REGISTERED OFFICE
Level 8, 99 St Georges Terrace | Perth
Western Australia | 6000
p +61 (8) 9486 4036
f +61 (8) 9486 4799

POSTAL ADDRESS
PO Box 5638 | St Georges Terrace | Perth
Western Australia | 6831
e admin@tarugaminerals.com.au
w tarugaminerals.com.au

Taruga Minerals Limited ACN 153 868 789



13 July 2021

# Exploration Update – Morgan's Creek Copper Prospect

## Highlights

- Morgan's Creek first-pass RC drilling program has been completed with a total of 22 holes drilled for ~2,100m. Assays are expected in mid-late August.
- Sections with elevated copper and zinc have been identified, using pXRF, hosted in breccia, reduced black shales and dolerite.
- Thick intersections of barite (likely hydrothermal in origin) up to 15m wide and associated with elevated copper in an overlying breccia unit (pXRF).
- Dolerites exhibit compositional differentiation and zonation of magnetite.
- Results of this drilling program is assisting with the understanding of the geological setting and controls of mineralisation at Morgan's Creek.

Taruga Minerals Ltd (**ASX:TAR**, **Taruga** or the **Company**) is pleased to announce that the first phase of reconnaissance drilling has been completed at the Morgan's Creek copper prospect, within the Mt Craig Copper Project (**MCCP**), South Australia. The reverse circulation (RC) drilling program consisted of 22 drillholes for a total of ~2,100 metres, with an average depth of 95 metres (ranging between 30m to 300m depth). The drill program was aimed at better understanding relationships between mineralisation, structure, geophysical anomalies and various lithologies within the Morgan's Creek breccia, to guide further targeted drilling.

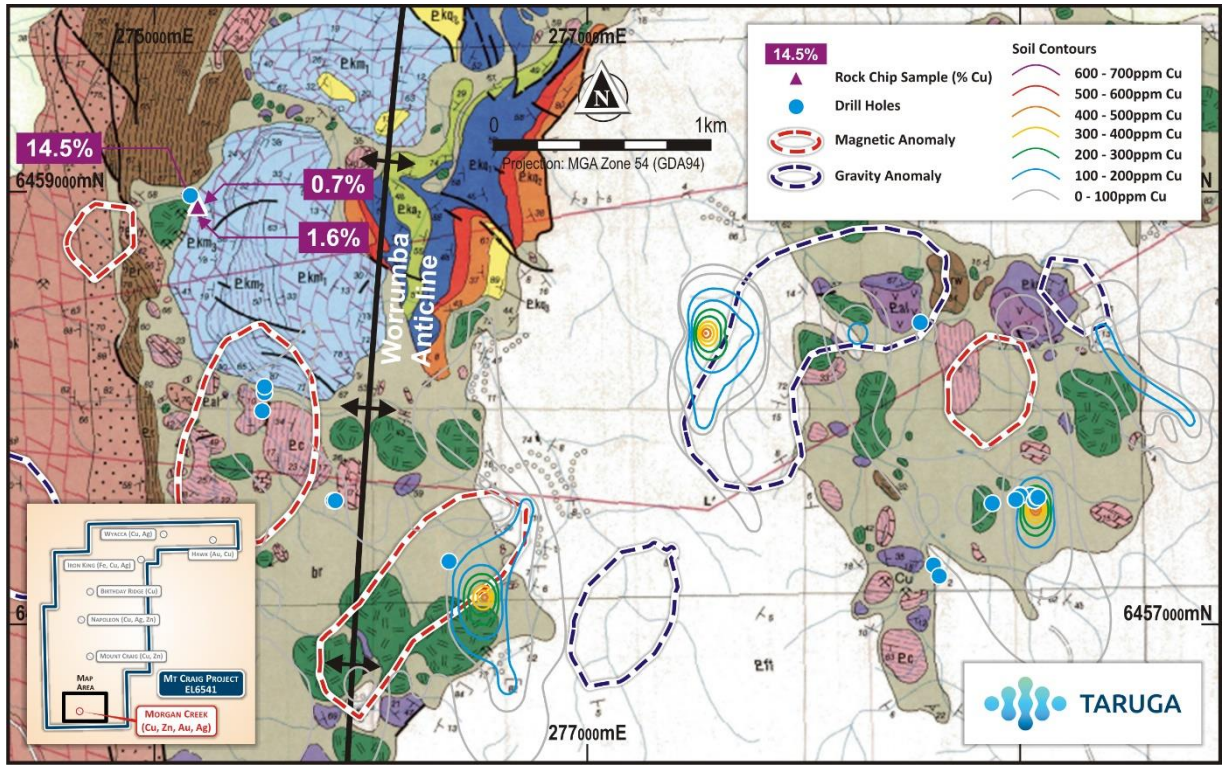
Drilling intersected anomalous copper and zinc in a range of lithologies within the diapiric breccia. These lithologies included oxidized sediments and reduced black shales, differentiated dolerites and hematite-altered breccias. A thick barite unit (>15m thick) was also intercepted adjacent to anomalous copper mineralisation and dolerites, along with a marble unit underlying differentiated dolerite.

The reduced black shales intercepted during drilling (currently undefined unit) are analogous to the Tindelpina Shale Member which host the high-grade copper mineralisation recently discovered by Taruga ~30 km north along strike at the Wyacca Prospect. Taruga consider these black shales, which reported anomalous

Cu and Zn values (pXRF) to be prospective for Zambian-Style base metal mineralisation. Taruga will investigate this model further by carrying out detailed mapping, an infill gravity survey and downhole/ground-based Induced Polarisation (IP) geophysical survey for further drill targeting.

The differentiated dolerites contain variable degrees of zoned magnetite, with higher magnetite content coinciding with elevated copper and zinc anomalism (pXRF). One such unit was underlain by a marble unit. Taruga consider the dolerites have potential to host copper and gold mineralisation, and will investigate this model by carrying out detailed mapping and sampling for further drill targeting.

Drilling has revealed zones of potassic alteration with sericite, hematite, dolomite and potassium-feldspar within the diapiric breccias surrounding dolerite bodies. These zones also contained anomalous copper near the surface (pXRF) and will undergo further targeting.



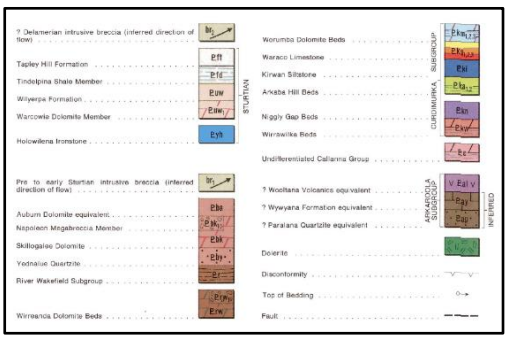



**Figure 1.** Drill Collar Locations Overlaid on Historical GSSA Geology Mapping, showing Copper in Broad Spaced Reconnaissance Soils Anomalies, Rock Chip Highlights, and Depth Slice Magnetic and Gravity Anomaly Outlines.

A thick barite (likely quartz-barite) unit, >15m thick, was intercepted near the surface, over more than 200 meters of strike, in close proximity to outcropping mineralised breccias and dolerites, and can be seen outcropping in nearby creek banks. Taruga consider the barite unit to be of potential hydrothermal origin associated with a rift margin environment, and may be indicative of base and precious metal potential (both vein-hosted and stratiform). The interpretation of hydrothermal barite is consistent with government mapping of nearby hydrothermal quartz-baryte veins in a similar setting.

CEO Thomas Line Commented: "The diapiric breccia and associated sediments at Morgan's Creek have all the components required for Zambian-Style base metal mineralisation. We continue to be surprised by the range of alteration and mineralisation styles observed at surface at Morgan's Creek, however a key target within the breccia and surrounding rocks is the reduced black shales which were intercepted during drilling. As a system, the breccia has undoubtedly had a lot of metal moving around during its evolution. Our job is to identify and drill test the structurally and lithologically favorable traps where these metals are most likely to have concentrated in economic quantities, and the geological setting at Morgan's Creek is very favorable for this".

**Breccias Textures**

Various breccias textures have been mapped at surface with varying degrees of iron (hematite, magnetite and goethite) alteration (**Figures 2 – 5**). Notably, intense hematite alteration with copper oxide mineralisation was identified during field mapping (**Figure 2**).

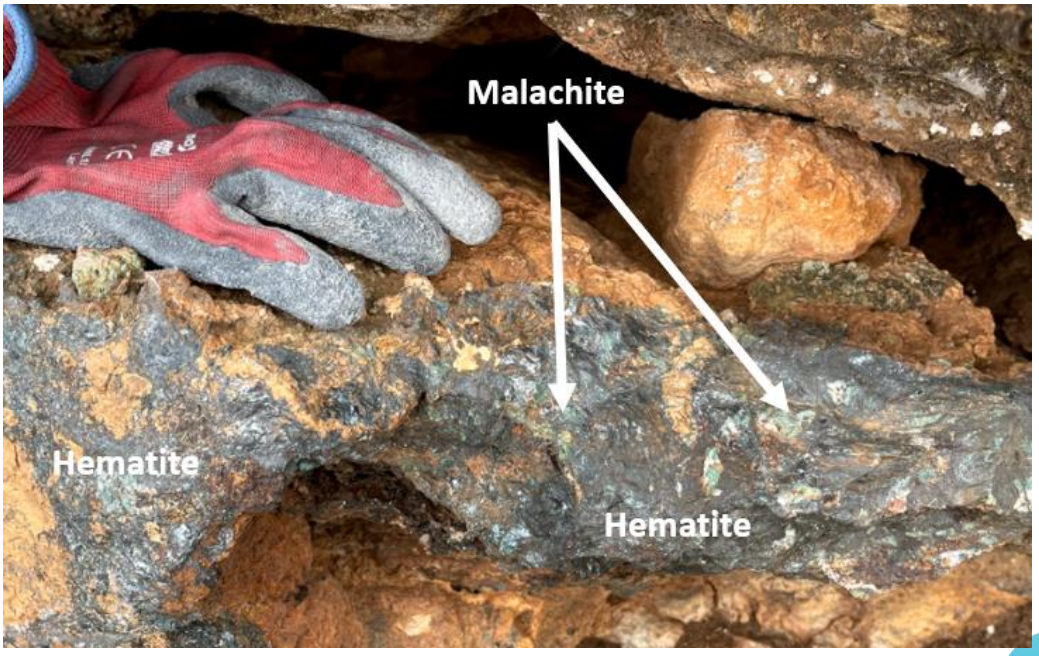



**Figure 2.** Outcropping Mineralised Hematite Breccia Vein with High Concentration of Visible Malachite.

**Figure 3.** Hematite-Breccia Textures Outcropping at Surface at Morgan's Creek Prospect.

**Figure 4.** (left) Weathered outcrop of breccia with Anomalous Zinc (pXRF), and (right) Copper-Rich Silicic Breccia Outcropping at Morgan's Creek Prospect.

**Figure 5.** Oxidized Breccia Outcropping at Morgan's Creek Prospect.

**Further Work**

Further reconnaissance exploration is planned, including detailed infill soil sampling, geological/structural mapping, an infill gravity survey, and further reprocessing of existing geophysical datasets. Downhole IP and EM geophysics is planned for selected holes. Diamond drilling is planned for August to assist with further understanding of structure and controls on mineralisation.

**About the MCCP**

The MCP is situated within the Adelaide Geosyncline (**AGS**), and lies at the intersection of the G2 and G8 structural corridors (lineaments). The G2 and G8 lineaments mapped by O'Driscoll may reflect the deep lithospheric structure of Australia, and host the majority of South Australia's major base metal deposits. The AGS has hosted over 800 historical copper mines or workings, and multiple polymetallic mines since the 1840's. Copper-gold associations are common within the AGS, with many of the old copper mining ventures not recognising the presence of gold. Modern exploration has continued to uncover significant large-scale, polymetallic, base and precious metal potential around historical mining regions within the AGS, which have undergone limited exploration and development since initial mining ceased in the late 1800's.

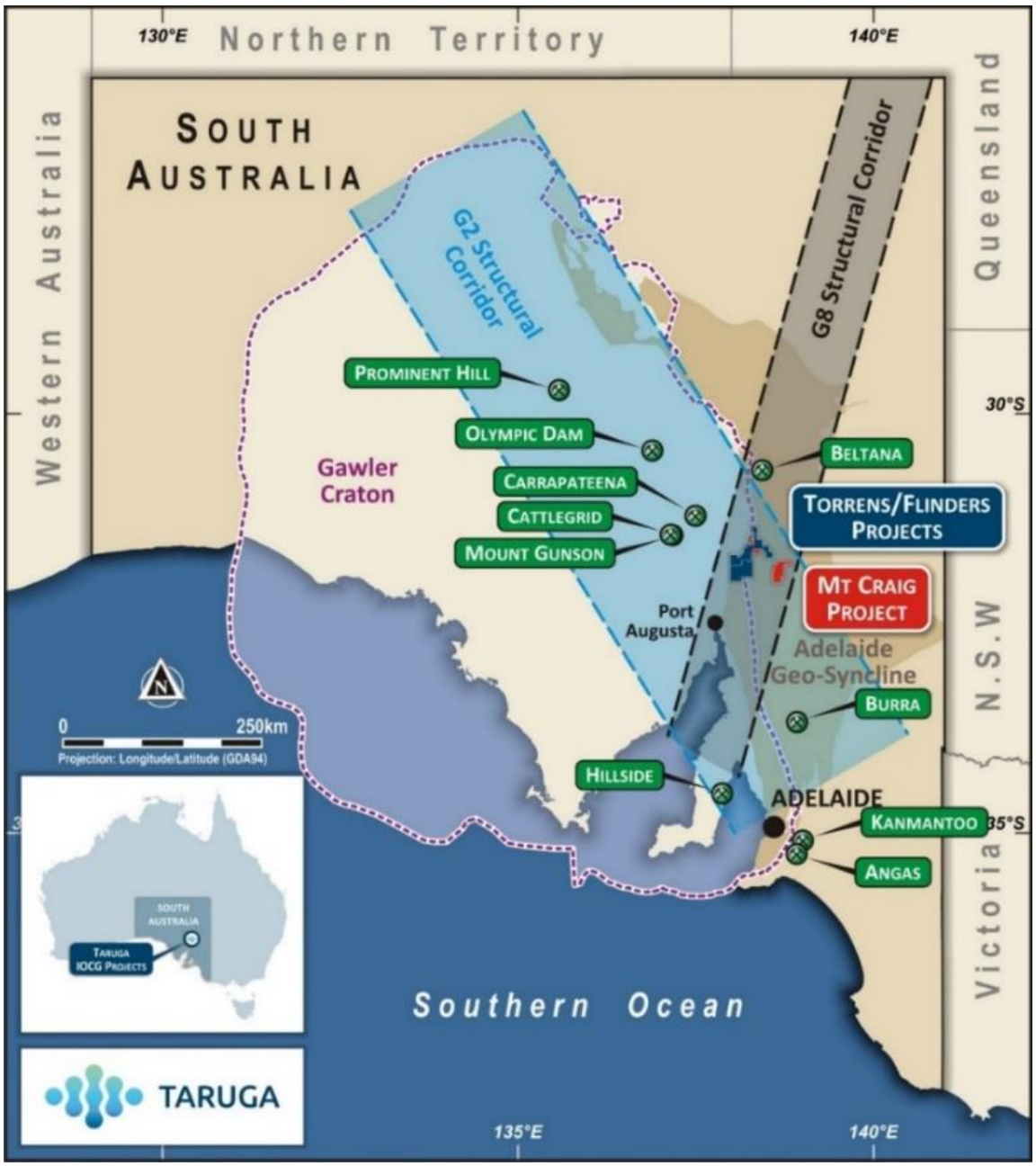



**Figure 6.** Regional Map showing the MCCP (in red) location within the Adelaide Geosyncline and G2 Structural Corridor within the Gawler Craton and Significant Mines/Deposits Nearby.

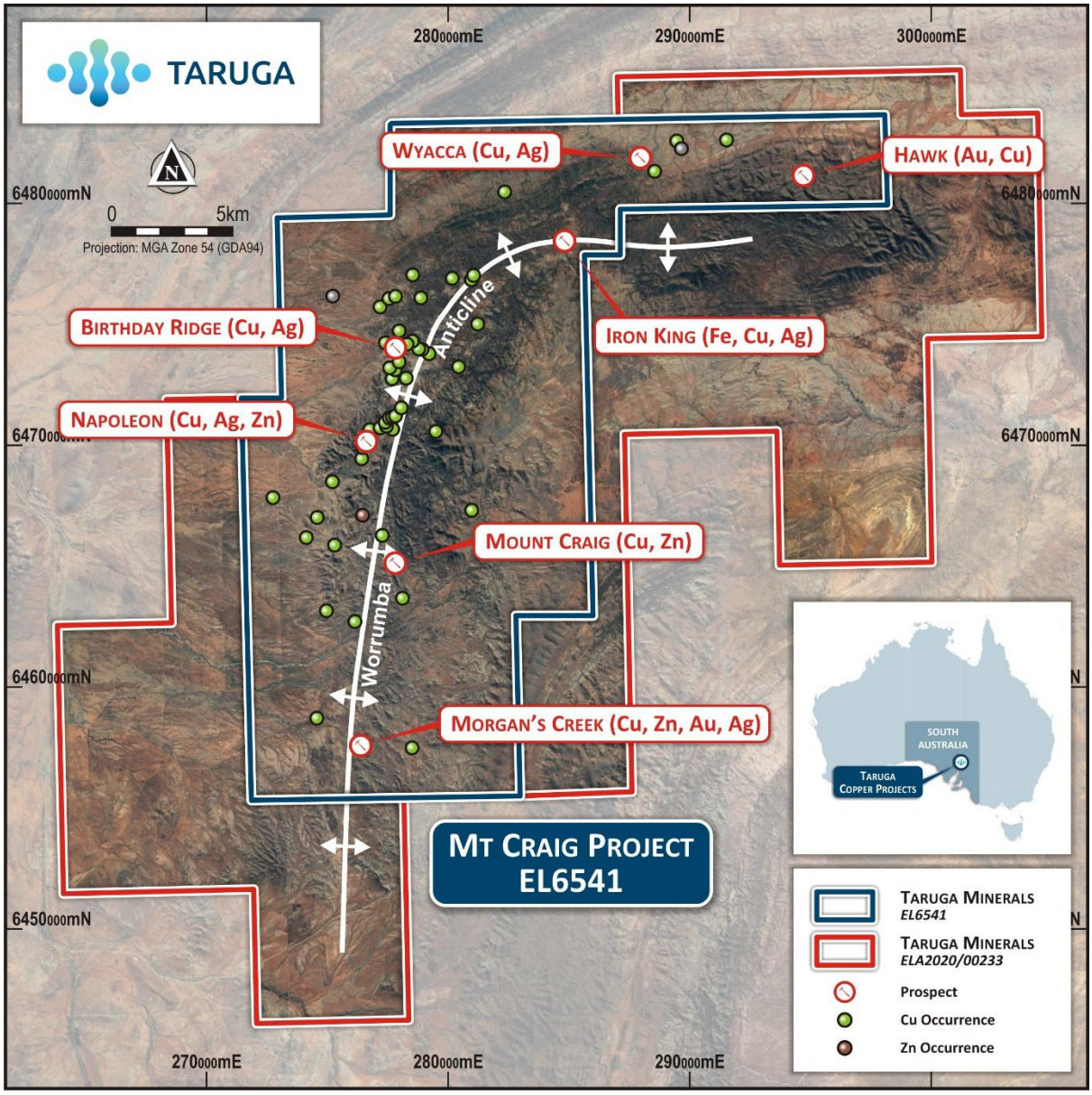



**Figure 7.** MCCP Project Outline showing Priority Exploration Targets, Historical Copper and Gold Mineral Occurrences & Mines, and the Main Structural Feature being the Worrumba Anticline.

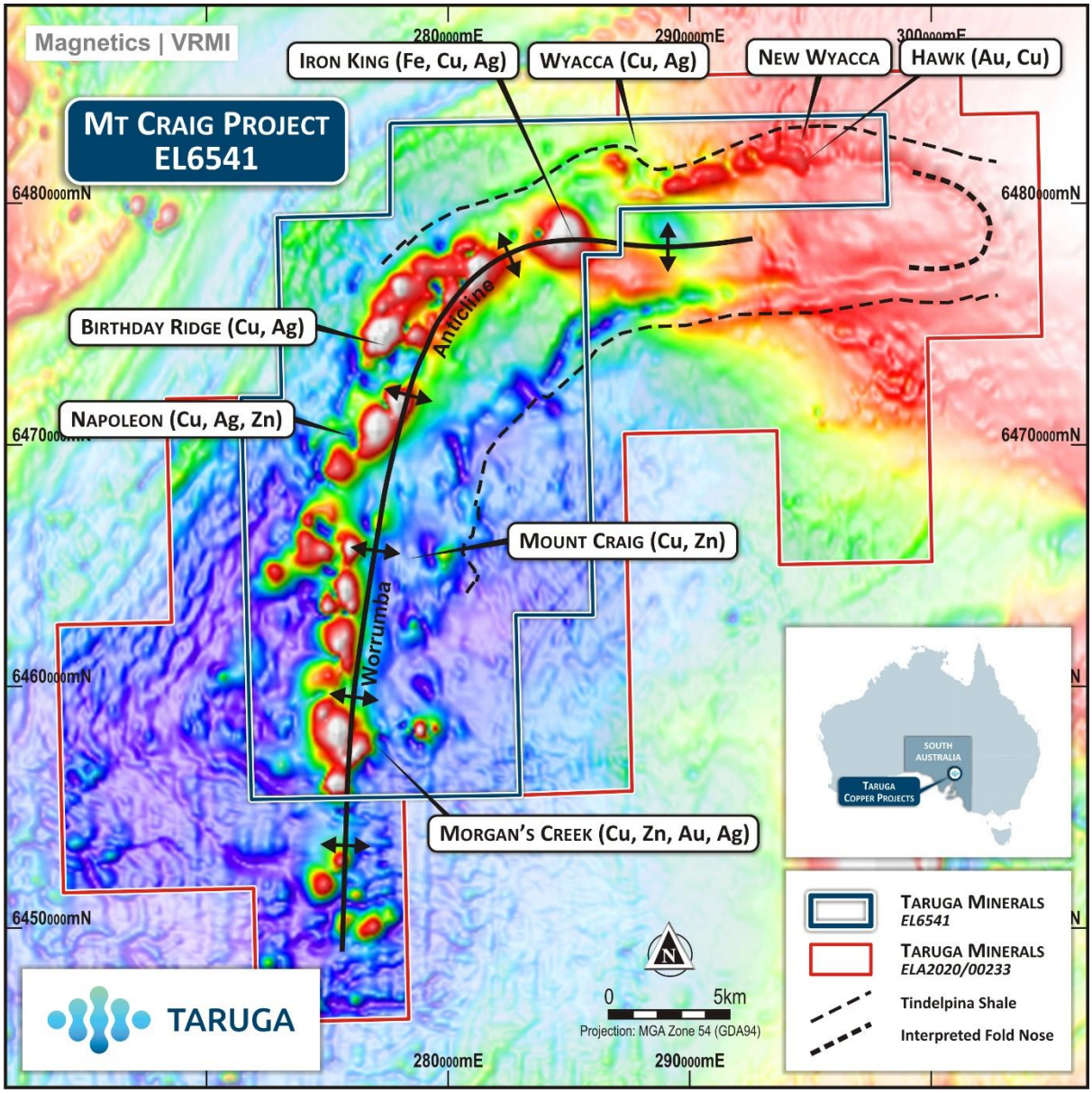



**Figure 8.** Reprocessed Vector Residual Magnetic Intensity (VRMI) Image Highlighting various Discrete Magnetic Anomalies clustered around the Worrumba Anticline Axis.

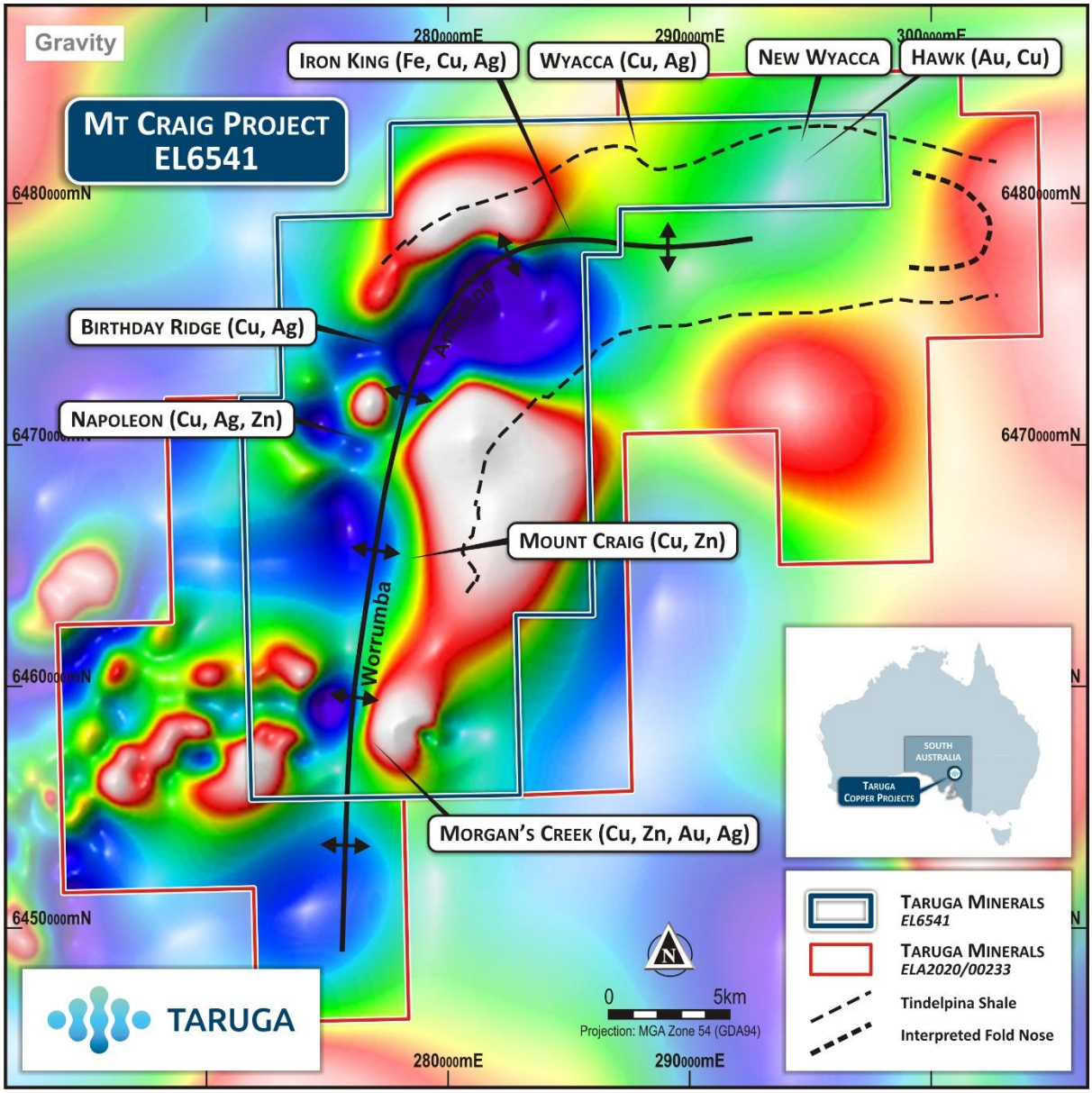



**Figure 9.** Reprocessed Residual Bouguer Gravity Image Highlighting Significant Gravity Anomalies Surrounding the Worrumba Anticline Axis.

This announcement was approved by the Board of Taruga Minerals Limited.

**For more information contact:**


| | |
|---|---|
| Thomas Line | Eric de Mori |
| CEO | Director |
| +61 8 9486 4036 | +61 8 6169 2668 |

**Competent Person's Statement – Exploration Results**

*The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr Brent Laws, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Processing and modelling of the geophysics have been conducted by Jim Allender, a geophysical consultant to the Company through Allender Exploration. Jim Allender is a member of the Australian Institute of Geoscientists (AIG) and is an experienced geophysicist with over 30 years' experience. Mr Allender has sufficient experience relevant to the style of mineralisation and the type of deposit under consideration.*

*Mr Laws is the Exploration Manager of Taruga Minerals Limited. Mr Laws has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves". Both Mr Laws and Mr Allender consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.*

**Forward Looking Statements and Important Notice**

*This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Taruga's control.*

*Actual results and developments will almost certainly differ materially from those expressed or implied. Taruga has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Taruga makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.*

*Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.*