

23 May 2024

Multiple New Rare Earth Exploration Targets identified at Narraburra with Potential to Significantly Up Scale the Project

- Exploration targets with potential to expand the existing JORC 2012 Mineral Resource Estimate, have been identified at Godolphin's 100% owned Narraburra Rare Earth Elements (REE) Project
- Reprocessing and interpretation of regional aeromagnetic data has identified four high priority target areas for follow-up exploration, as follows:
 - Targets 1 and 2: Areas with the potential to expand the existing Mineral Resource Estimate
 - Target 3: 2km x 2km area of likely granite undercover, adjacent to the Narraburra REE Deposit and with the ability to host REE mineralisation above the target granite
 - Target 4: Narraburra REE deposit analogue - 7km long exploration target corridor mapped along the newly interpreted Narraburra Fault Zone
- On ground exploration will commence immediately to systematically assess these targets and develop follow-up drilling programs which will be undertaken in the coming months

Godolphin Resources Limited (ASX: GRL) ("Godolphin" or the "Company") is pleased to provide the following update on a number of newly defined, highly significant, exploration targets on the Narraburra Rare Earth Elements Project (Figure 1). The new targets were identified by reprocessing and interpreting regional aeromagnetic data covering the Project and the wider exploration tenement areas.

Four key target areas have been defined from this reprocessed data and will form the immediate exploration focus (Figure 1). These target areas are aimed at expanding the existing Narraburra Resource and also seek to define regional drill targets within the Project area in order to discover new rare earth element deposits in these previously under explored areas.

Management commentary

Managing Director Ms Jeneta Owens said: *"Reprocessing of the existing regional magnetic data set by our geophysical consultant has provided Godolphin's technical team with a greater understanding of the geological conditions that may be influencing the location of the Rare Earth mineralisation on the Narraburra Project."*

"These new target areas provide a clear pathway to enable a potentially significant increase in the grade and tonnes of the Narraburra REE Resource, and also provide significant scope for exploration upside to substantially increase the overall Project size given the potential to make new clay hosted REE discoveries close to the existing Narraburra deposit."

"We look forward to providing additional updates on the commencement and results of the exploration initiatives at Narraburra as they develop, alongside ongoing metallurgical test work with ANSTO and the progression of the Scoping Study."



Narraburra Project - New Exploration Target Areas

The recently completed works program was commissioned by Godolphin to reprocess regional aeromagnetic data (Figure 1) at the Narraburra REE Project, in order to grow the existing mineral resource and define new exploration target areas across the tenement package.

The work comprised a review of the drill program that underpinned the Maiden JORC (2012) Mineral Resource Estimate at Narraburra (refer GRL's ASX Announcements 19 April 2023 and 21 April 2023), along with the work more recently completed.

As part of this work, the downhole Magnet Rare Earth Element Oxides (MREOs – Neodymium Nd, Praseodymium Pr, Dysprosium Dy, Terbium Tb) as a function of downhole depth have been calculated; this data was extracted from the weathered portion of the deposit only – it does not include any fresh rock.

This data shows that while the MREOs report to a large de-magnetised zone interpreted as a north-northeast striking fault (termed the Narraburra Fault Zone), the majority of the MREOs report to the west of the Narraburra Fault Zone and overlap with a distinct magnetic body.

The results of the MREO review indicate that this magnetic body is not likely a result of the Narraburra Granite, which hosts the eastern sector of the resource, but rather, may represent a separate igneous intrusion. This interpreted intrusion has been labelled as **Target 1** and will form the basis for ongoing drilling and resource expansion, targeting an increase in MREO grades with increased thicknesses.

Target 2 forms part of the extensional resource drilling, but unlike Target 1, exploration in this zone will focus on an area of low magnetic response, within which two historic aircore drillholes are strongly mineralised in MREOs. The area of the magnetic low will be targeted with additional drilling with the aim to intersect increased MREO grade and greater thicknesses of REE mineralisation.

Target 3 is a semi regional target defined by a large 2km x 2km magnetic low and is contiguous to the Target 1 and 2 areas discussed above. Reconnaissance field work is being planned over this target area and will consist of geological mapping and grab sampling, with a view to determine where best to place reconnaissance aircore drillholes.

Target 4 is positioned to the north-northeast of the Narraburra Resource and represents a 7km long regional target corridor. This target shares a similar signature to the Narraburra REE deposit, which is a de-magnetised zone along the Narraburra Fault Zone, adjacent to a magnetic high.

Interestingly, geostatistical models completed for various Rare Earth Elements suggest that the Heavy Rare Earth Element (HREE), Ytterbium (Yb), has a preferential trend to the north-northeast which is parallel to the Narraburra Fault Zone. It is therefore likely that the Narraburra Fault Zone is a controlling feature of the Narraburra deposit, the HREEs distribution, and forms an additional exploration target. Field reconnaissance over this area will be prioritised.

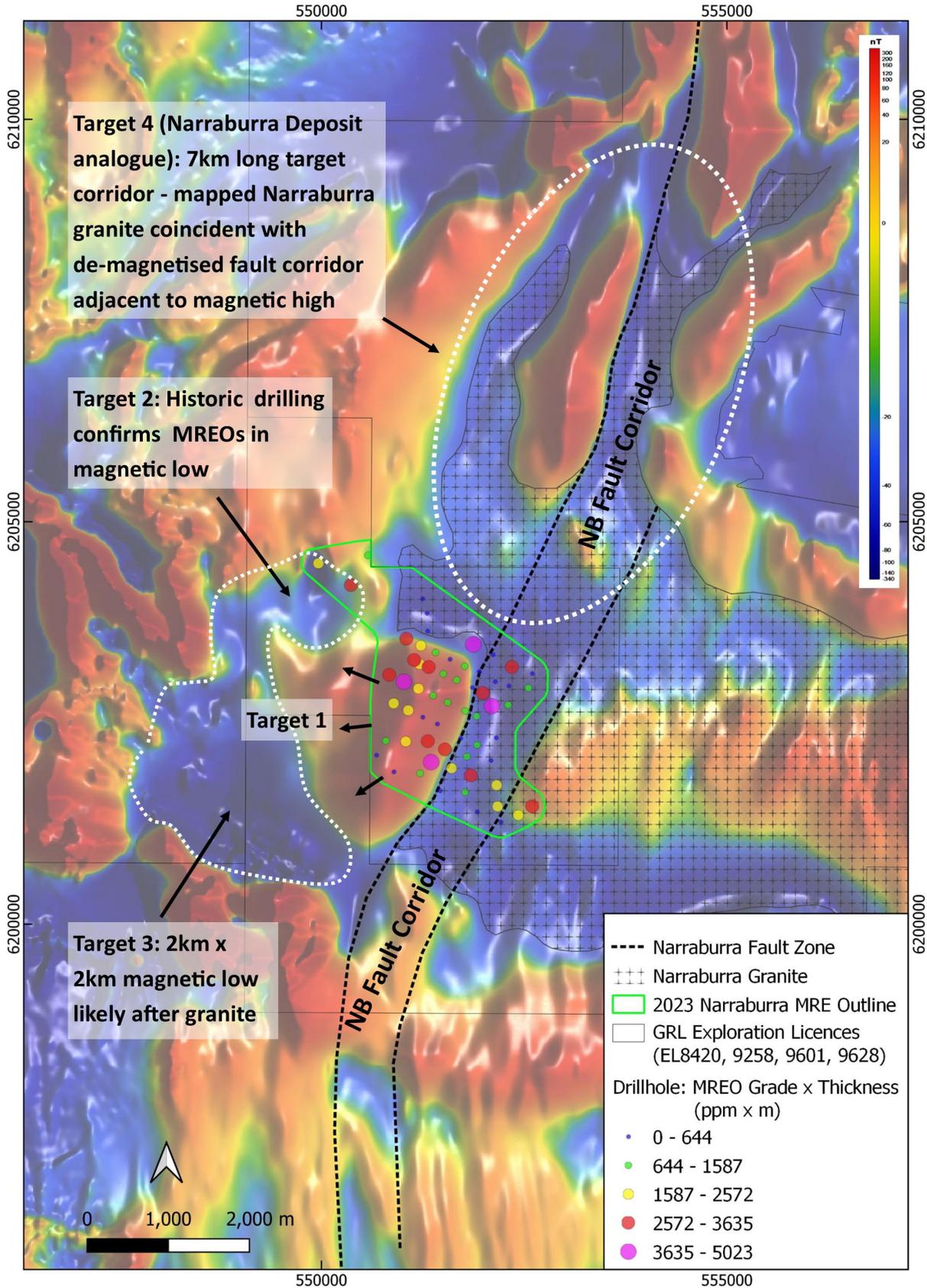


Figure 1: Reprocessed regional magnetic image showing the four key target areas. Note the Narraburra Resource drillholes are thematically mapped as a function of Magnet Rare Earth Oxides (MREO) x downhole thickness. Most of the MREOs are positioned west of the Narraburra Fault Corridor and overlap with a discrete magnetic high, creating a high priority drill target. Background Magnetic Image: RTP HP5000.



Project Overview

The Narraburra Rare Earth Element Project is located approximately 340km west of Sydney and 15km north of Temora in central west NSW. The Project comprises four exploration licences for 506km² held 100% by Godolphin Resources.

The Project contains the Narraburra 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 in accordance with JORC (2012) (refer ASX: GRL announcements: 19 April 2023 and 21 April 2023). Recently the third phase of metallurgical testing has commenced, which encompasses Process Development Testing being undertaken by ANSTO² was developed in conjunction with Ausenco Services Pty Ltd (“Ausenco”), who are currently undertaking the Narraburra REE Project Scoping Study (refer to GRL’s announcements: 25 March 2024 and 20 May 2024).

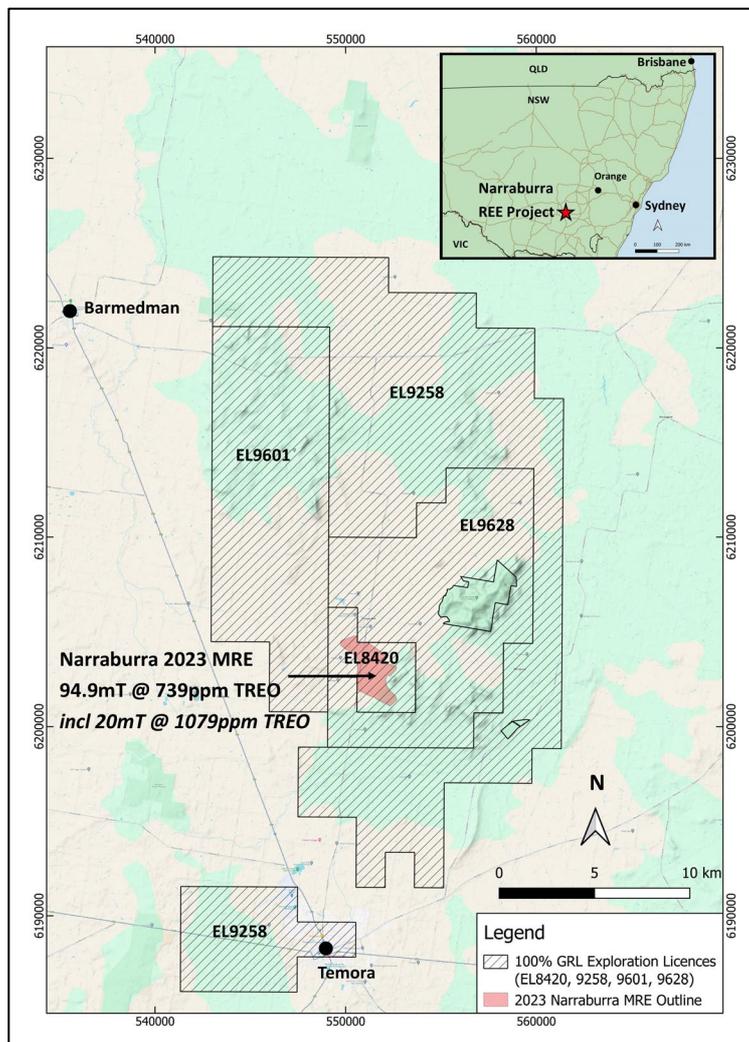


Figure 2: Narraburra Rare Earth Element Project consists of the Narraburra REE Clay deposit and four Exploration Licences EL8420, EL9258, EL9601 and EL9628.

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.

² Australian Nuclear Science and Technology Organisation (“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.



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

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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 and REE province. A strategic focus on critical minerals and future 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 province 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 NSW, structurally hosted & epithermal gold, base-metal deposits and large, gold-copper Cadia style porphyry deposits in the Lachlan Fold Belt. Continuing to focus exploration efforts to define new targets for unlocking the potential of our East Lachlan tenement holdings and increasing the mineral resources of its advanced Rare Earth Element, Copper and Gold Projects 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.



Appendix 1 – JORC Code, 2012 Edition, Table 1 report

Section 1 Sampling Techniques and Data (Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</p> <ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. <p>Aspects of the determination of mineralisation that are Material to the Public Report</p>	<ul style="list-style-type: none"> No new samples have been reported Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details. 	<ul style="list-style-type: none"> No drilling was completed Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Drill sample recovery	<ul style="list-style-type: none"> Method of re-coring and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> No drilling was completed Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. 	<ul style="list-style-type: none"> No drilling was completed Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	<ul style="list-style-type: none"> No drilling was completed Existing data used has been previously reported Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <ul style="list-style-type: none"> Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Now new assay data is presented Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> No drilling methods were used to collect the samples. Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. 	<ul style="list-style-type: none"> No drilling was completed Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> A new mineral resource is not addressed. The existing Narraburra Resource has been previously reported - Refer GRL's ASX Announcements on 19 April 2023 and 21 April 2023



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	<ul style="list-style-type: none"> No new sampling was completed Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> No new samples were taken
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits or reviews were deemed necessary

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	<p>Mineral tenement status:</p> <p>Tenements:</p> <ul style="list-style-type: none"> EL8420 (acquired 100% from EX9 Pty Ltd – awaiting Ministerial approval for transfer of title) EL9258 (acquired 100% from EX9 Pty Ltd – awaiting Ministerial approval for transfer of title) EL9601 (100% GRL) EL9628 (100% GRL) Location: ~20 km north of Temora, central NSW. Land ownership: Local private landowners (not GRL)
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Previous mining and exploration history: Past explorers: Primarily Capital Mining Limited (CML) from 1999 to 2013. Past exploration (Drilling): In 2006 an 8-hole RC program for 301 m. In 2008 a 26-hole AC program for 1,169 m. Bulk sample: A 15 t bulk sample was obtained in 2009 from a shallow 7.2 m deep pit.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralization. 	<p>Deposit type:</p> <ul style="list-style-type: none"> The REE deposit model for Narraburra is a Ion-Adsorption Clay (IAC) type REE-enriched deposit formed in the weathered regolith above an REE-bearing granite. <p>Geological setting:</p> <ul style="list-style-type: none"> Regionally: The Project is regionally situated within the central part of the Lachlan Fold Belt (an orogenic zone containing many mineral deposits and mines) in an area of later granitic intrusions. Locally: The Project area lies above the Narraburra Granite Suite, mostly expressed as low hills on its southern and eastern sides and in the weathered colluvium and alluvium and regolith above the granite in the flat valleys west of the hills. Mineralisation style: REE mineralisation is concentrated in layers within the ~50 m thick regolith above the granite, created by in-situ concentration by weathering of the granite and by lateritisation process involving ground water movements.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: 	<ul style="list-style-type: none"> No drilling was undertaken Existing data used has been previously reported - Refer GRL's ASX Announcements on 18 January 2023, 19 April 2023 and 21 April 2023



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. 	<ul style="list-style-type: none"> No drilling was undertaken. The MREO grade x thicknesses calculated were completed from existing data previously reported - Refer GRL's ASX Announcement 19 April 2023 and 21 April 2023 <p>Method to complete this exercise:</p> <ol style="list-style-type: none"> Relogging of previously reported drillhole data to determine the thickness of the weathered portion of the deposit (typically clay/saprolite and saprock). Cut off of >200ppm TREO was generally applied to this interpretation but values less than this were also considered where appropriate. Calculate the MREO grade of the interval using a weighted average Multiple the weighted average MREO grade by the downhole thickness for the relevant drillhole
Relationship between mineralization widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 	<ul style="list-style-type: none"> No drilling was undertaken. Existing data used has been previously reported - Refer ASX Announcement on 18 January 2023 and 19 April 2023 The MREO grade x thickness is reported as described above.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> A map of the drillhole collars are shown as previously reported in ASX Announcements on 18 January 2023 and 19 April 2023 The drillholes show MREO grade as a function of downhole thickness.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Results. 	<ul style="list-style-type: none"> All Godolphin generated results have been reported.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> All meaningful and material exploration data has been reported. A map of the reprocessed regional magnetic data is included as Figure 1. The regional magnetic data was reprocessed by a Mitre Geophysics. The image used is a: <ul style="list-style-type: none"> RTP HP5000 ESun image RTP = Reduced to Pole HP5000 = High Pass Filter which removes features of wavelengths >5000 (removes deep crustal sources) ESun: Illumination from the east
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p>	<ul style="list-style-type: none"> Future work of target areas highlighted in this report may consist of additional drilling, geological mapping and grab sampling where appropriate.