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QUARTERLY REPORT TO SHAREHOLDERS

for the three months ended
30 September 2019

ASX Code - EME

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

www.energymetals.net



HIGHLIGHTS

Bigrlyi JV Project (NT)

Vanadium mineralisation model extended to the
Anomaly-15 and Anomaly-2 deposits.

Vanadium potential of the Anomaly-7 to Anomaly-
9 trend highlighted.

Conventional leach tests confirm co-extraction of
vanadium (>72%) and uranium (>98%) achievable
at pH 1.2 with a 20% increase in acid consumption.

FINANCIAL

Energy Metals had approximately \$17.39M in cash
and 209.7M shares on issue at 30 September 2019.

Shuqing Xiao
Managing Director
31 October 2019

INTRODUCTION

Energy Metals (EME) is a dedicated uranium company with eight exploration projects located in the Northern Territory (NT) and Western Australia covering over 2,700 km² (Figure 1). Most of the projects contain uranium mineralisation discovered by major companies in the 1970's, including the advanced Bigryli Project (NT).

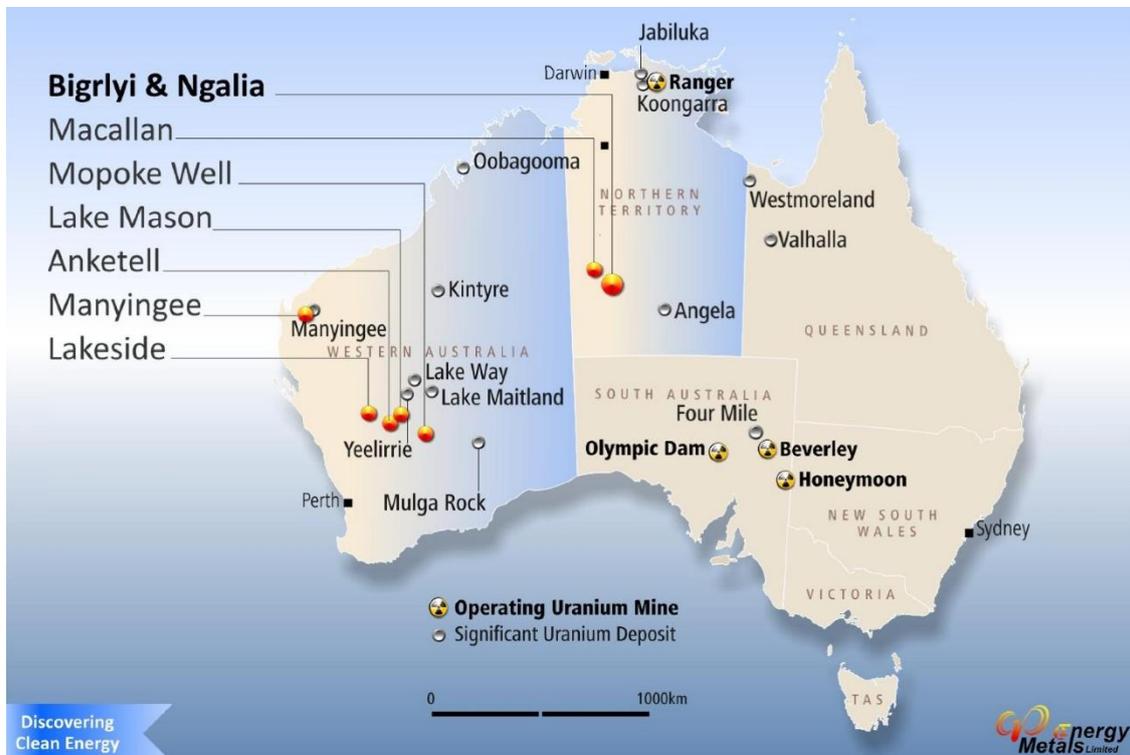


Figure 1 – Location of Energy Metals Projects

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), 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 30 September 2019, the installed capacity of CGN's operating nuclear generating plants was 27,140MWe from 24 nuclear power units with four other power units of 4,600 capacity under construction in various locations across 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 72.39%)

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 (NTU) and Southern Cross Exploration NL (SXX). The Bigrlyi Joint Venture tenements have been subject to significant exploration activity since discovery in 1973, including over 1,040 drill holes, metallurgical test-work and mining studies, with most work undertaken at the Bigrlyi project (Figure 2).

The Bigrlyi project is characterised by relatively high uranium grades, vanadium credits and excellent metallurgical recoveries. Further information is available in ASX announcements or from Energy Metals' website: www.energymetals.net.

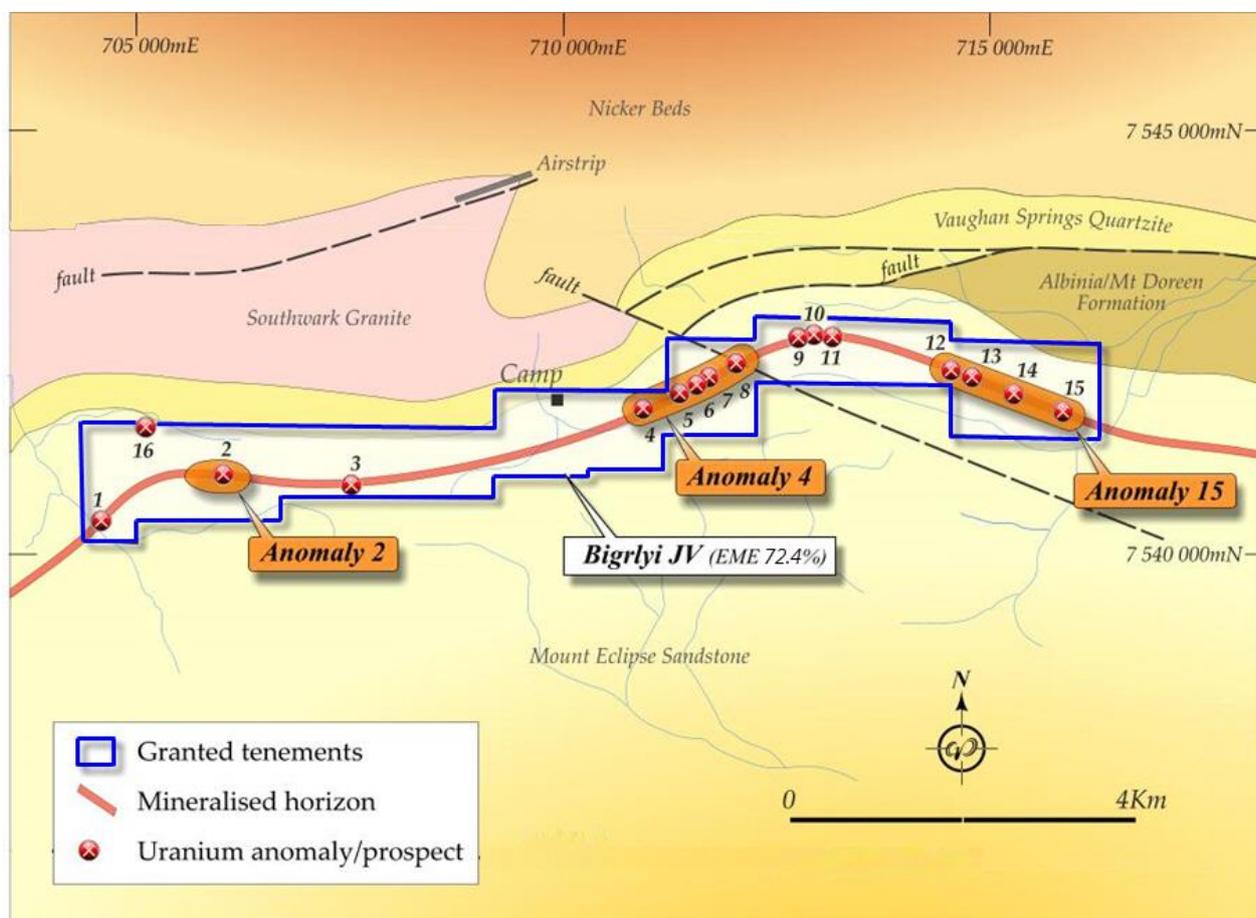


Figure 2 – Bigrlyi Joint Venture Project area showing simplified geology

The historic Karins uranium deposit (Figure 3) is part of the Bigrlyi Joint Venture and a JORC-compliant resource estimate was released to the ASX in 2015. In 2015 a maiden JORC (2012) resource estimate was announced for the historic Sundberg deposit, which is part of the Bigrlyi Joint Venture, and a satellite of the larger Walbiri deposit (Figure 3).

On 4 July 2019, Marenica Energy Ltd (ASX: MEY) announced a conditional agreement to acquire the assets of NTU (Energy Metals' JV partner) from current owner Optimal Mining Ltd.

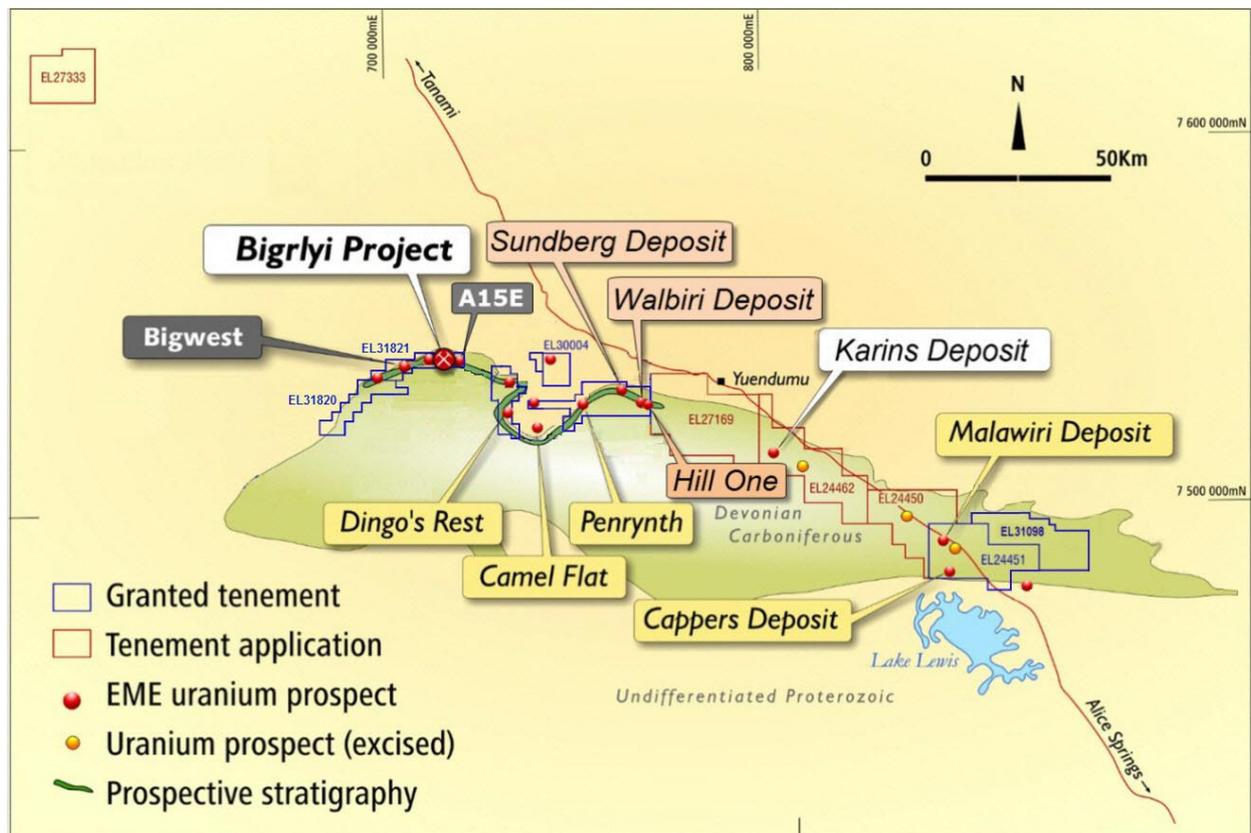


Figure 3 - Uranium deposits, occurrences and exploration target areas in the Ngalia Basin

Walbiri Joint Venture (EME 77.12%)

ELR45 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 (NTU), with EME as the operator. Energy Metals holds a 77.12% beneficial interest in the JV. A JORC (2012) mineral resource estimate was announced for the Walbiri deposit in 2015 confirming Walbiri as the second largest sandstone-hosted deposit in the Ngalia Basin after Bigrlyi.

Malawiri Joint Venture (EME 76.03%)

ELR41 covers the historical Malawiri deposit. The project is a joint venture with NTU with EME as the operator. Energy Metals holds a 76.03% beneficial interest in the JV. EME advanced the Malawiri project to JORC-compliant resource status with release of a mineral resource estimate on 14 December 2017.

JV Activities (September 2019 Quarter)

Energy Metals is committed to improving the economics of its flagship Bigrlyi project and this year has initiated a program to enhance the value of vanadium as a by-product commodity in a future Bigrlyi mining operation. Bigrlyi sandstone-hosted uranium-vanadium ores contain vanadium in various mineral forms that can be extracted by conventional acid leaching processes without the need for the extreme conditions required in the processing of more widely known magnetite-hosted vanadium ores. Bigrlyi uranium-vanadium ores are mineralogically identical to those of the Colorado Plateau district of the USA, which has a decades-long history of co-mining and co-recovery of uranium and vanadium; the extraction and recovery processes of uranium and vanadium from sandstone-hosted deposits are therefore well understood.

The predominant industrial use of vanadium, at present, is as a steel strengthening agent; however, the metal has growing future uses in energy storage technologies, particularly redox flow batteries, which is the technology of choice in medium-scale storage of photovoltaically-generated energy. Although the significant price rises in vanadium seen in the latter part of 2018 have not been sustained this year, demand is expected to grow in future years. The current vanadium price is \$US 7.70/lb V_2O_5 , which is higher than the long-term vanadium price average and compares with the current uranium spot price of \$US24/lb U_3O_8 .

Vanadium Mineralisation Modelling. Modelling of uranium-vanadium mineralisation at the Bigrlyi deposit has previously been constrained by the uranium distribution, resulting in vanadium resources being reported on the basis of uranium cut-off grades. However, it has been recognised since the 1990s that a larger halo of vanadium mineralisation surrounds uranium mineralisation and that parts of the deposit are significantly vanadium-rich, yet uranium-poor; these parts of the deposit have not been adequately modelled and are expected to contribute additional vanadium resources. Last quarter, a program to improve the vanadium mineralisation model was initiated using data from Energy Metals' recently upgraded and re-verified exploration database. The vanadium mineralisation model for Bigrlyi Anomaly-4 was discussed last quarter. This quarter, the mineralisation model has been completed for the remainder of the Bigrlyi deposit including the Anomaly-15 and Anomaly-2/3 sub-deposits (Figures 4 & 5).

Key results are that:

- The overall vanadium mineralised volume for the Bigrlyi deposit at the 100ppm V_2O_5 cut-off level is 36 Mm³, approximately 3 times the size of the presently known uranium mineralised volume defined at the 100ppm U_3O_8 cut-off level – confirming that a significant vanadium-mineralised halo extends outside uranium-mineralised zones.
- The vanadium mineralised volume associated with the Anomaly-7 to Anomaly-9 trend of sub-deposits is more than 4.5 times the size of the presently known uranium mineralised volume for this zone, and comprises some 28% of the total vanadium-mineralised volume of the Bigrlyi deposit as a whole - highlighting the potential of Anomaly-7/9 to host additional vanadium resources.

These results will form the basis of future resource estimation and economic model updates. Further work will continue next quarter with 3D implicit modelling of vanadium, uranium and calcium (as a proxy for acid-consuming carbonate) distribution underway. The models will be developed using Leapfrog software with the aim of better understanding the complex inter-relationship between these key mineralising and gangue-related elements.

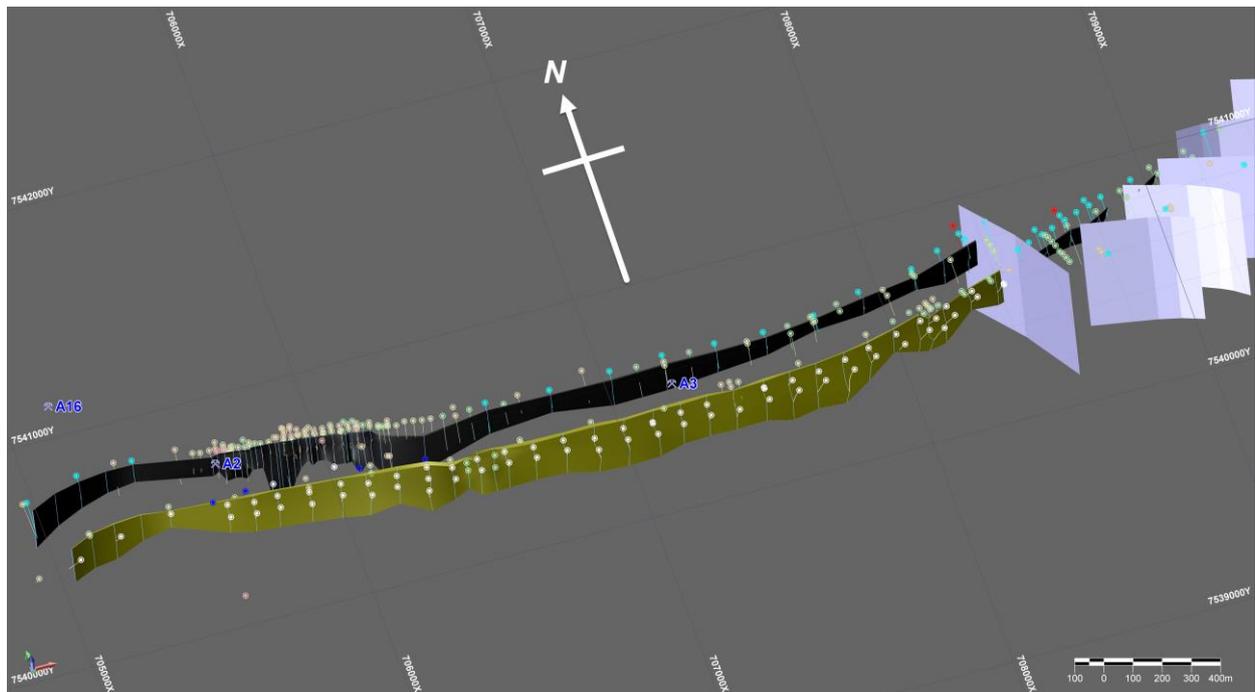


Figure 4. Newly developed vanadium wireframe model for the Bigrlyi Anomaly-2/3 trend constructed for a 100ppm V_2O_5 cut-off. The vanadium mineralisation wireframes comprise a vanadium halo that fully encloses uranium mineralisation. Drill-hole traces and bounding fault planes to the east are shown. Wireframes were constructed for Unit C-D mineralisation (black) and Unit B-C mineralisation (tan).

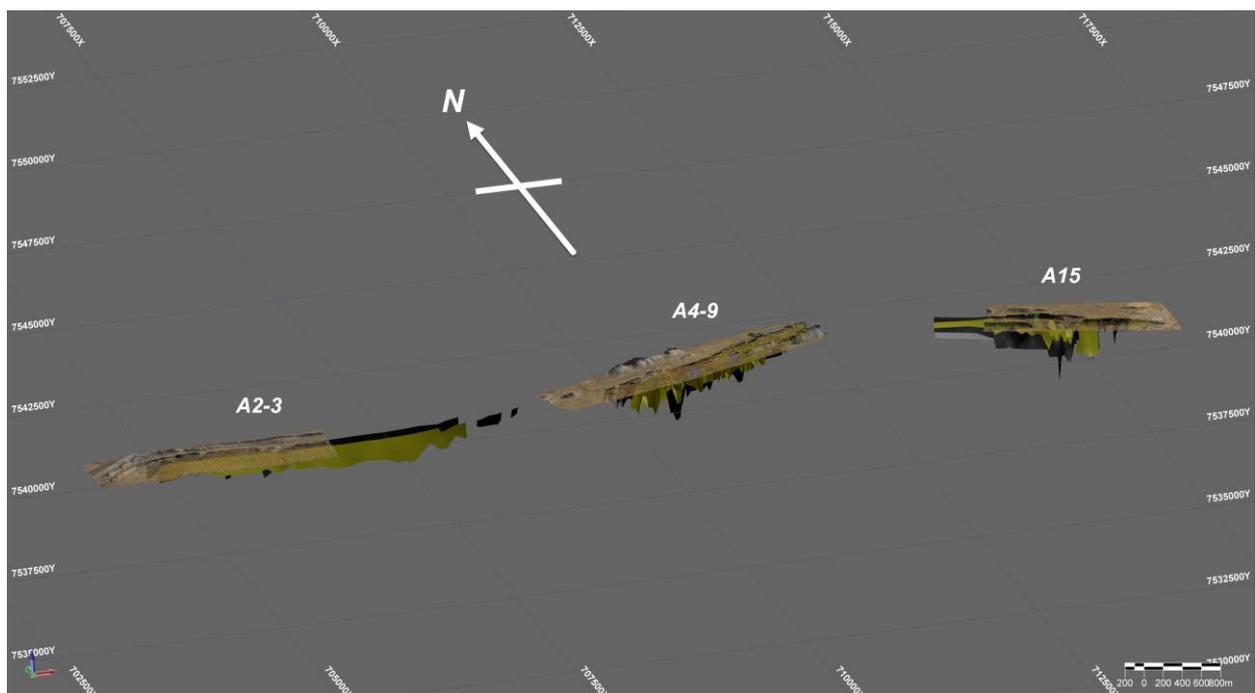


Figure 5. Overview of the vanadium wireframe model for the entire Bigrlyi deposit constructed for a 100ppm V_2O_5 cut-off with associated digital terrain model. The overall vanadium mineralised volume is approximately 3 times larger than the presently known uranium mineralised volume.

Metallurgical Test-work Results. Last quarter EME commenced a metallurgical investigation aimed at optimising the parameters necessary for the co-recovery of uranium and vanadium from representative Bigrlyi ore. In a series of low-slurry density, diagnostic extraction tests it was found that 99% of uranium was extractable and that a maximum of 80% of vanadium was extractable for leach conditions of pH 1.2 and 60°C. This quarter, the results of a series of

conventional leach tests at higher slurry densities, appropriate for extraction plant operating conditions, were received from the Australian Nuclear Science and Technology Organisation (ANSTO), Lucas Heights, Sydney (Table 1).

Table 1. Leach Test Results

Test ID	Slurry (wt %)	Duration (h)	Temp (°C)	pH	ORP (mV)	Reagent Utilisation (kg/t)			Extraction (%)*	
						Acid Addition	Acid Consumption	Oxidant Addition	U	V
3A	50	24	60	1.2	550	140.2	123.4	2.9	98.9	72.7
4A	50	48	60	1.4	550	134.1	123.8	4.2	98.8	68.1
4B	50	48	70	1.5	550	133.2	123.2	4.8	98.7	64.0

The results confirm that vanadium extraction is pH-sensitive with conditions of pH 1.2, temperature 60°C, and 24 hours leach time providing optimal vanadium extraction of over 72%. There were no benefits from an extended leach time at higher pH and higher temperature. This is a substantial improvement on previous test-work results which showed typical vanadium extractions around 40%. Acid consumption is approximately 20% higher than previous base-case, uranium-only-optimised extraction scenarios but not excessive. Clearly, increased reagent costs associated with vanadium co-recovery will be a key factor in modelling project economics to evaluate the viability of vanadium recovery at Bigryli. Further metallurgical tests are planned in the next quarter.

Ngalia Regional Project (EME 100%)

The Ngalia Regional project comprises twelve 100% owned exploration licences, applications and exploration licences in retention 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 Bigryli 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 (September 2019 Quarter)

During the quarter updated regional magnetic and radiometric image products were received from EME’s geophysical consultants. The products include recently available open file company surveys that have been merged with existing data. The imagery will assist EME in geophysical targeting and in the current program to model mineralisation trends.

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, 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 has been extended until October 2020 and the CLC are currently reviewing EME's comments on a draft exploration agreement.

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.

Law firm Gilbert+Tobin were appointed earlier in the year to assist Energy Metals with landholder objections to grant of the Manyingee title applications. During the quarter Energy Metals' resource consultants provided expert witness evidence regarding technical details of the Manyingee East deposit mineral resource estimate. The objections are expected to proceed to a Warden's Court hearing in the March quarter of 2020.

Other Deposits - Mopoke Well, Lakeside, Anketell, Lake Mason (all EME 100%)

These four projects are surficial uranium deposits associated with calcrete or calcretised sediments related to ancient drainage and/or lacustrine systems. All projects are located on granted retention licences and mineral resource estimates under the JORC 2004 or 2012 codes have previously been announced for each deposit. Under present uranium market conditions the deposits are not economic, however, the market is expected to show improvement in the next 4-5 years and Energy Metals will continue to monitor the situation with a view to re-starting exploration and development activities in line with the prevailing uranium price.

There was no activity during the period.

CORPORATE

Energy Metals remains in a strong financial position with approximately \$17.39 million in cash and bank deposits at the end of the quarter, forming a solid resource for ongoing exploration and project development.

Table 3: Tenement Information as required by listing rule 5.3.3

TENEMENT*	PROJECT	LOCATION	INTEREST	CHANGE IN QUARTER
Northern Territory				
EL24451	Ngalia Regional	Napperby	100%	-
EL31098	Ngalia Regional	Napperby	100%	-
EL31820	Ngalia Regional	Mt Doreen	100%	-
EL31821	Ngalia Regional	Mt Doreen	100%	-
EL32113	Ngalia Regional	Mt Doreen	100%	-
ELR31754	Ngalia Regional	Mt Doreen	100%	-
ELR31755	Ngalia Regional	Mt Doreen	100%	-
ELR31756	Ngalia Regional	Mt Doreen	100%	-
ELR46	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR47	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR48	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR49	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR50	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR51	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR52	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR53	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR54	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR55	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR41	Malawiri Joint Venture	Napperby	76.03%	-
ELR45	Walbiri Joint Venture	Mt Doreen	77.12%	-
EL30004	Ngalia Regional	Mt Doreen	100%	-
ELA27169	Ngalia Regional	Yuendumu	100%	-
EL30144	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELR31319	Bigrlyi Joint Venture	Mt Doreen	72.39%	-
ELA24462	Ngalia Regional	Yuendumu	100%	-
ELA24450	Ngalia Regional	Yuendumu	100%	-
ELA27333	Macallan	Tanami	100%	-
MCSA318-328	Bigrlyi Joint Venture	Yuendumu	72.39%	-
MLNA1952	Bigrlyi Joint Venture	Yuendumu	72.39%	-
Western Australia				
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.