

06 June 2023

ASX ANNOUNCEMENT

OLYMPIO EXPANDS COVERAGE OVER PROSPECTIVE REE CORRIDOR AT EURELIA

Highlights

- Aircore drilling of priority REE targets at the Eurelia Project now completed with assays pending.
- New area pegged directly to the north of the current Eurelia Project which covers an historical carbonatite occurrence and the prospective northerly extension of the G2 crustal corridor.
- Grant of the Walloway tenement directly south of current Eurelia Project is imminent, with preparation to drill multiple priority targets well advanced.
- Detailed aeromagnetic survey is planned upon grant of the new tenement applications.
- The expanded Eurelia Project is highly prospective for carbonatite-hosted rare earth elements (REE) mineralisation including neodymium and praseodymium, and niobium (Nb), all critical minerals used extensively in electric vehicles.

Olympio Metals Limited (ASX:OLY) (Olympio or the Company) is pleased to announce that it has pegged a new area considered highly prospective for carbonatite-hosted REE mineralisation at Yanyarrie, immediately north of the Eurelia Project (Figure 1), expanding Olympio's land package in the region to 353km². The tenement application covers the northern extension of the G2 crustal corridor, and also contains an historical carbonatite occurrence.

Olympio's Managing Director, Sean Delaney, commented:

"We have recently returned from a drilling campaign at Eurelia and eagerly await the assay results. The pegging of the new Yanyarrie tenement to the north complements Eurelia and Walloway to the south and gives Olympio commanding exposure over a region that we believe is highly prospective for numerous REE-enriched carbonatite bodies."

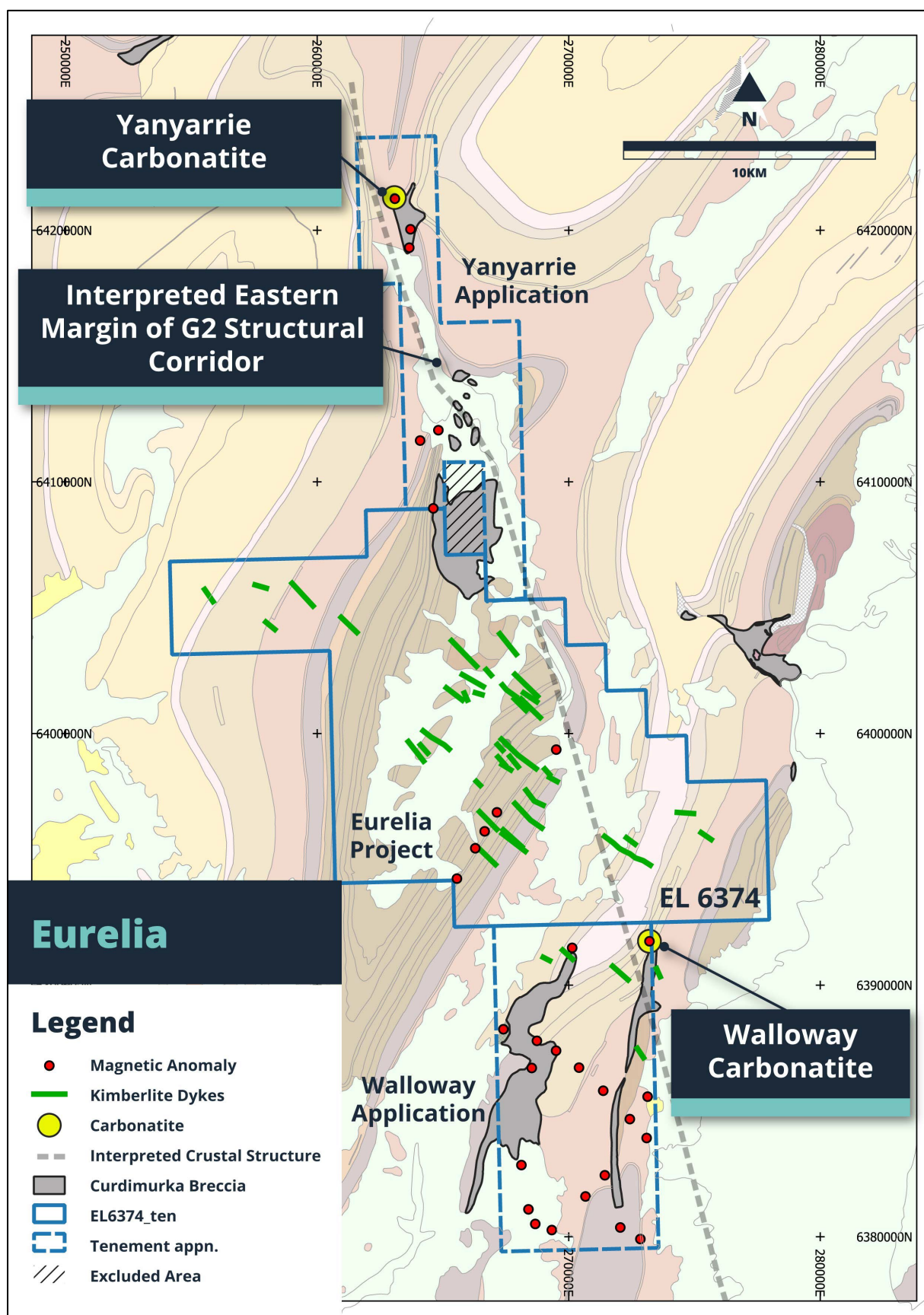


Figure 1: Geological setting of the Eurelia Project

Eurelia Project Maiden REE Drilling Campaign – Assays Pending

In May, Olympio completed a maiden aircore drilling program at the Eurelia Project, aimed at following up on an earlier trench resampling program.

22 aircore drillholes were completed in this program, with the samples submitted to the laboratory for multi-element analyses. It is expected that the results from this program will be announced in late June, dependent on laboratory turnaround.

The results of this program will be used to develop an exploration plan for the next drilling campaign, which will also include the assessment of priority targets at Walloway.



Figure 2. Eurelia Project location

TECHNICAL DISCUSSION

The **Eurelia Project Joint Venture** and **Walloway** and **Yanyarrie** applications are located within the Adelaide Geosyncline in South Australia and encompass a large area prospective for carbonatite-hosted REE mineralisation.

The Eurelia Project Joint Venture (**Eurelia**) is a JV between Copper Claim Pty Ltd and Olympio comprising tenement EL6374. The 100% owned Walloway tenement (**Walloway**) and Yanyarrie tenement (**Yanyarrie**) applications cover contiguous ground immediately south and north of Eurelia, respectively (Figure 1).

Multiple Carbonatites Confirmed at Eurelia

The new Yanyarrie tenement contains a carbonatite defined by previous explorers during trenching of a barite prospect (Figure 1). Sample EU100042 was analysed for whole-rock and multi-element geochemistry (Flinders Mines, 2009), together with petrological description (Pontifex & Associates, 2009). Analysis of the whole rock geochemistry has classified the sample as carbonatite (IUGS classification) (Steven Cooper, pers. comm.).

The Walloway area covers a portion of a defined carbonatite, the Walloway Carbonatite, which the Company believes is highly prospective for niobium and/or REE mineralisation. The Walloway Carbonatite is part of a suite of small dykes and plugs of carbonate-rich and chemically evolved ultramafic lamprophyre of Jurassic age (~170 Ma).

The Walloway Carbonatite was the first mantle rock-type found in the Eurelia field (1971). Recent magnetic modelling of the Walloway Carbonatite by Olympio suggests that a large carbonatite body is buried to the immediate north of the exposed carbonatite dykes.

The Walloway Carbonatite (and the Eurelia dykes) shows elevated REE and Nb, and further investigation is required to establish the scale and characteristics of the enrichment.

G2 Crustal Corridor and Basal Proterozoic Unconformity: Structural Carbonatite Pathways

The Eurelia Project is located on the eastern margin of the north-northwest-trending G2 structural corridor (Figures 1 and 2), a deep-seated feature that may have acted as the primary source route for the carbonatite and kimberlite magmas in the Eurelia region, which are interpreted to have ascended from mantle depth. The G2 structure is interpreted to have formed at depths greater than 125 km (Ferguson et. al 1979).

The Yanyarrie and Walloway carbonatites share numerous features in their geological setting (Figure 1). Both carbonatites occur peripheral to the interpreted G2 structure, and both occur on the northern margin of outcropping Curdimurka Breccia. The Curdimurka is a basal Proterozoic unit, brecciated by salt diapir deformation, unconformably overlain by Saddleworth Formation sediments. The unconformity appears to have been exploited by ascending carbonatite magmas.

Exploration Vectors

Large portions of the G2 corridor are obscured under alluvial cover. Together with the strong historical bias towards kimberlite exploration means **the Eurelia Project area is significantly under-explored for carbonatites.**

Review of the available data has revealed several key vectors for carbonatite emplacement:

- Magnetic anomalism
- Proximity to G2 crustal corridor
- Proximity to Curdimurka Breccia unconformable contact

Review of available aeromagnetic and geological data across all projects has highlighted numerous targets with magnetic signatures and geological context similar to the Walloway Carbonatite. The targets shown on Figure 1 **have never been drill tested**.

Advanced magnetic inversion modelling of several targets is complete, and high priority drill targets have been defined. Carbonatite target drill planning has commenced for the Eurelia and soon to be granted Walloway tenement.

About Carbonatites

Carbonatites are a type of igneous rock defined by their composition being rich in carbonate minerals, typically calcite or dolomite. They often occur as plugs within alkali intrusive complexes, or as dykes, sills, breccias or veins. They are generally associated with major crustal scale features in rift-related tectonic settings.

Carbonatites may be mineralised with REEs, niobium, phosphorus, tantalum, uranium, thorium, copper, iron, titanium, vanadium, barium, fluorine and zirconium.

Carbonatite-hosted mineralisation is one of the main sources of economic REE and niobium ores globally, with Lynas Rare Earths' (LYC:ASX) large Mt Weld mine in Western Australia and MP Minerals' large Mountain Pass mine in California both hosted in carbonatites.

The announcement is authorised by the Board of Olympio Metals.

For further information:

Sean Delaney

Managing Director

E: sdelaney@olympiometals.com.au

T: +61 409 084 771

Andrew Rowell

White Noise Communications

E: andrew@whitenoisecomms.com

T: +61 400 466 226

Competent Person's Statement

The information in this announcement that relates to exploration results for the Project is based on information compiled by Mr. Neal Leggo, a Competent Person who is a Member of the Australian Institute of Geoscientists and a consultant to Olympio Metals Limited. Mr. Leggo has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Leggo consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

ISSUED CAPITAL

Ordinary Shares: 53.7M

BOARD OF DIRECTORS

Sean Delaney, Managing Director

Simon Andrew, Chairman

Aidan Platel, Non-Executive Director

COMPANY SECRETARY

Peter Gray

REGISTERED OFFICE:

L2, 25 Richardson St,
West Perth 6005