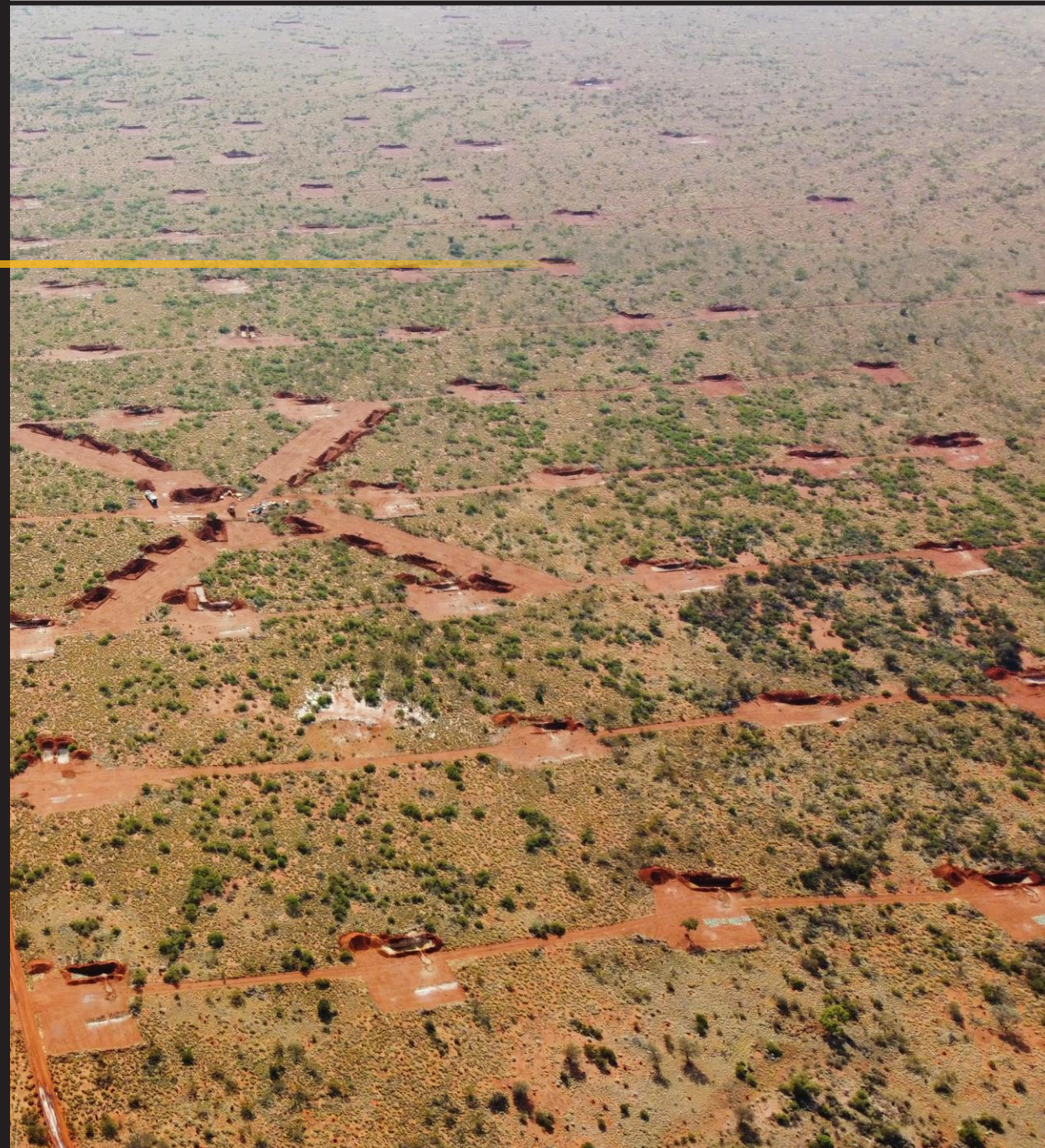




# WEST ARUNTA PROJECT

**NOOSA MINING CONFERENCE**

**NOVEMBER 2023**



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**Competent Person Statement:** The information in this presentation 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 WA1 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 presentation of the matters based on his information in the form and context in which it appears.

The information in this document that relates to mineralogical and metallurgical test work is based on, and fairly represents, information and supporting documentation reviewed by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Adamini is a full-time employee of Independent Metallurgical Operations Pty Ltd, who has been engaged by WA1 Resources Limited to provide metallurgical consulting services. Mr Adamini has approved and consented to the inclusion in this document of the matters based on his information in the form and context in which it appears

This presentation incorporates the results from exploration contained in WA1's ASX Announcements up until 15 November 2023. The Company confirms that it is not aware of any new information or data that materially affects the information included in these releases. All material assumptions and technical parameters underpinning these releases continues to apply and has not materially changed.

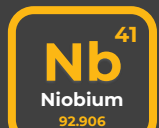
**Authorisation Statement** This presentation is authorised for market release by WA1's Board of Directors.

# GLOBALLY SIGNIFICANT NIOBIUM DISCOVERY IN AUSTRALIA

WA



High-grade niobium discoveries in a world-class mining jurisdiction



Advancing a critical mineral project in the concentrated, high-value, niobium market

West Arunta Project

WESTERN AUSTRALIA | NORTHERN TERRITORY

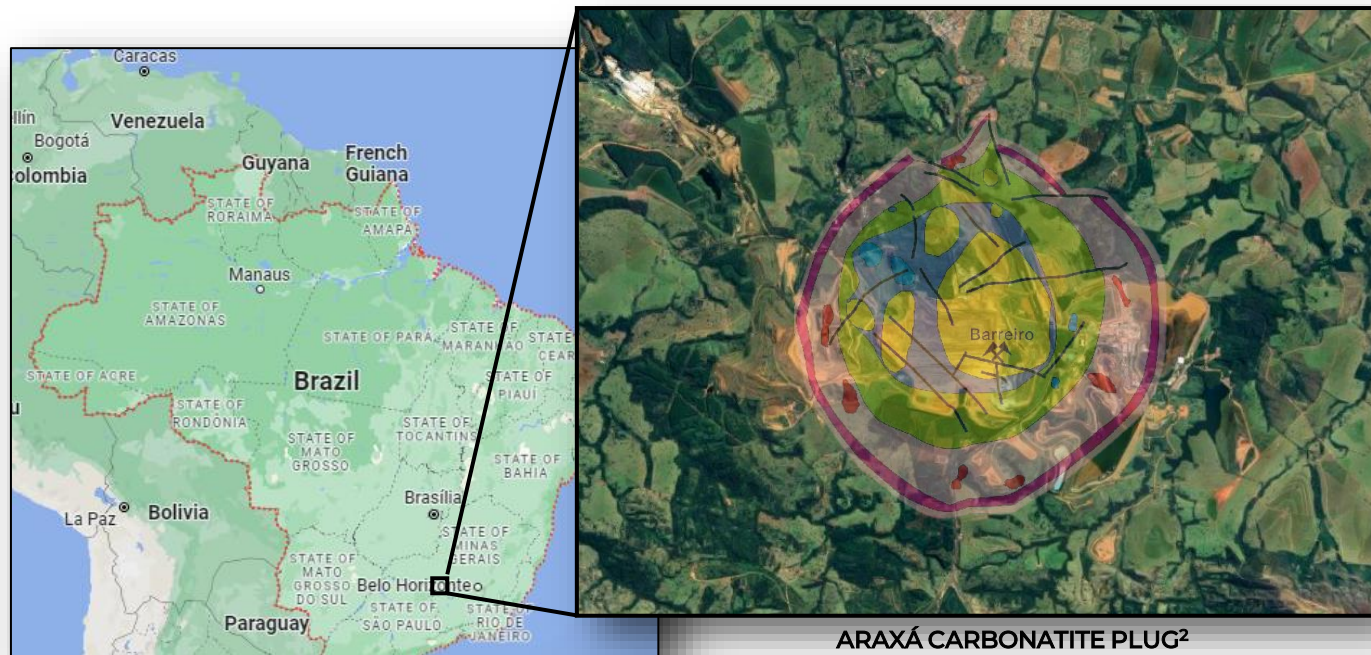
# BIRTH OF THE NIOBIUM INDUSTRY<sup>1</sup>



- The Araxá niobium deposit was discovered in 1953 and is located approximately 6km from the city of Araxá in the state of Minas Gerais, Brazil
- The carbonatite complex is circular in shape with an average grade of 2.5% Nb<sub>2</sub>O<sub>5</sub> within its shallow high-grade enriched blanket<sup>3</sup>
- In 1961 mining commenced and niobium concentrate was exported to Europe

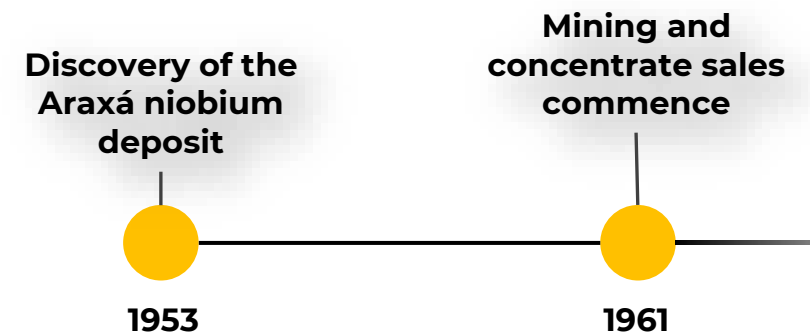


ARAXÁ OPEN PIT



LOCATION OF CBMM'S NIOBIUM MINE

ARAXÁ CARBONATITE PLUG<sup>2</sup>

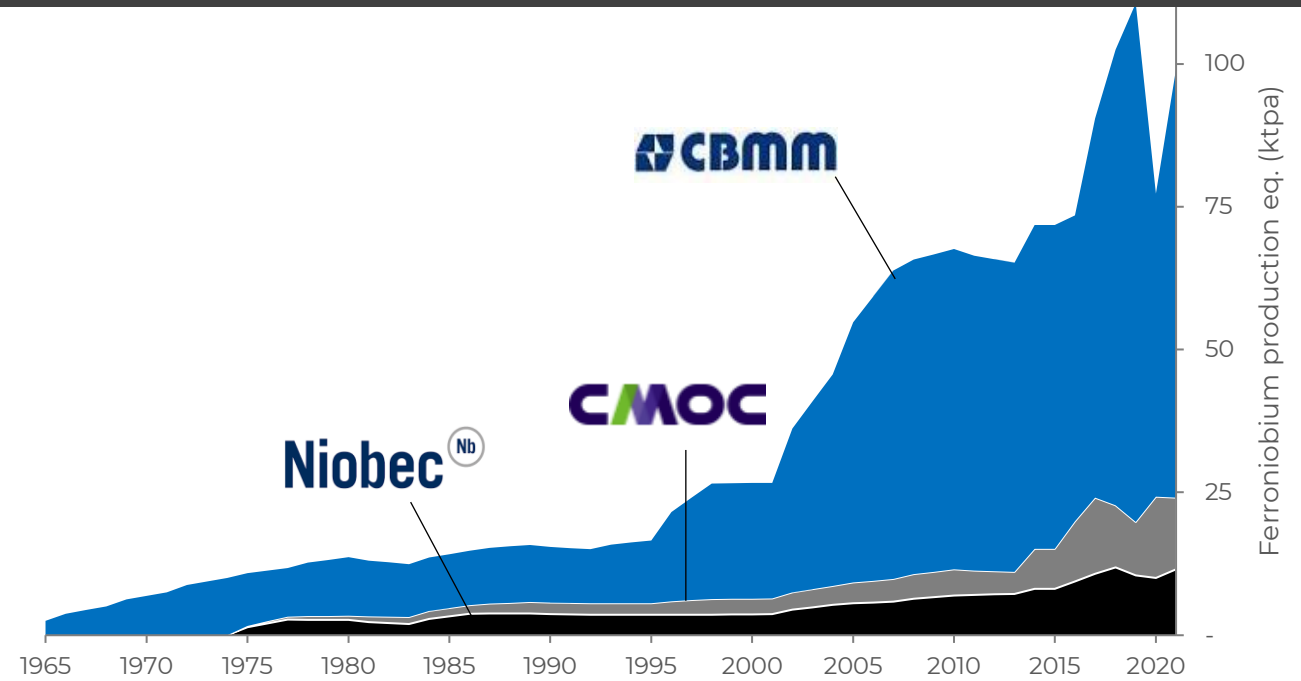
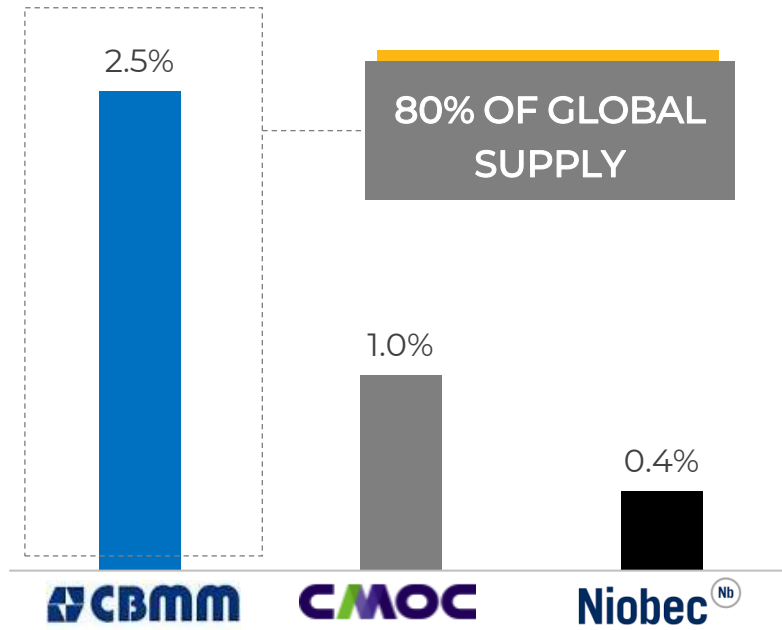


# GLOBAL NIOBIUM SUPPLY



GRADE OF KEY NIOBIUM PRODUCERS<sup>1</sup> (Nb<sub>2</sub>O<sub>5</sub>)

GLOBAL PRODUCTION<sup>2</sup>



Canadian mine St Honoré enters production

Brazilian mine Catalao enters production

30% stake of CBMM bought for US\$4bn<sup>3</sup>

High-grade niobium discovery

100ktpa critical mineral industry

1976

1977

2011

2022

2023

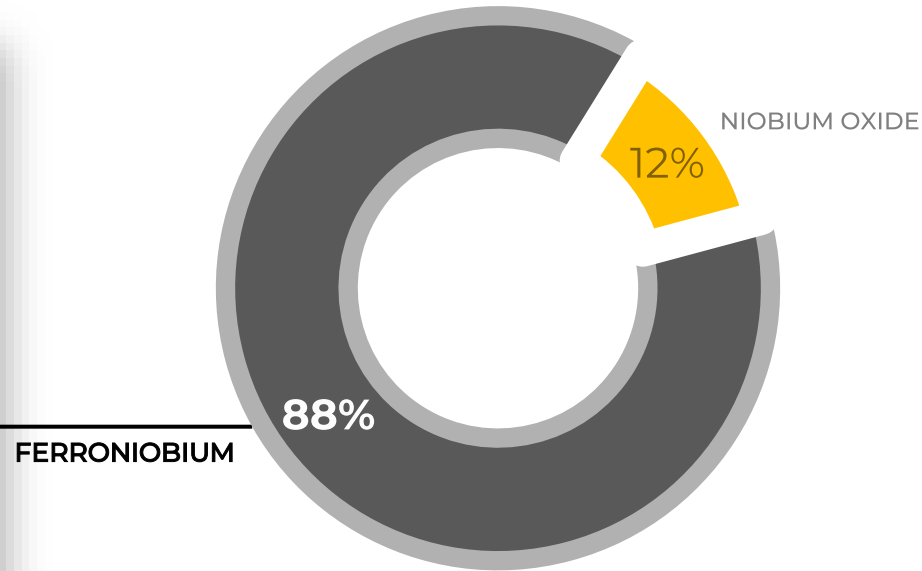
# FERRONIObIUM DEMAND



## KEY FERRONIObIUM MARKETS



## NIOBIUM DEMAND BY TYPE<sup>1</sup>



- Global ferroniobium production is approximately 88ktpa and **sells for ~US\$30,000/t<sup>1</sup>**
- Micro-alloyed steels using niobium increase the efficiency of the steel industry
- Strength improvements allow **lighter, more efficient steel components**
- Grain refinement decreases the cracking, with **only 0.02% niobium needed<sup>2</sup>**

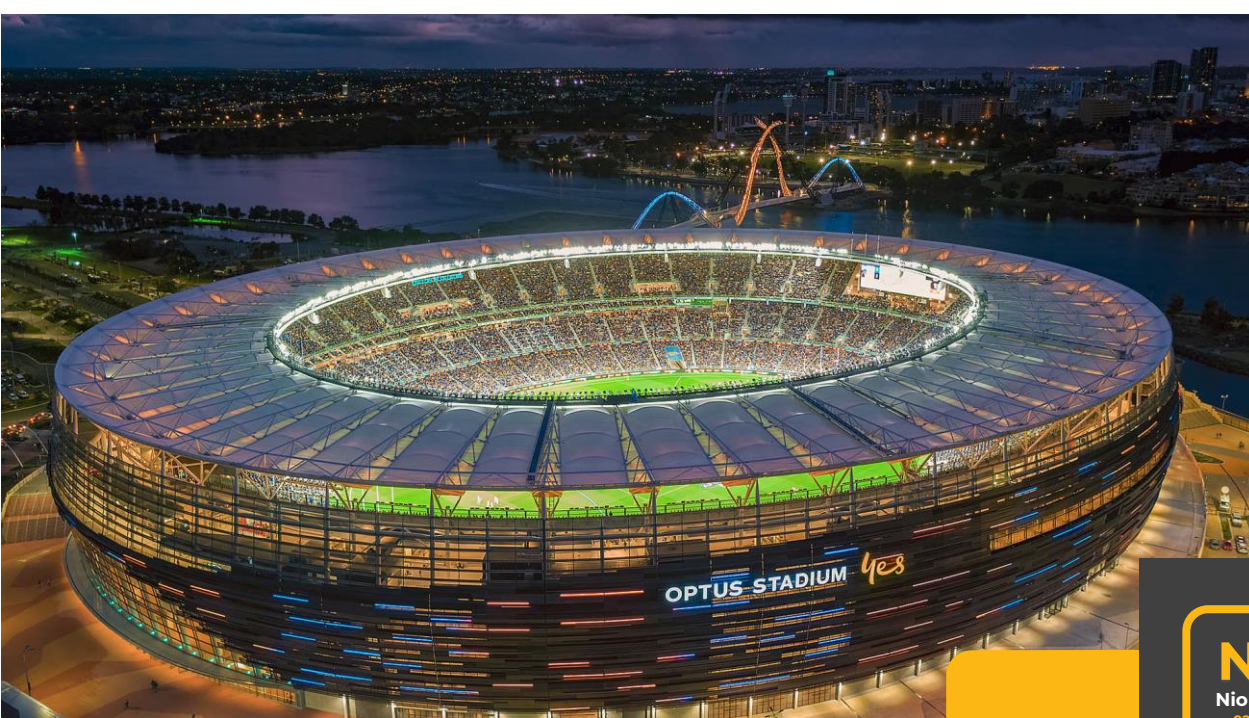
## DEMATERIAlISATIOn THROUGH OPTIMISeD STEEL PROPERTIES USING NIOBIUM



ADVANCED HIGH STRENGTH STEEL UTILISATION IN VOLVO SUV<sup>3</sup>



IMPROVED FLAT SHEET FORMABILITY WITH NIOBIUM<sup>4</sup>



The only  
replacement  
for steel is  
better steel

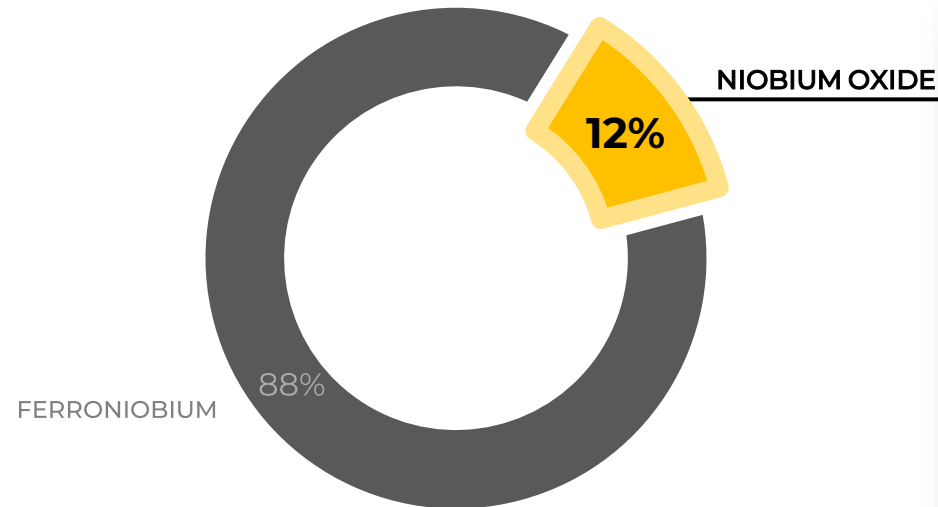


# NIOBIUM OXIDE DEMAND



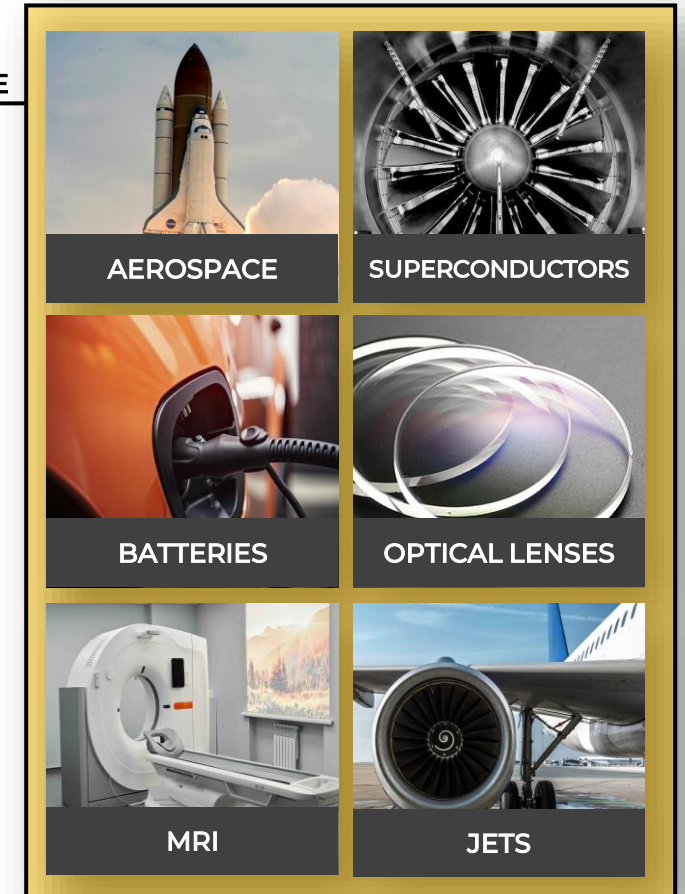
- **Niobium oxide is predominately produced through additional treatment applied to refined ferroniobium<sup>1</sup>**
- Key **established and high-growth markets** include<sup>2</sup>:
  - Superconductive magnets and capacitors
  - MRI equipment
  - Optical lenses
  - High temperature alloys used in aerospace and advanced applications
- Rapid developments in **battery technology** are expected to **significantly increase niobium oxide demand**

NIOBIUM DEMAND BY TYPE<sup>3</sup>



ADVANCEMENTS IN TECHNOLOGY IS ENABLED THROUGH THE USE OF NIOBIUM OXIDE

SPECIALTY NIOBIUM MARKETS



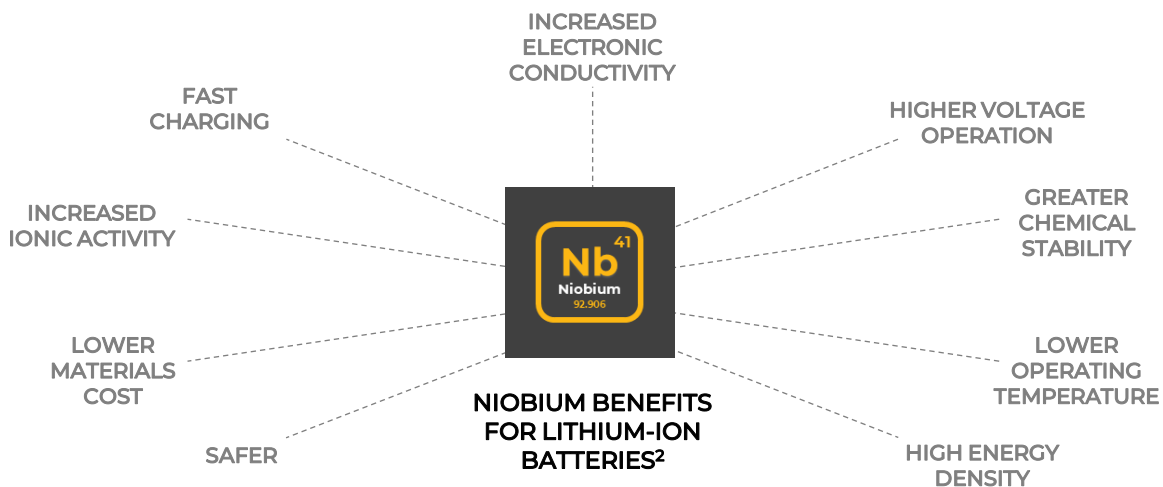


# NIOBIUM OXIDE DEMAND – BATTERIES



## NIOBIUM BATTERY TECHNOLOGY

- **10x longer life** than traditional batteries – **significantly reducing e-waste**<sup>1,2</sup>
- **Ultra-fast charging** – full charge in 6 minutes or less<sup>2</sup>
- Increased stability – up to **20,000 fast charge and discharge cycles without performance loss**<sup>2</sup>
- Smaller batteries – **lighter, more efficient vehicles**
- CBMM expects to increase their niobium oxide sales to **45ktpa by 2030**<sup>1</sup>



## NIOBIUM BATTERY LEADERS

**TOSHIBA**

**BATTERY STREAK®**  
CHARGE LIGHTNING FAST



nanoOne

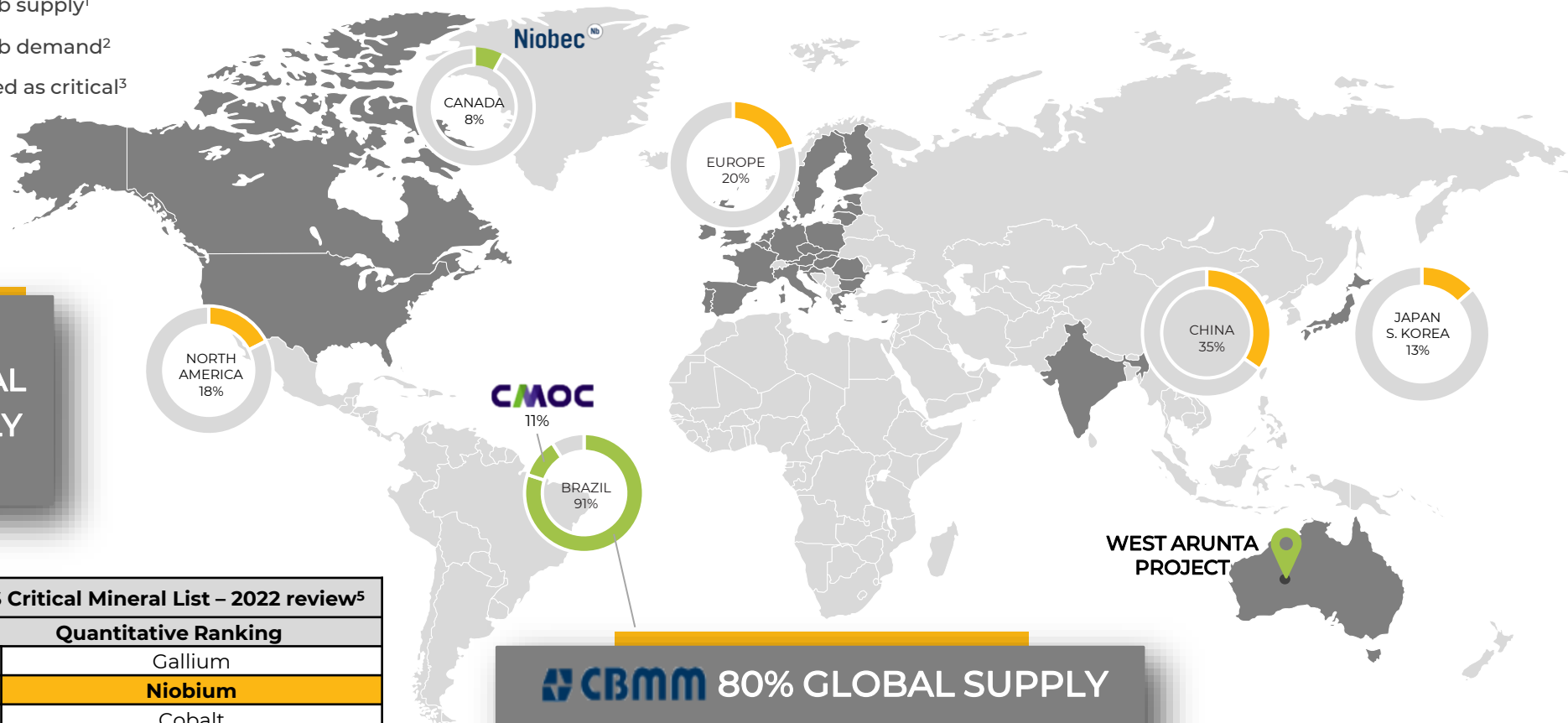


NYOBOLT PROTOTYPE EV

# NIOBIUM MARKET DISTRIBUTION



- FeNb supply<sup>1</sup>
- FeNb demand<sup>2</sup>
- Listed as critical<sup>3</sup>



**IDENTIFIED BY MANY COUNTRIES AS A CRITICAL MINERAL DUE TO SUPPLY CONCENTRATION**

Supply Risk		
1	HREE	5.1
<b>2</b>	<b>Niobium</b>	<b>4.4</b>
3	Magnesium	4.1
4	HREE Terbium	4.9
5	Phosphate Rock	1
6	Titanium Metal	1.6
7	PGM Ruthenium	3.8
8	HREE Lutetium	5.6
9	LREE Cerium	4
10	Silicon Metal	1.3

Quantitative Ranking	
1	Gallium
<b>2</b>	<b>Niobium</b>
3	Cobalt
4	Neodymium
5	Ruthenium
6	Rhodium
7	Dysprosium
8	Aluminium
9	Fluorspar
10	Platinum

**CBMM 80% GLOBAL SUPPLY**

**STRATEGIC OWNERSHIP TRANSACTIONS<sup>6</sup>**

JAPANESE KOREAN CONSORTIUM 15%  
US\$1.8B 2011 TRANSACTION

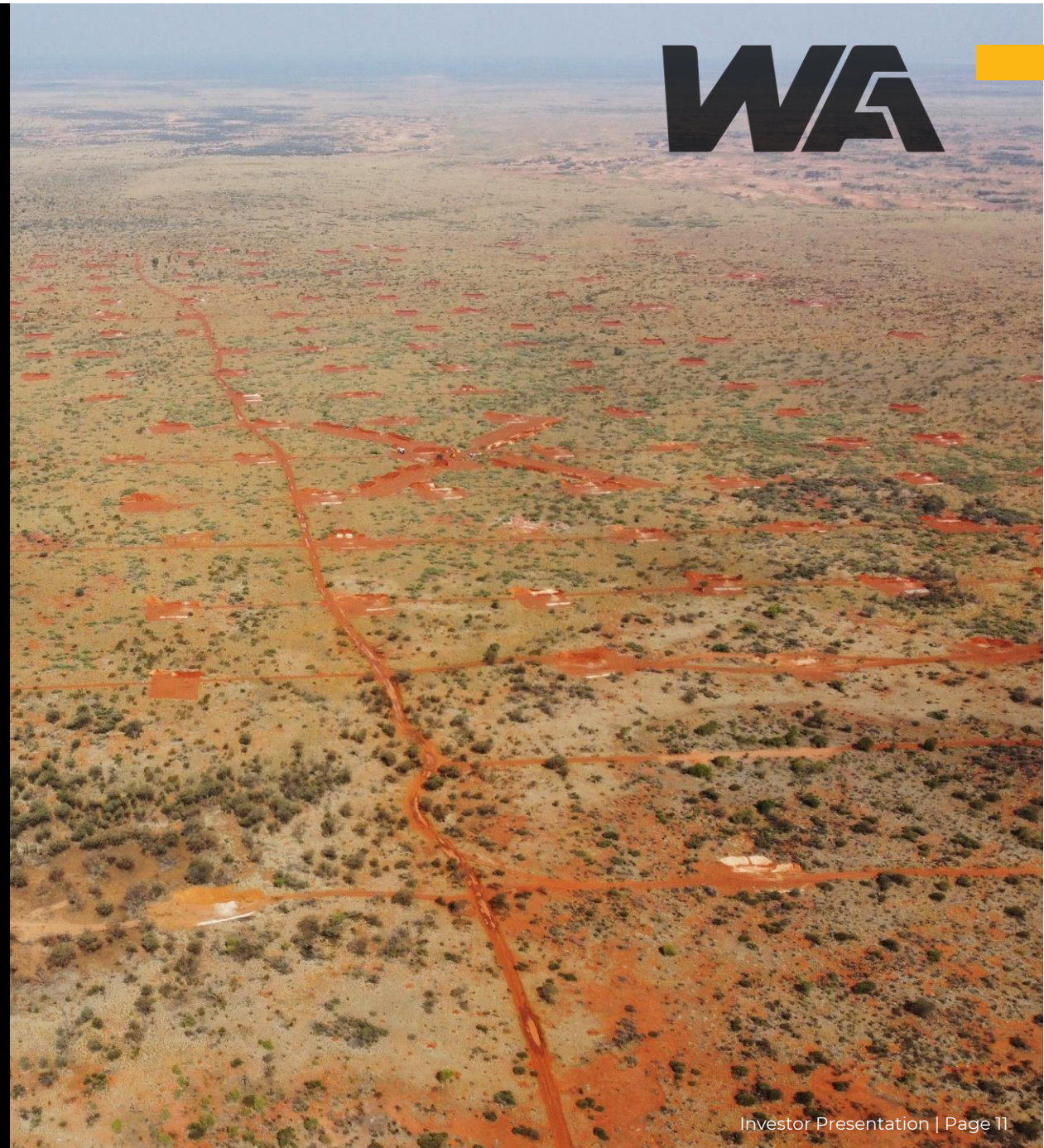
CHINESE CONSORTIUM 15%  
US\$1.95B 2011 TRANSACTION

**WEST ARUNTA PROJECT**



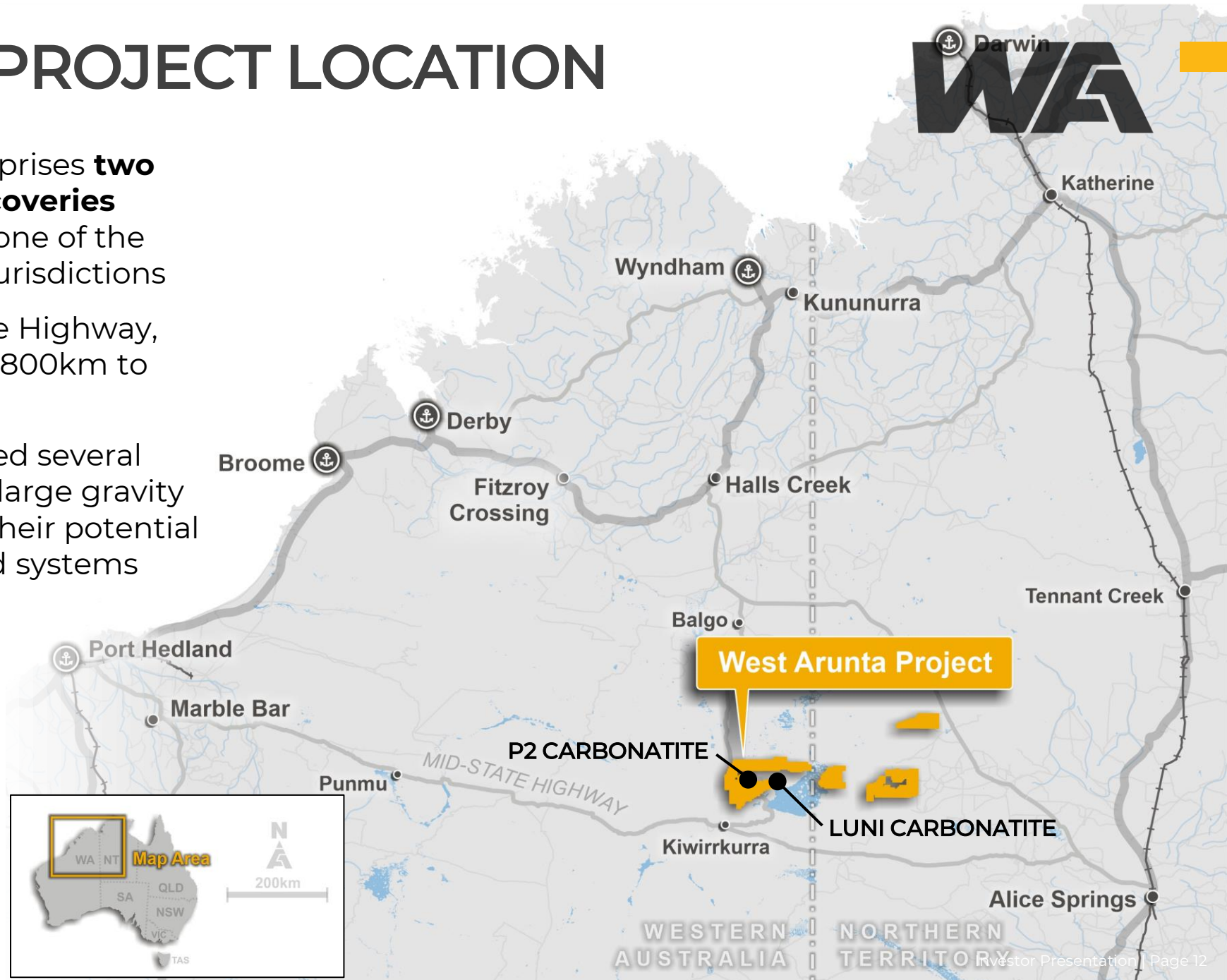
**Advancing a  
globally significant  
critical mineral  
discovery**

**WA**



# WEST ARUNTA PROJECT LOCATION

- The West Arunta Project comprises **two mineralised carbonatite discoveries** located in Western Australia, one of the world's pre-eminent mining jurisdictions
- Key access is via the Mid-State Highway, 1,300km to Port Hedland and 800km to Alice Springs
- The 2022 drill program followed several years of targeting and tested large gravity (+/- magnetic) anomalies for their potential to host significant mineralised systems
- Regional geological modelling and interpretation underpins expansion of tenure into the Northern Territory
- **Tenement package now spans over 6,400km<sup>2</sup>**

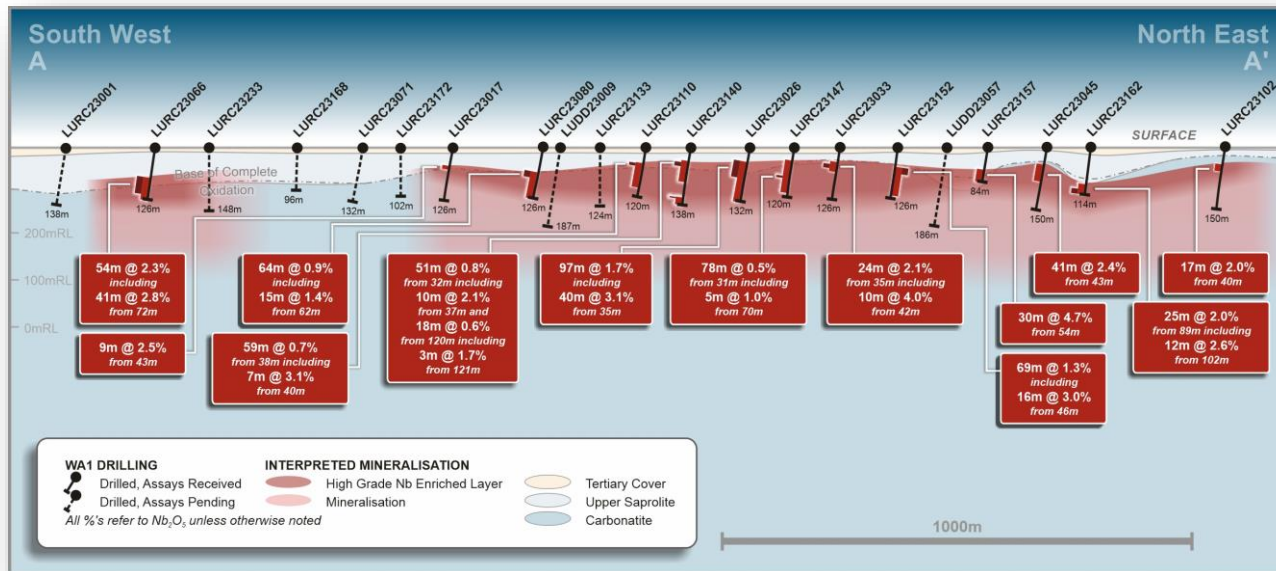
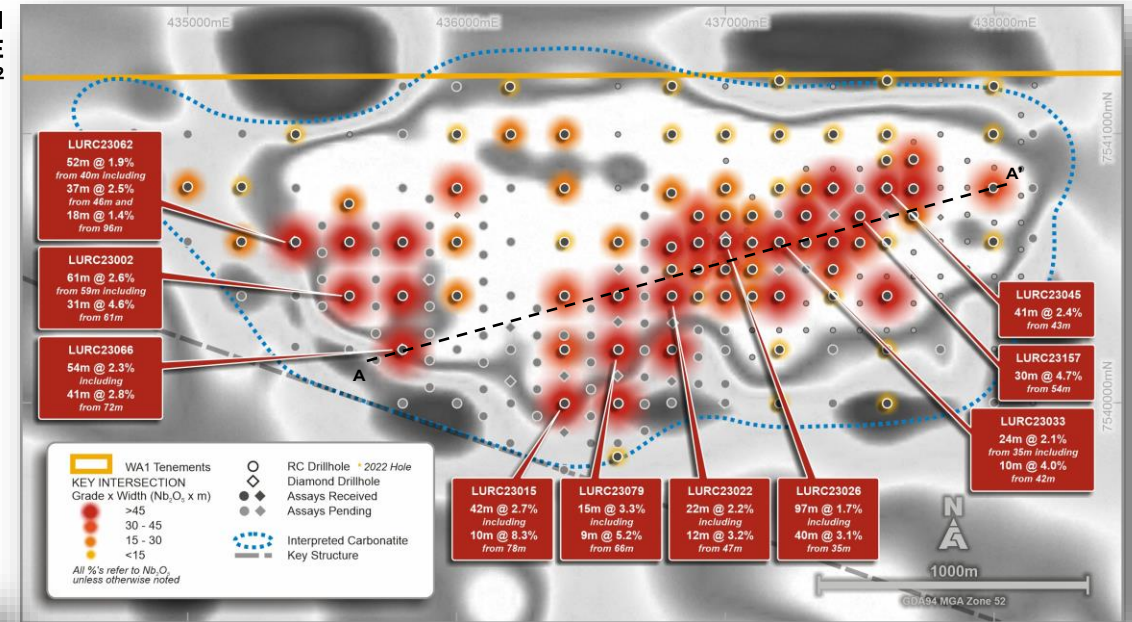


# A TIER-1 CARBONATITE COMPLEX



- The **Luni carbonatite extends** for a total of **3.5km wide and 1.5km long**
- The Luni carbonatite is characterised by a **discrete, very-high amplitude gravity anomaly** with a limited but coincident magnetic response
- Luni is also **located at the intersection of two interpreted regional structural features** and proximate to the Central Australian Suture

LUNI  
CARBONATITE  
PLAN VIEW<sup>2</sup>



- Broad spaced drilling has focused on defining a **high-grade niobium enriched mineralised horizon**
- Results released to date have confirmed a **shallow zone of high-grade mineralisation** with a northeast-southwest trend **extending for over 2km**

LUNI SIMPLIFIED  
CROSS SECTION<sup>1</sup>

Refer to appendices for full list of references

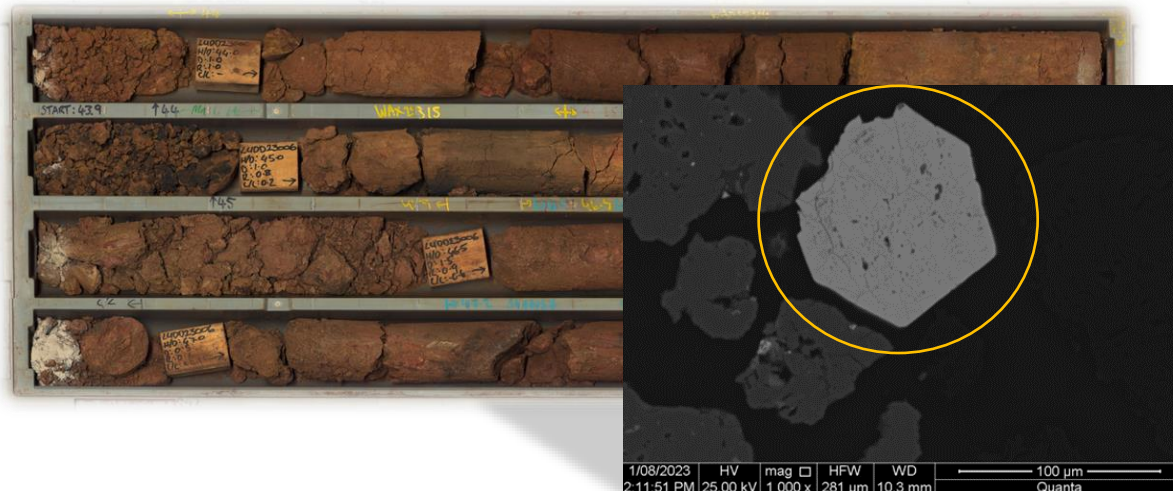
# MINERALOGY AND METALLURGY



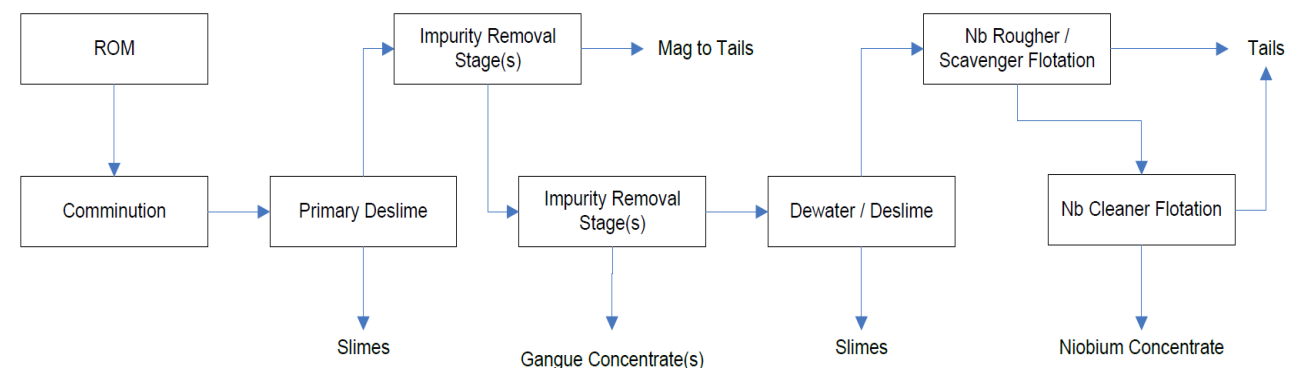
- Five composite samples have undergone detailed mineralogical assessment using QEMSCAN and XRD
- Dominant **high-purity, primary niobium bearing minerals** observed in the samples
- Strong liberation properties** observed with niobium minerals in a size range commonly amenable to flotation
- Preliminary **metallurgical amenability appears potentially favourable** using conventional processing techniques

	Niobium minerals	Niobium content	Liberation of niobium minerals	Next steps
<b>Preliminary mineralogy results</b>	Pyrochlore Columbite	~70% Nb <sub>2</sub> O <sub>5</sub> ~74% Nb <sub>2</sub> O <sub>5</sub>	>85% of -150 to +38um 'well-liberated' or 'high-grade middlings'	Completion of sighter beneficiation and flotation testwork using diamond core to commence in Q4-2023
<b>Implications</b>	Key minerals at existing global operations	High purity should assist with a quality end-product	Liberation should assist with concentration and recovery	

RESULTS FROM PRELIMINARY MINERALOGICAL CHARACTERISATION AND ASSESSMENT<sup>1</sup>



LUNI DRILL SAMPLE IMAGES – LUDD23-006 CORE (FROM 44-48M) WITH INSET OF SEM IMAGE FROM LURC23033 (COMPOSITE SAMPLE FROM 40-48M) OF LIBERATED PYROCHLORE CIRCLED IN YELLOW<sup>1</sup>



SIMPLIFIED, ADAPTED PROCESS BLOCK FLOW DIAGRAM FOR THE CATALÃO MINE (BEFORE REFINING TO A FERRONIBIUM OR NIOBIUM PENTOXIDE END-PRODUCT)<sup>2</sup>

# KEY PROJECT WORKSTREAMS INITIATED



## Drilling

Targeting a maiden Mineral Resource estimate in H1-2024



## Process Testwork

Mineralogical and metallurgical testwork underway



## Environmental

Baseline studies have commenced



## Transport Studies

Multiple road and rail transport corridors available



## Water

Regional sources with potential volume to support mining<sup>1</sup>



## Power Solution

Regional datasets show potential for a low-carbon power solution<sup>1</sup>



## Niobium Marketing

Niobium marketing advisor appointed with 20+ years experience at CBMM



## Local Engagement

Negotiation protocol signed with supportive local communities<sup>2</sup>



## Critical Mineral

Supportive political sentiment both domestically and internationally

# WAI'S ESG FOCUS



POSITIVE IMPACT ON THE  
COMMUNITIES WITHIN THE  
LANDS WE OPERATE



FUTURE FACING MINERAL  
EXPLORATION ENABLING  
DECARBONISATION



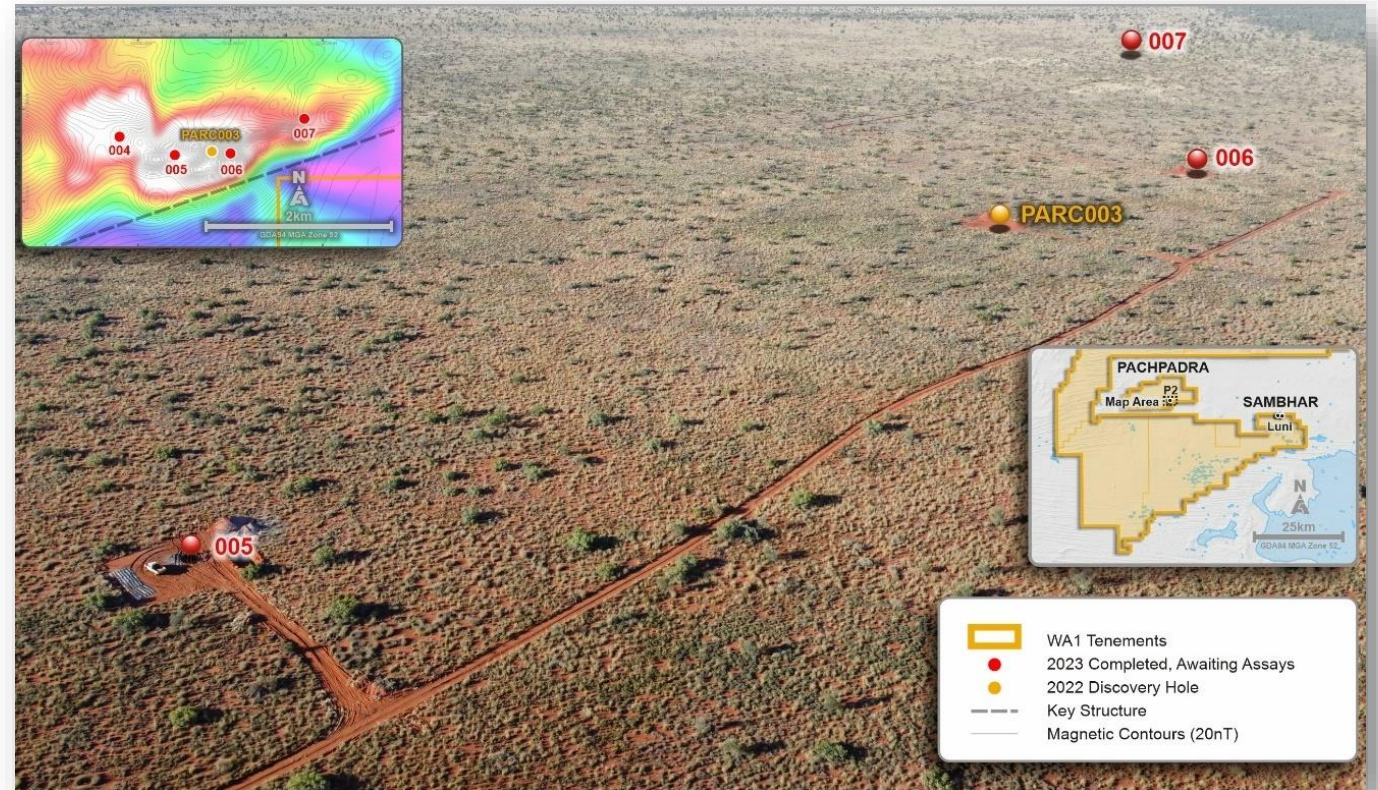
BUSINESS ETHICS AND  
CORPORATE GOVERNANCE



# P2 CARBONATITE DISCOVERY



- First drill hole (announced October 2022) at the P2 Target **discovered a mineralised carbonatite system**
- End of hole returned the highest-grade (1m @ 1.72% Nb<sub>2</sub>O<sub>5</sub>)<sup>1</sup> suggesting mineralisation may be **open and have depth potential**
- New geophysical data captured over P2 to further refine drill targeting
- A second reconnaissance four-hole RC drill program completed in July 2023 confirmed a **significant intrusive system over an area of approximately 2.5km x 1.0km**
- Assay results from the reconnaissance program expected in Q4-2023
- Planning is being finalised for a drilling program to define the grade and extent of mineralisation



AERIAL VIEW OF P2 DRILL PADS AT THE WEST ARUNTA PROJECT

1. Refer to WA1's ASX Announcement dated 2 August 2023 for full details.



**Key infrastructure  
established for  
efficient ongoing  
exploration and  
development  
activities**



# LEADERSHIP TEAM



## BOARD OF DIRECTORS

### **Gary Lethridge**, Chairperson

- Significant corporate experience from discovery to production
- Ex-Jubilee Mines executive (\$3.1b takeover by Xstrata)

### **Paul Savich**, Managing Director

- Diverse experience from project generation to FEED
- Previously at Metaliko/Echo (\$4m Bronzewing acquisition, \$300m takeover by Northern Star Resources)

### **Tom Lyons**, Executive Technical Director

- International experience advancing projects from exploration to advanced studies and permitting
- A founder of the West Arunta Project with 10 years of experience in the region

### **Rhys Bradley**, Director & Company Secretary

- Extensive capital markets experience and global investor relationships
- ESG and compliance professional currently CFO at Agrimin Ltd

## KEY CONSULTANTS



## SENIOR MANAGEMENT

### **Lucas Stanfield**, Project Manager

- Experienced mining engineer with more than two decades of experience in mine development and project management, specialising in mineral-rich carbonatites
- Previously Chief Development Officer at ASX listed Peak Resources and Chief Operating Officer at Mining Plus

### **Andrew Dunn**, Geology Manager

- Experience ranging from exploration to grassroots to brownfield exploration across a variety of commodities
- Previously Exploration Manager at ASX listed lithium explorer Essential Metals

### **Stephanie Wray**, Exploration Manager

- Planned and executed WAI's maiden drill program and has overseen the growth of WAI's geological capabilities to enable rapid project advancement
- Ex-Gold Fields with substantial resource definition experience

### **Lahiru Basnayaka**, Senior Metallurgist

- Metallurgical expert who has developed flotation schemes for pyrochlore and other mineral beneficiation
- Previously Project Metallurgist at Lynas Rare Earths and Globe Metals & Mining

### **Tom Hunter**, General Manager Corporate & Finance

- Chartered Accountant with 15+ years professional and corporate experience across a diverse industry base
- Extensive experience in company financing, corporate and commercial management

### **Gustavo Macedo**, Niobium Marketing Advisor

- Over 20 years' experience in the niobium industry, responsible for sales, marketing and market development
- Previously Managing Director of CBMM Europe, prior to this General Manager CBMM Asia

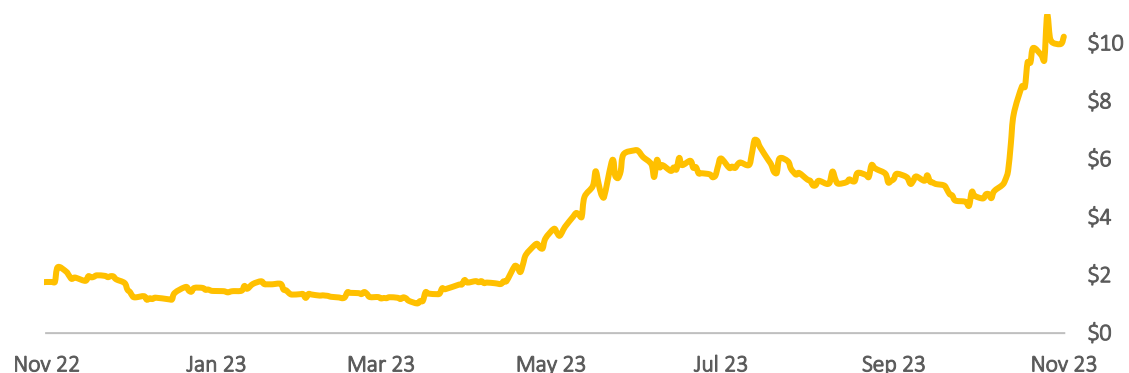
# CORPORATE SNAPSHOT



## CAPITAL STRUCTURE

SHARE PRICE (15 NOVEMBER 2023)	A\$9.81
SHARES ON ISSUE	56.7M
OPTIONS <sup>1</sup> AND PERFORMANCE RIGHTS	4.3M
MARKET CAPITALISATION (UNDILUTED)	A\$557M
CASH (PROFORMA) <sup>2</sup>	A\$25M
ENTERPRISE VALUE	A\$532M

## SHARE PRICE (ASX: WA1)



## REGISTER COMPOSITION



## BOARD OF DIRECTORS

**GARY LETHRIDGE**  
Non-Executive  
Chairperson

**PAUL SAVICH**  
Managing  
Director

**TOM LYONS**  
Executive  
Director

**RHYS BRADLEY**  
Non-Executive  
Director and Co. Sec

1. Exercise price of \$0.30 per share

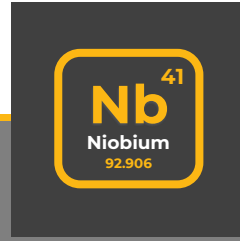
2. Amount includes cash balance at 30 September 2023 per quarterly cashflow statement and \$2.0m net Tranche 2 Placement proceeds approved at general meeting on 16 October 2023

# KEY TAKEAWAYS



## HIGH-GRADE MINERALISED CARBONATITE DISCOVERIES

- Luni is a globally significant, large-scale niobium discovery
- Shallow, high-grade zone of enrichment will drive project economics
- Meaningful exploration upside at Luni, P2 and untested regional targets



## CONCENTRATED HIGH-VALUE NIOBIUM MARKET

- High-value critical mineral and key carbon reduction enabler
- Concentrated supply, with 90% of production from two Brazilian producers
- New niobium supply needed to support future adoption in EV batteries



## GROWING TEAM OF PROJECT ADVANCEMENT EXPERTS

- Highly successful board and exploration team
- Metallurgy and marketing appointments support project development activities
- Ensures WA1 is best placed to maximise current and future discovery potential



## CONTINUOUS FLOW OF EXPLORATION RESULTS AND PROJECT NEWS

- Two drill rigs currently in operation at Luni
- Results from ~60% of the drill holes completed at Luni yet to be returned
- Maiden Mineral Resource estimate expected in the first half of 2024 to support development studies



**Advancing an essential  
critical mineral project for  
the concentrated, high-  
value niobium market**



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# References and Notes

## SLIDE 4

1. <https://cbmm.com/en/our-company/our-history>
2. Adaptation from Zhou, L., 'Simplified geological map of the alkaline-carbonatitic complex, Araxá'
3. Source: CBMM Sustainability Report 2018

## SLIDE 5

1. For full details refer to ASX announcement dated 28 August 2023
2. Internal company estimated production figures adapted from: USGS Annual Production Reports, IAMGOLD Corporation Technical Reports, Angloamerican Annual Reports, CMOC Annual Reports, IBRAM December 2012 Report, National Department of Mineral Production of Brazil, [https://www.researchgate.net/publication/276106866\\_The\\_Evolution\\_of\\_the\\_Niobium\\_Production\\_in\\_Brazil](https://www.researchgate.net/publication/276106866_The_Evolution_of_the_Niobium_Production_in_Brazil) viewed on 10/11/2023
3. Reuters article viewed at <https://www.reuters.com/article/us-cbmm-niobium-idUKTRE7811UB20110902> on 14/11/2023

## SLIDE 6

1. Mordor Intelligence, Global Niobium Market, 2022
2. Source: Niobium Tech presentation "Niobium solutions for a sustainable future" viewed at <https://niobium.tech/-/media/NiobiumTech/Images/Images---Pages--HUB/Embaixada-Toquio/PDFs/Niobium-solutions-for-a-sustainable-future---Niobium-technology-for-clean-energy.pdf> on 19/7/2023
3. ArcelorMittal available at [https://automotive.arcelormittal.com/news\\_and\\_stories/news/VolvoSafetyAward2019](https://automotive.arcelormittal.com/news_and_stories/news/VolvoSafetyAward2019)
4. Images sourced from <http://Niobium.Tech>

## SLIDE 8

1. Journal of Mining and Metallurgy viewed at <https://scindeks-clanci.ceon.rs/data/pdf/1450-5959/2022/1450-59592201001D.pdf> on 14/11/2023
2. Source: CBMM
3. Mordor Intelligence, Global Niobium Market, 2022

## SLIDE 9

1. 1,500 charge cycle life of Tesla Model 3 from <https://www.motortrend.com/features/how-long-does-a-tesla-battery-last/#:~:text=Tesla%20CEO%20Elon%20Musk%20also,miles%20for%20Long%20Range%20versions.>>
2. <https://www.batterydesign.net/niobium-in-batteries/>

## SLIDE 10

1. NioBay Metals, Investors – Presentations, retrieved from [http://niobaymetals.com/wp/wp-content/uploads/2021/05/2021-05\\_Niobay\\_Corporate\\_Presentation\\_.pdf](http://niobaymetals.com/wp/wp-content/uploads/2021/05/2021-05_Niobay_Corporate_Presentation_.pdf) on 25/10/2022
2. Source: CBMM
3. Australian Critical Mineral List 2023
4. EU Critical Mineral List, retrieved from <https://op.europa.eu/en/publication-detail/-/publication/57318397-fdd4-11ed-a05c-01aa75ed71a1> on 24/10/2023
5. US Critical Mineral List, retrieved from <https://apps.usgs.gov/minerals-information-archives/articles/usgs-critical-minerals-review-2021.pdf> on 24/10/2023
6. Reuters article viewed at <https://www.reuters.com/article/us-posco-cbmm-idINTRE7220EQ20110303> on 14/11/2023

## SLIDE 12

1. For full details refer to WA1 website and previous ASX announcements

## SLIDE 13

1. For full details refer to ASX announcement dated 8 November 2023
2. For full details refer to ASX announcements dated 16 November 2022, 6 February 2023, 1 May 2023, 5 & 29 June 2023, 21 & 28 August 2023, 26 September 2023, 26 October 2023, and 8 November 2023

## SLIDE 14

1. For full details refer to ASX announcement dated 5 June 2023
2. Simplified, Adaptation from 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)

## SLIDE 15

1. ASX: AMN released on 21 July 2020 and 17 November 2021
2. For full details refer to ASX announcement dated 19 October 2023