

25 March 2024

Leading Engineering Firm Ausenco Appointed to Complete Narraburra REE Project Scoping Study

- Multinational engineering services firm Ausenco has been awarded the contract to conduct a Scoping Study at Godolphin's flagship Narraburra Rare Earth Project
- Ausenco have specialist expertise in clay hosted Rare Earth Element (REE) projects, spanning Scoping, Pre-Feasibility and Feasibility studies, extending through to detailed design works and commissioning of operations
- The Scoping Study will be based on the existing JORC 2012-compliant Mineral Resource Estimate of 94.9 million tonnes at 739ppm TREYO¹, which includes a higher-grade component of 20 million tonnes at 1,079ppm TREYO
- The Narraburra Project Scoping Study is scheduled for completion during Q3 CY2024

Godolphin Resources Limited (ASX: GRL) (**Godolphin** or the **Company**) is pleased to advise that it has engaged multinational engineering services firm Ausenco to complete a Scoping Study on the Narraburra Rare Earth Element ("REE") Project ("Narraburra" or "the Project"), located 12km northeast of Temora in central west New South Wales.

The Scoping Study will be based on the existing Mineral Resource Estimate for Narraburra of 94.9 million tonnes at 739ppm TREYO², which includes a higher-grade component of 20 million tonnes at 1,079ppm TREYO in accordance with JORC (2012) (refer ASX: GRL announcements: 19 April 2023 and 21 April 2023).

Management commentary:

Managing Director Ms Jeneta Owens said:

"We are pleased to award the contract for the Scoping Study at Narraburra to a company of Ausenco's calibre. Already well-established as a market leader in its field, Ausenco has a demonstrated track record of success in developing world-class battery minerals projects both domestically and internationally."

"This contract marks the next step forward in Godolphin's stated development strategy for Narraburra, following the declaration in 2023 of our maiden mineral resource. We look forward to providing further updates as the Scoping Study progresses and we establish the parameters for Narraburra's future project economics and optimal development strategy."

Ausenco Vice President for NSW, Rod Harle, said:

"We are excited by the opportunity to work with Godolphin in delivering an outcome that will optimise the Company's project capital and operating costs and maximise value, while ensuring that the project concept is financeable and executable in the current market environment."

¹ "TREYO" is Total Rare Earth Oxide plus Yttrium Oxide, La₂O₃ + CeO₂ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ + Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Lu₂O₃ + Y₂O₃.



“Ausenco has assembled a team with expertise across all aspects of REE process design and operation, and with project phase experience spanning Scoping, Pre-Feasibility and Feasibility studies extending through to detailed design, execution, commissioning and operations.”

“We are committed to developing a quality, cost effective and timely study and recognise the importance of the Narraburra REE Project to GRL.”

Narraburra REE Project Scoping Study

The Scoping Study will comprise a two-phase approach. The objective of Phase 1 will be to comprehensively identify a wide range of viable processing options, then narrow them down to the most likely two to three scenarios. This will be achieved using a multi-criteria analysis (MCA) approach, incorporating both quantitative and qualitative data, to objectively rank and select the top two to three options.

Summary of key activities – Phase 1:

- Complete a comprehensive review and analysis of the drill core and metallurgical testing data completed to date, to gain insights that will inform subsequent scoping study activities;
- Review Ausenco’s library of past REE projects to collate all relevant information that can be adapted and repurposed for the Narraburra REE Project Scoping Study;
- Conduct a thorough literature review to identify other existing processing technologies relevant to the Narraburra REE Project;
- Collaborate with GRL to gain alignment on project scope and methodology, understanding of the test-work data, and range of options and alternative plant configurations under consideration;
- Evaluate each option against pre-defined criteria, such as technical feasibility, economic viability, environmental impact and social considerations;
- Utilise an MCA approach, incorporating both quantitative and qualitative data, to objectively rank and select the top 2-3 options to progress into Phase 2.

The objective of Phase 2 will be to further refine the shortlisted options through additional engineering activities, including AACE (Association for the Advancement of Cost Engineering) Class 5 CAPEX (Capital Expenditure) and OPEX (Operating Expenditure) development.

Summary of key activities – Phase 2:

Further engineering for the shortlisted options, including:

- High-level mass balance
- Basic equipment calculations
- High-level layouts
- AACE Class 5 CAPEX/OPEX.
- Development of a geometallurgical model populated with an assessment of block values based on measured grade, expected recoveries, predicted impurities and forecasted product revenue. Geometallurgy modelling will be undertaken using Ausenco’s Cancha modelling software
- Risk assessment
- Value-add assessments
- Open Pit mining optimisation at various throughputs and revenue factors.
- Refinement of the economic models for each option.
- Prepare a report outlining the potential benefits, challenges and next steps for each option.



The commissioning of the Scoping Study follows the receipt of recent results from metallurgical test work carried out by the Australian Nuclear Science and Technology Organisation (ANSTO) (refer ASX: GRL Announcement 19 February 2024).

Testing on composite samples delivered extraction rates of between of 80% - 95% for key magnet REEs (Nd, Pr, Tb, Dy), with best results of individual elements including Nd 96%, Pr 92%, Tb 91% and Dy 93%, further confirming the project's development potential. Metallurgical results will inform the 2024 works program, including the Scoping Study and the potential for additional drilling to further define and expand the existing Mineral Resources Estimate.

About Ausenco

Founded in Australia in 1991, Ausenco now has 26 offices in 15 countries, with over 3,000 staff managing projects in over 80 locations worldwide. Combining deep technical expertise with a 30-year track record, Ausenco delivers innovative, value-add consulting studies, project delivery, asset operations and maintenance solutions to the minerals and metals and industrial sectors.

Appointment of Study Manager for the Narraburra REE Project Scoping Study

Godolphin is also pleased to advise that it has appointed Dr. Quinton Hills as Study Manager for Narraburra REE Project Scoping Study. Dr. Hills is a geologist with over 20 years' local and international experience in various roles across exploration and project development, he is experienced in managing the technical aspects of Scoping and Pre-Feasibility Studies, which will be directly applicable to the Narraburra Project.

<<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:

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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 over 3,500km² of highly prospective ground focussed on the Lachlan Fold Belt, a highly regarded providence for the discovery of Rare Earth Elements, Copper, Gold and Base Metal 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 clay hosted REE's in both NSW and QLD, structurally hosted & epithermal gold, base-metal deposits and large, gold-copper Cadia style porphyry deposits in the Lachlan Fold Belt. It is pleasing to be continuing a focus of exploration efforts to define new targets for unlocking the potential of its East Lachlan tenement holdings and increasing the mineral resources of its advanced Copper Gold Projects. Ongoing 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, full-time employee, Shareholder and Optionholder 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.