



Large-Scale Mineral Deposit Exploration Commences at Silver Mountain

Highlights

- Potential for a large-scale mineralised source driving the gold, silver, copper, uranium, thorium and other metal occurrences found over a broad area at surface has been recognised at Silver Mountain from the results of work by our geologists and consultants
- A 3D seismic survey, modelling up to two kilometres deep, is due to commence in May 2024
- The western portion of the Silver Mountain project is the focus of the survey, with this area hosting:
 - Favourable fault systems with prospective intersecting features including gossan rich volcanogenic massive sulphide (VMS) trends
 - High-grade mineralisation such as 86.1g/t Au, 78.6g/t Au, 921g/t Ag, 11.1% Cu plus uranium and thorium assays up to 387ppm U₃O₈ and 493ppm ThO₂ that could help vector to a mineralisation system distal to these occurrences
 - Iron-rich rock facies at Red Mule and paleosols underlying Scarlett Hill representing a large source of secondary iron possibly from a weathered porphyry pyrite halo
- Similar structural setting to other major porphyry systems, including the nearby and on-trend Bagdad and Miami mines
- The potential mineralising source is likely to be of a porphyry, iron-oxide-copper-gold (IOCG), VMS or other hydrothermal style system
- The survey is a satellite-based, environmentally friendly, low impact passive ambient noise tomography process, with results expected in June

Commenting on the planned survey, Eagle Mountain Mining's CEO, Tim Mason, said:

"Our recent discoveries at Silver Mountain are highly encouraging, indicating significant potential for a large mineralised system and we are pushing ahead with further exploration works. Field mapping, sampling and limited drilling across the extensive 6 kilometre north-south zone in western Silver Mountain has revealed favourable structural features typical of large porphyry systems. Additionally, the discovery of uranium/thorium-rich dykes strengthens the possibility of a substantial mineral deposit distal to known surface mineralisation in veins and dykes.

We're pleased to announce a collaboration with Fleet Space Technologies for a passive seismic geophysical survey at Silver Mountain. Their proven technology, with over 250 successful surveys for numerous companies, will be instrumental in enhancing our understanding of the project's geology. Silver Mountain boasts multiple areas of outcropping high-grade mineralisation, but the source remains unclear. The survey is designed to model up to two kilometres in depth, well below the paleosol and tertiary volcanic cover.

The resulting 3D seismic model along with previous geophysical surveys and structural interpretation should present an exciting opportunity to delineate targets for future drilling programs."

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Eagle Mountain Mining Limited (ASX: EM2) (Eagle Mountain, or the Company) is pleased to provide an update on the Company's 100% owned Silver Mountain Project (Silver Mountain, or the Project) in Arizona, USA.

Multiple Geological Features Point to a System Below

Following the successful results of field mapping and sampling, including the discovery of pegmatites elevated in uranium and thorium, the Company has engaged Fleet Space Technologies (Fleet) to conduct a passive Ambient Noise Tomography (ANT) seismic geophysical survey across the western portion of Silver Mountain (see Figure 1). This area of the Project is largely undrilled, yet hosts numerous high grade gold and silver occurrences of up to 86.1g/t Au and 921g/t Ag in rock samples that could help vector towards a significant mineral system at depth.

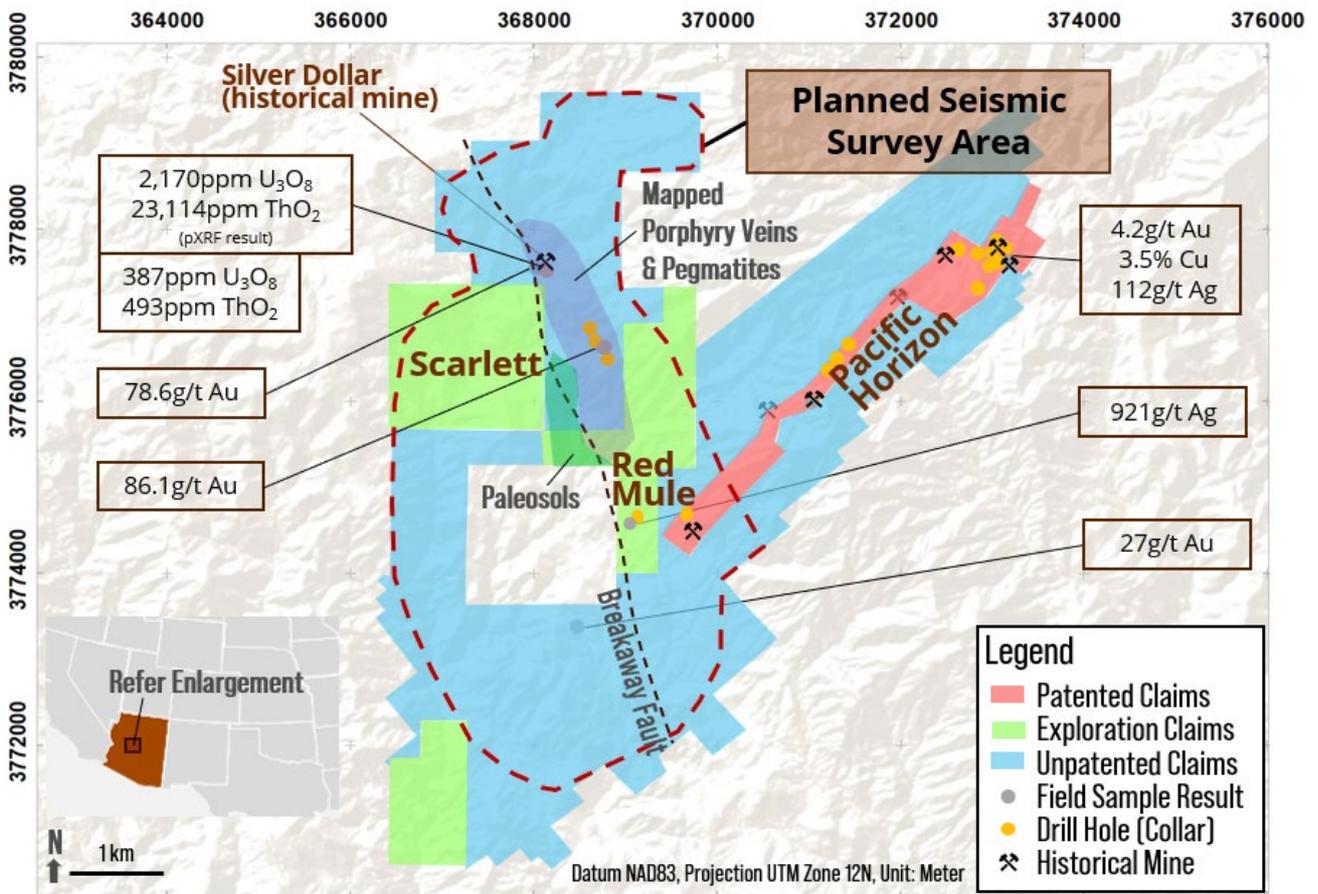


Figure 1 – Planned area for seismic survey at Silver Mountain (refer to ASX announcements dated 29 February 2024 and 13 March 2024).

The western half of Silver Mountain boasts numerous geological features that support the use of an ANT survey in the area, including:

- **Favourable Fault Systems:** A regionally significant structure – the Breakaway Fault – believed to be associated with detachment mineralisation, open at depth and possibly related to a mineralised source;
- **High-Grade Hotspots:** A well-endowed concentration of high-grade gold, silver, uranium and thorium occurrences are located along the Scarlett-Red Mule trend where porphyry style veins and pegmatites have been mapped. This suggests a significant source of mineralisation may lie below;
- **Hidden Geological Features:** Iron-rich rock facies and paleosols south of Silver Dollar mine potentially representing a large source of secondary iron (eg. from a weathered porphyry pyrite halo);
- **Prospective Crossroads:** Potential intersection of prospective systems such as the gossan-rich VMS trend at Pacific Horizon and Scarlett-Red Mule mineralisation at depth; and



- **Untested Territory:** Previous drilling has primarily been concentrated in the Pacific Horizon area, leaving the western half of Silver Mountain open for discoveries.

On a regional scale, Silver Mountain is positioned along the same structural trend as surrounding world-class porphyry deposits (see Figure 2). This NW-SE striking porphyry corridor, known as the Laramide Arc, hosts globally significant deposits such as Bagdad (1.6Bt @ 0.24% Cu¹), Miami and Resolution. Silver Mountain also lies on the prospective NE-SW trending Proterozoic greenstone belt which hosts VMS deposits such as United Verde and Iron King.

Geological features within the Project include structures that may vector towards a mineralisation source such as a porphyry, IOCG, other hydrothermal styles or depth extensions to a VMS system. The ANT survey will aim to generate a 3D seismic model of these large scale prospective geological features for future drill targeting.

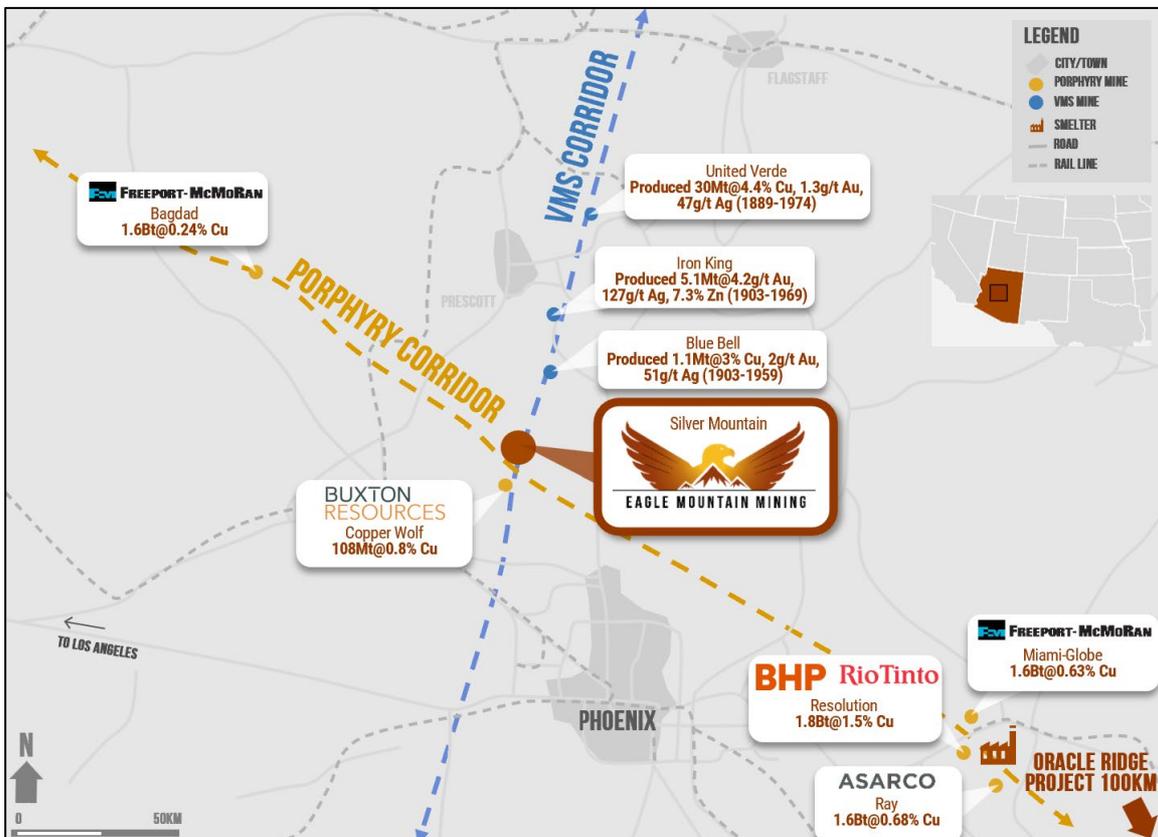


Figure 2 – Location of the Silver Mountain Project within the porphyry and VMS corridor intersection.

The All Important Structural Setting

The major NW-SE structural trend that defines the Laramide Arc informs almost all southwest US porphyry systems (as shown in Figure 2). More locally, there are similarities to large deposits such as the nearby Bagdad structural system, where Laramide Arc NW-SE oriented structures and NE-SW trending dykes exist at both deposits (as shown in Figure 3).

¹ Refer to FCX NYSE announcement dated 16 February 2024

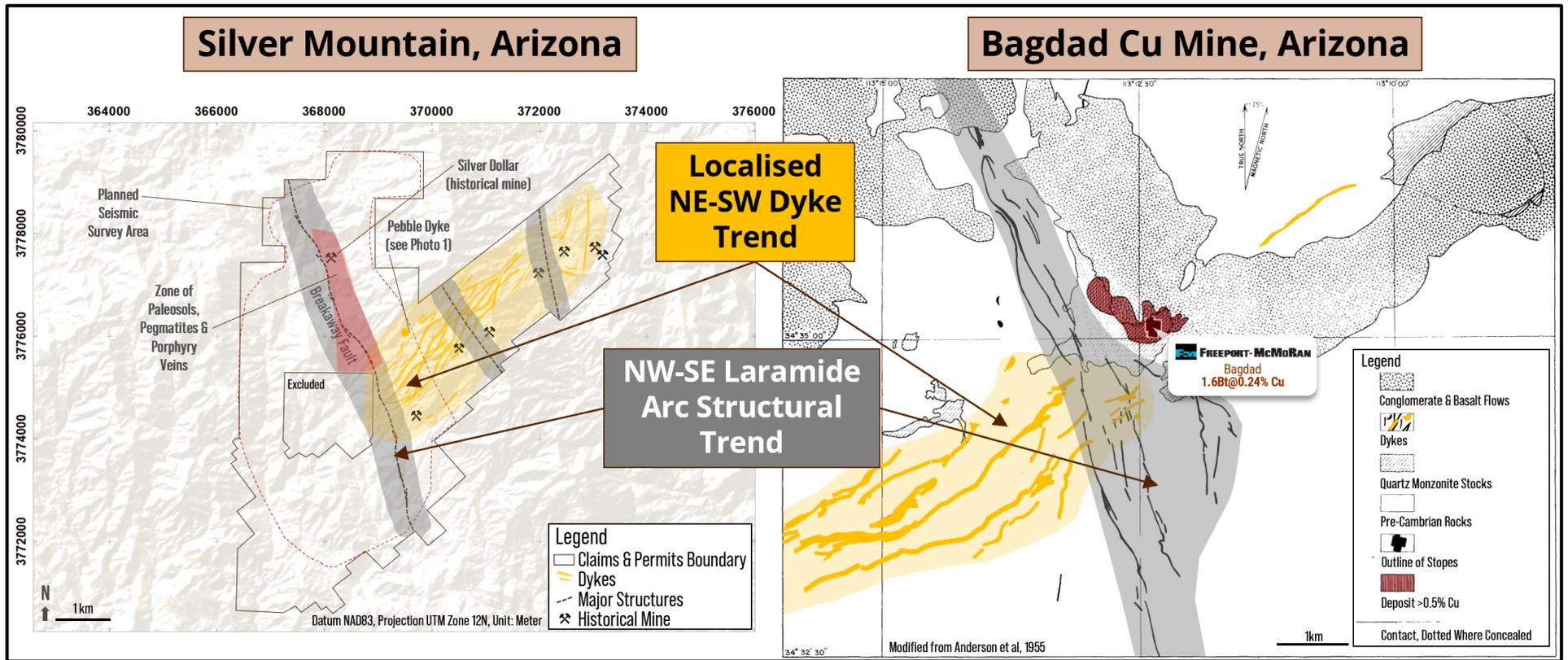


Figure 3 – Geological and structural similarities between Silver Mountain and the Bagdad copper mine, notably the NW-SE Laramide Arc structural trend and NE-SW dyke trend.



Additional prospective similarities to surrounding deposits include the presence of pebble dykes (see Photo 1), an intrusive feature associated with magma emplacement. For Silver Mountain, this is a potential vector to a mineral system distal to these surface occurrences.

Given all of the various indicators of a mineralising source distal to known surface mineralisation, it was decided that a deep-looking technology was required to help target these features, and Fleet's ambient noise technology process was chosen.



Photo 1 – Comparison of pebble dyke outcrop at Silver Mountain (left) and the Bagdad district (right) (Anderson et al, 1955).

A Sustainable Approach to Exploration

Fleet has successfully delivered over 250 surveys globally using their global network of satellites. The ANT survey is a low environmental impact passive process; ground sensors record natural and anthropogenic ambient noise to image the subsurface (refer to Figure 4), as opposed to traditional seismic surveys that require an induced noise source. The ANT survey will cover an area of approximately 12km² with real-time processing, interpretation and modelling of the data down to approximately two kilometres depth. Higher resolution infill surveys may be undertaken based on the results from the regional survey. The survey is scheduled to commence in May 2024.



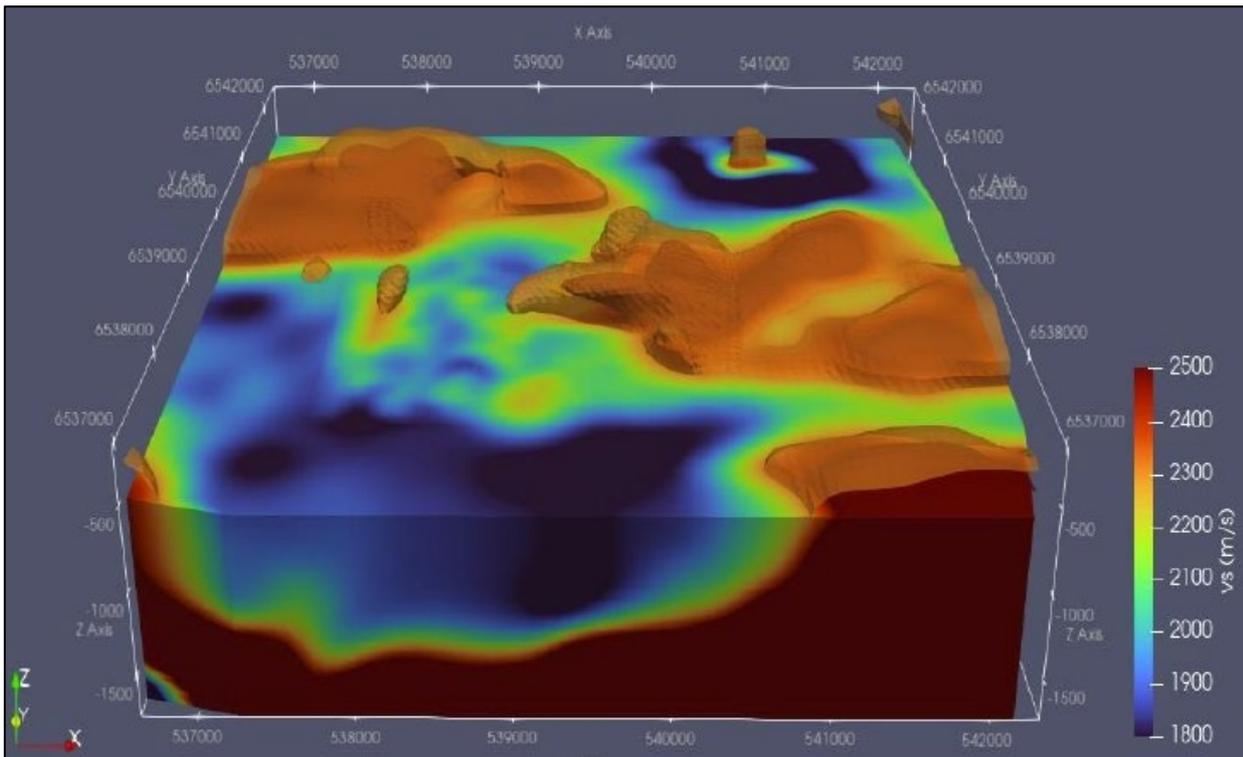


Figure 4 – Example of a 3D model produced by Fleet during a geophysical survey. View from the north and clipped at 500 metres relative level showing higher velocity rocks (brown/orange) interpreted to be intrusives to be drill tested.

Given the increased prospectivity and potential for significant mineralisation at the Silver Mountain Project, the Company's exploration team is planning extensive mapping, sampling and geological modelling of the high grade occurrences within the seismic survey area. This information will complement the 3D velocity model captured by the ANT survey and be used to produce a holistic exploration model that will incorporate all geophysical, geological and geochemical data. This model will be used to define significant targets that will inform future drilling at the Project and aim to unlock the full exploration potential of the Silver Mountain Project.

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

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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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COMPETENT PERSON STATEMENT

Where the Company references previous exploration results, it confirms that it is not aware of any new information or data that materially affects the information included in those announcements, and all material assumptions and technical parameters 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.

Refer ASX announcements dated 29 February 2024 and 13 March 2024.

