

ASX Release

3rd July 2024

## Matrix Manganese Project – Drone Survey Commenced

Buxton Resources Ltd ('Buxton'; ASX:BUX) is pleased to advise that drone magnetic surveys have commenced at the Matrix Project in Arizona (Figure 1).



**Figure 1:** Dawn greets the Matrix Project magnetic survey drone - looking East over the Chapin Wash toward the Artillery Mountains, Mohave County, Arizona.

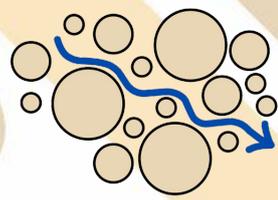
**Buxton's CEO Marty Moloney said;** *"This survey is the first step towards targeting our maiden drill program at the Matrix Project, and I'm pleased that it has commenced so soon after closing the acquisition."*

The survey will be flown at 30 metre flight lines for 1,290 line-kilometres to provide magnetic imagery at 6 metre resolution and photogrammetry / elevation products at 0.03 metre resolution (Figure 2).

Buxton's new survey aims to provide an improved basis for refining the structural model (Figure 3) ahead of first-pass drilling. Available open-file airborne magnetic imagery over the Matrix Project is based on a USGS survey flown in 1977 with 1,600 metre flight lines. Detailed orthophoto coverage (restricted to the tenure area) will

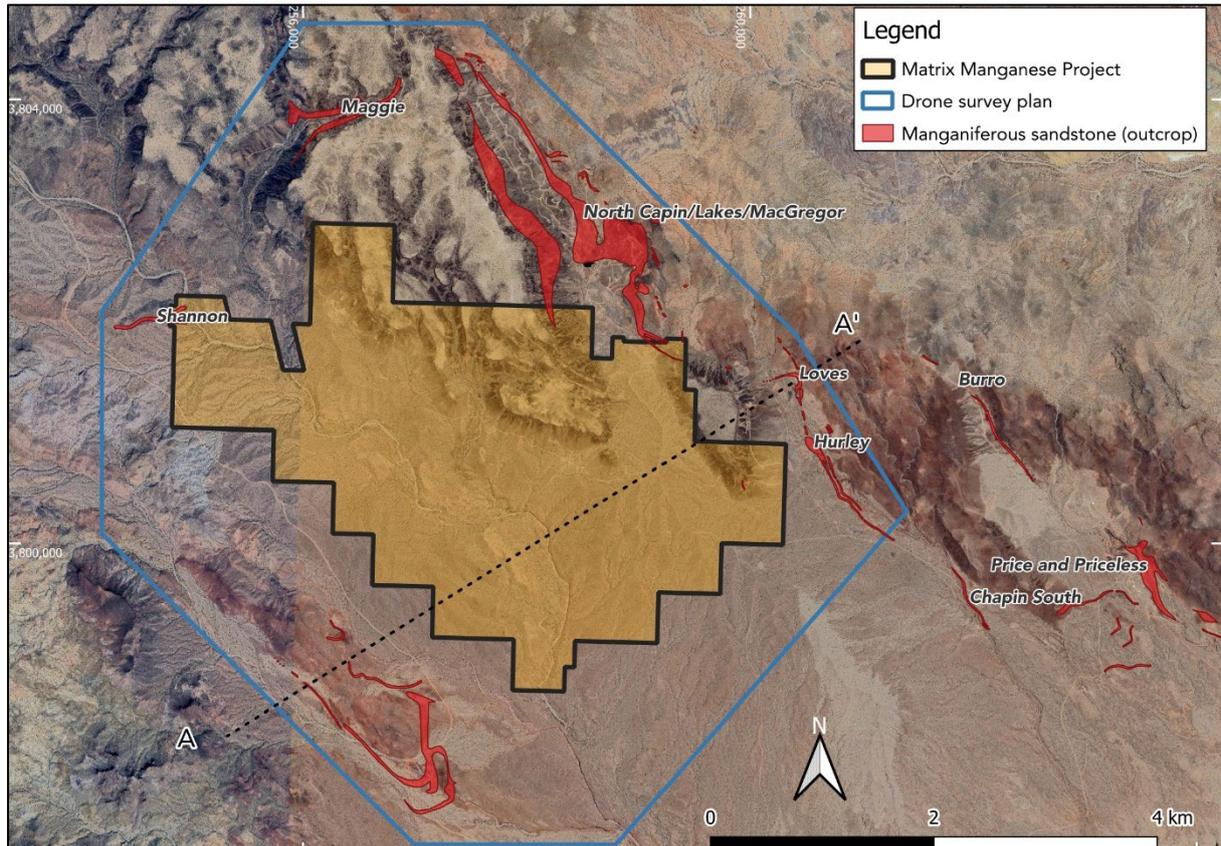


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provide a basis for the Project environmental baseline status. The survey is expected to take 2 weeks to complete.

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



**Figure 2:** 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. Line of cross section A-A' (Figure 3) is indicated.

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

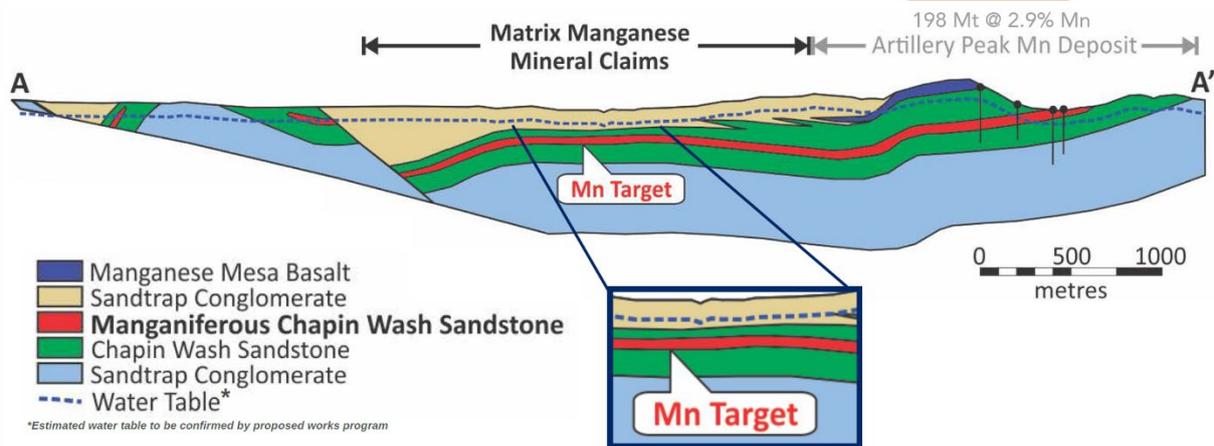
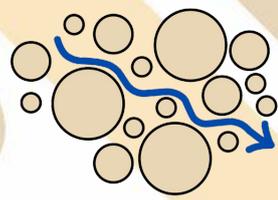
For further information, please contact:

Martin Moloney  
Chief Executive Officer  
[marty@buxtonresources.com.au](mailto:marty@buxtonresources.com.au)

Sam Wright  
Company Secretary  
[sam@buxtonresources.com.au](mailto:sam@buxtonresources.com.au)



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**Figure 3:** Matrix Project geological cross section, modified after Spencer et al 2015<sup>1</sup>

### About the Matrix Project

The Matrix Project consists of 154 Lode Mining Claims (MTX 001 - MTX 154) covering ~12 km<sup>2</sup> 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 RecyLiCo TSX.V:AMY) 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>2</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>3</sup>, and was the only deposit select for further evaluation targeting suitability for insitu recovery methods<sup>4</sup> - work which was curtailed when the USBoM was abolished in 1996.

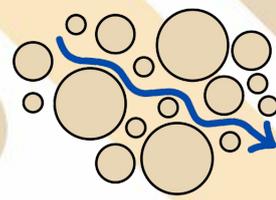
<sup>1</sup> Spencer, J.E., Richard, S.M., Johnson, B.J., Love, D.S., Pearthree, P.A., and Reynolds, S.J., (2015), Geologic map of the Artillery Peak and Rawhide Wash 7 ½ ' Quadrangles, Mohave and La Paz Counties, Arizona: Arizona Geological Survey Digital Geologic Map DGM -100, version 2.0, scale 1:24,000,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

<sup>2</sup> Tribe, N. (2011). Mineral Resource Evaluation Report on the Artillery Mountain Manganese Property, Mohave County, Arizona, U.S.A

<sup>3</sup> Pahlman, J. E., Khalafalla, S. E. (1988). Leaching of Domestic Manganese Ores with Dissolved SO<sub>2</sub>. United States: U.S. Department of the Interior, Bureau of Mines.

<sup>4</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





**Figure 4:** The Matrix Manganese Project, located in Arizona, around 3 hours' drive from Phoenix.

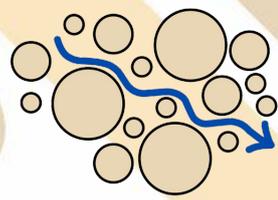
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