

Empire Metals Limited / LON: EEE / Sector: Natural Resources

24 October 2024

Empire Metals Limited
("Empire" or "the Company")

Diamond Drilling at Pitfield Completed
Titanium-rich Weathered Cap Significantly Thicker than Anticipated

Empire Metals Limited (LON: EEE), the AIM-quoted resource exploration and development company, is pleased to announce that the diamond core drilling programme at the Pitfield Project (**Pitfield**), located in Western Australia, has been completed, identifying new extensive, thick zones of strongly weathered "saprolite" cap. Samples will be used primarily for metallurgical testwork and flowsheet development as well as informing the plans for further diamond core and reverse circulation ('RC') drilling aimed at defining a maiden Mineral Resource Estimate (**'MRE'**) in 2025.

Highlights

- Diamond core drill programme completed on schedule, with five holes drilled to planned depths at both the Thomas and Cosgrove Exploration Target areas for a total of 679 metres.
- All drill holes encountered extensive weathered zones from very near surface to depths of around 60 metres, nearly double that previous encountered at the Cosgrove and Thomas prospects, confirming the extremely soft and friable nature of the bedded sandstones in this weathered zone.
- These significantly deeper intercepts of weathered sandstones at both target areas bode well for the development of a large scale Mineral Resource Estimate for the higher-grade, high-purity anatase-rich weathered cap.
- Excellent recovery of core was achieved which will primarily be used for metallurgical testwork and process flowsheet development including:
 - standard hardness and grindability tests to determine the energy input needed to liberate the titanium-bearing minerals from gangue minerals contained in the rocks; and
 - bulk composites of the weathered zone for mineral separation and titanium extraction testwork.
- The key observation from core logging is that the material characteristics of these highly weathered bedded sandstones will mean easier mining conditions and significantly less energy consumption required for comminution.
- With the completion of this diamond core drilling programme the Company has now drilled 100 RC holes for a total of 14,988m and 17 diamond core holes for a total of 2,704m.

Shaun Bunn, Managing Director, said: *"I am pleased to provide an update on what has been an extraordinarily successful diamond drill campaign. Core logging has confirmed the extensive depth of weathering, well over 60 metres from surface in the zones targeted, where our geoscientists had predicted they would be based on the previous drill sample logging and geochemical assay results. This logging data will help verify the geological model used for the Exploration Target estimates (announced 12 June 2024) and allow us to reduce our search area radius for high-grade, anatase rich mineralisation and hence reduce the size and cost of the next phase of drilling ahead of defining a maiden MRE.*

"Furthermore, the excellent recovery of drill core achieved throughout the campaign ensures that we have more than sufficient representative samples of the weathered zone to accelerate the mineral separation testwork. Gravity testwork is continuing on previously collected samples of the fresh bedrock throughout October and November, in order to evaluate the effect of grind size on particle liberation and to produce mineral concentrate samples for preliminary hydrometallurgical testing. Other mineral

separation processes being assessed include magnetic separation and froth flotation. As soon as the weathered core samples from this campaign are available, expected within weeks, a duplicate mineral separation testwork programme will commence."

Observations and Logging Results from Diamond Core Programme September-October 2024

The current diamond core drilling programme has been completed, with a total of ten diamond core drill holes at the Thomas and Cosgrove Prospects, identifying extensive weathered material for analysis (Figure 1). This drilling has provided invaluable geological insight into the weathering profiles at both prospects, confirming the depth of weathering, and identifying various aspects of the weathered profile including the intensity of the weathering and structures within the weathered rock mass.



Figure 1: Grey scale magnetics map overlain by airborne gravity results with the location of all drillholes and the ten recently drilled diamond core drillholes highlighted by blue diamonds.

The weathering profiles vary across both prospects, which is to be expected. The data collected from the core logging will significantly improve the current geological model's weathering profile and allow the thickness and intensity of weathering to be tied back to the geochemical and mineralogical results. This will allow the exploration team to focus the next drill campaign on defining areas of high-grade, high-purity anatase-rich mineralisation and help reduce the size and cost of drilling ahead of defining a maiden MRE.

The geological observations from the drill core collected across both prospects have identified that under thin lateritic or soil cover lies an intensely weathered zone where the original rock mass has been completely altered to saprolite. All elements of the original rock type, whether sandstone, conglomerate or siltstone have been altered, with an abundance of cream-coloured kaolinite now present. Lying beneath this saprolite are weathered and partially weathered basement rocks, being the more recognisable sandstones, siltstones and conglomerates seen throughout the sedimentary basin. The weathered rocks within this zone are extremely friable and tend to be incredibly soft, with a knife easily inserted into the drill core. The hardness and strength of the rock increases with depth as the profile transitions out of the weathered zone into the partly weathered, transitional zone. Ultimately the partly weathered profile transitions into fresh bedrock, generally over a width of several metres, and here the rocks become stronger and the drill core becomes more competent.

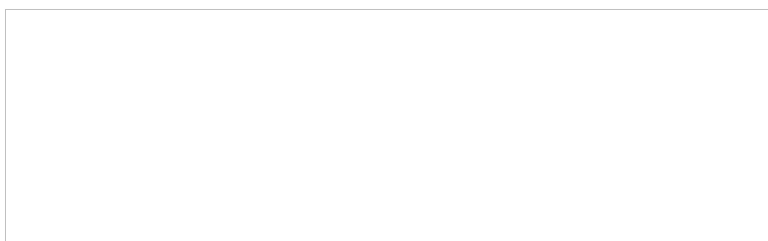




Figure 2. Diamond Core drilling at the Thomas Prospect.

A notable difference between the Cosgrove and Thomas prospects is that the intensity of weathering is stronger at the Thomas property with slightly thicker, more consistent saprolite and generally deeper weathering (Figure 3). There are zones at Cosgrove that show these characteristics, however these are on the western margin of the prospect where it has been drilled.

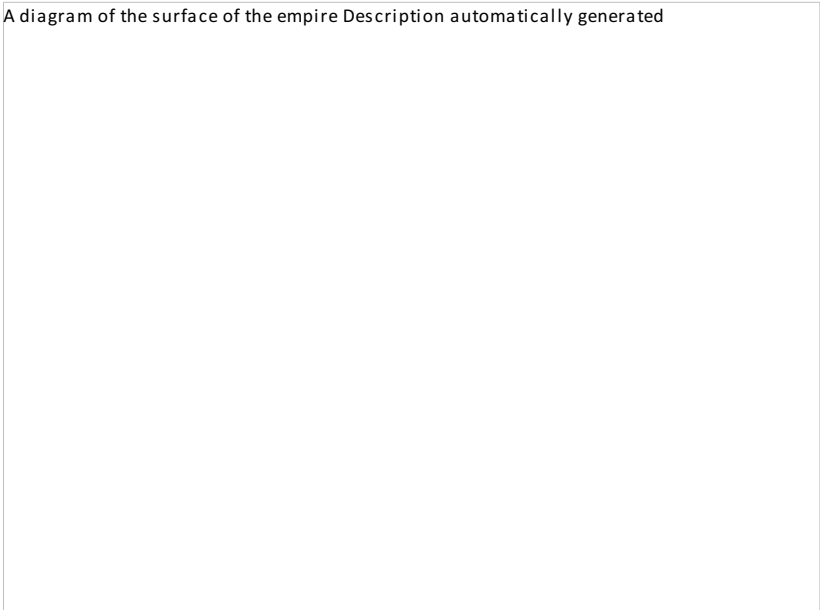
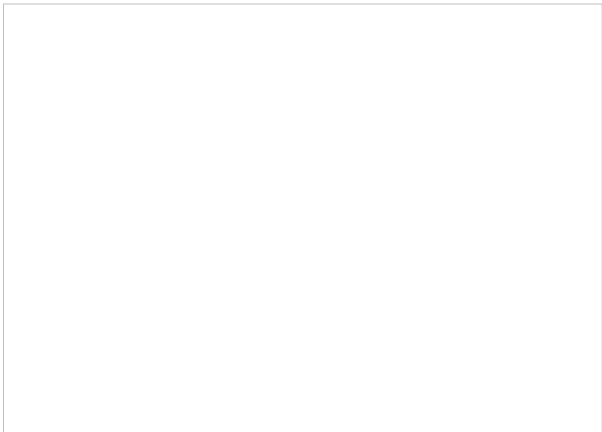


Figure 3: Cross Section from Thomas Prospect showing weathered cap profile (refer Figure 1 for Section A-B from 6724500N.)

Diamond Core results from Thomas Exploration Target

There were five diamond holes drilled for 367.8m across the Thomas prospect. The initial four holes were drilled to evaluate the central zone where the better RC results in the weathered profile were previously identified. These four holes (DD24TOM004-DD24TOM007) were designed to map the weathering profile from east to west and north to south to determine the depth of weathering, the intensity of weathering and the thicknesses and structure of the various weathering zones.

Each of the four holes have a laterite cover which extends between 6-14m from surface. Previous drilling has shown that this laterite cover is titaniferous. Logging of the four holes shows that the depth of weathering on the western side of the prospect is greater than the eastern side, with a thicker saprolitic profile ranging between 50-54m being some 10-12m greater than that observed on the eastern side. This closely fits the data from the previous RC drilling which also shows a decrease in thickness of weathering to the south.



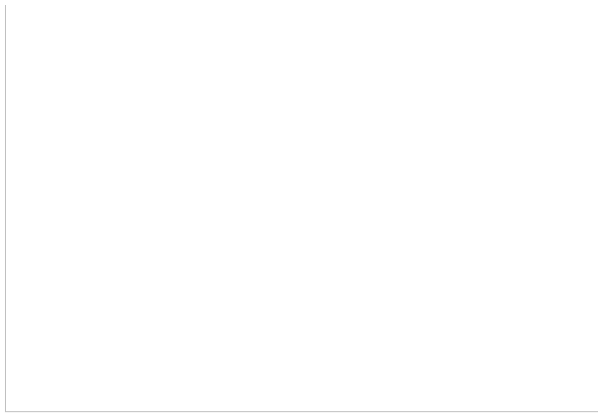


Figure 4: DD24TOM004 showing saprolite at top of hole before transitioning into extremely weathered sandstone (4.6m - 16.4m).

Hole DD24TOM008 was drilled to assess the weathering profile between two RC holes that intercepted high-grade mineralised zones of weathered sandstone, RC24TOM002 and RC24TOM003.

The diamond core hole from this programme intercepted 14m of saprolite at the top and cut the base of the weathering at 58m. This depth is approximately 10m deeper than the RC holes, based on empirical observation which will need to be confirmed with geochemical data.

Structural data at the Thomas Exploration Target indicates that the beds are dipping between 30 and 50 degrees to the southeast, the same as observed from previous drilling.

Table 1: Diamond Core Drill Holes and Weathered Zone Profiles for Thomas Prospect

Hole ID	Total Metres Drilled	Highly Weathered Zone (m range)	Highly Weathered Zone (total metres)	Comments
DD24TOM004	75.4m	6m to 56m	50m	Laterite cap to 6m
DD24TOM005	81.4m	6m to 60m	54m	Laterite cap to 6m
DD24TOM006	72.6m	5m to 58m	53m	Laterite cap to 5m
DD24TOM007	65.8m	14m to 57m	43m	Laterite cap to 14m
DD24TOM008	72.6m	1m to 58m	57m	Soil cover
Total	367.8m			

Diamond Core results from Cosgrove Exploration Target

There were five diamond holes drilled for 311.2m across the Cosgrove prospect. There were four holes (DD24COS005-DD24COS007) drilled to evaluate the northerly zone and one drill hole (DD25COS004) was designed to assess the western margin of known weathered mineralisation. All five drill holes were designed to map the weathering profile across the prospect to determine the depth of weathering, the intensity of weathering and the thicknesses and structure of the various weathering zones.

The four holes drilled in the north identified 5-14m of saprolite below a laterite cap. The depth of weathering is between 39-55m. Hole DD24COS004 intersected 11m of saprolite and 52m of underlying weathered bedrock. The depth of weathering is more variable at Cosgrove from south to north and east to west. The geochemical data from these holes will be instructive to understanding the link between the weathering profile and grade.

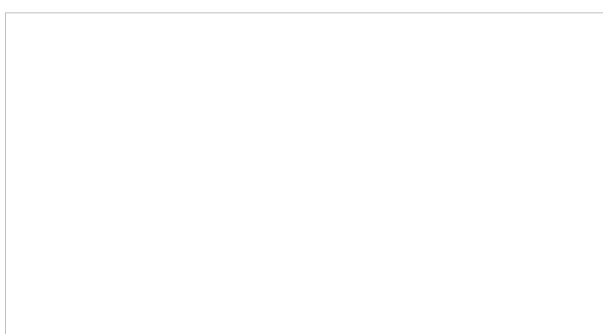




Figure 5: DD24COS005 showing smaller saprolite zone before transitioning into extremely weathered sandstone (7.3m - 17.1m).

Table 2: Diamond Core Drill Holes and Weathered Zone Profiles for Cosgrove Prospect

Hole ID	Total Metres Drilled	Highly Weathered Zone (m range)	Highly Weathered Zone (total metres)	Comments
DD24COS004	78.7m	11m to 63m	52m	Laterite cap to 11m
DD24COS005	48.7m	0m to 45m	45m	Drilled in to weathered bedrock
DD24COS006	48.4m	1m to 44m	43m	Soil cover
DD24COS007	62.7m	1m to 50	49m	Soil cover
DD24COS008	72.7m	1m to 60m	59m	Soil cover
Total	311.2m			

Ongoing and Planned Metallurgical Testwork

Metallurgical drill core will be used to further the process flowsheet development work. This drill campaign has provided samples in both weathered and fresh zones of the mineralisation.

Samples will be used for a range of tests including:

- Individual intervals for standard hardness and grindability tests
- Domain / zone based bulk composites for mineral separation and titanium extraction testwork.

The hardness and grindability testwork will provide information on energy input needed to liberate the titanium-bearing minerals from gangue minerals contained in the rocks. In particular the technical team are looking to understand how the rocks break and the difference between the weathered and fresh rock in terms of energy required to achieve liberation. This information will guide equipment selection, cost of processing and give an early indication of variability within the mineralisation.

Understanding variability will assist in sample selection and number of samples that should be tested in the next phases of the studies.

Once individual samples have been tested through the hardness and grindability process, the available samples will be blended into larger bulk composites for mineral separation and extraction testwork.

At this stage in the project bulk samples are used to compare different separation techniques and test variables for each technique ensuring that the only difference between tests is the test itself, and not the sample being evaluated.

Both weathered and fresh rock bulk composites will be produced, to study the metallurgical response for these mineralisation types separately.

The treatment for these samples will build on what has been learnt so far about the mineralisation of the Pitfield Project. In mineral separation the key focus areas will be gravity separation, magnetic separation and froth flotation.

Titanium extraction testwork has commenced on preliminary concentrate samples, and whole of ore, in order to evaluate concepts from research, literature and industry. Some of the new samples will be used in a similar way, and some of the sample will be reserved for a bulk run through a minerals separation test to produce bulk mineral concentrate for hydrometallurgical testing.

The Pitfield Titanium Project

Located within the Mid-West region of Western Australia, near the northern wheatbelt town of Three Springs, Pitfield lies 313km north of Perth and 156km south of Geraldton, the Mid West region's capital and major port. Western Australia is ranked as one of the top mining jurisdictions in the world according to the Fraser Institute's Investment Attractiveness Index published in 2023, and has mining-friendly policies, stable government, transparency, and advanced technology expertise. Pitfield has existing connections to port (both road & rail), HV power substations, and is nearby to natural gas pipelines as well as a green energy hydrogen fuel hub, which is under planning and development (refer Figure 2).



Figure 6. Pitfield Project Location showing the Mid-West Region Infrastructure and Services

Competent Person Statement

The technical information in this report that relates to the Pitfield Project has been compiled by Mr Andrew Faragher, an employee of Eclipse Exploration Pty Ltd, a wholly owned subsidiary of Empire. Mr Faragher is a Member of the Australian Institute of Mining and Metallurgy. Mr Faragher 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 Faragher consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

Market Abuse Regulation (MAR) Disclosure

Certain information contained in this announcement would have been deemed inside information for the purposes of Article 7 of Regulation (EU) No 596/2014, as incorporated into UK law by the European Union (Withdrawal) Act 2018, until the release of this announcement.

****ENDS****

For further information please visit www.empiremetals.co.uk or contact:

Empire Metals Ltd Shaun Bunn / Greg Kuenzel / Arabella Burwell	Tel: 020 4583 1440
S. P. Angel Corporate Finance LLP (Nomad & Broker) Ewan Leggat / Adam Cowl	Tel: 020 3470 0470
Shard Capital Partners LLP (Joint Broker) Damon Heath	Tel: 020 7186 9950
St Bridge Partners Ltd (Financial PR)	

About Empire Metals Limited

Empire Metals is an AIM-listed exploration and resource development company (LON: EEE) with a primary focus on developing Pitfield, an emerging giant titanium project in Western Australia.

Exploration activity at Pitfield has confirmed the discovery of a new giant mineralised system extending over 40km by 8km by 5km deep. Drilling campaigns have confirmed high-grade TiO_2 mineralised zones across thick bedded intervals to a vertical depth of ~350m, confirming Pitfield as a world class, district-scale titanium mineral system.

Empire is now accelerating the economic development of Pitfield, with the objective of becoming a leading producer of high value titanium dioxide products.

The Company also has two further exploration projects in Australia; the Eclipse Project and the Walton Project in Western Australia, in addition to three precious metals projects located in a historically high-grade gold producing region of Austria.

This information is provided by RNS, the news service of the London Stock Exchange. RNS is approved by the Financial Conduct Authority to act as a Primary Information Provider in the United Kingdom. Terms and conditions relating to the use and distribution of this information may apply. For further information, please contact ms@seg.com or visit www.ms.com.

RNS may use your IP address to confirm compliance with the terms and conditions, to analyse how you engage with the information contained in this communication, and to share such analysis on an anonymised basis with others as part of our commercial services. For further information about how RNS and the London Stock Exchange use the personal data you provide us, please see our [Privacy Policy](#).

END

UPDFXLLLZBLBFBX