

19 JUNE 2024

WEST ARUNTA PROJECT INITIAL METALLURGICAL TESTWORK RESULTS

Highlights

- **Excellent flotation results demonstrate a high-grade niobium concentrate with low impurities and industry comparable recovery rates can be produced from Luni oxide mineralisation using a conventional two stage flotation regime**
- **Initial flotation testwork was completed on sample material from a drillhole located in the northeast of Luni**
- **Open cycle float tests achieved a high-grade concentrate with excellent recovery:**
 - Open cycle concentrate (2nd cleaner) 51% Nb₂O₅ at 62% recovery**
 - Open cycle concentrate (4th cleaner) 61% Nb₂O₅ at 52% recovery**
- **Subsequent locked cycle testing confirmed the flotation regime performance:**
 - Locked cycle concentrate (5th cleaner) 58% Nb₂O₅ at 53% recovery**
- **Ongoing testwork is aiming to optimise the beneficiation stage including testing other process steps used at existing niobium operations, before moving to variability testing across Luni**

WA1 Resources Ltd (ASX: WA1) (**WA1** or **the Company**) is pleased to announce results from the initial metallurgical testwork program undertaken on niobium mineralisation from Luni at the 100% owned West Arunta Project in Western Australia.

WA1's Managing Director, Paul Savich, commented:

"Our first beneficiation testwork program has produced high-grade niobium concentrates with low impurities and at industry-comparable recovery rates through a practical two stage flotation regime. We consider this an excellent outcome towards unlocking the significant inherent strategic value of Luni."

"Flotation of niobium minerals is widely recognised as the key challenge to developing a conventional process flowsheet for a niobium deposit. This is because flotation typically provides most of the upgrade from ore to concentrate and incurs a majority of the recovery losses."

"Our testwork is currently optimising this regime, with clear potential for improvement through the comminution, classification and flotation steps. Other beneficiation techniques such as gravity and magnetic separation are also being assessed."

"For the remainder of this year, one of our key drilling and testwork objectives is to demonstrate a sufficient quantity of ore can be floated from the Luni deposit to support detailed mine planning and economic evaluation."

Niobium Industry Metallurgy Overview Integrated with Luni's Results

Niobium production at existing operations currently involves the beneficiation and further intermediate processing of ore to produce a concentrate grading between ~50-60% Nb₂O₅¹. This concentrate is then converted into a saleable end-product, typically ferroniobium (FeNb, 65% Nb), via pyrometallurgical processes.

The initial beneficiation phase comprises crushing, grinding and desliming before a combination of physical (i.e. magnetic and gravity separation) and flotation (up to four stages) steps to achieve a lower-grade concentrate. **The results from Luni reported herein relate to this initial beneficiation phase. Testwork used unoptimised two stage flotation and achieved or exceeded the concentration conventionally required to produce commercial end-products.**

This initial concentrate then typically undergoes an intermediate hydrometallurgical step (one to two stages of leaching), or pyrometallurgical step (electric arc furnace), to remove any remaining impurities and achieve a clean, high-grade concentrate to take forward into conversion. The combined recovery for the intermediate and conversion steps is typically in excess of 95% of the concentrate. **Testwork for this intermediate step along with conversion to ferroniobium has not yet been undertaken on concentrates produced from Luni and is planned in future testwork programs.**

Overall niobium recoveries at existing operations which incorporate all these metallurgical steps vary between 30-70%² and are generally regarded as secondary to the optimisation of a commercially viable, beneficiation regime. Figure 1 below utilises publicly available information to present simplified niobium process flowsheets from the three existing operations, with Luni's unoptimised initial flotation results integrated.

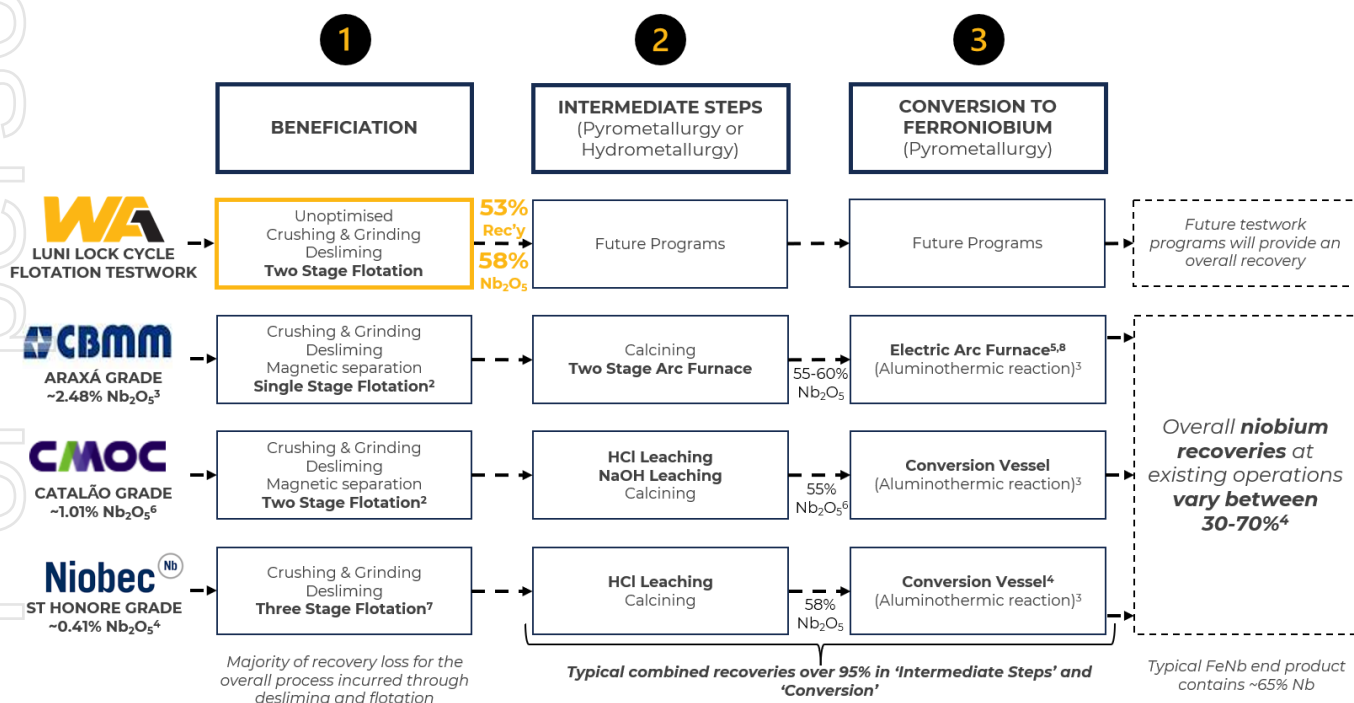


Figure 1: Simplified adapted process flowsheets for the three existing niobium operations with initial unoptimised results from Luni integrated

Notes: See Table 3 for full details of source documents for the above information

Note

1. Gibson, C.E., Kelebek, S, and Aghamirian, M: 'Niobium Oxide Mineral Flotation: A Review of Relevant Literature and the Current State of Industrial Operations' International Journal of Mineral Processing (2015)
2. IAMGOLD Corporation, NI 43-101 Technical Report, Update on Niobec Expansion, December 2013

Metallurgical Discussion - Luni Carbonatite

The Company has completed an initial phase of beneficiation testwork which was undertaken at SGS Canada Inc. located in Lakefield, Ontario (**SGS**). The primary objective was to make a first-pass assessment of beneficiating the Luni oxide mineralisation to a niobium concentrate using flotation.

Within a conventional niobium flowsheet (i.e. used at the three existing operations), flotation is considered the key technical challenge to enable the commercial upgrade of ore to a concentrate. This concentrate must then be suitable for refining through intermediate processing steps to create a high-grade concentrate that can then be converted to a ferroniobium end-product.

Sample Selection

The diamond drill core chosen for this testwork was from a single hole located in the northeast of Luni (LUDD23-030) (Figure 2 and Table 2). The Company has progressively completed a number of duplicate drillholes to provide sufficient sample feed for this phase of metallurgical testwork.

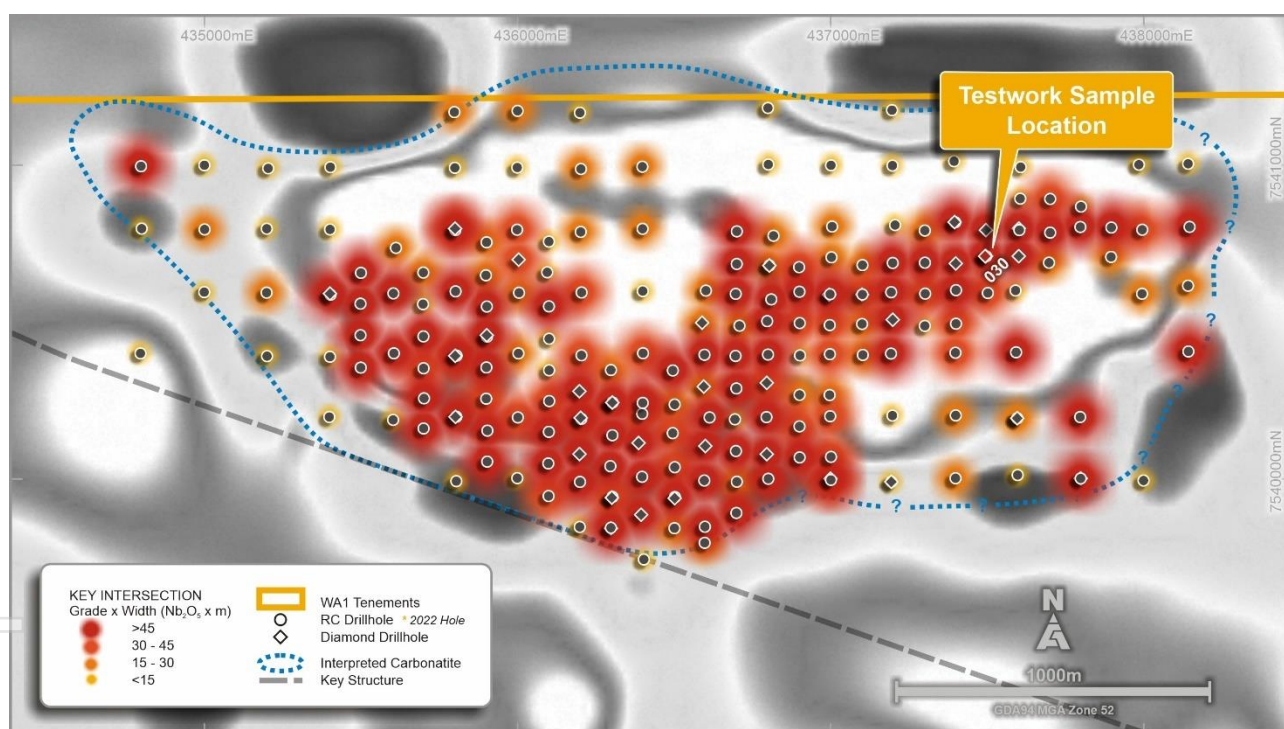


Figure 2: Location of drillhole LUDD23-030 used in metallurgical testwork

The sample location was selected as it is in an area where early resource drilling identified shallow, high-grade niobium mineralisation over broad intercepts which may potentially represent an ideal area for a start-up mining scenario.

The mineralised zone from LUDD23-030 commenced at approximately 42m vertical depth and the oxide horizon was combined to form approximately 130kg of bulk composite feedstock for testwork.

The LUDD23-030 drill core composite sample had a head grade of 4.15% Nb₂O₅. This high-grade niobium sample may be associated with increased oxidation/weathering, and it has been

observed at other deposits that increased weathering can often adversely affect flotation recoveries (i.e. higher grades do not always correlate with high metallurgical recoveries).

A single sample point was used to provide homogenous sample material for distribution to a number of specialised laboratories, both in Perth and overseas. This approach allows for direct comparison of results generated (minimising any potential bias that may be introduced by sample variability) along with faster identification of flowsheet options by conducting independent parallel work streams. Additionally, this sample contains meaningful proportions of both key niobium minerals identified at Luni, being pyrochlore and columbite, enabling the assessment of both minerals' response to flotation.

Testwork Program

The results presented herein were generated from testwork undertaken by SGS who are widely recognised as a well-credentialed laboratory with extensive experience in niobium processing and flowsheet development.

The sample was ground to a target of 100% passing 150µm followed by a desliming step to remove ultra-fine particles ahead of flotation. Flotation was then carried out using a two-stage approach with an initial phosphate mineral pre-float, followed by direct niobium mineral flotation under an array of test conditions (Figure 3).

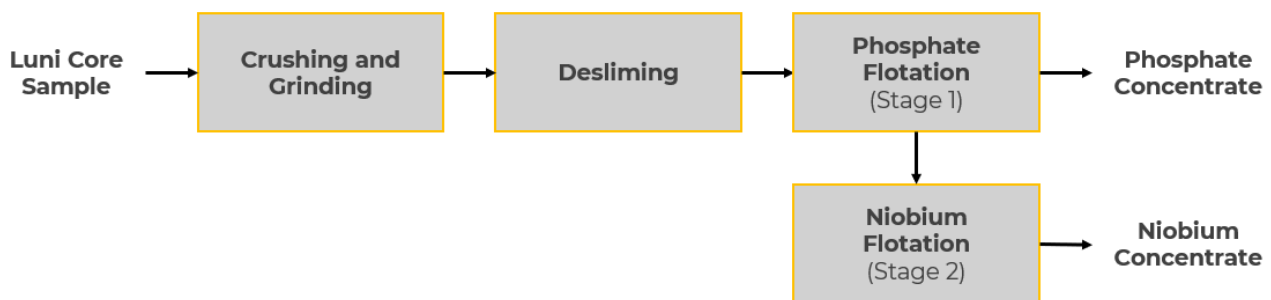


Figure 3: Simplified testwork flowsheet

The primary objective of the flotation testwork was to demonstrate that the niobium mineralisation (both pyrochlore and columbite) is amenable to concentration via flotation. This objective was achieved sooner than expected, so the testwork objective advanced to the production of a high-grade concentrate that may be suitable for intermediate processing and conversion into a ferroniobium end-product.

A total of 20 tests have been completed to date by SGS, assessing a range of different conditions. Initial tests focussed on reducing niobium losses in the pre-float stage. Later tests focused on targeting the niobium minerals through rougher and cleaner flotation steps to achieve a high-grade concentrate.

Testwork Results

The initial results reported from the SGS testwork program are presented in Table 1. **The results demonstrate the ability to produce a high-grade niobium concentrate with low impurities and at industry comparative recovery rates. These tests utilised conventional process steps adopted at existing niobium operations under practical flotation conditions.**

Excellent open cycle test results from the initial testing phase included 51.1% Nb₂O₅ at 62.1% recovery after two cleaning steps, and 61.0% Nb₂O₅ at 52.0% recovery after four cleaning steps.

Following success in the initial open cycle tests, SGS undertook a locked cycle test to confirm stability of the selected regime whereby internal streams are recirculated to better emulate potential full-scale plant performance.

Approximately 40kg of ore was processed through the crushing and grinding, deslime and bulk pre-float stages to produce feed for the locked cycle test. The locked cycle consisted of eight cycles in closed circuit to ensure steady state was achieved.

The locked cycle results show a concentrate grade of 57.9% Nb₂O₅ is achieved at 53.5% recovery which is comparable in performance to existing operations. This result aligns with the open cycle tests and thereby confirms process stability for the regime when operated in closed circuit. The combined final concentrate (over the steady-state cycles 3-8) was submitted for comprehensive analysis and is shown in Table 1. It demonstrates a high-grade niobium concentrate, low in key deleterious impurities.

Table 1: Niobium Concentrate Assays from key open cycle and locked cycle tests

	Nb ₂ O ₅	Ta	SiO ₂	CaO	Al ₂ O ₃	P ₂ O ₅	Fe ₂ O ₃	TiO ₂	U	Th	Pb
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(ppm)	(ppm)	(%)
Sample Feed	4.15	0.1*	22.6	30.8	3.56	24.9	6.29	0.25	87^	84^	<0.01
Open Cycle Concentrate (2 nd Cleaner)	51.15	-	3.4	5.90	1.92	4.58	16.77	1.73	-	-	-
Open Cycle Concentrate (4 th Cleaner)	61.0	<0.1	1.23	3.63	1.04	2.05	13.3	1.78	174	335	0.03
Lock Cycle Concentrate (5th Cleaner)	57.90	<0.1	1.90	6.83	1.02	4.51	11.7	1.76	161	326	0.06

*Assay reported at ALS by different methodology

^Back-calculated head from testwork mass balance

Grade-Recovery data for the selected open and locked cycle tests are presented in Figure 4.

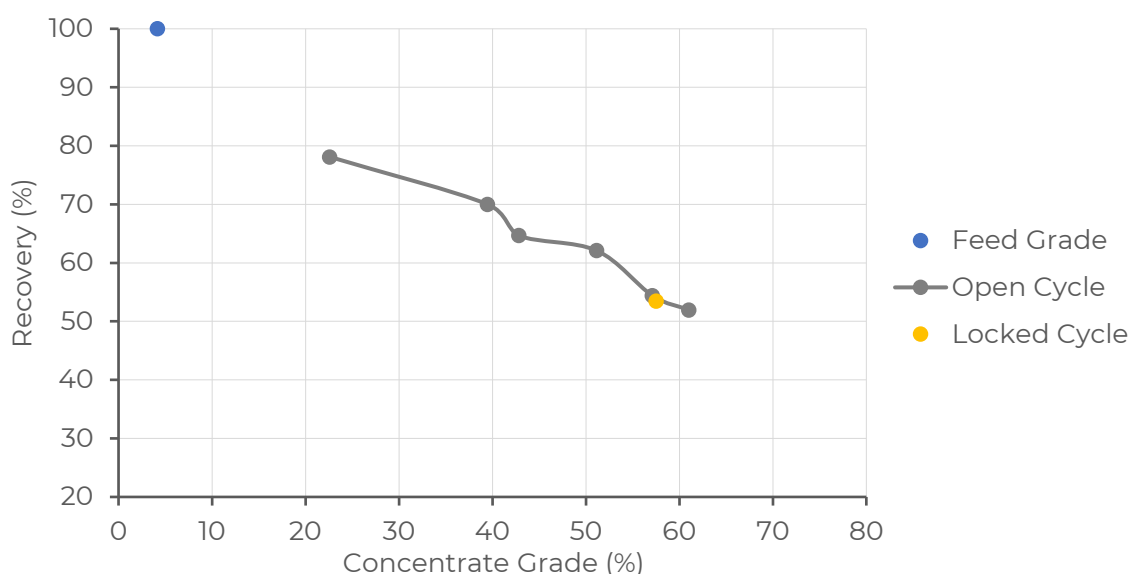


Figure 4: Grade-Recovery chart of the key open cycle (whole curve for niobium flotation stage) and locked cycle (concentrate only) tests

Mineralogical analysis of the tests demonstrated that both dominant niobium minerals present in Luni's mineralisation, being pyrochlore and columbite, are being collected by flotation.

Figure 5 is a photograph taken at SGS during the locked cycle flotation testing. Figure 6 is a microscope photograph of the final open cycle concentrate whereby dark-coloured niobium minerals are prevalent.



Figure 5: Niobium flotation during locked cycle



Figure 6: Microscopy of final open cycle concentrate

The tested flowsheet has the additional benefit of producing a potentially commercial phosphate by-product. The locked cycle test resulted in a concentrate grading 37.6% P_2O_5 with a recovery of 65.2%. The flowsheet used in the testwork is similar to that utilised at the Catalão niobium and phosphate mine in Brazil, which is owned by a subsidiary of CMOC Group Limited.

WAI's Niobium Processing Advisor, Clovis Sousa, commented:

"This initial testwork has demonstrated the Luni mineralisation is highly responsive to a practical flotation regime, producing high-grade niobium concentrates with low impurities and strong recovery characteristics."

"These unoptimised results compare well to existing global operations and provides confidence in our ability to produce high-quality end-products in future testwork programs."

Forward Testwork Programs

Significant potential to optimise the initial beneficiation results reported herein has been identified throughout the testwork program. This will be further investigated in the following areas:

- Comminution;
- Classification (including desliming);
- Flotation stages, cell types, reagents and conditions;

- Use of other beneficiation techniques (i.e. magnetic and gravity separation); and
- Techno-economic trade-off assessment between concentrate grades and recovery rates (i.e. accepting lower concentrate grades at higher recoveries or vice versa to maximise the economic outcome).

The outcomes of these programs and other future testwork programs will be reviewed and assessed to determine potential flowsheet options and optimisations.

The Company has ongoing parallel testwork programs at other laboratories in Perth and overseas. The outcomes from these programs will assist with considering and developing alternative beneficiation options along with which process steps should be taken forward into future testwork programs for subsequent optimisation, variability testing, and detailed flowsheet development.

Drilling is ongoing at Luni to collect additional samples for further metallurgical testwork programs. Following investigation of the areas outlined above, the Company will progress to assessing metallurgical variability across the Luni deposit, with a focus on flowsheet development to support initial mine planning and economic evaluation.

ENDS

This Announcement has been authorised for market release by the Board of WA1 Resources Ltd.

For further information, please contact:

Investors

Paul Savich
Managing Director
T: +61 8 6478 7866
E: psavich@wa1.com.au

Media

Michael Vaughan
Fivemark Partners
T: +61 422 602 720
E: michael.vaughan@fivemark.com.au

Or visit our website at www.wa1.com.au

Competent Person Statement

The information in this announcement that relates to metallurgical testwork results is based on information compiled by Mr. Roy Gordon who is a Member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr. Gordon is a full-time employee of WA1 Resources Ltd and has sufficient experience which is relevant to the information and activities under consideration to qualify as competent to compile and report such information. Mr. Gordon consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

Disclaimer: No representation or warranty, express or implied, is made by the Company that the material contained in this announcement will be achieved or proved correct. Except for statutory liability which cannot be excluded, each of the Company, its directors, officers, employees, advisors and agents expressly disclaims any responsibility for the accuracy, fairness, sufficiency or completeness of the material contained in this presentation and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this presentation or any effort or omission therefrom. The Company will not update or keep current the information contained in this presentation or to correct any inaccuracy or omission which may become apparent, or to furnish any person with any further information. Any opinions expressed in the presentation are subject to change without notice.

About WA1

WA1 Resources Ltd is based in Perth, Western Australia and was admitted to the official list of the Australian Securities Exchange (ASX) in February 2022. WA1's shares are traded under the code WA1.

WA1's objective is to discover and develop Tier 1 deposits in Western Australia's underexplored regions and create value for all stakeholders. We believe we can have a positive impact on the remote communities within the lands on which we operate. We will execute our exploration using a proven leadership team which has a successful track record of exploring in WA's most remote regions.

Forward-Looking Statements

This ASX Release may contain certain "forward-looking statements" which may be based on forward-looking information that are subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. For a more detailed discussion of such risks and other factors, see the Company's Prospectus and Annual Reports, as well as the Company's other ASX Releases.



Readers should not place undue reliance on forward-looking information. The Company does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this ASX Release, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Table 2: Collar location of drillhole (metallurgical sample)

Hole ID	Drill Type	Easting	Northing	RL	Dip	Azimuth	Depth
				(m)	(Degrees)	(Degrees)	(m)
LUDD23030	DD	437496	7540710	382	-60	180	126.2

Table 3: Sources for the internally generated schematic in Figure 1 above

Note	Source
1	Henrique. P: 'Production of niobium: Overview of processes from the mine to products' Journal of Mining and Metallurgy. (2022)
2	Gibson, C.E: 'Niobium Oxide Mineral Flotation: A Review of Relevant Literature and the Current State of Industrial Operations' International Journal of Mineral Processing. (2015)
3	Shikik. A: 'A review on extractive metallurgy of tantalum and niobium' Journal of Metallurgy. (2020)
4	IAMGOLD Corporation, NI 43-101 Technical Report, Update on Niobec Expansion. (2013)
5	CBMM Infographic, viewed at < https://cbmm.com/assets/infographic/en/index.html > on 13/2/2024
6	China Molybdenum Co., Ltd. 'Major Transaction Acquisition of Angle America PLC's Niobium and Phosphates Businesses'. (2016)
7	One of Niobec flotation steps is completed after HCl leaching
8	Does not include niobium pentoxide production steps, outputs or recoveries

Table 4: Grade of key niobium producers

	Deposit Size	Nb ₂ O ₅	Contained Nb ₂ O ₅
CBMM (Araxa)	(Mt)	(%)	(kt)
Measured	Unknown*	Unknown*	Unknown*
Indicated	Unknown*	Unknown*	Unknown*
Inferred	Unknown*	Unknown*	Unknown*
Total	462	2.48%	11,458
Source: US Geological Survey published 2017 available at < https://pubs.usgs.gov/pp/1802/m/pp1802m.pdf > *Measured, Indicated and Inferred resource not publicly available to due CBMM private ownership			
Magris Resources (Niobec)	(Mt)	(%)	(kt)
Measured	286	0.44%	1,252
Indicated	344	0.40%	1,379
Inferred	68	0.37%	252
Total	698	0.41%	2,883
Source: IAMGOLD NI 43-101 Report available at < https://www.miningdataonline.com/reports/Niobec_12102013_TR.pdf > Resource as at 31 December 2012 (NI 43-101 Compliant)			
CMOC (Catalao II)	(Mt)	(%)	(kt)
Oxide			
Measured	0.3	0.86%	2
Indicated	0.1	0.74%	1
Inferred	1.3	0.83%	11
Total	1.7	0.83%	14
Fresh Rock (Open Pit)			
Measured	0	0.00%	0
Indicated	27	0.95%	258
Inferred	13	1.06%	138
Total	40	0.99%	396
Fresh Rock (Underground)			
Measured	0.0	0.00%	0
Indicated	0.2	0.89%	2
Inferred	6.3	1.24%	78
Total	6.5	1.23%	80
Total (All)	48.4	1.01%	490
Source: China Molybdenum Co. Ltd: Major Transaction Acquisition of Anglo American PLC's Niobium and Phosphate Businesses available at < https://www1.hkexnews.hk/listedco/listconews/sehk/2016/0908/ltn20160908840.pdf > Resource as at 30 June 2016 (JORC 2012 Compliant)			

For personal use only

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

CRITERIA	COMMENTARY
Sampling techniques	- Geological information and metallurgical testwork samples referred to in this ASX Announcement were derived from diamond drilling programs. - Core samples were collected with a diamond drill rig and were mainly PQ core diameter. - The core was logged and photographed onsite and then transported to Bureau Veritas in Perth for cutting and sampling. Whole core was sampled for metallurgical testwork in its entirety to preserve sample integrity and maximise sample mass. - At Bureau Veritas, the core was selected and composited based on assays from RC twin samples, pXRF analysis of intervals and geological logging to identify the mineralised zones and domains. The mineralised core was composited in its entirety within the selected domains.
Drilling techniques	Diamond holes were drilled with PQ3 (83mm) rods. PQ core was triple tubed to enable increased core recovery.
Drill sample recovery	- The composite for the metallurgical testwork program reported covered an interval from 48 to 75.8m. Over this interval, 6.7m of core loss was reported. - Additional laboratory assays were undertaken on the samples submitted for the testwork and showed good alignments to the drill assays.
Logging	- All samples used for the metallurgical testwork were geologically logged to a detail level that supported the metallurgical studies. - The samples were logged qualitatively and quantitatively in nature for geology, alteration, and mineralisation by the Company's geological personnel. Drill logs were recorded digitally and have been verified. - Detailed logging of the diamond core was completed onsite.
Sub-sampling techniques and sample preparation	- At Bureau Veritas, the entire core composite was stage crushed to P100 3.35mm, blended and homogenised and subsequently split into charges for various testwork programs. Approximately 130kg was dispatched to SGS Lakefield for this testwork program. - Stage crushing was undertaken to minimise fines generation that may affect metallurgical testwork, whilst reducing top size which enabled representative sub-sampling to occur.
Quality of assay data and laboratory tests	- Unless otherwise noted, all assays reported are those conducted by SGS Lakefield, using a combination of Whole Rock Analysis (WRA) by fused-bead XRF, Leco and ICP-MS. - Standard laboratory QAQC was undertaken and monitored by the laboratory and mass balances for each test reported by SGS were reconciled against the feed grade. This is subsequently reviewed by WA1 upon receipt of results.
Verification of sampling and assaying	- Mineralised intersections have been verified against the downhole geology and pXRF analysis. - Logging and sampling data was recorded digitally in the field. - Duplicate head assays from ALS Metallurgy shows good agreeance

CRITERIA	COMMENTARY
	with the results from SGS.
Location of data points	- Drillhole collars were initially surveyed and recorded using a handheld GPS. Drill collars are then surveyed with DGPS system at appropriate stages of the program. - All co-ordinates are provided in the MGA94 UTM Zone 52 co-ordinate system with an estimated horizontal accuracy of $\pm 0.008\text{m}$ and an estimated vertical accuracy of $\pm 0.015\text{m}$ for the DGPS system. - Azimuth and dip of the drillholes is recorded after completion of the hole using a gyro. A reading is taken every 30m with an assumed accuracy of ± 1 degree azimuth and ± 0.3 degree dip.
Data spacing and distribution	See drillhole table for hole position and details.
Orientation of data in relation to geological structure	- The orientation of the oxide-enriched mineralisation is interpreted to be sub-horizontal and derived from weathering of primary mineralisation. The orientation of primary mineralisation is poorly constrained due to the limited number of drillholes that have penetrated to depth. - See drillhole table for details regarding the orientation of the drillhole. - Drillholes were designed based on interpretation from modelled geophysical data and results from drilling to date. - Oxide mineralisation is currently interpreted as a sub horizontal oxide unit.
Sample security	- Sample security is not considered a significant risk with WA1 staff present during collection. - All geochemical samples were collected and logged by either WA1 staff or the laboratory.
Audits or reviews	The program and data is reviewed on an ongoing basis by senior WA1 personnel.

Section 2 Reporting of Exploration Results

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

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	- All work completed and reported in this ASX Announcement was completed on E80/5173 which is 100% owned by WA1 Resources Ltd. - The Company also currently holds two further granted Exploration Licences and nine Exploration Licence Applications within the area of the West Arunta Project.
Exploration done by other parties	- The West Arunta Project has had limited historic work completed within the Project area, with the broader area having exploration focused on gold, base metals, diamonds and potash. - Significant previous explorers of the Project area include Beadell

CRITERIA	COMMENTARY
	Resources and Meteoric Resources. Only one drill hole (RDD01) had been completed within the tenement area by Meteoric in 2009 (located approximately 17km southwest of the Luni deposit), and more recently additional drilling nearby the Project has been completed by Encounter Resources Ltd. ▪ Most of the historic work was focused on the Urmia and Sambhar Prospects with historic exploration (other than RDD01) being limited to geophysical surveys and surface sampling. ▪ Historical exploration reports are referenced within the WA1 Resources Ltd Prospectus dated 29 November 2021 which was released by ASX on 4 February 2022. ▪ Encounter Resources are actively exploring on neighbouring tenements and have reported intersecting similar geology, including carbonatite rocks.
Geology	▪ The West Arunta Project is located within the West Arunta Orogen, representing the western-most part of the Arunta Orogen which straddles the Western Australia-Northern Territory border. ▪ Outcrop in the area is generally poor, with bedrock largely covered by Tertiary sand dunes and spinifex country of the Gibson Desert. As a result, geological studies in the area have been limited, and a broader understanding of the geological setting is interpreted from early mapping as presented on the MacDonald (Wells, 1968) and Webb (Blake, 1977 (First Edition) and Spaggiari et al., 2016 (Second Edition)) 1:250k scale geological map sheets. ▪ The West Arunta Orogen is considered to be the portion of the Arunta Orogen commencing at, and west of, the Western Australia-Northern Territory border. It is characterised by the dominant west-north-west trending Central Australian Suture, which defines the boundary between the Aileron Province to the north and the Warumpi Province to the south. ▪ The broader Arunta Orogen itself includes both basement and overlying basin sequences, with a complex stratigraphic, structural and metamorphic history extending from the Paleoproterozoic to the Paleozoic (Joly et al., 2013).
Drill hole Information	▪ Refer to Table 2 for drill hole details.
Data aggregation methods	▪ Not applicable as drilling results are not being reported in this announcement. ▪ No metal equivalents have been reported.
Relationship between mineralisation widths and intercept lengths	▪ Not applicable as drilling results are not being reported in this announcement.
Diagrams	▪ Refer to figures provided within this ASX announcement.
Balanced reporting	▪ All relevant information has been included and provides an appropriate and balanced representation of the results.
Other substantive exploration data	▪ All meaningful data and information considered material and relevant has been reported.

CRITERIA	COMMENTARY
Further work	▪ Further interpretation of drill data and assay results will be completed over the coming months, including ongoing petrographic and mineralogical analysis. ▪ Planning and implementation of further metallurgical and exploration drilling is in progress and analysis of existing drill samples is ongoing. ▪ An initial Mineral Resource estimate for the Luni deposit is planned to be completed in the coming weeks. More detailed quantification and examination of the deposit is under way. ▪ Further metallurgical studies are in progress and engineering factors are under consideration. ▪ Work on the project is ongoing on multiple fronts.