

1 MAY 2023

#### WEST ARUNTA PROJECT

# LUNI HIGH-GRADE NIOBIUM MINERALISATION CONTINUES TO EXTEND

### **Highlights**

 Further high-grade niobium intersections at the Luni carbonatite from 200m spaced step-out drilling (limited intervals assayed, refer to Table 1):

LURC23-026 from 35m: 13m at 5.0% Nb<sub>2</sub>O<sub>5</sub>

within an overall interval of

31m at 3.5% Nb<sub>2</sub>O<sub>5</sub>

LURC23-033 from 42m: 10m at 4.0% Nb<sub>2</sub>O<sub>5</sub>

within an overall interval from 39m of

24m at 2.1% Nb<sub>2</sub>O<sub>5</sub>

LURC23-022 from 48m: 12m at 3.2% Nb<sub>2</sub>O<sub>5</sub>

within an overall interval from 47m of

21m at 2.2% Nb<sub>2</sub>O<sub>5</sub>

- Significant high-grade niobium mineralisation is confirmed to extend at least 400m east and 200m south of 2022 discovery hole LURC003 and remains open in all directions
- Mineralised zonation continues to be observed including:

LURC23-033: 24m at 2.4% TREO¹ from 39m, with 10m at 795ppm tantalum (Ta<sub>2</sub>O<sub>5</sub>) and 243ppm scandium (Sc<sub>2</sub>O<sub>3</sub>) from 42m

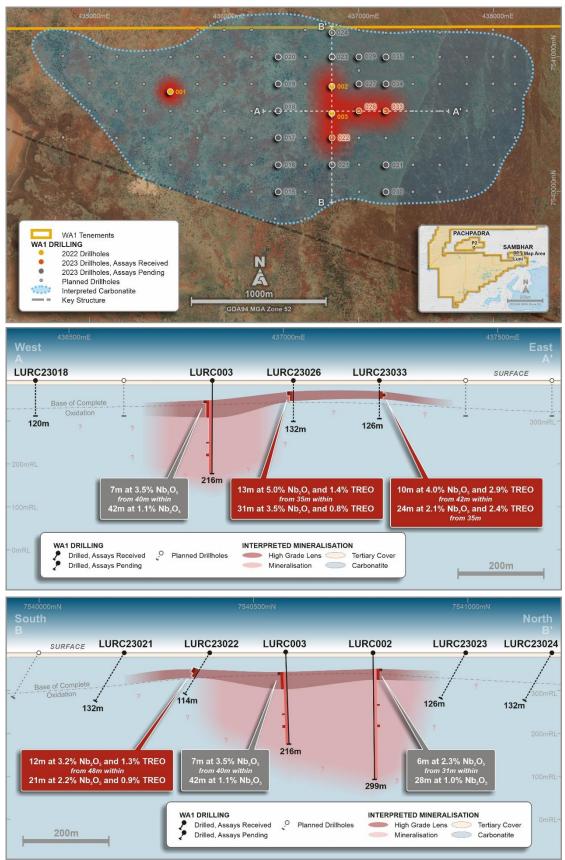
Diamond drilling set to commence in June, RC drilling is ongoing

WA1 Resources Ltd (ASX: WA1) (**WA1** or the **Company**) is pleased to announce the first assay results from the 2023 drilling program at the 100% owned West Arunta Project in Western Australia.

Assay results within this release are from limited intervals within the first three reverse circulation (**RC**) holes completed at the Luni carbonatite in late March. Further samples, including the remaining un-assayed intervals in these holes, have since been submitted for analysis.







Figures 1-3: Top – Luni carbonatite plan view and drill collar locations, Middle – Simplified long-section looking north, Bottom – Simplified cross-section looking west



#### WAl's Managing Director, Paul Savich, commented:

"Drilling at Luni has quickly consolidated a shallow and extremely high-grade mineralised envelope by stepping out on a broad 200m spacing. Confirmed mineralisation now spans 400m north-south, 400m east-west and is open in all directions.

"Over 90% of the global supply of niobium is produced from only two operations in Brazil. A third mine in Canada comprises the final existing niobium mine globally. All three operations produce a ferroniobium end-product (~65% Nb) for direct application as a steel alloy with no further downstream processing required. In addition, niobium has exciting developing applications in the fast-growing green energy space.

"The United States and European Union account for 40% of global niobium demand and have identified niobium as their second and fourth most critical raw material, respectively.

"Luni continues to demonstrate the potential to host a globally significant deposit of one of the world's most critical raw materials. Our reconnaissance drilling, along with detailed planning for other activities including resource definition and metallurgical test work, are ongoing with further assays due in the coming weeks."

#### **Technical Discussion - Luni Carbonatite (Sambhar Prospect Area)**

The results provided in this announcement relate to assays received from the first three RC holes drilled at the Luni carbonatite in 2023. All holes were drilled towards the south on an azimuth of 180 degrees and a dip of -60 degrees. This initial phase of reconnaissance drilling is currently being completed on a broad drill spacing of 200m.

Only select samples from the first three holes were able to be expedited to Perth. Accordingly, the results reported comprise of key intervals from these three drillholes. However, there is potential for mineralisation within the three drill holes to continue outside of these assayed intervals.

Table 1: Luni assav results within this release

Hole ID	Towart	lı	Hole Depth			
поје ј	Target	From	From To # of Samples		Metres	
LURC23-022	Luni	44	69	25	114	
LURC23-026	Luni	35	66	31	132	
LURC23-033	Luni	35	59	24	126	

For full drillhole details refer to Table 2

In all three drillholes, the geological profile consists of shallow (~16m thick) tertiary cover, before intersecting strongly weathered carbonatite. The weathering profile generally changes into more competent material at ~40m. In the holes reported the weathering horizon is interpreted to be sub-horizontal.

The upper extent of the carbonatite is intensely weathered and typically consists of a clay zone depleted in mineralisation (~8m to 25m thick). This zone transitions sharply into a second moderate to highly weathered zone significantly enriched in niobium, TREO, tantalum and phosphorus, generally representing the best mineralised grades intersected in the drilling to date. This enriched zone transitions into a less weathered and more



competent unit. Within this unit it is possible to start observing compositional and mineralogical zonation of the primary carbonatite.

Drilling in 2023 has focussed on testing the shallow enriched horizon and the drill rig has produced high-quality samples.

The geology and mineralisation is observed as being laterally continuous and typically associated with either limonite altered clays which transition into broad zones of manganiferous, or light grey clays followed by hematite and manganese alteration.

For full details of key intersections refer to the highlights, annotated images and Table 3. Orientation of the enriched, oxide mineralisation (true width) is currently interpreted to be sub-horizontal, coincidentally with the flat lying transition between intensely and moderately weathered carbonatite.

#### **West Arunta Project – Upcoming Exploration Activity**

Drilling is planned to continue on a regular 200m-spaced grid to further delineate any zonation and lateral extent of the shallow mineralisation. Holes are also planned outside the Luni geophysical target to assess potential for mineralisation to extend beyond the core of the interpreted carbonatite complex.

The Company has committed to the mobilisation of a diamond drill rig which it is anticipated will commence drilling in June. The diamond exploration program will target mineralised horizons to acquire material for metallurgical test work and provide valuable structural and stratigraphic data to aid understanding of mineralisation controls. It is currently planned that the Luni Deeps anomaly (refer to WAI's ASX announcement on 7 March 2023) will be drilled as part of the diamond exploration program.

Work on the Luni geological and mineralisation model is advancing as data becomes available and is refining interpretations and drill targeting, particularly for the upcoming diamond drilling campaign.

Further drill samples continue to be batch delivered to ALS Laboratories in Perth and will be reported when assessed and available. The Company also anticipates it will deliver a maiden resource estimate for Luni in the second half of 2023.

Whilst the initial exploration focus is at Luni, the Company also currently intends to undertake follow up drilling in the second half of 2023 within the Pachpadra prospect area which contains the P2 carbonatite discovery and the P3 target.

#### **Niobium Overview**

Niobium (Nb) is a metal with unique properties that make it essential as the world transitions to a low-carbon economy.

Accordingly, niobium is on the critical mineral lists of a significant number of developed and emerging nations including Australia, the United States (second highest supply risk²), Japan, and the European Union (forth highest risk mineral³) primarily due to concentration of supply from Brazil which currently produces more than 90% of global primary supply.

Ferroniobium (~65% Nb) is the primary saleable form of niobium and accounts for approximately 90% of established niobium sales globally. Standard ferroniobium sells for

<sup>3.</sup> Critical Raw Materials for Strategic Technologies and Sectors in the EU retrieved from

 $<sup>&</sup>lt; https://rmis.jrc.ec.europa.eu/uploads/CRMs\_for\_Strategic\_Technologies\_and\_Sectors\_in\_the\_EU\_2020.pdf > on 26 April 2023 and Sectors\_in\_the\_EU\_2020.pdf > on 26 April 2020.pdf > o$ 



approximately ~A\$45,000/t<sup>4</sup> and is primarily used as a micro-alloy in steelmaking, providing significant improvements in strength, corrosion resistance and heat resistance on the alloyed steel. These properties make ferroniobium essential for significant construction projects, automotive applications, wind turbines and oil and gas pipelines and storage.

Examples of niobium's real-world applications include the Oresund bridge between Denmark and Sweden, which used 82,000 tonnes of high strength steel containing 0.02% Nb, resulting in a saving of 15,000 tonnes in weight and \$25m in construction costs<sup>5</sup>. Similarly, approximately 300g of niobium can reduce the weight of steel in a mid-size car by 200kg increasing fuel efficiency by 5%<sup>6</sup>.

Along with its traditional use as a steel additive, niobium has shown significant promise in emerging battery technologies. The addition of niobium, primarily to the anode of Lithium-Ion batteries, has been demonstrated to reduce charging times significantly and increase the stability of batteries, resulting in a battery that can withstand up to 20,000 charge cycles and charge from 0% to 80% state of charge in as little as 6 minutes<sup>7</sup>.

#### **Outline of Global Niobium Supply & Demand**

There are currently three primary niobium producers globally, all producing from resources contained within carbonatite intrusions:

- CBMM, Araxa, Brazil (>80% of global production)
- China Molybdenum Co., Catalao, Brazil (10% of global production); and
- Magris Resources Inc., **Niobec, Canada** (8% of global production).

Whilst global supply is concentrated in Brazil (90% of global production), global demand for niobium products is far less concentrated. There are many end users and a growing number of applications.

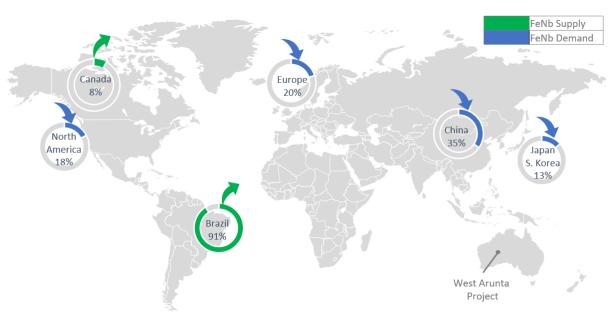


Figure 4: Major suppliers and consumers of global niobium

Source: Adapted from CBMM data

<sup>7.</sup> https://www.batterydesign.net/niobium-in-batteries/ accessed on 26 April 2023

<sup>8.</sup> https://www.visualcapitalist.com/visualizing-50-years-of-global-steel-production/ retrieved on 26 April 2023



The predominant application for niobium as a micro-alloying element is in high strength, low alloy steel (HSLA) applications such as Oil and Gas infrastructure, Automotive applications and premium stainless-steel products.

Steel producers in Europe, North America, Japan and South Korea, which together account for approximately 25% of global steel production, utilise far greater amounts of niobium relative to overall production as these markets tend to focus more on high margin, premium steel products.

In comparison, China produces approximately 57% of global steel and accounts for only 35% of global niobium consumption, due to the higher production of mild steel products that don't require the addition of micro alloys.

#### West Arunta Project - Overview (100% owned)

The West Arunta Project is located approximately 490km south of Halls Creek in WA. It comprises the **Pachpadra (containing the P2 carbonatite discovery)**, **Sambhar (containing the Luni carbonatite discovery)** and **Urmia prospect areas**, which are contained within a granted Exploration Licence.

Following comprehensive geophysical surveying, WA1 completed a maiden exploration drill program in August 2022. The program tested three initial targets and successfully identified two as mineralised carbonatites, being the Luni and P2 targets which both contained high grade niobium, elevated TREO, tantalum and phosphorus drill intercepts.

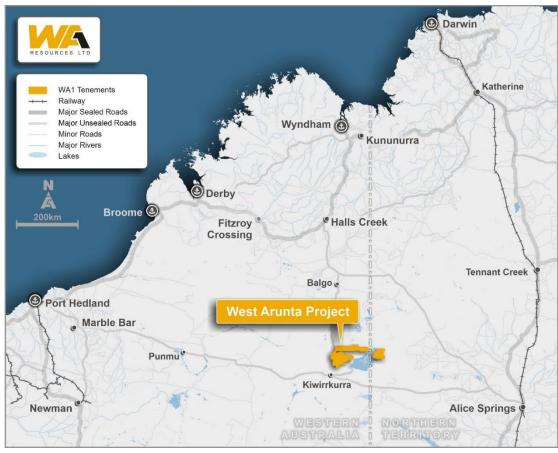


Figure 5: Location of the West Arunta Project



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Authorised for market release by the Board of WA1.

Table 2: Luni RC Collar Locations for 2023 drill holes completed to date

Hole ID	Target	Easting	Northing	RL	Dip	Azimuth	Depth
				(m)	(Degrees)	(Degrees)	(m)
LURC23015	Luni	436402	7539998	385	-60	180	120
LURC23016	Luni	436402	7540198	385	-60	180	120
LURC23017	Luni	436402	7540398	385	-60	180	126
LURC23018	Luni	436402	7540598	385	-60	180	120
LURC23019	Luni	436402	7540798	385	-60	180	126
LURC23020	Luni	436402	7540998	385	-60	180	150
LURC23021	Luni	436802	7540198	385	-60	180	132
LURC23022	Luni	436802	7540398	385	-60	180	114
LURC23023	Luni	436802	7540998	385	-60	180	126
LURC23024	Luni	436802	7541198	385	-60	180	132
LURC23026	Luni	437002	7540598	385	-60	180	132
LURC23027	Luni	437002	7540798	385	-60	180	138
LURC23029	Luni	437002	7540998	385	-60	180	150
LURC23030	Luni	437202	7539998	385	-60	180	98
LURC23031	Luni	437202	7540198	385	-60	180	120
LURC23033	Luni	437202	7540598	385	-60	180	126
LURC23034	Luni	437202	7540798	385	-60	180	144
LURC23035	Luni	437202	7540998	385	-60	180	120



**Table 3 - RC Drilling Results - Significant Intersections** 

Hole ID		From (m)	To (m)	Interval (m)	Nb <sub>2</sub> O <sub>5</sub> (%)	TREO (%)	Nd+Pr (ppm)	NdPr:TREO (%)	<b>Sc₂O₃</b> (ppm)	<b>Ta₂O₅</b> (ppm)	<b>SrO</b> (%)	Th (ppm)	<b>U</b> (ppm)	P <sub>2</sub> O <sub>5</sub> (%)	<b>TiO<sub>2</sub></b> (%)
LURC23022		47	69	21	2.20	0.90	2,105	23	28	160	0.88	61	108	12.42	1.74
LURC23022	incl	48	61	12	3.21	1.30	2,904	22	42	176	1.28	76	156	16.71	2.04
1110027026		35	66	31	3.45	0.80	1,295	17	162	31	0.48	69	58	6.20	0.57
LURC23026	incl	35	48	13	5.00	1.40	2,328	17	189	17	0.71	96	77	10.43	0.84
LURC23033		35	59	24	2.12	2.40	3,739	16	151	89	0.89	99	182	8.08	1.58
LURC23033	incl	42	52	10	4.03	2.90	4,563	16	243	795	1.44	128	350	9.32	1.74

Note: 1. Results not displayed above are considered to contain no significant anomalism

Competent Person Statement: The information in this announcement that relates to Exploration Results is based on information compiled by Ms. Stephanie Wray who is a Member of the Australian Institute of Geoscientists. Ms. Wray is a full-time employee of WAI Resources Ltd and has sufficient experience which is relevant to the style of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Ms. Wray consents to the inclusion in the announcement of the matters based on her information in the form and context in which it appears.

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<sup>2. &#</sup>x27;TREO' is an abbreviation of Total Rare Earth Oxides, representing a combined group of 17 elements (La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y, Sc)

#### **ASX RELEASE**



#### **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.

WAI's objective is to discover a Tier I deposit in Western Australia's under explored 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 "forward-looking certain 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 belief or expressed in good faith and believed to have a reasonable For a more detailed basis. 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 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.





# JORC Code, 2012 Edition – Table 1

# Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<ul> <li>All geological information referred to in this ASX Announcement was derived from a reverse circulation (RC) drill program.</li> <li>From every metre drilled a 2-3kg sample (split) was sampled into a calico bag via the rig mounted cone splitter. Samples submitted to the laboratory were determined by the rig geologist.</li> <li>Every metre interval was analysed with an Evident Vanta handheld XRF to identify zones of interest. These zones were despatched for priority analysis.</li> <li>All samples were submitted to ALS Laboratories in Perth for niobium and TREO analyses via Lithium Borate Fusion (ME-</li> </ul>
5 'W' / / '	MS81D) with overlimit determination via ALS method ME-XRF30.
Drilling techniques  Drill sample recovery	<ul> <li>RC drilling was completed at all holes with a diameter of 146mm.</li> <li>Sample recoveries are visually estimated for each metre.</li> </ul>
	<ul> <li>The sample cyclone was routinely cleaned at the end of each 6m rod and when deemed necessary.</li> <li>No relationship has been determined between sample recovery and the mineralisation returned.</li> <li>Samples were dry and recovery was generally high through significant intervals reported.</li> <li>Damp sample was noted in the broader intercepts for LURC23022, LURC23026 and LURC23033. In LURC23022 – the samples were intermittent dry or damp. Im of no sample return (54-55m) followed by one wet sample (55-56m).</li> </ul>
Logging	<ul> <li>The RC chips were logged for geology, alteration, and mineralisation by the Company's geological personnel. Drill logs were recorded digitally and have been verified.</li> <li>Logging of drill chips is qualitative and based on the presentation of representative chips retained for all 1m sample intervals in the chip trays.</li> <li>The metre intervals were analysed on the drill pad by a pXRF and magnetic susceptibility meter to assist with logging and the identification of possible mineralisation.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>RC samples were collected from the drill rig splitter into calico bags.</li> <li>In all holes the 1m samples within the tertiary cover (~20m) were composited into 4m intervals from spoil piles using a scoop by the site geologist.</li> <li>Single metre samples were collected and assayed from approx. 20m or as determined by the site geologist.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>All samples were submitted to ALS Laboratories in Perth for niobium and TREO analyses via Lithium Borate Fusion (ME-MS81D) with overlimit determination via ALS method ME-XRF30.</li> <li>Standard laboratory QAQC was undertaken and monitored by the laboratory and then by WAI geologists upon receipt of assay results.</li> <li>WAI utilises standards, duplicates and blanks in the analysis process.</li> <li>WAI inserted Certified Reference Materials (CRMs) in submissions to the laboratory. The CRM results have passed an internal QAQC review.</li> <li>The laboratory standards have been reviewed by the company and have passed internal ALS QAQC checks.</li> </ul>



Criteria	Commentary
Verification of sampling and assaying	<ul> <li>Analytical QC is monitored by the laboratory using standards and repeat assays.</li> <li>Mineralised intersections have been verified against the downhole geology.</li> <li>Logging and sampling was completed manually in the field and then recorded digitally.</li> <li>Significant intersections are inspected by senior WAlgeologists.</li> <li>No twinned holes have been drilled at this time.</li> <li>Drill hole collars were surveyed and recorded using a handheld</li> </ul>
points	<ul> <li>Offil role collars were surveyed and recorded dising a naridired GPS. Drill collars will be surveyed with DGPS at appropriate stages of the program.</li> <li>All co-ordinates are provided in the MGA94 UTM Zone 52 co-ordinate system with an estimated accuracy of +/-5m.</li> <li>Azimuth and dip of the drill hole was recorded after completion of the hole using a gyro. A reading was taken every 30m with an accuracy of +/-1 degree azimuth and +/-0.3 degree dip.</li> </ul>
Data spacing and distribution	<ul> <li>See drill hole table for hole position and details.</li> <li>Data spacing at this stage is not suitable for Mineral Resource Estimation.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>The orientation of mineralisation remains poorly constrained as this report relates to an additional three drill holes to the original three discovery holes.</li> <li>Due to the early-stage nature of the exploration, the orientation of the mineralisation remains uncertain, however the orientation of the oxide enriched mineralisation is suggested to be subhorizontal.</li> <li>See drill hole table for hole details and the text of this announcement for discussion regarding the orientation of holes.</li> <li>Drill holes were designed based on interpretation from modelled geophysical data and the discovery drillholes true and apparent widths have not been interpreted from the available data.</li> </ul>
Sample security	<ul> <li>Sample security is not considered a significant risk with WA1 staff present during collection.</li> <li>All geochemical samples were collected, bagged and sealed by WA1 staff, and delivered to ALS Laboratories in Perth.</li> <li>All samples were stored in a secure location.</li> </ul>
Audits or reviews	The program 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	<ul> <li>All work completed and reported in this ASX Announcement was completed on E80/5173 which is 100% owned by WA1 Resources Ltd.</li> <li>The Company also currently holds two further granted Exploration Licences and eight Exploration Licence Applications within the area of the West Arunta Project.</li> </ul>
Exploration done by other parties	<ul> <li>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.</li> <li>Significant previous explorers of the Project area include Beadell Resources and Meteoric Resources. Only one drill hole (RDD01) had been completed within the tenement area by Meteoric in 2009, and more recently a second hole proximate to the Project by Encounter Resources Ltd in 2020.</li> </ul>



Criteria	Commentary
	<ul> <li>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.</li> <li>Historical exploration reports are referenced within the WA1 Resources Ltd Prospectus dated 29 November 2021 which was released by ASX on 4 February 2022.</li> </ul>
Geology	<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>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).</li> </ul>
Drill hole Information	Refer to Table 2 for drill hole details.
Data aggregation	Significant intercepts are weight averaged by length.
methods Relationship between mineralisation widths and intercept lengths	<ul> <li>No metal equivalents have been reported.</li> <li>The true thickness of the mineralisation intersected in the drill hole is not currently able to be calculated due to limited data.</li> </ul>
Diagrams	Refer to figures provided within this ASX Announcement.
Balanced reporting	All meaningful information has been included in the body of the text.
Other substantive exploration data	<ul> <li>All material data and information has been included in the body of this ASX Announcement.</li> <li>No metallurgical assessments have been completed.</li> </ul>
Further work	<ul> <li>Further interpretation of drill data and assay results will be completed over the coming months, including detailed petrographic analysis, mineralogical analysis, and process testwork.</li> <li>Additional exploration drilling and analysis is ongoing.</li> </ul>