

## Murchison Project Exploration Update

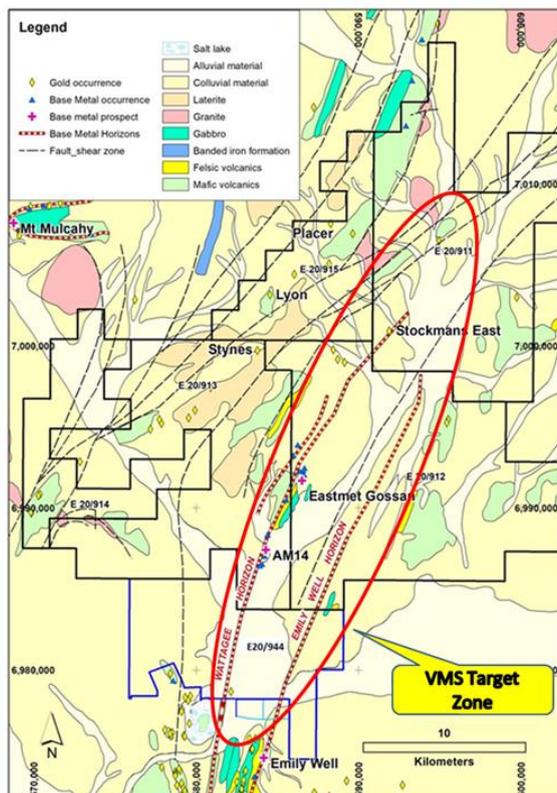
- Major helicopter borne Electromagnetic (EM) Survey commissioned over Zn-Cu rich felsic volcano-sedimentary suite north of Cue township, WA.
- Similar rock suites host major Cu-Zn deposits at Golden Grove, Gossan Hill and Scuddles near Yalgoo.
- Enterprise’s airborne EM survey will cover the Wattagee and Emily Well Zn-Cu horizons which are each ~45km long, giving a combined strike length of these horizons of ~90km.
- Airborne EM systems can identify conductors which may represent massive sulphides at depth.

Enterprise Metals Ltd (“Enterprise” or “ENT”) is pleased to advise that it has commissioned geophysical contractor NRG Australia to fly a major helicopter borne Time Domain Electromagnetic & magnetic (TEM) survey north of Cue, over the felsic volcano-sedimentary suite hosting the Wattagee and Eastmet Zn-Cu gossan trends. (Figure 1)

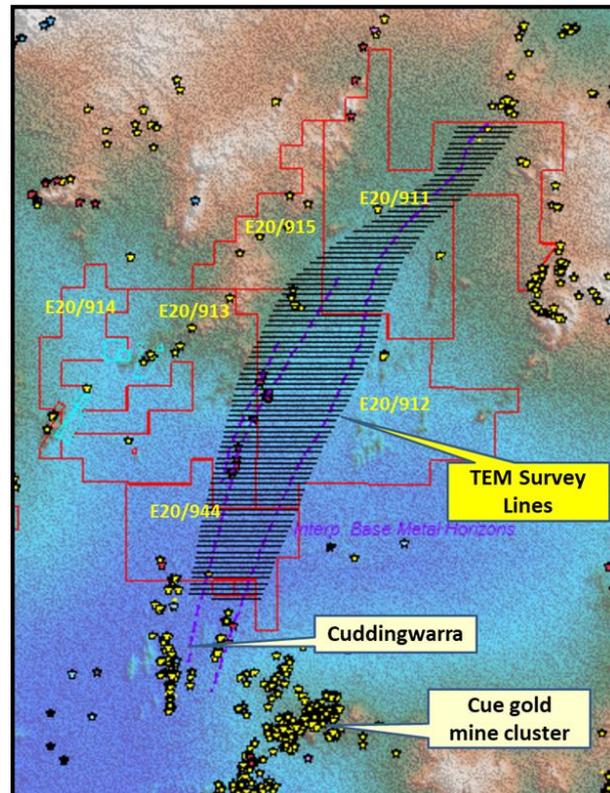
Historic gold discoveries in the Cue area such as Big Bell, Cuddingwarra and Day Dawn (the Great Fingall and Golden Crown) were all found through prospecting and discovery of gold nuggets in elevated (subcropping-outcropping) areas, where mafic rocks such as dolerite, gabbro and banded iron formations were the major host rocks.

Conversely, the low lying areas (Figure 2, blue areas) with post mineral cover did not shed gold nuggets, as the basement volcanoclastic rocks contained appreciable amounts of sulphides, which led to acid leaching, deeper weathering, and the occasional outcropping gossan.

**Figure 1. Murchison Project Surface Geology**



**Figure 2. TEM Survey Lines over Digital Terrain Mode4**



Modern exploration in the area commenced in 1971, with copper-zinc exploration based around prospects either defined by gossan sampling (and therefore limited to the small windows of outcrop, for example, around Wattagee Hill and the Eastmet Gossan), or areas of anomalous conductivity defined in relatively primitive airborne electromagnetic surveys which were effective only in areas of nil to shallow transported cover (for example, at Emily Well).

Esso and others in the 1970's intersected significant downhole widths and grades of copper-zinc sulphide mineralization at the AM14 and Eastmet Gossan prospects. (Refer ENT: ASX releases 9 Oct & 3 Nov 2017, 24 May 2018 & 30 Sept 2019.) Although these historic copper-zinc intersections were sub-economic, they are significant as VMS style deposits can occur in clusters and along strike within distinct stratigraphic horizons.

The Wattagee and Emily Well horizons in Enterprise's Murchison Project are each approximately 45km long, giving a combined strike length of these stratigraphic horizons of some 90km.

From 1987 onwards, the industry exploration focus shifted to gold, with soil sampling, rotary air blast drilling ("RAB") and reverse circulation ("RC") drilling defining gold anomalism throughout the western and northern parts of the project area.

### **Enterprise's Murchison Base Metal Exploration Program**

While there has been considerable historical exploration undertaken for gold in the western part of Enterprise's Murchison Project, there has been no significant modern electrical geophysical surveys undertaken over the Wattagee and Emily Well VMS trends. In addition, airborne EM systems have improved dramatically since the 1970's. Modern helicopter borne TEM surveys offer high resolution and effective signal to noise ratio from large loops suspended 30m-40m above the ground.

Enterprise's TEM survey consists of 91 east-west lines 400m apart and totals some 624 line km's. The survey covers Enterprise's Prospecting Licences 20/2302 and P20/2303, the eastern half of E20/944, the Wattagee horizon in E20/913, the Emily Well horizon in E20/912, and the interpreted NW continuation of these two horizons up to the northern limit of E20/911.

NRG's Xcite™ system when compared to all other AEM technologies available in the market is uniquely qualified and is unparalleled in its abilities. It is the only system that offers early time (near surface) resolution due to its very fast transmitter pulse turn-off speed, coupled with late time (deep penetrating) performance in a single pulse waveform.

**The streaming data provides an along line resolution of ~0.5m with uninterrupted 'soundings' from near surface to >300m depth of investigation. No other AEM system can offer this level of resolution laterally and vertically.**

Based on the TEM results, Enterprise intends to follow up with ground based Moving Loop EM (MLEM) surveys and RC drilling. Due to weather constraints, the commencement date of the survey is currently uncertain.

### **About Enterprise's Murchison Project**

Enterprise acquired much of its current Murchison tenure by purchasing unlisted Calypso Minerals Pty Ltd in December 2018. Extra tenements were subsequently added to bring the total project area to 823km<sup>2</sup>.

Between 1 April 2019 and 17 January 2022, Enterprise's Murchison Project was managed and wholly funded by Evolution Mining Ltd ("Evolution" or "EVN") whose focus was on a major gold exploration program on the western mafic sequence containing the northern extension of the Big Bell Shear Zone. (Refer EVN: ASX release 1 April 2019).

A detailed gravity survey (250m x 250m) was completed by Evolution over the eastern felsic volcano-sedimentary suite referred to in this report, but no electrical geophysics or drilling was undertaken, and Evolution withdrew from the Farm-in Joint Venture on 17 January 2022 with no retained interest.

This ASX Announcement has been approved in accordance with the Company's published continuous disclosure policy and authorized for release by the Company's Board of Directors.

**Further information, contact:**

Dermot Ryan - Director

Ph: +61 8 6381 0392

[admin@enterprisemetals.com.au](mailto:admin@enterprisemetals.com.au)

---

**Competent Person Statement**

*The information in this report that relates to Exploration Activities and Results is based on information compiled by Mr Dermot Ryan, who is an employee of Montana Exploration Services Pty Ltd and a Director and security holder of the Company. Mr Ryan is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ryan consents to the inclusion in this report of the matters based on information in the form and context in which it appears.*

**Murchison Project References**

WP14 and 15: Nunn, R.H., 1971. Annual Report, Mineral Claims 694- 697, 985- 988, 1029- 1033 and 1215- 1216. Unpublished Report for Eastmet Minerals N.L. WAMEX Open File Report a2771.

WP135: Harris, M.P., 1976. Wattagee- Project 667. Annual report for the period ending March, 1976. Unpublished Report for Esso exploration and Production Australia Inc. WAMEX Open File Report a6264.

WP138: Robinson, S.H., 1976. Wattagee-Project 667. Annual report for the period ending 31/12/1976. Unpublished Report for Esso Exploration and Production Australia Inc. WAMEX Open File Report a6744

Wilhelmji, H.R., 1990. Evaluation of the Wattagee Hill Volcanogenic Massive Sulphide Deposits, North of Cue, Murchison of Western Australia. Unpublished Report for Outokumpu Exploration Australia Pty Ltd. WAMEX Open File Report a31198