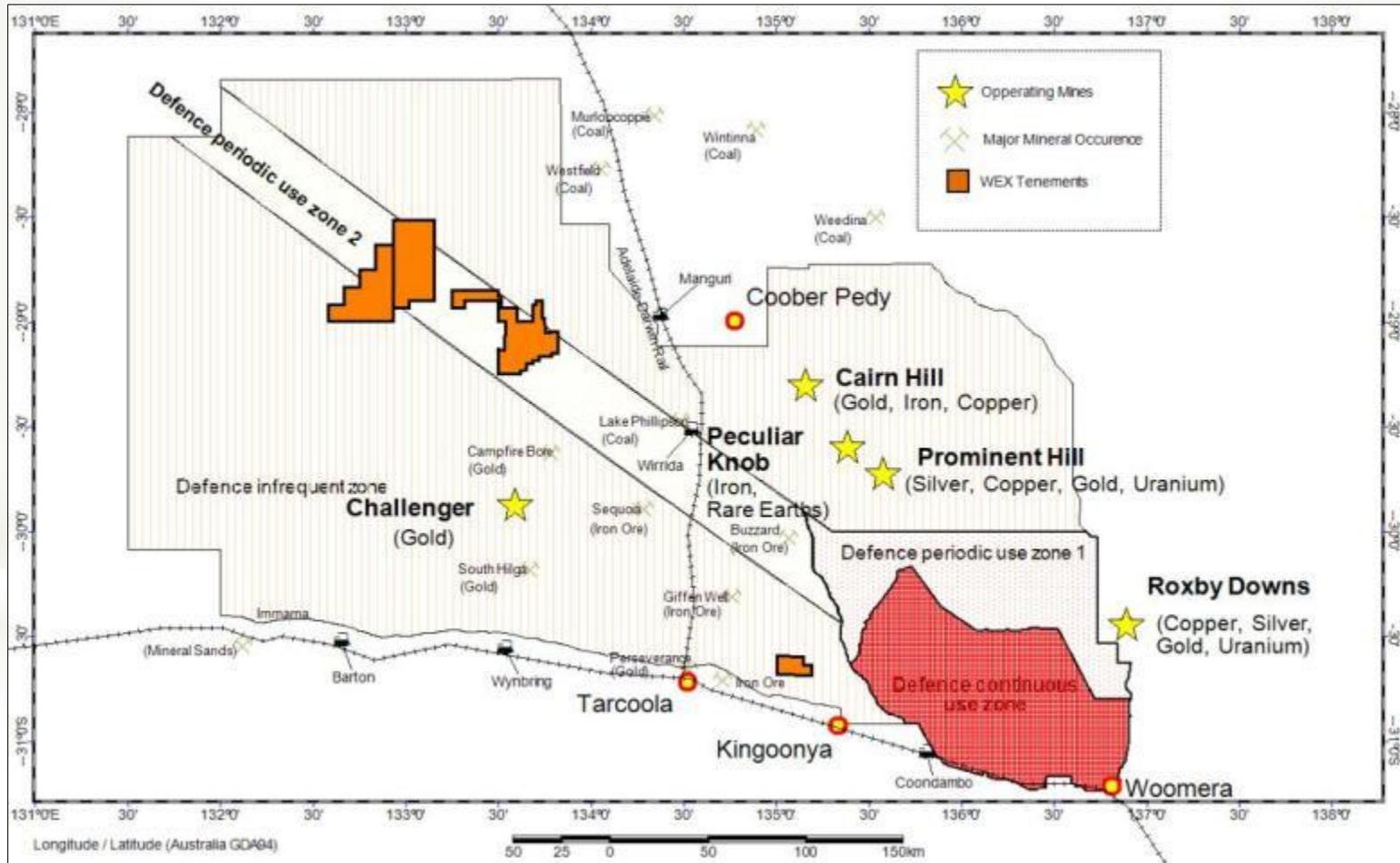


- Extensive area of remanently magnetised rock which when removed reveals large region of high magnetic susceptibility
- Geochemistry in TIE RC89 indicative of ultramafic intrusives – most likely Giles Complex
- **Sulphides as chalcopyrite, pyrite, and pentlandite, occur within the mylonitised (re-crystalised) rock**
- **Larger sulphide blebs up to 0.6 mm occur in less deformed areas and consist of variable proportions of pyrite, pyrrhotite, chalcopyrite and pentlandite**

From	To	Au(ppb)	Co(ppm)	Cu(ppm)	Ni(ppm)	Pd(ppb)	Pt(ppb)
0	2	1	17	11	64	7	5
2	10	2	72	80	450	39	15
10	16	3	94	88	600	43	25
16	22	8	120	60	750	59	50
22	30	5	150	61	950	75	55
30	34	2	150	58	900	65	35
34	36	3	130	58	750	58	35

Drill hole assays showing anomalous Ni, Cu, Co, Pd and Pt

# Woomera Prohibited Area project locations



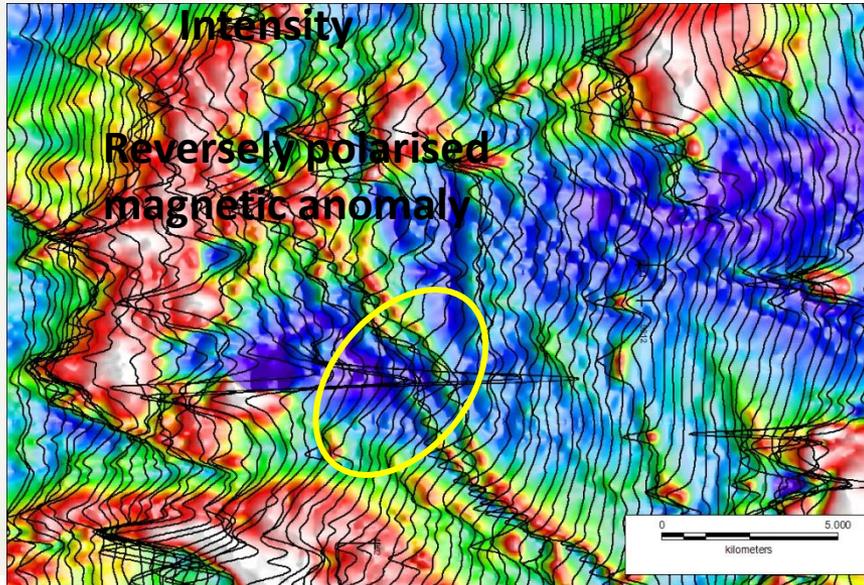
WEX tenements within WPA Periodic Use Zone 2 and Defence Infrequent Use Zone.

SA Government estimates that the economic potential for the WPA for the next ten years exceeds \$35 billion of developments, including iron ore, copper, gold and uranium projects.

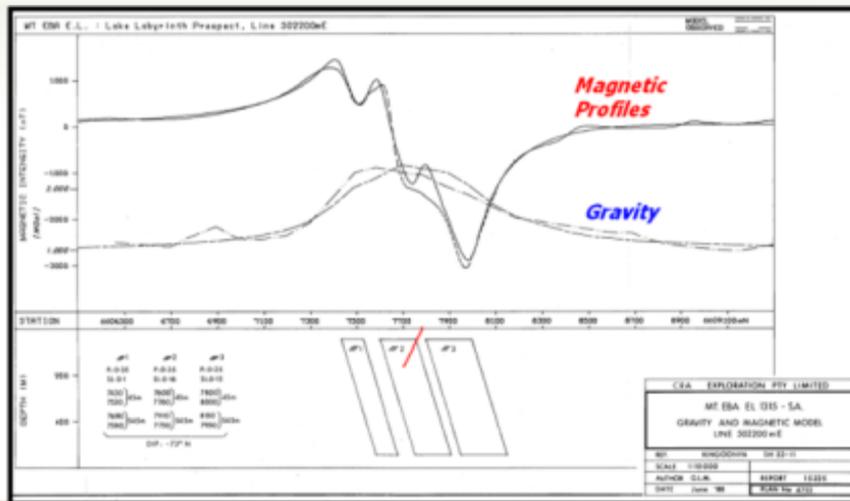
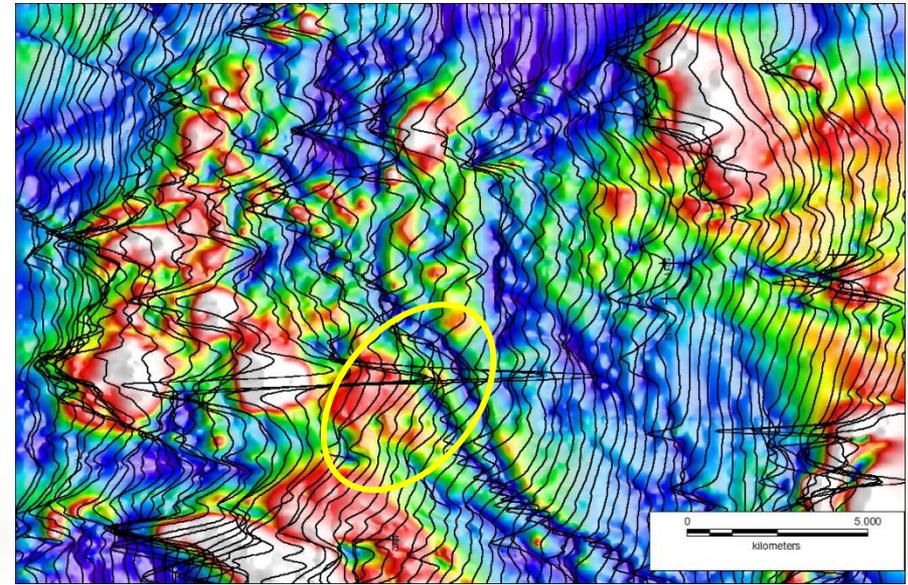
# Labyrinth Project – Copper, Gold and Rare Earths



## Reprocessed Total Magnetic

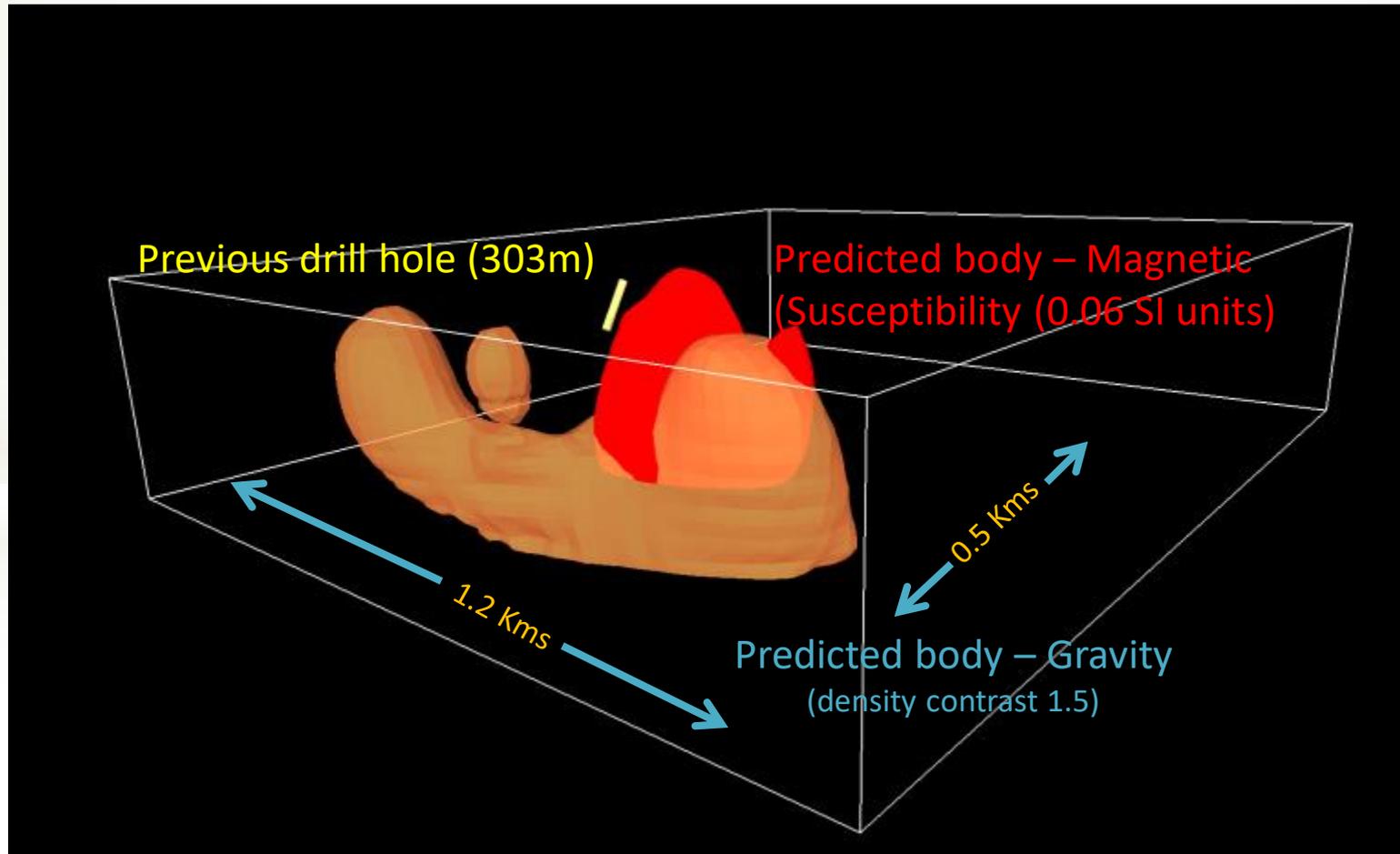


## VRMI Corrected



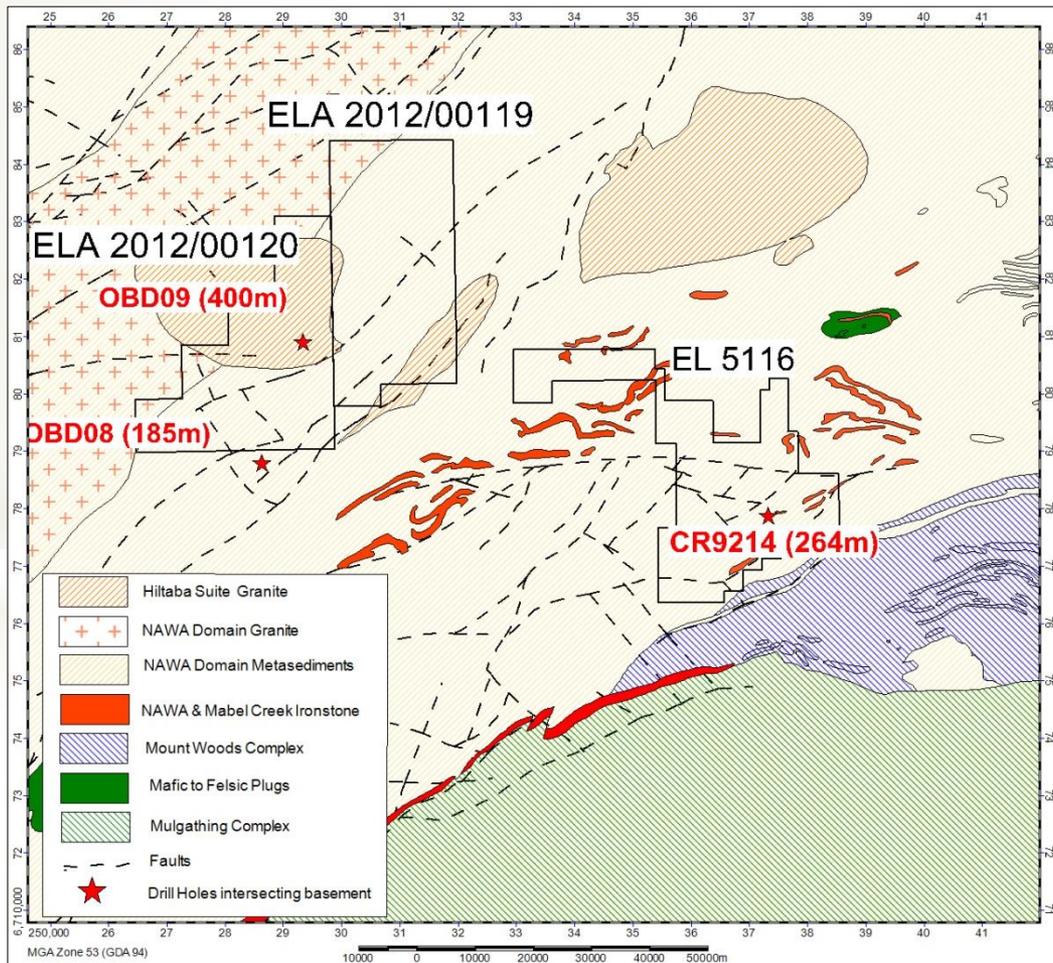
- CRAE drilling (1988) intersected a sequence of volcanics and mafic/ultramafic rocks at 69 metres - interpreted as Wiltabbie Volcanics
- Elevated copper (max 2230 ppm) and neodymium (max 206 ppm)
- Magnetic and gravity data with advanced modelling has relocated targets for follow up drilling

# Labyrinth predicted body



Drilling program to test the predicted model

# Gawler Craton Nawa Domain – Geology & Drilling

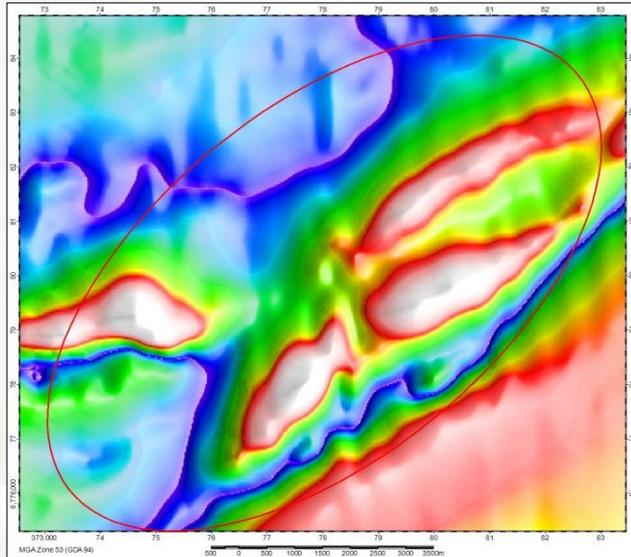


- Coincident magnetic and gravity anomalies tested by BHP in 1992 with drill hole CR9214 (264m)
- Intersected basement at 236m and terminated in Mount Woods complex which hosts Prominent Hill and Cairn Hill IOCG deposits
  - Graphitic, siliceous ultramafic rocks from 236m to 240m
  - Graphitic quartz magnetite unit from 240m to 254m
  - Pyritic gneiss 254 to 262m (best assays 130ppm Cu, 26ppm Zn and 20ppm Pb)
- Prospective for IOCG, BIF and gold deposits.

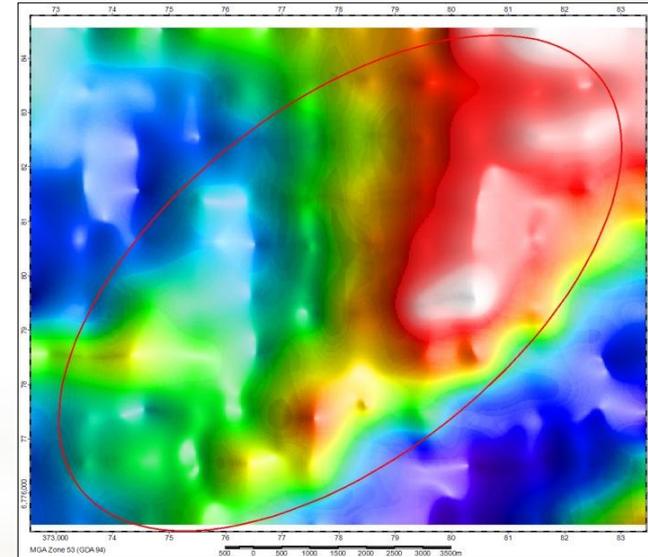
# Gawler Craton Nawa Domain – Coincident magnetic and gravity anomalies



## Magnetic Anomaly

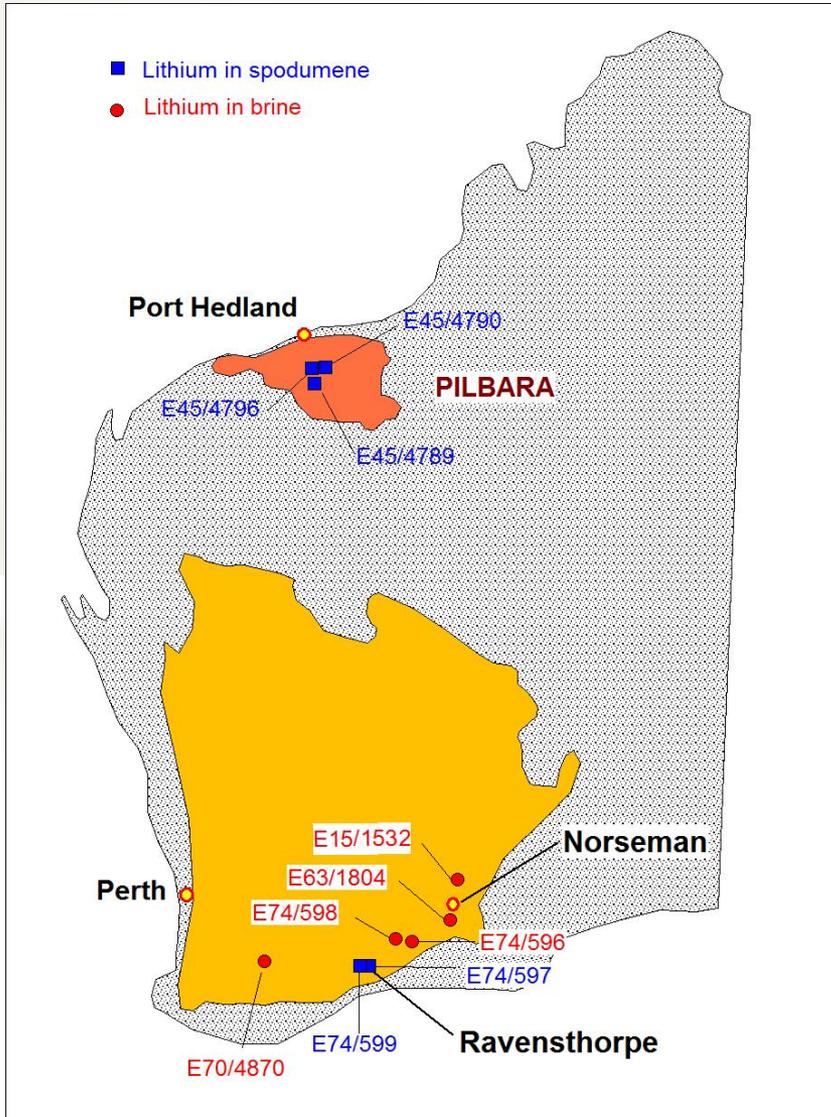


## Gravity Anomaly



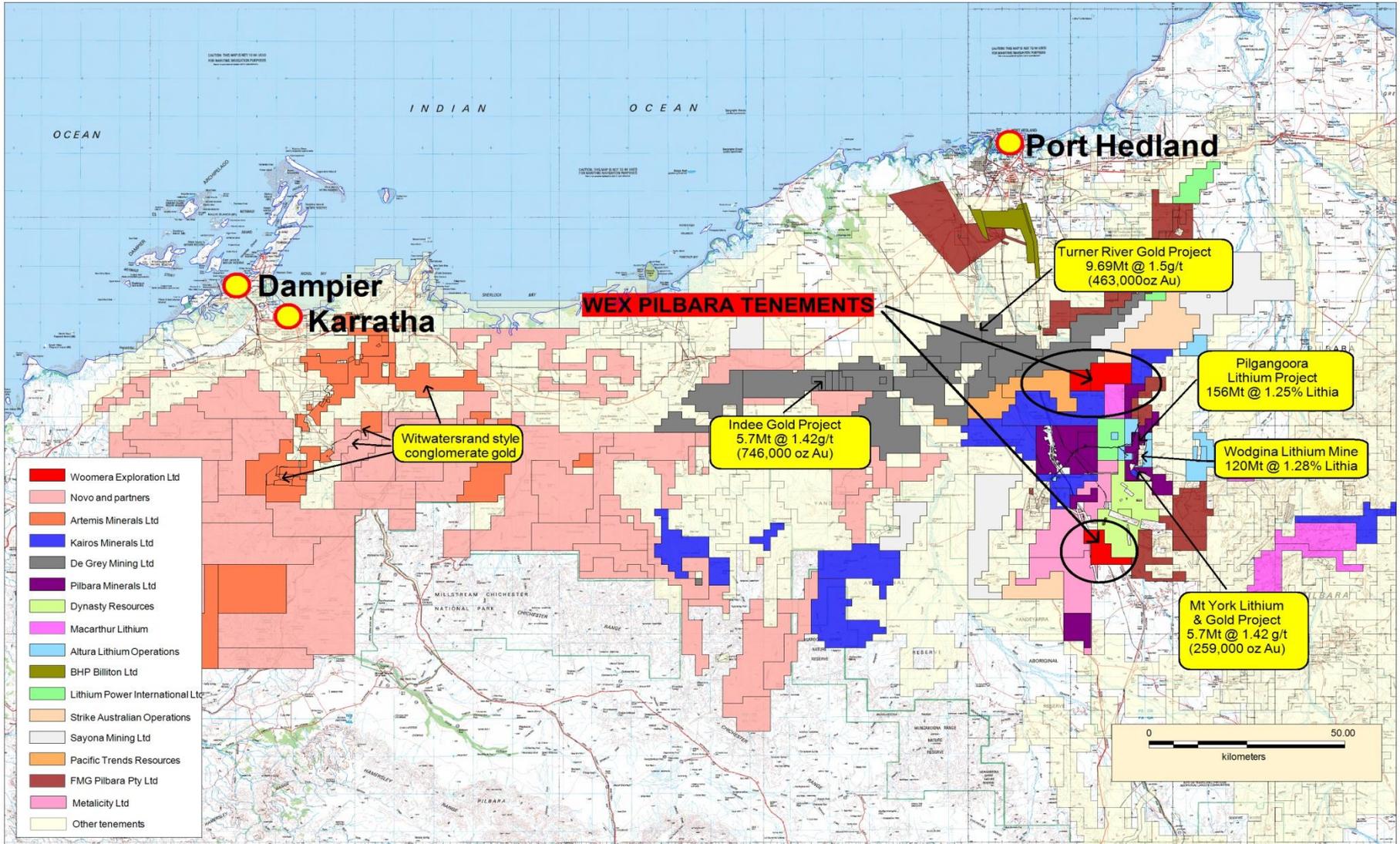
Area circled in red highlights coincident magnetic and gravity anomalies

# Pilbara and SE Yilgarn Lithium Tenements

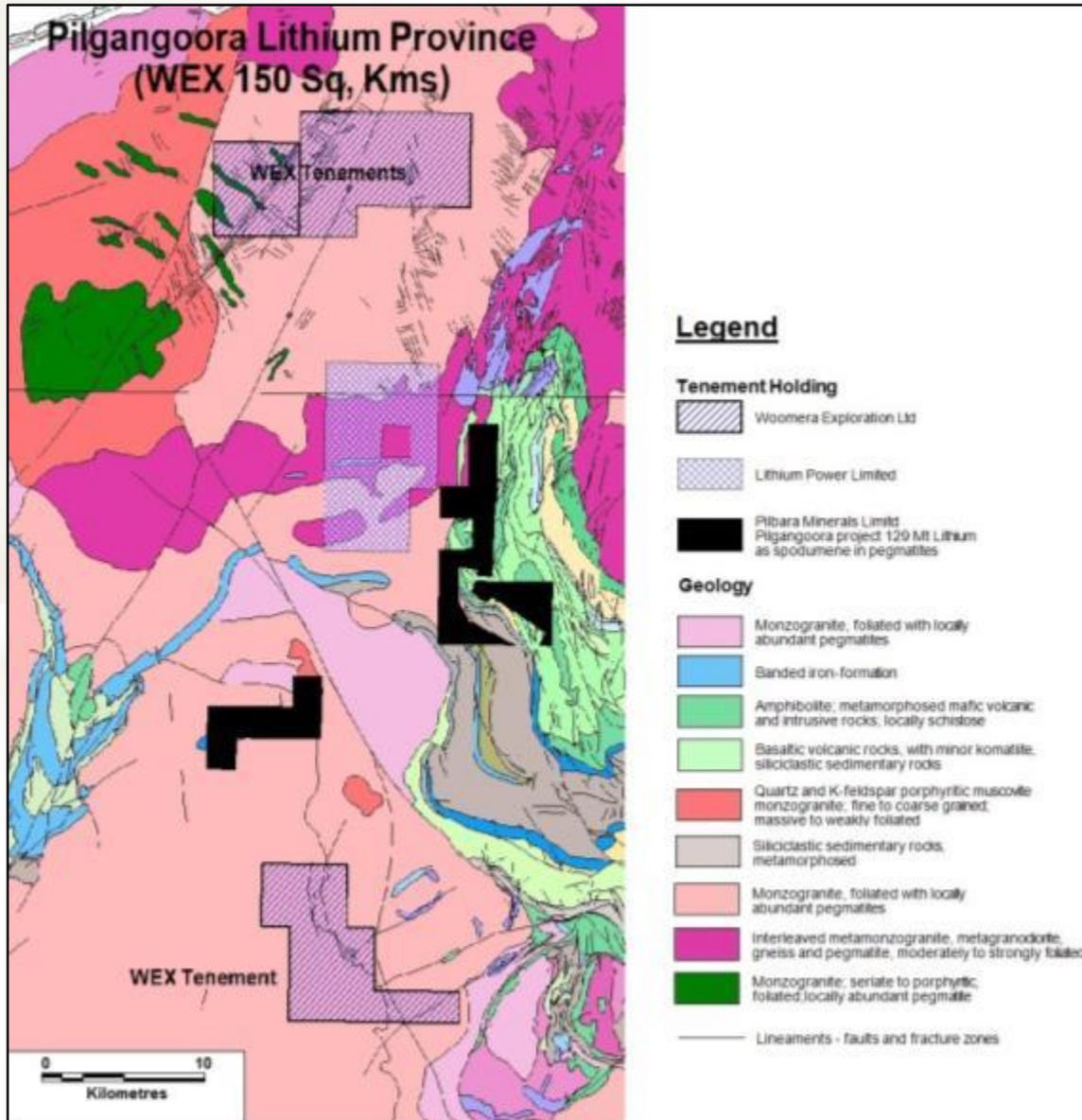


- Woomera acquired 100% of the issued capital in Volt Lithium Pty Ltd and Liquid Lithium Pty Ltd upon successful listing.
- Assets are 10 lithium tenements in WA
- Pilbara tenements in the Pilgangoora province which hosts several major hard rock lithium deposits
- Ravensthorpe tenements close to the Mt Cattlin spodumene mine
- Tenements covering lakes Tay, Sharpe, Dundas, Cowan, Dumbleyung that have been identified by Geoscience Australia for their high concentrations of lithium in brine

# Pilbara Hard Rock Lithium Tenements

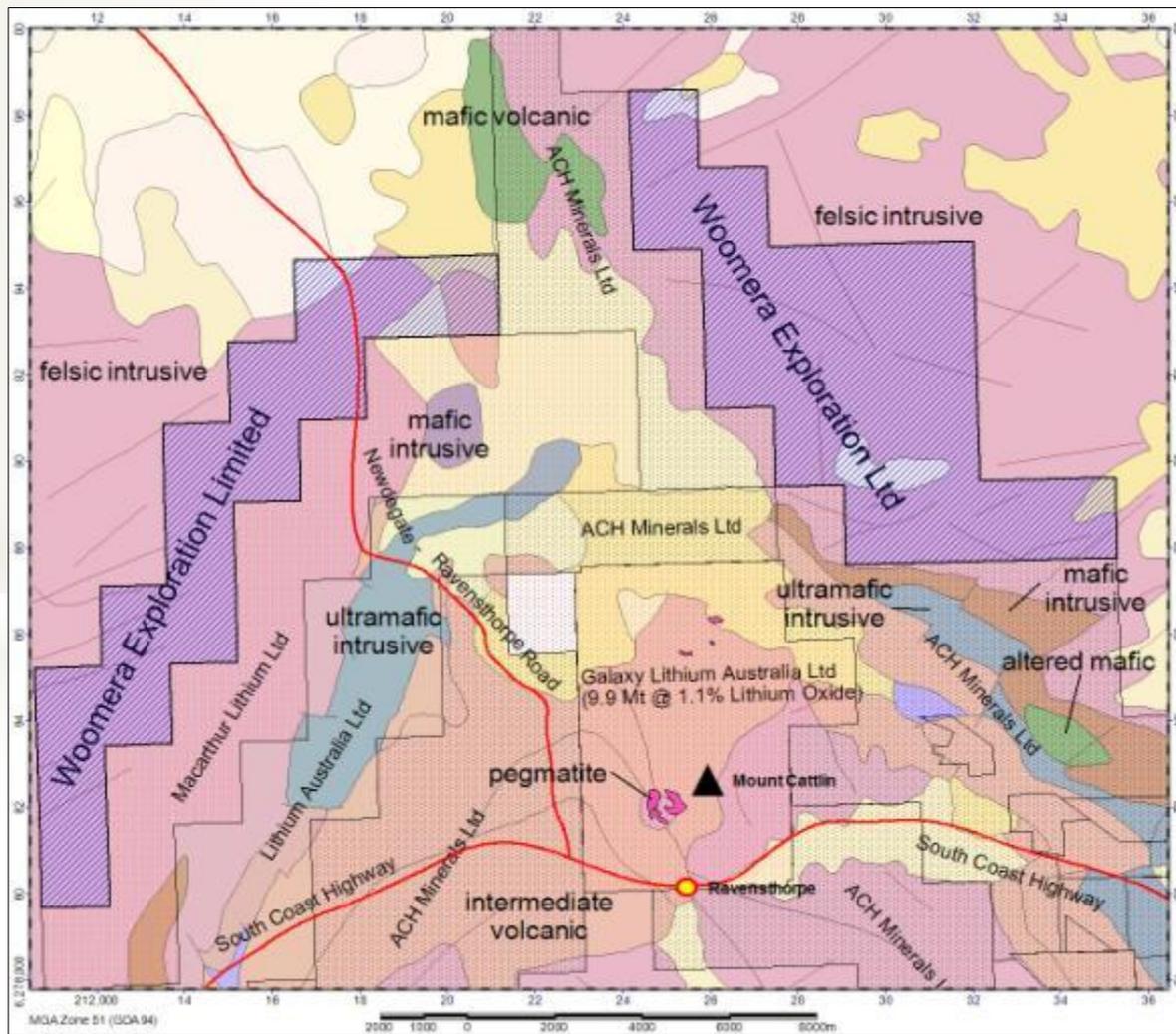


# Pilgangoora Hard Rock Lithium Project



- WEX's tenements lie in the same granitoid complex that hosts several major lithium deposits including Pilbara Mineral's Pilgangoora deposit (156.3Mt @ 1.25% Li<sub>2</sub>O).
- Northern tenements are on a highly fractured NE trending structural corridor (the Wodgina-Strelley lineament) where the monzogranites have locally abundant pegmatites
- Wodgina-Strelley Lineament – passes directly through tenements
- South west of WEXs tenements along Wodgina-Strelley lineament is the Wodgina lithium deposit (120Mt @ 1.28% Li<sub>2</sub>O) and east is Altura Mining (40.3Mt @ 1.0% Li<sub>2</sub>O))
- Southern tenement is on the edge of the east Pilbara granite greenstone terrane known for rare earth mineralised pegmatites

# Mount Cattlin Hard Rock Lithium Project



- In the same volcanic province that hosts the Mount Cattlin spodumene mine owned by Galaxy Lithium Australia Ltd
- Mt Cattlin deposit 16Mt @ 1.08% Li<sub>2</sub>O and 149 ppm Ta<sub>2</sub>O<sub>5</sub>
- Cross cutting faults and shear zone similar to Mt Cattlin
- Not previously explored for Lithium
- Also prospective for gold and base metals

Mount Cattlin tenements with geology and neighbouring tenement holders

# Q4 2018 Exploration Plan

## **Musgrave Alcurra-Tieyon Project**

- Native Title Mining Agreement with the Tjayiwara-Unmuru Aboriginal Corporation on the 23<sup>rd</sup> March. The Agreement has been lodged with the Mining Registrar.
- Conduct a Site Clearance Survey with members of the Aboriginal Corporation.
- Prepare and lodge an Exploration Plan for Environmental Protection and Remediation (E-PEPR) with DPC for approval to conduct the exploration program.
- Conduct ground-based moving loop EM survey.
- Conduct 4,000m RC drill program on 7 of the 12 anomalies. NB the EM will provide the detail needed to ensure appropriate drill coverage is achieved. Drilling could commence late Q4 although more likely to start in July 2018.

## **Hard Rock Lithium Projects**

- For Pilgangoora we will need a NTMA or ILUA before ground activities can commence.
- We have identified the drilling target and will commence once all approvals have been received.
- We will also look at opportunities to increase our exploration footprint in the Ravensthorpe and Norseman areas.