ASX RELEASE



# MURCHISON PROJECT (WA) AIRBORNE SURVEY DATA RECEIVED

Enterprise Metals Limited (ASX: ENT; "Enterprise" or "the Company") is pleased to advise that it has received the data from the recently completed 4,352 line km airborne magnetic and radiometric survey over the south-west portion of the Company's 100% owned Murchison Gold and Base Metals Project in Western Australia.

This detailed and low level (line spacing 50m, flying height 30m) survey has covered the northern extensions and the junction of the mafic units hosting the Big Bell gold deposit and the Cuddingwarra gold deposits. This junction represents a prime exploration target, which is entirely covered by alluvium and under-explored.

The 2018 survey data has been image processed and stitched into Enterprise's existing airborne magnetic data set. Preliminary processing and interpretation of the magnetic data has commenced, but a more rigorous and detailed litho-structural interpretation for gold and base metal targets will be conducted in the December Quarter. (Airborne Survey specification are shown in Appendix 1)

The preliminary magnetic image (Figure 1 below) shows the detailed survey with pre-existing magnetic data and WAMEX Max-Au drill hole data. Figure 2 overleaf illustrates the extent of alluvial cover.



Figure 1. Murchison Project 1<sup>st</sup> Vertical Derivative (1VD) Magnetic Image over Drill Hole Max Au





MURCHISON PROJECT – BACKGROUND

(Refer ENT ASX release 24 May 2018)

Enterprise's ~700 km2 Murchison Project is 35km north of Cue and covers Archaean rock sequences prospective for orogenic gold and volcanogenic massive sulphide (VMS) copper-zinc deposits. The project includes strike extensions of the gold mineralised Big Bell, Cuddingwarra, Chieftain (or Mt Magnet) and Emily Shear Zones, and the Wattagee and Emily Well VMS horizons.

Recent geochemical work by the Geological Survey of Western Australia (GSWA) indicates that the felsic volcanics in both the Wattagee and Emily Well horizons have geochemical characteristics consistent with VMS fertile packages across the Yilgarn and Canadian Abitibi Provinces.

While the Cue district contains several major gold mines, including Westgold's Big Bell (2.8 Moz historical production and 2.5 Moz resource), Day Dawn (Great Fingall and Golden Crown mines, 1.7Moz historical production and 0.89 Moz resource) and Cuddingwarra camp gold mines (0.8 Moz production and current resources of 0.55 Moz), these deposits were easily found because they outcropped. Enterprise's Murchison Project area is under-explored due to surficial cover.

The Enterprise team has significant experience in exploring for and discovering "blind" mineral deposits in the deeply weathered Yilgarn of Western Australia, and makes extensive use of airborne and ground geophysics to "see through" the cover and define favourable litho-structural targets for drill testing. Figure 3 below shows the regional geological setting of the Murchison Project.

# Figure 3. Murchison Project over Interpreted Bedrock Geology & Competitor Landholdings Showing Gold Endowment (Moz produced + Moz current resource)



Further information Dermot Ryan Managing Director

# **APPENDIX 1- 2018 Murchison Airborne Survey**

**Primary Equipment Configuration** 

Channel				Frequency	Distance	
Magnetics				20 Hz	"'3.5 metres	
Spectrometer			2 Hz		"'35 metres	
Traverse	Traverse Line	Tie Lir	ne	Tie Line	Sensor	Total Line
Line spacing	Direction (deg)	Spacing (	m)	Direction (deg)	Height* (m)	Kilometres
(m)						
50	090-270	500		000-180	30	4,352

\*Some draping may occur due to terrain and/or safety considerations.

## Data Acquisition System

• Sample rates up to 20 Hz

• Integrated Novatel OEM GPS receiver providing positional information that is used to tag incoming data streams **in** addition to providing pilot navigation guidance

- Current monitoring
- Visual real time on-screen system monitoring/ error messages to limit re-flights due to equipment failure

### Magnetometer

Geometrics GR823 tail sensor; mounted in a stinger housing.

•	Sensor Type	Caesium vapour
•	Resolution	0.001 nT
•	Sensitivity	0.01nT
•	Sample Rate	20 Hz (::::3.5 metre sample interval) 3-
•	Compensation	axis fluxgate magnetometer

### **Gamma-Ray Spectrometer**

RSI RS-500 gamma-ray spectrometer, incorporating 2x RSX-4 detector packs.

- Total Crystal Volume 32 L
- Channels 1024
- Sample Rate 2 Hz
- Multi-peak automatic gain stabilisation

### Altimeters

Bendix/King KRA 405 radar altimeter.