

Geophysics Indicates Large Clay Basin Hosting the Narraburra Rare Earth Elements Deposit Indicating Significant Resource Expansion Potential

- Airborne electromagnetic (AEM) survey undertaken by the NSW Government's Resources and Geosciences department, under the Critical Minerals and High-Tech Metals Strategy, directly maps conductive clays hosting the Narraburra Rare Earth Elements ('REE') mineralisation
- Conductive clay basin hosting the Narraburra REE mineralisation extends north and south of the Narraburra Mineral Resource, over a 25km strike length up to 4km wide and overlaps mapped A-Type Granites interpreted to be the source of the Narraburra REE mineralisation – area yet to be drill tested
- Two highly prospective drill targets have been delineated from the AEM and follow up drill programs are now being designed
- Future mineral resource extension and exploration activities will be concentrated within this highly prospective zone
- Critical Minerals and High-Tech Metals Strategy is a Government initiative which aims to support the growth of the critical minerals supply chains in Australia

Godolphin Resources Limited (ASX: GRL) ("Godolphin" or the "Company") is pleased to provide the following update on exploration at the Company's 100%-owned Narraburra REE Project (Figure 1). The Company has recently acquired and interpreted an Airborne Electromagnetic ('AEM') survey completed by NSW Resources and Geoscience Australia, which highlights the potential to significantly expand Godolphin's existing JORC (2012) Mineral Resource Estimate¹ of 94.9 million tonnes at 739ppm TREO, which includes a higher-grade component of 20 million tonnes at 1,079ppm TREO² using a 600ppm cutoff.

Management commentary

Managing Director Ms Jeneta Owens said:

"We are extremely grateful that Narraburra was included the NSW Government's Critical Minerals and High-Tech Metals Strategies large AEM survey area. The AEM was conducted over several key areas of importance across NSW and one of the survey lines flew directly over the existing Narraburra REE Mineral Resource."

"Our interpretation of the AEM data suggests that the clay hosted, REE mineralisation is mapped as a conductivity anomaly and this conductive corridor continues north and south of the Narraburra Mineral Resource for a strike length of 25km and up to 4km across – a very large area which will form the basis of highly prospective exploration."

¹ ASX: GRL announcements: 19 April 2023 and 21 April 2023.

² "TREO" is Total Rare Earth Oxide, La₂O₃ + CeO₂ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ + Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Lu₂O₃ + Y₂O₃.



“A-Type per-alkaline granite is interpreted to be concealed beneath the conductivity feature, indicating there is a strong possibility that REE mineralised clay horizons exist. Our exploration team is currently designing a drill program to test this highly prospective geological setting. We look forward to providing additional updates as these activities progress.”

The AEM survey covering the Narraburra deposit was completed by the NSW Government’s Resources and Geoscience office. Results highlighted that the clay hosting the Narraburra REE mineralisation is associated with an extensive conductivity anomaly (Figure 1). The conductivity anomaly resulting from the clay basin hosting the Narraburra REE mineralisation, extends to the north and south of the deposit over a strike length of 25km and is up to 4km wide, coincident with A-Type Granites interpreted to be the source of the Narraburra clay-hosted REE mineralisation (Figures 2 and 3).

Delineation of this large, highly prospective zone featuring the same geological setting that caused the formation of the Narraburra REE Deposit is highly encouraging and will drive the Company’s planned mineral resource extension and exploration activities.

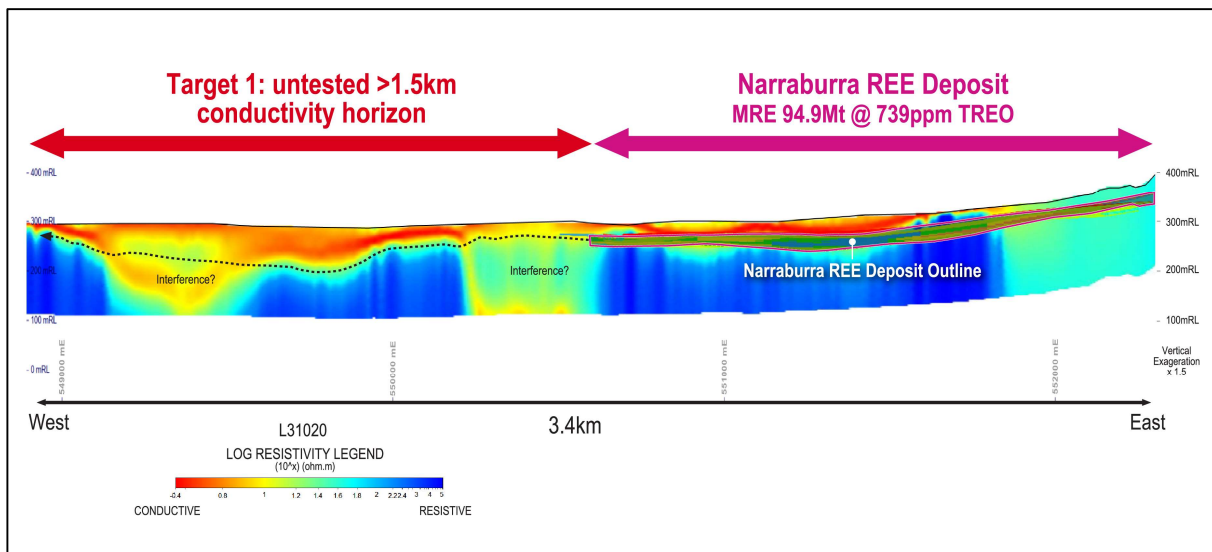


Figure 1: Cross Section of AEM flight line L31020 displayed as a Conductivity Depth Slice Image (CDI). The Narraburra REE Deposit mineralisation is hosted in kaolinite and smectite clays and these clays are mapped as a conductivity anomaly positioned near the transition from conductive overburden (warm colours) and resistive basement (cool blue colour). Target 1 represents a 1.5km continuation of this conductive horizon to the west of the existing Narraburra REE Deposit, a position which has not been drill tested.

Narraburra REE Project - Conductivity Exploration

As part of the NSW Government’s Critical Minerals and High-Tech Metals Strategy, which aims to support the growth of the critical minerals supply chains, a large AEM survey was completed during May to June 2023 and recently has been made available to the public. This survey, titled the *Forbes AEM Survey*, covered a 240km long segment between the townships of Temora and Narromine for 10,437 line kms.

The survey was implemented by the Geological Survey of NSW (NSW Resources) and Geoscience Australia. The purpose of the AEM survey was to measure the natural electrical properties of rock and soil up to 400m deep and specifically map different rock and soil types, the thickness of cover sequences and weathered rocks and their potential to host mineral deposits and ground water.



The southern sector of the *Forbes AEM Survey* overlapped with Godolphin's Narraburra Rare Earth Deposit, with 13 flight lines spaced at 2.5km crossing the broader Narraburra Rare Earth Project area (Figures 1 - 3).

Given AEM data directly maps variations in conductivity within the subsurface, it is an excellent exploration tool to detect electrically conductive minerals such as graphite, sulphides, saline ground water and, importantly, clays.

AEM flight line 31020 directly overflew with the Narraburra REE Deposit. Figure 1 illustrates the acquired data as a 2D Conductivity Depth Slice Image (CDI) through the earth, with the warm or red colours mapping conductivity and the cool or blue colours mapping resistive basement (Figures 2 and 3).

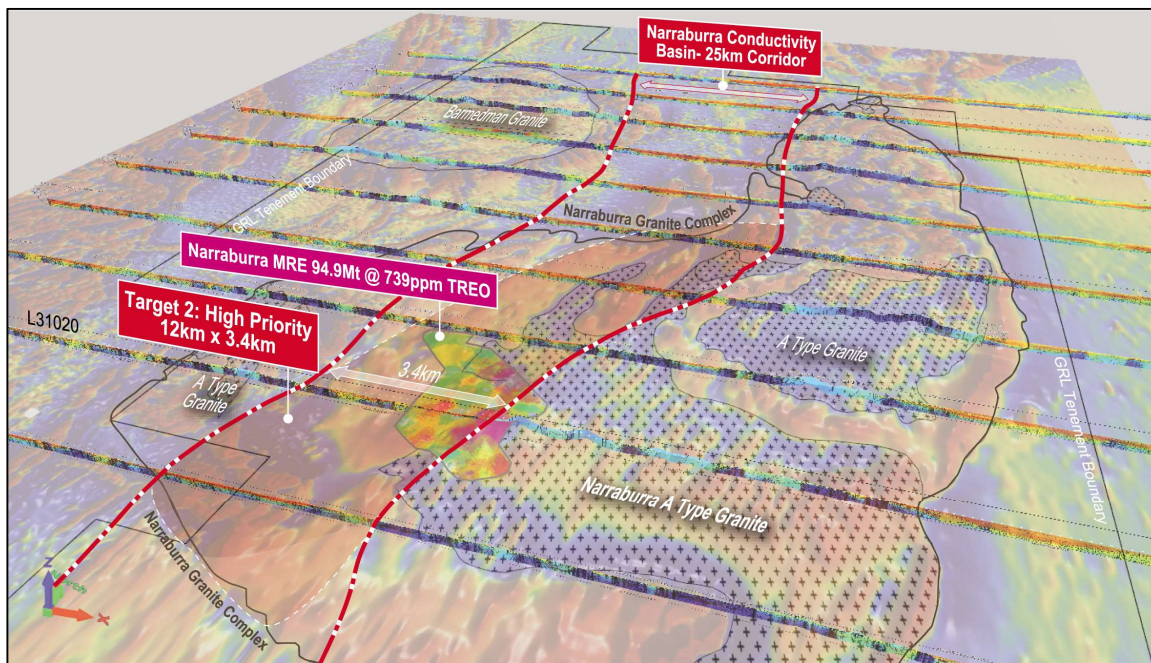


Figure 2: Perspective view looking north-west, showing the 25km long, north-south trending Narraburra Conductivity Basin. The CDIs are shown as the east-west trending pseudocolour lines, with flight line 31020 directly crossing the Narraburra Deposit. Target 2 is considered a high priority regional exploration target where conductive regolith overlaps with interpreted A-Type per-alkaline granite (source rock for REE mineralisation). Background Magnetic Image: RTP HP5000.

The Narraburra REE Deposit is directly mapped as a conductivity feature, showing that the AEM is mapping the conductive kaolinite and smectite clays which host the Narraburra REE mineralisation. The deposit is positioned near the transition from conductive clays to resistive granitic basement and, importantly, this mapped horizon continues to the west for an additional 1.5km.

This conductivity extension has not been drill tested and represents a high priority exploration target (labelled as Target 1 in Figure 1), with the potential to significantly increase the size of the existing deposit. Assuming there is A-Type per-alkaline granite (source rock for the REE mineralisation) concealed beneath Target 1, the probability of the clays hosting REEs is dramatically increased. This concept will be drill tested in future exploration programs, which are currently being designed.

In addition to Target 1, our exploration team has reviewed the surrounding AEM flight lines to the north and south of the Narraburra REE Deposit. A 25km long conductivity basin or corridor has been delineated, within



which a 12km long segment is considered a high priority regional target on the basis it overlaps mapped A Type per-alkaline granites (Figures 2 and 3). This is a high priority regional exploration target, herein referred to as Target 2.

Godolphin Resources aims to drill test Target Areas 1 and 2 with a reconnaissance style drill programs in the near future.



Figure 3: Perspective view looking north-west, showing the 25km long, north-south trending Narraburra Conductivity Basin. The CDIs are shown as the east-west trending pseudocolour lines, with flight line 31020 directly crossing the Narraburra Deposit. Target 2 is considered a high priority regional exploration target where conductive regolith overlaps with interpreted A-Type per-alkaline granite (source rock for REE mineralisation). Background Image: Google satellite.

Project Overview

The Narraburra Rare Earth Element Project is located approximately 340km west of Sydney and 15km north of Temora in central west NSW (Figure 4). The Project comprises four exploration licences for 506km² held 100% by Godolphin.

The Project contains the Narraburra Mineral Resource Estimate of 94.9 million tonnes at 739ppm TREO, which includes a higher-grade component of 20 million tonnes at 1,079ppm TREO using a 600ppm cutoff, in accordance with JORC (2012) (refer ASX: GRL announcements: 19 April 2023 and 21 April 2023). A Scoping Study is currently underway with the multinational mining services group Ausenco (refer ASX:GRL announcement 25 March 2024).

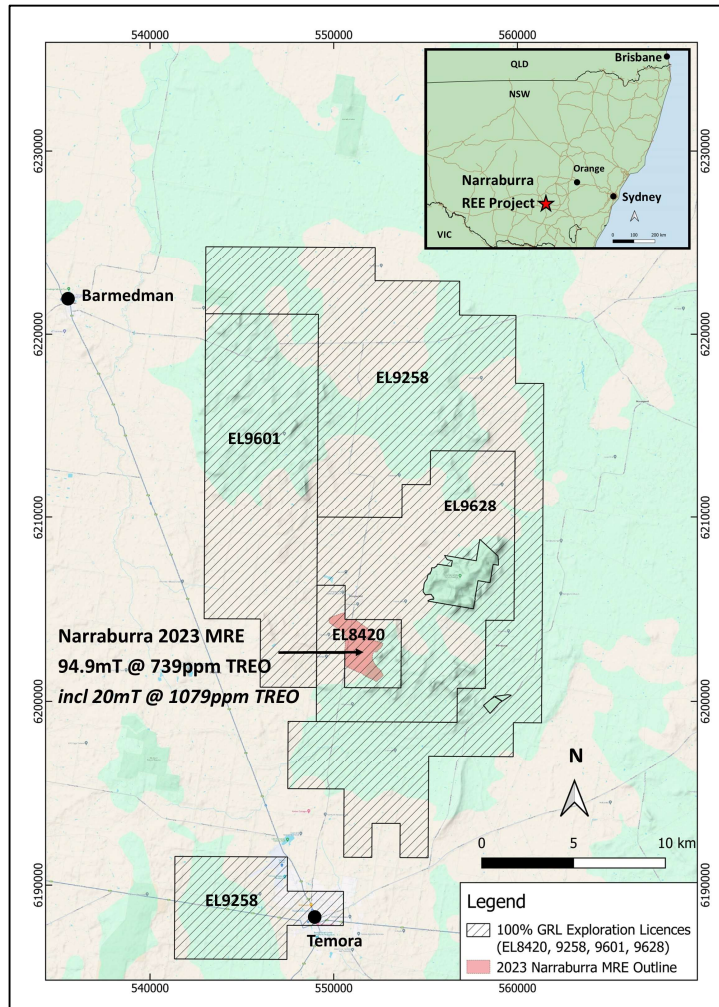


Figure 4: Godolphin's Narraburra Rare Earth Element project consists of the Narraburra REE Clay deposit and four Exploration Licences EL8420, EL9258, EL9601 and EL9628.

<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 & REE 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 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, 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 exploration efforts to define new targets for unlocking the potential of its East Lachlan tenement holdings and increasing the mineral resources of its advanced Narraburra Rare Earth Project, Lewis Ponds Gold & Base Metals Project and the Yeoval Copper Gold Project. Systematic and scientific 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.



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"> Not applicable – no sampling was undertaken
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"> Not applicable – no drilling was undertaken
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> Not applicable – no drilling was undertaken
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"> Not applicable – no drilling was undertaken
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"> Not applicable – no drilling was undertaken
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"> Not applicable – no drilling was undertaken
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"> Not applicable – no drilling was undertaken
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"> Not applicable – no drilling was undertaken
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 	<ul style="list-style-type: none"> Not applicable – no drilling was undertaken



Criteria	JORC Code explanation	Commentary
	<i>applied.</i>	
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"> Not applicable – no drilling was undertaken
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Not applicable – no drilling was undertaken
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"> Geophysical data was reviewed by an external geophysical consultant

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 (100% GRL) EL9258 (100% GRL) 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. <p>Bulk sample: A 15 t bulk sample was obtained in 2009 from a shallow 7.2 m deep pit.</p>
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 ASX Announcement on 18 January 2023 and 19 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.																																
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.																																
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">• Numerous images have been supplied																																
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.	<p>Geophysical results reported were taken from the NSW Resources supplied data, specifically from the Forbes-Dubbo AEM Survey. The survey was flown by Xcalibur Aviation (Australia) Pty. Ltd. using its 6.25 Hz HELITEM® AEM system. Xcalibur Aviation Pty. Ltd processed the data.</p> <p>The raw data was subsequently re-processed by an external geophysics consultancy called Mitre Geophysics</p> <p>Survey specifics:</p> <table><tr><td>Survey Name</td><td>Yathong, Forbes, Dubbo, Coonabarabran AEM, Australia, 2023, HELITEM Airborne Electromagnetic Survey</td></tr><tr><td>State</td><td>NSW</td></tr><tr><td>GA Airborne Survey ID</td><td>5022</td></tr><tr><td>GSNSW Geophysical Survey ID</td><td>AIR1000, AIR1001, AIR1002, AIR1003 and AIR1004</td></tr><tr><td>Custodian</td><td>Geoscience Australia</td></tr><tr><td>Contractor</td><td>Xcalibur Multiphysics</td></tr><tr><td>AEM System</td><td>6.25 Hz HELITEM</td></tr><tr><td>Nominal Terrain Clearance</td><td>72 m</td></tr><tr><td>Line Spacing</td><td>Variable between (100m-2500m)</td></tr><tr><td>Line Direction</td><td>East-West</td></tr><tr><td>Total Survey Line Kilometres</td><td>15,090 km</td></tr><tr><td>Nominal Terrain Clearance</td><td>72 m (nominal) above ground level</td></tr><tr><td>Survey Start Date</td><td>24th April 2023</td></tr><tr><td>Survey End Date</td><td>20th June 2023</td></tr><tr><td>Datum</td><td>GDA2020</td></tr><tr><td>Projection</td><td>MGA Zone 55</td></tr></table>	Survey Name	Yathong, Forbes, Dubbo, Coonabarabran AEM, Australia, 2023, HELITEM Airborne Electromagnetic Survey	State	NSW	GA Airborne Survey ID	5022	GSNSW Geophysical Survey ID	AIR1000, AIR1001, AIR1002, AIR1003 and AIR1004	Custodian	Geoscience Australia	Contractor	Xcalibur Multiphysics	AEM System	6.25 Hz HELITEM	Nominal Terrain Clearance	72 m	Line Spacing	Variable between (100m-2500m)	Line Direction	East-West	Total Survey Line Kilometres	15,090 km	Nominal Terrain Clearance	72 m (nominal) above ground level	Survey Start Date	24 th April 2023	Survey End Date	20 th June 2023	Datum	GDA2020	Projection	MGA Zone 55
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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 reconnaissance style drilling.																																