

## **Mid-Tier Copper Production Focus for Scoping Study**

### **Highlights:**

- Positive metallurgical and mining studies result in a decision to commence a formal Scoping Study to define the economic and technical pathway to production for Oracle Ridge Copper Project
- Scoping Study will be based on the current Mineral Resource Estimate of 28Mt at 1.35% copper, 11.06g/t silver and 0.16g/t gold
- A simplified flow sheet will be incorporated and will include concentrate leaching and SX/EW producing an LME grade copper cathode to support domestic decarbonisation goals
- A key focus of the Scoping Study will be to minimise the environmental footprint by incorporating low energy and emissions processes while also minimising surface disturbance
- Substantial exploration targets within and around the mine area providing opportunity for a mine life well beyond that which the Scoping Study is focussed
- Very experienced study team in Perth and Tucson with more than 100 years of combined experience in operations, design, studies and optimization
- Study expected to be completed in Q3 of 2024

Commenting on commencement of the Study, Eagle Mountain Mining's CEO, Tim Mason, said:

*"Our team has identified a simplified ore processing method for Oracle Ridge providing significant cost and environmental benefits. Following on from this, the board has approved a formal Scoping Study on the technical and economic development of Oracle Ridge Copper Project. While the Project was previously operated in the 1990's, the increase of the Mineral Resource to nearly 30Mt means that we can now consider materially higher production rates and longer mine life.*

*It is a fantastic time to be developing a copper project, with global decarbonisation targets driving strong demand forecast, especially for the second half of this decade. Importantly, the recent inclusion of copper on the US critical materials list means that production of LME grade copper onsite at Oracle Ridge supports supply of copper for domestic use.*

*I am very excited by these latest developments which support our goal to become a mid-tier copper producer in the USA."*

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Eagle Mountain Mining Limited (ASX: **EM2**) (**Eagle Mountain**, or the **Company**) is pleased to announce the commencement of a Scoping Study ("Study") for the Company's 100% owned Oracle Ridge Copper Project in Arizona.

Oracle Ridge lies in the heart of an active mining region in Arizona with access to high quality infrastructure. Oracle Ridge was last mined in the early 1990's at a rate of approximately 250k tons per year of ore with reported concentrate grades ranging between 26 to 30% Copper. Following the new Mineral Resource Estimate (MRE) of 28.2Mt at 1.35% copper, 11.06g/t silver and 0.16g/t gold (refer Table 1 and the Company's ASX announcement dated 21 November 2023), the Study will consider materially higher production rates compared to the previous mining rate to support our goal to become a mid-tier copper producer.

**Table 1 – New Oracle Ridge Mineral Resource Estimate at a 0.8% copper cut-off**

Resource Category	Tonnes [Mt]	Cu [%]	Ag [g/t]	Au [g/t]	Contained Cu	Contained Ag	Contained Au
Measured	3.1	1.40	13.93	0.18	43,000 t or 94,800,000 lb	1.4 Moz	18 kOz
Indicated	12.2	1.36	11.96	0.18	166,000 t or 366,000,000 lb	4.7 Moz	71 kOz
<b>Subtotal M+I</b>	<b>15.3</b>	<b>1.37</b>	<b>12.35</b>	<b>0.18</b>	<b>209,000 t or 460,800,000 lb</b>	<b>6.1 Moz</b>	<b>89 kOz</b>
Inferred	13.0	1.32	9.53	0.13	171,000 t or 377,000,000 lb	4.0 Moz	53 kOz
<b>Total M+I+I</b>	<b>28.2</b>	<b>1.35</b>	<b>11.06</b>	<b>0.16</b>	<b>380,000 t or 837,800,000 lb</b>	<b>10.0 Moz</b>	<b>142 kOz</b>

Differences may occur in totals due to rounding

Importantly, the Measured and Indicated resources in the new MRE are predominantly located in areas which are expected to support mine production in the first five years of mine life. Over half of the MRE is in the higher confidence Measured and Indicated resource categories, which are important for de-risking the restart of the Project.

The Study will consider various underground methods only, with no surface mining. The mine plan will incorporate the existing 18 kilometres of underground development which is proximal to the measured and indicated mineral resources in the north-west zone. The accessible development is expected to materially reduce initial mining capital costs. Mined voids will be backfilled to minimise surface disposal, increase extraction rates and improve geotechnical stability.

Recent results from comminution testing indicate that the use of high-pressure grinding rolls are applicable for use at Oracle Ridge. The Company aims to minimise the energy requirements of the crushing circuit and the use of high-pressure grinding rolls is expected to assist this objective.

Mineral processing will consider methods which aim to produce copper in the USA to support domestic decarbonisation goals. The Company recently identified a sulphide leaching process that utilises glycine to leach copper, silver and gold from both ore and concentrates (refer Figure 1 and ASX announcement 4 December 2023). The processes have been shown to be more applicable to leaching copper within



bornite and chalcocite, compared to chalcopyrite. The mineralogy of Oracle Ridge is likely to be a key positive factor in the leach testwork results to date.

The sulphide leaching process that utilises glycine has the following significant potential benefits:

- Cost Savings – lower processing costs with no downstream smelting and haulage costs
- USA copper production – the dissolved copper will be recovered through an SX/EW plant producing LME grade copper cathode supporting domestic decarbonisation goals
- Environmental – the process uses glycine which is used in the food and pharmaceutical industries
- Recyclable – the glycine is recovered and stays in circuit prior to the SX/EW process

The Company recently received results of various glycine based leach testwork with encouraging results. Further metallurgical testwork is underway and the results will be incorporated into the Study.

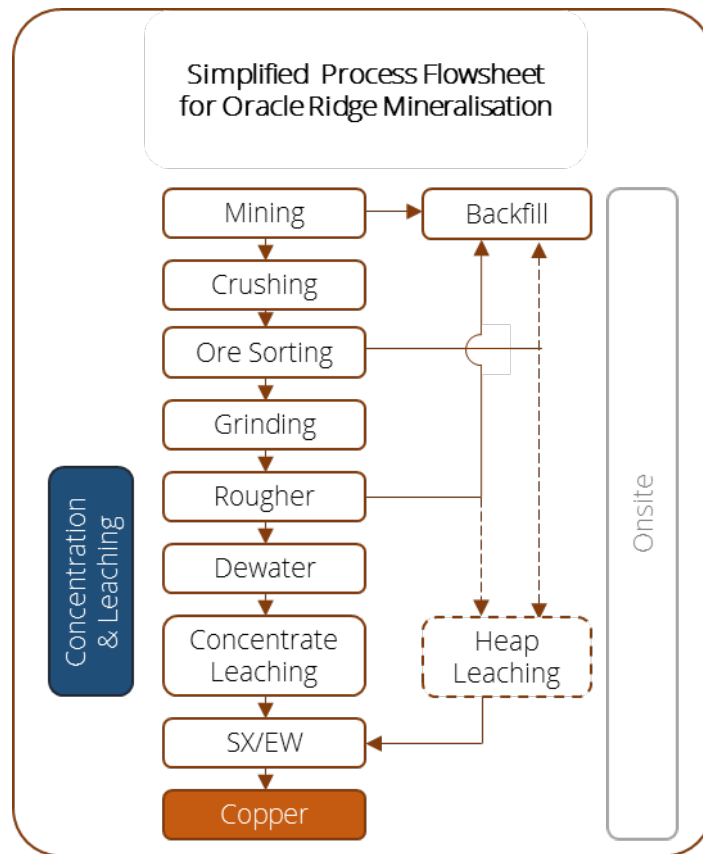


Figure 1 – Simplified Processing Flowsheet (refer ASX announcement dated 4 December 2023)

All of the mineral resources and key infrastructure, including tailings storage facility and waste rock dumps are held on held on Patented Claims. This greatly assists permitting optionality for future production.



The outcomes of the Study will form the basis for a preliminary feasibility study for the Project and support various work plans necessary to bring Oracle Ridge into production. The Study will be undertaken by various reputable local and international consultants working with Company personnel. The Study is expected to be completed in Q3 of 2024.

Eagle Mountain has appointed Mr Bob Jacko as studies manager based in Arizona, USA. Mr Jacko will support the Company in supervising and coordinating the Study. In recent years, he has worked at Sandfire's Black Butte Copper Project in Montana, USA responsible for the technical and economic studies and permitting. Other members of the Study team include strong experience in mining, processing, infrastructure, environmental and permitting.

*This ASX announcement was authorised for release by the Board of Eagle Mountain Mining Limited.*

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#### **COMPETENT PERSON STATEMENT**

Where the Company references the Mineral Resource Estimate updated and released on 21 November 2023, it confirms that it is not aware of any new information or data that materially affects the information included in that announcements, and all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed. In addition, the form and context in which the Competent Persons findings are presented have not been materially modified from the original reports.

The information in this report that relates to the Processing and Metallurgy for the Oracle Ridge Project is based on and fairly represents information and supporting documentation compiled by Mr Charles Bass who is a Fellow of The Australasian Institute of Mining and Metallurgy and the Managing Director of Eagle Mountain Mining Limited. Charles Bass has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Charles Bass consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this document that relates to Exploration Activities is based on information compiled by Mr Brian Paull, who is a member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience relevant to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). Mr Paull is the Director of Exploration at Eagle Mountain Mining Limited's wholly-owned subsidiary, Silver Mountain Mining Inc, and consents to the inclusion in this document of the information in the form and context in which it appears. Mr Paull holds shares and options in Eagle Mountain Mining Limited.



## ABOUT EAGLE MOUNTAIN MINING

Eagle Mountain is a copper-gold explorer focused on the strategic exploration and development of the Oracle Ridge Copper Mine and the highly prospective greenfields Silver Mountain Project, both located in Arizona, USA.

Arizona is at the heart of America's mining industry and home to some of the world's largest copper discoveries such as Bagdad, Miami and Resolution, one of the largest undeveloped copper deposits in the world.

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