

## ABN 63 111 306 533

# QUARTERLY REPORT TO SHAREHOLDERS

for the three months ended 30 September 2014

## **ASX Code - EME**

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#### www.energymetals.net



## **HIGHLIGHTS**

#### Manyingee Project (WA)

Drilling at the Manyingee East Prospect targeting roll-front mineralisation upstream of Paladin's Manyingee deposit returns encouraging intercepts including:

#### MRM017: 1.4m @ 1,117ppm eU<sub>3</sub>O<sub>8</sub>

#### Mopoke Project (WA)

Mainly low-grade uranium intercepts encountered in drilling the southern extension of the Peninsula deposit. Significant results include:

#### MWP268: 2.05m @ 141ppm $eU_3O_8$ from 3.0m MWP306: 1.00m @ 223ppm $eU_3O_8$ from 1.6m

#### **FINANCIAL**

Energy Metals had approximately \$24.28M in cash and 209.7M shares on issue at 30 September 2014.

Weidong Xiang Managing Director 29 October 2014

## **INTRODUCTION**

Energy Metals is a dedicated uranium company with eight exploration projects located in the Northern Territory (NT) and Western Australia covering over 4,000 km<sup>2</sup>. 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 recently completed its first shipment of UOC and is currently negotiating purchase agreements 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 mid-year, CGN had 11 operating nuclear power units with a generation capacity of 11,620MWe and more than 15,500MWe of capacity under construction in 13 other nuclear power units across various locations around 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 (EME 53.3%)

The Bigrlyi Project comprises 10 granted exploration licenses in retention and several applications within the Ngalia Basin, located approximately 350km northwest of Alice Springs. The project, which is a joint venture with Paladin Energy subsidiary Northern Territory Uranium Pty Ltd and Southern Cross Exploration, has been subject to significant exploration activity since discovery in 1973, including over 1,040 drill holes, metallurgical testwork and mining studies.

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.

#### **Activities (September 2014 Quarter)**

Due to current market conditions, the Company's Bigrlyi camp remained closed during most of the quarter with a visit during August which included camp maintenance and an inspection of drill site rehabilitation.



Figure 2 – Bigrlyi Joint Venture Simplified Geology

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

The Ngalia Regional project comprises fourteen 100% owned exploration licenses (total area 3,435 km<sup>2</sup>) located in the Ngalia Basin, between 180km and 350km northwest of Alice Springs in the Northern Territory (Figure 3). Eleven of these tenements are contiguous and enclose the Bigrlyi project as well as containing a number of uranium occurrences including the historic Walbiri and Malawiri deposits and the Cappers deposit (Inferred Mineral Resource of 2,720 tonnes  $U_3O_8$  at a grade of 167ppm at 100ppm cut-off). The remaining three tenements are located southwest of the Bigrlyi deposits and cover discrete uranium anomalies with no evidence of previous exploration.

Ten of the fourteen Ngalia Regional Exploration Licences have been granted, the four remaining applications (EL's 24450, 24462, 24805 and 27169) are located on Aboriginal Freehold land and the consent of the Traditional Owners is required before the tenements can be granted. Energy Metals is negotiating with the Traditional Owners through the Central Land Council (CLC) and is confident that the Company will eventually gain access to these areas.



Figure 3 - Ngalia Regional Project showing uranium deposits, occurrences and exploration target areas. The Anomaly 15 East deposit (not shown) is located within the area identified by the Bigrlyi Project symbol.

A number of high priority targets have been identified in the 100% Energy Metals tenements (see Figure 3) including;

- Bigwest, the western extension of the Bigrlyi trend (mostly under sand cover)
- Anomaly-15 East, the eastern extension of the Bigrlyi trend adjacent to the Anomaly-15 deposit

- Anomaly-15 Far East, the far eastern extension of the Bigrlyi trend (mostly under sand cover)
- Autobahn, at the far western end of the Bigrlyi trend (mostly under sand cover)
- Camel Flat and associated eastern and western stratigraphic extensions
- The historic Walbiri prospect and stratigraphic repeats
- Dingo's Rest (North and South)
- Along strike extensions of the Minerva and Malawiri prospects
- The Crystal Creek prospect within ELA 30004
- Various small prospects along the prospective stratigraphic trend

Energy Metals is undertaking a systematic evaluation of these prospects, in many cases for the first time since the early 1980's. In February 2014, EME announced maiden resource estimates for the Bigwest, Anomaly-15 East and Camel Flat satellite deposits (Figure 3).

#### Activities (September 2014 Quarter)

In conjunction with a visit to Bigrlyi camp in August, archived historical drill core from regional prospects was re-organised and re-logged. Planning for future geophysical programs, in particular a high-resolution magnetic and radiometric survey over prospective areas of the northern Ngalia Basin, was on-going during the quarter. Energy Metals continued with compilation and verification of historical data for the regional prospects.

#### 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. A recent interpretation of palaeovalley systems within central Australia by Geoscience Australia indicates that the Macallan anomaly lies within the Wildcat Palaeovalley, an ancient valley system that drains into Lake Mackay to the southwest. Energy Metals considers that 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. A draft Exploration Access agreement provided by the CLC is currently under consideration by Energy Metals.

#### **WESTERN AUSTRALIA**

#### Manyingee (EME 100%)

The Manyingee exploration licence (E08/1480) is located 85 km south of the port of Onslow. The tenement (total area 86 km<sup>2</sup>) surrounds the mining leases containing Paladin Energy's Manyingee resource, a stacked series of palaeochannel-hosted roll front uranium deposits.

A small rotary mud drill program (18 holes for 1,790m) designed to test the uranium potential up-channel of Paladin's Manyingee deposit commenced in September with results announced late October 2014. Fifteen of the holes returned significantly mineralised intercepts (grade x thickness values >100ppm-metre), including 1.3m @ 996ppm eU<sub>3</sub>O<sub>8</sub> from 63.48m in hole MRM009; and 1.4m @ 1,117ppm eU<sub>3</sub>O<sub>8</sub> from 76.62m in hole MRM017 (refer to ASX release of 27<sup>th</sup> October 2014 for further details).

#### Mopoke Well (EME 100%)

The Mopoke Well project comprises exploration licence E29/568 and retention licence application R29/1 located 55km west of Leonora. The tenement area contains two historic uranium prospects (Peninsula and Stakeyard Well) hosted by calcretised sediments associated with the Lake Raeside drainage system. Last year, an inferred category JORC (2004) resource estimate totalling 9.75Mt at 165ppm  $eU_3O_8$  for 1,613 tonnes or 3.56Mlb  $U_3O_8$  at a cut-off grade of 100ppm  $U_3O_8$  was obtained for the Peninsula deposit (see ASX release of March 12<sup>th</sup> 2013).

A small 510m aircore drilling program (51 holes of 10m depth) was undertaken late last year at Peninsula in order to better define the extent of mineralisation in the southern portion of the prospect. Due to delays caused by unseasonable weather conditions, processed gamma logs and results of geochemical testwork on selected drill spoils have only been received this quarter. Drill hole information is provided in Table 1 and significant gamma log intercepts and geochemical assay data are provided in Tables 2 and 3 respectively. Only a few holes were found to contain significantly mineralised intervals (see Figure 4).

				Hole		
	Easting	Northing	Elevation	Depth		
Hole ID	GDA94	GDA94	(m)	(m)	Azimuth	Dip
MWP265	275245.8	6810738.5	371.3	10.0	360	-90
MWP266	275450.2	6810752.7	370.8	10.0	360	-90
MWP267	274349.8	6810498.3	368.9	10.0	360	-90
MWP268	274555.3	6810493.3	373.2	10.0	360	-90
MWP269	274847.0	6810500.3	371.5	10.0	360	-90
MWP270	275049.2	6810501.1	371.1	10.0	360	-90
MWP271	275247.7	6810499.3	370.5	10.0	360	-90
MWP272	275451.0	6810498.1	370.3	10.0	360	-90
MWP273	275650.2	6810497.8	369.0	10.0	360	-90
MWP274	275852.4	6810497.1	368.7	10.0	360	-90

#### Table 1. Drill Hole Information

MWP275	274350.8	6810249.8	369.9	10.0	360	-90
MWP276	274544.9	6810243.7	372.9	10.0	360	-90
MWP277	274852.1	6810247.6	369.9	10.0	360	-90
MWP278	275048.1	6810244.3	369.7	10.0	360	-90
MWP279	275250.5	6810242.6	370.6	10.0	360	-90
MWP280	275450.1	6810248.9	370.5	10.0	360	-90
MWP281	275651.6	6810247.2	368.9	10.0	360	-90
MWP282	275950.4	6810247.1	370.7	10.0	360	-90
MWP283	274150.2	6809998.1	369.0	10.0	360	-90
MWP284	274352.2	6810003.8	371.3	10.0	360	-90
MWP285	274546.9	6810003.0	371.1	10.0	360	-90
MWP286	274851.4	6810004.6	370.4	10.0	360	-90
MWP287	275052.1	6810000.5	371.5	10.0	360	-90
MWP288	275251.0	6810002.6	370.8	10.0	360	-90
MWP289	275451.2	6810004.1	370.7	10.0	360	-90
MWP290	275649.2	6810000.1	371.4	10.0	360	-90
MWP291	275849.4	6809998.7	370.3	10.0	360	-90
MWP292	274149.4	6809745.4	370.3	10.0	360	-90
MWP293	274351.9	6809749.2	369.8	10.0	360	-90
MWP294	274552.2	6809756.7	371.1	10.0	360	-90
MWP295	274849.0	6809752.9	370.5	10.0	360	-90
MWP296	275049.8	6809747.2	372.3	10.0	360	-90
MWP297	275250.9	6809745.8	371.1	10.0	360	-90
MWP298	275450.2	6809750.7	371.2	10.0	360	-90
MWP299	275649.2	6809744.7	370.9	10.0	360	-90
MWP300	275843.7	6809752.0	370.3	10.0	360	-90
MWP301	274265.2	6809492.6	369.6	10.0	360	-90
MWP302	274351.4	6809500.8	369.4	10.0	360	-90
MWP303	274556.7	6809514.4	370.3	10.0	360	-90
MWP304	274850.0	6809501.9	370.8	10.0	360	-90
MWP305	275048.7	6809497.4	371.5	10.0	360	-90
MWP306	275252.3	6809496.8	371.1	10.0	360	-90
MWP307	275458.7	6809496.8	371.3	10.0	360	-90
MWP308	275649.5	6809498.8	371.1	10.0	360	-90
MWP309	275851.3	6809496.5	369.7	10.0	360	-90
MWP310	274546.2	6809347.6	369.7	10.0	360	-90
MWP311	274849.5	6809288.8	368.6	10.0	360	-90
MWP312	275051.3	6809247.6	369.4	10.0	360	-90
MWP313	275248.2	6809244.5	368.9	10.0	360	-90
MWP314	275443.8	6809253.5	368.1	10.0	360	-90
MWP315	275646.8	6809245.4	370.3	10.0	360	-90

Hole ID	from (m)	to (m)	eU₃O <sub>8</sub> (ppm)	width (m)	Grade x Thickness
	1 72	20 (,	106	1 15	122
10100 200	1.72	2.07	100	1.15	122
MWP267	1.21	2.56	111	1.35	150
MWP268	2.97	5.02	141	2.05	289
MWP284	2.27	3.67	111	1.40	156
MWP286	0.92	1.92	107	1.00	107
MWP297	1.37	2.67	149	1.30	194
MWP306	1.57	2.57	223	1.00	223

Table 2. Significant Processed Gamma Log Intercepts\*

\*Cut-off grade 100ppm eU3O8, minimum width 1.0m, max. internal dilution 1m.

Table 3. Significant Intervals by Geochemical Assay\*

		-	U <sub>3</sub> O <sub>8</sub>	-	Grade x	V <sub>2</sub> O <sub>5</sub>
Hole ID	from (m)	to (m)	(ppm)	width (m)	Thickness	(ppm)
MWP267	1.0	3.5	130	2.5	324	185
MWP268	3.0	5.5	153	2.5	383	148
MWP271	2.0	3.0	249	1.0	249	264
MWP283	1.5	3.5	125	2.0	250	143
MWP284	2.0	4.5	124	2.5	310	146
MWP297	1.5	3.0	103	1.5	155	125
MWP306	1.5	3.0	146	1.5	219	200

\*Cut-off grade 100ppm U3O8, minimum width 1.0m, max. internal dilution 1m.



Figure 4. Results of the 2013 drilling program categorised by grade x thickness for the southern Peninsula Deposit.

Note that radiometric gamma log and geochemical  $U_3O_8$  assay results may not necessarily agree due to differences in sampling volume, compositing widths and the effects related to radioactive disequilibrium. As previously noted, the geochemical results suggest some domains within the Peninsula Deposit may contain slightly higher grades and greater widths of uranium mineralisation than indicted by the gamma logs. Nevertheless, in view of the lack of continuity and the low-grade nature of intercepts, EME considers that an update of the resource estimate would not result in a significant change.

An application to convert resource areas of the existing Mopoke exploration licence into a retention licence was progressing during the quarter.

#### Lakeside (EME 100%)

The Lakeside project is located in the Murchison district 20km west of Cue and comprises exploration licence E21/120. This project was acquired to follow up previously discovered surficial uranium mineralisation associated with calcrete and saline drainages. Aircore drilling campaigns by Energy Metals were undertaken in 2007, 2008, 2010 and 2012.

In June 2014 EME announced a Mineral Resource estimate of 2.74Mt at an average grade of 350 ppm  $U_3O_8$  for 960 tonnes or 2.12Mlb  $U_3O_8$  (200ppm  $U_3O_8$  cut-off grade); see ASX release of 3<sup>rd</sup> June 2014. The Mineral Resource is based on JORC (2012) definitions and the reported resource is classified as Inferred.

No on-ground exploration activities were conducted during the quarter.

An application to convert resource areas of the existing Lakeside exploration licence into a retention licence was progressing during the quarter.

### Anketell (EME 100%)

The Anketell project comprises two granted exploration licences (E's 58/289 & 58/292) together with an overlying Retention Licence application (R58/2). The tenements contain shallow calcrete hosted mineralisation discovered by Western Mining (WMC) in 1972. The mineralisation is similar in style to the Yeelirrie deposit, also discovered by WMC in the same year and located 150km to the northeast. Following completion of aircore drilling programs, the Company announced in July 2009 an initial JORC (2004) Inferred Mineral Resource of 2,720 tonnes (6MIb)  $U_3O_8$  at a grade of 167ppm (100ppm cut-off).

No on-ground exploration activities were conducted during the quarter.

An application to convert resource areas of the existing Anketell exploration licence into a retention licence was progressing during the quarter.

#### Lake Mason (EME 100%)

This project comprises one granted exploration licence (E 57/590) together with an overlying Retention Licence application (R57/2) centred 25km NNE of Sandstone and 80km SW of the Yeelirrie deposit. Previous exploration by BP Minerals in the 1970's discovered shallow carnotite mineralisation in calcrete and calcareous sediments associated with the Lake Mason drainage system.

In December 2010 the Company announced a JORC (2004) resource at Lake Mason of 9.1Mt @ 185ppm  $U_3O_8$  (at 100ppm cut-off) for 1,689 tonnes (3.7Mlb) of uranium, with 62% of the resource reporting to the Indicated Category (refer to the ASX announcement of 17 December 2010 for further details).

No on-ground exploration activities were conducted during the quarter.

An application to convert resource areas of the existing Lake Mason exploration licence into a retention licence was progressing during the quarter.

#### CORPORATE

Energy Metals remains in a strong financial position with approximately \$24.28 million in cash and bank deposits at the end of September, forming a solid resource for ongoing exploration and project development.

At 30 September 2014, Energy Metals had 209.7 million shares on issue.

				CHANGE
TENENAENIT*	DROIFCT			
	PROJECT	LOCATION	INTEREST	QUARIER
	Northern T	erritory		
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%	-
EL24806	Ngalia Regional	Mt Doreen	100%	-
EL24807	Ngalia Regional	Mt Doreen	100%	-
ELR46	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR47	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR48	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR49	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR50	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR51	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR52	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR53	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR54	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR55	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR41	Ngalia Regional	Napperby	52.10%	Granted
ELR45	Ngalia Regional	Mt Doreen	41.90%	Granted
EL30002	Ngalia Regional	Mt Doreen	100%	-
EL30004	Ngalia Regional	Mt Doreen	100%	-
EL30006	Ngalia Regional	Mt Doreen	100%	-
ELA27169	Ngalia Regional	Yuendumu	100%	-
EL30144	Ngalia Regional	Mt Doreen	53.30%	Granted
EL30145	Ngalia Regional	Mt Doreen	53.30%	Granted
ELA24462	Ngalia Regional	Yuendumu	100%	-
ELA24450	Ngalia Regional	Yuendumu	100%	-
ELA24805	Ngalia Regional	Nyirripi	100%	-
ELA27333	Macallan	Tanami	100%	-
MCSA318-328	Ngalia Regional	Yuendumu	53.30%	-
MLNA1952-1953	Ngalia Regional	Mt Doreen	53.30%	-
Western Australia				
E08/1480	Manyingee	Yanrey	100%	-
E21/120	Lakeside	Cue	100%	-
E29/568	Mopoke Well	Leonora	100%	-
E57/590	Lake Mason	Sandstone	100%	-
E58/289	Anketell	Sandstone	100%	-
E58/292	Anketell	Sandstone	100%	-

Table 2: Tenement Information as required by listin	g rule 5.3.3
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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.

Information in this report relating to the determination of the gamma probe results and 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.

The following commentary is provided to ensure compliance with the JORC (2012) requirements for the reporting of Exploration Results for the Peninsula Deposit on tenement E29/568.

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The Peninsula Deposit was sampled by aircore (AC) drilling. AC drill holes were probed using calibrated 33 mm Auslog gamma tool to obtain a total gamma count reading at 5 cm intervals (see below for tool calibration information).</li> <li>Gamma logging is a common method used to estimate uranium grade where the radiation contribution from thorium and potassium is small (e.g. for calcrete-hosted deposits like Peninsula). Gamma radiation is measured from a volume surrounding the drill hole with a radius of approximately 35 cm. The gamma probe therefore samples a much larger volume than common diameter drill samples.</li> <li>Chemical assay analysis was also conducted on a spread of samples for comparison with gamma logging.</li> <li>Estimates of equivalent uranium concentrations, derived from gamma ray measurements, are based on the assumption that the uranium is in secular equilibrium with its daughter radionuclides, which are the principal gamma ray emitters in the U-series decay chain. If uranium is in disequilibrium as a result of the redistribution (depletion or addition) of uranium relative to its daughter radionuclides, then the true uranium concentration in holes logged by gamma probe will be higher or lower than those estimated.</li> <li>No special investigations of disequilibrium have been completed at Peninsula so far; but comparisons between gamma estimated eU<sub>3</sub>O<sub>8</sub> and chemically measured U<sub>3</sub>O<sub>8</sub> show that the chemically analysed U<sub>3</sub>O<sub>8</sub> values are approximately 9% higher on average.</li> <li>AC drill spoils were sampled off the cyclone to yield one ca.3-5 kg bulk sample which was collected in a calico bag. Samples were not split.</li> <li>Downhole eU<sub>3</sub>O<sub>8</sub> values were used to control sample selection for chemical assay.</li> <li>100 half-metre samples of AC drill spoil were speared for an 800-1200g sample and submitted to Genalysis Laboratory Services Pty Ltd for Uranium and Vanadium assay by 4-Acid Digest / ICP-MS and</li> </ul>

Criteria	JORC Code explanation	Commentary
		4-Acid Digest /ICP-OES methods respectively.
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	• AC drilling was used at the Peninsula deposit. AC drilling utilized both blade (89mm diam.) and hammer (90mm diam.) methods. Holes were drilled on with a nominal 250 m by 100 m spacing; all holes were 10 m in depth. Drill holes were vertical to optimally intersect the mineralisation in horizontal beds.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>No quantitative sample recovery data (sample weights) were collected.</li> <li>Poor sample recovery was commented on and information in terms of a visual estimate of % recovery was entered into the company's database.</li> <li>Sample recoveries were visually 90-100% except in a few zones (generally located outside mineralised intervals).</li> <li>Ground conditions were not challenging in terms of gaining a full sample recovery or representative samples. The sample recovery was maximised by good drilling practices such as using appropriate drill bits for the stratigraphy, running the rig on correct air pressures, good driller/offsider communication ensured capturing 0.5m samples in numbered sample bags without error, casing the hole with PVC to facilitate gamma probing; water contamination was not an issue for 10m drill holes.</li> <li>No relationship was observed between sample recovery and sample grades.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All holes were gamma logged.</li> <li>All drill chip samples were qualitatively geologically logged and information was recorded digitally on lithology, colour, alteration, alteration intensity, significant minerals, and geological comments including cementation, acid reaction, presence of gypsum and carbonaceous matter, clay size/fraction and grainsize.</li> <li>All coded data was verified using EME standard logging look-up tables.</li> <li>Chip trays are archived at the EME sample storage facility.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Radiometric logging was used as the primary sampling method and because gamma radiation is measured from the entire volume surrounding the drill hole at a radius of approximately 35 cm it can be regarded as representative of the <i>in situ</i> material.</li> <li>In all AC programs the bulk material was sub-sampled by methodical spearing to provide a primary sample for assay.</li> <li>Primary and duplicate samples supplied for assay generally consisted of moist sandy clays and/or calcrete.</li> <li>In general the sampling preparation technique adopted by EME has proven to be effective in supplying a representative and repeatable sample as demonstrated by routine QA tests.</li> <li>The collection of bulk sample into bags without being split off the cyclone and the use of a spear for sampling is required due to the sticky nature of clays in the samples.</li> <li>Chemical assay sample sizes of 3-5 kg are considered to be appropriate for the style of mineralisation found here (calcrete and sandy clay hosted uranium) taking into consideration the fine- to medium-grained nature and mineralogy of mineralised intersections containing ≥100ppm U<sub>3</sub>O<sub>8</sub>.</li> <li>Samples were pulverised in a low-Cr steel ring mill so that 85% passed 75 micron mesh size.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The gamma tools used for downhole gamma measurements were calibrated in Adelaide at the SA Department of Water in calibration pits constructed under the supervision of the CSIRO; the tools are recalibrated annually.</li> <li>EME staff run regular checks to ensure the accuracy and reproducibility of probe data using a standard radioactive source.</li> <li>The raw gamma ray data was converted from counts per second to equivalent U<sub>3</sub>O<sub>8</sub> values (eU<sub>3</sub>O<sub>8</sub> in ppm) using the probe calibration factor related to casing. Additional factors take into account differences in drill-hole size and drill-hole water levels.</li> <li>eU<sub>3</sub>O<sub>8</sub> data is filtered (deconvolved) to more closely reproduce true grades and thicknesses, essential where narrow mineralised zones are encountered. The various calibration factors, deconvolution parameters and eU<sub>3</sub>O<sub>8</sub> determinations were compiled and/or</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>calculated by David Wilson BSc MSc MAusIMM from 3D Exploration Pty Ltd based in Perth, Western Australia.</li> <li>Several repeat gamma logs were measured with acceptable reproducibility.</li> <li>Uranium was assayed by four acid digest/ICP-MS with Vanadium assayed by four acid digest/ICP-OES. Both methods give a total digest for calcrete-hosted uranium.</li> <li>QC samples comprised a certified reference material, a blank and a duplicate at the approx. frequency of 1 QC set per 25 samples.</li> <li>Assessment of the QC data has confirmed that the accuracy and precision of the laboratory test work namely standard values (CRMs) reproduced within specified 95% confidence limits, duplicates reproduced to within +/-3%, blanks &lt;0.4ppm U<sub>3</sub>O<sub>8</sub>.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant uranium intersections were established by independent chemical and gamma logging methods.</li> <li>No holes have been twinned at the Peninsula deposit, however, duplicate gamma logs were recorded for selected holes.</li> <li>There has been no quantitative assessment of radioactive disequilibrium at the Peninsula Deposit to date.</li> <li>Primary data (sampling intervals, associated sample numbers and standard insertion etc.) from the field were recorded in hardcopy and in electronic format. Electronic data is entered into a Micromine template where it is validated before being imported into a SQL/GBIS database. A GBIS dispatch is created and a sample register is filled out. Upon return of the analytical data a GBIS receipt is created and the results stored in the GBIS database.</li> <li>No adjustments were made to analytical assay data.</li> <li>No correction factor has been applied for radioactive disequilibrium; further work would be needed to establish the definitive disequilibrium characteristics of the deposit.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Peninsula drill hole collar pickups were conducted by EME technicians using an Altus APS-3 RTK base receiver & rover (RTK DGPS). The precision quoted by Altus is 0.6cm in the horizontal and 1cm in the vertical plane. A local base station was previosuly established at a Survey Control Point via the AUSPOS system. Elevations are derived AHD heights computed using the

Criteria	JORC Code explanation	Commentary
		<ul> <li>AUSGeoid09. The centre of the drill collar cap was measured.</li> <li>All data and coordinates for the project are located on the MGA94 grid, Zone 51 using the GDA94 datum. Co-ordinates are recorded in Eastings and Northings format.</li> <li>Topographic control of EME drilling collars by RTK DGPS are accurate to 0.01m. As all holes were vertical and of 10m depth; no inclination measurements or down-hole surveys were undertaken.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Peninsula deposit drilling is on a grid with a nominal spacing of 100 to 200m between holes (Eastings) and 250m spacing between lines (Northings).</li> <li>EME and consultants CSA consider the spacing sufficient to establish continuity of geology and grade.</li> <li>Downhole gamma logs were measured at 5 cm spacing and were not composited for reporting purposes.</li> <li>Geochemical assay data are based on 0.5m sampled data.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Uranium mineralisation is hosted by stratiform calcrete or calcretised sediments associated with a palaeodrainage system and exhibits no structural control.</li> <li>Mineralisation is controlled by physical and chemical characteristics of the host rock such as permeability and is influenced by fluctuations in the groundwater table and groundwater flow.</li> <li>Drilling has been conducted perpendicular to the bedding that hosts the mineralised zones. Chemical sampling and deconvolved radiometric logging, refers to the vertical plane and is perpendicular to generally flat lying mineralised horizons thereby minimising any possible sampling bias related to orientation.</li> </ul>
Sample security	The measures taken to ensure sample security.	• The chain of custody of samples including dispatch and tracking is managed by EME staff. Samples are stored in a designated fenced area at site prior to transport to the assay laboratory by EME personnel. Sample pulps are returned to EME's sample storage facility for archive on completion of assay work.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• EME's downhole gamma probe logging procedures were reviewed and updated in 2012 with the assistance of David Wilson (3D Exploration Pty Ltd) and geophysical personnel from Paladin Energy Ltd.

Criteria	JORC Code explanation	Commentary
		<ul> <li>In 2013 a comprehensive data review of EME's WA uranium properties (2006 to 2012) was conducted by Matthew Wheeler, principal consultant of Terramin Geoservices. As part of the review previous EME data was validated and data handling practices updated including improvements to EME data management systems.</li> <li>Current sampling techniques and data management passed an audit by CSA Global in March 2013.</li> </ul>

### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Peninsula deposit is located on Exploration Licence E29/568, which is 100% owned and operated by EME.</li> <li>The exploration licence is located within the Sturt Meadows pastoral lease. There are no Native Title Claims covering the Peninsula Project area on Lake Raeside.</li> <li>The exploration licence is held in good standing with no known impediments.</li> </ul>
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Four international resources companies, Newmont, Western Mining Corporation, BP Minerals Australia, and Esso Exploration and Production Australia, undertook exploration for uranium in the Lake Raeside area during the 1970s. Although some historical exploration works, including drilling and pitting, were carried out in the Peninsula deposit area, no historical data was used for the Peninsula resource estimate as the historical drill and sample data could not be verified.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Peninsula Deposit is classified as a surficial calcrete-style uranium deposit.</li> <li>The region around the Peninsula Project is typically a topographically low, arid desert terrain with low rises separated by broad alluvial sheetwash plains, with aeolian deposits and salt marsh areas of low relief adjacent to Lake Raeside.</li> <li>The Peninsula Deposit is located on a low-lying peninsula extending into Lake Raeside and may represent a former delta broached to the west by a modern drainage system or may represent a chemical delta associated with groundwater flow.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Basement granitoids in the catchment area are considered to be the probable source rocks for the uranium.</li> <li>Uranium mineralisation is hosted in shallow calcrete or calcareous clay layers.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>All drill hole information from the present program has been included in Table 1.</li> <li>Refer Tables 2-3 for drill holes with significant intercepts.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Exploration results, i.e. mineralised intercepts, are reported as either equivalent U<sub>3</sub>O<sub>8</sub> values (eU<sub>3</sub>O<sub>8</sub>) from processed gamma logs or as chemical assay U<sub>3</sub>O<sub>8</sub> values in parts per million (ppm) by weight.</li> <li>Gamma log intersections have been determined from 5 cm deconvolved eU<sub>3</sub>O<sub>8</sub> values. In Table 2, a cut-off of 100 ppm eU<sub>3</sub>O<sub>8</sub> has been used with a minimum thickness of 1.0 m and a maximum internal dilution of 1.0m and no external dilution.</li> <li>Chemical assay U<sub>3</sub>O<sub>8</sub> values have been determined from 0.5 m samples of AC drill spoils.</li> </ul>
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>The stratigraphy is predominantly flat lying. All holes have been drilled vertically at -90 degrees, perpendicular to bedding planes and true widths of intersections are estimated to be 100% of the reported downhole widths.</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to Figure 4 in the body of the text.

Criteria	JORC Code explanation	Commentary
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	All exploration results have previously been reported.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>Vanadium is routinely assayed together with uranium, however, the recovery of vanadium is not considered to be an economic proposition (average grade &lt;150ppm V<sub>2</sub>O<sub>5</sub>).</li> <li>To test for the presence of buried palaeochannels a gravity survey over the entire Peninsula area was completed in March 2007; the survey comprised stations at 200 m spacing on traverses 2 km apart (total 622 stations). Consultant geophysicists Southern Geoscience Consultants reprocessed the raw data to provide contours and images. Possible palaeochannel targets were identified from the survey and later drill tested, however, no palaeochannel features were confirmed and no significant mineralisation was encountered.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>In view of the present results, an update of the resource estimate for Peninsula is currently not under consideration.</li> </ul>