

21 April 2023

Maiden Narraburra Mineral Resource Announcement dated 19 April 2023

On 19 April 2023, Godolphin Resources Limited (ASX: GRL) (**Company**) made a market announcement titled “*Maiden Narraburra Mineral Resource Announcement*”.

The Company is required to provide full disclosure under ASX Listing Rule 5.8.1, which requires a market announcement to include in the body of its announcement a summary of all information material to understanding the reported estimates of mineral resources.

To satisfy Listing Rule 5.8.1, the following addendum includes additional detailed information relating to the Narraburra Mineral Resource estimation process.

While JORC Table 1 was attached to and formed part of the 19 April 2023 ASX announcement, cross referencing to the JORC Table 1 is not sufficient to satisfy this rule. The information must be included in the body of the announcement as well.

Following is an addendum to the Company’s announcement dated 19 April 2023 to comply with ASX Listing Rule 5.8.1.

<<ENDS>>

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

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Addendum: “Maiden Narraburra Mineral Resource Announcement” dated 19 April 2023

Following is a summary (extracted from the Company’s announcement dated 19 April 2023) of all information material to understanding the reported estimates of mineral resources in relation to the following matters:

Geology and geological interpretation

Regionally the Project is located within the central part of the Lachlan Fold Belt (LFB), a wide generally N/S trending geological subdivision in eastern Australia marked by folded and faulted sedimentary and volcanic rocks of similar age. The Project lies towards the southern end of a later Devonian intrusive granite complex, the local Narraburra Suite outcrops of which are surrounded by recent sediments. Granite outcrop hills form the EL’s southern and eastern boundary. Around the peripheries of the granites lie very young Quaternary aged colluvium, and further down-slope of the colluvium, completely covering the valley floors, lies young Cenozoic aged alluvium. All exploration was done in the colluvium and alluvium and underlying strongly weathered granite.

Narraburra REE mineralisation is identified as a REE deposit-type only recently appreciated to occur in Australia – an Ion-Adsorption Clay (IAC) type REE-enriched deposit. These deposits occur in the weathered clayey regolith formed above suitably mineralised granites and were first identified in southern China, allowing China to become a very major heavy REE producer over the last 30 years. Weathering in a periodically wet sub-tropical environment compresses and concentrates the granite profile at surface (by dissolution and mechanical weathering). Percolating groundwaters eventually deplete pre-existing REEs in the upper part of the weathered profile and secondarily concentrates them in clays in the lower parts.

To date, diamond drilling undertaken by Godolphin at Narraburra has intersected broad zones of REE and RM mineralisation in clay, saprock (clay-weathered rock) and in underlying fresh rock protolith material. The REEs 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 1-2m below surface.

Mineralisation interpretation was aimed at defining REE-mineralised zone(s) within the weathered saprolite layer overlying the fresh granite bedrock – in order to separate mineralisation from low grade waste. It was found that contiguous REE-mineralised zones in each drill hole would correlate with similar ones in adjacent drill holes – forming a layer. Close inspection of the drill logs and core photographs enabled the interpretation of a stratigraphic model comprising three mineralised layers, transported sediments at surface (soil, alluvium and laterite, given code TRAN), a thick underlying regolith layer of in-situ weathered granite (saprolite and saprock, code REG), and basal fresh bedrock granite (code BR). Bedrock was important to clearly identify as it would not form part of the resource due to its unknown extraction economics.

Layers were modelled by interpolating their upper and lower bounding surfaces. The surface TM (transported material) layer was thinnest averaging ~3.0 m, layer RMU (residual material upper) averaged 5.8 m thickness, layer RML (residual material lower) averaged 12.6 m thickness (the dominant layer), and layer BM (bedrock) averaged 4.5 m thickness. The top of layer TM was ~0.6 m below surface, top of layer RMU was ~14.3 m below surface and top of layer RML was ~24.8 m below surface. Fresh layer BM was predominantly immediately below weathered layer RML. Layer lateral extent was curtailed by a polygon drawn ~250 m outside the boundary drill holes. An un-folding block model was then created within the layers, and all drill hole samples were domained by layer.

Sampling and sub-sampling techniques

Historic drilling across the area consists of 8 reverse circulation (RC) holes and 26 aircore (AC) holes, of which 17 were used in 2011 to define the JORC (2004) compliant REE and RM mineral resource estimate. Drill samples were collected at 1m intervals and composited to 4m for analysis of the disseminated



mineralisation. All indications of the historical sampling were that it was “industry standard” for the time and was administered by geological professionals.

GRL’s 2022 diamond drilling program of 31 holes was sampled over entire drill holes on a 1m interval basis. A minor number of samples were on a minimum of 0.5m intervals and maximum of 3.0m intervals where there were areas of core loss or sampled to geological boundaries. Each sample was cut in half, with the first four diamond holes cut in half again with quarter core sent for assay. For all remaining holes the entire half PQ sized core was sent for analysis. All core not sent for assay is stored in sealed plastic for immediate and future use in mineralogical and metallurgical testwork.

Drilling techniques

Historic drilling consisted of vertical holes using both RC and AC methods. RC drilling was used to provide cased (twin tube) sample collection for accurate depth sampling and minimising sample contamination with recovery up a central tube. Typically, 6 m rods, ~140 mm diameter holes. AC drilling to RC) provided cased (twin tube) sample collections. The most recent drilling by Godolphin’s two campaigns of diamond core drilling (DD), when all holes in these programs were drilled vertically using PQ size diameter core for hole stability and recovery in the targeted clays.

The criteria used for classification, including drill and data spacing and distribution

JORC (2012 Edition) resource classification was based on individual block average sample distances (D) and number of sample points (P) saved during grade estimation. The criteria used here was to classify all blocks with $D \leq 240$ m as Indicated, and all other blocks as Inferred. These classifications were validated visually to ensure each class formed a contiguous zone without being patchy.

Sample analysis method

Historic drill samples were analysed at NATA registered laboratories by a combination of Induced Neutron Activation Analysis, X-Ray Fluorescence Spectrometry and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) methods. All samples from the 2022 drilling campaigns were analysed at a NATA accredited laboratory using industry best practice QAQC and analytical methods. Each sample interval was assayed by two different methods, firstly a four-acid digest and secondly using a lithium borate fusion digestion with both methods analysed by ICP-MS.

Estimation methodology

Steps in the resource estimation included modelling topography as a DTM (digital terrain model) surface; databasing all drill hole data (and converting REE values to oxides (REO)); geologically interpreting the REE mineralisation intercepts and modelling it as a series of stacked layers; geostatistically analysing the layer assays to determine grade continuity directions and distances; analysing dry density determinations to derive average densities for each layer; creating blocks models within the layers; estimating block grades using an un-folding model to guide search directions sub-parallel to layering; and reporting resources. Grades for each element were then estimated individually using an Inverse Distance squared (ID2) algorithm with vertical distances weighted by a factor of two and lateral XY searches trended along the layers by using the unfolding control. Block grades were stored in a 25*25*1 m block model. Totals for the various common divisions of REOs (light, heavy, total, magnet) were created from the individually estimated block grades.

Density

GRL’s raw dry density determinations (351 samples) were processed by compositing them by interpreted mineralised layer in each drill hole and then averaged. These produced values of 1.70 t/m³ for the upper TM layer, 1.76 t/m³ for the RMU layer and 1.80 t/m³ for the RML layer (fresh layer BM was 2.53 t/m³). These densities lay between historically used densities but very close to typical densities being currently used in similar REE deposits elsewhere.



Cut-off grade(s), including the basis for the selected cut-off grade(s)

All REE mineralisation occurred above a natural cut-off at ~300 ppm TREO (total REO). TREO assay results were geostatistically analysed, with the help of the un-folding control, in the thickest layer (RML) to determine continuity, which showed a long-range continuity of ~650 m towards ~350° with the other directions shorter at ~350-450 m range. This was interpreted as isotropic with the maximum continuity distance conservatively taken to be 350m. A lower cut-off of 300 ppm total Rare Earth Oxides including Y₂O₃ (TREO) minus CeO₂ was used in reporting resources. This cut-off value was justified as being in line with most similar current REE resource reporting.

Mining and metallurgical methods and parameters, and other material modifying factors considered to date

Historical exploration at Narraburra, and these resources, relied on positive REE mining economics based on the deposit's position in shallow weathered partly-clayey and weak layered material allowing relatively inexpensive free-dig mining by free-dig excavation from a shallow open-cut. Those economics were also based on the deposit's mineralisation nature (IAC deposit type) allowing in-expensive and efficient extraction by leaching in pads (proven elsewhere in similar deposits). Dilution would be expected to be minimised by these mining and extraction methods.

Historically Capital Mining Ltd (CML) used an excavator to successfully extract a 15 t bulk sample from a pit in the centre of the deposit, partly to test mineability. The Competent Person points out that CML's excavation was primarily in surface transported alluvium and that the deeper in-situ saprolite and particularly saprock of the majority of the resource may be more difficult to mine (although core photographs show saprock to predominantly be fairly crumbly).

CML conducted various metallurgical studies where they reported successful extraction.

CML was not specifically focused on REE extraction, being more focused on extracting zirconium through heavy metal and/or gravity methods. Their reported extraction proportions were lower than currently reported for IAC deposits although the Competent Person considers that they were not employing better recently developed methods for REE extraction.

IAC REE-enriched deposits generally form a thin (~5-10 m) laterally extensive sub-horizontal REE-enriched layer. In comparison to hard rock REE deposits regolith hosted IAC REE deposits are predominantly low-grade, typically containing 0.05-0.30 wt.% extractable Rare Earth Oxide (REO). With this mineralisation being readily dug material and simple to extract through chemical leaching IAC deposits typically have low grade cut-offs (~300 ppm).

The 300 ppm cut-off resource covers ~80% of the modelled area. However, a 600 ppm cut-off resource still reports a tonnage adequate for mining (20 Mt @ 1,079 ppm) and covers ~10% of the modelled area. This area might help target where open-cut mining could commence – effectively what 'pit optimisation' software would indicate.

See ASX: GRL 5 April 2023 "*Leach Testing Highlights Exceptional Narraburra Recoveries.*" The maiden metallurgical results, from a total of six samples from the Project, confirm exceptional REE leachability at Narraburra. Preferential extraction of heavy REE's, over light REE's, was identified in the first results, with exceptional recoveries of up to 94% Nd, 90% Pr, 80% Dy and 83% Tb. The samples tested cover a range of rock types from saprolite, saprock and fresh bedrock granite.

An expanded metallurgical testing study for the Project later in 2023 will examine the feasibility of extracting the REEs from the fresh bedrock and, if possible, the bedrock provides further upside for the overall mineral resource.



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 province for the discovery of REE, copper and gold deposits. Additional prospectivity attributes of GRL tenure include the McPhillamy’s 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 is pleased to announce a re-focus of exploration efforts for unlocking the potential of its East Lachlan tenement holdings, including increasing the mineral resource of its advanced Lewis Ponds Project. Reinvigoration of exploration efforts across the tenement package is the key to discovery and represents a transformational stage for the Company and its shareholders.

COMPLIANCE STATEMENTS: The information in this report that relates to reporting of Exploration Results, Mineral Resources or Ore Reserves is based on REE exploration information (excluding the RM information) reviewed by Mr Robin Rankin, a Competent Person who is a Member (#110551) of the Australasian Institute of Mining and Metallurgy (MAusIMM) and accredited since 2000 as a Chartered Professional (CP) by the AusIMM in the Geology discipline. The exploration information was compiled by Godolphin Resources Limited (GRL, see secondary CP Statement below). Mr Robin Rankin is an independent consultant to GRL and provided this service to his Client GRL as paid consulting work in his capacity as Principal Consulting Geologist and operator of independent geological consultancy GeoRes. He and GeoRes are professionally and financially independent in the general sense and specifically of their Client and of the Client’s project. This consulting was provided on a paid basis, governed by a (in this case an on-going engagement) scope of work and a fee and expenses schedule, and the results or conclusions reported were not contingent on payments. Mr Rankin has sufficient experience that is relevant to the REE style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person (CP) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rankin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mr Rankin’s CP Statement is given on the basis that GRL takes responsibility to a Competent Persons level (as given below) for the collection and integrity of the source data.

The actual REE exploration information in this report that relates to Exploration results, Exploration data, Sampling Techniques or Geochemical Assay Methodology is based on information compiled by Ms Jeneta Owens, Competent Person who is a Member of the Australian Institute of Geoscientists. Ms Owens is the Managing Director, shareholder and full-time employee of Godolphin Resources Limited. Ms Owens has sufficient experience 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.