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ASX Announcement

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RANGER 3 DEEPS RESOURCE UPDATE

- Update to the Ranger 3 Deeps resource model follows completion of approximately 95 per cent of a revised underground drilling programme.
- The updated resource model estimate is 12.2 million tonnes at 0.285 %U_3O_8 equating to 34,761 tonnes of uranium oxide.
- This compares to the previously reported estimate of 11.9 million tonnes at 0.274 %U_3O_8 equating to 32,620 tonnes of contained uranium oxide.
- The updated estimate includes an upgrade of the Upper Mine Sequence component to 24,940 tonnes of contained uranium oxide, compared to the previously reported estimate of 22,148 tonnes of contained uranium oxide.
- A final mineral resource estimate is scheduled to be completed by the end of the fourth quarter of 2014.

Resource model update

Energy Resources of Australia Ltd (ERA) has completed approximately 95 per cent of a revised drilling program for Ranger 3 Deeps. The drilling programme has been optimised based on ore body knowledge and the requirements of the Prefeasibility Study, resulting in a reduction of total drilling from approximately 52,000 metres to approximately 47,000 metres. This update is reported as part of the Ranger 3 Deeps Prefeasibility Study, which is scheduled for completion by the end of the fourth quarter of 2014.

ERA has now completed 219 underground drill holes for 46,104 metres of drilling with 10,718 samples submitted for geochemical analysis. In addition, all drill holes have been geophysically logged producing a downhole uranium equivalent grade.

ERA has updated the mineral resource model and made appropriate adjustments to the mineral resource statement. These results should be read in conjunction with the JORC Code 2012 Edition – Table 1, outlined in the Appendix to this announcement.

The updated estimate has increased the Upper Mine Sequence resource tonnage to 8.50 million tonnes with an increase in the overall grade to 0.293 %U_3O_8 equating to 24,940 tonnes of contained uranium oxide. This compares to the previously reported Upper Mine Sequence resource tonnage estimate of 8.47 million tonnes at 0.274 %U_3O_8 equating to 22,148 tonnes of contained uranium oxide.

The Ranger 3 Deeps geological model has been updated with all underground drilling data acquired to date. All estimation domains including major faults and geological contacts have been re-interpreted and refined based on the latest drilling data.

Important fault structures known to influence the distribution of grade within the deposit have been used to re-domain the high grade zones within the Upper Mine Sequence. This has resulted in a geologically improved definition of these zones, translating into incrementally higher tonnes and grade when compared to the previous resource estimate (at an equivalent cut-off grade of 0.15 %U_3O_8). There have been some minor updates to the Measured, Indicated and Inferred categories of the resource estimate when compared to the previous resource estimate.

The following table sets out the updated mineral resource estimate.

Mineral Domain	Class	Class Proportion	Tonnes	U_3O_8 %	Ca %	U_3O_8 tonnes
Upper Mine Sequence (UMS)	*Measured*	37%	3,111,493	0.325	0.23	10,120
	Indicated	61%	5,161,271	0.276	0.23	14,264
	Inferred	3%	227,416	0.244	0.32	555
	Sub-total UMS		*8,500,180*	*0.293*	*0.23*	*24,940*
Lower Mine Sequence (LMS)	*Measured*	0%	-	-	-	-
	Indicated	8%	282,450	0.243	9.25	686
	Inferred	92%	3,408,230	0.268	10.63	9,134
	Sub-total LMS		*3,690,680*	*0.266*	*10.5*	*9,820*
UMS+LMS	*Measured*	26%	3,111,493	0.325	0.23	10,120
	Indicated	45%	5,443,721	0.275	0.70	14,951
	Inferred	30%	3,635,646	0.267	9.99	9,689
	Grand Total		*12,190,860*	*0.285*	*3.350*	*34,761*

* Rounding differences may occur.

No further geological interpretation of the Lower Mine Sequence mineralisation has been undertaken in this update. Further drilling of the Lower Mine Sequence may be undertaken by ERA at a future stage of the Ranger 3 Deeps project.

The final mineral resource estimate is scheduled to be completed by the end of the fourth quarter of 2014, following the completion of the underground drilling programme in the third quarter of 2014. Prefeasibility level mine plans are being developed in line with the updated resource model and will be completed by the end of the fourth quarter of 2014. The Prefeasibility Study is scheduled to be considered by the ERA Board in the first quarter of 2015.

Competent Person

The information in this announcement relating to exploration results and mineral resources is based on information compiled by Greg Rogers and Stephen Pevely, Competent Persons who are members of the Australasian Institute of Mining and Metallurgy. Both Greg Rogers and Stephen Pevely are full-time employees of ERA and have 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'. Greg Rogers and Stephen Pevely consent to the inclusion in this announcement of the matters based on their information in the form and context in which it appears.

About Energy Resources of Australia Ltd (ERA)

Energy Resources of Australia Ltd is one of the nation's largest uranium producers and Australia's longest continually operating uranium mine.

ERA has an excellent track record of reliably supplying customers. Uranium has been mined at Ranger for three decades. Ranger mine is one of only three mines in the world to produce in excess of 110,000 tonnes of uranium oxide.

ERA's Ranger mine is located eight kilometres east of Jabiru and 260 kilometres east of Darwin, located in Australia's Northern Territory.

ERA is a major employer in the Northern Territory and the Alligator Rivers Region.

Located on the 79 square kilometre Ranger Project Area, Ranger mine is surrounded by, but separate from, the World Heritage listed Kakadu National Park.

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APPENDIX

JORC Code, 2012 Edition – Table 1 – Mineral Resource update Ranger 3 Deeps

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity 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 (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.*	• Three primary sampling techniques are utilised, geophysical gamma logging, geochemical assaying and specific gravity by pycnometry testing, all of which are set as 1 metre intervals. • During the drilling phase a down hole geophysics gamma sonde is deployed during both the inrod and openhole drill runs (where possible according to ground conditions). Geophysical sampling is recorded every 0.05 metre and composited into 1 metre intervals and provides an equivalent U_3O_8 result (referred to as eU_3O_8). • The gamma sonde undertakes a daily calibration test against a standard source, and also undertakes a yearly calibration to verify the dead-time and K-Factor conversion variables used to convert observed and true gamma counts into an eU_3O_8 reading. All downhole geophysical tools are run down a verification drillhole (R3PD13) and a technical report produced monthly. • The selection of samples for geochemical assaying is initially defined by the results from the down hole geophysics 1 metre eU_3O_8 composites. Intervals that have gamma results above 0.08% eU_3O_8 are automatically assigned for assaying, plus the two samples above and below the triggered interval. In zones where the down hole geophysics were unable to reach and no gamma data was obtained the entire interval is selected for assay. • The current suite of geochemical analyses consists of 48 major and trace elements which is analysed by ICPMS and ICPOES. All elements are reported in parts per million (ppm), except for U, which is reported as the weight percent oxide U_3O_8. • Every tenth sample is also assigned for SG testing, and is conducted on the pulverized material by gas pycnometer at the analytical laboratory.

ERA

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *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).*	• All current drilling has been a combination of HQ3 and NQ/NQ3 Diamond core. • Core orientation is conducted by a reflex digital orientation tool and the low side markup is made at the drilling rig upon core retrieval. The remaining core orientation lines are completed by the field team at the core logging facility.
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.*	• Sample recovery is logged according to geotechnical intervals, with interval length and total recovered metres logged for the entire drill hole. All exclusion intervals are also recorded (due to core loss) to provide a total sample recovery percentage for every drill hole. • The diamond core is processed in the ERA Jabiru East core yard where each metre is checked, measured and marked before the core is geologically and geotechnically logged. Every discrepancy between the measured length of the core and the driller's length marked on the core blocks is investigated. Discrepancies are resolved by ERA field staff, geologists and drilling personnel prior to cutting and sampling. • Triple tube drilling has been selected to increase core recovery in the mineralised zone.
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.*	• All diamond core is oriented and geologically logged to a detailed system that is constructed around the specific style of geological model/mineralisation under evaluation. Emphasis is placed upon the association of stratigraphy, lithology, structure and brecciation intensity. Similarly, the same core is geotechnically logged to system that is specifically adopted to derive a Tunneling Quality Index (Q) for geotechnical stope span support criteria. 100% of the core is logged in this manner. All core is photographed under consistent lighting conditions and the digital images stored on an internal shared drive.

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.*	• Individual metres of diamond core that have been selected for geochemical analysis are cut in half by diamond saw, with each half of each metre representing a single sample. • Core is cut along a line through the centre of the axis of symmetry as defined by the dominant fabric in the rock (or the mineralised structures), i.e. the line which passes through the apex of the foliation ellipsoid. • Upon receipt at the analytical laboratory, samples are dried at 105 degrees Celsius to remove sample moisture. • Samples undergo a primary crushing stage to take the entire sample to <2 millimetres. On occasions, at this stage a sample may be rotary split off for additional metallurgical testing. • The remaining sample undergoes a secondary drying phase at 80 degrees Celsius to remove any additional moisture that may have resulted from the high humidity conditions in the NT. • A rotary split is conducted on up to 3 kilograms of crushed material to a 300 gram result, which then undergoes a final pulverise stage to take the entire sample to 95%<75µm. • The final pulverised sample undergoes a 4-acid near total digestion and submitted to ICPMS and ICPOES analysis.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The down hole gamma sonde is a Geovista 38 millimetres Total Count Gamma Probe and there are currently three in cyclical use, 3348, 3498 and 3540. All three probes were calibrated on the Adelaide Models (AM1, AM2, AM3 and AM7) on 6 June 2013 in order to derive the Deadtime and K Factor for each probe. The derivation of these variables and the drilling diameter correction factors are all documented in a technical report provided by Borehole Wireline Pty Ltd. • To ensure quality control measures are in place for geochemical analysis, a uniform quality control process is assigned for each drillhole to be sampled. • Field duplicates are taken every 10m in the mineralised zone. • The five highest eU_3O_8 samples are also assigned as a field duplicate if not already duplicate as per 10 metre intervals. • A certified reference standard is inserted at a frequency of every 25th sample.

Criteria	JORC Code explanation	Commentary
		There are 10 certified reference standards available, ranging from 0.03% to 1.68%, all off which have been created from ERA material and are matrix matched. The first standard is selected at random and subsequent standards are incremented from ERA_CRS_1 to ERA_CRS_10. • A blank sample (quartz sand) is also inserted at a frequency of every 20th sample. • All drill holes are sent as a single dispatch, whereby they are split up into sets of 88 by the analytical laboratory. An additional 12 check samples are included by the laboratory to conduct 100 sample analyses at a time (Qty x4 each of internal laboratory repeats, standards and blanks). • A Quartz flush is also inserted between every sample during the crushing stage to minimise potential contamination of sample preparation equipment.
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.*	• All samples are conducted by a NATA accredited laboratory (Northern Territory Environmental Laboratory, a division on Intertek). All sample results are reported in electronic format and imported directly into acQuire without modification to the original files. All results are saved in CSV and PDF format for future verification by if required. • A report of the import process and results is also saved on a shared network drive for archive purposes. • Access to the import process is restricted by three layers of security, AcQuire software, Active Directory and SQL server protocols are implemented to ensure that only trained and qualified staff are physically capable of importing assay results. • The sample approval process also abides by the same level of security, with specific staff permitted to write permissions, all other staff have read-only access to assay results.
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.*	• At present DGPS – Differential Global Positioning System, is used in conjunction with a real time kinematic (RTK) system involving a base/static station radio broadcasting its received satellite telemetry to a moving/rover receiver. Regular QA/QC checks are conducted for the veracity of the GPS system by positioning the GPS rover over known, monumented ground stations with the receivers on a fast static or dynamic mode.

Criteria	JORC Code explanation	Commentary
		• Base Station and Mine Grid System – the survey department of the ERA – Ranger mine maintains a base/static station 24/7 at the mine site office and broadcast the satellite telemetry on the local/adopted mine grid system. The relative positions of various features and earth works requirements are instantly available to the roving receivers for both setting-out and as-built surveys.
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 maximum range of mineralisation continuity as suggested by existing variography studies to achieve a "measured" mineral resource confidence category is a maximum of 25 x 25 metres. The goal of the underground drilling program is to reduce the current data spacing of existing surface exploration drilling from 50 x 50 metres to a maximum of 25 x 25 metres. This confidence classification will be reviewed with further variography studies as new data is gathered. All sampling is conducted on regular 1 metre intervals.
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.*	• All drilling from the underground decline has been oriented to ensure it is 90 degrees to the strike of the known mineralisation and controlling structures. Previous surface drilling was oriented parallel to northing sections which was not 90 degrees to the strike of the known mineralisation and controlling structures. The influence of this change of drilling orientation on sampling bias is under assessment.
Sample security	• *The measures taken to ensure sample security.*	• All post drilling assessments are undertaken within a fully lockable facility located at the Ranger mine. • In preparation for dispatch to the laboratory, all bagged cut core samples are packed into 44 gallon drums with tension strapped lids, closed and stored for transport in a fully enclosed, lockable shipping module.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• ERA has internal audit and governance processes in place with respect to the classification and reporting of Mineral Resources.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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 park 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.*	• ERA holds an authority issued pursuant to section 41 of the *Atomic Energy Act 1953* (Cth) ('Section 41 Authority') over the Ranger Project Area. This authorises ERA to conduct mining and processing operations on the Ranger Project Area. • The Section 41 Authority permits the conduct of mining and processing operations until 8 January 2021. Following this date, ERA must cease all mining and processing operations and is required to rehabilitate the Ranger Project Area in accordance with the Environmental Requirements annexed to the Section 41 Authority. • The Ranger Project Area is located on Aboriginal land. In January 2013, ERA, the Commonwealth Government, the Gundjeihmi Aboriginal Corporation (representing the Mirarr Traditional Owners) and the Northern Land Council entered into a suite of agreements governing the conduct of operations on the Ranger Project Area. • ERA's operations are closely supervised and monitored by key statutory bodies including the Northern Territory Department of Mines and Energy, Commonwealth Government's Supervising Scientist Division, Northern Land Council, Gundjeihmi Aboriginal Corporation (representing the Mirarr Traditional Owners) and the Commonwealth Department of Industry.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Ranger 3 Deeps mineralisation is down dip of the Ranger Pit 3 deposit, which was mined from 1997 to 28 November 2012. The Ranger 3 Deeps mineralisation has been defined by a series of successive surface diamond drilling programs from 2005-2009 undertaken by ERA.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Ranger mine and the Ranger Project Area lie in the north-easternmost part of the Pine Creek Geosyncline. Ranger 3 Deeps is a structurally controlled U_3O_8 deposit hosted by Paleo-Proterozoic arenites, shales and carbonate sediments of the Cahill formation which have been regionally metamorphosed to psammites, chlorite schists and magnesitic marble all of which dip at moderate angles to the east. The deposit sits within the "Deeps Fault Zone", a NNW trending complex upward soling reverse fault system controlled by the competency structure of the local stratigraphy. This competency contrast of the Ranger package is hypothesised to directly reflect its depositional character. Mineralisation is associated with brecciation and structural overprint adjacent to reverse faulting and is intimately linked to the geochemistry of the chlorite schist host lithology.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	• The initial azimuth and dip setup of the drill hole is conducted via a Downhole Surveys Azimuth Aligner™, which utilises north seeking gyros with precision to 0.2 degrees azimuth and 0.01 degrees inclination. Down hole surveys are conducted via a Reflex EZ-TRAC™ Survey camera (accuracy 0.35 degrees azimuth and 0.25 degrees inclination), with a single shot recorded every 30 metres during drilling, and multi-shot when retrieving rods as a means of quality control. The Reflex tool measures magnetic north, and therefore a correction factor is applied to convert to True North, taking into account yearly magnetic north drift as defined by Geoscience Australia. • Down hole length is recorded both via a daily drill plod and on each core tray blocks to define the start, end and core loss intervals for each drilling run. This is verified by the geologists and field team by cross referencing the drilling contractor measurements with actual core mark-up measurements. Any discrepancies are noted and rectified before any core logging or sampling is conducted. • Initial interception depth (as defined by eU_3O_8) is determined by the Geovista Logging unit, which records the wireline depth, speed and cable tension to determine a true down hole depth every five centimetres during the geophysics logging process. A daily wireline calibration check is conducted against known markers on the wireline to ensure the unit is calibrated before each logging

Criteria	JORC Code explanation	Commentary
		run. • Chemical assaying interception depth is determined by the core samples which are created against the core length markups conducted by the logging geologist.
Data aggregation methods	• *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.* • *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.*	• All significant intersections are reported at a 0.12% U_3O_8 cut-off with a maximum of 2 metres internal dilution below that value. This is considered appropriate for a high grade underground mining project. • All reporting of intersections is based on a regular sample length of 1 metre.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to 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 (eg 'down hole length, true width not known').*	• Previous surface drilling was completed on an E-W exploration/mine grid orientation towards 270 degrees. • Current and proposed underground drilling is oriented towards 240 degrees which is at right angles to the strike of the structures known to host the mineralisation.
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.*	• Appropriate maps and sections (with scales) are included in the body of the accompanying announcement.
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.*	• The associated report is considered to represent a balanced report.

Criteria	JORC Code explanation	Commentary
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.*	• Other exploration data collected is not material to this announcement. Further data and interpretation will be reviewed and reported when considered material.
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.*	• Approximately 3 drillholes are planned from 1 drill position. Appropriate drill sections will be reported following drilling.

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 geology and grade data is stored in the AcQuire Database management system, which ensures database integrity using the following measures: • All geology logging is by direct entry into the database using real-time wireless connected tough books via logging codes selected from drop down boxes in the AcQuire logging object. Logs are reviewed by the Competent Person to ensure the logging matches the geology model and downhole eU_3O_8 gamma results for that hole. • All downhole gamma and chemical assays are uploaded into the AcQuire database using unique sample ID, hole ID and dispatch no. identifiers. If there is not a match on all three for each sample, then the upload fails and is then reviewed. • Each chemical analysis batch is reviewed against the eU_3O_8 gamma data using QA/QC procedures in Acquire to ensure a downhole match between both data sets. If standards and blanks in the batch under consideration do not meet the threshold criteria, then the batch cannot be accepted and is not imported until a re-analysis of relevant samples is completed.
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 visits the site on a weekly basis to ensure that the rigour around the collection of geological data is maintained and to chair weekly geology meetings where discussion is around the evolving interpretation of current drilling sections.
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.*	• The current geology model which hosts the majority of the resource has been developed with assistance of a structural geology expert and is considered robust and of high confidence within well drilled areas. • This model has been developed using historic (post-2005) oriented diamond drilling from surface. • There are no credible alternative geological interpretations available. • The current geology model is an effective driver of the Mineral Resource

Criteria	JORC Code explanation	Commentary
		estimation, as it effectively explains the location and orientation of controlling structures that influence grade. The majority of uranium mineralisation in Ranger 3 Deeps is hosted by an interconnected network of brecciation developed within and around an upward-soling, brittle reverse fault system, the Deeps Fault Zone (DFZ). The DFZ soling is controlled by the competency contrast of the local Cahill Formation mine stratigraphy. This stratigraphic sequence comprises Lower Mine Sequence (LMS) carbonates and Upper Mine Sequence (UMS) chlorite schists and quartz-chlorite-biotite schists (meta-arenites). The UMS chlorite schist (which hosts the majority of the resource) focusses the soling of the DFZ by acting as the weakest unit of the mine stratigraphy sandwiched between the underlying massive LMS carbonates and the overlying competent meta-arenites. This competency contrast is hypothesised to directly reflect the depositional character of the mine stratigraphy. Structural logging to identify actual faults where movement was evident and quantifying the associated 'damage' zones (where the uraninite is hosted) was also a key element in re-defining the new structural model. The mapping of brecciation intensities and fault locations is now part of the routine logging of drill core generated by the resource definition drilling program. The association of high grade uranium mineralisation and brecciation intensity is now unequivocal. In the core of the DFZ, multiple close-spaced soling fault "strands" coalesce these breccia zones to form the most continuous, highest grade parts of the resource that decreases up-dip as the system attenuates.
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.*	• Current drilling has the deposit defined as 1.1 km in length, 0.4 km width located between RL ~ -150 m and ~ -500 m.

Criteria	JORC Code explanation	Commentary
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 (e.g. 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.*	• A probabilistic model of +200ppm U_3O_8 grade distribution was used in conjunction with detailed structural and geological interpretation and mapping to derive a 'mineralised domain' model that was used to constrain U_3O_8, Ca and secondary grade estimation. • Three principal estimation domains are used in the model. The majority of the mineralisation is hosted in UMS chlorite schists. Based on recent structural re-interpretation, this package has been re-domained into "upper" and "lower" domains, separated by a major fault which is known to influence the distribution of UMS mineralisation. The third domain is the LMS carbonates, which comprises both fault-hosted and stratigraphy-hosted mineralisation. • Grade estimation within these three domains was performed using Geovariances Isatis v2013 software package. Given the relatively close spaced data configuration compared to earlier estimates, Ordinary Kriging was chosen as the most suitable best linear unbiased estimator for this style of mineralisation. • The current estimate is derived from earlier Order of Magnitude estimation modelling and uses the same block size, orientation and estimation techniques as the earlier modelling. • There are no material by-products • There are 9 non-grade elements that are estimated in the current model. Sulphur is included. • The block size in the model is 10x10x5 metres in x, y and z respectively. This compares favourably with the final designed drill data configuration of 25 metres spacing between drill holes. • Stope (SMU) sizes have been designed in accordance with the data configuration and geotechnical considerations. • Construction of resource domains were strongly influenced by increased orebody knowledge from recent geology and structural studies • This estimate is made using uncut data, and is considered to be a "best case" scenario. A top-cut analysis has been performed on this estimate and the distribution of high grade samples and their effect on the estimate has been documented.

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		• Validation techniques include 3D visualisation of the block model in different software platforms to ensure spatial integrity with drill hole data, the reporting of local estimates using different software platforms to derive the same results, and the use of swathe plots to comparing the global (i.e. no cut off applied) tonnes, grade and metal of the 10x10x5 metre block grades and 1m composite data for U_3O_8 and Ca in Upper Mine Sequence and Lower Mine Sequence Main domains.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• All tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• For a comparison with previous model iterations tabulations have been provided using a cut off of 0.15% U_3O_8. This is equivalent to the cut off used for Pre-Feasibility base case studies.
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.*	• The Ranger 3 Deeps resource could conceivable be mined by long-hole stoping with paste fill. Mining levels would be developed at 15m to 30m vertical intervals. The ore would be blasted using blast holes drilled from either level and charged with explosives. The blasted ore would be loaded into 60t trucks using load haul dump loaders. The trucks would haul the ore up to surface via the decline ramp. Bulk heads (walls) would be constructed across the entrance to the empty stopes and the void would be back filled with cemented paste. The paste would comprise of de-slimed mill tailings, crushed rock and binders. Adjacent stopes can be mined when the fill has attained a strength of 0.5 MPa (curing time 2-4 weeks). Dilution would be in the order of 0.5 to 1 metre from walls and backs (roof).
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*	• Metallurgical performance of the Ranger 3 Deeps ore body will be processed through the existing processing plant. All test work on drill core composites have resulted in comparable metallurgical performance to the current open pit ore. The addition of a beneficiation process for the removal of excess carbonate prior to the existing process ensures that feed quality will be similar to the existing operation. Pilot scale testing of the ore sorter chosen for this

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	the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	beneficiation has resulted in acceptable rejection of carbonate with minimum loss of uranium.
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.*	• All impacts and aspects are currently under consideration and will form the basis of the Ranger 3 Deeps underground mine Draft Environment Impact Statement.
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.*	• Dry density of mineralised and non-mineralised rock has been determined using a combination of historical (surface holes) site-based water immersion (WI) and more recent (underground drilling) lab-based pycnometry (PYC) methods. Statistical comparison of these datasets demonstrates that there is <5% variation between the two. For resource modelling, both data sets (a total of 1,975 samples) were combined and the results interpolated into the model using Ordinary Kriging based on robust geostatistical analysis of the dataset. • All testing was performed on fresh, unweathered rock.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. 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.*	• The resource has been classified into the three confidence classifications on three major estimation domains, Upper Mine Sequence Main, upper and lower and Lower Mine Sequence Main domains. Previous estimates have used the empirical approach of assigning the confidence of a block based on the distance to the nearest samples. Blocks informed by nearby samples were flagged with the highest confidence and blocks furthest away were flagged with the lowest confidence. In the latest modelling, an estimate of the slope of regression between true and estimated block grade is made for each block using the U_3O_8 variogram and data configuration (location of samples, distance from block) and values are written to all estimated blocks.

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		• Geological continuity was also considered as a factor in the classification, with the Upper Mine Sequence Main domain considered well constrained, with little uncertainty around the mineralised volume and its geometry, backed up by orebody knowledge. In contrast, the Lower Mine Sequence Main domain has far less drilling, less orebody knowledge and uncertainly around the mineralised volume. • The Competent Person is comfortable with this geostatistically informed approach, as it directly reflects the quality of kriging performed on each block and thus the reliability of the estimate in this structurally hosted deposit of a metal that has a skewed distribution.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The 2009 Order of Magnitude resource model was reviewed in 2012 by an external consultant with no adverse findings.
Discussion of relative accuracy/ confidence	• *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 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.*	• Previous empirical methods of classification have been superseded by the more geostatistically robust approach of an estimate of kriging quality using the slope of regression between the true grade and the estimated grade of individual blocks.The slope of regression provides a measure of conditional bias of the block estimate and this is useful input to resource classification. Slope of regression does not capture or describe any uncertainty that may be associated with the definition of the mineralisation geometry model. This is captured with the geological continuity of domains derived from orebody knowledge studies. • This estimate relates to both global and local estimates. The resource tabulation shows a breakdown of tonnes and grade within the two estimation domains at measured, indicated and inferred classifications. • There is no underground production data with which to compare with.