



ASX Announcement

3 September 2018



ANGULARLI URANIUM PROJECT SCOPING STUDY UPDATE

Key Highlights

- **Engineering Scoping Study awarded to Wood PLC. Work has commenced and is expected to be completed in Q4 CY2018**
- **Exceptional uranium leach extraction of 98.5% achieved**
- **Low acid and oxidant consumptions of 14 kg/t and 1.4 kg/t (100% hydrogen peroxide) respectively**
- **High purity leach solutions indicate direct precipitation of uranium is potentially feasible**

Vimy Resources Limited ('Vimy' or 'the Company') is pleased to provide an update on the Scoping Study for the Angularli Uranium Project (75% Vimy) located in the Northern Territory. Metallurgical testwork is currently underway at the Australian Nuclear Science and Technology Organisation (ANSTO) and will be completed in September 2018. Testwork results to date have shown an exceptionally high uranium extraction of 98.5% at a sulphuric acid consumption of 14 kg/t, and an oxidant consumption of 1.4 kg/t hydrogen peroxide.

The Company has awarded the Engineering Scoping Study to Wood PLC (formerly Amec Foster Wheeler). The Scoping Study is expected to be completed early in the final quarter of CY2018 and will provide a +/- 35% capital and operating estimate.

Mike Young, Managing Director and CEO of Vimy Resources said, "*We are so pleased with the way our team has ramped up activities at the Alligator River Project. To have completed a resource estimate, started the drill program, and now have a Scoping Study underway in such a short time is nothing short of spectacular.*"

"The high-grade nature of the Angularli deposit provides us with the opportunity to develop a Tier One asset, with the potential to be profitable in any uranium market."

"Angularli is just one of many prospects in the target-rich Alligator River uranium province where Vimy holds the largest granted tenement package. The Alligator River Project builds on Vimy's pipeline of world-class projects, which is headed by the Mulga Rock Project in Western Australia".

Angularli Uranium Project

The Angularli deposit is located in the King River-Wellington Range tenement group which is managed in a joint venture with Rio Tinto Exploration Pty Limited ('Rio Tinto'), a wholly owned subsidiary of Rio Tinto Ltd, (Vimy 75%: Rio Tinto 25%). Angularli has an Inferred Mineral Resource estimate of 0.91Mt @ 1.3% U₃O₈ for 26 Mlbs (Vimy 75%) (as per ASX release of 20 March 2018). This Mineral Resource is the basis for the Scoping Study. Results from drilling currently underway at Angularli, as announced on 13 August 2018, will not be incorporated into the Study.



Mine Development

The current conceptual mine development approach for Angularli to be used as a basis for the Scoping Study is similar in approach to the historical Nabarlek mine located 65km from Angularli. The Nabarlek uranium mine operated successfully between 1980-1988 and produced 24Mlbs U_3O_8 from 550,000 tonnes of ore at an average grade of 1.84% U_3O_8 . It has since been successfully decommissioned and the site fully rehabilitated.

The Nabarlek open cut resource was mined out in one dry season with the ore stockpiled on the surface and processed over an eight-year period. Similarly, at Angularli, it is proposed that the underground resource will be mined over approximately 18 months. The sterilised open stopes will then be used for tailings paste backfill. It is envisaged the resulting surface ore stockpile will be processed over a similar period to Nabarlek.

Mining Plus completed the mine design and initial capital and operating estimates for the Angularli deposit earlier this year. Mining costs are currently being finalised along with stope sequencing and diluted mineral inventory expected from the underground operation (see Figure 1).

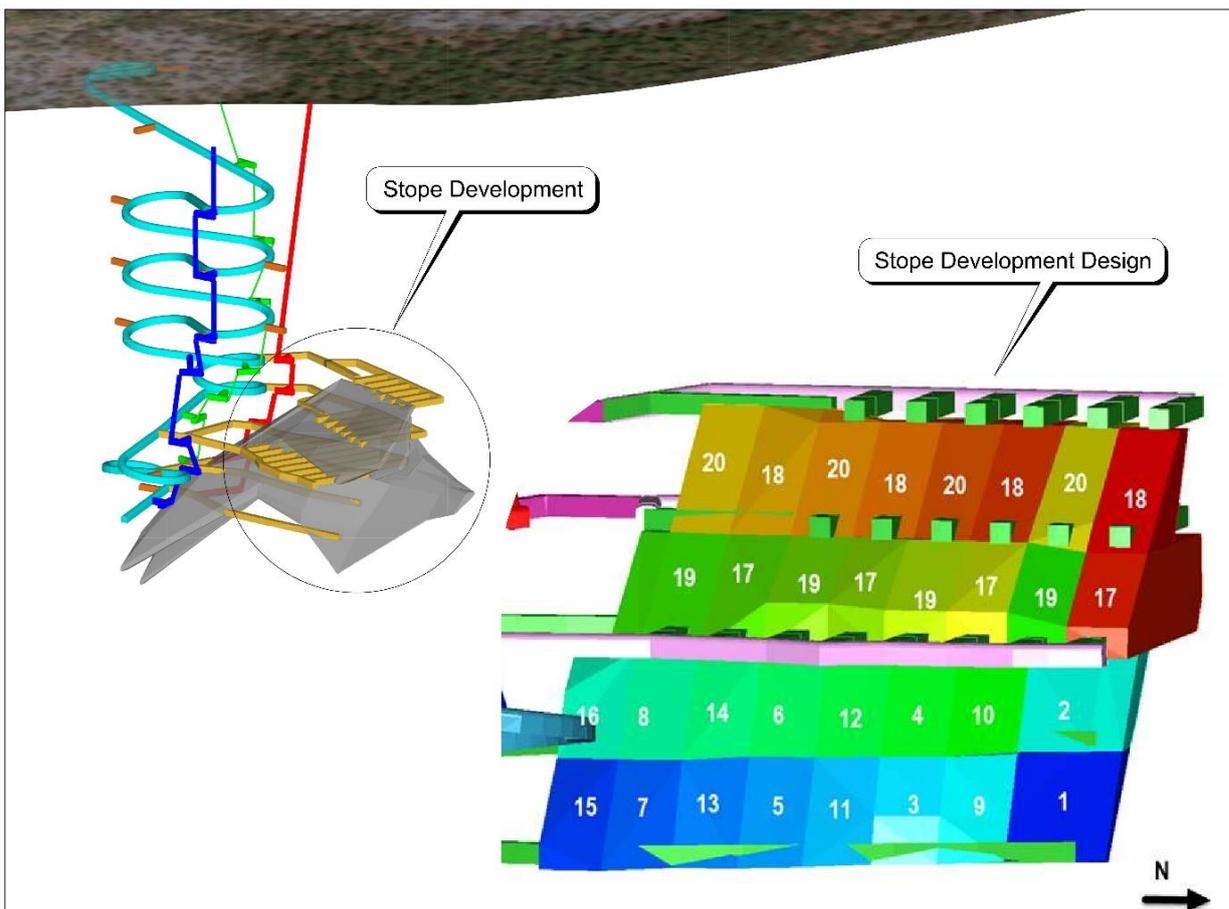


Figure 1: Angularli mine design and stope sequencing



Metallurgical Sample

A metallurgical composite sample has been generated using seven diamond drill holes across the Angularli resource. Figure 2 provides the location of the diamond holes used for the testwork program. The core was blended to achieve a uranium grade of between 0.7 to 1.0% U_3O_8 , which would be indicative of the expected diluted run-of-mine (ROM) uranium grade being delivered to the process plant. Table 1 provides the head assay of the metallurgical composite sample generated for the testwork program.

Table 1: Head assay of metallurgical composite sample

Composition (%w/w)												
Al	C _{Total}	Ca	Fe	K	Mg	Mn	Na	S	Si	Ti	V	U_3O_8
4.02	0.03	0.06	1.31	1.5	0.29	0.015	0.03	1.05	38.9	0.16	0.008	0.74

The Angularli ore is very clean with minimal deleterious elements or reagent consuming gangue minerals present. Mineralogy analysis shows that uranium is predominantly present as uraninite, UO_2 and coffinite, $U(SiO_4)_{1-x}(OH)_{4x}$. The main gangue minerals are quartz and muscovite with minor amounts of smectite, pyrite and feldspar. Due to the inert gangue minerals present within the host rock and the relatively high uranium grade, it is considered that there is good potential for the direct precipitation process to be technically feasible.

It is believed the ore is amenable to ore sorting and this will be examined at a later date to further increase the uranium head grade and reduce the size of the processing plant.

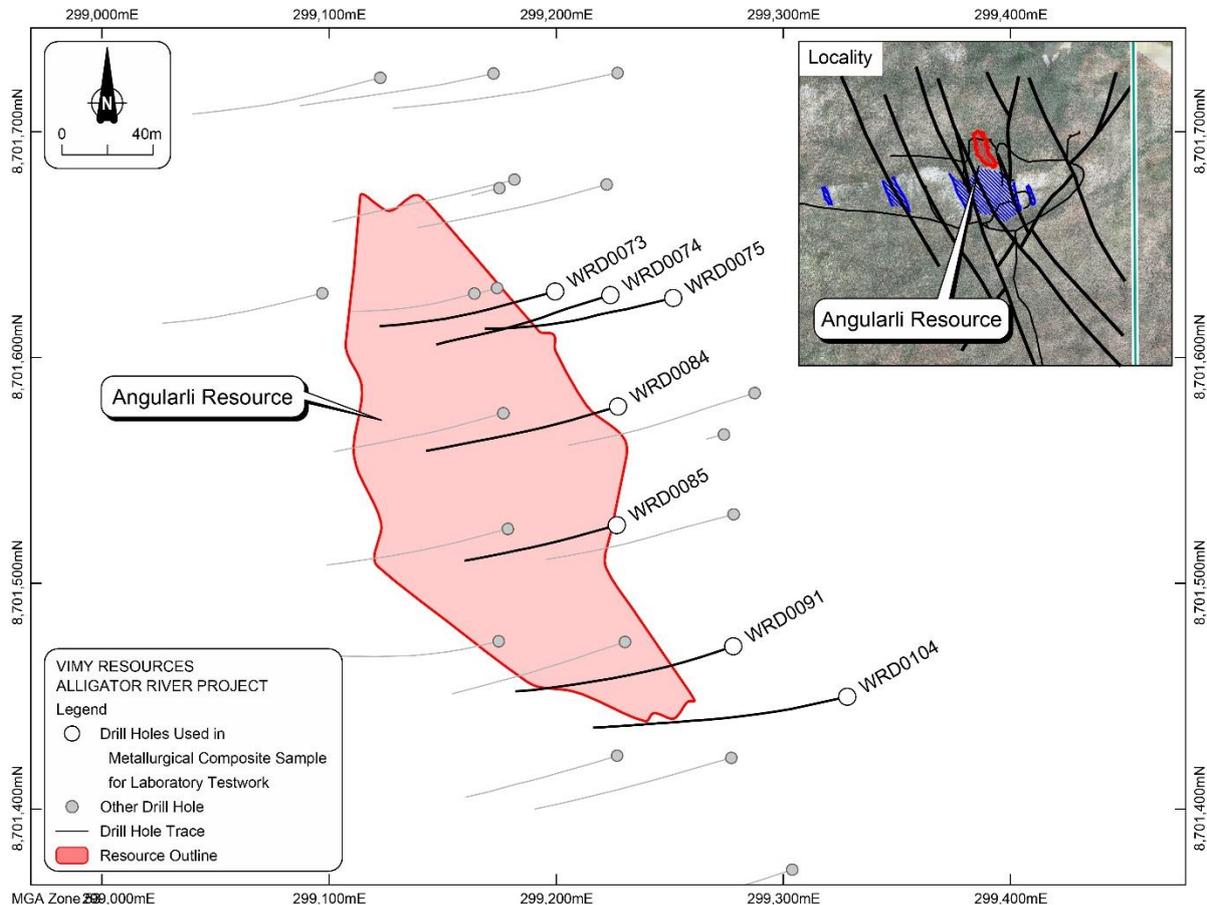


Figure 2: Location of diamond drill collars used for metallurgical composite sample



Acid Leach

ANSTO Minerals has performed a number of acid leach tests to confirm the uranium leach extraction and reagent consumptions to be used for the Engineering Scoping Study. Test results have shown an average uranium extraction of 98.5% was achieved. At the current optimum leach conditions, a sulphuric acid consumption of 14kg/t ore was achieved with an oxidant demand of 1.4 kg/t (100% hydrogen peroxide equivalent).

Table 2 provides a comparison between Angularli and historical operating data from the Nabarlek and Ranger uranium mines. The superior uranium extraction and reagents consumption obtained for the Angularli deposit are also illustrated.

The leach discharge solutions are exceptionally clean with very low levels of impurities present. This will simplify downstream recovery of uranium.

Table 2: Comparison of Angularli, Nabarlek and Ranger leach parameters

Leach Parameters	Unit	Angularli	Nabarlek ¹ (Jul 1983-Jan 1984)	Ranger ^{2,3}
Temperature (°C)	(°C)	35-40	35-40	35-45
pH	-	1.6	1.6	1.9-2.0
Residence time	hours	24	24	24
Feed density	%w/w	50	50	55
Sulphuric acid consumption	kg/t	14	54.7	30-40
Oxidant consumption	kg/t	1.4	2.0 [#]	5 [*]
Uranium extraction	%	98.5	97.5	91.5

[#]Operating plant data using hydrogen peroxide mixed with concentrated sulphuric acid to form Caro's Acid.

^{*} Ranger uses pyrolusite (MnO₂) as an oxidant.

Process Flowsheets

Two metallurgical flowsheets are being evaluated as part of the Scoping Study:

- Acid leach / solvent extraction
- Acid leach / direct precipitation

Figure 3 shows the block flowsheets for both process options being considered for the Project. Due to the high uranium grade, any plant will be small with a very small footprint and so is expected to have a low capital cost.

Both flowsheet options have identical front ends consisting of crushing, milling, acid leach and counter-current decantation (CCD) circuits. Uranium drying and packaging plant, tailings paste plant and water treatment are also essentially the same for both flowsheets. The only difference between the two flowsheets is the uranium recovery circuits, which are highlighted in Figure 3.

The first flowsheet uses conventional solvent extraction to recover uranium from the leach solution and then precipitates uranium as uranyl peroxide (UO₄.xH₂O). The second flowsheet directly precipitates uranium from the leach solution after iron, and other minor impurities are removed. The second flowsheet will have a very low capital cost but is dependent on the levels of impurities present in the ore.

¹ Fulton, E. J., Caro's Acid – Its Introduction to Uranium Acid Leaching in Australia, The AusIMM Conference, Darwin 1984.

² Uranium Evaluation and Mining Techniques, IAEA Proceedings of a Symposium, Buenos Aires, 1979.

³ Ring, B., Uranium Ore Processing in Australia – Past, Present and Future, ALTA Conference, Perth, 2006.

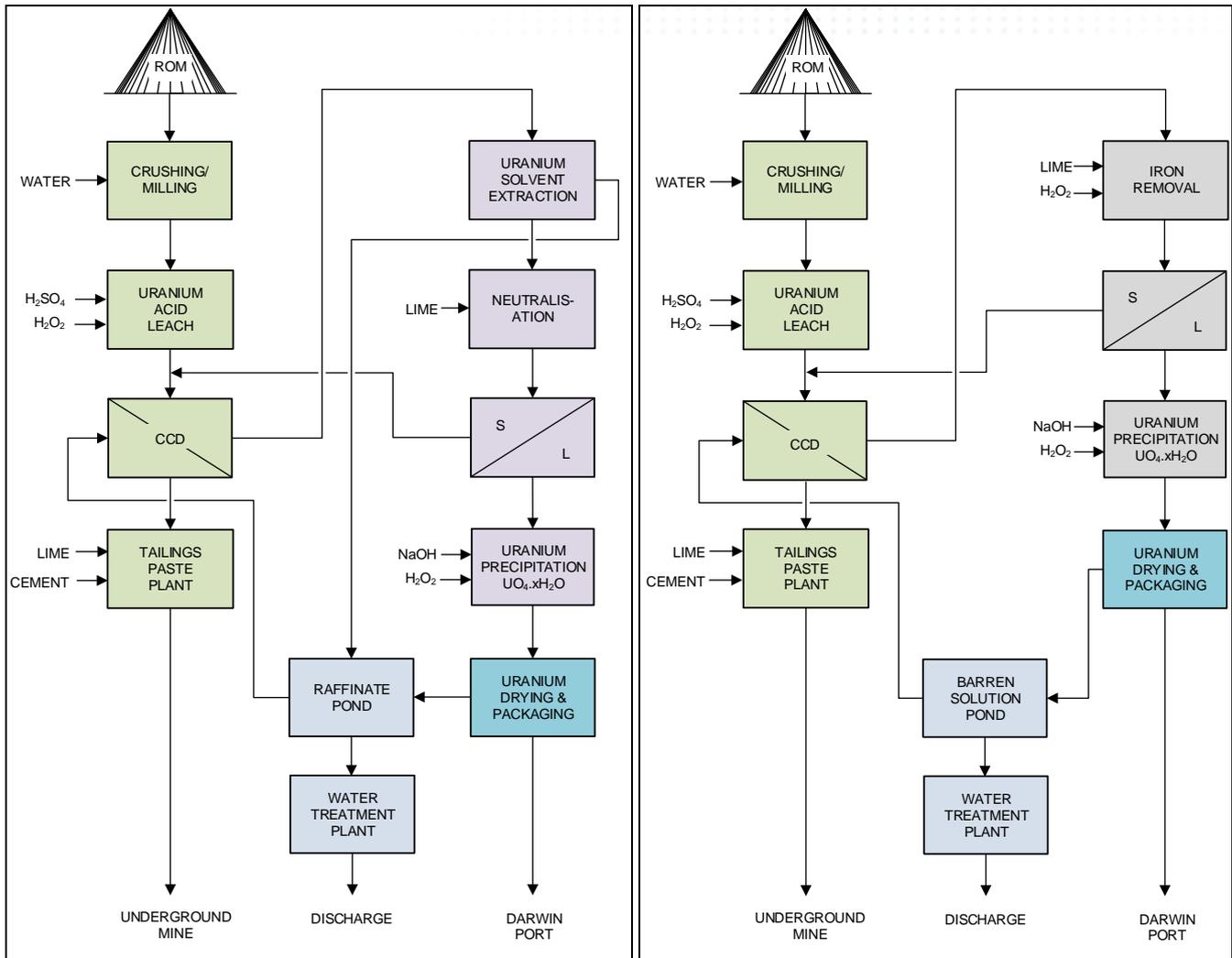


Figure 3: Angularli Process Flowsheets - Solvent Extraction Route (left) and Direct Precipitation Route (right)

Next Steps

The Engineering Scoping Study has been awarded to Wood PLC (formerly Amec Foster Wheeler). They have commenced work on the Study which is expected to be completed in Q4 CY2018.

ANSTO is nearing completion of the testwork on the two uranium recovery options, and these results will be released in due course.

Mike Young
Managing Director and CEO

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3 September 2018



Compliance Statement

The information in relation to the Angularli Deposit Mineral Resource that is contained in this announcement is extracted from ASX announcement entitled 'Maiden Mineral Resource at Angularli Deposit Alligator River Project' released on 20 March 2018 and available to download from asx.com.au ASX:VMY. The Company is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Competent Person Statements

The information in this announcement relates to the metallurgical testwork results for the Angularli Uranium Project are based on information compiled by Dr Anthony Chamberlain, who is a Member of the Australian Institute of Mining and Metallurgy. Dr Chamberlain is a full-time employee of Vimy Resources. The metallurgical results were derived from test work completed by ANSTO and ALS Metallurgy. Dr Chamberlain has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined in the JORC code. Dr Chamberlain consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.



About Vimy Resources

Vimy Resources Limited (ASX: VMY) is a Perth-based resource development company. Vimy's flagship project is the Mulga Rock Project, one of Australia's largest undeveloped uranium resources which is located 290km ENE of Kalgoorlie in the Great Victoria Desert of Western Australia.

Vimy also owns (75%) and operates the largest granted uranium exploration package in the world-class Alligator River uranium district, located in the Northern Territory. Vimy is exploring for large high-grade uranium unconformity deposits identical to those found in the Athabasca Basin in Canada.

Directors and Management

The Hon. Cheryl Edwardes AM
Chairman

Mike Young
CEO and Managing Director

Julian Tapp
Executive Director

David Cornell
Non-Executive Director

Mal James
Non-Executive Director

Andy Haslam
Non-Executive Director

Dr Vanessa Guthrie
Non-Executive Director

Ron Chamberlain
Chief Financial Officer and Company Secretary

Tony Chamberlain
Chief Operating Officer

Scott Hyman
Vice President Sales and Marketing

Xavier Moreau
General Manager, Geology and Exploration



THE MULGA ROCK PROJECT

RESOURCE OF



90.1
Mlb

U₃O₈



The creation of approximately
350 direct site jobs
IN WESTERN AUSTRALIA

Royalty and payroll tax
payments of around

A\$17m

PER YEAR TO THE
STATE GOVERNMENT

The amount of uranium produced
when used in nuclear power plants to
displace coal fired electricity would
offset more than



70 million tonnes
of carbon dioxide equivalent
emissions which is
around 13%
of Australia's total greenhouse
gas emissions.

For a comprehensive view of information that has been lodged on the ASX online lodgement system and the Company website please visit asx.com.au and vimyresources.com.au respectively.

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**STATE & FEDERAL
MINISTERIAL
APPROVALS**

Appendix 1

JORC Code, 2012 Edition – Table 1 Angularli Deposit – Metallurgical Testwork Results

The Company has provided information for Sections 1 to 2 in the announcement entitled “Maiden Mineral Resource at Angularli Alligator River Project” to the ASX dated 20 March 2018. Section 3 of the JORC Table 1 is provided below. Only parameters updated from the Maiden Mineral Resource announcement have been stated in Section 3 of the JORC Table 1 below.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> As per the Maiden Mineral Resource announcement dated 20 March 2018.
Site visits	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Dr Anthony Chamberlain undertook a site visit in September 2017 for due diligence on the Angularli Uranium Project.
Geological interpretation	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Multiple diamond drill holes (WRD0073, 74, 75, 84, 85, 91 and 104) have been selected along the mineralised strike to generate the metallurgical sample. Diamond hole intervals have been selected that are representative of the geology for the main uranium mineralisation. Samples were collected on half NQ2 core from holes drilled in 2011 by the previous operator.
Dimensions	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> As per the Maiden Mineral Resource announcement dated 20 March 2018.
Estimation and modelling techniques	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> As per the Maiden Mineral Resource announcement dated 20 March 2018.

Appendix 1

JORC Code, 2012 Edition – Table 1 Angularli Mineral Resource Estimate, March 2018

Criteria	JORC Code explanation	Commentary
	<p><i>selective mining units.</i></p> <ul style="list-style-type: none"> • 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. 	
Moisture	<ul style="list-style-type: none"> • Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> • As per the Maiden Mineral Resource announcement dated 20 March 2018.
Cut-off parameters	<ul style="list-style-type: none"> • The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> • The nominal 0.15% U₃O₈ lower cut-off used to report the Mineral Resource was chosen to select mineralised core for the metallurgical testwork program.
Mining factors or assumptions	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • No mining recovery factor has been applied to the U₃O₈ Mineral Resource stated in this release.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • No factors regarding metallurgical recovery or processing cost have been applied in the Mineral Resource. • Multiple uranium leach tests have been performed to provide a sufficient level of confidence to support a Scoping level study. • An average metallurgical leach extraction of 98.5% U₃O₈ was achieved. • Mineralogical studies show that most of the uranium is present as coffinite and uraninite, deposited around 1,730 Ma, in a state of secular equilibrium.
Environmental factors or assumptions	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • As per the Maiden Mineral Resource announcement dated 20 March 2018.

Appendix 1

JORC Code, 2012 Edition – Table 1 Angularli Mineral Resource Estimate, March 2018

Criteria	JORC Code explanation	Commentary
Bulk density	<ul style="list-style-type: none"> • 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 of 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. 	<ul style="list-style-type: none"> • As per the Maiden Mineral Resource announcement dated 20 March 2018.
Classification	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • As per the Maiden Mineral Resource announcement dated 20 March 2018.
Audits or reviews	<ul style="list-style-type: none"> • The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> • As per the Maiden Mineral Resource announcement dated 20 March 2018.
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • As per the Maiden Mineral Resource announcement dated 20 March 2018.