



# **EQ RESOURCES LIMITED**

Mt Carbine Bankable Feasibility Study

Webinar

December 2021



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# **Corporate Snapshot**



### **Value Proposition**

- Australia's only primary producer of tungsten
- High-grade resource (expandable)
- Multiple revenue streams
- Low-cost expansion
- Experienced Board & Leadership Team

	22 November 2021
Share Price	A\$ 0.057
Issued Shares	1,344m
Market Capitalization	A\$ 76,61m
Shareholding: - Top 20 holders	57.88%

### **Board & Leadership Team**

Oliver Kleinhempel	German	Non-executive Chairman
Stephen Layton	Australian	Non-executive Director
Zhui Pei Yeo	Singaporean	Non-executive Director
Richard Morrow	Australian	Non-executive Director
Kevin MacNeill	Canadian	Chief Executive Officer
Tony Bainbridge	Australian	Chief Geologist





- Australia's only primary producer of tungsten, a critical mineral
- Strong Economics of Open Pit & LGS- \$131M NPV<sub>8</sub> with 154% IRR
- **3** Genuine ESG vision and commitment

- BFS only focusses on the open pit only 14.4% of the resources (excl LGS)
- Scoping study for UG set for Q1 2022, expected to continue improvement of project economics
- Potential to expand Open Pit with further drilling to be completed ahead of mining

### **Our Values & Culture**



#### Act Safe, Feel Safe,

Act safe at work. Care and respect each other. Feel safe to be yourself.

#### **Embrace Difference**

Diversity of thinking, skills and background creates value and drives innovation

#### **Tread Lightly**

Embed resource efficiency to minimise environmental footprint and deliver positive societal impact.

#### Dig Deep

Go one better. Strive to continuously learn and improve. Challenge the status quo.

#### **Buddy Up**

Collaboration is key to realising shared value.

#### Lead with Integrity

Have courage to do the right thing. Be accountable.



### Stakeholder ESG Sentiments



### **ESG Organisational Performance**

Stakeholders were asked to rate whether the organisation was perceived to be leading or lagging across each of the 12 ESG themes. They were asked to do this for current state, as well as for where they felt the Organisation should be positioned / aiming to be.

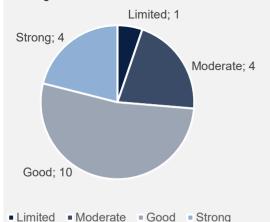
This information has been overlayed with the top 3 themes considered to be most material across the stakeholder groups.



#### **Organisational Performance Scale**

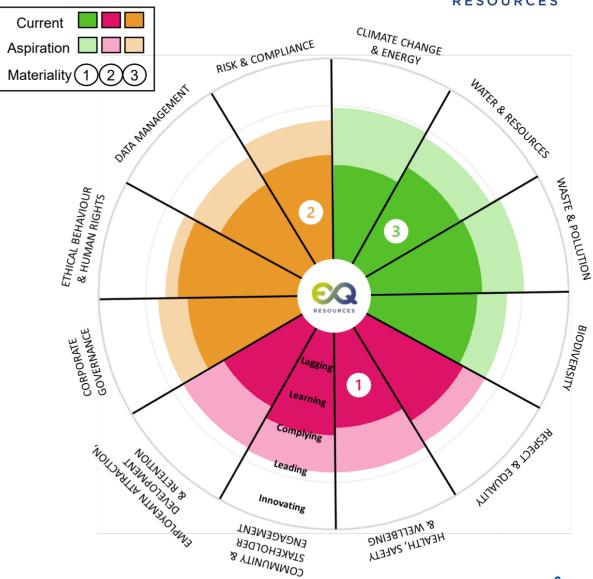
Lagging - Organisation is not investing in this category. Meets compliance obligation but nothing additional.

Leading - Substantial investment in this category. Significantly advanced compared to industry average



#### **Respondent Understanding of ESG**

When rating their own understanding of ESG, most stakeholders felt they had moderate to strong knowledge of what ESG is.



# Mt Carbine Open-cut & Modernisation Project Overview



Australia's only primary tungsten producer is increasing production

Located 130 km north of the city of Cairns in Far North **Queensland**, **Australia** 

Situated within the Far North Queensland critical mineral province

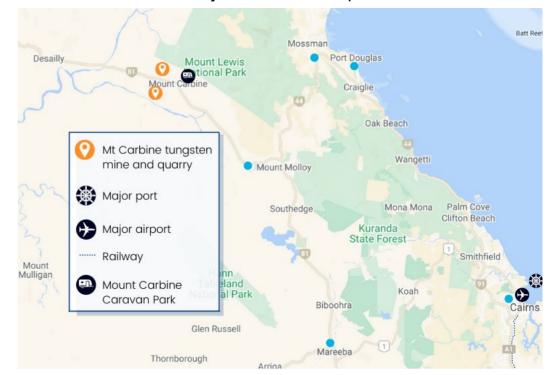
Operating tungsten mine and rock quarry resulting in no mine waste

**Established mine-to-ship logistics chain** to ensure the project remains scalable and reliable over its multi-decade life

Binding off-take agreement in place for tungsten product

Industry-leading BFS completed and currently advancing though final stages of permitting & project funding

#### **Project Location Map**



## 2,200tpa

#### **Avg Tungsten production**

To bring in line with large-scale tungsten producers

# 12 years

#### **Initial mine life**

LGS & Open-cut project with industrylow cash costs

### A\$131m

Pre-tax NPV<sub>8, real</sub>

Project value exceeds EQR's current market capitalisation

### **A\$21m**

#### **Capital cost**

Low capital intensity to provide rapid payback period of 2.2 years

## A\$155/mtu

#### Total cash cost (CIF)

Projected to be in the lowest cost quartile

## A\$430/mtu

#### **Long-term price forecast**

High product quality and strong critical mineral demand growth

37.15-14275-

# **154%**

#### Post-tax IRR

Outstanding returns for a low risk development asset

# 49% EBITDA margin

Substantial cash margins to support sustainable growth



### **Pre-tax Cashflow Generation – UG Potential**

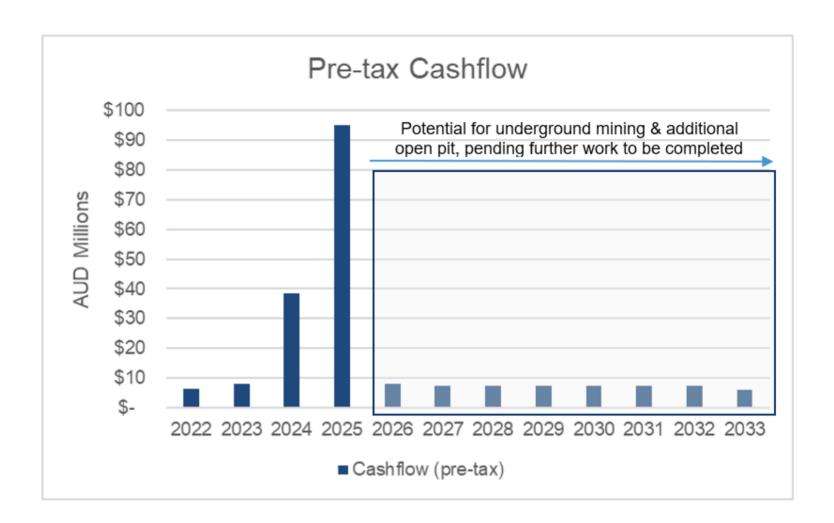


Open Pit currently defined is +/-15% of resource

Significant **underground potential** exists to drive economics for several more years

Scoping Study to be completed on UG resource potential to gain better understanding of economics and viability over and above internal work completed to date

**Site infrastructure** supports UG mining operation and capacities



# **Project Development Plan**



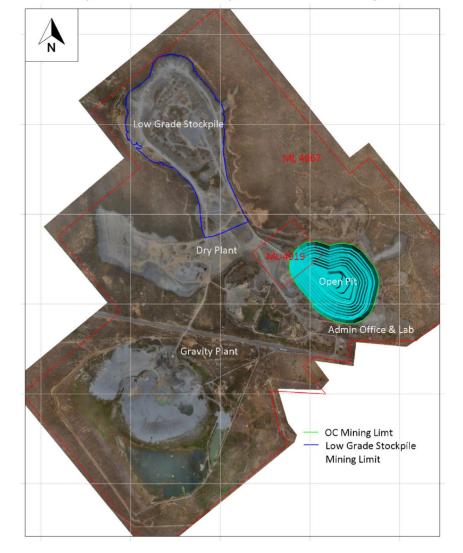
Development plan includes integration of open-cut and processing facility modernisation

**Phase 1** focuses on minimal capital expenditure, incremental improvements to increase the mine's productivity and profitability focusing solely on the mining and processing of the Low Grade Stockpile

**Phase 2** focuses on the commencement of open pit mining. The crushing and screening plant and processing plant will be upgraded to further reduce operating costs and improve the tungsten recovery from the open pit high grade ore

**Phase 3** (focus of future study) shall investigate commencement of underground mining activities at Mt Carbine to allow the continuation of mining once the open pit resource is exhausted.

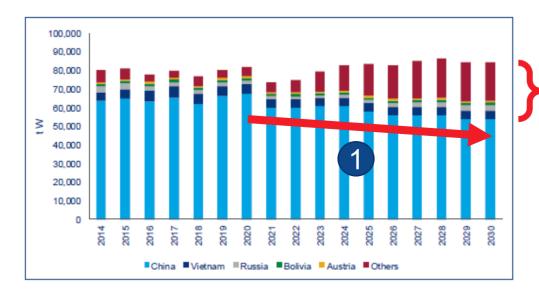
#### Simplified location plan for the Project

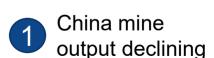


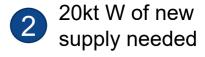
# **Market Analysis**

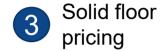
RESOURCES

- Unique properties, difficult to substitute
- Steady demand growth of 1.5% CAGR projected (2021-2030)
- High supply concentration (5 mines account for 23% of global output
- EQR investigating value-add product

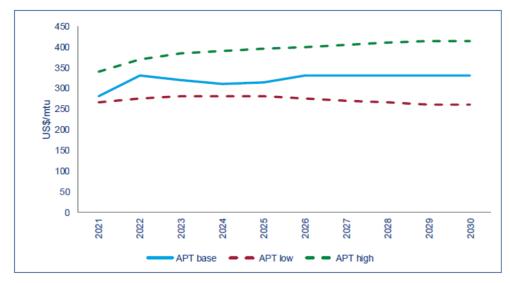




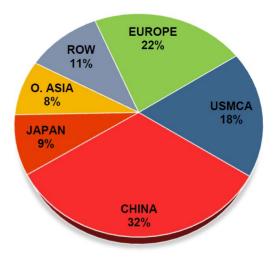






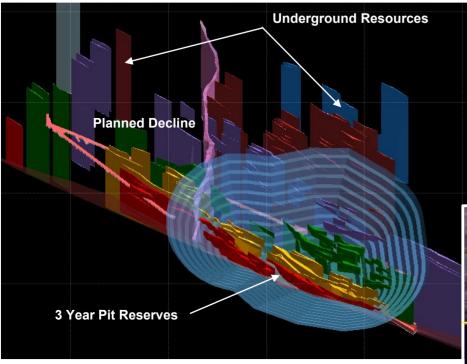


#### End Use by Region (2019)



# **Geology and Resources**





### **Perspective View showing**

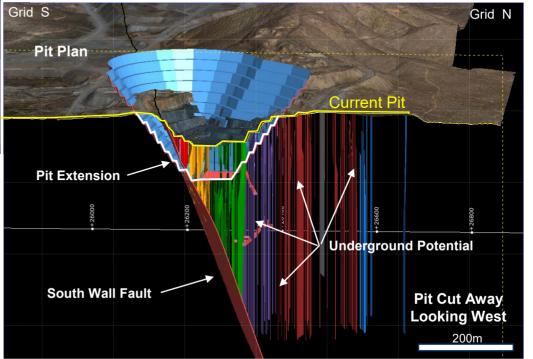
- Planned Open Cut Extension
- Color Coded Ore Zones in the pit
- Highlights additional resources outside planned pit, a lot of this ore will be accessed from existing decline

#### Phase 1 and 2 (under Bankable Feasibility Study)

- Low grade stockpile 10.1Mt@0.075%
- Preferred Pit 15Mt Pit Extension contains 1.1Mt@0.83%WO<sub>3</sub>
- 14.4% of known in-situ resources

#### **Phase 3 (planned Scoping Study)**

- Long Life Underground Mine
- 85.6% of known resources

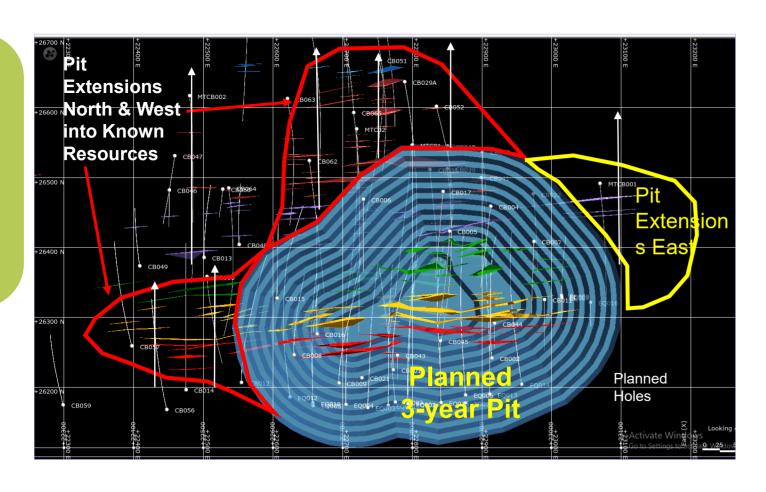


# Cut-Away Section thru the Planned Pit shows

- Existing & new pit extension
- Bounding South Wall Fault
- Ore is open to the West & North and to Depth
- Pit extends on low side not touching the high wall

# **Q1 - Near Term Confirmation Drilling**



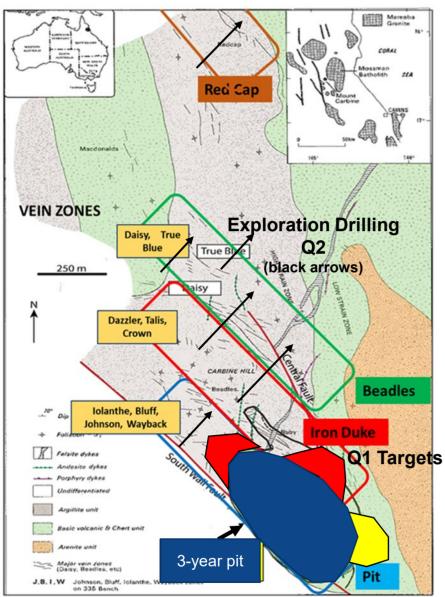


### **Adding Shallow Open Cut Ore**

- Known Shallow Resources
- Eastern Exploration Work
- Continue Pit Extensions to Depth

# **Q2 – Regional Extension Vein Drilling**





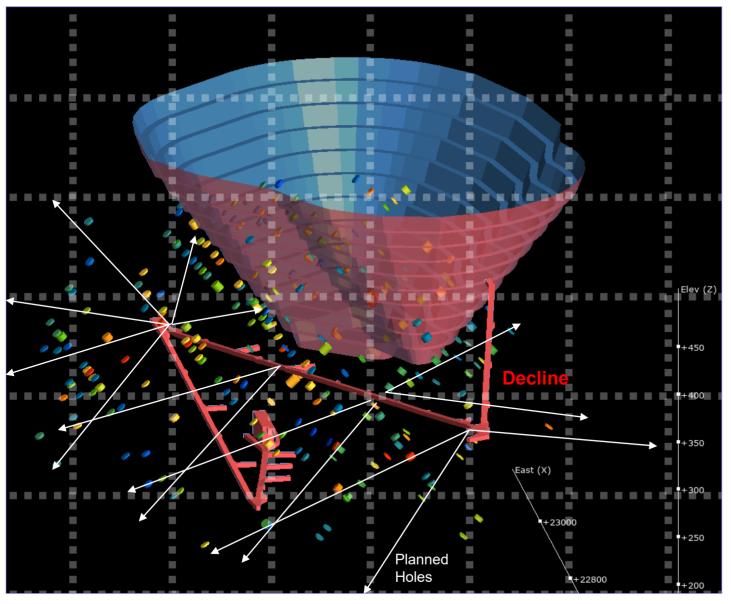
### **Locating New Mt Carbine Sheeted Systems**

- Target other key vein packages similar to Mt Carbine
- Integrated Geophysics & Soils
- Complete Plot-Logic Multi-frequency Scan Program
- Extend Structural Mapping

Project Geology highlighting open cut setting

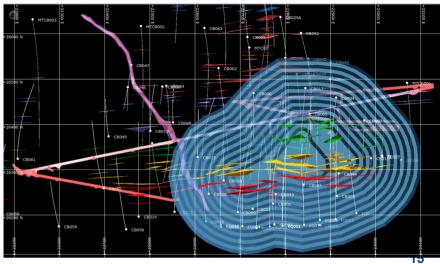
# **Q3 - Underground Drill Program**





### **Defining + 10 Yrs of Reserves**

- Mining of high-grade zones from UG decline
- More than 10 ore zones on each level
- Low-cost extraction using long hole mine methods
- Resources indicate >10 years mining of High-Grade ore.



# **Geology and Resources**



- Measured Group prepared the Independent Resource Statement released on 23 September 2021
- BFS open pit shell design to include ~14.4% of the known resources
- Detailed Drilling allowed high grade zones to be linked

Classification	Tonnes (million)	Grade (% WO <sub>3</sub> )	WO₃ (mtu)		
Low Grade Stockpile					
Indicated	12.00	0.075	900,000		
In-Situ Hard Rock Resources					
Indicated	2.40	0.74	1,776,000		
Inferred	6.81	0.59	4,017,900		
Sub-Total	9.21	0.63	5,793,900		
Total Mt Carbine Mineral Resource					
	21.21		6,693,900		

<sup>1.</sup> Total estimates are rounded to reflect confidence and resource categorisation.

### Completed

#### Stage 1 – Define Resources for Open Cut Mine

- Detailed Drilling allowed high grade zones to be linked, around the Andy White pit
- Independent Resource Statement released on 23 September 2021
- First open pit design to include 14.4% of the known resources

### 2022 Workplan

#### Stage 2 – Drill & Expand

- Drill out further shallow open cut resources
- to Indicated; So far conversion has increased tonnes & grade
- Drill Exploration Targets Dazzler & Daisy

<sup>2.</sup> Classification of Mineral Resources incorporates the terms and definitions from the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012) published by the Joint Ore Reserve Committee (JORC)

<sup>3.</sup> No upper cut was applied to individual assays for this resource, a lower cut of 0.25% WO3 was applied

### Mine Plan



Mine plan is designed extract ore from the open-cut pit extension and low grade ore stockpile

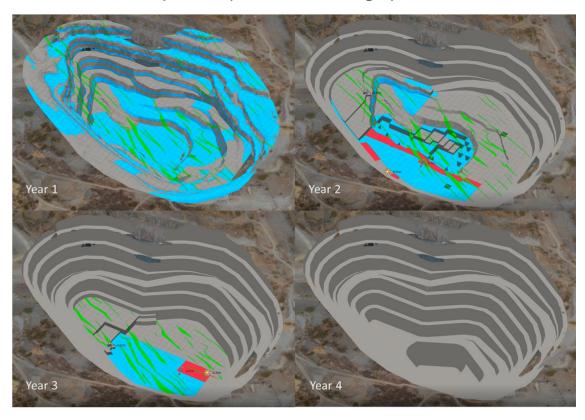
BFS mine plan is designed to deliver a constant feed of 1,000,000tpa of ore to the ROM for a 12 year mine life

Mine plan is supported by the Ore Resource of 21.2Mt (to be extracted from Measured and Indicated Mineral Resources)

Low grade ore stockpile



Open-cut pit extension stage plans



# **Processing**



Processing improvements identified through operational performance analysis

Existing dry and wet processing facilities currently in operations

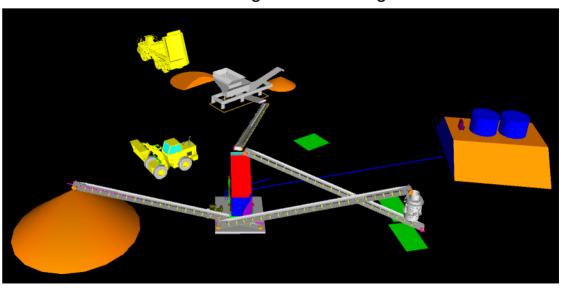
Processing facilities are designed for **steady-state production of 1,000,000tpa** 

Production to reach steady-state within the **first 2** months of operations

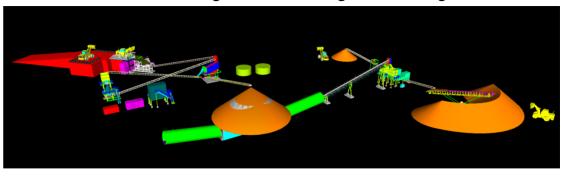
Production process has an estimated **overall Tungsten recovery of 79.5%**, including for both the crushing/screening/sorting and wet concentrator plant

The tungsten concentrate produced at site is loaded into bulk bags, sealed and **sold ex-gate** at Mt Carbine

Phase 1 Crushing and Screening Circuit



Phase 2 Crushing and Screening and Sorting Circuit



### Infrastructure



Mt Carbine is currently operating and is well serviced with existing on-site infrastructure

The site infrastructure strategy for the project is to utilise as much as possible the **existing site infrastructure** and only construct new infrastructure if required to support new or upgraded facilities

As the overall changes to the footprint and capacity of the mining and associated crushing, screening, XRT sorting and processing **infrastructure is minimal** 

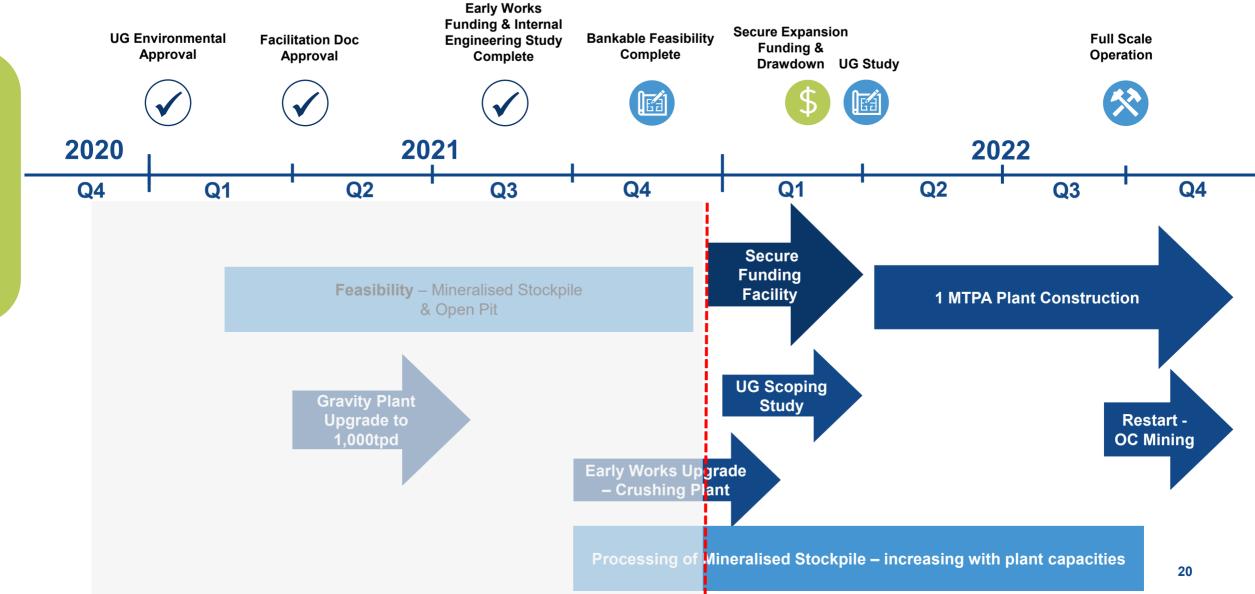
Non-process site infrastructure will include high voltage power supply and reticulation upgrades, workshop and warehouse upgrades and existing site offices will be refurbished to improve general amenities



# **Development Timeline**

Phased approach for early cash flow





# Strategic, Social and Economic Benefits

### A critical minerals project of national significance



- Embracing the concept of the Circular Economy, using innovation to identify suitable ore for treatment and the use of 'by-products' to supply road base and aggregate materials to build local roads and construction projects
- Partnership with local indigenous community and ongoing engagement
- The project will make an important contribution through employment, economic infrastructure and \$425m in export revenue
- The project will employ approximately **70 direct full-time employees** and create significantly more jobs through the
  regional supply chain and direct contractor engagement



# **Compelling Economics**

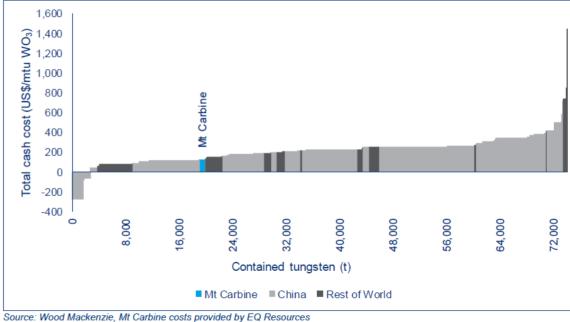


BFS¹ confirms high margins, low capital intensity & operating cost and speed to market

#### Summary of BFS Results

Parameter	Unit	BFS
Production Rate (LoM Avg)	mtu	2,200
Life of Mine	years	12
Total Cash Cost (FCA)	A\$/mtu	159
Capital Cost	A\$m	21
Pre-tax NPV <sub>8, real</sub>	A\$m	131
NPV / Capex Ratio	Х	5.2
Post-tax IRR	%	154%
EBITDA Margin (LoM)	%	49
Payback Period	years	2.25

#### Global tungsten Cash Cost Curve (US\$/mtu)



#### Notes:

- The BFS has been prepared to a -20% to +20% level of accuracy. The production target and financial information in this table must be read in conjunction with the cautionary statement in this ASX Release.
- AUD:USD exchange rate of 0.73 has been used for currency conversions.

<sup>1.</sup> Refer to the ASX Release on 13 December 2021 for full Bankable Feasibility Study details.

# **Priorities of Coming 12-Months**



- Phase 1 completed and increase production to 70 to 90tpm tungsten concentrate, becoming profitable
- Financial Close for Phase 2 Expansion (BFS scope)
- Drill Mt Carbine exploration targets and increase open pit optimization tonnage, drill inferred resource to indicated
- Further enhancing HSE standard at site, extending training program for employees
- Amendment to environmental licence to start mining open pit
- Further promote "green aggregate" products to reduce environmental footprint of regional construction sector

#### **Site Contact:**

Kevin MacNeill Chief Executive Officer

E: kmacneill@eqresources.com.au

#### **Registered Office:**

Level 4, 100 Albert Road South Melbourne, VIC 3205 Australia

E: info@eqresources.com.au

#### **Investor Relations:**

Peter Taylor

**NWR Communications** 

T: +61 412 036 231

E: peter@nwrcommunications.com.au

#### Mt Carbine Office:

6888 Mulligan Highway, Mt Carbine Qld 4871 PO Box 1496, Mareeba Qld 4880 www.eqresources.com.au

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