

12 October 2023

Phase 2 Metallurgical Testing Underway for Narraburra Rare Earth Project

- Drill core samples from Narraburra have been sent to the Australia Nuclear Science and Technology Organisation (“ANSTO”) for the second phase of test work
- ANSTO is a statutory body of the Australian Government that provides a range of services to the resources sector, assisting with Australia’s transition to renewable energy and green technology
- Planned work includes desorption testing, size fraction analysis and leach testing – initiatives designed to provide a greater understanding of Narraburra’s REE extraction alternatives
- Follows initial leach testing that highlighted exceptional recoveries at Narraburra including 92% recovery of key magnet REE and key individual elements Nd (94%) and Pr (90%)
- Maiden metallurgical work confirms the Project’s low-cost development potential and provides a solid foundation for Phase 2 metallurgical testing
- ANSTO’s work is anticipated to be completed within three months

Godolphin Resources Limited (ASX: GRL) (“**Godolphin**” or the “**Company**”) is pleased to advise the second phase of metallurgical test work has commenced on samples from the Narraburra Rare Earth Element (“REE”) Project (“Narraburra” or “the Project”).

Narraburra is located 12km northeast of Temora in central west New South Wales and hosts a **Mineral Resource Estimate (MRE) of 94.9 million tonnes at 739ppm TREO, which includes a higher-grade component of 20 million tonnes at 1,079ppm TREO in accordance with JORC (2012)** (refer ASX: GRL announcement: 19 April 2023).

The second phase of metallurgical testing is being undertaken with ANSTO and follows an initial phase of work with the organisation which delivered very promising results, including a highly encouraging 92% recovery of key magnet REE (Praseodymium (Pr), Neodymium (Nd), Terbium (Tb), Dysprosium (Dy) with individual elements Nd 94% and Pr 90%, which is considered high for leaching of an Australian weathered clay deposit (refer ASX:GRL announcement: 5 April 2023). This further affirmed Narraburra’s low-cost development potential and provides a strong foundation for the phase two metallurgical test work program.

Management Commentary

Managing Director Ms Jeneta Owens said:

“We are excited to have commenced this second phase of metallurgical testing with an organisation of ANSTO’s calibre. The first round earlier this year resulted in some exceptional recovery rates, which are amongst the best from an Australian weathered clay hosted REE deposit. We look forward to working closely with ANSTO to expand on the phase 1 results with some additional desorption testing, size fraction analysis and composite samples from both vertically down hole and spatially across the orebody to define the leachability of REE’s on a larger scale.

Commencement follows ongoing collaboration with ANSTO over the last few months on selecting the right program of works and we look forward to this continued relationship with ANSTO over the coming weeks to better understand the Project’s metallurgical characteristics. We expect to have the results of this important work within the next three months.”



Phase 2 background:

GRL have selected 18 samples for the second phase of metallurgical test work which includes individual 1 metre samples and composite samples of up to 6 metres. The samples have been sent to ANSTO, which is a statutory body of the Australian Government focused on national infrastructure research. ANSTO provides bespoke services to the resources sector, facilitating the transition to renewable energy.

The samples are currently within the ANSTO workstream and undergoing multiple assessments including desorption testing, a size fraction analysis and leach testing of composite samples. The size fraction analysis is designed to determine if REE's are present in a particular size fraction that may provide an option to upgrade the material by screening. The leaching program has been designed to test for leachability down the weathered profile and across the defined resource area, to better understand the metallurgy of the Project and provide input into future mining studies.

Results from the second phase of work are expected in three months and will provide Godolphin with a better understanding of the Narraburra project and its near-term development potential. Results will also form a key component of the Company's discussions with potential off take partners.

Project Background:

The Narraburra area was first explored in 1999 for Rare Earth Elements associated with the Devonian-aged Narraburra Granite. Narraburra is listed as a Critical Minerals Project by the Critical Minerals Office of the Australian Government's Department of Industry, Science, Energy and Resources and Australian Trade and Investment Commission. Godolphin's objective at Narraburra has been to define a bulk tonnage disseminated deposit of REE in free-digging weathered clays and weathered bedrock that would be amenable to low-cost mining from a shallow open pit. Processing would include low-cost atmospheric pressure acid leaching to recover REE for sale to local and international customers.

To date, diamond drilling undertaken by Godolphin at Narraburra has intersected broad zones of REE mineralisation in clay, saprock (clay-weathered rock) and in underlying fresh rock protolith material (refer ASX: GRL announcements: 11 November 2022 and 13 December 2022). The REE at Narraburra are hosted in clay and saprock, which is the result of weathering of REE rich host rocks. The clays and clay-weathered saprock become enriched in REE through water table effects and occur as flat lying sheets within the in-situ clay rich weathered material. The REE are contained within three well-defined layers that vary in thickness, with the layers increasing in thickness from surface towards the bedrock with the upper layer at an average 1-2 meters below surface.

The four magnet Rare Earth Elements – Nd, Pr, Tb and Dy have all been identified at Narraburra. These four elements are crucial for producing high-strength permanent magnets which are used in many future-facing manufactured products notably, motors for electric vehicles, generators in wind turbines, medical devices and everyday appliances such as computer hard drives and mobile phones.

<<ENDS>>

This market announcement has been authorised for release to the market by the Board of Godolphin Resources Limited.

For further information regarding Godolphin, please visit <https://godolphinresources.com.au/> or contact:

Jeneta Owens
Managing Director
+61 417 344 658

jeneta@godolphinresources.com.au

Henry Jordan
Six Degrees Investor Relations
+61 431 271 538

Henry.jordan@sdir.com.au

About Godolphin Resources

Godolphin Resources (ASX: GRL) is an ASX listed resources company, with 100% controlled Australian-based projects in the Lachlan Fold Belt (“LFB”) NSW, a world-class gold-copper province. A strategic focus on critical minerals and green metals through ongoing exploration and development in central west NSW. Currently the Company’s tenements cover 3,400km² of highly prospective ground focussed on the Lachlan Fold Belt, a highly regarded providence for the discovery of REE, copper and gold deposits. Additional prospectivity attributes of GRL tenure include the McPhillamys gold hosting Godolphin Fault and the Boda gold-copper hosting Molong Volcanic Belt.

Godolphin is exploring for REE, structurally hosted, epithermal gold and base-metal deposits and large, gold-copper Cadia style porphyry deposits and it is pleasing to continue exploration efforts for unlocking the potential of its East Lachlan tenement holdings, including increasing the mineral resource of its advanced Lewis Ponds Project. Reinvisitation of exploration efforts across the tenement package is the key to discovery and represents a transformational stage for the Company and its shareholders.

COMPLIANCE STATEMENT The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Ms Jeneta Owens, a Competent Person who is a Member of the Australian Institute of Geoscientists. Ms Owens is the Managing Director and full-time employee, shareholder and option holder of Godolphin Resources Limited. Ms Owens 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. Ms Owens consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

Information in this announcement is extracted from reports lodged as market announcements referred to above and available on the Company’s website www.godolphinresources.com.au.

The Company confirms that it is not aware of any new information that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons’ findings are presented have not been materially modified from the original market announcements.