

25 October 2024

## Lady Grey Exploration Update

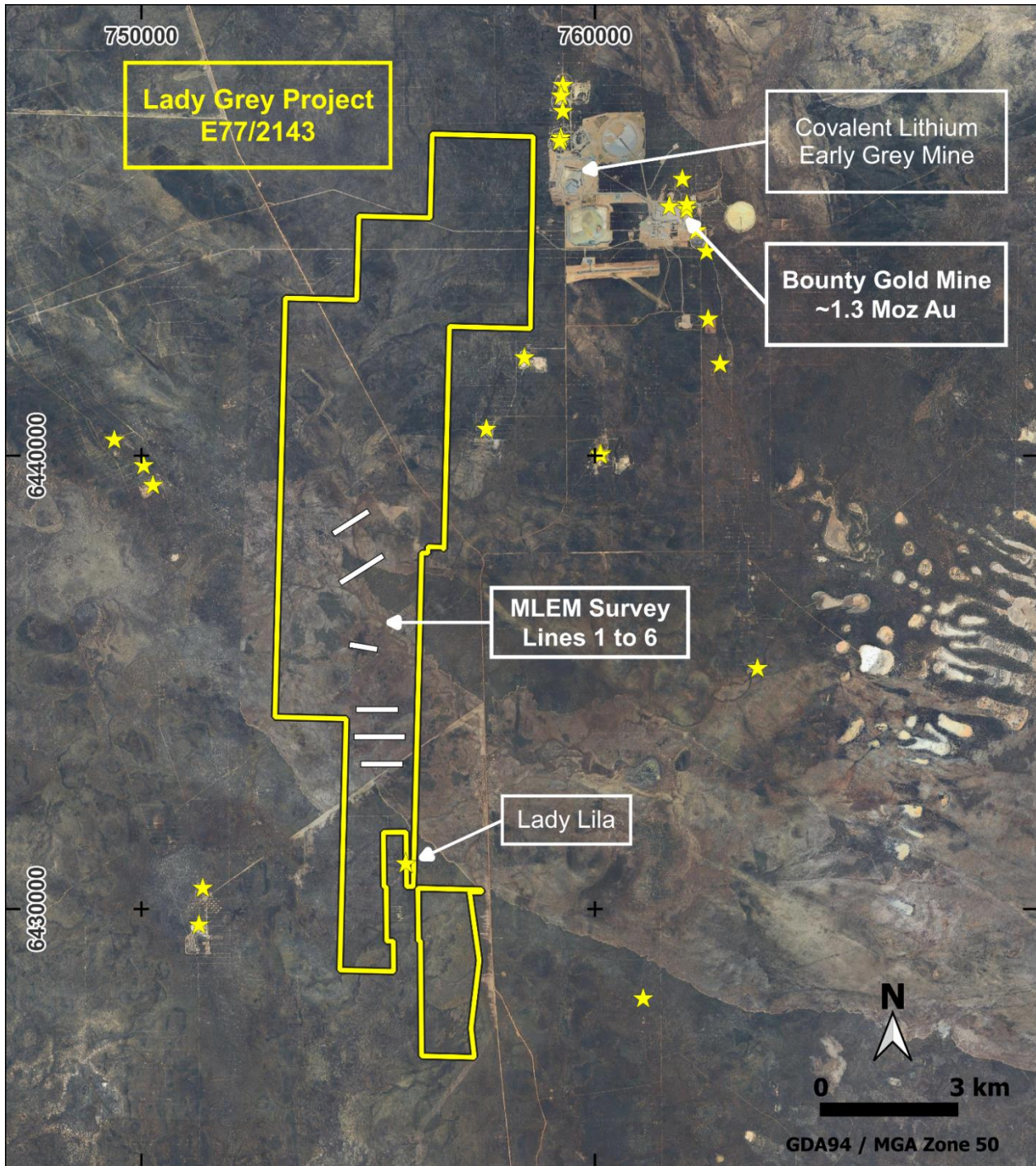
- Programme of Work (PoW) granted by DEMIRS for drilling on Modelled MLEM Conductor Plate under EM Line #6 with no requirement for Spring Flora and Fauna or Heritage Surveys
- MLEM survey Line #6 target is aligned with a surface gold geochemical anomaly coincident with a regional structural zone favourable for hosting gold (ASX 24 Sept 2024)
- Drilling contractor and geological support crew engaged
- Programmes of Work (PoW) application for drilling on MLEM survey Lines #1-3 progressing with Spring Flora and Fauna Survey now completed and Heritage Survey scheduled
- Close spaced drone aeromagnetic survey to infill existing open file magnetic surveys completed
- Historic Bounty Gold Mine which produced ~1.3 Moz Au<sup>1</sup> on Covalent Lithium's Mount Holland mine site, located adjacent to Lady Grey and Lady Lila Gold Prospect, is located along strike to the south of Lady Grey

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Lanthanein Resources Limited (ASX: LNR) ("Lanthanein" or the "Company") is pleased to announce the grant of a Programme of Work (PoW) on the Company's Lady Grey Project at Mt Holland in WA's Yilgarn Province to drill test a modelled conductor plate under Moving Loop EM (MLEM) Survey Line #6 (refer ASX release 24 September 2024). Interpretation of the MLEM results, by the Company's geophysical consultants, has generated EM conductor model plates representing sources for EM anomalies that coincide with ultra-fine fraction (UFF) soil geochemical anomalies and historical downhole assay data.

**Mr Brian Thomas, Technical Director of Lanthanein commented:** "We are very excited to have been granted a PoW to drill the Line #6 conductor plate which coincides with a 75ppb UFF soil gold anomaly plus high order nickel and copper anomalies (ASX 22 April 2024). We remain confident that the PoW to enable drill testing of the EM conductor plate under MLEM survey line 1 which coincides

*with the 256 ppb Au UFF soil anomaly will be granted soon, along with the requisite heritage survey (ASX 22 April 2024). The Forrestania region is well known historically for significant gold production from the old Bounty Mine producing ~1.3 Moz Au adjacent to the Lady Grey project tenements.”*



**Figure 1: Lady Grey Project tenement E77/2143 outline (yellow), known gold occurrences (yellow stars), Earl Grey lithium mine and recently completed MLEM survey lines (white), all overlay on a Google Earth aerial photo image.**

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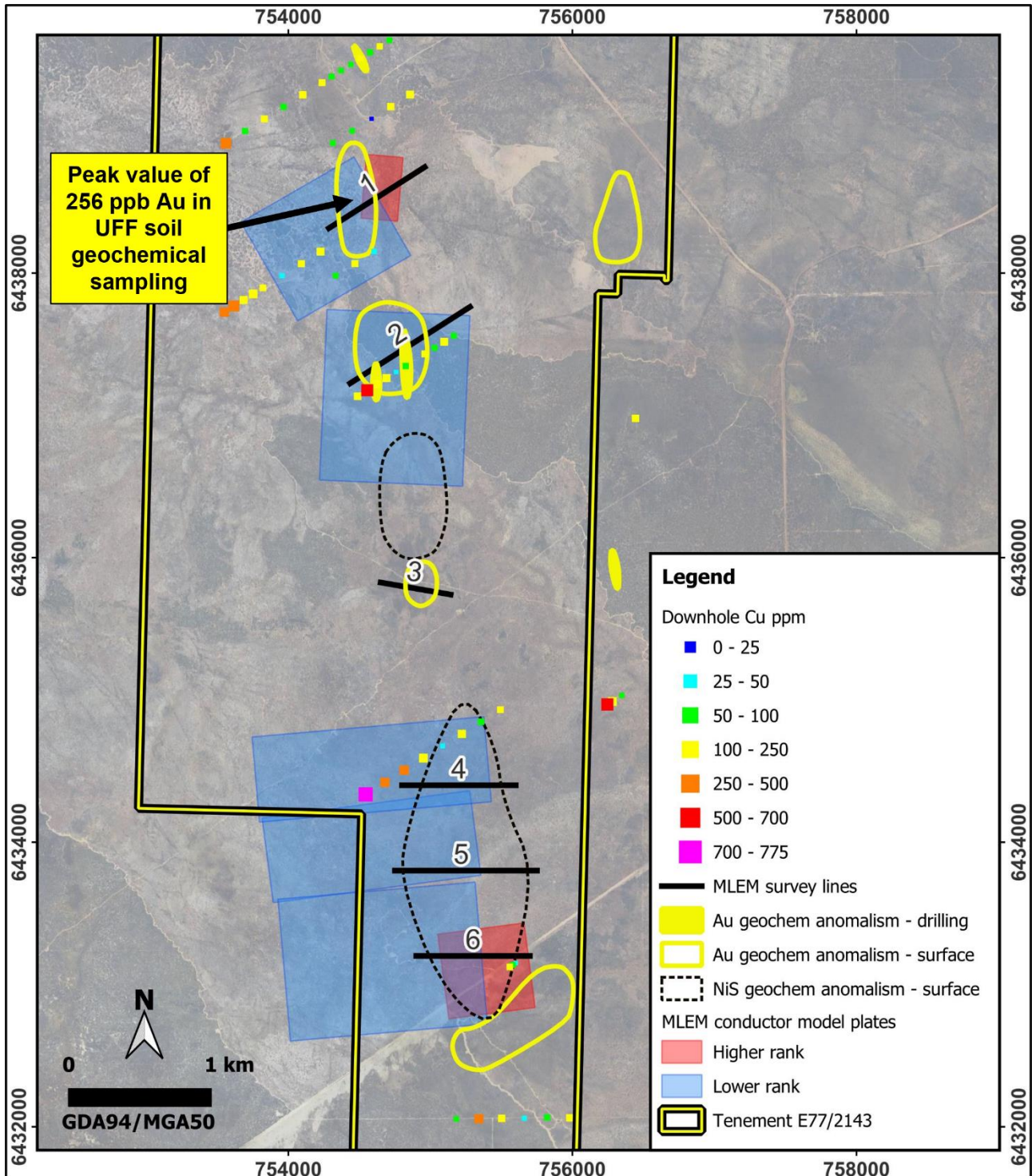
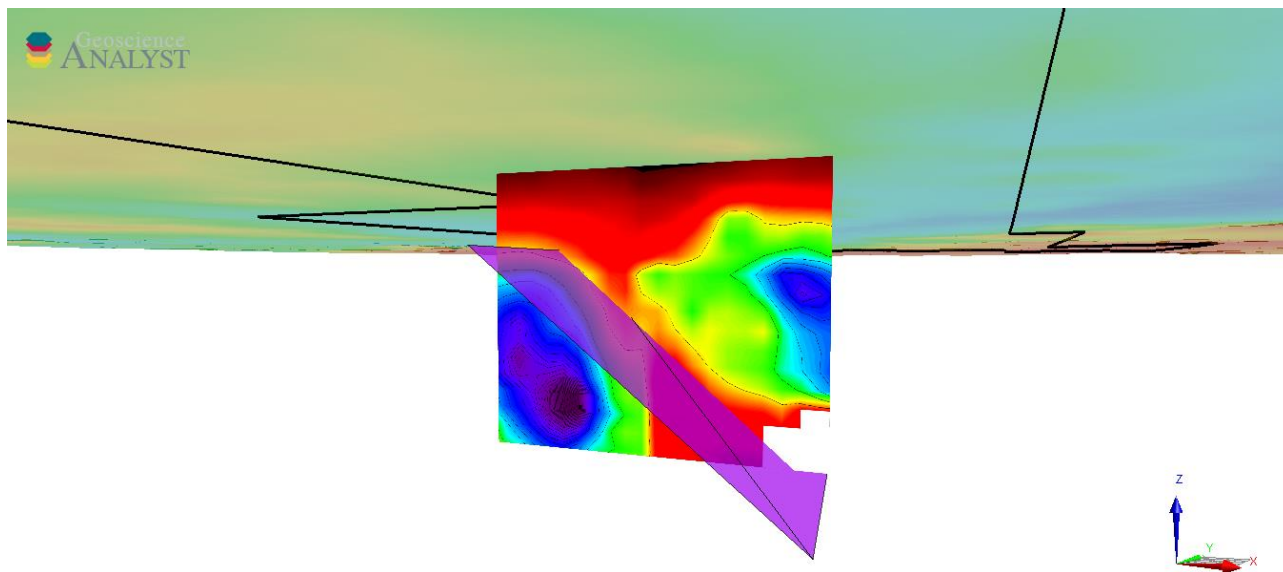


Figure 2: MLEM survey lines 1 to 6 (black), gold (yellow) and nickel (black) geochemical anomaly outlines overlain on a Google Earth aerial photo image (ASX 24/9/24). Higher ranked MLEM conductor model plates under Lines # 1 & 6 shown projected to the surface (red shaded polygons). All MLEM conductor model plates are dipping to the east.



**Figure 3: 3D View looking north along MLEM survey Line 6 showing EM conductor model plates (red and blue shaded polygons), MLEM 1D conductivity inversion model (CDI) coloured such that hot colours are more conductive, and the topographic surface wireframe (aqua). No vertical exaggeration and all data are referenced to the GLO30 DEM surface (orthometric/geoidal height datum)**

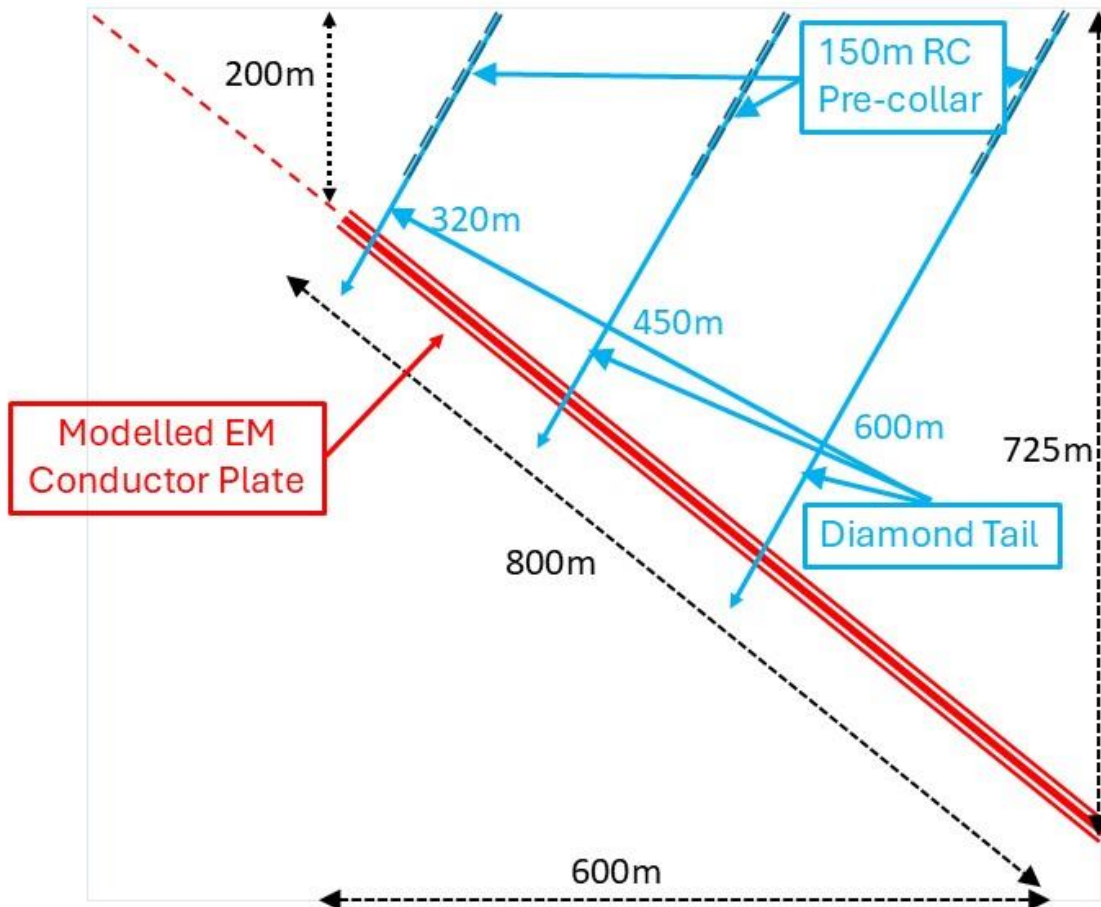
**Planned Drilling**

The modelled conductor plate under MLEM Line #6 will be drilled from the existing historical access road which links the old Laday Ada mine and the Marvel Loch Forrestania Road. As the modelled conductor plate is 200m below surface and dips to the east the drill testing will consist of the three RC with diamond tail drill holes as proposed in Figure 4.

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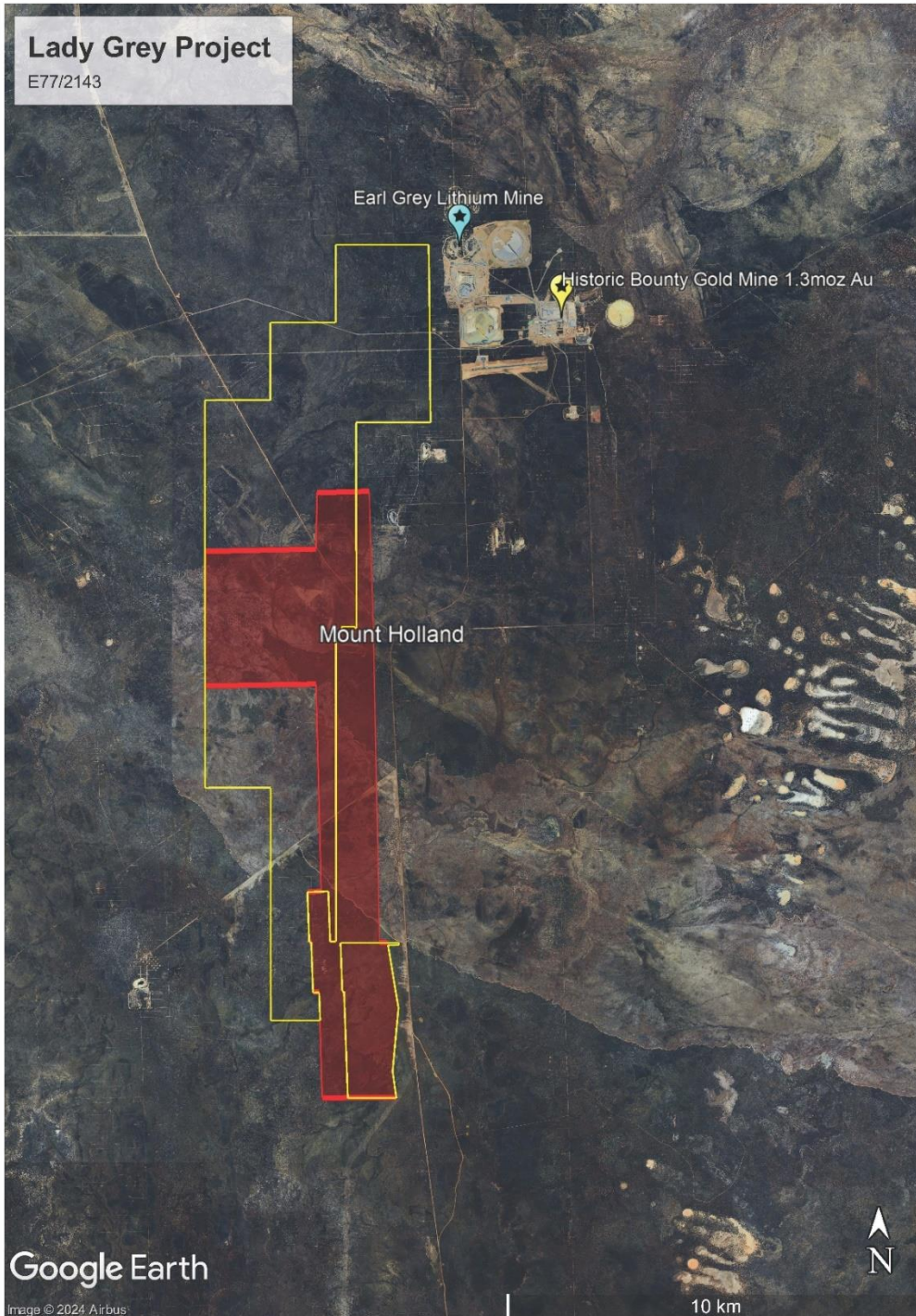
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**Figure 4: Modelled Conductor Plate (in Red) with Drill Holes Traces (in Blue) superimposed on Google Earth image and cross section below**

### Drone Aeromagnetics Survey

A close spaced aeromagnetic survey on 25 metre line spacings was recently completed using an Unmanned Airborne Vehicle (UAV). The area covered by the survey provides coverage of a gap between two open file aeromagnetic surveys plus give closer spaced coverage over the MLEM Line #1 modelled conductor plate.



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Figure 5: Area flown with 25 metre spaced UAV aeromagnetics shown in red



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This announcement has been authorised for release by the Directors of the Company.

For additional information please visit our website at [www.lanthanein.com](http://www.lanthanein.com)

**LANTHANEIN RESOURCES LTD**

The information referred to in this announcement relates to the following source(s):

<sup>1</sup> source: <https://portergeo.com.au/index.asp>.

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This announcement includes forward-looking statements that are only predictions and are subject to known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of Lanthanein, the directors and the Company's management. Such forward-looking statements are not guarantees of future performance.

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This release includes exploration results the Company has previously reported 22 & 29 April, 15 May & 16 July 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in previous announcements (as may be cross referenced in the body of this announcement) and that all material assumptions and technical parameters underpinning the exploration results continue to apply and have not materially changed.

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