Potential Extension of VHMS Mineralisation at AM14 Cu/Zn Project, Murchison WA

- **The recent Moving Loop Electromagnetic (MLEM) survey at Murchison has identified several strong conductors at AM14 and Eastmet VHMS prospects.**
- **A large and highly conductive feature at AM14 is down plunge of historic drill holes that intersected massive sulphide zinc, copper and gold mineralisation.**
- **Follow up drilling, DHEM and MLEM are recommended to properly characterise and test these anomalies.**

MLEM Survey

In June 2023 six survey lines of high-powered ground based MLEM were acquired over airborne EM targets associated with the historic AM14 and Eastmet massive sulphide Zn/Cu prospects.

Refer Figure 1 for Location of MLEM Lines over Channel 40 AEM Image.

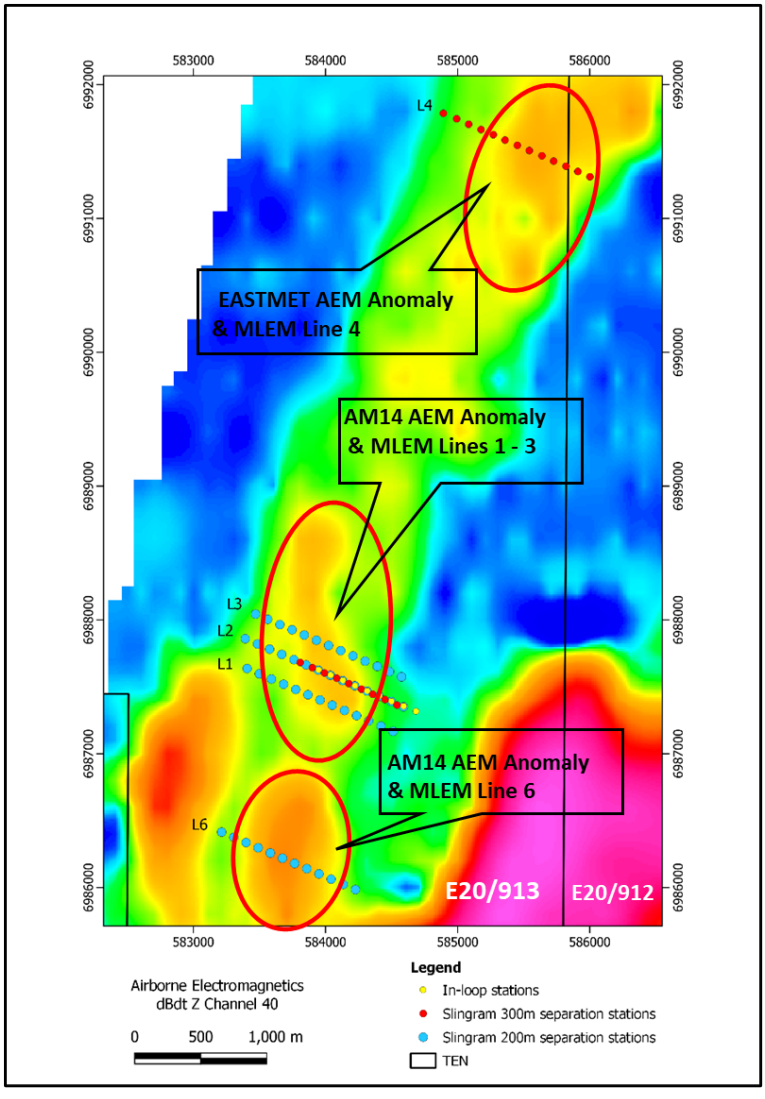

Figure 1. Location of MLEM Lines over Gridded Image of Channel 40 Airborne EM Data

AM14 - MLEM

- Historical drilling through large conductive feature (7350 Sm) has intersected base metal mineralisation.
- High grade base metals and gold mineralisation intersected up dip from conductor.
- Conductor untested down plunge from known mineralisation.
- No drilling has intersected the smaller discrete anomalies.
- Highly conductive, thick unit (late time purple plate) coincident with magnetic anomalies

Refer Figure 2, plan view of MLEM Lines 1-3 with modelled EM plates over RTP Magnetic Image

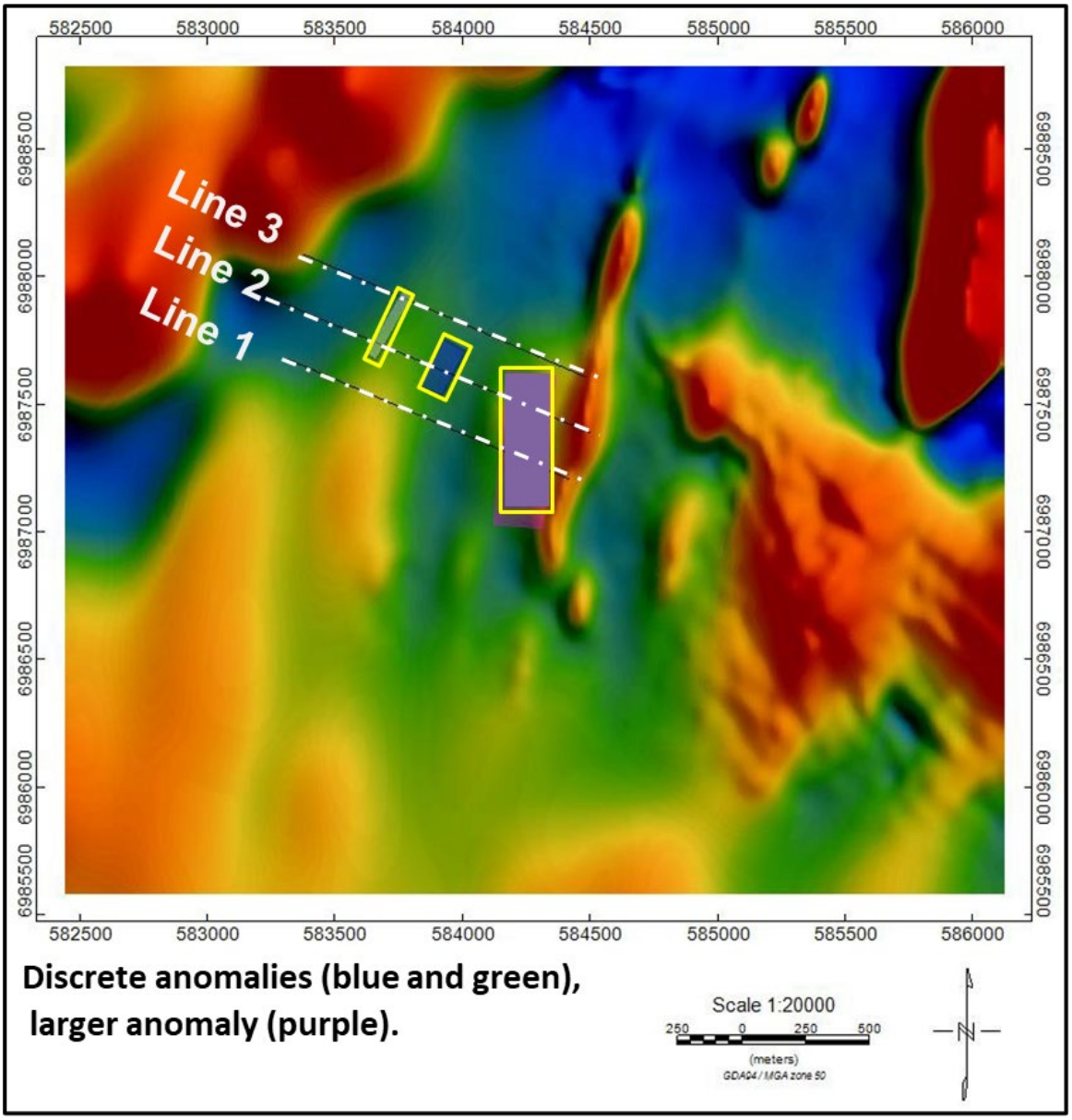

Figure 2. Plan View Lines 1-3, Modelled EM plates over Reduced to Pole Magnetic Image.

Refer Figure 3 overleaf for Cross Section (MLEM Line 2) with historical drilling and modelled MLEM plates.

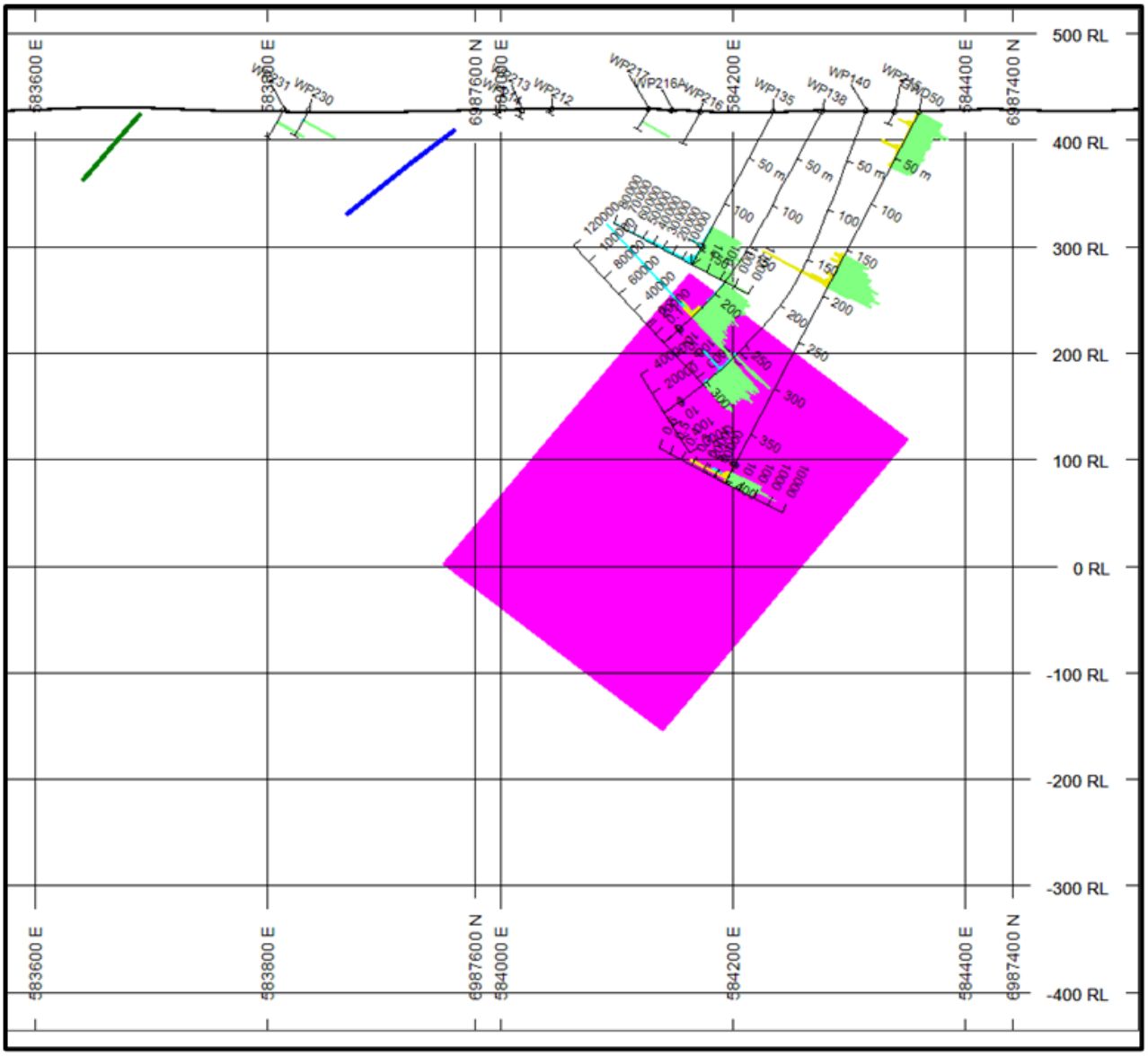

Figure 3. Cross Section (MLEM Line 2) with Historical Drilling and Modelled EM plates (green, blue, purple)

Table 1. Purple Plate Parameters

Plate	Purple
Size (m)	600 m x 350 m x 250 m
Conductivity thickness (Sm)	7350 Sm
Depth to centre top (m)	225 m
Channels	Late-time

A summary of historic drill holes on MLEM Lines 1 and 2 are shown in Table 2 overleaf.

Table 2. Historic Drill Hole Intersections on MLEM Line 2 (~987400mN) and Line 1 (~6987200mN)

Hole ID	Collar East MGA_50	Collar North MGA_50	RL (m)	Max Depth (m)	From - To (m)	Int (m)	Cu (ppm)	Pb (ppm)	Zn (%)
WP106*	584082	6986957	423	130	116 -119	3	486	441	0.62%
WP108	584120	6987408	431	80	60 - 80	20	880	440	0.63%
WP135*	584201	6987412	428	205.5	164 -167	3	6,976	2,505	4.68%
WP138*	584253	6987418	450	257	228 - 231	3	4,200	5,300	7.50%
WP139*	584227	6987263	428	250	205 - 210	5	600	300	0.44%
WP141*	584225	6987032	417	323.5	307.5 - 308.6	1.1	3,600	6,000	7.07%
GWD50*	584354	6987421	431	402.9	395.26 - 396.61	1.35	2,000	800	1.79%
GWD51*	584304	6987217	431	385.6	178 - 182	4	1,845	400	1.00%
GWD51*	584304	6987217	431	385.6	321.25 - 321.6	0.35	500	412	1.04%

* *with diamond core tail.*

Eastmet - MLEM

- Line 4 contains 2 discrete conductors (5000 Sm and 4500 Sm).
- No historic drilling recorded in close proximity to the modelled plates.
- The green conductor is coincident and parallel with flank of magnetic anomaly.
- The orange conductor is also coincident with region of increased magnetic amplitude.

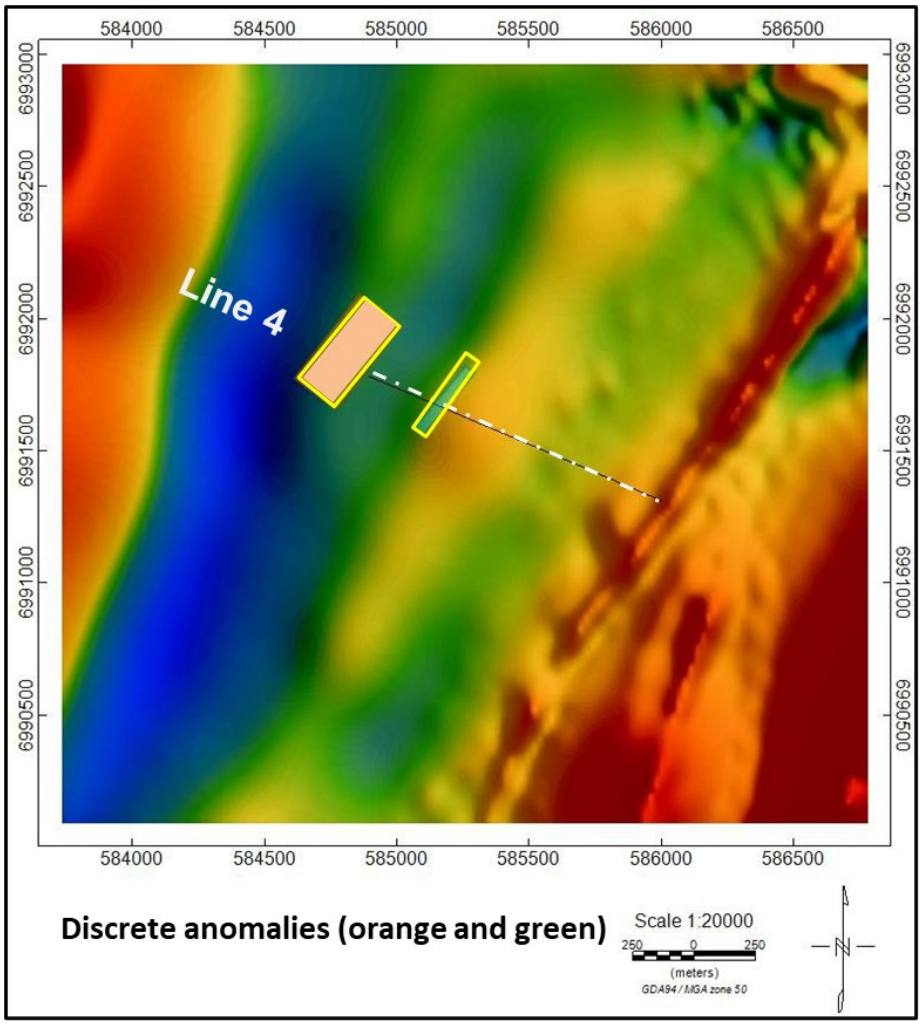

Figure 5. Plan View Line 4, Modelled EM plates over reduced to pole Magnetic Image.

Table 3. Orange and Green Plate Parameters

Plate	Green	Orange
Size (m)	300 x 400	400 x 600
Conductivity thickness (Sm)	5000	4500
Depth (m)	30	20
Channels	Late-time	Late-time

Background

In early 2023 geophysical consultants Terra Resources Pty Ltd integrated the airborne EM data with Enterprise's detailed ground gravity and airborne magnetic data, and historic surface and drill hole geochemistry, and identified a number of targets for follow up. *Refer Figure 6 below for details.*

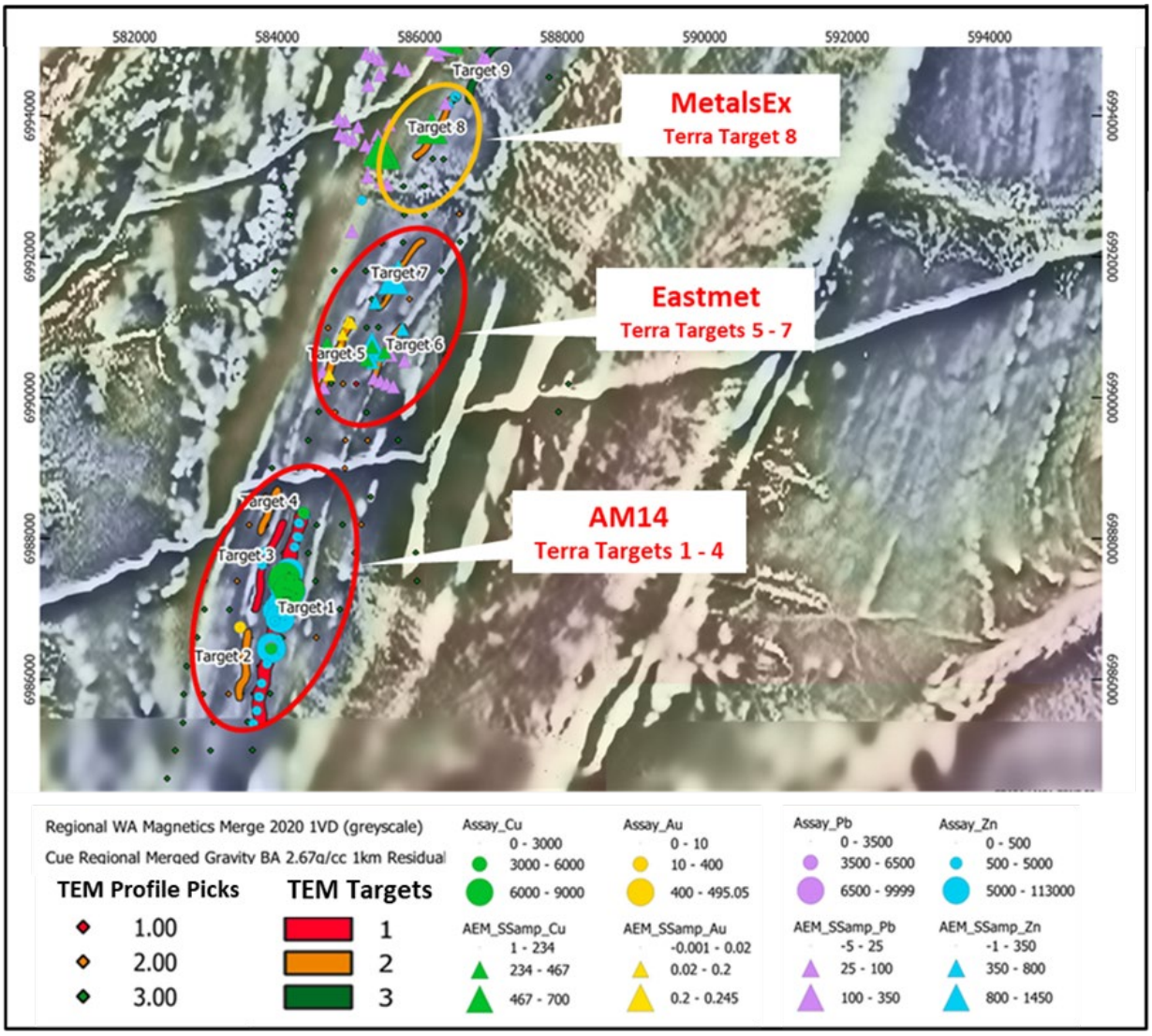

Figure 6. Location of AM14, Eastmet - MetalsEx EM Targets with Max. Geochem over Grey Scale Magnetics and Colour Gravity

Mapping by Esso Exploration and Production Australia Inc. (Esso) and Eastmet Minerals Ltd (Eastmet) in the early 1970's discovered a number of gossan outcrops rich in zinc and copper near Wattagee Well, 30km north of Cue in WA. These prospects were explored with rockchip and soil sampling, an INPUT survey, Induced Polarisation (IP) surveys and ultimately angled percussion and diamond drill holes.

Esso intersected significant downhole widths and grades of zinc-copper sulphide mineralisation at the AM14 and Eastmet Gossan prospects. The majority of these drill holes were quite shallow (between 20m - 80m depth) but deeper holes at AM14 returned the best results of 3m @ 7.5% Zn from 228m (WP138) and 3m @ 4.68% Zn from 164m. (WP135). (Ref 2.]

In September 2022 New Resolution Geophysics Australia Pty Ltd (NRG) completed a helicopter borne EM survey north of Cue for Enterprise Metals, over the historic felsic volcano-sedimentary suite hosting the Wattagee and Eastmet Zn-Cu gossan trends. [Ref. 2, *Inc. JORC Table 1*]

Conductivity Depth Imaging (CDI) of the TEM data at an RL of 275m identified 5 clusters of conductors associated with the known isolated prospects discovered in the 1970's. Enterprise's TEM survey has extended the conductive target zones beyond the surface gossans that were drill tested by the early explorers in the 1970's. [Ref. 2]

This ASX Announcement has been approved in accordance with the Company's published continuous disclosure policy and authorised for release by Dermot Ryan, Director.

Further information, contact:

Dermot Ryan - Director Ph: +61 8 6381 0392 admin@enterprisemetals.com.au

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Forward Looking Statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management. Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future.

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.

Enterprise ASX References:

1. *Enterprise Acquires Major Landholdings North of Cue, WA 9 Oct 2017*
2. *Multiple Conductors Identified along Zn-Cu VMS trend at Murchison Project. 7 Oct 2022*
3. *Thirteen Late Time AEM Zn-Cu Targets Identified at Murchison Project. 31 Jan 2023.*
4. *Murchison Project Exploration Update., 26 April 2023.*
5. *MLEM Survey Completed at Murchison Zn-Cu Prospects, 15 June 2023.*

Open File References

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.

Unknown, 1987. Exploration Licence 20/01, Gidgie Well, Final Report for EL 20/01, Unpublished Chevron Report.

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.

JORC Code, 2012 Edition – Table 1 Report

Section 1. Murchison Project - Sampling Techniques and Data

Murchison Project - Eastern Felsic Volcanoclastic Suite

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	• Commencing in 1970, active exploration for Volcanogenic Hosted Massive Sulphides (VHMS) deposits in the Eastern Felsic Volcanoclastic suite north of Cue was undertaken by Esso Exploration and Production Aust, Eastmet Minerals NL and others. However, between 1980 and 2020, the focus of most explorers in the Murchison area was on gold exploration, with scant focus on base metals. • In September 2022 New Resolution Geophysics (NRG™) undertook a modern helicopter Airborne Electromagnetic Survey (AEM) over the Eastern Felsic Volcanoclastic suite of rocks for Enterprise Metals Ltd. • 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 provided 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. • Enterprise's AEM survey consisted of 91 east-west lines 400m apart and totalled some 624 line km's. The survey covered Enterprise's Prospecting Licences 20/2302 and P20/2303, the eastern half of E20/944, the Wattagee VMS horizon in E20/913, the Emily Well VMS horizon in E20/912.
Drilling techniques	• No drilling has been undertaken by Enterprise in the Eastern Felsic Volcanoclastic suite of rocks on E20/944, E20/913 or E20/912.
Drill sample recovery	• Drill sample recovery is not relevant at this stage as Enterprise has not drilled any holes in this part of the Murchison project.
Logging	• Drill hole logging is not relevant at this stage as Enterprise has not drilled any holes in this part of the Murchison project. • Historical drill holes in the 1970's and 1980's were logged and interpreted by ASX listed companies with qualified geologists.

Criteria	Commentary
Sub-sampling techniques and sample preparation	• Sub-sampling techniques and sample preparation are not relevant at this stage as Enterprise has not drilled any holes in this part of the Murchison project.
Quality of assay data and laboratory tests	• Assay data and laboratory tests are not relevant at this stage as Enterprise has not drilled any holes in this part of the Murchison project. • Historical samples from drill holes and soils analysed in the 1970's and 1980's were analysed by reputable licenced mineral laboratories in WA. • With regards to the airborne EM data collected by NRG, the raw data collected in the field underwent a strict routine of levelling and processing and has now been forwarded to Enterprise and Enterprise's geophysical consultants for review, analysis and recommendations.
Verification of sampling and assaying	• No verification of sampling and assaying has been undertaken as Enterprise has not drilled any holes in this part of the Murchison project. • NRG has strict protocols in place to guarantee quality data from the AEM survey.
Location of data points	• The altitude of the NRG receiving bird was 30m to 40m (Tx-Rx array), and a 60 to 70m (helicopter altitude) was employed and varied from time to time due to tree height. • The magnetometer sensor was located mid-way between the bird and the helicopter. A minimum line length of 3km was utilised for the flight path. • The X, Y co-ordinates for the AEM data were collected and stored in MGA 94-Zone 50 using a Novatel DL-V3L1L2 GPS unit. • An SF11/C (Loop) and SF00(Heli) Laser Altimeter with 1cm resolution was used for capture of sensor height above terrain. • The Radar Altimeter was calibrated at the start of each survey.
Data spacing and distribution	• The flight line spacing for the 2022 AEM survey was 400m.
Orientation of data in relation to geological structure	• The flight lines were arranged on East- West lines, on GDA 94-50 Northings. • The flight lines were approximately orthogonal to the interpreted stratigraphy and VMS horizons.
Sample security	• NRG handled all field data and processing and modelling the AEM data was undertaken by Terra Resources Pty Ltd.
Audits or reviews	• No audits have been undertaken on the processed and modelled AEM data.

Section 2. Murchison Project - Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The Murchison Project is comprised of 2 granted Exploration Licenses in the name of Calypso Minerals Pty Ltd, and 1 granted Exploration Licence and 2 granted Prospecting Licenses in the name of Enterprise Metals Limited. • Calypso Minerals Pty Ltd is a wholly owned subsidiary of Enterprise Metals Limited. See Tenement table overleaf:

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
<table>
<tr><th>Lease</th><th>ENT % Interest</th><th>Grant Date</th><th>Expiry Date</th><th>Comments</th></tr>
<tr><td>E20/912</td><td>100%</td><td>18/05/2018</td><td>17/05/2023*</td><td>*Extension of Term lodged.</td></tr>
<tr><td>E20/913</td><td>100%</td><td>22/05/2018</td><td>21/05/2023*</td><td>*Extension of Term lodged.</td></tr>
<tr><td>E20/944</td><td>100%</td><td>06/09/2019</td><td>5/09/2024</td><td></td></tr>
<tr><td>P20/2302</td><td>100%</td><td>18/05/2018</td><td>17/05/2026</td><td></td></tr>
<tr><td>P20/2303</td><td>100%</td><td>18/05/2018</td><td>17/05/2026</td><td></td></tr>
</table>

Native title is held by Wajarri Yamatji Group. The Group is engaged to undertake Cultural Heritage Surveys across any drill programs prior to drilling. Any historical sites are registered, and Cultural Heritage reports are made public.
No Heritage sites are not known to exist within the current lease package.

*E20/912 and E913 are in good standing and Enterprise is confident that its Extension of Term applications will be approved based on the recent and ongoing exploration programs.
</td></tr>
<tr><td>Exploration done by other parties</td><td>

From the early 1970's to about 1980, the main exploration focus was for base metal (Cu, Zn) within the felsic volcanic suite that lies between the Wattagee VMS Horizon and the Emily Well VMS Horizon.
The main explorers at this time were Shell, Esso, Chevron utilising extensive RAB drilling, with follow up percussion and diamond core drilling. Outokompu undertook an extensive review and compilation of the project data in 1990.

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<tr><td>Geology</td><td>

The Murchison leases sit within the Archean Wattagee Hill Greenstone Belt in the North Western part of the Murchison Domain of the Yilgarn Craton. Regional geology is based upon GSWA regional airborne magnetic surveys and previous GSWA geological mapping. Mineralisation in the area is mainly shear hosted but other styles of mineralisation are present.
Note: there is very little exposed bedrock in much of the area as basement rock is obscured by alluvium, laterite and transported cover.
Detailed mapping and information from historic drilling has shown that the geology of the Wattagee area is composed of a sequence of volcanic and volcaniclastic rocks that have been isoclinally folded into a northeast-trending syncline. The syncline has been structurally modified by faulting along the axial surface, resulting in the faulted juxtaposition of its two limbs in the south, and by refolding along a northwest trending axial surface.
A number of lithological stratigraphic units have been recognised in the limbs of the syncline and are listed below:

Unit 1: Felsic volcanic and andesite porphyry succession of unknown thickness that is exposed at Emu Hills and to the east of the Eastmet and AM14 volcanogenic massive sulphide areas.
Unit 2: A 500 -700m thick basalt succession with thin intercalated horizons of tuff and graphitic shale exposed between the AM14 and Eastmet volcanogenic massive sulphide areas. The latter horizons host the Cu and Zn rich massive sulphide deposits at AM 14 and Eastmet.
Unit 3: A 700 – 800m thick basalt succession.
Unit 4: A 1,000 – 1,500m thick succession of tuff, lapilli tuff, volcanic breccia and felsic volcanics. A number of graphitic and sulphidic shale horizons are interbedded in the sequence. A basalt lense is also present in the succession.
Unit 5: A 250mthick basalt succession.

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Criteria	Commentary
	• A series of gabbro and ultramafic bodies have been emplaced between the felsic volcanic and basalt successions of Unit 1 and 2 between the AM 14 and Eastmet areas. Many of these igneous bodies are differentiated into lower ultramafic and upper mafic divisions and some of them host low grade copper and nickel mineralisation. • Of the five lithostratigraphic units, the basalt and intercalated shale – tuff succession of Unit 2 has the greatest economic potential because of the presence of copper and zinc-rich volcanogenic massive sulphides. However, based on the historic drilling, all of the identified volcanogenic massive sulphide deposits (Eastmet, Kennecott, AM 14) are sub-economic at the present time. • Exploration data from previous explorers is a valuable legacy and can assist Enterprise in future exploration in the adjacent covered and untested areas.
Drill hole Information	• To date, Enterprise has not undertaken any drilling within the eastern felsic volcanic suite, but the Company has compiled an extensive digital database containing previous explorer's drill hole attributes and down hole geochemical analytical data. • Due to the exploration reporting practices of the early 1970s, much critical drill hole data cannot be found in the DMIRS Wamex Open File Reports. • However the database has been useful in the interpretation phase of the AEM data, where gossans were exposed at surface. • Previous explorers initially used shallow RAB and percussion drill holes to test below the gossans, and following significantly elevated Zn and Cu values, undertook some Induced Polarisation (IP) surveys, and drilled follow up deeper diamond drill holes. • A significant number of these deeper holes intersected disseminated and massive Zn and Cu sulphides which have not been followed up.
Data aggregation methods	• No relevant new data to aggregate at the present time.
Relationship between mineralisation widths and intercept lengths	• Targets identified by the 2022 AEM survey were followed up in June 2023 with ground based Moving Loop Electromagnetic (MLEM) surveys conducted by Wireline Services Group (WSG). • Six MLEM survey lines over were completed over Priority 1 AEM Targets associated with historic AM 14 and Eastmet Zn/Cu prospects. • Processing and modelling of the 2023 MLEM survey data has been undertaken by Terra Resources Pty Ltd (Terra), a company with extensive experience of processing and interpreting MLEM data. • Significant late time and complex conductors have been identified and modelled by Terra Resources, and recommendations have been made for additional follow up MLEM surveys. • A number of these late time conductors sit below massive sulphide intersections in historical drill holes. • *Note:* Estimated True Widths of massive sulphide intersections in historical drillholes were not recorded in historical reports.
Diagrams	• Digitising of key historical drill sections is underway, along with historical hole location diagrams and representative exploration results.

Criteria	Commentary
Balanced reporting	• Intersection lengths and Zn and Cu grades for the historical drilling associated with MLEM Lines 1 -3 are reported as down-hole, length weighted averages of grades.
Other substantive exploration data	• Enterprise has captured other historical exploration data sets including multi-element data for surface samples, field mapping data, outcrop rock chip data and geophysical surveys which include historical IP data. Refer ASX release 31 January 2023.
Further work	• Further exploration work on the eastern felsic volcanic suite will include follow up MLEM lines, and then reverse circulation drilling with diamond core tails.