



11 December 2023

Metallica Minerals Ltd Commences Drilling at the Leo Grande Graphite – Gold Prospect

Metallica Minerals Ltd (ASX: MLM) is pleased to announce that drilling has commenced at the Leo Grande Graphite Gold Project (LGGP) which is located within the Clermont EPM (EPM 17698).

A data review of drill logs for fifty-four (54) reverse circulation (RC) holes and one 1 diamond hole drilled at the Leo Grande Prospect in 1989 and 1990 highlighted the presence of graphite in all of the holes drilled. The amount of graphite in each hole was never quantified with the logs referring only to low, moderate, strong to very strong graphite content, with the graphite associated with a black mylonite or a quartz-mica schist.

The historical holes drilled at the Leo Grande prospect in 1989 and 1990 were designed to test a 3.2 km long shear zone which contains anomalous gold mineralisation. No exploration work has been undertaken on the Leo Grande prospect since the 1990's as the prospect was covered by two MDL's (MDL106 and 143) which were surrendered in 2009. No exploration work was completed on the Leo Grande prospect by Chalcophile after the surrender of the MDLs.

Metallica plans to drill five (5) RC holes totalling approximately 300m at the Leo Grande prospect in December 2023. The aim of the drilling is to twin historical RC holes which were noted to have "moderate, strong to very strong" graphite mineralisation in order to quantify the graphite content in the holes, and to facilitate assessment of the exploration potential of this project for economic graphite mineralisation.

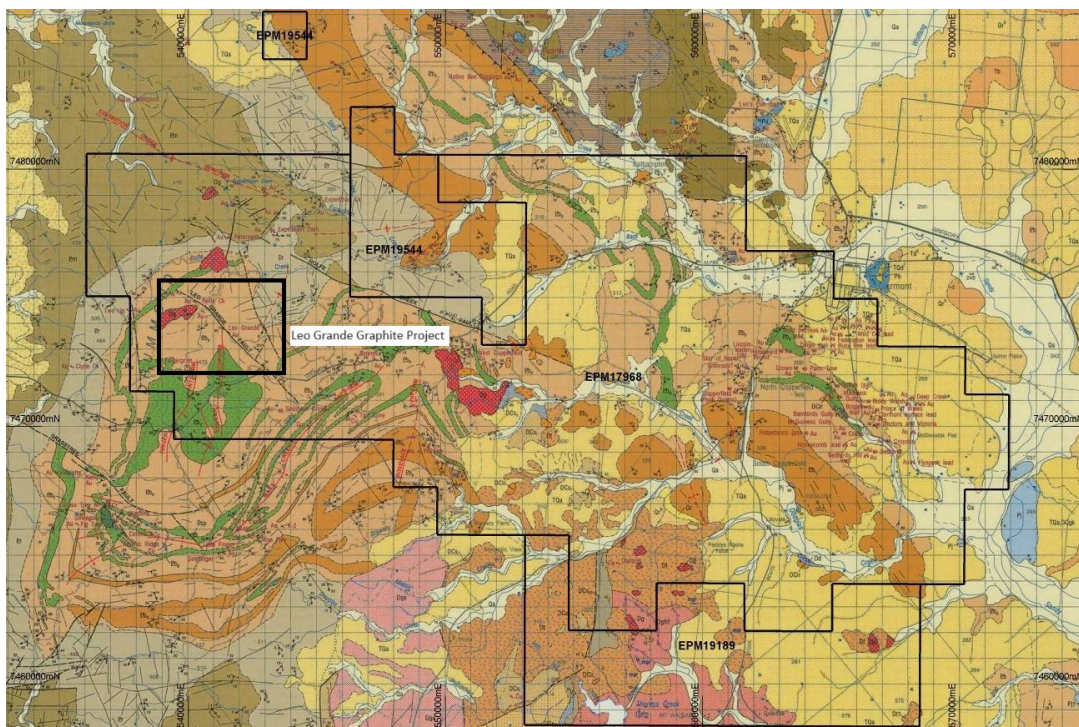


Figure 1. Location of the LGGP within EPM 17968

The drill programme is expected to be completed in three to five days with the assay results due back in late January 2024. The location of the project area is presented as Figure 1 and the historical and proposed hole locations are included as Figure 2.

Theo Psaros, the Executive Chairman of Metallica, said that “our strategy has always sought to have a project that would not take attention away from the main focus being to deliver the Cape Flattery Silica Sand project but could follow on in later years. Graphite is a crucial element in the electrification of Australia, and it is a major component in battery manufacture and like silica sand it is denoted as a Critical Mineral by the Queensland Government. This initial drilling program will determine if there is the potential to define a significant graphite deposit on our existing tenement. It is noted that the project is well located within a well know mining district and close to existing infrastructure and a skilled workforce.”

Proposed Future Work

If this initial drilling programme does identify significant amounts of graphite in the holes, Metallica will then undertake further drilling at the prospect to determine the extent of the deposit in order to define a resource.

Diamond drilling, in order to obtain core for metallurgical studies will also be undertaken to determine if the graphite can be extracted from the mineralised mylonite and to understand the nature and characteristics of the graphite to determine if it can be used in the manufacture of lithium-ion batteries¹.

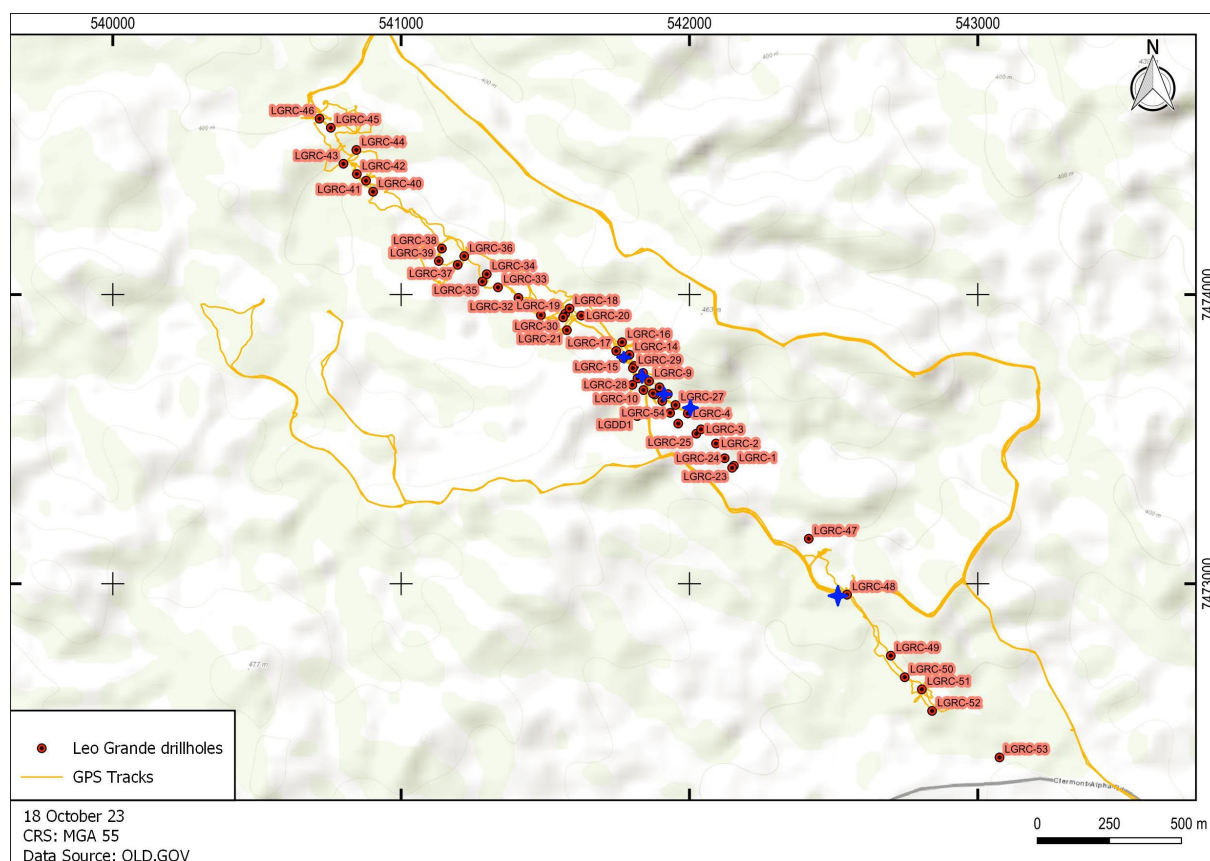


Figure 2. Location of the historical drill holes at the LGGP and proposed holes (blue stars)

¹ Graphite represents almost 50% of the materials needed for batteries by weight, regardless of the chemistry. In Li-ion batteries specifically, graphite makes up the anode, which is the negative electrode responsible for storing and releasing electrons during the charging and discharging process. [Graphite: An Essential Material in the Battery Supply Chain \(visualcapitalist.com\)](https://visualcapitalist.com/graphite-an-essential-material-in-the-battery-supply-chain/)

Project Ownership

The Clermont tenement is held as a joint Venture between PGE Minerals Ltd a wholly owned subsidiary of Metallica Minerals Ltd and Chalcophile Pty Ltd a wholly owned subsidiary of Diatreme resource Ltd. On 12 October 2023, Metallica elected to earn an additional 24% in the Clermont project, which will increase Metallica's ownership of the project from 51% to 75% by expending an additional \$1M under the terms of the JV agreement with Diatreme resources (DRX).

This announcement has been approved for release by the Board of Metallica Minerals Ltd.

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