



ABN 63 111 306 533

## QUARTERLY REPORT TO SHAREHOLDERS

for the three months ended  
30 June 2018

### ASX Code - EME

For further information,  
contact:

Dr Weidong Xiang  
Energy Metals Limited

Telephone: 61 8 9322 6904  
Facsimile: 61 8 9321 5240  
Email: enquiry@energymetals.net  
Level 2, 28 Kings Park Road,  
West Perth WA 6005

PO Box 1323  
West Perth WA 6872

This report and further  
information are available on  
Energy Metals' website at:

[www.energymetals.net](http://www.energymetals.net)



## HIGHLIGHTS

### Bigrlyi JV Project (NT)

Further uranium series disequilibrium studies at Bigrlyi Anomaly-2 deposit in progress.

### Ngalia Regional Project (NT)

Aerial electromagnetic survey identifies uranium-prospective, buried palaeochannel system in the eastern Ngalia Basin.

Soil geochemistry survey at Crystal Creek prospect identifies anomalous uranium, copper and vanadium.

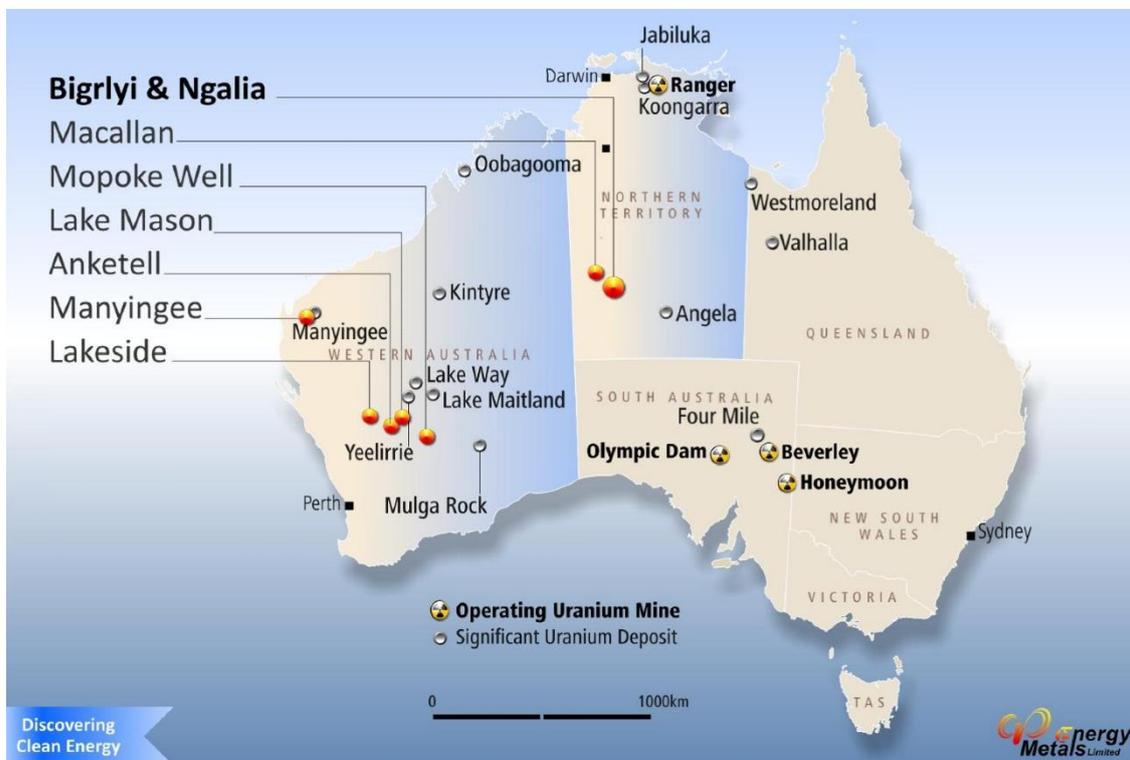
## FINANCIAL

Energy Metals had approximately \$18.8M in cash and 209.7M shares on issue at 30 June 2018.

**Weidong Xiang**  
Managing Director  
30 July 2018

## INTRODUCTION

Energy Metals (EME) is a dedicated uranium company with eight exploration projects located in the Northern Territory (NT) and Western Australia covering over 3,400 km<sup>2</sup> (Figure 1). Most of the projects contain uranium mineralisation discovered by major companies in the 1970's, including the advanced Bigryli Project (NT).



**Figure 1 – Location of Energy Metals Projects**

Energy Metals is well placed to take advantage of the favourable outlook for Uranium as nuclear power continues to play an increasing role in reducing global carbon emissions.

Importantly Energy Metals is one of only five companies that currently hold all the required permits and authorities to export Uranium Oxide Concentrates (UOC) from Australia. The Company has completed its first shipment of UOC and is negotiating with Australian uranium producers to enable further shipments from Australia for resale, primarily to major Chinese utility China General Nuclear Power Group (CGN, formerly China Guangdong Nuclear Power Holding Company), ultimately Energy Metals' largest shareholder.

China Uranium Development Company Limited, Energy Metals' largest shareholder (with 66.45% of issued capital), is a wholly owned subsidiary of CGN. As of end 2017, CGN had 20 operating nuclear power units with a generation capacity of 21,470MWe and more than 10,270MWe of capacity under construction in 8 other nuclear power units across various locations in China. Additionally CGN is one of only two companies authorised by the Chinese government to import and export uranium.

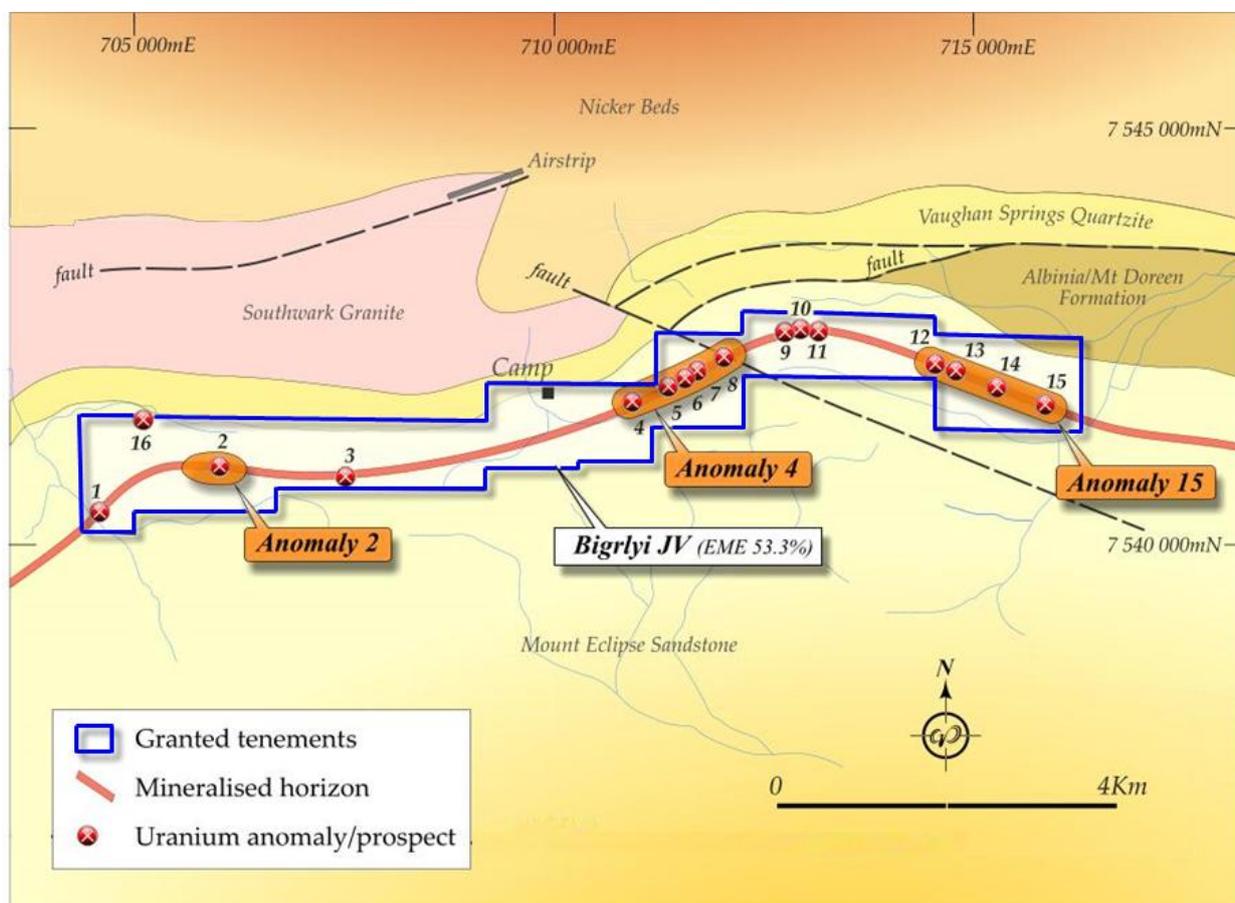
This unique relationship with CGN gives Energy Metals direct market exposure as well as access to significant capital and places the Company in a very strong position going forward.

## NORTHERN TERRITORY

### **Bigrlyi Joint Venture (EME 53.3%)**

The Bigrlyi Joint Venture comprises 11 granted exploration licences in retention (ELRs), one granted EL, and several applications within the Ngalia Basin, located approximately 350km northwest of Alice Springs. EME operates the Joint Venture in partnership with Northern Territory Uranium Pty Ltd and Southern Cross Exploration NL. The Bigrlyi Joint Venture tenements have been subject to significant exploration activity since discovery in 1973, including over 1,040 drill holes, metallurgical testwork and mining studies, with most work undertaken at the Bigrlyi project (Figure 2).

The Bigrlyi project is characterised by relatively high uranium grades and excellent metallurgical recoveries. Historical base case acid leach tests recorded extraction rates of 98% uranium. For further information on metallurgical testwork, resource estimates and economic studies please refer to ASX announcements or the Company's website [www.energymetals.net](http://www.energymetals.net).



**Figure 2 – Bigrlyi Joint Venture Project area showing simplified geology**

The historic Karins deposit, located approximately 260km northwest of Alice Springs (Figure 3), is located on tenement applications MLN1952 and MCS318-328, which are part of the Bigrlyi Joint Venture. Karins is a tabular uranium-vanadium style of deposit similar to Bigrlyi although with an oxidised zone (carnotite zone) of variable thickness. EME acquired CPM's interest in the project in 2005, including all the historical exploration records. A maiden JORC-compliant resource estimate for the Karins Deposit was released to the ASX in July 2015.

In October 2015, a maiden JORC (2012) resource estimate was announced for the historic Sundberg deposit, a satellite of the larger Walbiri deposit (Figure 3).

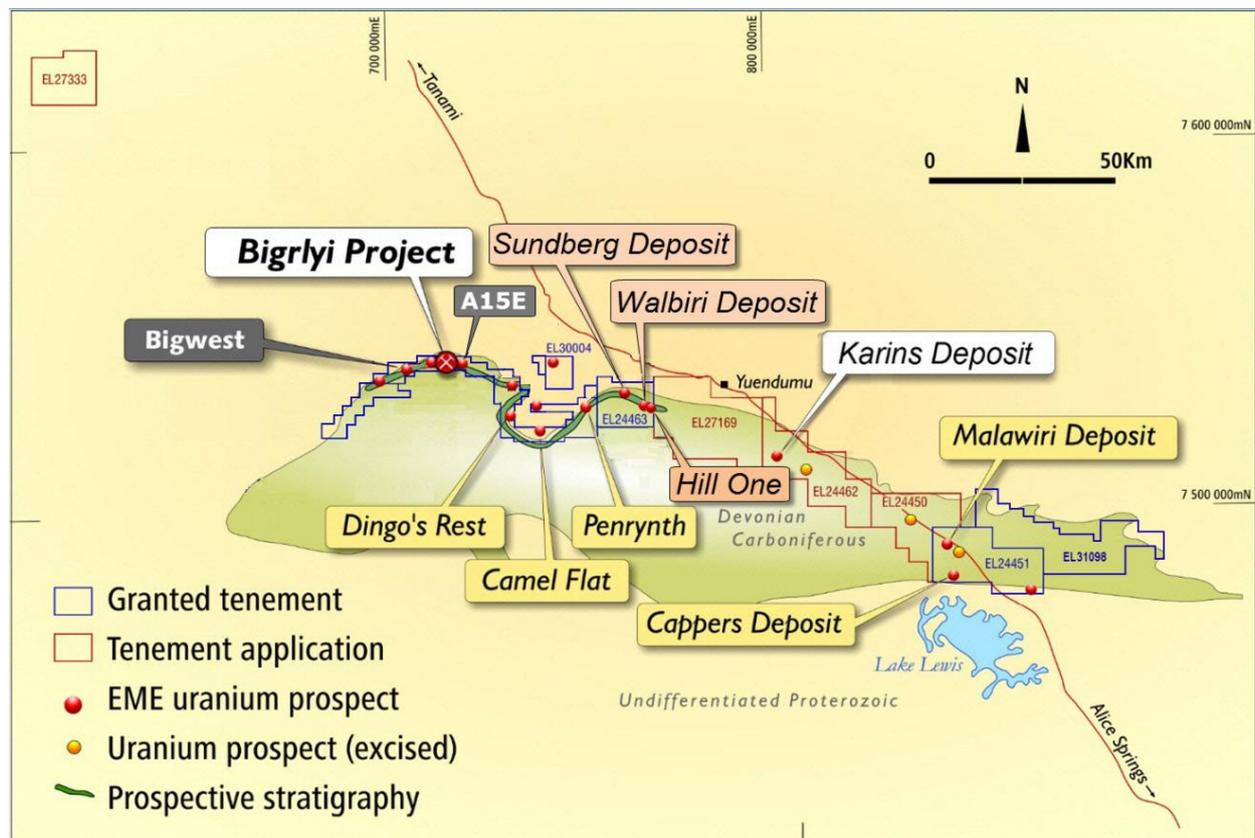


Figure 3 - Uranium deposits, occurrences and exploration target areas in the Ngalia Basin

### **Walbiri Joint Venture (EME 41.9%)**

ELR45, granted in August 2014, covers part of the historical Walbiri deposit and part of the Hill One satellite deposit (Figure 3). The project is a joint venture with Northern Territory Uranium Pty Ltd (58.1%), with EME as the operator. In October 2015 an initial JORC (2012) mineral resource estimate was announced for the Walbiri deposit, confirming Walbiri as the third largest sandstone-hosted uranium deposit in Central Australia after Angela and Bigrlyi.

### **Malawiri Joint Venture (EME 52.1%)**

ELR41, granted in August 2014, covers the historical Malawiri prospect. The project is a joint venture with Northern Territory Uranium Pty Ltd (47.9%) with Energy Metals as the operator. A program of digitisation and reprocessing of historical gamma logs, core re-logging, and historical data compilation and verification was completed in mid-2015 and a small drilling program was completed in September 2016. In late 2017 EME advanced the Malawiri project to JORC-compliant resource status with announcement of a maiden inferred-category mineral resource estimate of 542 tonnes  $U_3O_8$  (for further details see ASX announcements of 27<sup>th</sup> September 2016 & 14<sup>th</sup> December 2017).

### **JV Activities (June 2018 Quarter)**

Energy Metals' exploration strategy is to progressively advance its projects toward economic development within current market constraints. For its advanced JV projects, Energy Metals' aim is to ensure that they meet the high standards necessary for any future development to proceed in a timely manner once market conditions improve.

Following uranium-series disequilibrium results released last quarter, follow-up samples from the deeply weathered Bigrlyi Anomaly-2 deposit have been submitted to ANSTO for closed-can analysis.

This year increased interest in vanadium in commodity markets, partly due to its importance in energy storage technologies, has resulted in improved pricing - currently over \$17 per lb  $V_2O_5$  versus the \$23 per lb spot price of  $U_3O_8$ . Recovery of vanadium is likely to enhance the economics of a uranium mining development at Bigrlyi where vanadium is a significant accessory commodity. However, the factors that control vanadium distribution relative to uranium and its mineralogy and hence its prospects for metallurgical extraction are not well understood. Next quarter Energy Metals will begin a program to further investigate vanadium mineralogy and metallurgy at Bigrlyi, including studies on the controls and distribution of vanadium mineralisation in cooperation with CSIRO researchers and external consultants.

### **Ngalia Regional Project (EME 100%)**

The Ngalia Regional project comprises twelve 100% owned exploration licences (total area approximately 3,100 km<sup>2</sup>) located in the Ngalia Basin, between 180km and 350km northwest of Alice Springs in the Northern Territory (Figure 3). The tenements are contiguous and enclose the Bigrlyi project as well as containing a number of uranium occurrences, including part of the historic Walbiri deposit and the Cappers deposit.

Nine of the twelve Ngalia Regional exploration licences have been granted; the three remaining applications (ELs 24450, 24462 and 27169) are located on Aboriginal Freehold (ALRA) land and Energy Metals is negotiating access agreements with the Traditional Owners through the Central Land Council (CLC) (Figure 3).

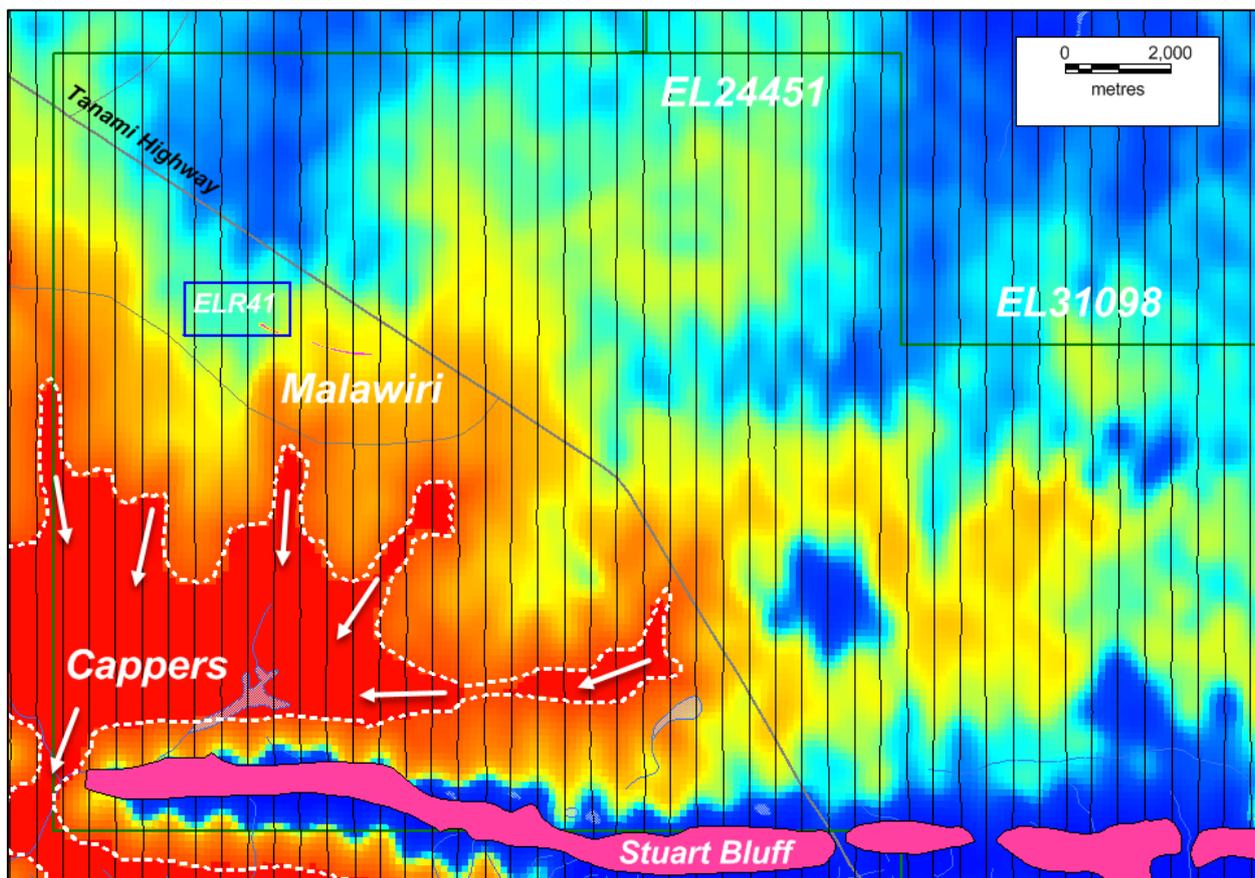
A number of high priority targets have been identified on the 100% owned tenements and Energy Metals is undertaking a program of systematic evaluation of these prospects, some of which were originally discovered in the 1970s. In February 2014, EME announced maiden resource estimates for the Bigwest, Anomaly-15 East and Camel Flat satellite deposits and in October 2015 EME announced inferred JORC resources for the historical Walbiri, Sundberg and Hill One deposits (Figure 3).

### **Activities (June 2018 Quarter)**

Planning for the 2018 exploration field season continued this quarter with a focus on enhancing Energy Metals' understanding of the various Ngalia Basin uranium-vanadium deposits, and how they form, to improve targeting and future discoveries. Results from two survey programs were received this quarter.

**Eastern Ngalia Electromagnetic Survey.** In mid-2017 an aerial electromagnetic (AEM) survey was flown over parts of EL24451 and EL31098 in the eastern Ngalia Basin in conjunction with Geoscience Australia's *Exploring for the Future Program*. Final data products from the survey were received in June and interpretation and targeting work is currently in progress with Energy Metals geophysical consultants.

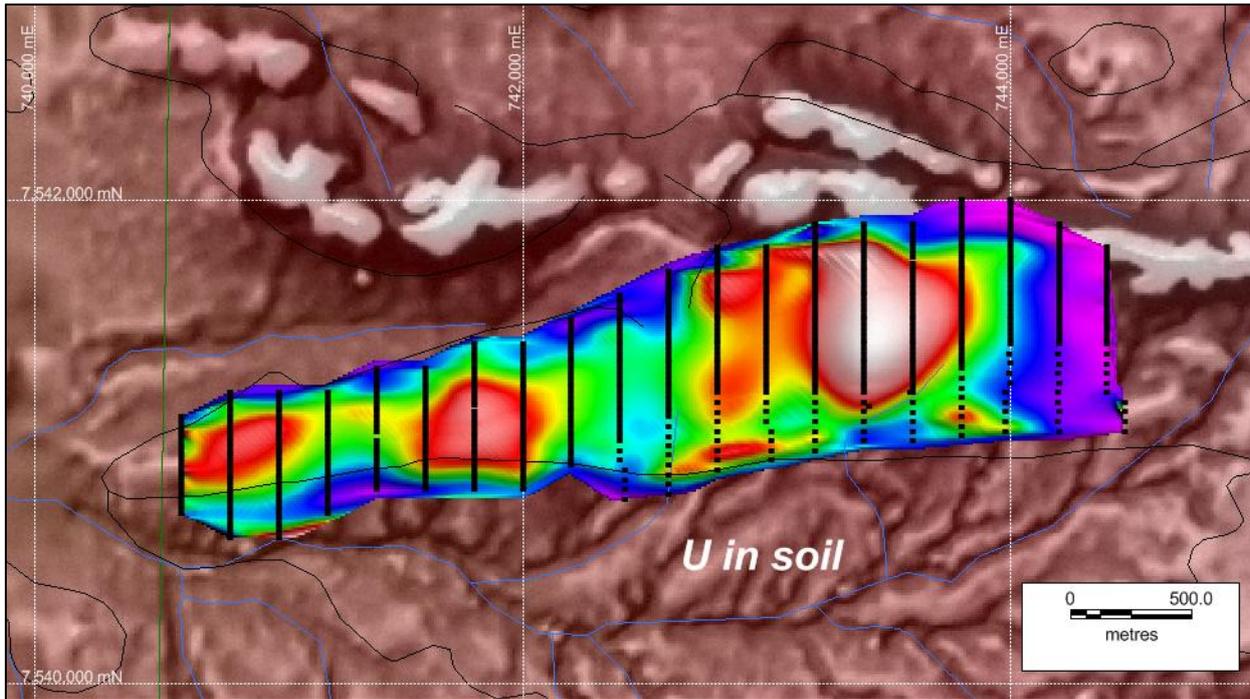
An example of preliminary AEM survey conductivity imagery over the eastern Ngalia Basin as received from Geoscience Australia is shown in Figure 4 below. The image is a conductivity slice at 40-60m depth and shows numerous buried, highly conductive, palaeochannel-like features, presumably containing saline groundwaters, which are located beneath and to the north and east of Energy Metals' Cappers deposit (a surficial calcrete-style uranium deposit). The topography of the area is such that these palaeodrainage channels would have coalesced to funnel through a narrow gap in the Stuart Bluff Range – the constriction is likely to have caused groundwaters and surface waters to pond and evaporate creating ideal conditions for calcrete formation and uranium precipitation in the sub-surface during late Cenozoic times. The Cappers deposit was only ever drill tested to a depth of 10m, the underlying older channel system represents a new and deeper target within inferred palaeochannels of several kilometres length.



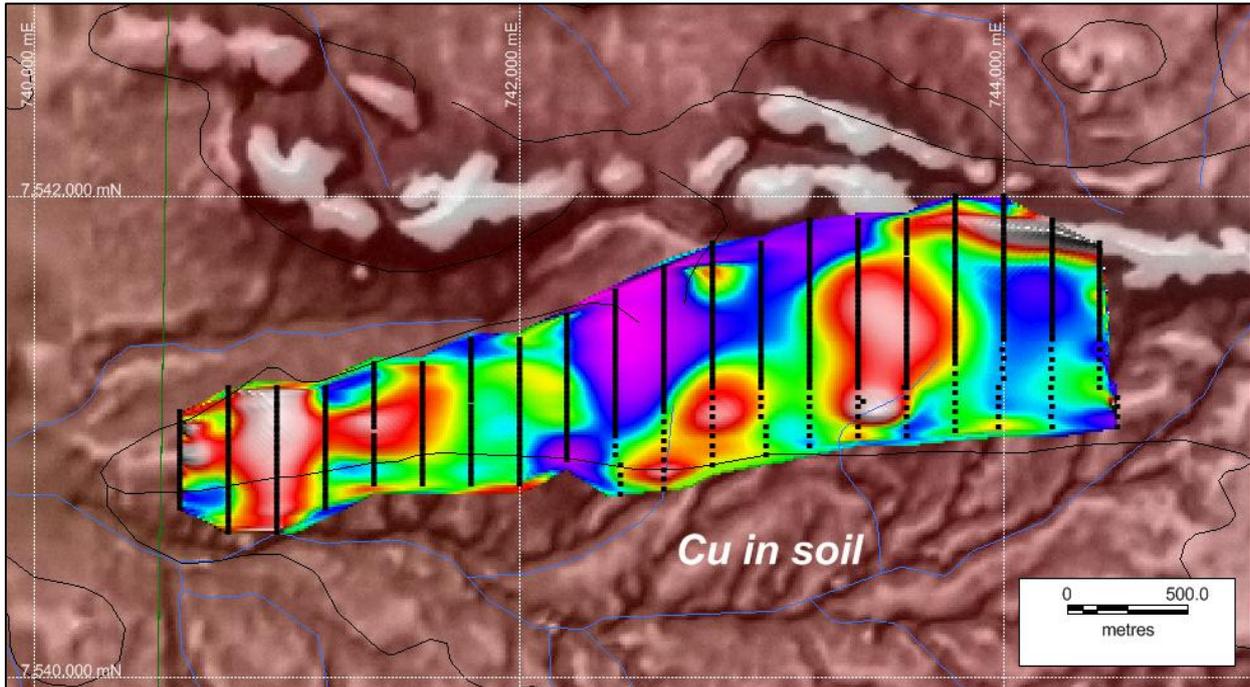
**Figure 4 – AEM conductivity imagery for a 40-60m depth slice over parts of EL24451 and EL31098 (red = highly conductive, blue = low conductivity) showing palaeochannel-like features of several kilometres length inferred to drain from the north and east (arrows). Cappers calcrete uranium deposit and Malawiri sandstone uranium deposit on ELR41 shown. The Stuart Bluff Range (pink) is a significant palaeodrainage barrier.**

**Crystal Creek Geochemical Survey.** A soil geochemical survey was completed over the southeastern part of the Crystal Creek prospect during the quarter. The survey is an extension

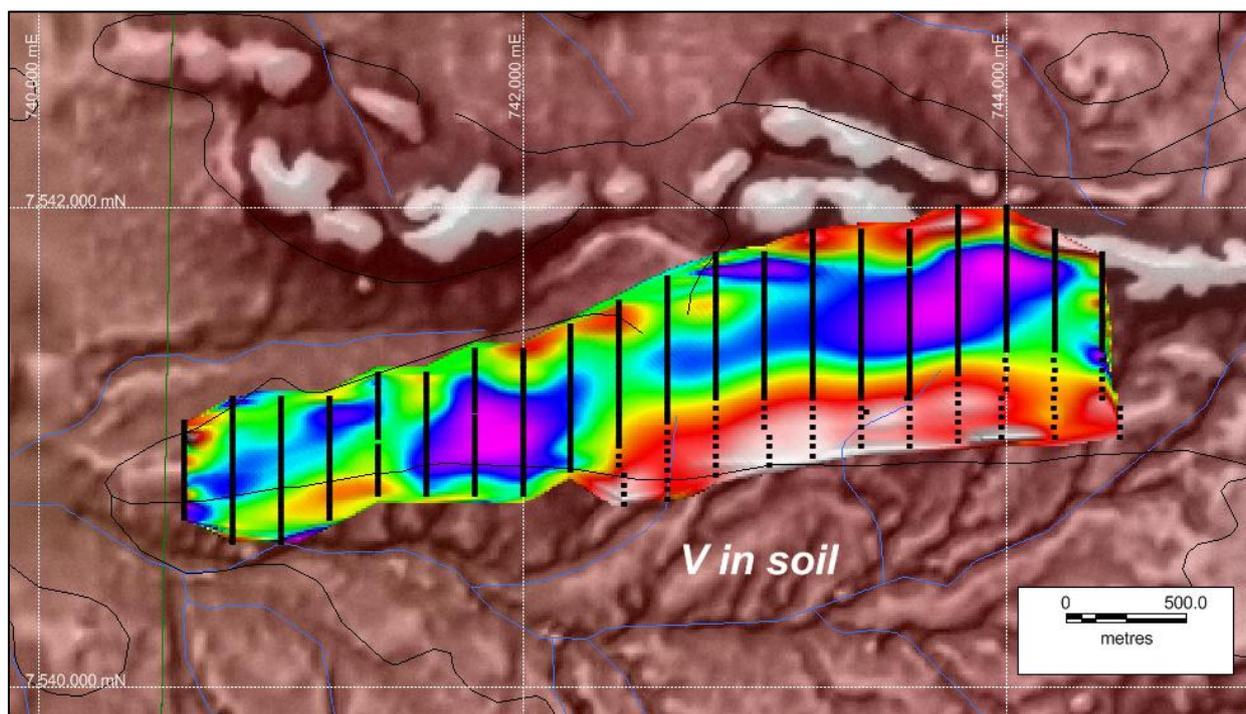
of a soil survey undertaken by previous tenement holders Uranium Exploration Australia Ltd who identified a 3 km long quartz-ironstone-breccia structure associated with both uranium and copper mineralisation including occurrences of the secondary uranium mineral torbernite. Energy Metals' survey at 40m sample spacing was designed to target a linear feature associated with intense quartz veining some 500m to the south of the known structure. Gridded images, shown in Figures 5 to 7, identify a number of untested U and Cu anomalies and highlight anomalous vanadium in association with the southern linear feature. Further work is planned during the field season to trace the source and identify the nature of these anomalies.



**Figure 5 – Gridded image of uranium in soil at the Crystal Creek prospect (U values range from 2.4 to 29 ppm). Underlying digital elevation model image. Sample points as black squares.**



**Figure 6 – Gridded image of copper in soil at the Crystal Creek prospect (Cu values range from 1 to 84 ppm). Underlying digital elevation model image. Sample points as black squares.**



**Figure 7 – Gridded image of vanadium in soil at the Crystal Creek prospect (V values range from 10 to 70 ppm). Underlying digital elevation model image. Sample points as black squares.**

**Tenement Reorganisation.** A prospectivity and tenement review was completed last quarter to enable Energy Metals to focus its activities on the most prospective ground. Finalisation of this process during the quarter resulted in some changes to tenements:

- Replacement titles EL31820 and EL31821 were granted;
- EL30002 and EL30006 were surrendered and final technical reports lodged;
- ELR31754, ELR31755 and ELR31756, covering resource areas of the Bigwest, A15E and Camel Flat deposits, were granted;
- An application was lodged to surrender EL30689.

These changes will streamline Energy Metals' exploration programs going forward.

### **Macallan (EME 100%)**

The Macallan project comprises a single exploration licence application (ELA27333), located 460 km NW of Alice Springs and 140 km from Bigryli. The tenement covers a strong 3km-wide bullseye radiometric anomaly. The Macallan anomaly lies within the Wildcat Palaeovalley, an ancient valley system that drains into Lake Mackay to the southwest. The Macallan anomaly most likely represents a surficial accumulation of uranium minerals associated with the Wildcat palaeodrainage system, although other explanations are possible.

ELA27333 lies on land under Aboriginal Freehold title and access is subject to negotiation with the Traditional Owners and the CLC. The negotiation period on the tenement has been extended until October 2018 and negotiations are proceeding.

## **WESTERN AUSTRALIA**

### **Manyingee (EME 100%)**

The Manyingee project comprises retention licence application R08/3, underlying tenement E08/1480 and exploration licence application E08/2856, which are located 85 km south of Onslow. The project is located adjacent to mining leases containing Paladin Energy's Manyingee resource, a stacked series of buried, palaeochannel-hosted, roll-front uranium deposits. In November 2016 EME announced an initial JORC (2012) Mineral Resource Estimate for the Manyingee East uranium deposit, which is located up-channel of Paladin's Manyingee deposit.

There was no activity during the period.

### **Mopoke Well (EME 100%)**

The Mopoke Well project is located 55km west of Leonora on retention licence R29/1. The project contains two historic uranium prospects (Peninsula and Stakeyard Well) hosted by calcretised sediments associated with the Lake Raeside drainage system. A JORC (2004) mineral resource estimate was released to the ASX in March 2013.

There was no activity during the period.

### **Lakeside (EME 100%)**

The Lakeside project is located in the Murchison district 20km west of Cue on retention licence R21/1. This project was acquired to follow up previously discovered surficial uranium mineralisation at Lake Austin associated with calcrete and saline drainages. Aircore drilling campaigns were undertaken by EME in 2007, 2008, 2010 and 2012. A JORC (2012) mineral resource estimate was release to the ASX in June 2014.

There was no activity during the period.

### **Anketell (EME 100%)**

The Anketell project is located 50km west of Sandstone on retention licence R58/2 and comprises surficial calcrete-style mineralisation discovered by Western Mining (WMC) in 1972. Following completion of aircore drilling programs, an initial JORC (2004) mineral resource estimate was released to the ASX in July 2009.

There was no activity during the period.

### **Lake Mason (EME 100%)**

The Lake Mason project is located 25km north of Sandstone on retention licence R57/2 and comprises shallow carnotite mineralisation hosted in calcrete and calcareous sediments associated with the Lake Mason drainage system. A JORC (2004) mineral resource estimate was released to the ASX in December 2010.

There was no activity during the period.

## **CORPORATE**

Energy Metals remains in a strong financial position with approximately \$18.8 million in cash and bank deposits at the end of the quarter, forming a solid resource for ongoing exploration and project development.

**Table 2: Tenement Information as required by listing rule 5.3.3**

| TENEMENT*                 | PROJECT                | LOCATION  | INTEREST | CHANGE IN QUARTER  |
|---------------------------|------------------------|-----------|----------|--------------------|
| <b>Northern Territory</b> |                        |           |          |                    |
| EL24451                   | Ngalia Regional        | Napperby  | 100%     | -                  |
| EL24463                   | Ngalia Regional        | Mt Doreen | 100%     | -                  |
| EL31098                   | Ngalia Regional        | Napperby  | 100%     | -                  |
| EL31820                   | Ngalia Regional        | Mt Doreen | 100%     | <b>Granted</b>     |
| EL31821                   | Ngalia Regional        | Mt Doreen | 100%     | <b>Granted</b>     |
| ELR31754                  | Ngalia Regional        | Mt Doreen | 100%     | <b>Granted</b>     |
| ELR31755                  | Ngalia Regional        | Mt Doreen | 100%     | <b>Granted</b>     |
| ELR31756                  | Ngalia Regional        | Mt Doreen | 100%     | <b>Granted</b>     |
| ELR46                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR47                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR48                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR49                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR50                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR51                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR52                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR53                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR54                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR55                     | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR41                     | Malawiri Joint Venture | Napperby  | 52.1%    | -                  |
| ELR45                     | Walbiri Joint Venture  | Mt Doreen | 41.9%    | -                  |
| EL30004                   | Ngalia Regional        | Mt Doreen | 100%     | -                  |
| ELA27169                  | Ngalia Regional        | Yuendumu  | 100%     | -                  |
| EL30144                   | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELR31319                  | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | -                  |
| ELA24462                  | Ngalia Regional        | Yuendumu  | 100%     | -                  |
| ELA24450                  | Ngalia Regional        | Yuendumu  | 100%     | -                  |
| ELA27333                  | Macallan               | Tanami    | 100%     | -                  |
| MCSA318-328               | Bigrlyi Joint Venture  | Yuendumu  | 53.3%    | -                  |
| MLNA1952                  | Bigrlyi Joint Venture  | Yuendumu  | 53.3%    | -                  |
| EL30689                   | Bigrlyi Joint Venture  | Mt Doreen | 53.3%    | <b>Surrendered</b> |
| <b>Western Australia</b>  |                        |           |          |                    |
| E08/1480                  | Manyingee              | Yanrey    | 100%     | -                  |
| E08/2856                  | Manyingee              | Yanrey    | 100%     | -                  |
| R08/3                     | Manyingee              | Yanrey    | 100%     | -                  |
| R21/1                     | Lakeside               | Cue       | 100%     | -                  |
| R29/1                     | Mopoke Well            | Leonora   | 100%     | -                  |
| R57/2                     | Lake Mason             | Sandstone | 100%     | -                  |
| R58/2                     | Anketell               | Sandstone | 100%     | -                  |

\* EL = Exploration Licence (NT); ELA = Exploration Licence Application (NT); ELR = Exploration Licence in Retention (NT); ELRA = Exploration Licence in Retention Application (NT); MCSA = Mineral Claim (Southern) Application (NT); MLNA = Mineral Lease (Northern) Application (NT); E = Exploration Licence (WA); R = Retention Licence (WA).

### **Competent Persons Statement**

*Information in this report relating to exploration results, data and cut-off grades is based on information compiled by Dr Wayne Taylor and Mr Lindsay Dudfield. Mr Dudfield is a member of the AusIMM and the AIG. Dr Taylor is a member of the AIG and is a full time employee of Energy Metals; Mr Dudfield is a consultant to Energy Metals. They both have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)”. Dr Taylor and Mr Dudfield both consent to the inclusion of the information in the report in the form and context in which it appears.*

*This report references mineral resource estimates and/or related information that was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.*