

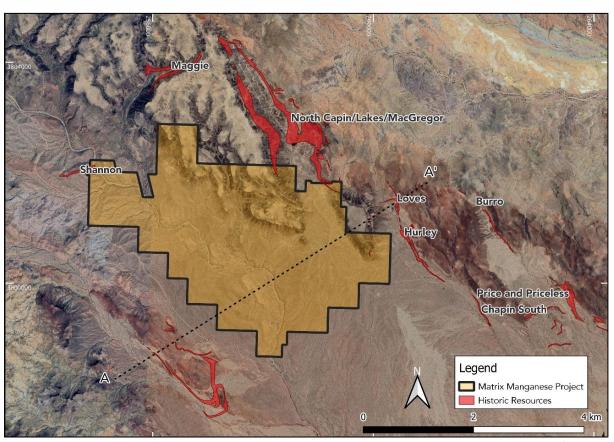


ASX Release 14th May 2024

## Matrix Manganese Project Acquisition, Arizona

- Low-cost brownfields exploration project acquisition covering 12 km<sup>2</sup> with walk-up drill targets testing down-dip extensions to existing Mn Resources
- Positioned adjacent to RecycLiCo's Artillery Peak Project, the world's 6<sup>th</sup> largest resource by contained metal - 277 Mt @ 2.8% Mn
- USA currently imports 100% of all Mn with domestic demand predicted to be underpinned by strong demand for battery-grade manganese sulphate
- Current Mn ore spot prices <u>up 32.5% since the start of 2024</u>

Buxton Resources Ltd ('Buxton'; ASX:BUX) has entered into a binding Earn-In Agreement to acquire 100% of the Matrix Manganese Project ("Matrix") located in Mohave County, Arizona, from Solution Metals Pty Ltd ("Solution").



**Figure 1:** Matrix Manganese Project, Mojave County, Arizona. Known manganese mineralisation surrounds the Project on three sides, and includes the Artillery Peak project which has a NI43-101 compliant resource of 277 Mt @ 2.8% Mn.





The Matrix Project is adjacent to the Artillery Peak manganese deposits, the world's 6<sup>th</sup> largest resource by contained metal according to S&P Global<sup>1</sup>. These deposits are unique in that they are hosted by sandstone having high porosity and low gangue acid consumption. These characteristics underpin excellent leaching characteristics in comparison with other deposits. Mapping by the Arizona Geological Survey indicates good potential for known resources to extend onto the Matrix Project tenure (Figure 1, Figure 2).

**Buxton's CEO Marty Moloney said**; "The Matrix Project acquisition provides Buxton shareholders a low-cost option on the high-purity manganese sulphate market which is predicted to grow between 4-6 times by 2030. The strategic context is highly compelling as the project is located proximal to >1 TWh of announced US auto pipeline battery cell capacity across > 35 plants.

The USA currently relies 100% on manganese imports and significant incentives, such as the Biden Administration's massive Inflation Reduction Act, are available for critical mineral projects. The project is located in a proven manganese province and we'll be commencing work on the ground in Q3 2024, with drilling designed to test extensions of known manganese mineralisation expected in Q4."

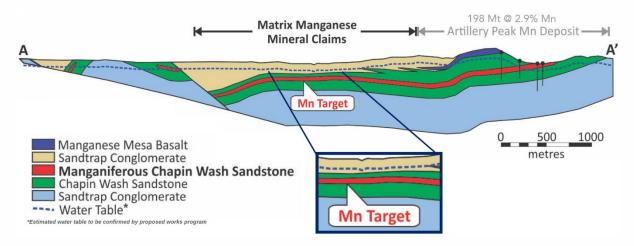


Figure 2: Matrix Project geological cross section.<sup>2</sup>

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<sup>&</sup>lt;sup>1</sup> S&P Capital IQ screener report 13th May 2024. 1) Nchwaning/Gloria 752.8Mt @ 38.4% Mn for 289 Mt Mn; 2) Tshipi Borwa 421Mt @ 33.2% Mn for 139.6 Mt Mn; 3) Moanda 414Mt @ 28.1% Mn for 116 Mt Mn; 4) Oakover 312Mt @ 10.6% Mn for 32.9 Mt Mn; 5) Hotazel 293Mt @ 39.7% Mn for 116.2 Mt Mn; 6) Artillery Peak 277Mt @ 2.8% Mn for 7.8 Mt Mn

<sup>&</sup>lt;sup>2</sup> Spencer, J.E., Richard, S.M., Johnson, B.J., Love, D.S., Pearthree, P.A., and Reynolds, S.J., (2015), Geologic map of the Artillery Peak and Rawhide Wash 7 ½ 'Quadrangles, Mohave and La Paz Counties, Arizona: Arizona Geological Survey Digital Geologic Map DGM -100, version 2.0, scale 1:24,000, 2 sheets. Section line B-B'





The material terms of the Agreement are as follows;

- Buxton will Earn-In to 100% ownership of 154 BLM Lode Mining Claims by spending AU\$1.0M over a maximum of 2 years.
- Buxton will issue Solution AU\$150k equivalent in shares within 20 days after the agreement is executed (priced at the 20-day VWAP), and a 1.5% NSR royalty. Buxton retains a right of first refusal over this royalty.
- Buxton will issue Solution a second tranche of AU\$100k in shares at the 2 years anniversary, or on completing the Earn-In, whichever comes earliest.
- Mandatory commitments are limited to the claim maintenance fees (currently U\$\$25,410), which are to be paid on Jan 1 each year.
- Should BUX subsequently either a) IPO the project: Solution will get 10% of the new entity's capital structure, plus priority right to subscribe to an additional 9.9% on the same terms as for other investors of that IPO; or b) Progress the project: Solution to get milestone payments payable, at BUX's discretion in BUX shares or cash, as follows; 3% (of fair market value of the project) at Resource, 2% at Feasibility Study and 1% at Decision to Mine.

Buxton looks forward to updating shareholders on progress at this exciting project.

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This announcement is authorised by the Board of Buxton Resources Ltd.

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## About the Matrix Project

The Matrix Project consists of 154 Lode Mining Claims (MTX 001 - MTX 154) covering ~12 km² in Mohave County, Arizona. The Matrix Project claims cover the interpreted western extension of the Artillery Peak mineralisation. Buxton is targeting deposits of highly soluble manganese amenable to in-situ recovery mining methods.

Manganese was first discovered in the region around 1880. The deposits at the Artillery Peak occur as two distinct types of deposit, stratiform manganese deposits and vein manganese deposits. In 2011 American Manganese Inc. (now Recyclico AMY.V) defined Indicated & Inferred Resources of 277 Mt @ 2.8% Mn. A Tetra Tech study in 2012 focused on a smaller area with Indicated and Inferred Resources of 82 Mt @ 2.3% Mn (with 198 Mt remaining current outside this area).<sup>3</sup>

In the 1980s the US Bureau of Mines evaluated the feasibility of in-situ and heap leaching for Mn extraction from domestic US ores. Of the 25 deposits examined, the Artillery Peak sample (3.5% Mn) presented the fastest and highest Mn recovery characteristics in column leaching<sup>4</sup>, and was the only deposit select for further evaluation targeting suitability for insitu recovery methods<sup>5</sup> - work which was curtailed when the USBoM was abolished in 1996.

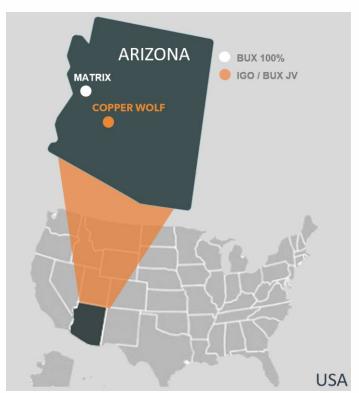


Figure 3: The Matrix Manganese Project, located in Arizona, around 3 hours' drive from Phoenix.

<sup>&</sup>lt;sup>3</sup> Tribe, N. (2011). Mineral Resource Evaluation Report on the Artillery Mountain Manganese Property, Mohave County, Arizona, U.S.A

<sup>&</sup>lt;sup>4</sup> Pahlman, J. E., Khalafalla, S. E. (1988). Leaching of Domestic Manganese Ores with Dissolved SO2. United States: U.S. Department of the Interior, Bureau of Mines.

<sup>&</sup>lt;sup>5</sup> Brink, S. E., Blake, R., & Marozas, D. (1995). Petrographic and Geochemical Analyses of Leach Samples From Artillery Peak, Mohave County, AZ. Report of Investigations to United States Department of the Interior & Bureau of Mines





## Cautionary Note Regarding Forward-Looking Information

This Announcement contains forward-looking statements and forward-looking information within the meaning of applicable Australian securities laws, which are based on expectations, estimates and projections as of the date of publication. This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing required to execute the Company's programs, and the length of time required to obtain permits, certifications and approvals.

Wherever possible, words such as "anticipate", "believe", "expect", "intend", "should", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forwardlooking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time. Forward-looking information involves significant risks, uncertainties, assumptions, and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully.

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