ASX ANNOUNCEMENT

25th Feburary 2025

BIGRLYI MINERAL RESOURCE INCREASED BY A FURTHER 12%

HIGHLIGHTS

- **The Mineral Resource Estimate (MRE) for Bigrlyi has been updated to include results from drilling carried out in 2024.**
- **The overall uranium content has increased by 12%, rising to 10.9kt U_3O_8 (23.9 Mlbs).**
- **The updated MRE contains an additional 1.2kt U_3O_8 (2.6Mlbs) compared to the 2024 estimate.**
- **20% of the resource is now classified as Measured, rising from 18% previously, which provides increased geological confidence in the resource.**

Energy Metals Limited (**ASX: EME** or **the Company**) has completed a revised JORC (2012) compliant Mineral Resource Estimate (MRE) for the Bigrlyi Uranium Project, delivering a 12% increase in the total uranium content compared to the previous MRE announced August 1, 2024[1].

Located in the Ngalia Basin – approximately 350km northwest of Alice Springs, NT, the deposit is classified as a tabular sandstone-hosted uranium and vanadium deposit, occurring within the sub-vertically dipping Mt Eclipse Sandstone, which comprises a sequence of medium-to-coarse grained felspathic sandstones.

The Project is a joint venture (JV) between Energy Metals (72.39%), NT Uranium (20.82%), and Noble Investments (6.79%), with Energy Metals acting as the JV operator.

Managing Director Shubiao Tao commented: *"The 12% expansion of the JORC-compliant resource to 10.9kt U_3O_8 is an exciting development which demonstrates Bigrlyi's potential to keep growing. We are committed to further drilling in 2025 to systematically test multiple high-priority zones of this fabulous deposit."*

[1] Energy Metals ASX Announcement 01/08/2024: "Resource Update – Bigrlyi Project"

RESOURCE CLASSIFICATION

The updated MRE – as set out in Table 1 – comes after the Company successfully completed an 11,055m campaign of RC and Diamond drilling in Q3 of 2024 designed to grow the uranium resource at Bigrlyi. The MRE increase reported here is due to the excellent results returned from that drilling, particularly at the A4 subdeposit which has grown by 23%.

The mineral resources were estimated at various cut-off grades using Multiple Indicator Kriging (MIK) to estimate uranium, with Ordinary Kriging (OK) used to estimate vanadium.

The revised uranium resource stands at 7.94Mt at an average grade of 1,370ppm for 10.9Kt (23.9 Mlbs) contained U_3O_8 using a 500ppm cut-off. The MRE comprises 20% Measured Resource, 49% Indicated Resource, and 31% Inferred Resource.

Table 1: *Mineral Resource Estimate by resource category*

Resource Category	Tonnes (Millions)	U_3O_8 (ppm)	V_2O_5 (ppm)	U_3O_8 (Tonnes)	U_3O_8 (Mlbs)	Proportion
Measured	1.69	1,300	1,010	2,210	4.87	20%
Indicated	3.75	1,410	1,410	5,300	11.7	49%
Inferred	2.50	1,340	1,230	3,350	7.39	31%
Total	7.94	1,370	1,270	10,900	23.9	100%

Estimated at a 500ppm U_3O_8 cut-off grade.

Tonnes are metric (2204.62lbs). Figures may not total exactly due to rounding.

GEOLOGY AND MINERALISATION

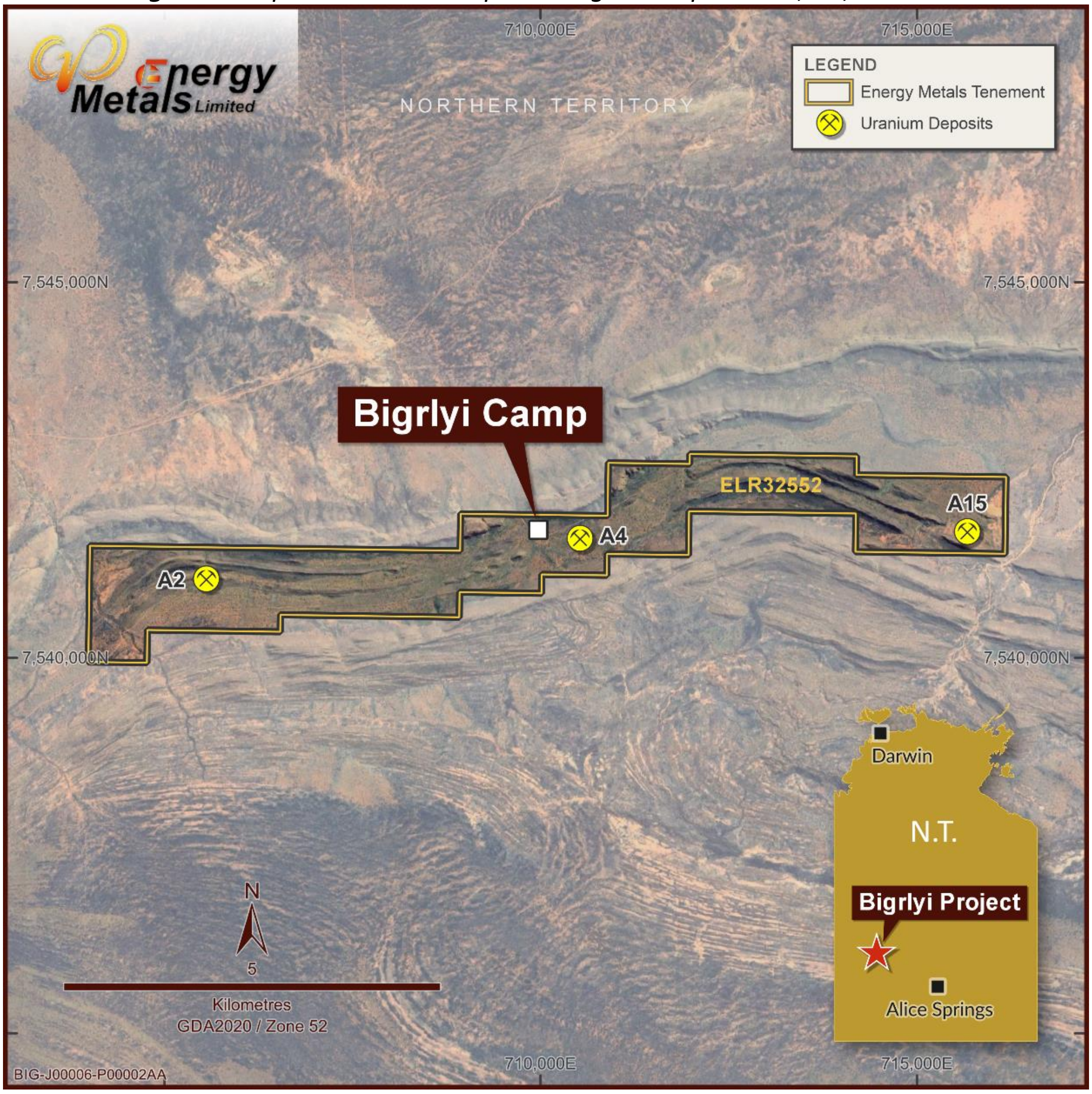
Mineralisation at Bigrlyi occurs over a strike length of approximately 11km within a series of sub-deposits, which are known from west to east as A2, A4, A7/9, and A15. The uranium mineralisation is associated with specific redox-controlled horizons within the stratigraphic sequence – particularly at the upper and lower contacts between a reduced, grey sandstone, referred to as Unit C – and overlying and underlying red-bed sandstones, referred to as Units B and D. There are additional thin zones of mineralisation within Units B and D but these are secondary in importance.

The uranium mineralisation occurs predominantly in the form of Uraninite (UO_2) and Coffinite ($USiO_4.H_2O$) when fresh, and as Carnotite ($K(UO_2)_2(VO_4)_2.3H_2O$) when oxidised.

Vanadium mineralisation, principally Montroseite ((V, Fe) O(OH)), is associated with uranium at Bigrlyi but commonly forms a broader halo around uranium mineralisation. The vanadium content has increased substantially in the latest MRE with the total of 10.1kt V_2O_5 at a 500ppm U_3O_8 cut-off grade. This represents a 67% increase relative to the 2024 model which contained 6.04kt V_2O_5. Vanadium may form an economic byproduct of any future uranium mining operation at Bigrlyi.

With the revised MRE, the distribution of uranium resources across Bigrlyi is now such that A4 hosts 63% of the total resource, with 27% at A15, 7% at A2, and the final 3% spread across minor subdeposits such as A7 and A9. The location of the main subdeposits are shown on the location map in Figure 1 below.

Figure 1: *Deposit Location Map showing sub-deposits A2, A4, and A15.*



UPDATE OF THE MINERAL RESOURCE ESTIMATE

Changes to the MRE and underlying resource model in 2025 are due to multiple factors which have all combined to influence the final outcome. These include:

- New drilling data from 2024,
- Increased consideration of resources which are suitable for underground mining,
- Changes to the dataset as a result of improved database validation,
- A change in the detailed estimation methodology (change of support model) used at A4 to ensure consistency of modelling techniques across all subdeposits.

Each of these changes in isolation have affected the MRE either positively or negatively, with the overall net effect being an increase of 1200t U_3O_8 and a better and more accurate resource model.

THE A4 SUBDEPOSIT

One notable change in the 2025 MRE is the large increase in metal content at A4, which now contains an additional 23% uranium (1280t U_3O_8). Most of this increase has come at depth in the centre of A4 where recent deep drilling identified a zone of extremely high grade. Figure 2 shows a cross-section through the deposit in the centre of A4 which illustrates the continuity of the deposit, as well as the increasing grade trend with depth. It should be noted that the model here is open both at depth and along strike to the east.

A4 has now been defined over a strike length exceeding 2km, with a depth extent greater than 500m. It contains the bulk of uranium mineralisation at Bigrlyi and will form the core of any future mining operation. An oblique long-section view of A4 – given in Figure 3 – shows all resource blocks with U_3O_8 greater than 100ppm and is overlain with the most recent open pit designs for the Project which were generated to accompany previous mining studies in 2011. Future work will include updating these pit designs to account for recent increases in the size and depth extent of the deposit.

Figure 2: *Cross-section through the centre of A4 showing the resource blocks coloured by U_3O_8 grade*

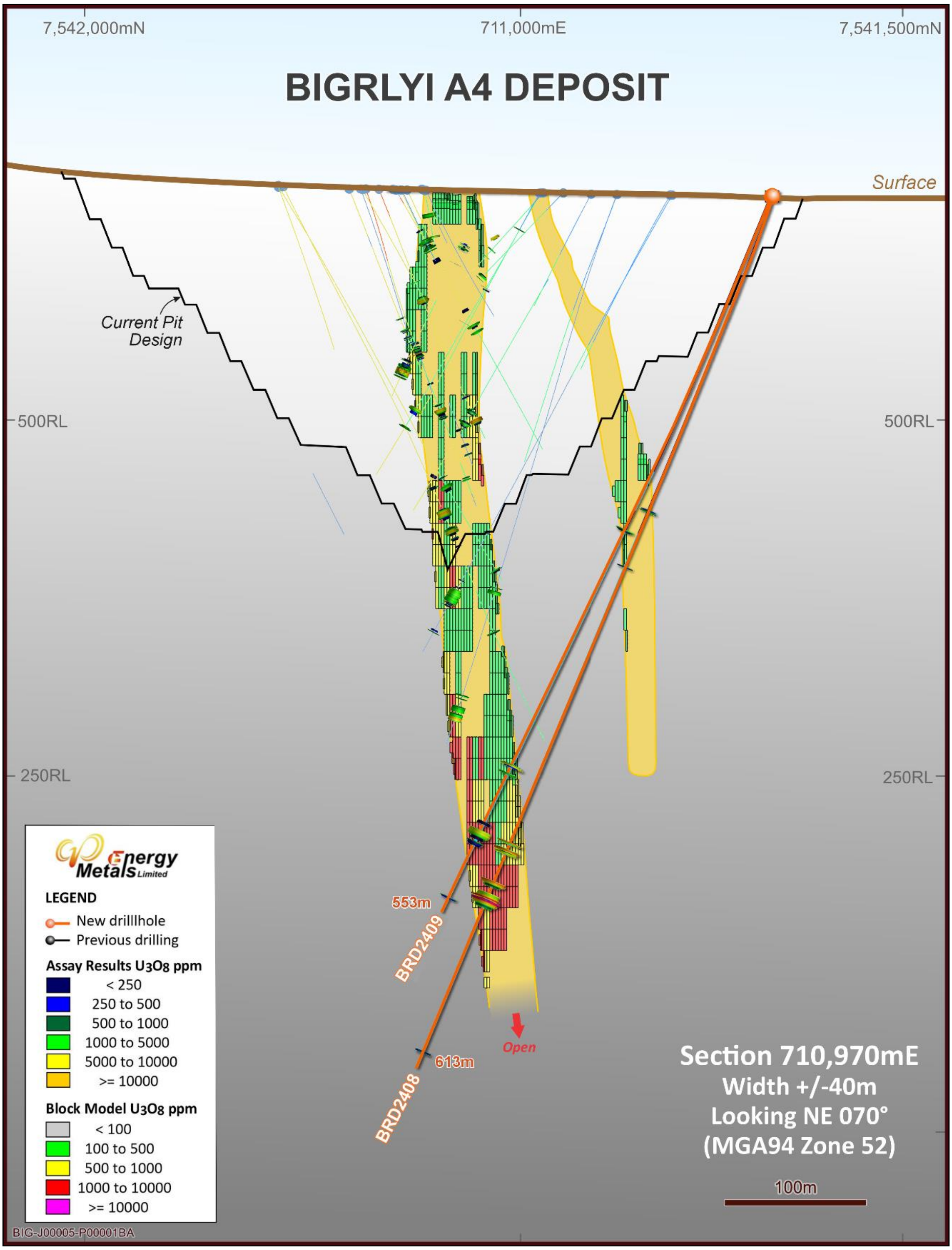
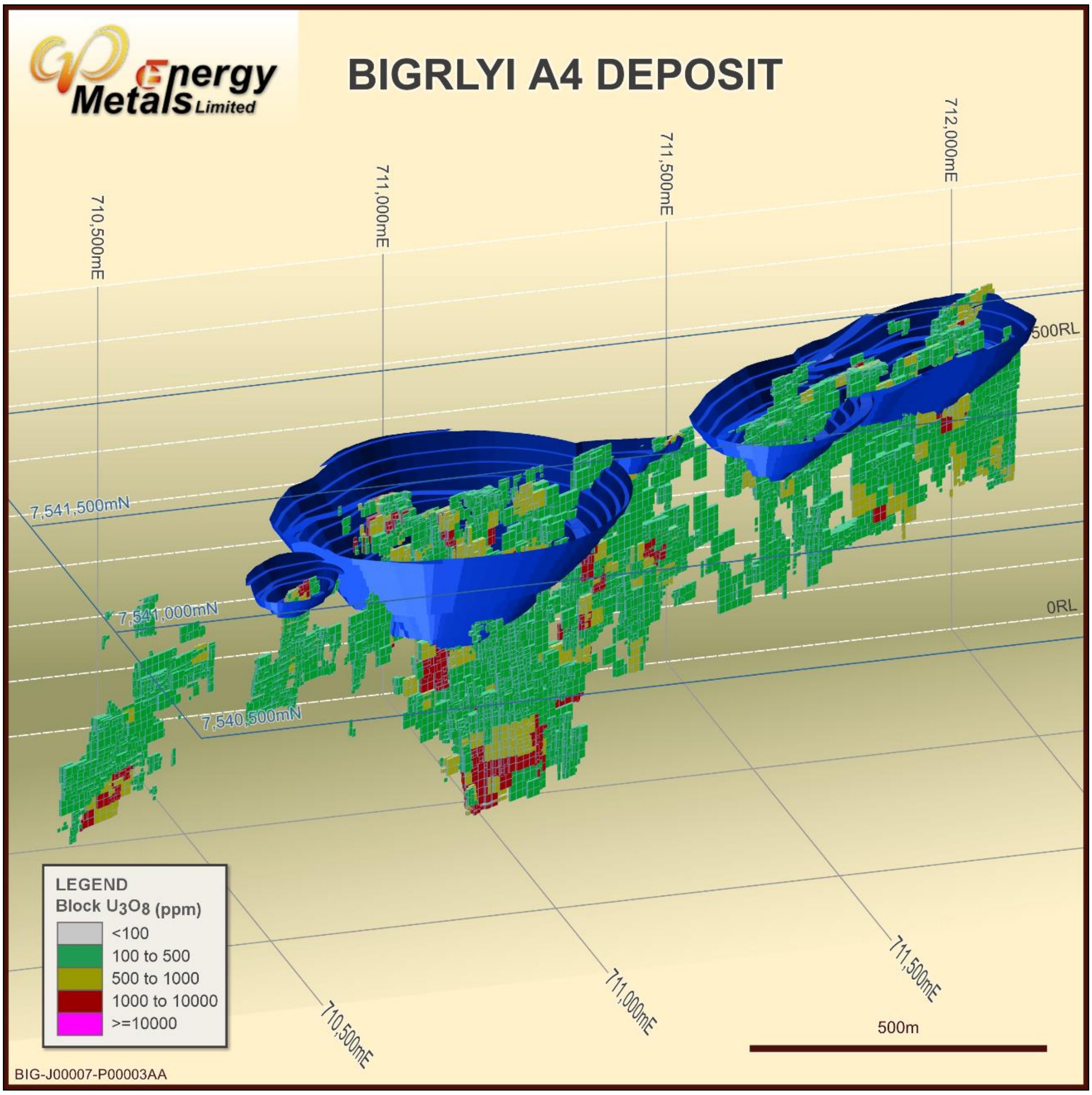


***Figure 3**: Oblique view of A4 showing resource blocks greater than 100ppm U_3O_8 and previously designed open pits.*



NEXT STEPS

With the updated MRE and associated resource model now at hand, the Company intends to revisit past mining studies and bring them up to date. One aspect of this will be revised economic modelling taking into account relevant 2025 commodity pricing, exchange rates, and capital expenditure. The Company will also carry out a mining shape optimisation (MSO) study to generate revised pit and stope designs using the latest resource model and updated economics.

The exploration team is currently finalising drilling designs targeting further resource growth at Bigrlyi, with a drilling program expected to commence mid-year.

ASX LISTING RULE 5.8 DISCLOSURES

The Bigrlyi uranium deposit is classified as a tabular, sandstone-hosted uranium-vanadium deposit. Mineralisation occurs as discrete zones within reduced beds of the Mt Eclipse Sandstone.

The MRE comprises information from 1190 drillholes, including 37 new holes which were completed in 2024 and are included for the first time. Multiple drilling methods have been used to define the MRE including diamond (43%), RC (49%), percussion (7%), and other (1%).

Sampling of mineralised zones is carried out firstly by using visual inspection and downhole gamma logging to identify zones with elevated uranium content, then subsampling these zones into individual samples no larger than 1.2 metres in length. Drill core samples are taken as sawn half-core lengths, while RC samples are taken as bagged splits derived from the cyclone splitter.

Most samples were analysed for uranium and vanadium by pressed powder XRF. In recent work, samples were digested with lithium metaborate and uranium determined by ICP-MS whilst vanadium was determined by ICP-OES.

A combination of chemical and radiometric U_3O_8 assays were used for estimation, with chemical assays preferred where available. Intervals with U_3O_8 values but missing V_2O_5 were assigned a V_2O_5 value based on revised local regressions of U_3O_8 versus V_2O_5.

The mineral resources reported herein have been estimated using MIK to estimate uranium, with OK used to estimate vanadium.

The resource classification for Bigrlyi is based largely on the estimation search pass. Pass 1 blocks are based on a nominal 30x30m hole spacing or less in the plane of mineralisation. Pass 2 blocks are nominally drilled at 60x60m hole spacing, while Pass 3 blocks were drilled at a spacing wider than 60x60m in the plane of mineralisation. However, only coherent areas of Pass 1 blocks are classified as Measured Mineral Resource, above 510m elevation at A4 and A15, and generally above 520m elevation at A2. There are no Measured resources for A7 and A9. Remaining Pass 1 and 2 material is classified as Indicated, while Pass 3 is Inferred. This scheme is considered to take appropriate account of all relevant factors, including the relative confidence in tonnage and grade estimates, confidence in the continuity of geology and metal values, and the quality, quantity and distribution of the data. The resource classification appropriately reflects the Competent Person's view of the deposit.

A cut-off grade of 500ppm U_3O_8 has been used in the reporting of this Mineral Resource Estimate. The cut-off grade of is based on comparison with comparable uranium projects and is supported by the PFS.

A Pre-Feasibility Study (PFS) completed in mid-2011[2] confirmed that mining the A2, A4, and A15 deposits using a combination of open pit and underground mining and processing ore through a relatively simple acid leach circuit would be cash-positive over a mine life of approximately 8 years. The project economics from 2011 are based on an assumed average uranium oxide price of $US80/lb and an $US/AUS exchange rate of 0.85. The economic modelling has not been updated for current economic conditions, however the Company intends to begin this work during 2025.

[2] *Energy Metals ASX Announcement 17/06/2011: "Pre-feasibility Study Results of Bigrlyi Joint Venture"*

ENDS

This announcement dated 25th February 2025 has been authorised for release to the ASX by the Board of Energy Metals Limited.

For more information, please contact:

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Competent Persons Statement

The information in this report that relates to Exploration Results that underpin the Mineral Resource Estimates is based on information compiled by Mr David Nelson, a Competent Person who is a Member of The Australian Institute of Geoscientists ("AIG") (Member #4172). Mr Nelson is a full-time employee of Energy Metals Ltd where he holds the position of Exploration Manager. Mr Nelson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)'. Mr Nelson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Competent Person for the 2025 Bigrlyi Mineral Resource Estimates is Mr Arnold van der Heyden of H&S Consultants Pty Limited. The information in the report to which this statement is attached that relates to the 2025 Mineral Resource Estimate is based on information compiled by Mr van der Heyden, who has sufficient experience that is relevant to the resource estimation to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr van der Heyden is an employee of H&S Consultants Pty Limited, a Sydney based geological consulting firm and is a Member and Chartered Professional of The Australasian Institute of Mining and Metallurgy ("AusIMM"). Mr van der Heyden consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Disclaimer

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery *rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.*

JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *The nature and quality of sampling (e.g. 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.* • *Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The Bigrlyi deposit was sampled by reverse circulation (RC) and diamond core drilling methods. Drill hole dip angles generally varied between 50 to 80 degrees. Azimuths are generally towards the north or south to optimally intersect the mineralisation in east-west trending sub-vertically oriented beds. • Drill holes were probed by a calibrated downhole gamma tool to obtain a total gamma count reading and processed to yield equivalent U_3O_8 values (eU_3O_8) with depth at 10 cm intervals. Intervals of at least 3m above to 3m below significant eU_3O_8 intercepts (>100 ppm) were sampled for routine chemical assay. • Chemical assays for uranium, vanadium, chromium, and calcium were carried out on approx. 3 kg size, metre-sample RC drill spoils or in the case of diamond drilling, on cut half-core samples from mineralised intervals. • In some cases, minor adjustments have been made to the locations of downhole gamma peaks to ensure correlation with the observations of geologists logging the drill core. These adjustments are on the order of 0.5 to 2m and are believed to be a result of minor driller errors when zeroing the gamma probe depths before logging runs.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other types, whether core is oriented and if so, by what method, etc).*	• Drilling for exploration purposes was typically reverse circulation (RC) drilling to between 100 and 280 m depth or NQ/HQ diamond core (DD) drilling for deeper holes. PQ or HQ DD holes, drilled from the surface, have been utilised for metallurgical test-work. • Core was oriented, loaded into trays, marked up, and checked for depth against core blocks; alpha/beta angle measurements on bedding planes and other features were undertaken on selected intervals using a goniometer orientation tool.

Criteria	JORC Code explanation	Commentary
		• Historical drilling in the period 1974-1981 was undertaken by percussion drilling and HQ, NQ & BQ DD methods. Except for metallurgical samples, Energy Metals holds all current and historical core in its core yard archive on-site at Bigrlyi.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Assessment of RC drill spoil volumes or DD core recovery was made either as a visual estimate or from core length measurements and this information was entered into the Energy Metals' database. With the exception of some deeply weathered, water-saturated zones, estimated sample recoveries were high (>90%). Appropriate drilling techniques were used to maximize sample recovery. No relationship has been identified between sample recovery and grade of mineralisation.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• RC and DD holes were geologically logged with information on lithology, colour, grain-size, stratigraphic unit, oxidation state, alteration, cementation, weathering and other features recorded digitally. All coded data was verified according to Energy Metals' standard logging look-up tables. • Logging was generally qualitative in nature, however the logging geologist endeavoured to quantify the relative proportions of trace and rock-forming minerals wherever possible. Chip trays & core trays were photographed before being archived at the Bigrlyi camp sample storage facility. • All drill holes are logged from collar to end of hole by a suitably qualified geologist, and all significant mineralised intersections are reviewed by a senior geologist or the Exploration Manager.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn, and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sawn half-core samples of drill-cores were submitted for chemical assay. Sample lengths were variable from 0.2m to 1.2m with the majority being 0.5m in length. • RC drill spoils were sampled off the cyclone via a cone splitter to yield a 3-5 kg sub-sample and a 40kg bulk sample. Predominantly dry material was sampled. Field duplicates were collected by spear sampling or riffle-splitting the bulk sample. • Field QC procedures involved the insertion of a set of QC samples comprising a field standard, a blank, and a duplicate at the approx. frequency of 1 QC set per 25 samples. • Laboratory sample preparation of RC drill spoils involved riffle splitting the sample to a maximum sub-sample size of 3 kg; this was followed by pulverization in a low-Cr steel ring mill so that 85% passed 75 microns grain size. • The unpulverised remainder was bagged and retained. Core samples (ca 2kg size) were jaw crushed to 70% nominal passing -6mm and then pulverized as for the RC drill spoils. • Sample sizes of 3-5 kg are considered to be appropriate for the style of mineralisation found here (tabular sandstone-hosted uranium) taking into consideration the nature and fine-grained mineralogy of mineralised intersections.
Quality of assay data and laboratory tests	• *The nature, quality, and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Samples were tested at independent, NATA accredited laboratories. For 2024 drilling, samples were digested using lithium metaborate which is considered a total digest. Uranium was analysed by ICP-MS, with Ca, Cr, and V analysed by ICP-OES. For pre-2024 drilling, uranium and vanadium were assayed by XRF using the pressed powder pellet (PPP-XRF) method which does not require a digest and can be considered total. Assays from historical exploration in the period 1974-1981 were undertaken either by PPP-XRF or by an acid digest/spectro-photometric method. Energy Metals holds paper copies of all analytical certificates from historical assay work. • Quality control procedures comprised analysis of certified reference materials (CRMs) such as blanks and matrix-matched standards, which were included in the sample batches at a minimum ratio of 1 in

Criteria	JORC Code explanation	Commentary
		20. Field and laboratory pulp duplicates were also analysed to test repeatability of the sampling and lab prep processes. The results of the quality control procedures were compiled into a comprehensive QAQC report which indicated that sufficient levels of accuracy and precision have been established.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Pre-2024 significant mineralised intersections were verified on-site during the course of a 60,000 metre Hylog and Hychips scanning campaign as part of the CSIRO JSU Ngalia Basin uranium study (2010-2012). From 2024 onwards, all significant intersections are verified by a senior geologist using a combination of visual inspection, assay data, and downhole gamma data. • Several high-grade holes have been twinned as part of routine exploration procedures; gamma probe and assay measurements over mineralised intersections yielded comparable results with acceptable agreement achieved between the primary and twinned holes. • Primary data was collected in the field using either paper logs (pre-2010) or a field computer with digital data entry (post-2010). The information was validated and then dispatched to Perth office for compilation into an SQL database. • In the cases where uranium was reported as U ppm or %, a factor of 1.1792 was applied to convert metal to oxide value (U to U_3O_8). Similarly, where vanadium was reported as V ppm or %, a factor of 1.79 was applied to convert metal to the oxide value (V to V_2O_5).
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Hole collar locations (including historical holes) were surveyed by Brian Blackman Surveys of Alice Springs. Measurements were carried out using RTK DGPS equipment with an accuracy of +/-30 mm for eastings, northings and elevation data. • All measurements are based on existing site control points which were previously occupied by a GPS base station and resolved using the Geoscience Australia GPS processing service AUSPOS. • Elevations are Derived AHD heights computed using the AUSGeoid09. The centre of the drill collar cap was measured for

Criteria	JORC Code explanation	Commentary
		modern holes. For the historical holes, the location of a tagged star picket marker was measured. • Coordinates are located on the MGA94 grid, Zone 52 using the GDA94 datum. • Pre-2000 holes were surveyed by acid-etch or single-shot camera methods. Between 2000 and 2024, downhole surveys were undertaken with a single-shot or multi-shot tool (Reflex EZ-Shot or GlobalTech) every 30m or 3m, respectively, and at EOH depth. From 2024 onwards, all holes were surveyed downhole using a gyroscopic tool capable of operating in both singleshot and multishot survey mode with readings taken at least every 30m. • Initial collar orientations were aligned by compass and inclinometer. From 2024 onwards, starting azimuths were determined using the gyroscopic survey tool. • For QC purposes a sub-sample of pre-2000 holes were re-surveyed using a gyroscopic tool or a magnetic deviation tool.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• The Bigrlyi sub-deposits were drilled on lines with nominal line spacing (Eastings) as follows: A2-3 C-D Contact 25-100m, B-C Contact 100m; A4 C-D & B-C Contacts 25-50m; A7-9 C-D & B-C Contacts 25-50m, A12-15 C-D & B-C Contacts 12-100m. • Energy Metals considers the spacing sufficient to establish continuity of geological units and grade. • The sample data is stored in Energy Metals database on an uncomposited basis.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Several investigations have shown that Bigrlyi style (tabular stratiform sandstone-hosted) uranium-vanadium mineralisation exhibits no significant structural control. • Mineralisation is controlled by physical and chemical characteristics of the host rock such as permeability and redox state and is influenced by primary depositional and sedimentological features. • Drilling has mostly been conducted perpendicular to bedding planes that host the mineralised zones and no bias of sampling related to orientation of these zones has been identified.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• The chain of custody of samples including dispatch and tracking is managed by Energy Metals staff. Samples are stored in a fenced yard at site prior to transport to the assay laboratory by Energy Metals personnel or by professional haulage contractors. Sample pulps are returned to site for storage and archive on completion of assay work.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Geochemical sampling procedures were reviewed at various times in the period 2006-2013 with tests conducted to ensure optimal sampling methods were in place. • Following an audit and review by external database consultants in 2017, Energy Metals' exploration database was upgraded and re-built in 2018 with re-loaded data subject to strict verification procedures. • Energy Metals considers its current exploration database to be of a quality and standard sufficient to support resource estimation.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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 parks, and environmental settings.* • *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.*	• The Bigrlyi deposit is located on an exploration licence with retention status (ELR32552) which is 72.4% owned by Energy Metals under the Bigrlyi Joint Venture (BJV). Energy Metals is the operator of the JV. • The exploration licence is located within the Mt Doreen Perpetual Pastoral Lease Native Title Claim (NTD39/2011) which was determined by consent on 3/7/2013. • The exploration licence is held in good standing with no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration work and drilling programs at the Bigrlyi project were conducted by Central Pacific Minerals NL (CPM) in the period 1974 to 1981. Energy Metals retains all CPM's historical exploration information in its data archive and relevant historical data has been verified and incorporated into EME's exploration database.
Geology	• *Deposit type, geological setting, and style of mineralisation.*	• Bigrlyi and associated satellite deposits are tabular, stratiform, sandstone-hosted uranium-vanadium deposits of Carboniferous age located on the northern margin of the Ngalia Basin (NT).

Drill hole Information	• *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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *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.*
		• Refer to previous ASX announcements by Energy Metals Ltd for tabulations of drill hole information and results.
		• Statutory exploration technical reports, containing full details of exploration drilling and assay results for the Bigrlyi Joint Venture (ELRs 46-55 and formerly ERLs 46-55) in the period 2006-2012 are now in the public domain and may be downloaded from the Northern Territory Geological Survey (NTGS) GEMIS website.
		• Historical drill hole and exploration information from the period 1974-1981, when the project was operated by CPM, is publicly available by download of open file reports from the NTGS GEMIS website.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades), and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration results, i.e. mineralised intercepts, are reported as either equivalent U_3O_8 values (eU_3O_8) from processed gamma logs or as chemical assay U_3O_8 values in parts per million (ppm) or percent (%) by weight. • From 2024 onwards, significant intercepts have been reported at a cut-off level of 500ppm U_3O_8 with a minimum thickness of 0.3m, a maximum internal dilution of 1m and no external dilution. Pre-2024 similar methods were applied but with lower cut-off grade thresholds. • No metal equivalents have been used in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation concerning the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• Based on geological mapping and structural measurements of drill core, beds have been upturned and are steeply dipping or sub-vertically oriented, typically at 70 to 85 degrees. • Most holes have been drilled at -60 degrees perpendicular to bedding planes and true widths of intersections are estimated to be 75% to 80% of the reported downhole widths.
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 figures in the body of the text.
Balanced reporting	• *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.*	• All significant drilling intercepts have previously been reported to the market by Energy Metals as part of ongoing continuous disclosure requirements. No new drilling results are included within this announcement. • Statutory exploration reports and historical exploration reports (ex CPM), which include compilations of assay and processed gamma log data for drillholes used in this study, are publicly available as open-file company reports and may be downloaded from the

Criteria	JORC Code explanation	Commentary
		NTGS GEMIS website.
Other substantive exploration data	• *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.*	• All relevant and material exploration data for the target areas discussed has been reported or referenced.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further resource growth drilling is planned for Bigrlyi in 2025 with the exact details yet to be finalised. The Company is also developing a strategy for the advancement of mining studies in order to refresh the previously completed 2011 Pre-Feasibility Study. • Relevant diagrams are included in the body of the document.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• All geological data for Bigrlyi is stored electronically by EME in a Micromine Geobank 2024 SQL database that was completely rebuilt and validated in 2018-2019, and further validation was performed in 2024. This database is administered by independent database management firm. • Basic checks were performed by HSC to ensure data consistency, including checks for FROM_TO interval errors, duplicate database records, excessive or missing down hole deviation, comparison of collar elevations with topography, and extreme or unusual assay values. • A few issues were identified by HSC, including possibly anomalous collar elevations and potentially excessive or missing down hole deviation, which EME are following up.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The CP for the MRE visited site for a three day period in 2006 to inspect surface outcrops and core samples. No drilling was in progress at that time.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• There is a reasonable degree of confidence in the interpreted stratigraphy of the Mt Eclipse Sandstone, which controls the distribution of uranium and vanadium mineralisation. There is some uncertainty locally due to faulting, which is not always well defined by drilling. • Individual mineralisation lenses were interpreted using nominal grade thresholds of 10ppm U_3O_8 and 100ppm V_2O_5, which are generally coincident. • Surfaces for base of complete weathering and top of fresh rock were interpreted, based on geological logging. Only a small proportion of mineralisation occurs within the relatively thin weathering zone, and there is no obvious evidence of depletion or enrichment of uranium due to oxidation. There is also a thin surficial layer of sand or soil locally, which was also modelled.

Criteria	JORC Code explanation	Commentary
		• The geological logging defines the location of the different stratigraphic units, although this data is missing for some of holes. This allows a reasonably consistent and coherent interpretation to be generated for each deposit. • There is limited scope for alternative interpretations, which are unlikely to have a significant impact on the MRE. • Geology is a primary control on the MRE, with mineralisation constrained to specific horizons within the stratigraphic units, primarily the B-C and C-D unit boundaries. • While the continuity of stratigraphy is reasonably well defined by drilling, the uranium mineralisation is less continuous and confined to specific horizons within the stratigraphic units. Faulting can potentially affect the continuity of grade and geology locally. • EME updated the interpretation of mineralisation for A2, A4 and A15, which HSC checked and modified slightly to ensure that all significantly mineralised samples were included; a few other minor changes were made. Wireframes for weathering were not updated because EME considered this unnecessary. The MREs for A7 and A9 were not updated because they have no new drilling.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• At a 500ppm U_3O_8 cut-off grade, the A4 MRE consists of two parallel lenses of mineralisation with an overall ENE strike length of 2.25km. Mineralisation extends from surface to 560m depth and locally is up to 40m thick. • The A15 MRE consists of four lenses of mineralisation with an overall ESE strike length of 1.3km at 500ppm U_3O_8 cut-off grade. Mineralisation extends from surface to 430m depth and is up to 20m thick locally. • The A2 MRE consists of two discontinuous lenses of mineralisation with an overall E-W strike length of 2.8km at 500ppm U_3O_8 cut-off grade. Mineralisation extends from surface to 255m depth and locally is up to 18m thick. • The A7 MRE is unchanged from March 2024 and consists of lenses of mineralisation with an overall ENE strike length of 0.72km at 500ppm U_3O_8 cut-off grade. Mineralisation extends from surface to

Criteria	JORC Code explanation	Commentary
		290m depth and is up to 16m thick locally. • The A9 MRE is unchanged from March 2024 and consists of discontinuous lenses of mineralisation with an overall ESE strike length of 0.62km at 500ppm U_3O_8 cut-off grade. Mineralisation extends from 40 to 200m below surface and is up to 11m thick locally.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Samples were composited to 1.0m intervals for analysis and estimation, with a minimum length of 0.49m. A combination of chemical and radiometric U_3O_8 assays were used for estimation, with chemical assays preferred where available. Intervals with U_3O_8 values but missing V_2O_5 were assigned a V_2O_5 value based on revised local regressions of U_3O_8 versus V_2O_5. • Three separate new models were generated for A2, A4 and A15 with different azimuth rotations to account for the changing orientation of mineralisation at each prospect. • Uranium grades were estimated by recoverable MIK because the grade distributions are moderately skewed. MIK estimates were made into 30x4x30m panels, with an assumed SMU of 5x1x5m and a nominal grade control of spacing 12.5x5.0x2.0m on a staggered pattern. The direct log-normal method was used for the MIK change of support correction for all deposits. • Vanadium grades were estimated by OK because the grade distributions are less skewed than uranium; 15x2x15m blocks were used. • Limited grade cutting has been applied to the estimates. The OK estimates for V_2O_5 were uncut, while MIK estimates used the average of the mean and median values in the top indicator class. • MIK estimates were generated using GS3 software, while OK estimates were produced in Datamine software. • It is assumed that vanadium is a potential by-product to uranium. • There are no known deleterious elements or other non-grade variables of economic significance at this stage of the project. • Uranium and vanadium do show some correlation in the drill hole samples, and this was used to provide vanadium values for

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		intervals without vanadium assays, i.e., intervals with radiometric uranium assays from gamma logging. No assumptions were made regarding the correlation of variables during estimation because each element was estimated independently and the similarity in variogram models effectively guarantees that any correlation will be preserved in the estimates. • A three-pass search strategy was used for the MIK grade estimates: 1. 30x10x30m search, 16-48 samples, minimum of 4 octants 2. 60x20x60m search, 16-48 samples, minimum of 4 octants 3. 120x20x120m search, 16-48 samples, minimum of 2 octants The OK estimates used a maximum of 32 samples; search radii and octant constraints were identical to the MIK estimates. • The partial and complete oxide zones were estimated together with the fresh mineralisation, while the surficial sand/soil was assigned low nominal average grades. • The maximum extrapolation distance will be close to the maximum search radius of 120m. • The geological interpretation controlled the resource estimates by restricting the mineralisation to specific horizons within the stratigraphic sequence. • The recoverable MIK estimates assume a minimum SMU of 5x1x5m in the change of support correction. The OK estimates have an effective SMU equivalent to the minimum sub-block size, which is 7.5x1.0x7.5m. • All models were validated through visual and statistical comparison of block and drill hole grades, and comparison with previous estimates. No reconciliation data is available as the deposits remain unmined. • This MRE takes appropriate account of previous estimates and is broadly comparable to these alternative estimates.
Moisture	• *Whether the tonnages are estimated on a dry basis or with*	• Tonnages are estimated on a dry basis, and moisture content has

Criteria	JORC Code explanation	Commentary
	natural moisture, and the method of determination of the moisture content.	not been determined.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The cut-off grade of 500ppm U_3O_8 is based on comparison with comparable uranium projects.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• A Pre-Feasibility Study (PFS) completed in mid-2011 confirmed that mining the A2, A4 and A15 deposits using a combination of open pit and underground mining and processing ore through a relatively simple acid leach circuit would produce around 10 Mlb U_3O_8 and positive cash flow of around $120M over a mine life of approximately 8 years. The project economics from 2011 are based on an assumed average uranium oxide price of $US80/lb and an $US/AUS exchange rate of 0.85. However, one key finding was that a substantial increase in the resource base that underpins the project would have a positive impact on the economics of the project, especially if those resources are amenable to open pit mining. The economic model has yet to be updated for current economic conditions. • More recent studies have confirmed that a hydrometallurgical process to remove acid-consuming carbonate gangue together with modern ore-sorting technologies to enhance run-of-mine grade has potential to substantially improve project economics. • The recoverable MIK and OK methods implicitly incorporate internal mining dilution at the scale of the assumed SMU. No specific assumptions were made about external mining dilution in the MRE.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Detailed metallurgical test work undertaken by EME confirmed that the major uranium bearing minerals are uraninite and coffinite, and the major vanadium bearing minerals are montroseite and vanadian clays. This work has also confirmed the very high acid dissolution characteristics of the Bigrlyi ore with extraction levels of up to 98% uranium and 74% vanadium recorded from optimised acid leach tests. Physical grinding (comminution) testing and ‘front-end’ processing test work has also produced encouraging results.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• It is currently assumed that all process residue and waste rock disposal will take place on site in purpose built and licensed facilities. • All waste rock and process residue disposal will be done in a responsible manner and in accordance with any mining and environmental license conditions.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The earliest density data for Bigrlyi is referenced in a WH Bryan Mining Geology Research Centre report dated November 1998, which reports average values for oxidised and fresh rock of 2.40 and 2.65 g/cm3 respectively. These values were "provided by CPM" and "These specific gravity measurements are the average of a small number of selected samples for which pycnometer density determinations were obtained." No further details are provided. The pycnometer method tends to over-estimate dry bulk density because it does not account for porosity. • The EME database contains density measurements for 1,017 core samples from 30 holes; 3 holes were tested in 2006, one in 2012, 21 in 2013 and 5 holes in 2024. The 49 measurements from 2006 (holes drilled between 1977 and 1981) have the method recorded as OA-GRA08 ("Specific Gravity on pulps using pycnometer"). Measurements on the remaining samples were performed using a water immersion method, with a hairspray coating used for the 2012 measurements. Most samples were not oven dried prior to measurement, apart from the 2012 measurements, because testing by EME indicated that this was not material. • Based on analysis of the available information, HSC adopted the following values to apply the current MRE: <table><tr><th>Material</th><th>Density (t/m3)</th></tr></table>

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<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td><table><tr><td>Surficial Sands</td><td>2.00</td></tr><tr><td>Fully Oxidised Sandstone</td><td>2.40</td></tr><tr><td>Partially Oxidised Sandstone</td><td>2.50</td></tr><tr><td>Fresh Sandstone</td><td>2.60</td></tr></table>• The value for fresh sandstone is based on the EME measurements; fresh rock comprises over 95% of the MRE, so any uncertainty in the density for oxidised samples will have minimal impact on the MRE.</td></tr>
<tr><td>Classification</td><td>• The basis for the classification of the Mineral Resources into varying confidence categories.
• Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).
• Whether the result appropriately reflects the Competent Person’s view of the deposit.</td><td>• The resource classification for Bigrlyi is essentially based on the estimation search pass. Pass 1 blocks are generally based on a nominal 30x30m hole spacing or less in the plane of mineralisation. Pass 2 blocks are nominally drilled at 60x60m hole spacing, while Pass 3 blocks were drilled at a spacing wider than 60x60m in the plane of mineralisation.
• However, only coherent areas of Pass 1 blocks are classified as Measured Mineral Resource, above 510m elevation at A4 and A15, and generally above 520m elevation at A2. There are no Measured resources for A7 and A9. Remaining Pass 1 and 2 material is classified as Indicated, while Pass 3 is Inferred.
• This scheme is considered to take appropriate account of all relevant factors, including the relative confidence in tonnage and grade estimates, confidence in the continuity of geology and metal values, and the quality, quantity and distribution of the data.
• The resource classification appropriately reflects the Competent Person’s view of the deposit.</td></tr>
<tr><td>Audits or reviews</td><td>• The results of any audits or reviews of Mineral Resource estimates.</td><td>• No formal external audits or reviews have been completed for this MRE, but it has been the subject of client (EME) and internal HSC peer review.</td></tr>
<tr><td>Discussion of relative</td><td>• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the</td><td>• The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated JORC Mineral Resource</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	*Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the estimator's experience with a number of similar deposits elsewhere. The main factors that affect the relative accuracy and confidence of the Mineral Resource estimate is the stratigraphic correlation and drill hole spacing. • The estimates are local, in the sense that they are localised to model blocks of a size considered appropriate for local grade estimation. The tonnages relevant to technical and economic analysis are those classified as Measured and Indicated Mineral Resources. • No production data is available as the project remains undeveloped.