



**"Venus Metals Corporation holds a significant and wide-ranging portfolio of Australian gold, base metals, lithium, rare earth and vanadium exploration projects in Western Australia that has been carefully assembled over time."**

## VENUS METALS CORPORATION LIMITED

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*Managing Director*

Kumar Arunachalam  
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Barry Fehlberg  
*Non-Executive Director*

### COMPANY SECRETARY

Patrick Tan

Ordinary shares on Issue	178m
Share Price	\$0.15
Market Cap.	\$26.7m
Cash & Investments	\$6.6m
(as at 31 December 2022)	



## Marvel Loch East Rare Earth Project

### High-res aeromag survey identifies priority drill targets for clay-hosted and fresh rock REE mineralisation

Venus Metals Corporation Limited ("Venus" or the "Company") is pleased to announce the preliminary results of a recent high resolution 50m line spaced aeromagnetic survey on its tenement E15/1796 and ELA 15/1946, located ~60 km east of Marvel Loch (Figure 1).

#### HIGHLIGHTS:

- The detailed aeromagnetic and radiometric survey has delineated demagnetised zones along the main magnetic feature that may indicate deep weathering of the REE-enriched monzogranite, and that therefore present favourable targets for clay-hosted REE mineralisation.
- The survey also identified magnetic features within the ~25 km-long magnetic trend (Anomaly 1) and a nearby ovoid magnetic feature (Anomaly 2) (Figure 2) that present priority drill targets for bedrock-hosted REE mineralisation.
- Anomaly 2, is an ovoid shaped, zoned magnetic anomaly approximately 2.5km x 3km in size. It is characterised by a strong magnetic aureole surrounding a non-magnetic core. The anomaly includes limited outcrop of monzogranite that is also anomalous in REE with up to 4,365 ppm TREO (VMC ASX releases 30 September 2022 and 16 January 2023).

#### WORK PLANNED AND/OR ONGOING:

- Aircore drilling to target specific demagnetized zones along the regional magnetic highs to explore for thick zones of potential clay-hosted REE mineralisation in the residual weathering zone.
- Reverse circulation drilling to target bedrock-hosted REE mineralisation associated with monzogranite in two different settings.
- Application for EIS government co-funded exploration drilling submitted.
- Further soil and rockchip sampling to test new radiometric anomalies.

## Project background

The Marvel Loch East Project is located approximately 60km east from Marvel Loch, WA (Figure 1). It is comprised of one granted exploration licence (E15/1796) and four applications (ELAs 15/1944, 15/1946, 15/1947 and 77/2721) for a total area of 283 blocks (828 km<sup>2</sup>). The project is considered prospective for rare earth mineralisation with initial soil sampling programs returning up to 6,092 ppm total rare earth oxides (TREO) (VMC ASX release 30 September 2022).

The arcuate and ovoid magnetic highs within granite terrain of E15/1796 are suggestive of a regional-scale magnetite-bearing monzogranite that is enriched in rare earth elements (REE). Rock chip samples from outcropping monzogranite have yielded maximum TREO concentrations of 4,365 ppm in the eastern target area and of 2,292 ppm in the western target area of E 15/1796 (refer ASX release 16 January 2023). These results are ~10 to 20 times the average crustal abundance for TREO (Taylor & McLennan, 1995).

Scanning electron microscopy (SEM) studies and optical microscopy show the monzogranite is dominated by albite, k-feldspar, quartz, biotite, magnetite ± titanite, rutile, zircon, chlorite, apatite and Ca-Fe amphibole. **The primary magmatic REE mineral throughout the monzogranite is allanite** (Ce,Ca,Y,La)<sub>2</sub>(Al,Fe<sup>+3</sup>)<sub>3</sub>(SiO<sub>4</sub>)<sub>3</sub>(OH) along with minor REE-bearing titanite and apatite. Allanite occurs in association with biotite and magnetite, and the release of REEs from the primary REE host (allanite) in surface samples is favourable for the formation of REE-enriched clays (refer ASX release 16 January 2023).

## Current work

A high resolution 50m line spaced aeromagnetic survey totalling 9,356 line km was completed over project tenements E15/1796 and ELA 15/1946 to further refine magnetic and radiometric anomalies apparent in the wide-spaced regional government aeromagnetic survey considered prospective for REE (Figure 3).

The survey results indicate that the project area comprises mainly granitic rocks with several large magnetic features related to magnetite-rich granitic bodies and Proterozoic dykes. The radiometric ternary images indicate that the area is mostly covered by recent sediments, well-developed salt lake systems and drainages.

Three strong magnetic anomalies have been defined by the aeromagnetic survey of which two are within the granted E15/1796 (Figure 2). Of these the most prominent (Anomaly 1) is a north-northeast trending lenticular anomaly approximately 700m in width which can be traced semi continuously over a 25km strike length. The southern (Figure 4) and northern ends of this anomaly correspond to outcropping monzogranite anomalous in REE (VMC ASX release 30 September 2022) which are also associated with anomalous potassium. The strong magnetic response of the monzogranite reflects a significant magnetite content.

Anomaly 2 is an ovoid shaped, zoned magnetic anomaly approximately 2.5km x 3km in size. It is characterised by a **strong magnetic aureole surrounding a non-magnetic core** with limited outcrops of monzogranite that are also anomalous in REE (VMC ASX release 30 September 2022). These magnetic anomalies represent significant zones prospective for REE mineralisation based on the previous soil and rockchip analyses (Figure 5).

Furthermore, weathered magnetic monzogranite may show residual REE enrichment due to dissolution and concentration of primary REE to form clay-hosted secondary rare earth mineralisation. Zones of deeper weathering, potential implying thicker zones of REE enrichment, may be preferentially located along or close to cross cutting structures and faults, and may appear as demagnetised zones in the aeromagnetic imagery, suggestive of weathering of magnetite and

formation of hematite, or, alternatively, due to clay zones above non-magnetite bearing basement rock.

Using this relationship, seven de-magnetised targets over a combined strike length of 10km have been selected to represent deep weathering of magnetic monzogranite as potential sites for clay-hosted secondary REE mineralisation. Additionally, sixteen potassium anomalies have been defined targeting outcropping monzogranite REE mineralisation (Figure 3).

## **References**

Taylor, S. R., and McLennan, S. M., 1995, The geochemical evolution of the continental crust. *Reviews of Geophysics*, **33**, 241–265.

This announcement is authorised by the Board of Venus Metals Corporation Limited.

For further information please contact:

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### **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Venus Metals Corporation Limited planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Venus Metals Corporation Ltd believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

### **Competent Person's Statement**

The information in this announcement that relates to aeromagnetic data interpretation and modelling is based on information compiled by Mr M. Cooper who is a member of The Australian Institute of Geoscientists. Mr Cooper is Principal Geophysicist of Core Geophysics Pty Ltd who are consultants to Venus Metals Corporation Limited. Mr Cooper has sufficient experience which is relevant to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Cooper consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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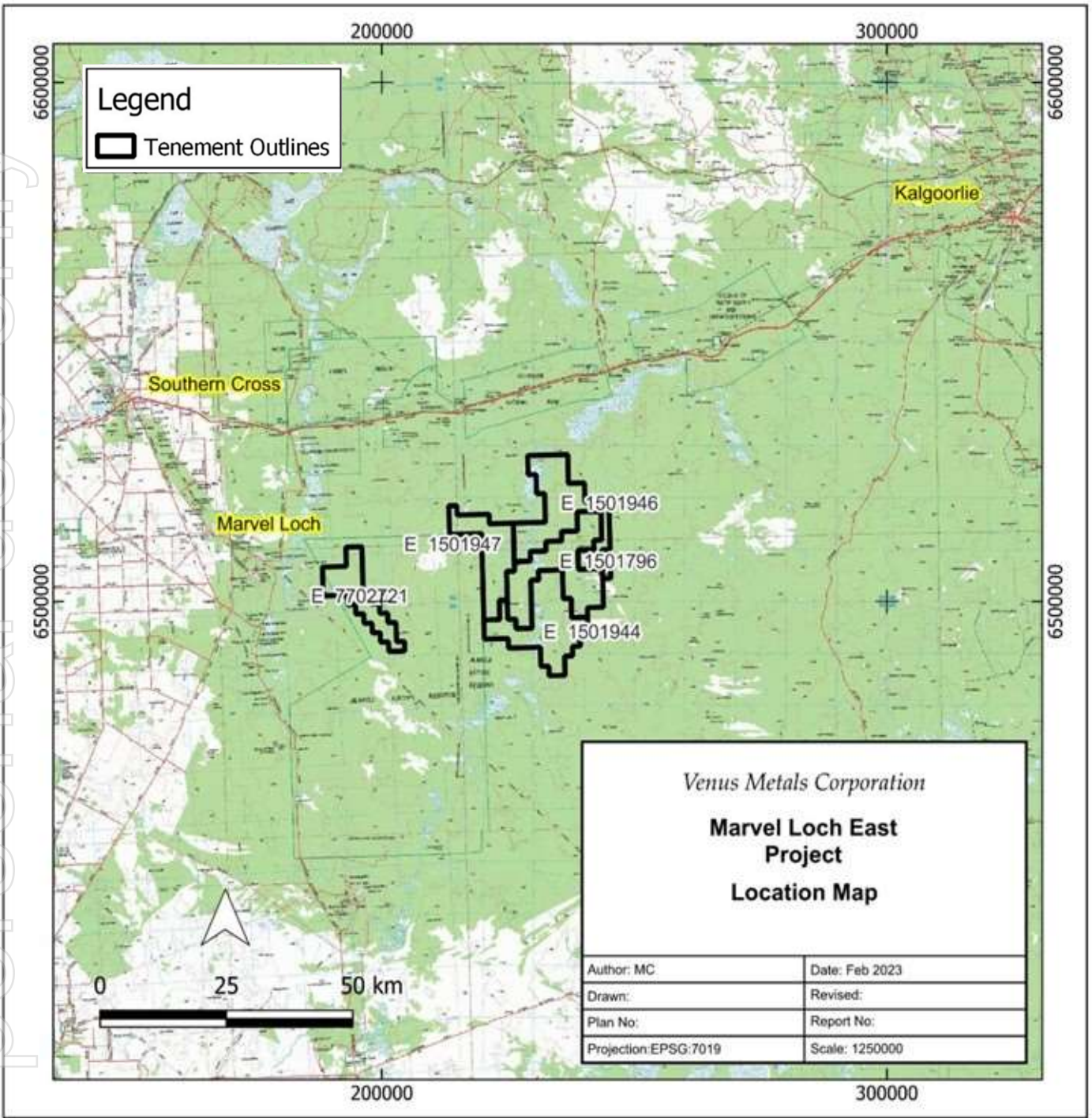


Figure 1. Location of Marvel Loch East Tenements on 250k Topo Map.

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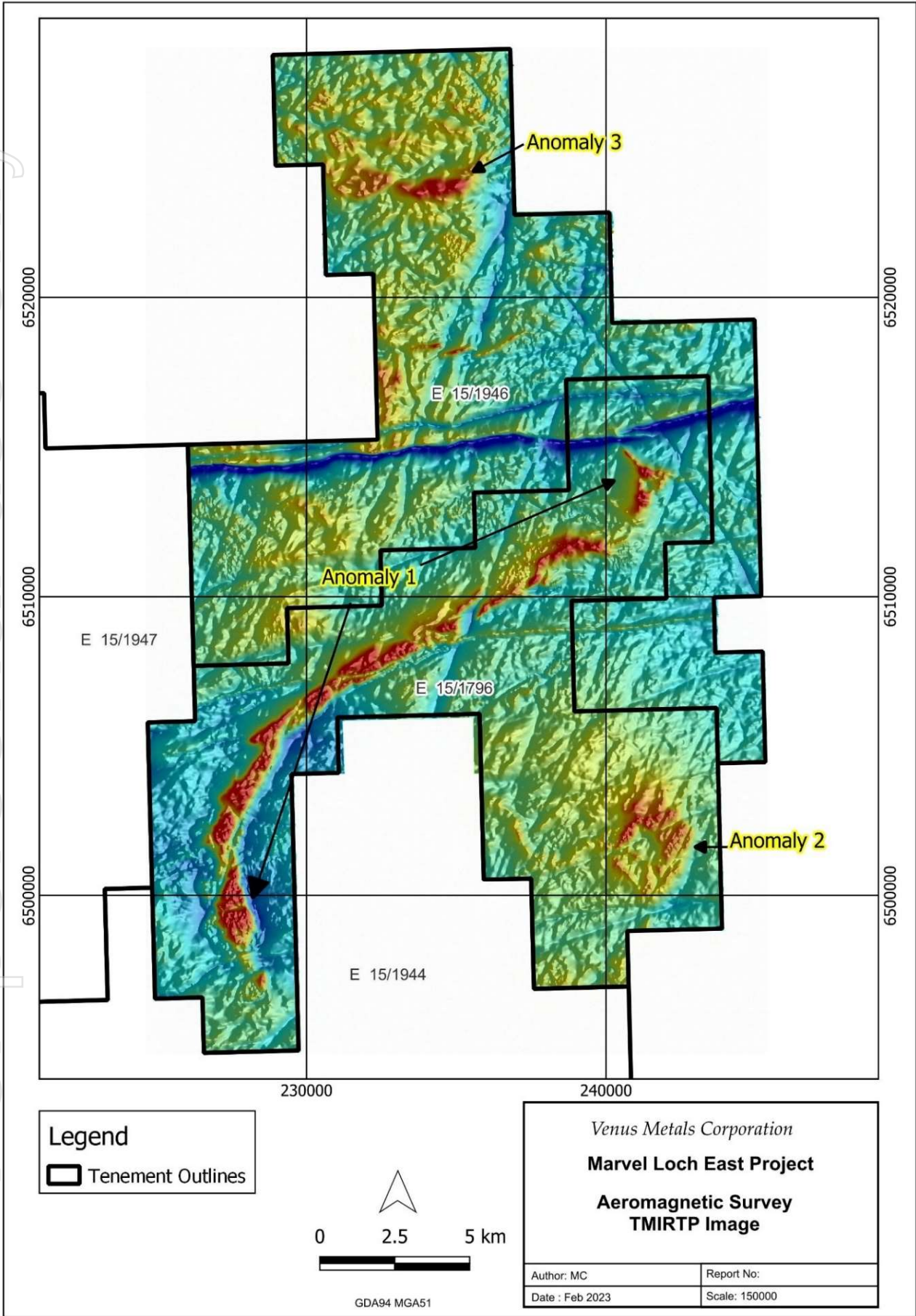


Figure 2. Aeromagnetic TMIRTP image and Anomalies 1 and 2.

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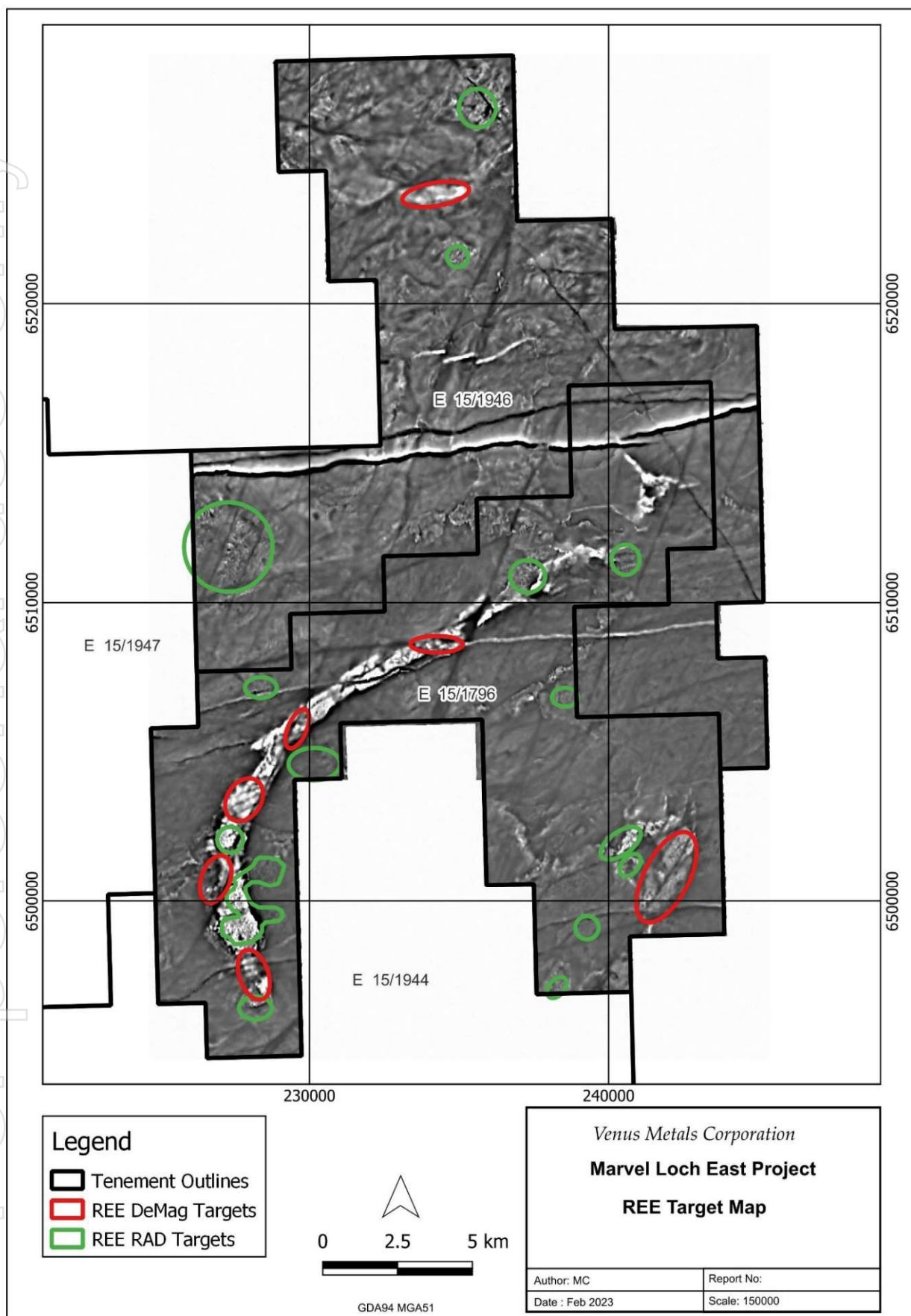


Figure 3. REE targets associated with demagnetized zones and radiometric targets.

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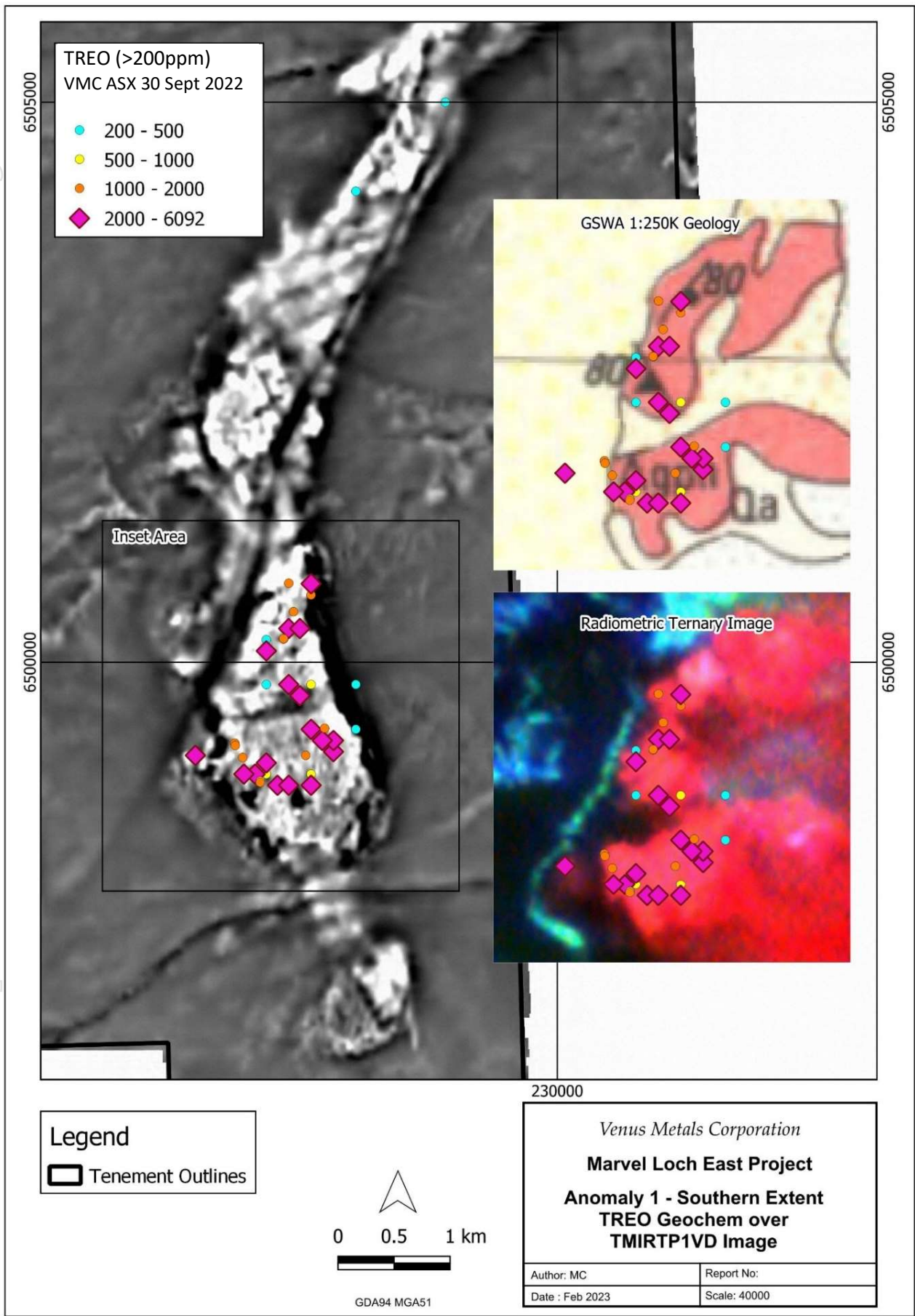


Figure 4. Anomaly 1 – Southern extent TREO in UF soil on TMIRTP1VD Image with GSWA geology and radiometric ternary image for inset area.

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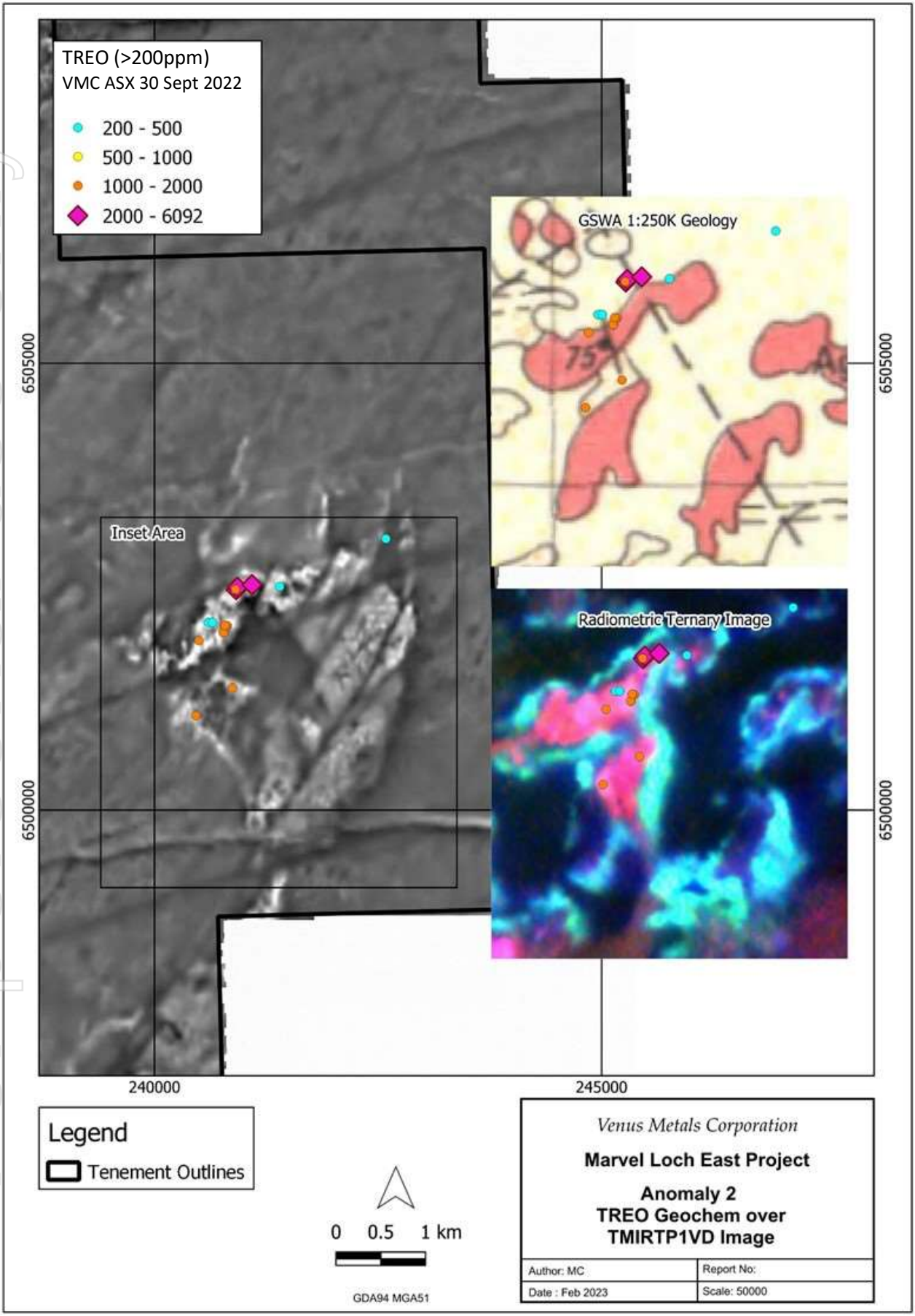


Figure 5. Anomaly 2 – Southern extent TREO in UF soil on TMIRTP1VD Image with GSWA geology and radiometric ternary image for inset area.



# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>• An aeromagnetic survey was conducted over the Marvel Loch East Project over December 2022 and January 2023.</li> <li>• The survey was commissioned by Venus Metals Corporation and completed by Thomson Aviation.</li> <li>• A total of 9,356 line km were collected with the specifications summarised below.</li> <li>- Line Spacing : 50m</li> <li>- Line Orientation : 090-270°</li> <li>- Tie Line Spacing : 500m</li> <li>- Tie line Orientation : 0-180°</li> <li>- Survey Height : 35m (agl)</li> <li>- Magnetic Sensor : G-822A cesium vapour magnetometer</li> <li>- Spectrometer : RSI RS-400 gamma-ray spectrometer (33 Litres)</li> <li>- Sample Rate (Magnetics and DEM) : 20Hz (approx. 3.5m along line)</li> <li>- Sample Rate (Radiometrics) : 2Hz ( approx.. 35m along line)</li> <li>- GPS : Integrated Novatel OEMV-1 VBS receiver</li> </ul> <p>Other details of sampling techniques is not applicable</p>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>• No drilling activity undertaken</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• No drill samples collected</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• Geophysical survey and hence no logging</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• The survey was flown with an Integrated Novatel OEMV-1 VBS GPS with accuracy of Vertical: ±0.5 m, Horizontal: ±1.5 m</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• No Assays carried out for this survey</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• All data was transferred to Thomson personnel on a daily basis for verification.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• All data has been collected in WGS84 datum converted to MGA Zone 50 grid system, automatically by the on-board integrated GPS which employs a recording rate of 20Hz.</li> </ul>

Criteria	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>The line spacing was 50m with data recorded every 0.05 second to provide stations every 3.5m. The data density is considered appropriate to the purpose of the survey. The base station recorded every 6 seconds.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>The line path is approximately perpendicular to the regional strike direction of geological formations and is sufficient to locate discrete anomalies.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>Not applicable for geophysical survey</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The data were verified by Core Geophysics.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<p>E15/1796 is held by Redscope Enterprises Pty Ltd, a wholly-owned subsidiary of Venus Metals Corporation Ltd. The tenement is located on Crown land.</p> <p>Redscope Enterprises Pty Ltd signed a heritage agreement covering E15/1796 with the Marlinyu Ghoorlie Native Title Claimant Group. To the best of Venus' knowledge, there are no other known impediments to operate on E15/1796.</p>
<i>Exploration done by other parties</i>	<p>Bullseye Mining Ltd carried out MMI soil geochemical surveys (2012–2015) across two areas that partly cover E 15/1796; the results identified Au, base metal and REE anomalies (Wamex report A107388).</p> <p>Image Resources NL conducted work (2006–2007) that comprised limited soil sampling and AC drilling (15 holes on E15/1796) targeting Au, Cu and Ni (Wamex report A75927). Drill hole logs indicate that the residual weathering profile is preserved between areas of outcrop.</p> <p>Rosella Creek Mining (2006–2007) conducted desktop studies (Wamex report A75987).</p> <p>Dominion Mining Ltd conducted work (2002–2005) that comprised calcrete, soil and laterite sampling, and shallow RAB drilling (36 holes for c.1100m) along two traverses targeting gold only. The drilling encountered massive biotite granite and felsic granitic gneiss. Drill hole logs indicate that the residual weathering profile is preserved between areas of outcrop (Wamex report A70400).</p> <p>Anaconda Australia Inc, Forrester Gold NL and Inco Australia Ltd explored the tenement area as part of their regional programs targeting Cu, Ni and Au in the 1970s and 1980s (Wamex report A8097 &amp; A9913; A22545 &amp; A29078, and A38751 respectively).</p> <p>Kennecott Exploration Ltd in 1972-1973 tested an oval-shaped magnetic feature in the southeast of the EL for the presence of a carbonatite. Shallow auger samples contained only background values of those elements commonly associated with carbonatites and no further work was carried out (Wamex report A3599).</p>
<i>Geology</i>	<p>The tenement is on the Boorabbin 250k geological sheet (SH51-13). The area is part of the Archaean Southern Cross Province of the Yilgarn Craton. The tenement covers an arcuate magnetic anomaly on the western side of the Boorabbin 250k geological sheet. The mapped bedrock comprises granitoid intrusions (Agr and Agph); the regolith is dominated by sandplain and alluvial sediments within drainage that intersects the western part of the tenement; parts of the tenement are erosional with bedrock and saprock</p>

Criteria	Commentary
	exposed.
<i>Drill hole Information</i>	No drilling done by Venus.
<i>Data aggregation methods</i>	No drilling done by Venus.
<i>Relationship between mineralisation widths and intercept lengths</i>	No drilling done by Venus.
<i>Diagrams</i>	See figures in the announcement.
<i>Balanced reporting</i>	Image of the complete aeromagnetic survey shown in the attached figure.
<i>Other substantive exploration data</i>	To the best of our knowledge, there is no other substantive exploration data for any of the exploration areas referred to.
<i>Further work</i>	Drilling programs are being planned.