ASX Announcement

16 September 2020

Ore Sorting Results

Strengthen the outstanding potential of the Angularli Uranium-Gold deposit at Vimy's Alligator River Project

- **Uranium grade in sample concentrate increased by 70% to 2.0% U_3O_8**
- **Potential for estimated capital and operating costs to be materially reduced**
- **Confirms Alligator River's potential for 1st quartile position on global uranium cost curve**
- **Further enhances the Project's prospective economics and attraction to strategic partners**
- **Enhanced sample concentrate gold grade warrants further investigation of recovery options**

Vimy Resources Limited (ASX:VMY) is pleased to announce the results of the ore sorting trial on a composite of mineralised material from the Angularli deposit at Alligator River in Australia's Northern Territory (NT). The results of the test, which were carried out by leading sorting systems supplier TOMRA, highlight the potential of ore sorting to lower project costs and improve the Project's potential economics.

Mike Young, CEO of Vimy, said, "*The results of the TOMRA ore sorting trial at the Alligator River Project's Angularli deposit have exceeded our expectations. The high-grade nature of the deposit, coupled with the ore sorting outcomes, enhances the prospect of Angularli's potential future development as a low-cost uranium operation.*

"Our next step is to progress the upgrade trials and investigate the potential for the recovery of high-value by-products associated with the uranium mineralisation at the Angularli deposit."

Key Findings

Beneficiated Feed Grades

- Proof of concept trial undertaken on 41.5 kg sample broadly representative of deposit mineralisation
- Uranium concentrate grade increased from 1.2% to 2.0% U_3O_8 (70% increase) with high U_3O_8 recovery
- Sample gold concentrate grade increased from 0.7 g/t to 1.1 g/t (47% increase). This warrants further investigation given no gold processing or recovery testwork has been undertaken to date
- Gold mineralisation spatially coincident with the uranium mineral resource
- High-grade material (13.5 kg of the 41.5 kg sample) not sorted due to high uranium grade but provides additional upside in future trials
- Other potential by-products were identified including platinum and palladium

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Potential for Reduced Capital and Operating Costs

- A higher feed grade from ore sorting would likely result in lower operating costs
- Smaller hydrometallurgical plant circuits would likely be required for the same level of production. Coupled with a potential reduction in acid-consuming phases in the concentrate, ore sorting has the potential to lower reagents (and water) usage and costs on a per lb U_3O_8 produced basis, noting that expected reagent use is already low.
- A smaller plant would result in a lower overall disturbance footprint with commensurate approvals and capital cost benefits

Angularli Uranium-Gold Deposit

The Angularli deposit is part of the Alligator River Project which lies approximately 380km by road east-northeast of Darwin in the Northern Territory of Australia (Figure 1). The Angularli deposit is located in the King River-Wellington Range tenement group which is managed in a joint venture (Vimy 79%: Rio Tinto 21%) with Rio Tinto Exploration Pty Limited (Rio Tinto), a wholly owned subsidiary of Rio Tinto Ltd. Rio Tinto is currently not contributing to joint venture expenditure, with its interest diluting based on expenditure by Vimy. Angularli has an Inferred Mineral Resource estimate of 26Mlbs U_3O_8 (0.91Mt @ 1.3% U_3O_8) (see ASX announcement of 20 March 2018: *Maiden Mineral Resource at Angularli Deposit, Alligator River Project*).

In December 2018, Vimy released the results of a Scoping Study based on the Inferred Mineral Resource. which concluded that the Project had the potential to have operating costs within the first quartile of the global uranium cost curve.

Mineralisation at Angularli is well understood and comprises predominantly uraninite (UO_2) within the matrix of brecciated, silica-altered sandstone. Metallurgical testwork to date suggests that the high silica content of the ore will result in low reagent consumption and very high metallurgical recoveries owing to the silica being chemically inert.

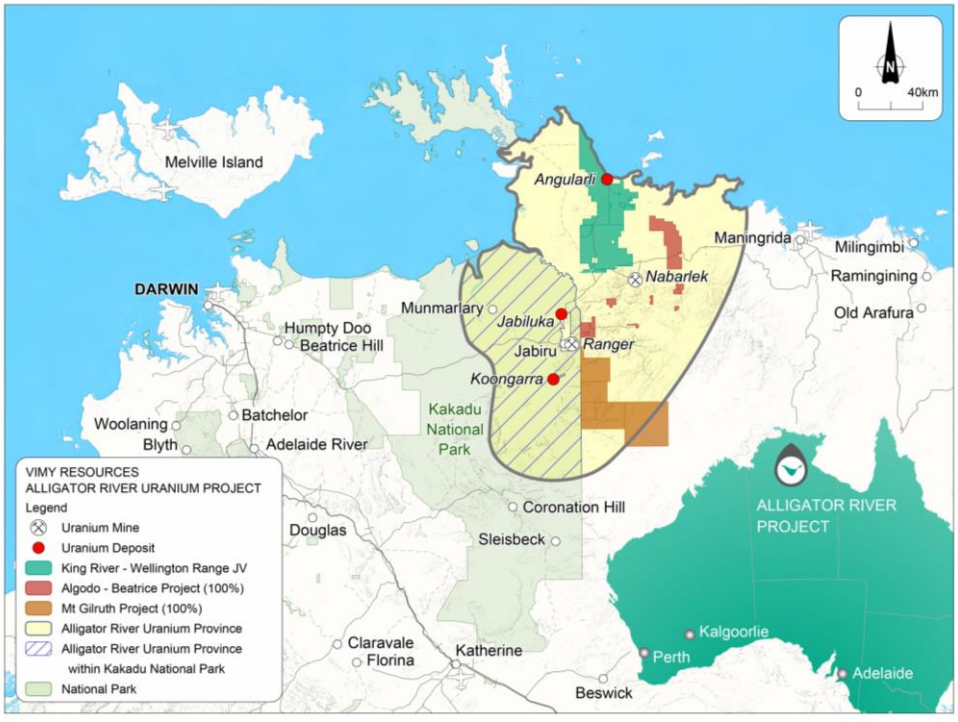

Figure 1: Alligator River Project Location and Angularli Deposit

For further details of the Scoping Study and previous metallurgical testwork carried out on the project, see ASX announcements dated 3 September 2018: *Angularli Uranium Project Scoping Study Update* and 10 December 2018: *Angularli Uranium Deposit - Positive Scoping Study*.

Ore Sorting Testwork

The ore sorting testwork was completed to determine the suitability of the Angularli mineralised material to be upgraded using advanced ore sorting technology provided by TOMRA Sorting Australia (Appendix A).

These results are considered to be “proof-of-concept” tests by TOMRA and were conducted on a broadly representative sample of mineralised material collected from drill core. The diamond holes were drilled by Cameco Australia in 2011 and 2016 (Figure 2) and form part of the drilling database used to estimate the 2018 Mineral Resource. A total of 41.5kg of mineralised zone material, including some adjacent barren material, was collected from half-diamond drill core samples, with an aggregate grade of 1.2% U_3O_8. Further details of the sample preparation are provided below and in Table 1.

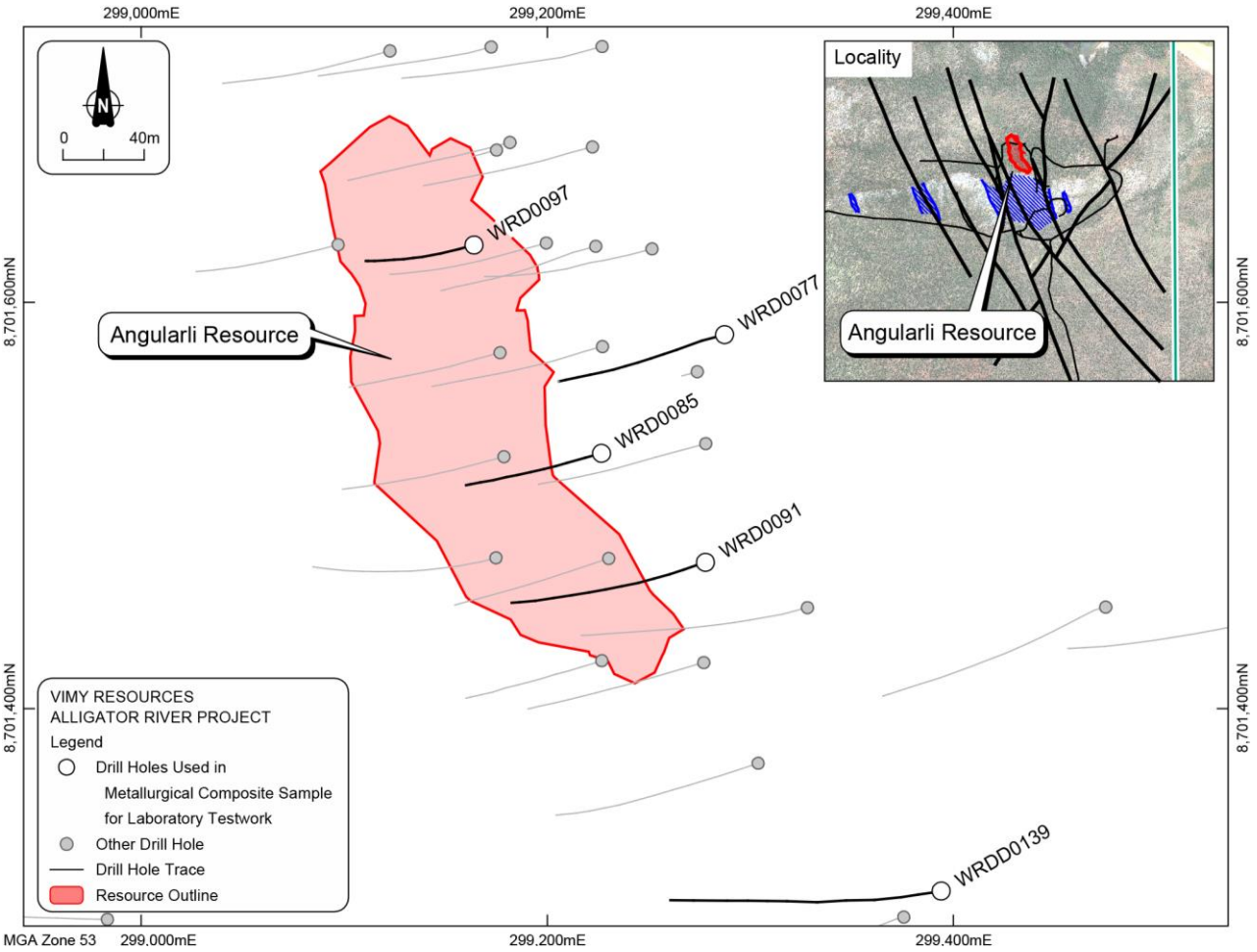

Figure 2: Drill holes sample locations for the Angularli TOMRA Composite

The ore sorting procedure requires an initial set-up of the ore sorter and calibration against proprietary image processing software. To achieve this, images were taken of the samples by subjecting them to “static” tests to determine their response to the TOMRA X-Ray Transmission (XRT) system. The X-ray sensor signal is a function of the sample atomic density and provides information on its composition. By combining two energy levels simultaneously, it is possible to differentiate particles by their relative atomic densities.

In the case of the Angularli sample, mineralised material shows concentration of high atomic density associated with uranium, against the low density of the gangue (waste) silicates. Figure 3 illustrates the excellent discrimination achieved during this static calibration of the sorter. Further details of the ore sorting technology and methodology are provided in Appendix A.

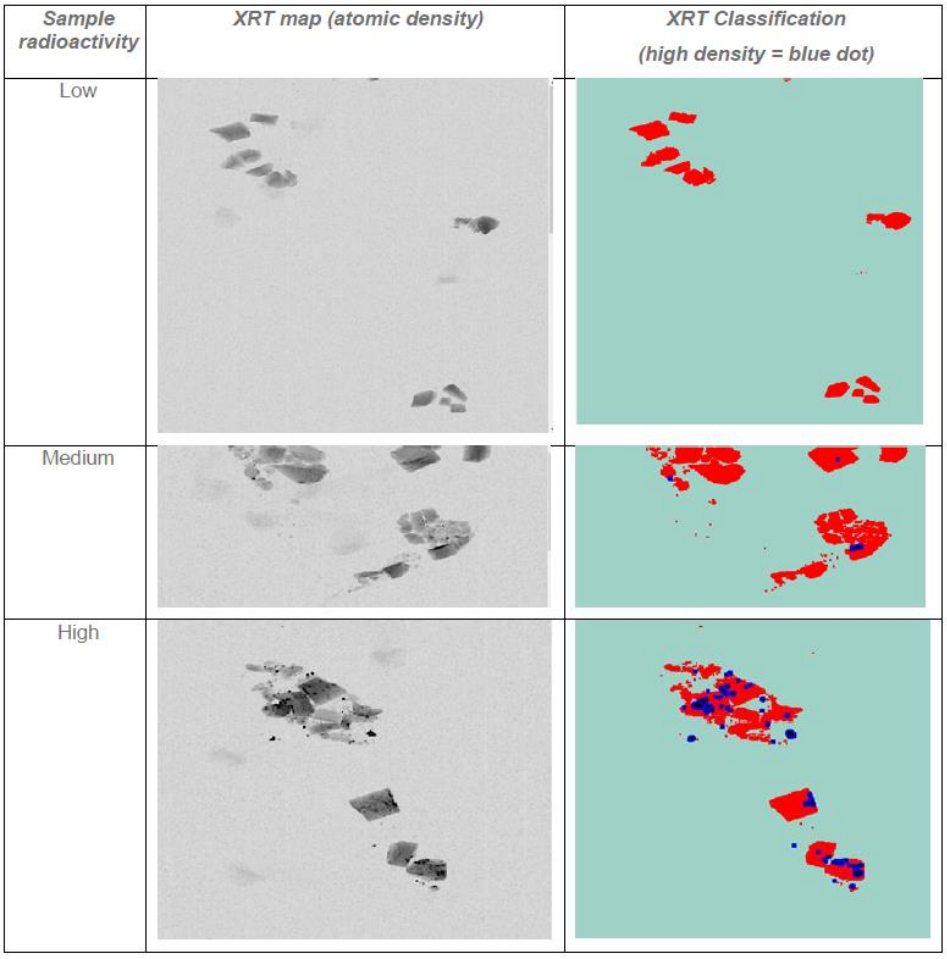

Figure 3: TOMRA Sorting Solutions raw (left) and processed (right XRT images of tested material

For the purposes of the testwork, the drill core feed was separated into a high-grade stream (not sorted) and a TOMRA Feed stream to comply with radiation OH&S rules for the TOMRA facility. The TOMRA Feed was then sorted into concentrate and waste streams. The upgrade factor, which includes the TOMRA concentrate stream as well as the high-grade bypass material, resulted in an U_3O_8 upgrade of 70%, a decrease in sample mass of 43%, and a 3% loss in contained U_3O_8.

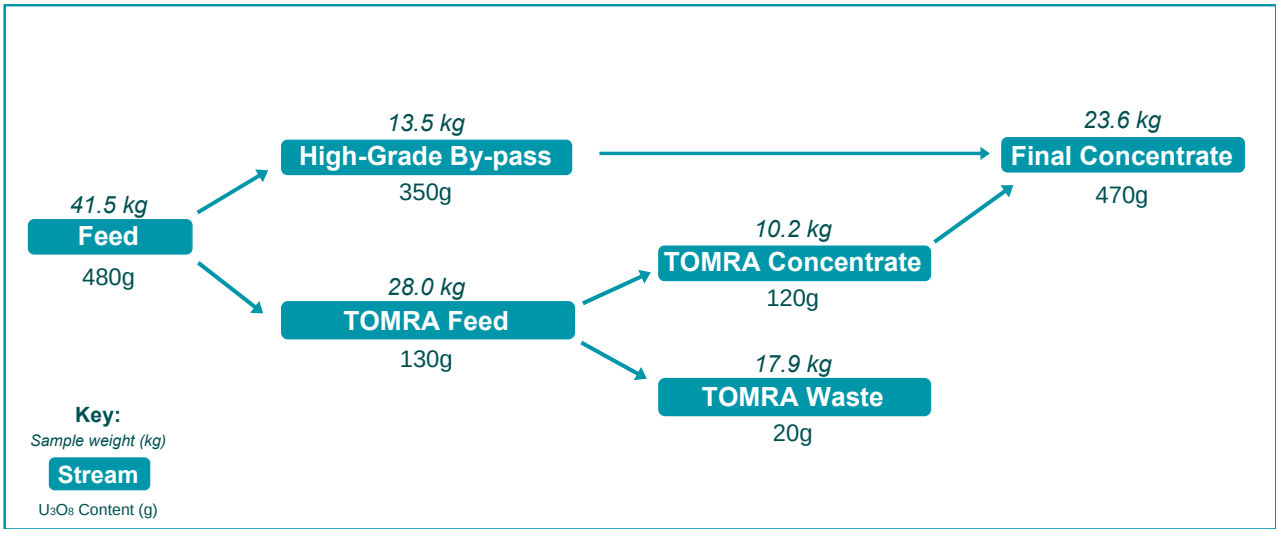

Figure 4: TOMRA Testwork flow chart with sample weight (upper) and U_3O_8 content (lower), rounding has been applied

The analytical results of the 2020 Angularli ore sorting trial are presented below (Table 1).

Table 1: 2020 Angularli Ore Sorting Trial Results

	Mass (kg)	Grade U_3O_8	Grade Au (g/t)	U_3O_8 (kg)
Feed from drill core	41.5	1.2%	0.74	0.48
High-grade by-pass	13.5	2.6%	1.55	0.35
TOMRA Feed	28.0	0.5%	0.35	0.13
TOMRA Concentrate	10.2	1.1%	0.48	0.12
TOMRA Upgrade	**-64%**	**144%**	**37%**	**-12%**
TOMRA Waste	17.9	0.1%	0.28	0.02
Final Results				
	Mass (kg)	**Grade U_3O_8**	**Grade Au (g/t)**	**U_3O_8 (kg)**
Feed from drill core	41.5	1.2%	0.74	0.48
High-Grade + TOMRA Concentrate	23.6	2.0%	1.09	0.47
TOTAL Upgrade	**-43%**	**70%**	**47%**	**-3%**

Notes

- *Uranium assays by XRF, gold assays by fire assay.*
- *Rounding has been applied.*

Next steps

The proof of concept trial results clearly indicates the potential for feed grade enhancement through ore sorting. Vimy considers that further ore sorting trials are warranted including optimisation of the process flow for different ore types and grade or size fractions, ensuring a greater reliability of particle classification. This will require the acquisition of large quantities (~1/2 tonne) of representative drill core from the Angularli deposit, which will be collected during a future infill drilling program as the Project moves towards a Pre-Feasibility Study.

This drilling program will also underpin additional project development activities. It will provide Vimy with the opportunity to investigate the potential recovery of high-value, by-products including gold and platinum group elements.

More immediately however, and with far less expense, Vimy plans to carry out acid leach tests on the pulverised samples generated during the ore sorting trial. These tests will be carried out according to optimal leach conditions determined for Angularli by ANSTO in 2018 and enable comparison of recoveries and reagent consumption on the sorted and unsorted mineralised material.

Mike Young
Managing Director and CEO

Released for and on behalf of the Board of Vimy Resources Limited

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Summary Information

The following disclaimer applies to this announcement and any information contained in it (the Information). The Information in this announcement is of general background and does not purport to be complete. It should be read in conjunction with the Company's other periodic and continuous disclosure announcements lodged with ASX Limited, which are available at www.asx.com.au. You are advised to read this disclaimer carefully before reading or making any other use of this announcement or any information contained in this announcement. In accepting this announcement, you agree to be bound by the following terms and conditions including any modifications to them.

Forward-Looking Statements

This announcement includes forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "will", "potential", "progress", "aim", "anticipate", "believe", "intend", "estimate", "expect", "may", "plan", "project", "should", "seek" and similar words or expressions containing same.

The forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this announcement and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. Given these uncertainties, no one should place undue reliance on any forward-looking statements attributable to the Company, or any of its affiliates or persons acting on its behalf. The Company does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Neither the Company nor any other person, gives any representation, warranty, assurance, nor will guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. To the maximum extent permitted by law, the Company and each of its advisors, affiliates, related bodies corporate, directors, officers, partners, employees and agents disclaim any responsibility for the accuracy or completeness of any forward-looking statements whether as a result of new information, future events or results or otherwise.

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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 Statement

The information in this announcement that relates to the Exploration Results (sample selection, composite make-up and analytical protocols) for the Ore sorting testwork are based on information compiled by Xavier Moreau, who is a Member of the Australian Institute of Geoscientists. Mr Moreau is a full-time employee of Vimy Resources. Mr Moreau has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as Competent Persons as defined in the 2012 Edition of the JORC 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Moreau 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 by road ENE of Kalgoorlie in the Great Victoria Desert of Western Australia.

Vimy also owns (79%) 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

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CEO and Managing Director

David Cornell
Non-Executive Director

Dr Tony Chamberlain
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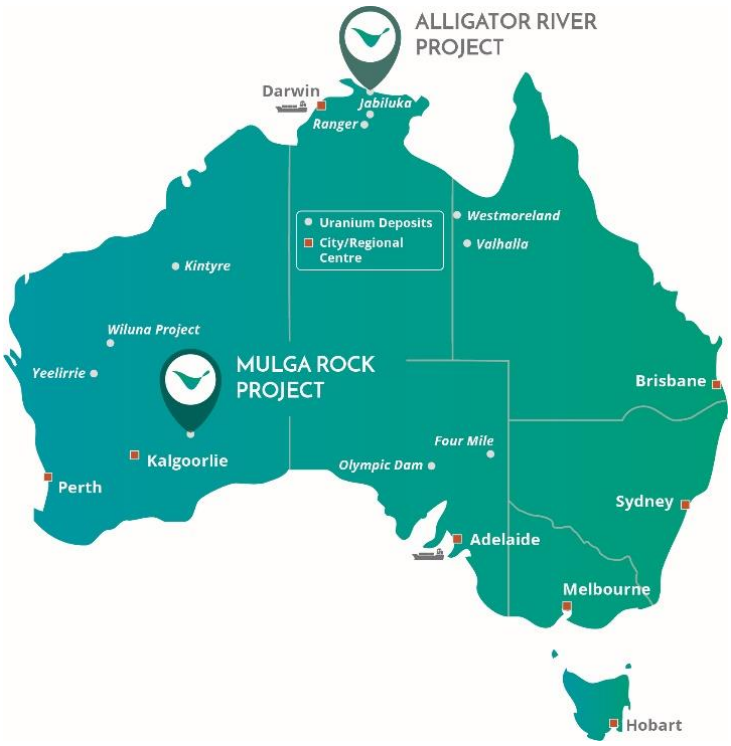
Marcel Hilmer
Chief Financial Officer
and Company Secretary

Julian Tapp
Chief Nuclear Officer

Scott Hyman
Vice President Sales and Marketing

Xavier Moreau
General Manager, Geology and Exploration



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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APPENDIX A

TOMRA XRT Technology

A proportion of material mined (Run-of-Mine or ROM) is typically worthless (waste), and must be transported, crushed, milled, classified before reporting to the hydrometallurgical portion of a mining project process flow sheet. Removing that waste component after primary crushing can result in material savings.

Bulk ore sorting is a proven pre-concentration technology in which barren gangue is separated from mineralised material based on grade measured or inferred from a sensor measurement.

TOMRA is specialised in sensor-based sorting techniques, an umbrella term for all applications where particles are individually detected by a sensor and rejected by an amplified mechanical, hydraulic or pneumatic process. TOMRA has over 20 years' experience in ore sorting and is familiar with many ore types and sorting applications and is the world market leader in this area.

The sensor(s) used to support the sorting process can rely on the detection of sample colour, transparency, near-infrared, radiometric or electromagnetic signature, X-Ray fluorescence, X-Ray transmission, with the option to combined multiple sensors to achieve optimal results.

The key benefits of an upfront bulk ore sorting circuit in operation include lower process throughputs, lower reagent costs associated with higher feed grade, lower consumption of water, power and environmental benefits such as lower tailings generation. Those benefits combined usually result in lower operating and capital costs.

The technology is based on industry proven, high capacity industrial sorting machines commercially available, and works much faster than traditional sorting technologies.

Test equipment

Data for the trial reported was collected using TOMRA's COM X-Ray transmission (XRT) system, which uses a broad-band electrical X-ray source.

The COM series sorting equipment covers the range of applications which require a belt feeding system. This allows the presentation of a non-uniform feed, with particles stabilising on the belt before scanning by the sensor(s).

Figure 5: TOMRA Sorting Solutions COM tertiary XRT sorter used for the Angularli orientation testwork

A short process animation of the XRT sorter can be viewed on our website.

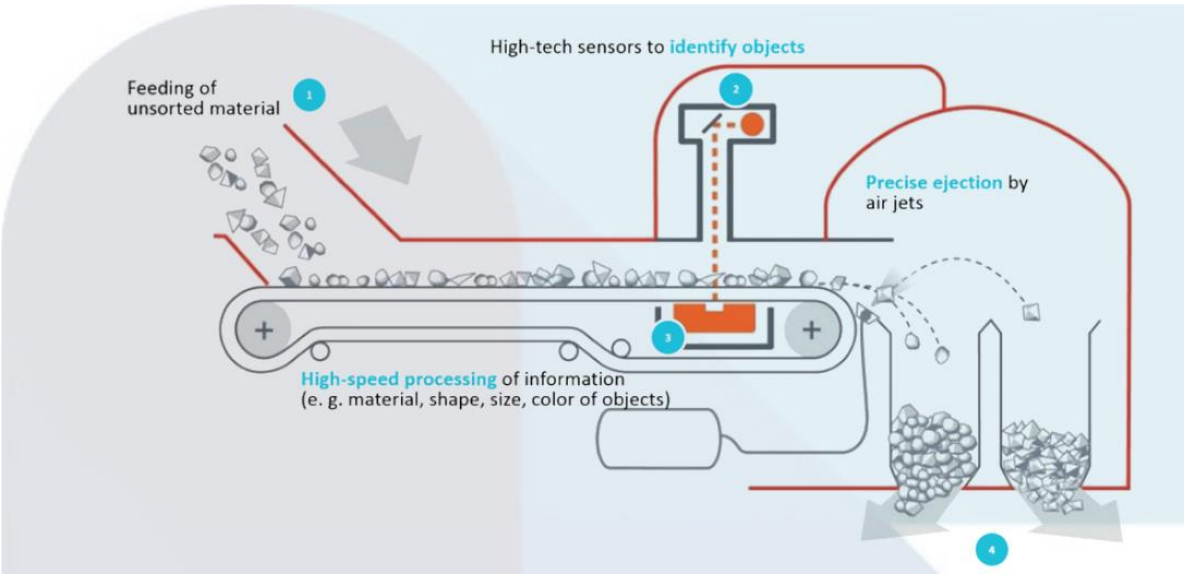

Figure 6: Simplified scheme of the COM Series principles (TOMRA Sorting Solutions Mining)

1) Material is fed and moves along the belt
2) The scanning in step 2, with
3) Near instant classification in step 3
4) Compressed air is used to eject the classified objects to one of the bays of the separation chamber.

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

The Company has provided information for Sections 1 to 2 in the announcements titled "*Maiden Mineral Resource at Angularli, Alligator River Project*" to the ASX dated 20 March 2018 and *"Angularli Uranium Project Scoping Study Update"* dated 3 September 2018. Section 1 of the JORC Table 1 provided below refers specifically to the metallurgical composite make-up and subsequent analytical testwork.

Section 1 Sampling techniques and data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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 3kg was pulverised to produce a 30g 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.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018. • Resampling of historical drill core was carried out on half-diamond drill core samples.
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 type, whether core is oriented and if so, by what method, etc).*	• As per the Maiden Mineral Resource announcement dated 20 March 2018.
Drill sample recovery	• *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.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018. • Multiple diamond drill holes (WRDD077, 085, 091, 097 and 139) have been selected along the mineralised strike to generate the metallurgical sample, and include an appropriate amount of low-grade and barren drill core.

Criteria	JORC Code explanation	Commentary
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.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018.
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 representativity 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.*	**Site Based Work** • Individual sample were photographed, and their weights and radiometric responses (eU, eTh, eK) recorded using an RS125 spectrometer, and used to screen samples. • Individual fragments were assigned to 10cm intercepts based on downhole depth recorded on drill core, to ensure appropriate reconciliation against existing geochemical assay data. **Laboratory Based Work** • Following sorting, weighing and drying at the Intertek facilities in Darwin, drill samples were crushed in two stages to ~2mm (jaw crusher followed by a Boyd crusher), split to produce a fraction pulverised to a P_{85} of 75 microns. Four samples were selected per fraction, generating a total of 12 samples. Fused disks were prepared separately for XRF analysis. • Residual crushed and pulp material was preserved to support additional characterisation and leach testwork. • All samples were analysed in Perth using ICP-MS (mass spectroscopy) for trace elements plus ICP-OES (optical emissions spectroscopy) for major and minor elements after a four acid digest in Teflon tubes. One gold analysis per fraction was carried out using 50g charge fire assay. Additional analyses included XRF analysis (to account for the high U concentrations) and a sodium peroxide fusion with a hydrochloric acid digest to dissolve the melt, followed by ICP-MS analyses. Loss on Ignition (LOI) was also analysed for all samples using a thermal gravimetric analyser. • All sample weights were recorded by the laboratory.
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*	**QA/QC of Assay Samples** • An industry standard QA/QC program was followed by the analytical facility out, comprising the use of external certified reference materials, and laboratory duplicates.

Criteria	JORC Code explanation	Commentary
	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.*	• Excellent repeatability between sub-samples of a single fraction was achieved by the sample preparation and analytical protocol followed.
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.*	• Various checks were carried out on the sample data, including via depth-matching against existing geochemical assays and original photographs
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.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018.
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.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018. • Data spacing for the composite make-up was appropriate given the “proof of concept” nature of the ore sorting testwork.
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.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018.
Sample security	• *The measures taken to ensure sample security.*	• A full chain of custody was maintained during sampling and dispatch, with packing of drill core samples in 150-micron polyethylene bags stored within sealed drums, delivered directly to the laboratory by company personnel.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• As per the Maiden Mineral Resource announcement dated 20 March 2018.