

04 July 2024

Mabel Creek Gravity Survey Defines Significant Copper-Gold Targets

Highlights

- Petratherm is exploring the Mabel Creek Project for Tier-1 sized Iron-Oxide Copper-Gold (IOCG) deposits.
- Recently completed gravity surveying has identified **three high-priority Copper-Gold targets**.
- The new targets are dense, non-magnetic features which may represent iron and copper-gold rich alteration within Proterozoic basement.
- Target BCG1 is a significant IOCG style target, adjacent to historical drilling which intersected copper-bearing hematite alteration.
- Two targets are within 10km of known hematite alteration with modelled densities of 3.4 g/cm^3 which is comparable to known IOCG deposits such as Prominent Hill, Carrapateena and the Oak Dam Project.

Petratherm Limited (ASX: PTR) (“**PTR**” or “**the Company**”) is pleased to announce that processing and interpretation of gravity data on the Mabel Creek Copper-Gold Project has identified numerous new iron-oxide copper-gold (IOCG) targets.

Gravity surveys were undertaken by the Company in April this year around the BigNE prospect area where favourable geology and alteration had been identified (Figure 1). Several new gravity anomalies were generated from this work and three of them are considered high-priority drill targets.

The Company is searching for large copper-gold accumulations associated with iron-rich alteration (hematite) that form large dense bodies which can be identified in gravity survey data. Examples of these bodies include BHP’s mining operations at Prominent Hill and Carrapateena as well as the massive Oak Dam Project¹.

PTR Chief Executive Officer, Peter Reid, Commented:

“A thorough data review indicated that the BigNE area on our Mabel Creek Project has potential to host hematite IOCG deposits similar to Prominent Hill, Carrapateena and Oak Dam, after previous explorers had focused on magnetic targets.”

¹ Refer to Endnote

“It is extremely encouraging to generate multiple new gravity-only anomalies in this region in our recent survey work. All the known IOCG deposits in the Olympic Province were identified through their gravity signatures.

“The computer modelling work undertaken to date has given further weight to our enthusiasm for this area, with our highest priority target less than 2km away from known copper-bearing hematite alteration.”

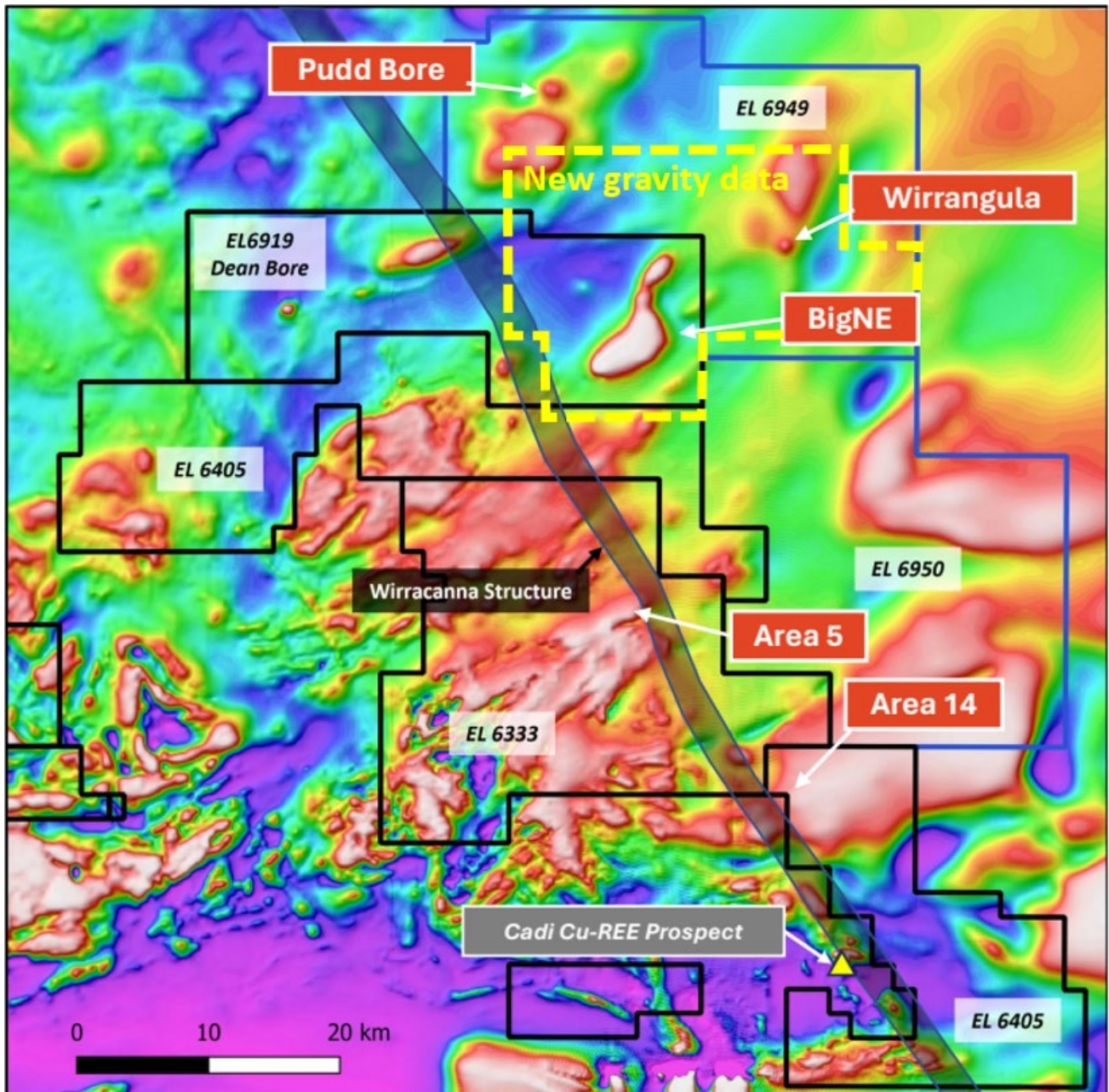


Figure 1 – Magnetic data for PTR’s Mabel Creek Project Tenements showing location of new gravity surveys and regional prospects.

Gravity Data Modelling

The new gravity data has identified three priority drill targets, all around the edge of a circular gravity low which is interpreted as potentially being caused by an underlying granite intrusion (Figure 2). On the eastern side of the interpreted deep granite are several drill holes drilled by Alliance Resources between 2003 and 2009 which intersected strong iron-rich (hematite) alteration in Proterozoic metasediments overlying strongly magnetic Banded Iron Formation (BIF) units². While the strongly magnetic, deep, BIF units are not considered a target, the dense hematite-only zones have the potential to host IOCG-style copper-gold mineralisation, and in the historical drilling this alteration was associated with strongly elevated copper assays (up to 0.32% Cu over 1.1 metres)². Combined 3D magnetic and gravity inversion modelling was undertaken over this area and a significant gravity-only target, BCG1, was resolved (Figure 3). This target has the potential to be a significant zone of hematite-alteration.

Given the proximity of this target to existing copper-bearing hematite alteration zones, this feature is considered an extremely high priority target with excellent potential to host a large copper-gold deposit.

2D gravity modelling was undertaken on the other gravity features rimming the interpreted deeper granite (Figure 2). To the south the two gravity features modelled as being very dense but deep (>1000 metres below surface), however the two features to the west both produced models of significant density but at depths more amenable to drill testing. For example, the southern of these two features, BCG2, models as a large (450m x 1070m x >4000m) body at 500 metres below surface (Figure 4). The produced model density of 3.4 g/cm³ is consistent with the measured density of known IOCG deposits in the Olympic Domain.

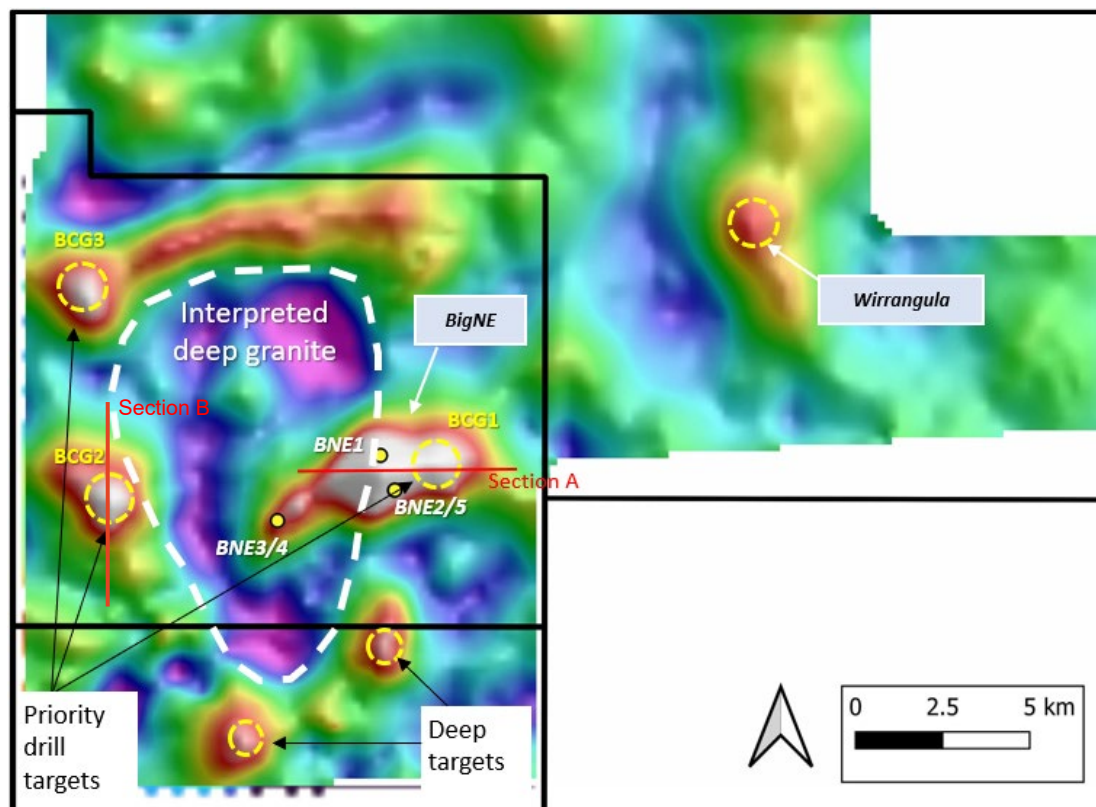


Figure 2 – New gravity survey data and copper-gold targets.

² PTR ASX Release 14/08/2023 – Significant Copper-Gold Expansion at Mabel Creek

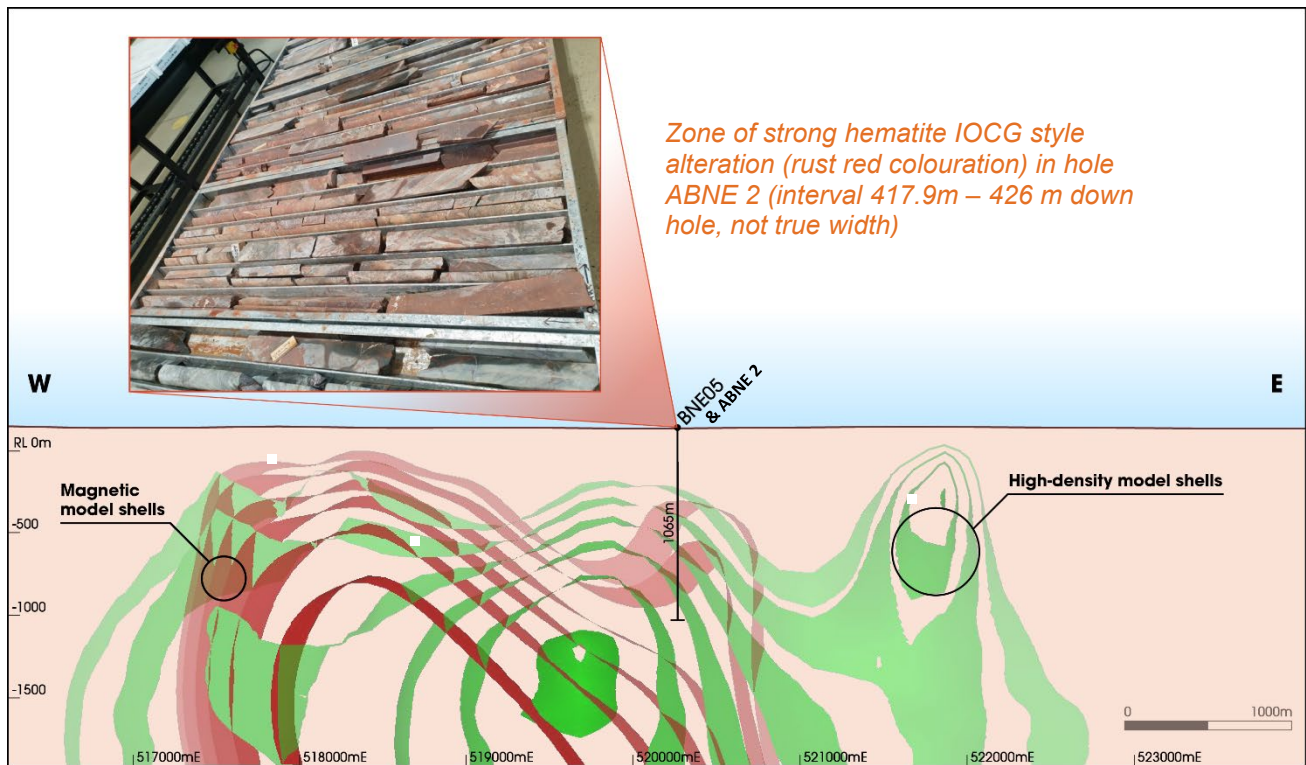


Figure 3 – Section A – BCG01 target 3D magnetic and gravity inversions with existing drilling.

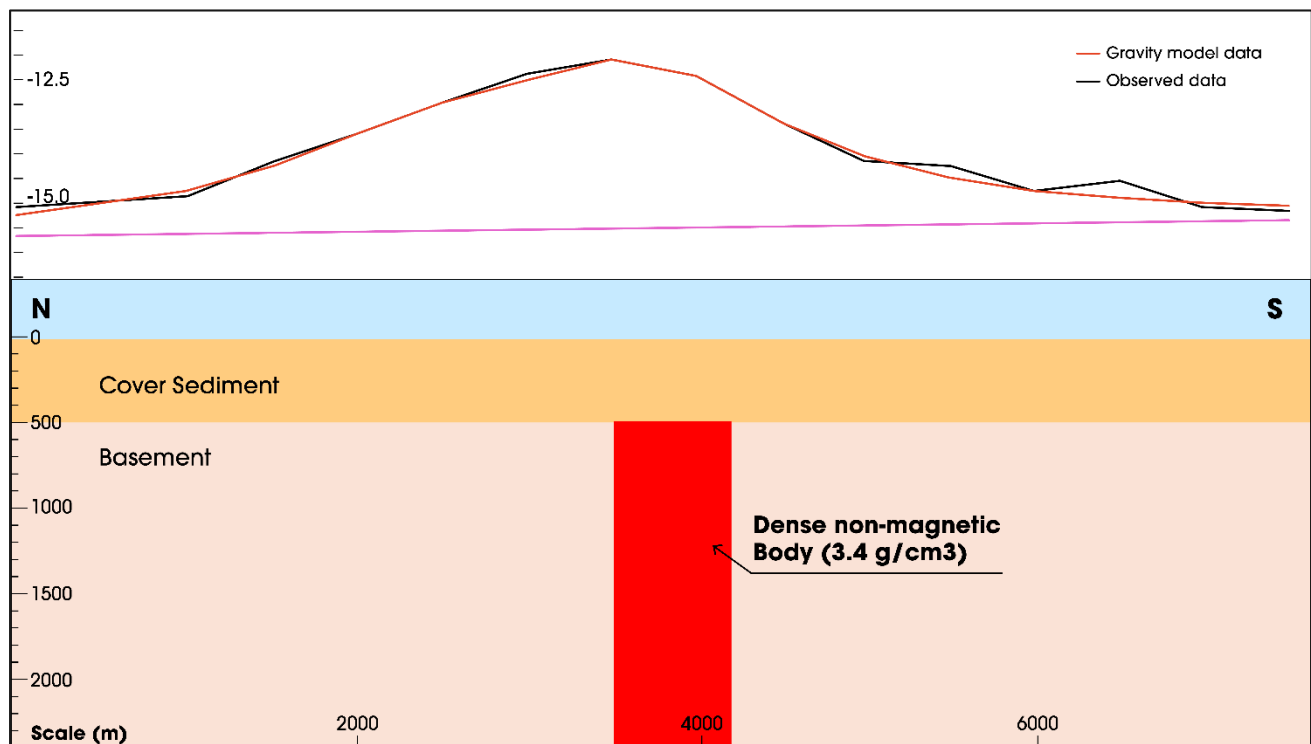


Figure 4 – Section B - Gravity model for BCG2 target.

Next Steps

The Company will complete modelling of other targets identified from the gravity survey data (for example Wirrangula) and then rank them in terms of geophysical, geological and structural criteria to select high-priority targets for drill testing. It is anticipated drilling of multiple IOCG targets will commence in the second half of 2024.

-ENDS-

This announcement has been authorised for release on the ASX by the Company's Board of Directors.

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Competent Persons Statement:

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Peter Reid, who is a Competent Person, and a Member of the Australian Institute of Geoscientists. Mr Reid is not aware of any new information or data that materially affects the historical exploration results included in this report. Mr Reid is an employee of Petratherm Limited. Mr Reid 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 Resources and Ore Reserves'. Mr Reid consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Endnote

BHP Group Limited is a producing entity. The purpose of the statement is to illustrate the geological context of the Olympic Province's known Copper and Gold occurrences and the geographical proximity of the Mabel Creek Project.

About Petratherm Limited

Petratherm Limited (ASX: PTR) is a copper and critical minerals explorer focused on the discovery of world-class deposits in both frontier and mature mineral provinces. The Company has two major exploration projects in the world-class Olympic Copper-Gold Province of South Australia. Work in the region has uncovered Iron-Oxide Copper-Gold style alteration/mineralisation at both its Mabel Creek and Woomera Project Areas. Geophysical targeting work has defined several compelling Tier-1 Copper-Gold targets which the Company is aiming to drill test during the 2024 calendar period.

In addition, PTR has a major project holding in the northern Gawler Craton of South Australia. Recent exploration has uncovered significant concentrations of rare earths over large areas at several prospect sites. The rare earths are associated with a major intrusive complex, which has been found to be highly prospective for other critical minerals including Platinum Group Elements, Vanadium, Chrome and Titanium. This is an early-stage Greenfields project with exceptional upside potential.



PTR's Project Locations in South Australia