

30 January 2025

## ACTIVITIES REPORT QUARTER ENDED 31 DECEMBER 2024

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### Lady Grey Project

- **Drilling of the RC Pre Collars completed with Diamond Drilling of the Modelled MLEM Conductor Plate under EM Line #6 commenced**
- **Conductor plate target is aligned with a surface gold geochemical anomaly coincident with a regional structural zone favourable for hosting gold (ASX 24 Sept 2024)**
- **On ground Heritage Survey of MLEM Line #1 completed**
- **Extension to Lady Grey Farm-in Agreement**
- **Sale of 3m Tolu Mineral Ltd Shares the final consideration from sale of Tolukuma EL2531 in PNG**

Lanthanein Resources Limited (**Lanthanein** or the **Company**) is pleased to provide its quarterly report for the three-month period ending 31 December 2024.

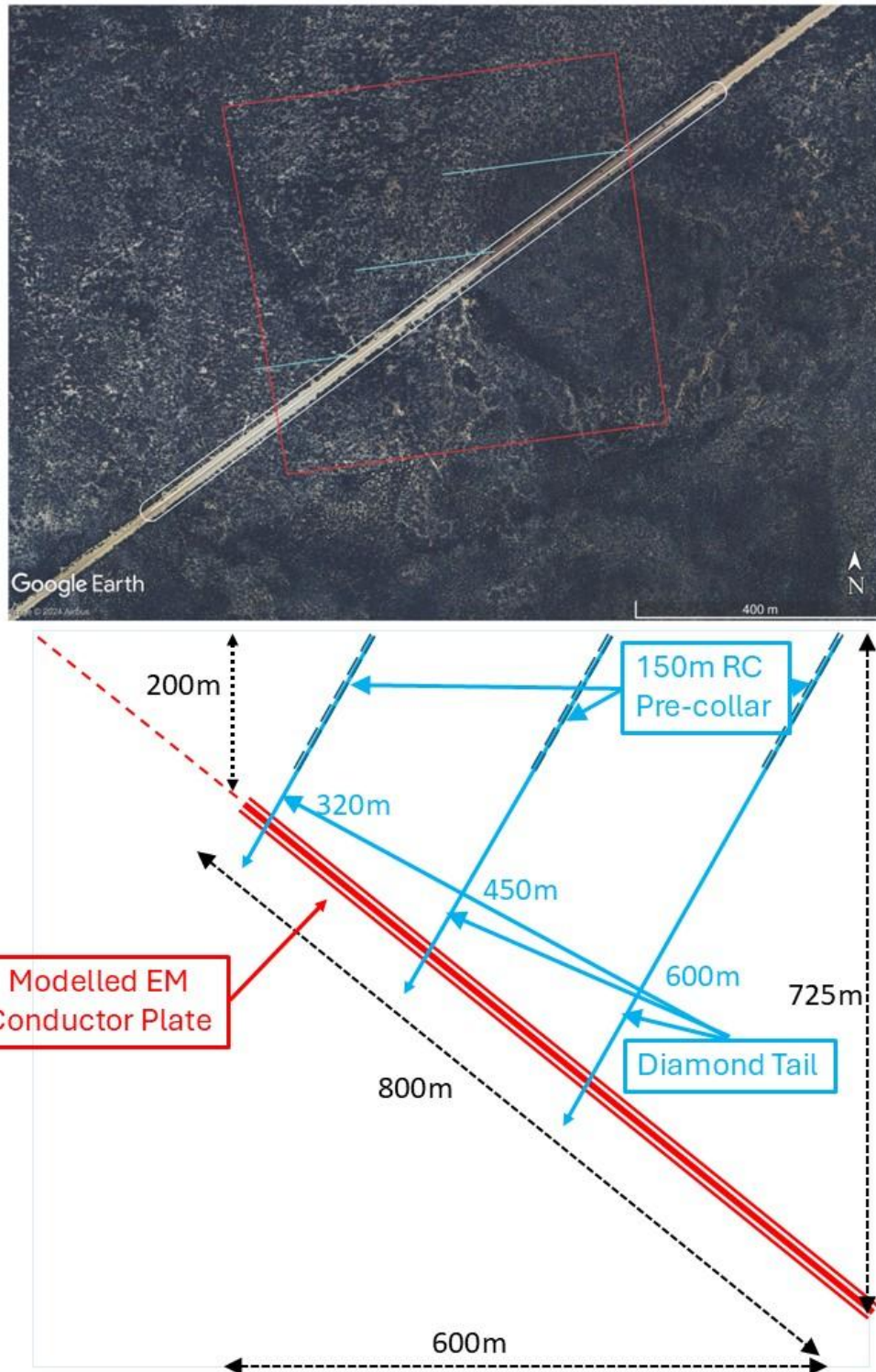
### **Lady Grey Project, Western Australia**

During the quarter the Company announced the commencement of drilling at the Company's Lady Grey Project at Mt Holland in WA's Yilgarn. The drilling aims to test a modelled conductor plate under Moving Loop EM (MLEM) Survey Line #6 (refer ASX release 24 September 2024). The first phase of the drilling programme was three RC precollars that were completed to a maximum depth of 150m. The second phase of the drilling of the diamond tails commenced during the quarter with the drilling expected to be completed early in the following quarter.



**Figure 1: Lady Grey Project tenement E77/2143 outline (yellow), approved PoW Drill Line (white) and drill hole traces (blue), all overlain on a Google Earth satellite photo image.**

The modelled conductor plate under MLEM Line #6 is being drilled from the existing historical access road which links the old Lady 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 precollars with diamond tail drill holes as proposed in Figure 2.



**Figure 2: Modelled Conductor Plate (in Red) with Drill Holes Traces (in Blue) superimposed on Google Earth image and cross section below**

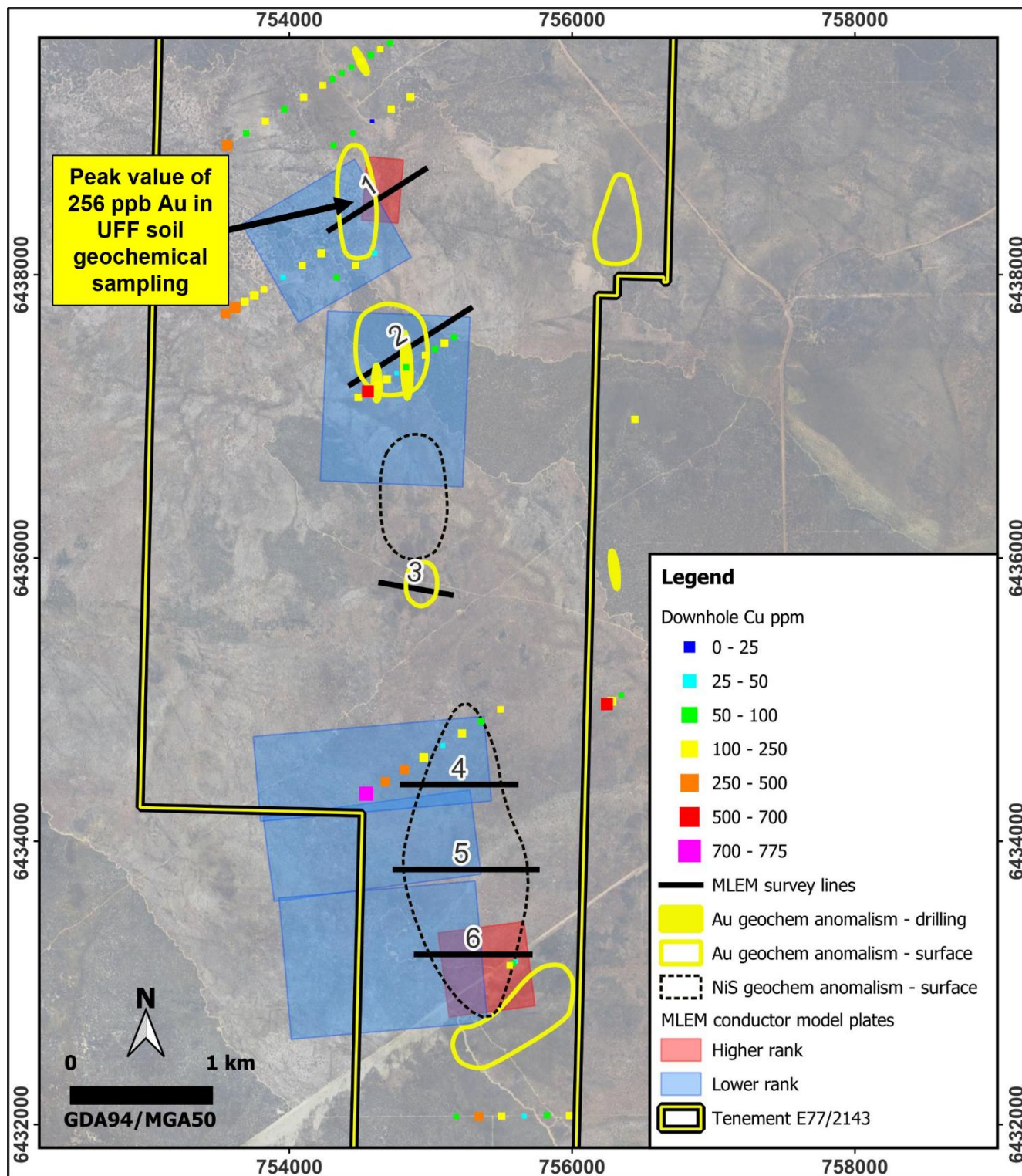


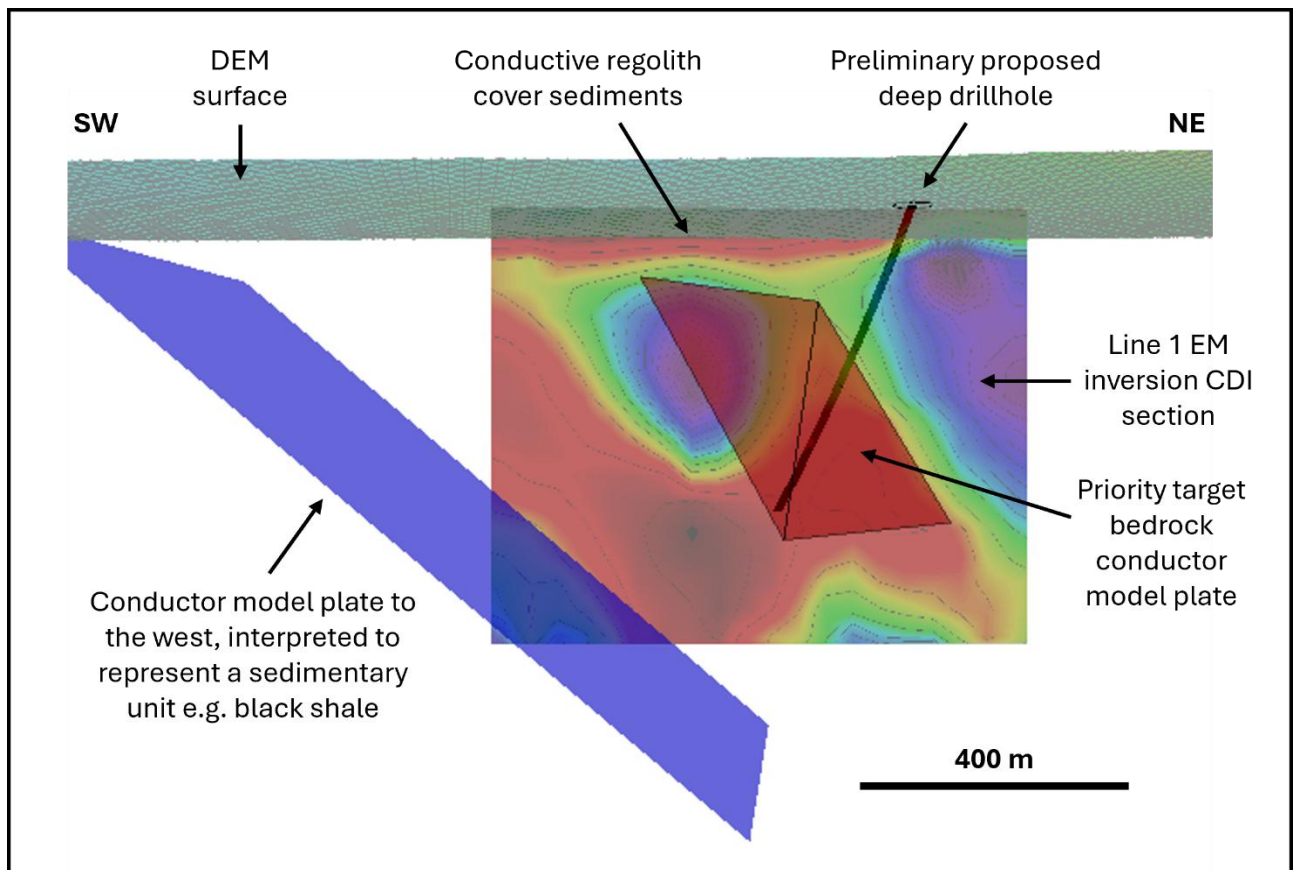
Figure 3: Recently completed MLEM survey lines 1 to 6 (black), gold and nickel geochemical anomaly outlines (yellow), and downhole Cu assays as coloured squares projected vertically to surface, all overlay on a Google Earth aerial photo image. Higher ranked MLEM conductor model plates shown projected to the surface (red shaded polygons), other lower ranked MLEM conductor model plates interpreted to be caused by black shales located to the west (blue shaded polygons), and all MLEM conductor model plates are dipping to the east.

### Moving Loop Electromagnetic Survey (MLEM) Survey

The Company's geophysical consultants, Resource Potentials Pty Ltd (ResPot), have identified and modelled a number of potential bedrock EM conductor source bodies across the completed MLEM survey lines. A large conductor model plate is modelled to the west of most the MLEM survey lines, which at this stage is interpreted to represent a conductive black shale sedimentary unit (see blue shaded conductor model plates in Figure 4). Higher ranked isolated bedrock EM conductor plate source bodies have been modelled to fit strong EM anomalies located near the centre of MLEM survey lines 1 and 6 (see red shaded conductor model plates in Figure 4). In both cases, these higher ranked EM conductor plates are located close to a NNW trending magnetic ultramafic unit and surface geochemical UFF anomalism in Au, Cu, Ni and other pathfinder elements at surface. The higher ranked modelled bedrock EM conductor plate located near the centre of MLEM survey line 6 is within a broad Ni surface geochemical anomaly, and the up-dip projection of the modelled conductor plate is located along strike to the SSE of downhole Cu geochemical anomalism in historical drilling assays. This EM conductor model plate has a strike length of 600 m, a depth extent of 800 m and a conductance of 1,300 S. The top of the model plate is approximately 195 m below surface, with the plate dipping to the east. The higher ranked bedrock EM conductor plate modelled to fit a strong EM anomaly located near the centre of MLEM survey line 1 sits down-dip from a broad zone of elevated surface Au geochemical anomalism, which includes a UFF soil sample with a peak value of 256 ppb Au (ASX 29 April 2024). This modelled EM conductor plate has a strike length of 450 m, a depth extent of 450 m and a conductance of 1,200 S. The top of the model plate is approximately 115m below surface and it also dips to the east. This EM conductor plate forms a high priority Au target zone, because Au mineralisation at the nearby Bounty Gold mine was associated with EM anomalism from pyrrhotite and other associated sulphide minerals, and therefore represents a priority target for drill testing during Lanthanein's maiden drill program at the Lady Grey Project, with a PoW application underway for gaining approvals to test this priority target as well as other Au, base metal and lithium targets at Lady Grey.

A 3D view looking towards the northwest at the EM conductor model plate with an EM 1D conductivity inversion cross section image ("CDI") for MLEM survey Line 1 is shown in Figure 4. The EM conductor model plate represents a more robust target for drill targeting due to its isolation compared to the interpreted black shale to the west, and the coincident geochemical anomalism, but it is encouraging to see the plate modelled EM anomaly source resolved in a similar position in the CDI cross section to provide higher confidence for drilling this target zone. A similar comparison between conductor the model plate and CDI results were obtained for MLEM survey Line 6 (not shown here), also representing a high priority drilling target. A preliminary proposed drillhole is shown in the 3D view in Figure 4, but note that initial drill

testing of this gold prospect will likely start with shallower drilling of the up-dip projection of the EM conductor model plate where sulphide minerals are likely oxidised, and drilling deeper into fresh rock to ensuring adequate drill testing for the sources of the surface Au and base metal geochemical anomalism.



**Figure 4: 3D View looking north along MLEM survey Line 1 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). A preliminary proposed deep drillhole is shown as a black trace along the CDI image. No vertical exaggeration and all data are referenced to the GLO30 DEM surface (orthometric/geoidal height datum)**

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## Corporate

### Lady Grey Farm-in Agreement Extension

During the quarter the Company entered into a variation deed to the Lady Grey Project farm-in agreement first announced on 6 December 2023, due to delays with approvals from the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) with the grant of Programmes of Work for the Company's planned drilling programmes. Additionally, there were significant delays with scheduling heritage surveys of the areas proposed for drilling.

The Company and its wholly owned subsidiary, West Kidman Pty Ltd (ACN 672 896 865), have agreed with Gondwana Resources Ltd ("Gondwana") and the Option Vendors (defined below) to extend the date by which it may earn a 50% legal and beneficial interest in tenement E77/2143 by six months by paying Gondwana consideration of \$200,000 cash.

This amount will be included as exploration expenditure incurred by the Company during the 19<sup>th</sup> month and the 30<sup>th</sup> months after the earn in start date within the Stage 1 Earn In Period.

The extension will allow the Company sufficient time to finalise the drilling and receive assays to assess the prospectivity of the project and to decide whether the Company would proceed with the next stage of the farm-in agreement.

The Company has agreed with the Option Vendors to extend the date by which the following consideration to be paid for assigning the Gondwana Option to the Company is payable to the Option Vendors by six months, as follows:

- if the Company has not withdrawn from the Agreement, 18 months from the execution date of the Agreement ("Commencement Date"), the Company will issue the Option Vendors 100,000,000 fully paid ordinary shares in the capital of Lanthanein (Shares);
- if the Company has not withdrawn from the Agreement, 30 months from the Commencement Date, the Company will issue the Option Vendors 166,666,666 Shares; and
- if the Company has not withdrawn from the Agreement, 42 months from the Commencement Date, the Company will issue the Option Vendors 166,666,666 Shares.

All other material terms of the Agreement remain in full force and effect.

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**Sale of Tolu Minerals Shares**

Following completion of the sale of the Company's former subsidiary, Frontier Copper PNG Ltd, the holder of the Tolukuma Exploration Licence EL2531 in PNG to Tolu Minerals Limited (ASX 10 November 2023), the Company received consideration of A\$2 million comprising A\$500,000 equivalent cash and A\$1.5 million by way of issue of 3 million fully paid ordinary shares in Tolu Minerals escrowed for 12 months. The shares were released from escrow on 11 November 2024 and were sold on market on 15 November 2024 for A\$2.4m less costs.

**Annual General Meeting**

At the annual general meeting held on 7 November 2024, all resolutions put to shareholders were passed on a poll.

**Expiry of Listed Options**

192,000,011 listed options exercisable at \$0.02 expired on 31 December 2024.

**Lapse of Performance Shares**

The Company advised that 13,461,538 Class B Performance Shares had lapsed on unvested on 1 October 2024.

**ASX Additional Information**

- ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$313,000. Full details of exploration activity during the quarter are set out in this report.
- ASX Listing Rule 5.3.2: There was no substantive mining production and development activities during the quarter.
- ASX Listing Rule 5.3.5: Payment to related parties of the Company and their associates during the quarter: \$66,250. The Company advises that this relates to non-executive directors' remuneration and additional technical consulting fees. Please see the Remuneration Report in the Annual Report for further details on Directors' Remuneration.

This activities report 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)

**Releases submitted to the ASX during the Quarter included:**

03/01/2025	Change of Director's Interest Notice
13/12/2024	Lady Grey Diamond Drilling
10/12/2024	Lady Grey Farm-in Agreement Extension
18/11/2024	Lady Grey Drilling Started





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13/11/2024	Expiry of Listed Options
07/11/2024	Results of Meeting
29/10/2024	Quarterly Activities/Appendix 5B Cash Flow Report
25/10/2024	Lady Grey Exploration Update
08/10/2024	Letter to Shareholders - Notice of Annual General Meeting
08/10/2024	Notice of Annual General Meeting/Proxy Form
03/10/2024	Notification of cessation of securities

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

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

**LANTHANEIN RESOURCES LTD**

**Western Australian Projects**

The information in this announcement that relates to Exploration Results complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and has been compiled and assessed under the supervision of Dr Jayson Meyers, a consultant to Lanthanein Resources Ltd and a Director of Resource Potentials Pty Ltd. Dr Meyers is a Fellow of the Australasian Institute of Geoscientists. He 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 JORC Code. Dr Meyers consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the information in the original reports, and that the form and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

The information in this press release relating to Mineral Resources is based on information compiled, reviewed and assessed by Mr. Bill Oliver, who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr. Oliver is a consultant to the Company and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Oliver consents to the inclusion of the information in the form and context in which it appears.

The Company confirms that all material assumptions and technical parameters underpinning the mineral resource estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the mineral resource estimates are presented have not been materially modified.

**Schedule 1 – Lanthanein Resources Limited Tenement Information as at 31 December 2024**

Tenement Number and Name	Ownership	Sub-blocks	Area (sq.km)	Application /Grant Date	Expiry Date
E 09/2515 - Gascoyne (WA)	100% LNR via Dalkeith Capital Pty Ltd	47	147.02	17-Dec-21	16-Dec-26
E 09/2516 - Gascoyne (WA)	100% LNR via Dalkeith Capital Pty Ltd	25	78.35	17-Dec-21	16-Dec-26
E 77/2796 - Koolya (WA)	100% LNR via Dalkeith Capital Pty Ltd	47	138.78	05-Nov-21	04-Nov-26
E 77/2797 - Koolya (WA)	100% LNR via Dalkeith Capital Pty Ltd	28	82.68	05-Nov-21	04-Nov-26
E 52/4012 - Mt Clere (WA)	100% LNR via Dalkeith Capital Pty Ltd	191	591.63	23-Mar-22	22-Mar-27
EL6717 - Murraydium (SA)	100% LNR via Southern Rare Earths Pty Ltd	78	876.00	06-Apr-22	05-Apr-28



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EL6969 – Murraydium (SA)	100% LNR via Southern Rare Earths Pty Ltd	671km <sup>2</sup>	671.00	17 Jan 24	16 Jan 30
E77/2143 – Lady Grey Project (WA)	Earning up to a 70% interest Current interest in Stage 1: 0%	47		5 Nov 21	4 Nov 26

During the quarter the Company surrendered tenement E52/4012 above. There were no other changes in the Company's interests in tenements during the quarter.

## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

LANTHANEIN RESOURCES LTD

ABN

96 095 684 389

Quarter ended ("current quarter")

31 December 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation (if expensed)	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	-	-
(e) administration and corporate costs	(153)	(366)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	11	20
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	(15)	27
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(157)</b>	<b>(319)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) entities	-	-
(b) tenements	(200)	(200)
(c) property, plant and equipment	-	-
(d) exploration & evaluation (if capitalised)	(313)	(591)
(e) investments	-	-
(f) other non-current assets	-	-

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	446
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	2,388	2,388
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (drilling co-funding payment)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>1,875</b>	<b>2,043</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>-</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	2,799	2,793
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(157)	(319)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	1,875	2,043
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>4,517</b>	<b>4,517</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	4,517	2,799
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>4,517</b>	<b>2,799</b>

**6. Payments to related parties of the entity and their associates**

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

**Current quarter  
\$A'000**

66

-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

Consulting fees and directors' fees      \$66,250

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i>		
<i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (Item 1.9)	(157)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	(313)
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(470)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	4,517
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	4,517
8.7 <b>Estimated quarters of funding available (Item 8.6 divided by Item 8.3)</b>	9.61
8.8	If Item 8.7 is less than 2 quarters, please provide answers to the following questions:
1.	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?
	Answer: N/A
2.	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?
	Answer: N/A
3.	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?
	Answer: N/A

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 30 January 2025

Authorised by: (lodged electronically)  
Matthew Foy – Company Secretary

**Notes**

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg *Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.