

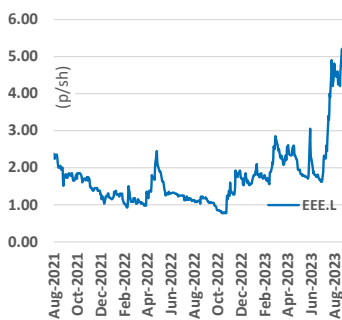
29<sup>th</sup> August 2023

### Sector: Mining

Gold, copper & titanium exploration in Australia

### Market data

Markets	LSE – AIM
Ticker	EEE
Price (p/sh)	5.35
12m High (p/sh)	5.35
12m Low (p/sh)	0.77
Ordinary shares (m)	489.9
Mkt Cap (£m)	26.2



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](http://www.empiremetals.co.uk)

### Board & key management

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

### Analyst

phil.swinfen@shardcapital.com  
020 7186 9008  
Phil Swinfen

## Empire Metals Limited

### Airborne gravity confirms potential for sizeable system at Pitfield

Empire has released results based on the interpretation of a recent airborne gravity survey at its Pitfield project in Western Australia. The high-resolution survey identified a large and very dense core within the existing 40km magnetic anomaly which Empire believes correlates with previously mapped iron-titanium mineralisation and associated alteration. Encouragingly, the highest density zones are outside of the areas tested by Empire's maiden drill programme earlier this year, indicating significant potential to expand the mineralisation footprint. The data will help define high-priority drill targets for future drilling programmes.

- **Background.** The airborne gravity survey was flown last month to refine the model and geological understanding of Empire's recent titanium mineralisation discovery at Pitfield. The survey follows the maiden 21 hole, 3,206m reverse circulation (RC) drill programme which was designed to test induced polarisation (IP) anomalies to identify potential copper mineralisation but instead drilling revealed the presence of a large-scale titanium discovery. Subsequently, historical geochemical data revealed the high-grade titanium footprint extends over almost the entire 40km length of the airborne magnetic anomaly. A gravity survey provides data on the variations in subsurface density of rock formations.
- **Large gravity anomaly.** Processing and interpretation of the gravity data has defined a large, very dense core, a regional scale feature covering an area of 30km by 6km and broadly associated with the previously mapped giant iron-titanium alteration system at Pitfield. The gravity anomaly is within and matches the 40km airborne magnetic anomaly. The data shows a distinct linear gravity high >15km in length, associated with the very dense rocks, flanking the eastern margin of the regional gravity anomaly but largely corresponding to rocks of lower magnetic susceptibility. This is an unexpected outcome which potentially highlights new zones of concentrated titanium mineralisation. A separate strong but discrete gravity high also occurs towards the northern end of the regional gravity core feature.
- **Implications.** The two gravity highs mentioned above infer subsurface rock densities up to 4x greater than the surrounding rocks. These very dense zones may represent extensive concentrated Fe-Ti oxide mineralised beds. Alternatively, the high-density bodies could represent large zones of hematitic iron oxide alteration, a compelling target for iron-oxide associated copper mineralisation. Clearly, the only way to determine what the cause of the high-density zones is to drill, but we view this gravity data as highly encouraging. The close line spacing (325m) of the survey resulted in higher resolution data which will be invaluable for drill targeting, providing not only a vector to potential zones of new mineralisation, but also useful structural information.
- **Best gravity results in new areas.** An exceptionally positive outcome is that the highest density zones identified in the survey are outside of the area that was tested in the maiden RC drill programme. Assuming that the highest density anomalies are high priority due to the potential for the density contrast to be related to iron-titanium mineralised beds, then this bodes well for future drill testing. The magnitude of the density anomalies could be a result of various subsurface factors including thicker sequences of the mineralised beds or a greater concentration of high-density minerals, or both. Empire certainly has some exciting targets to drill as the pieces of the jigsaw start to come together.
- **Drilling about to start.** A 1,500m diamond core drill programme is due to commence in September which will consist of 3 holes to test the continuation of titanium mineralisation discovered during the maiden programme. Later in 2023, a much larger (and fully funded) RC programme will be carried out along the length of the high-density gravity core to test new targets using the gravity data in conjunction with previously collated exploration data.

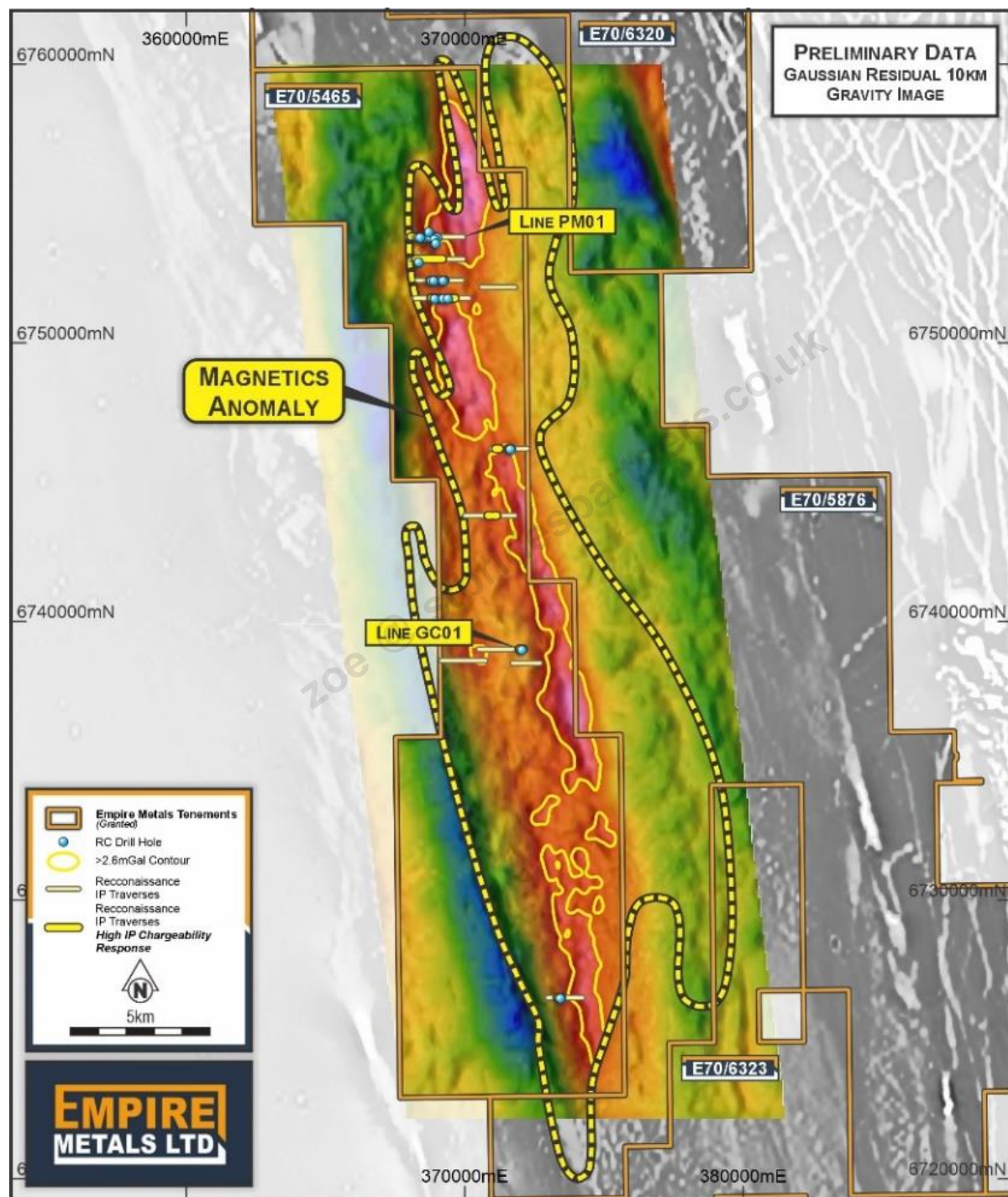
It's all coming together for Empire. The gravity survey interpretation adds fuel to the fire, confirming the potential highlighted in earlier geophysics surveys but also providing a plethora of exciting new targets for drilling later in the year. Empire now has a clear roadmap ahead as it pushes ahead to confirm the scale and grade of this pre-eminent titanium discovery. The major RC programme planned for later this year will be key to unlocking the scale of this potential world-class discovery. Exploration momentum at Pitfield remains pleasingly rapid and the exploration budget is being used wisely. We don't see a more exciting and rapidly evolving exploration play on AIM at the moment, rightly reflected in EEE's share price appreciation.

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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 maiden RC drill holes and IP survey lines. Note that the highest density zones are located in areas not covered by the maiden drill programme.

Drilling at Mt Scratch was at the northern end of the high-density core gravity anomaly; however, the intensity of the gravity anomaly is weaker where the holes were drilled. In the south of the project area, where some of the highest TiO<sub>2</sub> grades were recorded, a single RC hole was drilled on the western flank of the highest density gravity anomaly. This indicates the potential to outline new mineralisation over a wide area.



Source: Empire Metals Limited

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