

## ABN 63 111 306 533



# QUARTERLY REPORT TO SHAREHOLDERS

for the three months ended 31 December 2016

## **ASX Code - EME**

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

#### www.energymetals.net



# **HIGHLIGHTS**

## Malawiri JV & Ngalia Regional Projects (NT)

CORE Collaborative Drilling and Geophysical program at the Malawiri prospect successfully concluded.

First reimbursement of CORE direct costs received from NT Government.

## Manyingee East Project (WA)

Mineral Resource Estimate of 1,291 tonnes  $U_3O_8$  obtained for the Manyingee East deposit located up-palaeochannel of Paladin Energy's Manyingee deposit.

Resource area to be converted to a Retention Licence until uranium market conditions improve.

## **FINANCIAL**

Energy Metals had approximately \$20.5M in cash and 209.7M shares on issue at 31 December 2016.

Weidong Xiang Managing Director 31 January 2017

#### **INTRODUCTION**

Energy Metals (EME) is a dedicated uranium company with eight exploration projects located in the Northern Territory (NT) and Western Australia covering over 3,900 km<sup>2</sup> (Figure 1). Most of the projects contain uranium mineralisation discovered by major companies in the 1970's, including the advanced Bigrlyi Project (NT).

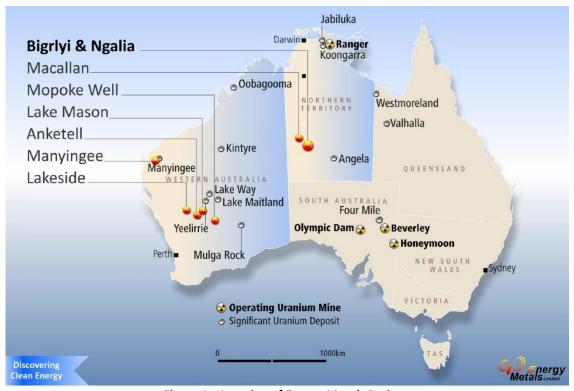


Figure 1 – Location of Energy Metals Projects

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 31 December 2016, CGN had 19 operating nuclear power units with a generation capacity of 20,370MWe and more than 11,356MWe of capacity under construction in 9 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 10 granted exploration licences in retention (ELR's), three granted ELs, and several applications within the Ngalia Basin, located approximately 350km northwest of Alice Springs. EME operates the Joint Venture in partnership with Uranium Africa Limited and Southern Cross Exploration. 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.

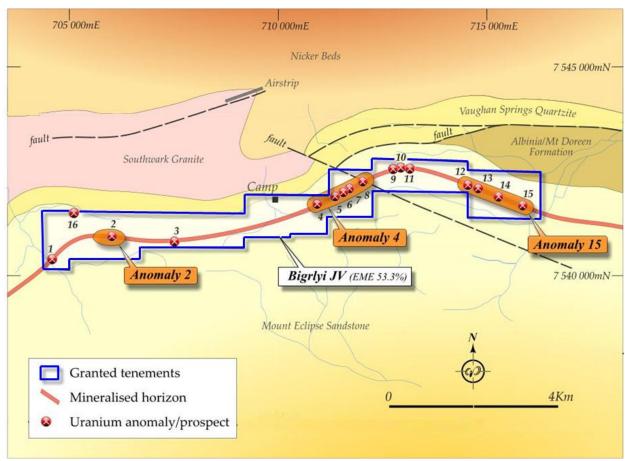


Figure 2 – Bigrlyi Joint Venture Project area showing simplified geology

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.

On 27<sup>th</sup> October 2015, a maiden JORC (2012) resource estimate was announced for the historic Sundberg deposit (Figure 3).

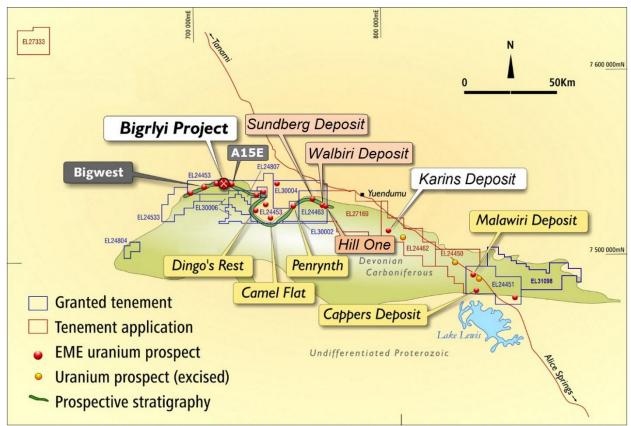


Figure 3 - Uranium deposits, occurrences and exploration target areas in the Ngalia Basin

#### **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 Uranium Africa Limited (58.1%), with EME as the operator. In the ASX announcement of 27<sup>th</sup> 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 Deposit to the west of Paladin's Minerva Deposit. The project is a joint venture with Uranium Africa Limited (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. As part of EME's 2016 drilling program in the Malawiri project area (see below) intercepts from hole MARD004 at the Malawiri deposit have confirmed previous mineralisation. In addition, the drilling resulted in the discovery of a new high-grade mineralisation zone comprising 8.1m at 1,789 ppm eU<sub>3</sub>O<sub>8</sub> from 222.0m. Together with the recently compiled and verified historical data, EME believes it will be possible to advance the project to JORC-compliant resource status in 2017.

#### JV Activities (December 2016 Quarter)

Following the 2016 drilling program, site rehabilitation works at the Malawiri project area were concluded during the quarter.

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

The Ngalia Regional project comprises thirteen 100% owned exploration licences (total area approximately 3,500 km²) located in the Ngalia Basin, between 180km and 350km northwest of Alice Springs in the Northern Territory (Figure 3). Twelve of these 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.

Ten of the thirteen Ngalia Regional exploration licences have been granted; three of the remaining applications (EL's 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 1970's. In February 2014, EME announced maiden resource estimates for the Bigwest, Anomaly-15 East and Camel Flat satellite deposits. In October 2015 EME announced inferred JORC resources for the historical Walbiri, Sundberg and Hill One deposits (Figure 3).

#### **Activities (December 2016 Quarter)**

During the quarter, the final report of the 2016 Malawiri area drilling and geophysics program was completed. The program was part-funded under the NT Government's CORE Geophysics and Drilling initiative and the first payment of nearly \$25K in collaborative funds was received from the NT Government. The aim of the program was to better understand the undercover geology of the poorly explored eastern Ngalia Basin on EL24451 to assist EME in exploring for buried uranium deposits similar to the nearby Malawiri and Minerva prospects. Results of the program show the potential for Malawiri and Minerva lookalike deposits in the area with the discovery of uranium mineralisation in hole MARD001, some 3.5km north of previously known mineralisation (refer ASX release of 27<sup>th</sup> September 2016).

The results of Aboriginal Traditional Owner meetings regarding exploration access to Aboriginal Land Rights Act (ALRA) tenements ELA24450 (Cassidy's Bore) and 24462 (Rinkabeena) were received during the quarter. The Traditional Owners wish to pursue further negotiations for access to ELA24450 under ALRA, however, ELA24462 has been refused and this tenement will return to a 5-year moratorium and will next be eligible for negotiation in 2021.

An application was made for an exploration licence over the historic Napperby (New Well) deposit and adjacent prospects in the eastern Ngalia Basin. As there are several competing applications over the same ground, EME is awaiting confirmation of the application from the NT DPIR, which is expected next quarter.

## Macallan (EME 100%)

The Macallan project comprises a single exploration licence application (ELA27333), located 460 km NW of Alice Springs and 140 km from Bigrlyi. 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; though 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 2017.

## **WESTERN AUSTRALIA**

## Manyingee (EME 100%)

The Manyingee project comprises granted tenement E08/1480 and tenement application E08/2856, which are located 85 km south of Onslow. E08/1480 is adjacent to mining leases containing Paladin Energy's Manyingee resource, a stacked series of buried, palaeochannel-hosted roll front uranium deposits.

Encouraging results were obtained from a small rotary mud drill program (18 holes for 1,790m) completed in late 2014 which affirmed the uranium potential of EME's Manyingee East prospect, located up-channel of Paladin's Manyingee deposit (ASX release 27<sup>th</sup> October 2014).

Following discussions with resource consultants at CSA Global it was determined that, given the known structure of the Manyingee East palaeochannel, sufficient continuity of mineralisation could be demonstrated from drilling results to enable Energy Metals to proceed with estimation of a mineral resource. On 7th November 2016 EME announced an initial Mineral Resource Estimate of 1,291 tonnes U<sub>3</sub>O<sub>8</sub> (250 m\*ppm grade-thickness cut-off; Table 1).

Table 1: Manyingee East Resource Estimate at various grade-thickness (GT) cut-off values

Tonnes (Million)*	Cut-off GT (m∗ppm eU₃O <sub>8</sub> )	Average Grade eU₃O <sub>8</sub> (ppm)	Average GT (m*ppm eU <sub>3</sub> O <sub>8</sub> )	Contained U <sub>3</sub> O <sub>8</sub> (tonnes)	Contained U₃O <sub>8</sub> (MIb)
2.84	250	455	993	1,291	2.85
2.06	500	524	1,224	1,079	2.38
0.86	1,000	756	1,996	650	1.43

Tonnes are metric (2204.62 pounds), figures may not total precisely due to round-off errors. Significant figures do not imply precision. \*A bulk density value of 1.7 t/m<sup>3</sup> was used for the estimation.

The Mineral Resources have been classified in accordance with JORC (2012) requirements. Manyingee-style mineralisation is considered favourable for extraction of uranium by cost effective in-situ recovery (ISR) methods, and Energy Metals will continue to evaluate future resource upgrade and development options as market conditions improve. In the meantime a Retention Licence application has been lodged with the DMP over resource areas of E08/1480

in order to maintain the project under Energy Metals tenure until economic conditions improve.

#### 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 on 12<sup>th</sup> 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 released to the ASX on 3<sup>rd</sup> 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 on 21<sup>st</sup> 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 on 17<sup>th</sup> December 2010.

There was no activity during the period.

## **CORPORATE**

Energy Metals remains in a strong financial position with approximately \$20.5 million in cash and bank deposits at the end of the quarter, forming a solid resource for ongoing exploration and project development.

**Table 1:** Tenement Information as required by listing rule 5.3.3

TENEMENT*	PROJECT	LOCATION	INTEREST	CHANGE IN QUARTER
	Northe	rn Territory		
EL24451	Ngalia Regional	Napperby	100%	-
EL24453	Ngalia Regional	Mt Doreen	100%	-
EL24463	Ngalia Regional	Mt Doreen	100%	-
EL24533	Ngalia Regional	Mt Doreen	100%	-
EL24804	Ngalia Regional	Nyirripi	100%	-
EL24807	Ngalia Regional	Mt Doreen	100%	-
EL31098	Ngalia Regional	Napperby	100%	-
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%	-
EL30002	Ngalia Regional	Mt Doreen	100%	-
EL30004	Ngalia Regional	Mt Doreen	100%	-
EL30006	Ngalia Regional	Mt Doreen	100%	-
ELA27169	Ngalia Regional	Yuendumu	100%	-
EL30144	Bigrlyi Joint Venture	Mt Doreen	53.3%	-
ELRA31319	Bigrlyi Joint Venture	Mt Doreen	53.3%	-
ELA24462	Ngalia Regional	Yuendumu	100%	Returned to ALRA moratorium
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%	-
ELA31446	Ngalia Regional	Napperby	100%	Application
	Weste	rn Australia		
E08/1480	Manyingee	Yanrey	100%	
E08/2856	Manyingee	Yanrey	100%	-
R08/3	Manyingee	Yanrey	100%	Application
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.

The information in this report that relates to Mineral Resource estimation is based on information compiled by Dr Maxim Seredkin, Principal Resource Geologist, and Mr Dmitry Pertel, Principal Resource Geologist. Dr Seredkin is a fellow of the Australasian institute of Mining and Metallurgy (FAusIMM) and a member of the Australian Institute of Geoscientists (MAIG) and Mr Pertel is a member of the Australian Institute of Geoscientists (MAIG); both are employees of CSA Global. Dr Seredkin and Mr Pertel have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as is a Competent Person as defined by the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)", and they consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Information in this report relating to the determination of gamma probe results and related geophysical work is based on information compiled by Mr David Wilson. Mr Wilson is a member of the AusIMM and the AIG. Mr Wilson is a consultant to Energy Metals. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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)". Mr Wilson consents to the inclusion of the information in the report in the form and context in which it appears.

This report contains 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.