



ABN 63 111 306 533

## QUARTERLY REPORT TO SHAREHOLDERS

for the three months ended  
31 December 2023

### ASX Code - EME

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This report and further  
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Energy Metals' website at:

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



## HIGHLIGHTS

### Bigirlyi JV Project (NT)

Field activities concluded; essential infrastructure works completed at the Bigirlyi exploration camp.

Preparations underway for a restart of exploration operations including resource expansion drilling at Bigirlyi in the 2024 season.

Update of the Bigirlyi Mineral Resource Estimate in progress.

### Ngalia Regional Project (NT)

Encouraging results from initial aircore drilling program at the Crystal Creek REE-in-Regolith prospect with significant intercepts:

**CCA30:** 21m @ 1,230ppm TREO & 3.1% DyTb-Oxides from surface, incl. 3m @ 2,390ppm TREO & 4.0% DyTb-Oxides;

**CCA05:** 21m @ 947ppm TREO & 4.0% DyTb-Oxides from 6m, incl. 6m @ 1,370ppm TREO & 4.7% DyTb-Oxides;

**CCA08:** 24m @ 763ppm TREO & 4.8% DyTb-Oxides from surface, incl. 6m @ 1,138ppm TREO & 4.5% DyTb-Oxides.

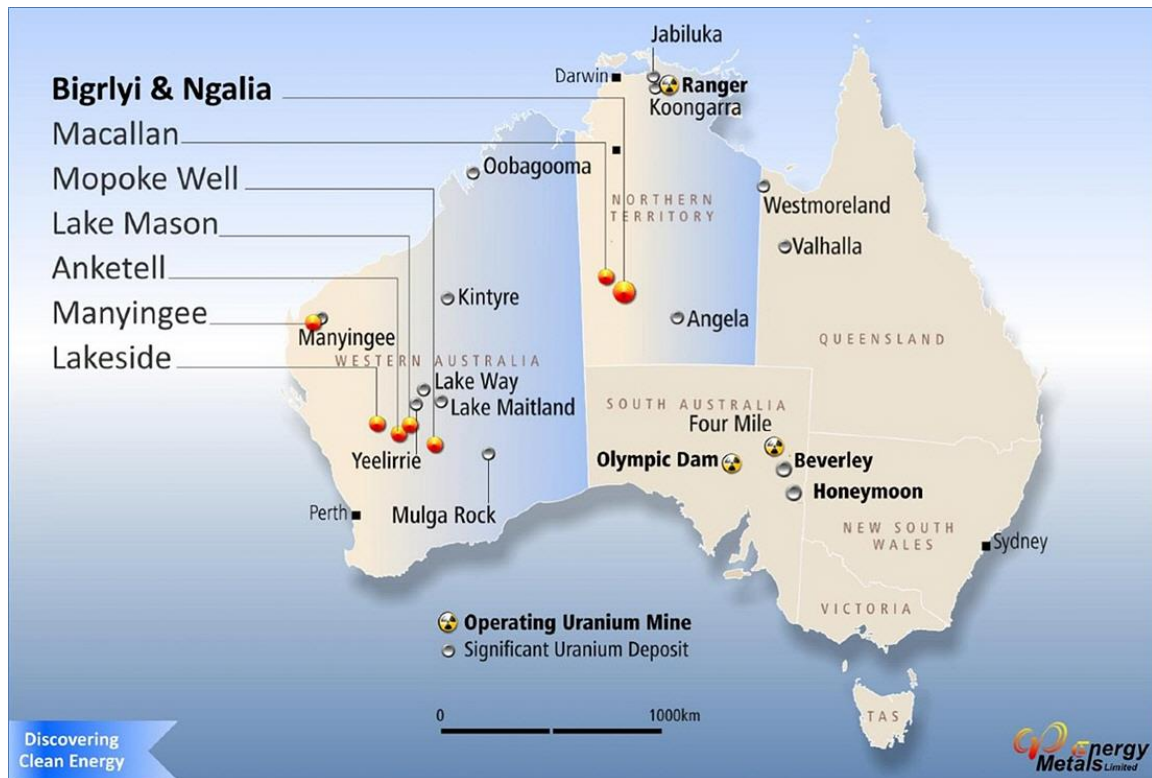
## FINANCIAL

Energy Metals had approximately \$13.19M in cash and 209.7M shares on issue at 31 December 2023.

Shubiao TAO  
Managing Director  
31 January 2024

## INTRODUCTION

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

China Uranium Development Company Limited, Energy Metals' largest shareholder (with 66.45% of issued capital), is a wholly owned subsidiary of CGN, a leading company in clean energy and nuclear power technologies in China and world-wide. As of 31 December 2023, the installed capacity of CGN's operating nuclear generating plants was 43.814 GW from 27 nuclear power units in operation with 11 power units under construction and being approved for construction in various locations across China. 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.

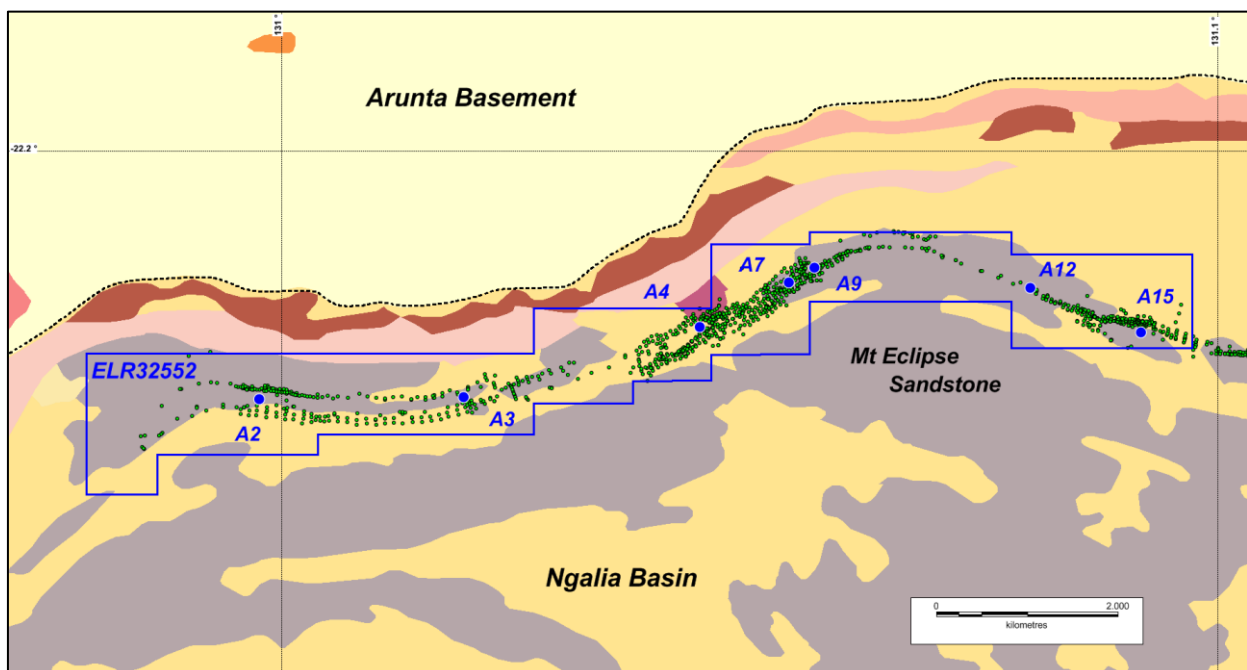
**Market Update.** During the December 2023 quarter the uranium spot price rose sharply from \$US 70/lb U<sub>3</sub>O<sub>8</sub> to \$US 90/lb by year-end principally due to production issues at major mines in Kazakhstan and Canada, and political uncertainty in Niger. More than 20 countries have announced plans to increase their nuclear power capacity in the light of ambitious plans to decarbonise their economies. In January 2024 the uranium spot price rose to more than \$US 100/lb, a price level not seen since 2007. In the vanadium market prices were steady near \$US 6/lb V<sub>2</sub>O<sub>5</sub>, just below long-term averages.

## **NORTHERN TERRITORY**

### **Bigrlyi Joint Venture (EME 72.39%)**

The Bigrlyi Joint Venture comprises two granted exploration licences in retention (ELRs), one granted EL, and several applications within the Ngalia Basin, located approximately 350km northwest of Alice Springs. Energy Metals operates the Joint Venture in partnership with Northern Territory Uranium Pty Ltd (NTU; a wholly-owned subsidiary of Elevate Uranium Ltd, EL8), and with Noble Investments Pty Ltd (NIL), a private investment company that holds a 6.79% interest.

The Bigrlyi Joint Venture has been the subject of significant exploration activity since 1973, including over 1,040 drill-holes, metallurgical test-work and mining studies focussed on the flagship Bigrlyi deposit, which comprises a number of sub-deposits over a 11km strike length on ELR32552 (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](http://www.energymetals.net).



**Figure 2 – Bigrlyi Joint Venture project area showing simplified geology (grey = Mt Eclipse Sandstone) with the outline of amalgamated ELR 32552 shown in blue; Anomaly-2 to Anomaly-15 (A2 to A15) sub-deposit locations (blue dots) and exploration drill-hole collars (green dots) are shown.**

The historical 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).

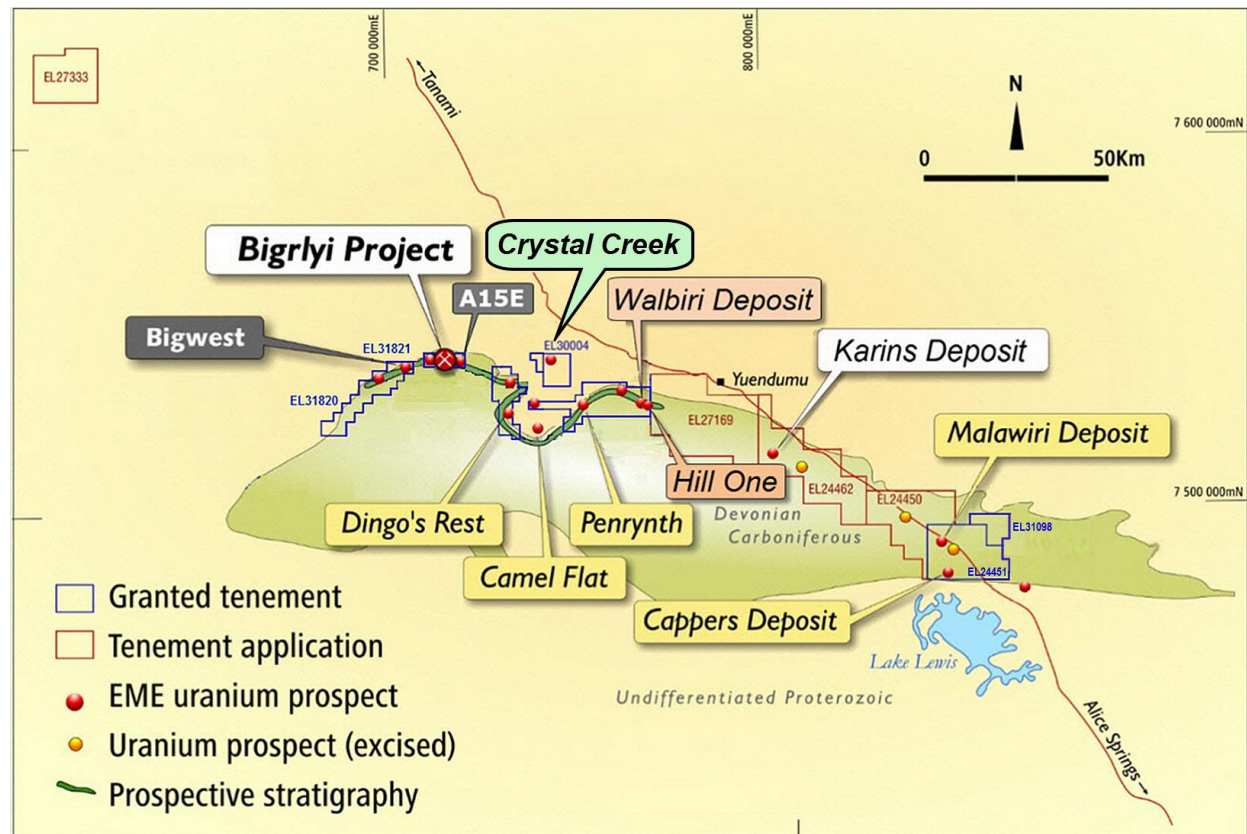
### **Walbiri Joint Venture (EME 77.12%)**

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 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 Energy Metals as the operator. Energy Metals holds a 76.03% beneficial interest in the JV and NTU holds a 23.97% interest. The Company advanced the Malawiri project to JORC-compliant resource status with release of a mineral resource estimate on 14 December 2017.



**Figure 3 – Uranium deposits, occurrences and exploration target areas in the Ngalia Basin. Location of the Crystal Creek REE prospect shown.**

### **JV Activities (December 2023 Quarter)**

Exploration work this season has focussed on continuing re-optimisation of various aspects of the Bigrlyi Project 2011 Prefeasibility Study (PFS) together with an aircore drilling program to test concealed targets at the Dingos Rest South uranium prospect. With recovery in the uranium market now underway, Energy Metals is well-positioned to progress its projects, and in particular to advance its flagship Bigrlyi project. Accordingly, active planning is currently underway for a restart of exploration and development operations at Bigrlyi in 2024.

**Field Program.** The 2023 field program, based out of the Bigrlyi exploration camp, was completed with a final field trip in November. A particular focus this year was on upgrading and refurbishing facilities and services at camp in preparation for a re-start of exploration operations in the 2024 field season. Essential earthworks conducted around camp included reinstatement of the camp fire-break and the clearing of access track to the camp's water supply and other camp infrastructure.



**Update of Bigirlyi Mineral Resource Estimate.** An update the Bigirlyi project Mineral Resource Estimate (MRE) to JORC (2012) standard is currently in progress with results expected in March.

**Field Season 2024 Planning.** With the recovery in the uranium market, planning was underway during the quarter for an operational re-start in 2024 with a resource expansion drilling program at Bigirlyi being a priority for the 2024 field season.

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

The Ngalia Regional project comprises thirteen 100% owned exploration licences, applications and exploration licences in retention located in the Ngalia Basin, between 180km and 350km northwest of Alice Springs (Figure 3). The tenements are contiguous and enclose the Bigirlyi project as well as containing a number of uranium occurrences, including part of the historic Walbiri deposit and the Cappers calcrete-hosted deposit. In addition, the rare earth element (REE) potential of the Crystal Creek prospect on EL30004, which comprises clay-rich regolith materials developed on granite, are under investigation.

### **Activities (December 2023 Quarter)**

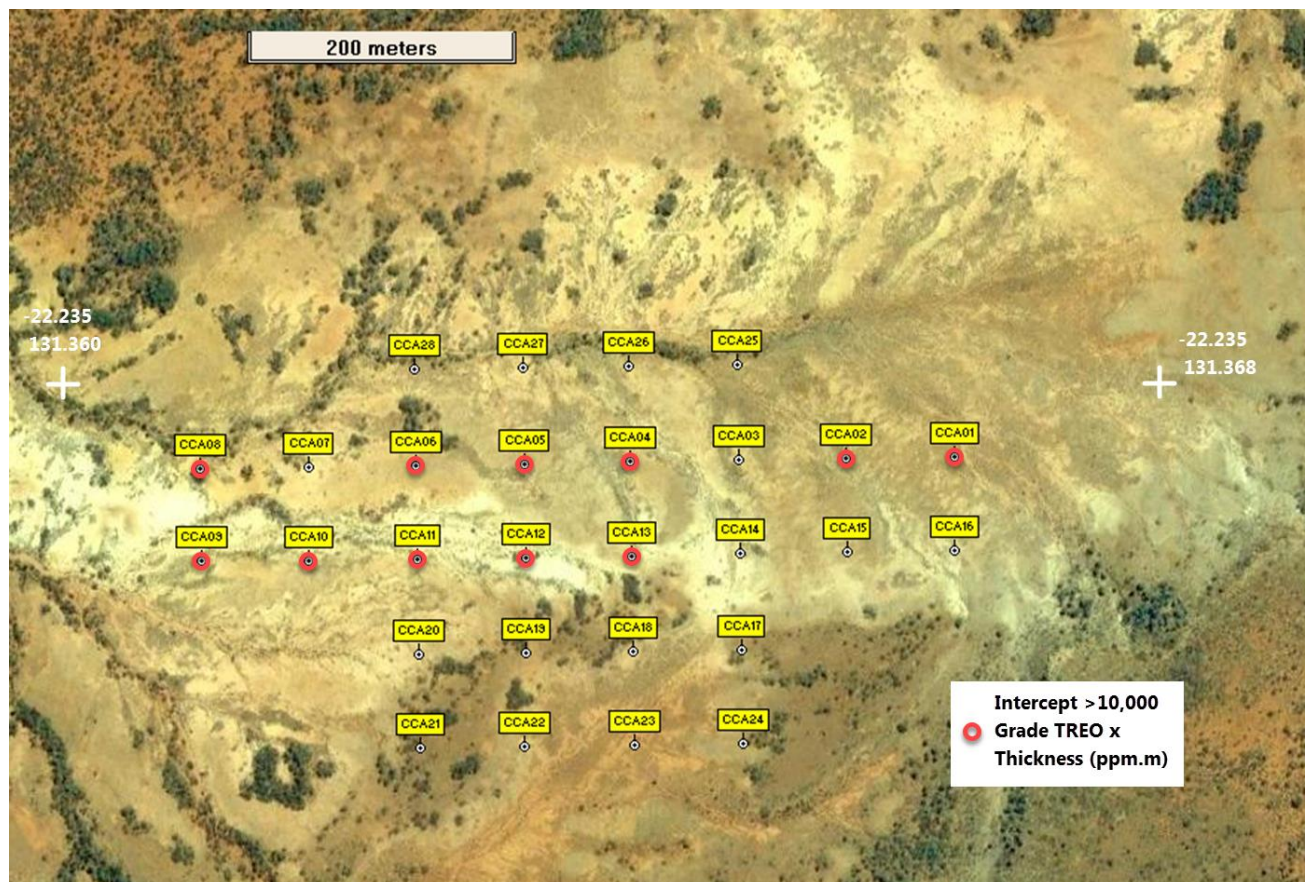
**Crystal Creek REE-in-Regolith Prospect Drilling.** An initial aircore drilling program, comprising 32 holes for a total of 541 metres, was completed at the Crystal Creek prospect mid-year. Assay data were received from the laboratory this quarter with significant results summarised below.

Table 1. Significant Drilling Results - Crystal Creek REE-in-Regolith prospect

Hole ID	Intercept* (m)	TREO (ppm)	From	Gr(TREO)x Thickness (ppm.m)	NdPrO (ppm)	% NdPrO	DyTbO (ppm)	% DyTbO
CCA01	21m @	682	surface	14,322	125	18.3	10.4	1.5
	incl. 3m @	1,099	9m	3,297	234	21.3	12.4	1.1
CCA02	18m @	757	surface	13,626	158	20.9	14.0	1.8
CCA03	3m @	623	surface	1,869	163	26.2	11.9	1.9
	& 9m @	560	9m	5,040	112	20.0	15.9	2.8
CCA04	12m @	984	12m	11,808	226	23.0	47.0	4.8
	incl. 6m @	1,271	15m	7,626	313	24.6	68.7	5.4
CCA05	21m @	947	6m	19,887	213	22.5	38.3	4.0
	incl. 6m @	1,370	15m	8,220	372	27.2	64.1	4.7
CCA06	18m @	791	6m	14,238	181	22.9	27.6	3.5
	incl. 3m @	1,139	15m	3,417	267	23.4	45.7	4.0
CCA07	12m @	544	3m	6,528	119	21.9	10.1	1.9
CCA08	24m @	763	surface	18,312	124	16.3	36.7	4.8
	incl. 3m @	1,138	6m	3,414	236	20.7	51.2	4.5
CCA09	21m @	767	surface	16,107	134	17.5	37.2	4.9
CCA10	18m @	775	surface	13,950	183	23.6	25.6	3.3
CCA11	18m @	672	surface	12,096	168	25.0	19.3	2.9
	incl. 3m @	1,084	3m	3,252	306	28.2	35.5	3.3
CCA12	15m @	772	surface	11,580	166	21.5	23.0	3.0
CCA13	15m @	737	surface	11,055	172	23.3	17.8	2.4
CCA14	15m @	534	surface	8,010	112	21.0	15.1	2.8

CCA15	12m @ 635	surface	7,620	137	21.6	12.7	2.0
CCA16	9m @ 727	surface	6,543	157	21.6	9.5	1.3
CCA19	6m @ 524	surface	3,144	81	15.5	6	1.1
CCA20	3m @ 700	3m	2,100	81	11.6	6.2	0.9
CCA21	3m @ 928	3m	2,784	169	18.2	12	1.3
CCA22	9m @ 534	surface	4,806	85	15.9	7.5	1.4
CCA25	3m @ 535	3m	1,605	124	23.2	8.3	1.6
CCA26	9m @ 649	surface	5,841	126	19.4	11	1.7
CCA27	3m @ 527	3m	1,581	74	14.0	7.9	1.5
CCA30	21m @ 1,230	surface	25,830	295	24.0	38.3	3.1
	incl. 3m @ 2,390	18m	7,170	538	22.5	96.1	4.0
CCA31	9m @ 563	7m	5,067	88	15.6	5.9	1.0
	& 16m @ 812	20m	12,992	208	25.6	18.8	2.3
CCA32	5m @ 597	1m	2,985	93	15.6	6.6	1.1

*\*Intercepts reported for a cut-off grade of 500ppm TREO; maximum 3m internal dilution and no external dilution. TREO = total rare earth oxides; NdPrO =  $\text{Nd}_2\text{O}_3 + \text{Pr}_6\text{O}_{11}$ ; DyTbO =  $\text{Dy}_2\text{O}_3 + \text{Tb}_4\text{O}_7$ ; %NdPrO =  $100 \times \text{NdPrO} / \text{TREO}$ ; %DyTbO =  $100 \times \text{DyTbO} / \text{TREO}$ . Further details are provided in Appendix 1.*



**Figure 4 – Crystal Creek Aircore Drill-hole location map (western group)**

At the 500ppm cut-off level significant thicknesses of REE mineralisation were encountered with 40% of the holes having intervals with TREO grade x thickness values exceeding 10,000 ppm.m for an average TREO grade of 823 ppm (see Figure 4 and 5). In addition, seven of the holes had intervals in which over 3% of the TREO were present as the valuable Dy and Tb oxides for an average DyTbO grade of 42.3 ppm. The best 3m interval was 2,390ppm TREO in hole CCA30, which included 538 ppm NdPrO and 96ppm DyTbO.



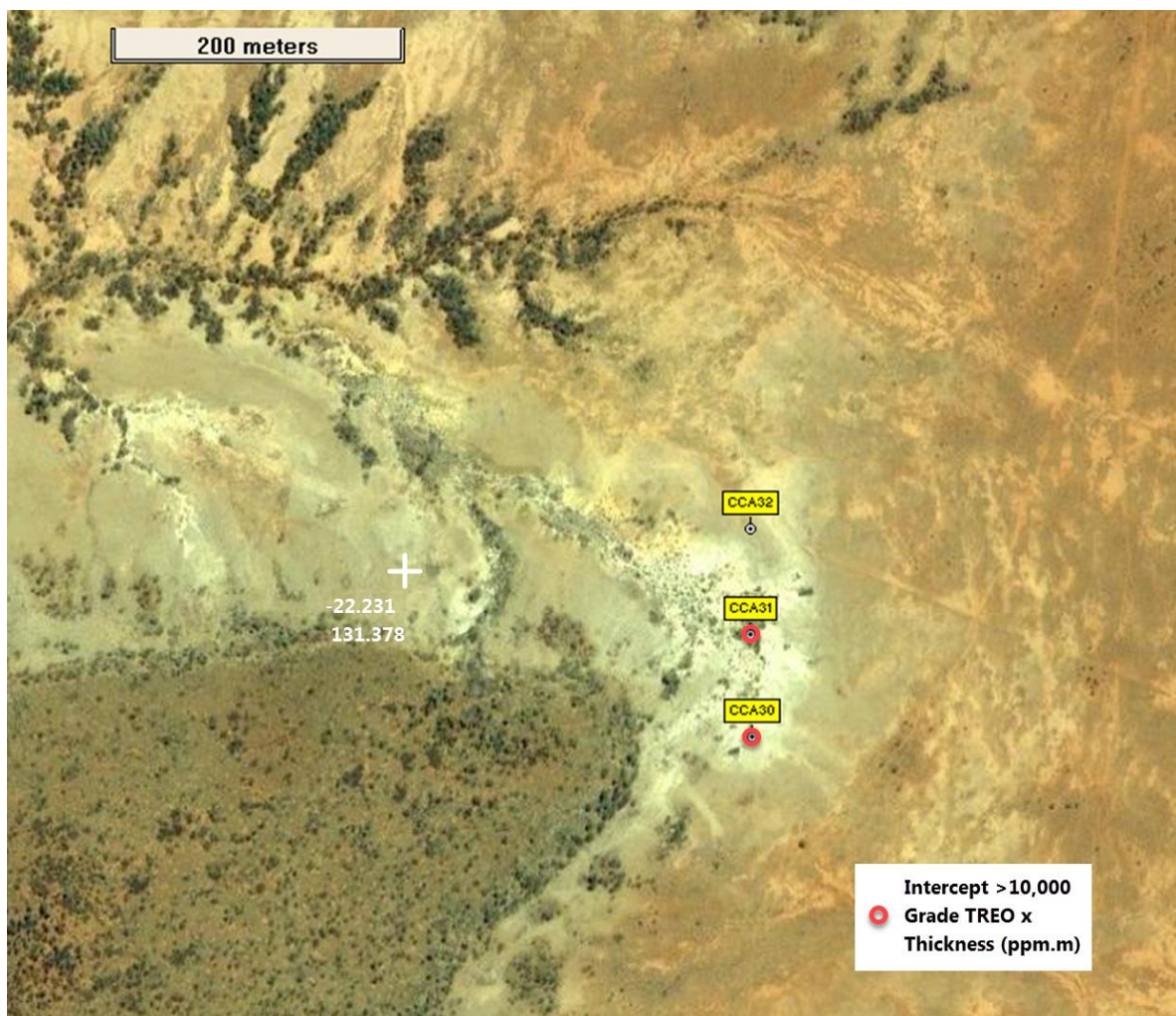


Figure 5 – Crystal Creek Aircore Drill-hole location map (eastern holes; 2km east of those in Figure 4).

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

The Macallan project comprises a single exploration licence application (ELA27333), located 460 km NW of Alice Springs and 140 km from Biglryi. 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 2024 and the CLC are currently reviewing the Company'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 two exploration licence applications, 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 Energy Metals 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 was appointed in 2019 to assist Energy Metals with landholder objections to grant of the Manyingee title applications. The objections are progressing through the Wardens Court procedure.

#### **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. All deposits are affected by the WA Government's current ban on uranium mining, and under present uranium market conditions the deposits are not economic. Energy Metals will continue to monitor the market and political situation with a view to re-starting exploration and development activities should positive conditions return.

#### **CORPORATE**

Energy Metals remains in a strong financial position with approximately \$13.19 million in cash and bank deposits at the end of the quarter, forming a solid resource for ongoing exploration and project development.

As disclosed under item 6.1 in the Appendix 5B, Energy Metals paid \$60,000 in total during the quarter to related parties and their associates. The payments represented amounts paid to the directors, including salaries, non-executive directors' fee, and consulting fees.



**Table 1: 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%	-
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%	-
ELR32552	Bigirlyi 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%	-
ELA33116	Ngalia Regional	Yuendumu	100%	-
EL30144	Bigirlyi Joint Venture	Mt Doreen	72.39%	-
ELR31319	Bigirlyi Joint Venture	Mt Doreen	72.39%	-
ELA24462	Ngalia Regional	Yuendumu	100%	-
ELA24450	Ngalia Regional	Yuendumu	100%	-
ELA27333	Macallan	Tanami	100%	-
MLNA1952	Bigirlyi Joint Venture	Yuendumu	72.39%	-
<b>Western Australia</b>				
E08/1480	Manyingee	Yanrey	100%	-
E08/2856	Manyingee	Yanrey	100%	-
E08/3647	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); 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 consultant to 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 discussed in this report relating to mineralisation modelling, exploration targets and metallurgical test-work results is based on information compiled by Dr Wayne Taylor. Dr Taylor is a member of the Australian Institute of Geoscientists (MAIG) and was a full-time employee of Energy Metals Ltd. He has 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 Competent Persons as defined in the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)”. Dr Taylor consents to the inclusion of the information in the report in the form and context in which it appears.*

*This report references uranium 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.*

## Appendix 1: Table 1 – Information provided under JORC (2012)

### Section 1: Sampling Techniques and Data.

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Aircore drilling was used to obtain 1m drill spoil samples downhole that were collected in plastic buckets from the cyclone and deposited on the ground in rows of 10 samples.</li> <li>Representative samples were obtained by spearing the sample piles at right angles.</li> <li>Speared samples were composited over 3m intervals into calico bags.</li> <li>Composite samples dispatched to the laboratory for analysis were approx. 3kg in size.</li> <li>Some one-metre samples were obtained to check for homogeneity by pXRF.</li> <li>Occasional cores of granite saprolite or saprock were recovered and separately bagged and retained.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Aircore drilling, which is the industry standard technique of choice for regolith materials, was used.</li> <li>The drilling was undertaken by McLeod Drilling using a mobile rig mounted on a dual axle Toyota Landcruiser with an auxiliary vehicle-mounted compressor.</li> <li>All holes were drilled vertically using NQ diameter (3") blade bits.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Drill sample recovery was noted and any poor recoveries were flagged.</li> <li>Sample recovery was generally excellent and no relationship between recovery and assay grade</li> </ul>



	<ul style="list-style-type: none"> <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>	was noted.
<i>Logging</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Drill spoil from each downhole metre was logged for lithology, colour, and moisture content, and scintillometer readings in counts per second were taken using a Radeye PRD.</li> <li>• All metre intervals, which mostly comprise quartz-bearing clays of variable iron oxide content, were logged.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The sample size (~3 kg) dispatched to the laboratory was considered appropriate for fine-grained, clay-rich material.</li> <li>• All samples were dry prior to bagging.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Samples were freighted in sealed bins to Intertek-Genalysis Perth laboratory from Alice Springs.</li> <li>• Initial sample preparation included sorting, drying and pulverisation;</li> <li>• Pulps were chemically analysed by the Intertek 4-acid digest multielement methods 4A/OM48 and 4A/OM48R, which includes the full REE suite. The method is appropriate for clay-rich regolith materials, however, REEs residing in highly refractory minerals may not be fully extractable.</li> <li>• Checks by the peroxide fusion method FP6/MS, which gives 100% REE dissolution, indicate that the light REEs (La to Sm) are close to fully</li> </ul>

		<p>extractable by the 4-acid method whereas heavy REEs appear variably extractable with up to 15% of Dy and Tb occurring in refractory forms.</p> <ul style="list-style-type: none"> <li>• Duplicates, blanks, field standards and/or certified reference materials were inserted approx. every 30 samples.</li> <li>• Laboratory QC results are reported along with sample values in the analytical certificate and report.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Sampling and assay data are entered into Energy Metals' Geobank database by an independent data management contractor.</li> <li>• Data entered into the database are subject to verification checks.</li> <li>• Data is stored on a secure server subject to regular back-up.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• The locations of sample sites were recorded using hand-held GPS units with an accuracy in the x-y plane of approx. 2m.</li> <li>• The coordinates are located on the MGA94 grid, Zone 52, using the GDA94 datum.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The nominal spacing between drill lines was 100m.</li> <li>• Drill holes were spaced 100m apart in two areas 2km apart.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The target is ionic adsorption-on-clay REE mineralisation (IAC) or weak acid extractable (WAE) REEs developed in the weathering profile of incompatible element-rich granites.</li> <li>• Sampled regolith materials comprise 'layer-cake' clay-rich, soil and granitic saprolite of approx. 10-30m thickness.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples were sealed in a bulk sample bin during transport from site to the laboratory.</li> </ul>

<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Audits or reviews of sampling techniques are yet to be undertaken due to the early-stage nature of the project.</li> </ul>
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## Section 2: Reporting of Exploration Results.

<i>Criteria</i>	<i>JORC Code explanation</i>	<i>Commentary</i>
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The prospect area is located on EL30004, which is 100% owned by Energy Metals Ltd.</li> <li>The tenement is held in good standing.</li> <li>There are no impediments to working in the area.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration drilling by Uranium Exploration Australia Ltd established substantial thicknesses of granitic saprolite in the southern part of the Crystal Creek prospect area where higher-grade REE-in-soil values have been reported by Energy Metals. The saprolite varies in thickness from 15 to 60m, however, only a few intervals from two holes were ever assayed for REEs with anomalous Nd of 229 ppm reported from hole 08SC14.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Energy Metals is targeting ionic adsorption on clay (IAC) style or weak acid extractable (WAE) REE mineralisation. IAC or WAE deposits form mainly in the weathering profiles of granites or related rocks where REEs are associated with clays. The REEs can be recovered by various acid leaching methods. Typical grades of IAC or WAE deposits are 0.05 to 0.20% TREO (total rare earth oxides).</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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:</li> </ul>	<ul style="list-style-type: none"> <li>Material drill hole information is provided in the attached table (see p. 16).</li> </ul>



	<ul style="list-style-type: none"> <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> <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>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Reported TREO values were calculated as the sum of the REE oxides as follows: <math>\text{La}_2\text{O}_3 + \text{CeO}_2 + \text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 + \text{Sm}_2\text{O}_3 + \text{Eu}_2\text{O}_3 + \text{Gd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 + \text{Ho}_2\text{O}_3 + \text{Er}_2\text{O}_3 + \text{Tm}_2\text{O}_3 + \text{Yb}_2\text{O}_3 + \text{Lu}_2\text{O}_3 + \text{Y}_2\text{O}_3</math>.</li> <li>• Oxide values were converted from elemental data reported by the laboratory using the following conversion factors: La: 1.1728, Ce: 1.2284, Pr: 1.1703, Nd: 1.1664, Sm: 1.1596, Eu: 1.1579, Gd: 1.1526, Tb: 1.1510, Dy: 1.1477, Ho: 1.1455, Er: 1.1435, Tm: 1.1421, Yb: 1.1387, Lu: 1.1372, Y: 1.2699.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Mineralisation intercepts vary in width from 3m to over 20m within granitic saprolite that occurs as essentially a horizontal blanket or layer developed over granitic basement; therefore, the intercept width is the true thickness.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Table 1 and Figures 4 and 5 in the body of the text.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• All significant results (i.e., those intercepts equal to or greater than 500ppm TREO) have been reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>• As the project is at an early stage, a metallurgical test-work program, including clay desorption extraction and leaching tests, is yet to</li> </ul>

	<p>– <i>size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	<p>be implemented.</p> <ul style="list-style-type: none"> <li>• Early stage mineralogical characterisation work on surface soils has identified the REE minerals monazite, xenotime, churchite and florencite; mineralogical work is yet to be conducted on drill samples.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Metallurgical test-work is planned to investigate REE extractability and in particular whether the mineralisation style is of the IAC or WAE type and whether the mineralisation has the potential to be economically extractable.</li> <li>• Positive results are expected to result in further aircore drilling to expand the mineralisation footprint as only a small part of the prospective area, as determined by previous soil sampling and a HyMap multispectral survey, has been tested to date.</li> </ul>

**Table of Drill Hole Collars**  
**Crystal Creek Project**

Hole ID	Zone	MGA_E	MGA_N	EoH (m)	Inclination	Method	Bit
CCA01	52	743934	7539200	21	-90	Aircore	Blade
CCA02	52	743853	7539199	18	-90	Aircore	Blade
CCA03	52	743774	7539199	21	-90	Aircore	Blade
CCA04	52	743694	7539200	25	-90	Aircore	Blade
CCA05	52	743615	7539199	27	-90	Aircore	Blade
CCA06	52	743534	7539198	24	-90	Aircore	Blade
CCA07	52	743455	7539198	24	-90	Aircore	Blade
CCA08	52	743375	7539199	27	-90	Aircore	Blade
CCA09	52	743373	7539131	21	-90	Aircore	Blade
CCA10	52	743453	7539128	18	-90	Aircore	Blade
CCA11	52	743533	7539128	18	-90	Aircore	Blade
CCA12	52	743614	7539129	15	-90	Aircore	Blade
CCA13	52	743693	7539129	15	-90	Aircore	Blade
CCA14	52	743775	7539129	15	-90	Aircore	Blade
CCA15	52	743854	7539130	12	-90	Aircore	Blade
CCA16	52	743935	7539130	9	-90	Aircore	Blade
CCA17	52	743774	7539058	12	-90	Aircore	Blade
CCA18	52	743693	7539058	9	-90	Aircore	Blade
CCA19	52	743614	7539059	12	-90	Aircore	Blade
CCA20	52	743534	7539060	9	-90	Aircore	Blade
CCA21	52	743533	7538990	12	-90	Aircore	Blade
CCA22	52	743611	7538990	9	-90	Aircore	Blade
CCA23	52	743694	7538988	9	-90	Aircore	Blade
CCA24	52	743774	7538989	9	-90	Aircore	Blade
CCA25	52	743774	7539269	9	-90	Aircore	Blade
CCA26	52	743693	7539270	9	-90	Aircore	Blade
CCA27	52	743614	7539270	9	-90	Aircore	Blade
CCA28	52	743534	7539269	9	-90	Aircore	Blade
CCA29	52	743100	7538099	45	-90	Aircore	Blade
CCA30	52	745355	7539569	21	-90	Aircore	Blade
CCA31	52	745354	7539639	36	-90	Aircore	Blade
CCA32	52	745354	7539709	12	-90	Aircore	Blade



## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Energy Metals Limited

ABN

63 111 306 533

Quarter ended ("current quarter")

31 December 2023

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	-	-
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(85)	(361)
	(e) administration and corporate costs	(54)	(425)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	148	394
1.5	Interest and other costs of finance paid	(1)	(6)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (management fee receipt from JV)	11	28
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>19</b>	<b>(370)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	(170)	(470)
	(e) investments	-	-
	(f) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(170)</b>	<b>(470)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	(14)	(54)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>(14)</b>	<b>(54)</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	13,352	14,081
4.2	Net cash from / (used in) operating activities (item 1.9 above)	19	(370)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(170)	(470)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(14)	(54)

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	<b>Cash and cash equivalents at end of period</b>	<b>13,187</b>	<b>13,187</b>

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	410	476
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (term deposits)	12,777	12,876
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>13,187</b>	<b>13,352</b>

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	60
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>7. Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1 Loan facilities		
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 <b>Total financing facilities</b>		
7.5 <b>Unused financing facilities available at quarter end</b>		
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	19
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(170)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(151)
8.4 Cash and cash equivalents at quarter end (item 4.6)	13,187
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	13,187
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	87.3
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: Not applicable.	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: Not applicable.	

**Mining exploration entity or oil and gas exploration entity quarterly cash flow report**

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: Not applicable.

*Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.*

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 January January 2024



Authorised by: .....  
Xuekun Li, Company Secretary

**Notes**

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.