

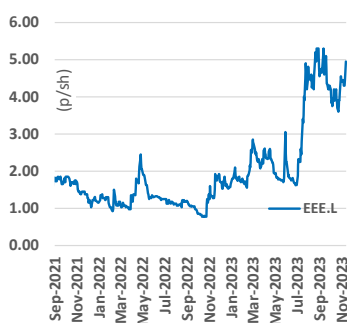
14th November 2023

Sector: Mining

Gold, copper & titanium exploration in Australia

Market data

Markets	LSE – AIM
Ticker	EEE
Price (p/sh)	4.95
12m High (p/sh)	5.30
12m Low (p/sh)	1.28
Ordinary shares (m)	567.36
Mkt Cap (£m)	28.1



Source: Alpha

Description

Empire has a portfolio of natural resource projects in Australia and Austria. The company's main focus is on the high-grade Eclipse and Gindalbie gold projects in Western Australia and the Pitfield copper-gold and titanium project, also in WA. www.empiremetals.co.uk

Board & key management

Non-Exec Chairman	Neil O'Brien
MD	Shaun Bunn
FD	Greg Kuenzel
NED	Peter Damouni

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Empire Metals Limited

Pitfield just keeps Moving On Up...

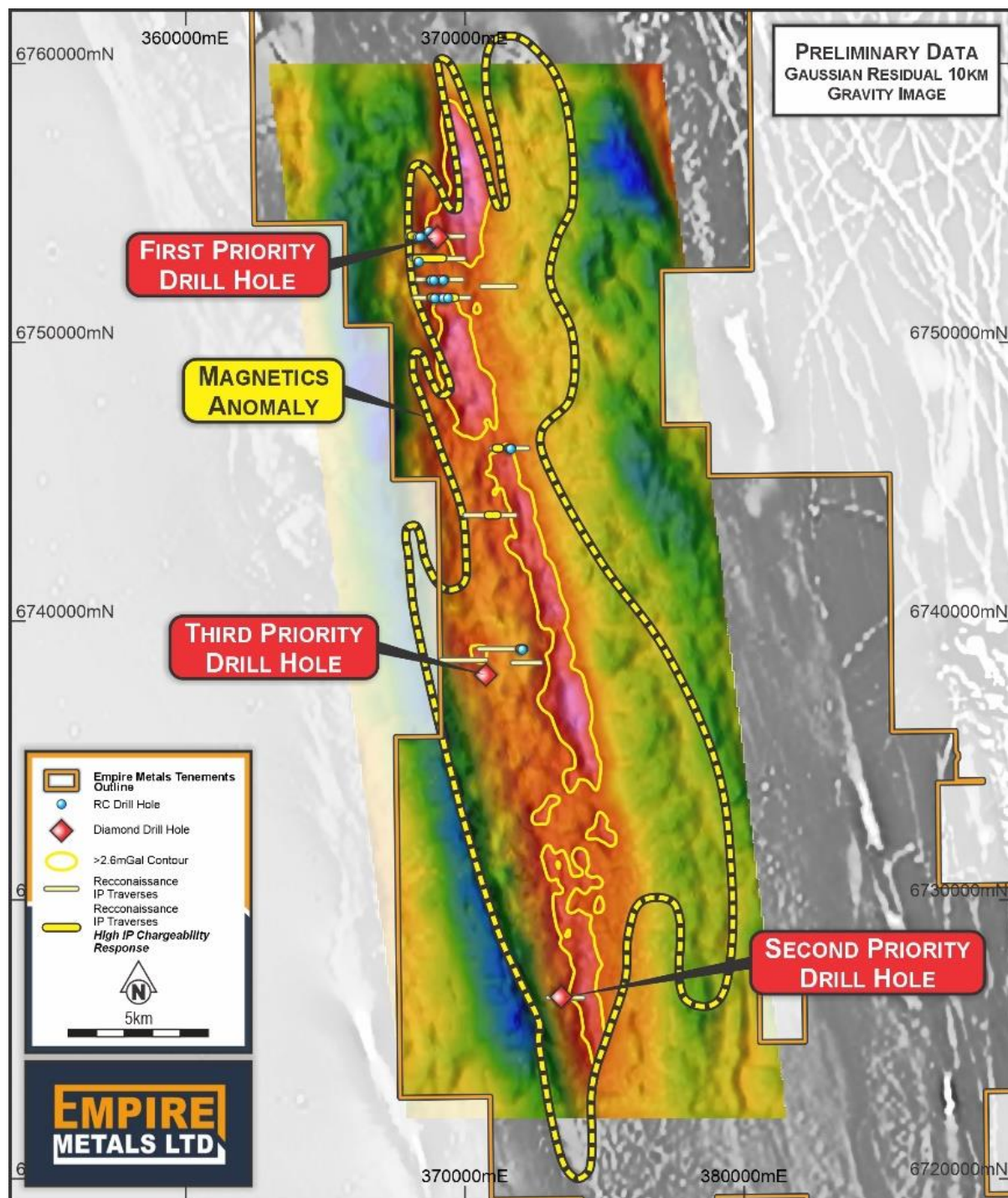
Empire has now completed the three deep diamond drill holes at the company's Pitfield project in Western Australia. Assays are pending but core logging and portable XRF indicates that the entire length of each of the three holes is titanium mineralised and remains open to depth at 350m. Separately, geological mapping and sampling carried out over large previously identified geophysical anomalies has identified two new high-grade TiO₂ drill targets. Numerous rock chip samples exceeded 10% TiO₂ and one sample returned 21.5% TiO₂. A more extensive 6,000m RC drill programme will commence later this month.

- **Discovery background.** The three deep, high impact diamond drill holes were designed to confirm the continuation of the high-grade titanium mineralisation discovered during the maiden RC (reverse circulation) programme in May. The maiden RC programme did not test any of the discrete high-density anomalies identified in the recent airborne gravity survey, a regional scale feature covering an area ~30km in length and up to 6km wide. Consequently, these diamond holes were strategically located to test this vast anomalous area, spaced many kilometres apart, and drilled at an angle, in order to attempt to get a handle on the scale potential of this emerging globally important titanium discovery.
- **The results are mind-boggling.** Titanium mineralisation has been identified throughout the entire length of all three diamonds holes. This is staggering, not only because the holes are deep (each c.400m & angled, ∴ c.350m vertical depth) but also because they span an enormous 30km north-south distance along the largely coincident gravity and magnetic anomaly. Even more intriguingly, the geological setting and stratigraphy varies in each of the three holes, yet they are all titanium mineralised from start to finish. The holes intersected various sedimentary successions of interbedded sandstones and siltstones (Mt Scratch formation) and/or the Beaconsfield conglomerate formation, but all holes display evidence of strong hydrothermal alteration and titanium. This suggests to us that there was an extremely large and long-lived hydrothermal mineralising system in the area and Empire has probed only a very limited area so far.
- **Even more new targets identified.** A comprehensive mapping and rock chip sampling programme was completed during September-October 2023 over previously unexplored ground within the 40km by 8km regional geophysical anomaly. In addition to defining the outcrop of target rocks, 310 rock samples were collected, with 202 assay results received to date. The rock chip results have defined a high-grade area over 3km by 2km in the vicinity of diamond drillhole #2, as well as a 3km by 1km area close to diamond drillhole #3 which are now priority drill targets for the next programme.
- **Grade King.** The rock chip results are impressive and show high grades with 65 samples exceeding 5% TiO₂ and 17 samples exceeding 10% TiO₂ with the maximum recorded value being a remarkable 21.5% TiO₂. Initial petrographic studies at Pitfield (RNS 11-7-2023) confirmed the presence of ilmenite (FeTiO₃) as one of the dominant minerals. This is interesting because stoichiometrically speaking, the ideal chemical TiO₂ content of ilmenite is 53% TiO₂ although it varies between 40% and 65% TiO₂ in practice especially if iron is leached out of the mineral. For reference, a typical mineral sand deposit may have a total heavy mineral (THM) content of a few percent (e.g. 2-5% THM) of which ilmenite could be 40-80% of the THM, which translates to an ilmenite grade in ore of 2-3%, of which around a half might be TiO₂. The point we are making is that although Empire's samples are selective rock chips samples and not drill core, the TiO₂ grades are very high which makes for a unique and exciting exploration project.
- **The challenge** for Empire now is to evaluate this very large project and vector in on areas with high grades and continuity, with focused exploration keeping one eye on potential resource and development pathways. More mineralogical work will also be key to determine metallurgical processing options and the completed diamond holes will help with this by providing core for testwork. There is still much to learn about this unique titanium occurrence but with excellent grades and the obvious scale potential, it is one of the most gripping new discoveries we have seen for a very long time.
- **The next drill programme.** A much larger RC programme (40 holes, 6,000m) along the length of the high-density gravity core (within the regional magnetic anomaly) will focus on these recently identified high-grade areas. Drilling is due to kick off later this month.

Pitfield continues to deliver the goods. There are still many questions on how the pieces of this giant titanium system fit together but it's still early days and the next RC drill programme will be highly instructive. Empire is not short of upcoming news catalysts.

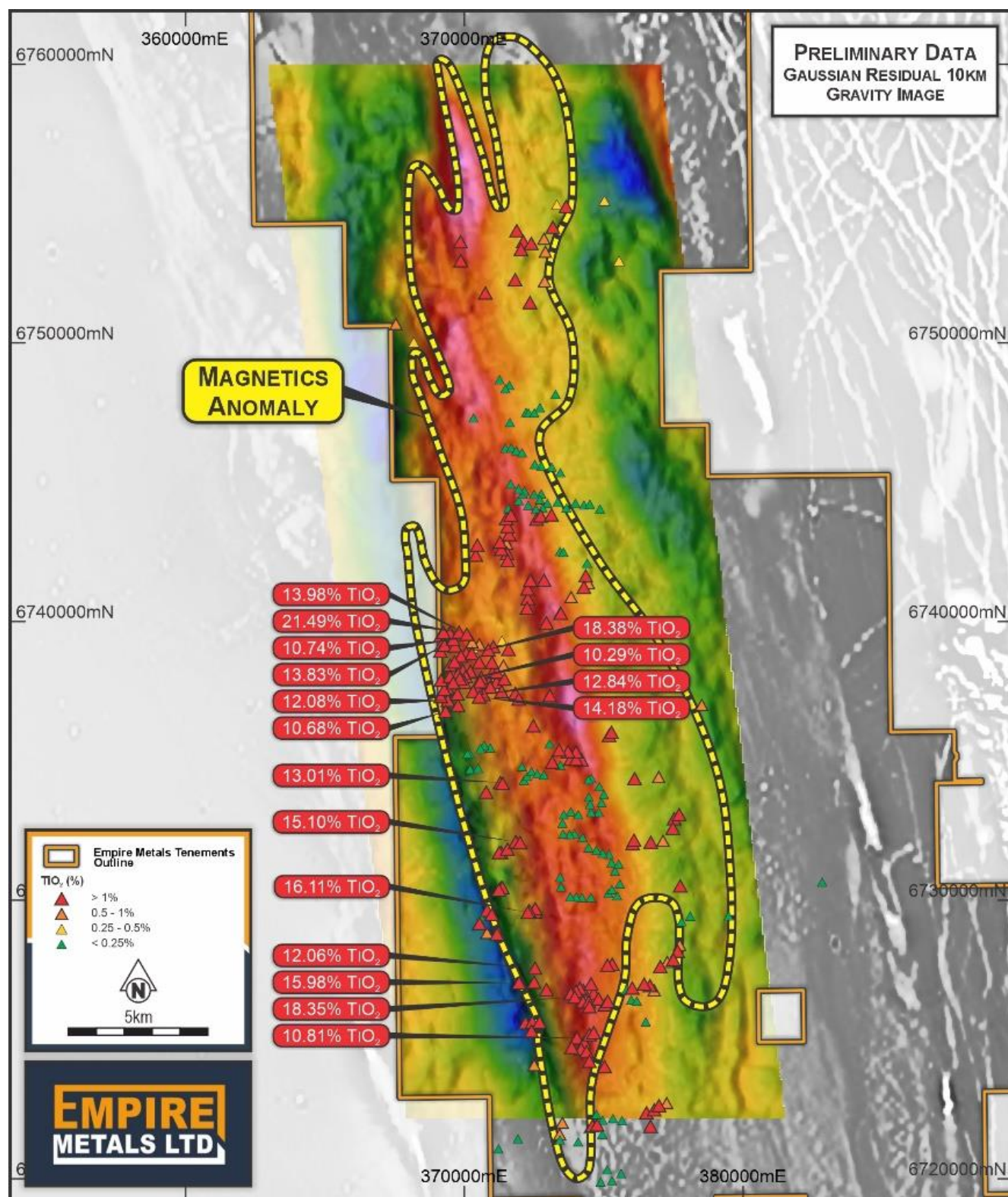
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Figure 1 Grey-scale magnetics map overlain by airborne gravity survey results with indicative highest density zones (solid yellow outlines) and locations of diamond core drill holes and maiden RC drill holes/IP survey lines.



Source: Empire Metals Limited

Figure 2 Grey-scale magnetics map overlain by airborne gravity survey results highlighting recent **rock chip sample locations** and TiO_2 values.



Source: Empire Metals Limited

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