

ACTIVITIES REPORT

QUARTER ENDED 30 JUNE 2024

Lady Grey Lithium Project

- **A new large lithium soil anomaly with a strike of ~4km has been identified in the recently completed soil sampling programme**
 - **Peak result of 454ppm Li₂O, with a total of 527 samples returning ≥150ppm Li₂O**
 - **Covalent Lithium's (SQM & Wesfarmers, 50/50) Earl Grey Mine, 189Mt @1.53% Li₂O¹ at Mount Holland located adjacent to Lady Grey Project displays similar spatial relationship to potential lithium source granite as Godzilla Prospect, Figure 1**
 - **Strong correlation between lithium and caesium (Cs) anomalism, supporting LCT type pegmatite potential, Figures 2 & 3**
- **New gold, copper and nickel soil anomalies identified in the recently completed soil sampling programme**
 - **>2km long gold anomaly coincident with structural flexure**
 - **Peak result of 256ppb Au, with a total of 87 samples returning ≥25ppb Au (Refer ASX announcement 29 April 2024)**
 - **Peak result of 170ppm Cu, with a total of 300 samples returning ≥50ppm Cu**
 - **Peak result of 263ppm Ni, with a total of 464 samples returning ≥100ppm Ni**
 - **Strong spatial correlation between gold, copper, nickel and sulphur anomalism**
- **Comprehensive review open file geophysical data plus acquisition of additional multi client data commenced**

**ADDRESS**

Level 8, 99 St Georges Terrace
Perth WA 6000

PHONE

+61 (08) 9486 4036

ABN

96 095 684 389

WEBSITE

www.lanthanein.com

- **Programmes of Work (PoW) and Heritage approvals process underway targeting drilling Q3/Q4 2024**

Lanthanein Resources Limited (**Lanthanein** or the **Company**) is pleased to provide its quarterly report for the three-month period ending 30 June 2024.

Lady Grey Lithium Project, Western Australia

During the quarter the Company announced the results from a recent tenement wide soil sampling programme at the Lady Grey Lithium Project ("Lady Grey") directly adjacent to Covalent Lithium's (SQM & Wesfarmers) Earl Grey Mine, 189Mt @1.53% Li₂O¹ at Mount Holland in the Forrestania Greenstone Belt. The programme collected 1,893 samples and has delineated multiple lithium anomalies (Figure 1 and Figure 2).

Geophysical Review

The Company has engaged a geophysical consulting group to conduct a comprehensive review of all historical open file data plus acquire additional multi-client data to enable a assessment of the coincident geophysical features with the recent geochemical footprint.

Drilling Approvals

Applications for Programmes of Work (PoW) to enable the drilling of approximately 4-5,000 metres of Aircore and Reverse Circulation drill holes over the Lithium, Gold and Copper/Nickel anomalies have been lodged with the Department of Energy, Mines, Industry Regulation and Safety.

The Company has also engaged with the representatives of both of the Traditional Owner groups that are represented in the Mount Holland area, one of whom has granted Native Title with the other being a claimant group progressing a claim. Planning for heritage clearances for the areas is underway.

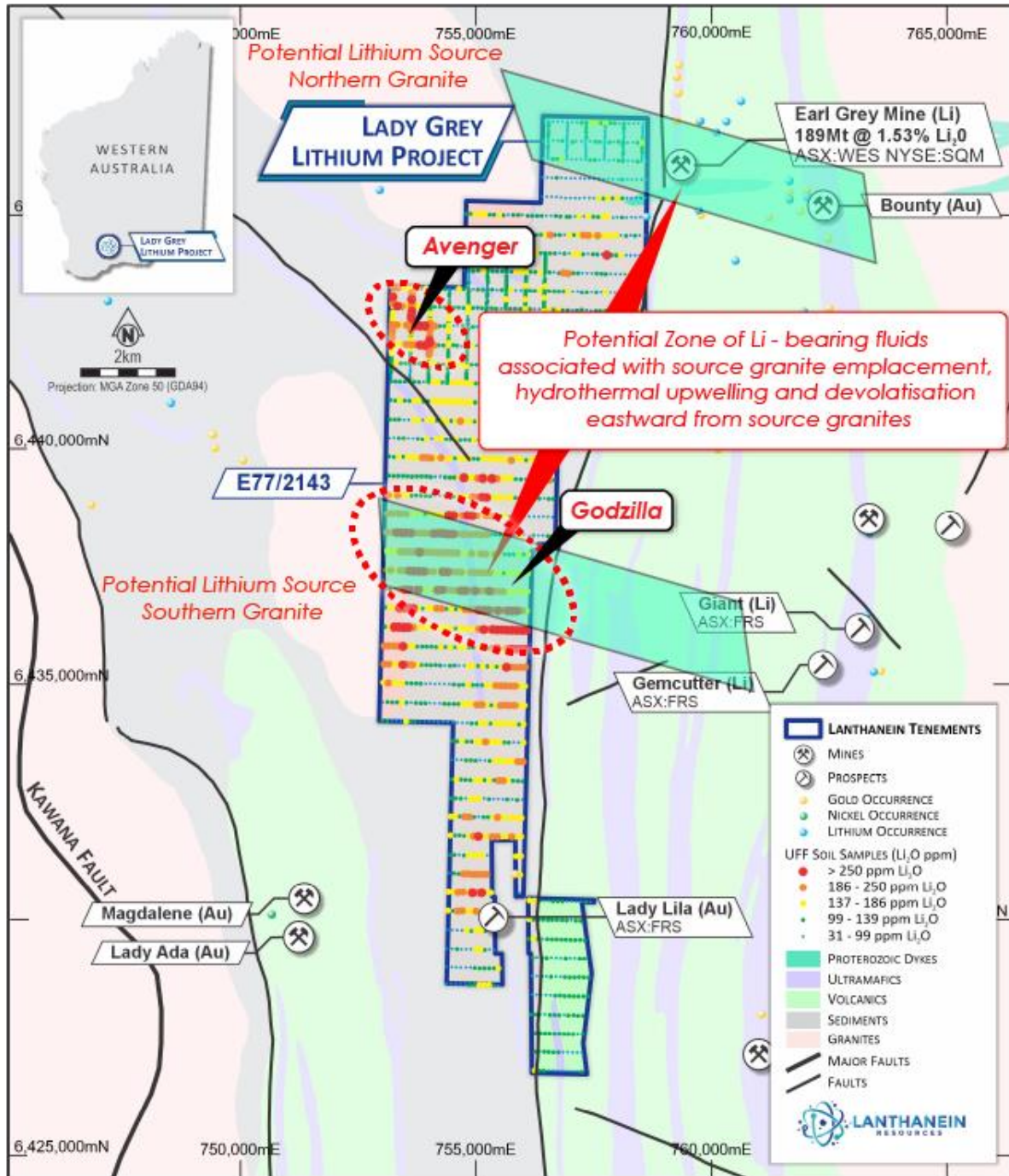


Figure 1: New lithium prospects Godzilla and Avenger, plus the identification of potential Li-bearing fluid eastward migration from source granite associated with the granite emplacement, hydrothermal upwelling and devolatilisation.

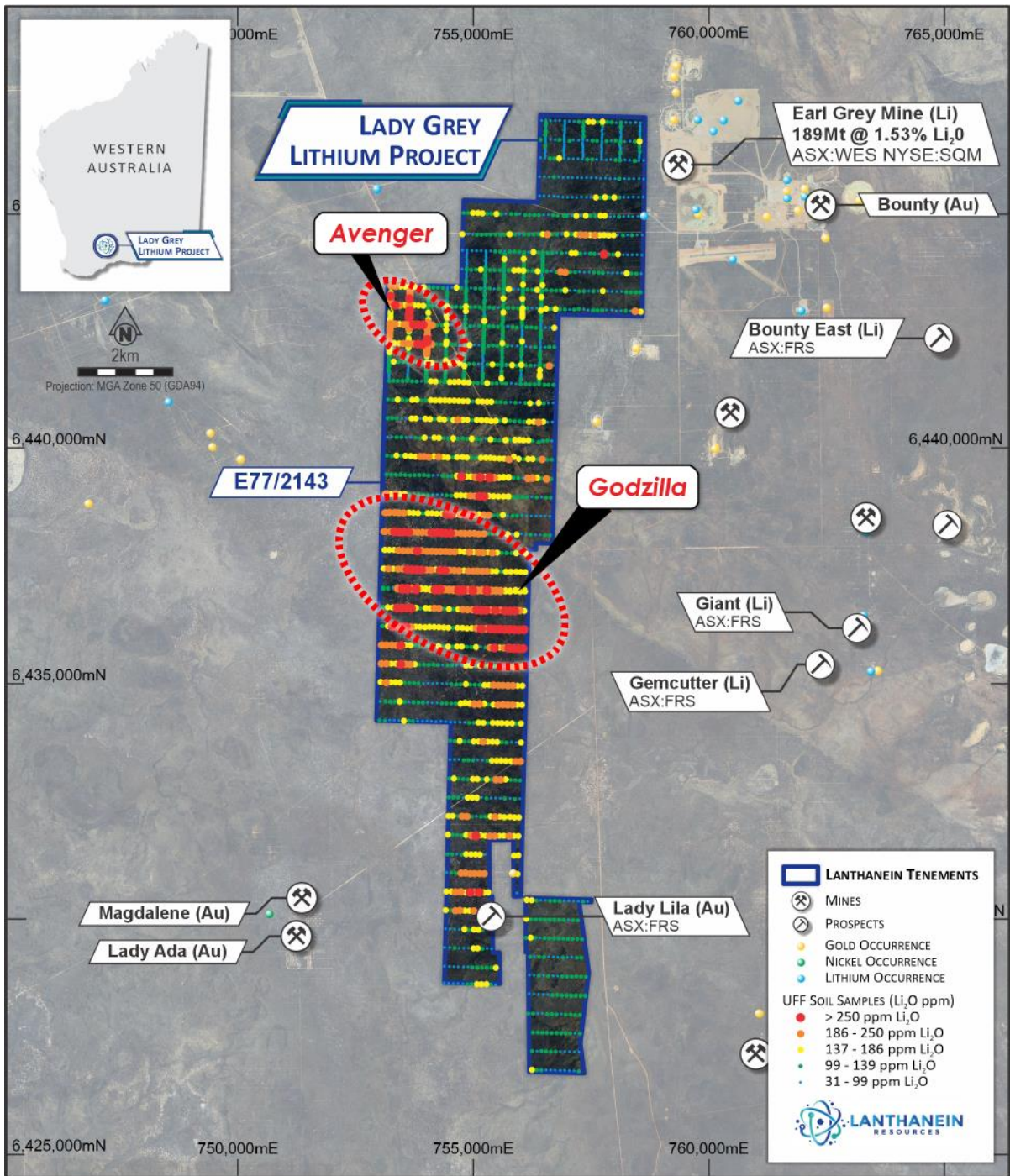


Figure 2: Completed Soil Sampling Grid for the Lady Grey Project adjacent to the Earl Grey Lithium Mine, highlighting the large Li_2O anomalism recorded at Godzilla and Avenger Prospects (ASX 22/04/2024)

UltraFine+™ Soil Sampling Programme

The survey was completed on a minimum spacing of 400m x 100m, with a total of 1,893 soil samples collected.

**ADDRESS**

Level 8, 99 St Georges Terrace
Perth WA 6000

PHONE

+61 (08) 9486 4036

ABN

96 095 684 389

WEBSITE

www.lanthanein.com

Figures 2 and 3 show the soil anomalies delineated from the sampling results. The soil anomalies represent areas with $> 180\text{ppm Li}_2\text{O}$ – considered highly anomalous using this soil sampling technique.

Samples were assayed at LabWest Minerals Analysis Pty Ltd (LabWest) using the Ultrafine+ technique. Analysis used the $<2\mu\text{m}$ Ultrafine+ method for 53 elements including lithium and pathfinder elements such as caesium, tantalum, rubidium, niobium and tin.

UltraFine+ analysis is now an established approach to surface exploration analysis using proven geochemical methods to identify sensitive signals at surface, proving useful to help “see through” shallow to moderate cover. Concentration of metals in the ultrafine fraction gives stronger signals, generally well above instrumental detection limits, and increased signal-to-background ratios.

New Geochemical Anomalies

The high-priority soil anomalies are:

1. **Godzilla** – Coincident lithium and caesium, 4.3km^2 total area.

The trending anomalous zones are located on the edge of a large regional granite dome on the western area of the Lady Grey Project, and lithium anomalism extends $\sim 3\text{km}$ eastward. The dominant ESE trend is thought to reflect the migration of lithium rich mineralised fluids away from the source granite and into the greenstone host rocks and have potentially deposited lithium minerals at a trap site that is commonly referred to as the ‘goldilocks zone’ approximately 2-4km from the source granite. If the northern granite is the source for the Earl Grey mine, then, given the location of, the northern granite ($\sim 2.7\text{km}$ to the west of Earl Grey), the geological rationale to support another mineralising event associated with the southern granite at Godzilla Prospect is highly encouraging and makes for an extremely compelling drill target.

2. **Avenger** – Coincident lithium and caesium, 0.58km^2 .

This anomaly is located in the northwest corner of the tenement covering an area $1.7\text{km} \times 1\text{km}$. With a peak result of $340\text{ppm Li}_2\text{O}$, this prospect displays consistent elevated lithium values across the entire 0.58km^2 .

Significantly, all lithium soil anomalies have an association with elevated values for lithium pathfinder elements – particularly caesium. This further supports the presence of a LCT (lithium caesium-tantalum) pegmatite field that is prospective for lithium mineralisation.

The results of the latest soil survey are highly encouraging and emphasise the significant lithium prospectivity on the Lady Grey Project. These new soil anomalies represent compelling targets for drilling potential new discoveries. Extensions and in-filling to the current soil surveys are already planned to further delineate and add to the Company's current lithium targeting, in conjunction with heritage surveys and drilling.

Both the anomalies, Godzilla and Avenger, when compared to the surface footprint of Earl Grey and the respective regional soil sampling campaign carried out by Kidman Resources^{2, 3}, Figure 4, the Godzilla anomaly stands out as a key priority for follow up and further evaluation.

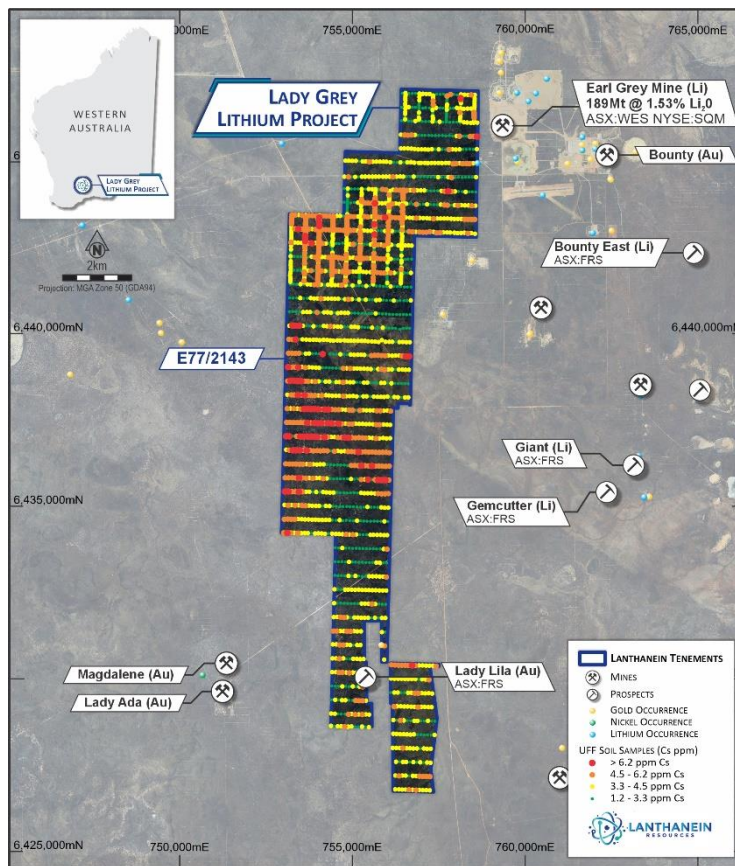


Figure 3: Caesium (Cs) and Lithium (Li₂O) geochemical results recording strong coincident Cs and Lithium geochemistry supporting potential for presence of LCT-type pegmatites

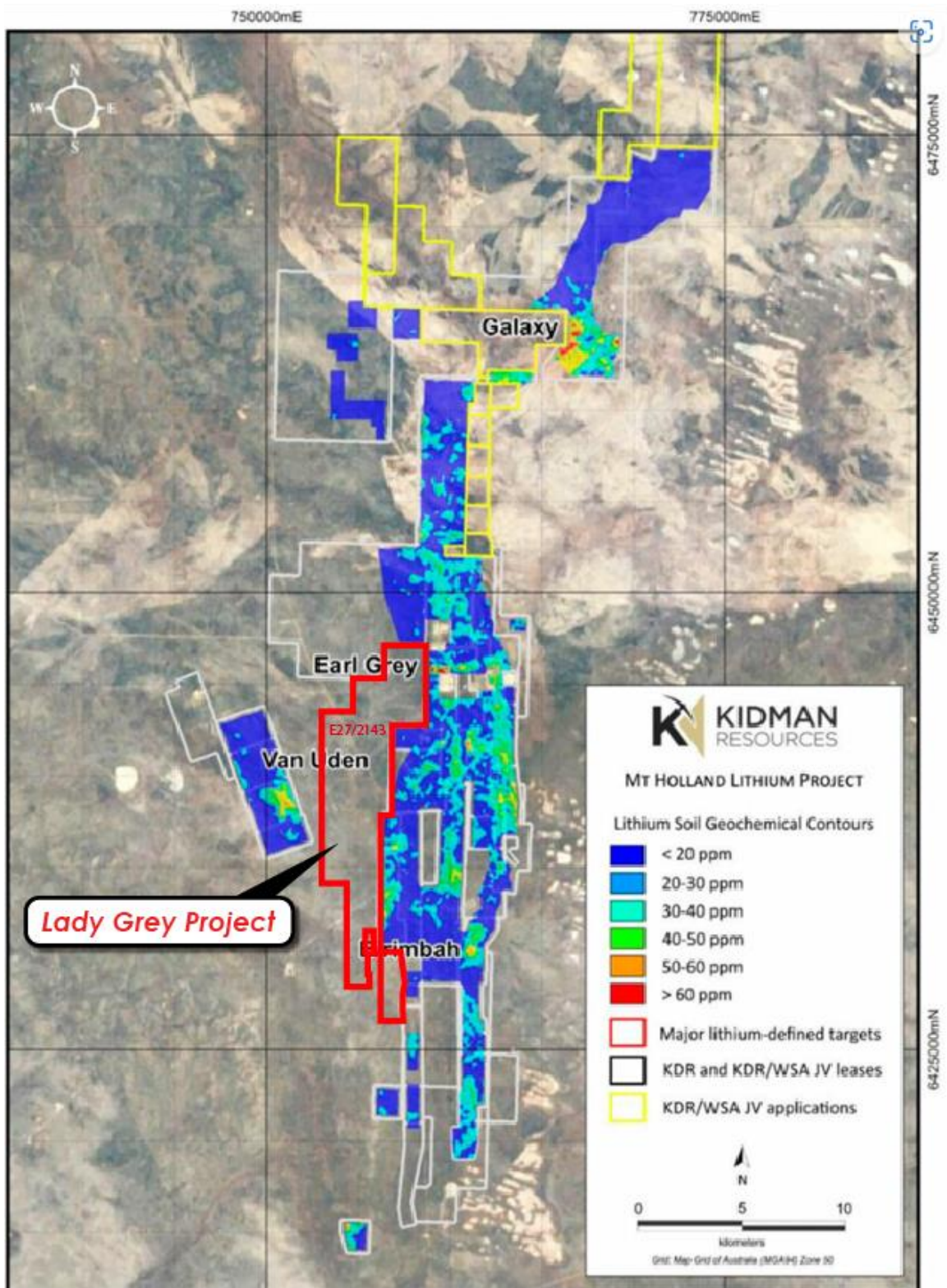


Figure 4: Earl Grey regional soil sampling campaign carried out by Kidman Resources showing >60ppm Lithium anomaly.
Source: https://www.researchgate.net/figure/Regional-soil-mapping-programme-to-delineate-lithium-anomalies-with-14-000-samples_fig3_361479416

Significant Gold, Copper and Nickel Soil Anomalies at Lady Grey Project

During the quarter the Company announced the gold and base metal results from the recent tenement wide soil sampling programme at Lady Grey. The programme collected 1,893 samples and has identified multiple coincident gold, copper and nickel anomalies.

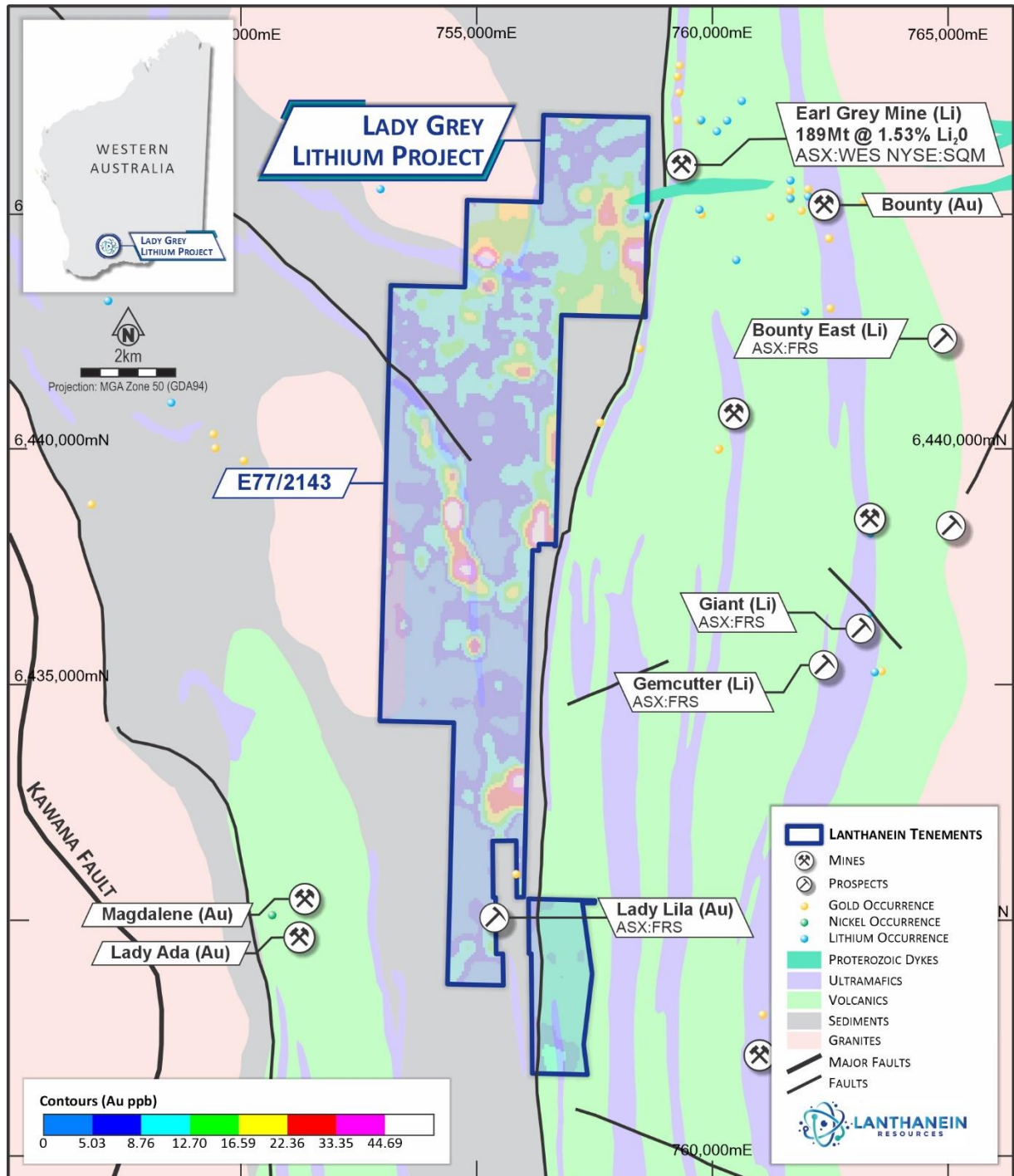


Figure 5: New Gold Anomalies at the Lady Grey Lithium Project (ASX 29/04/2024)

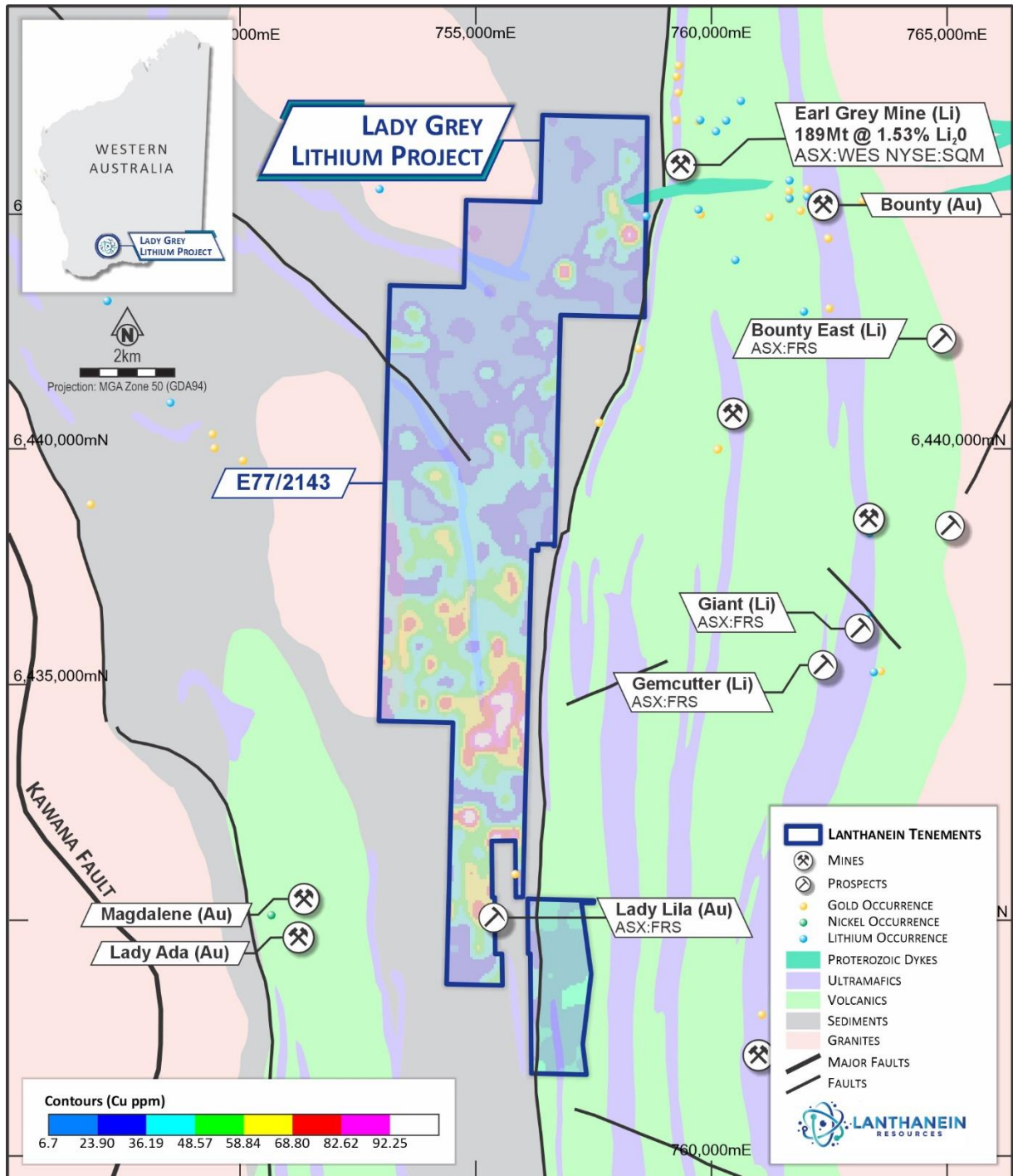


Figure 6: New Copper Anomalies at the Lady Grey Lithium Project (ASX 29/04/2024)

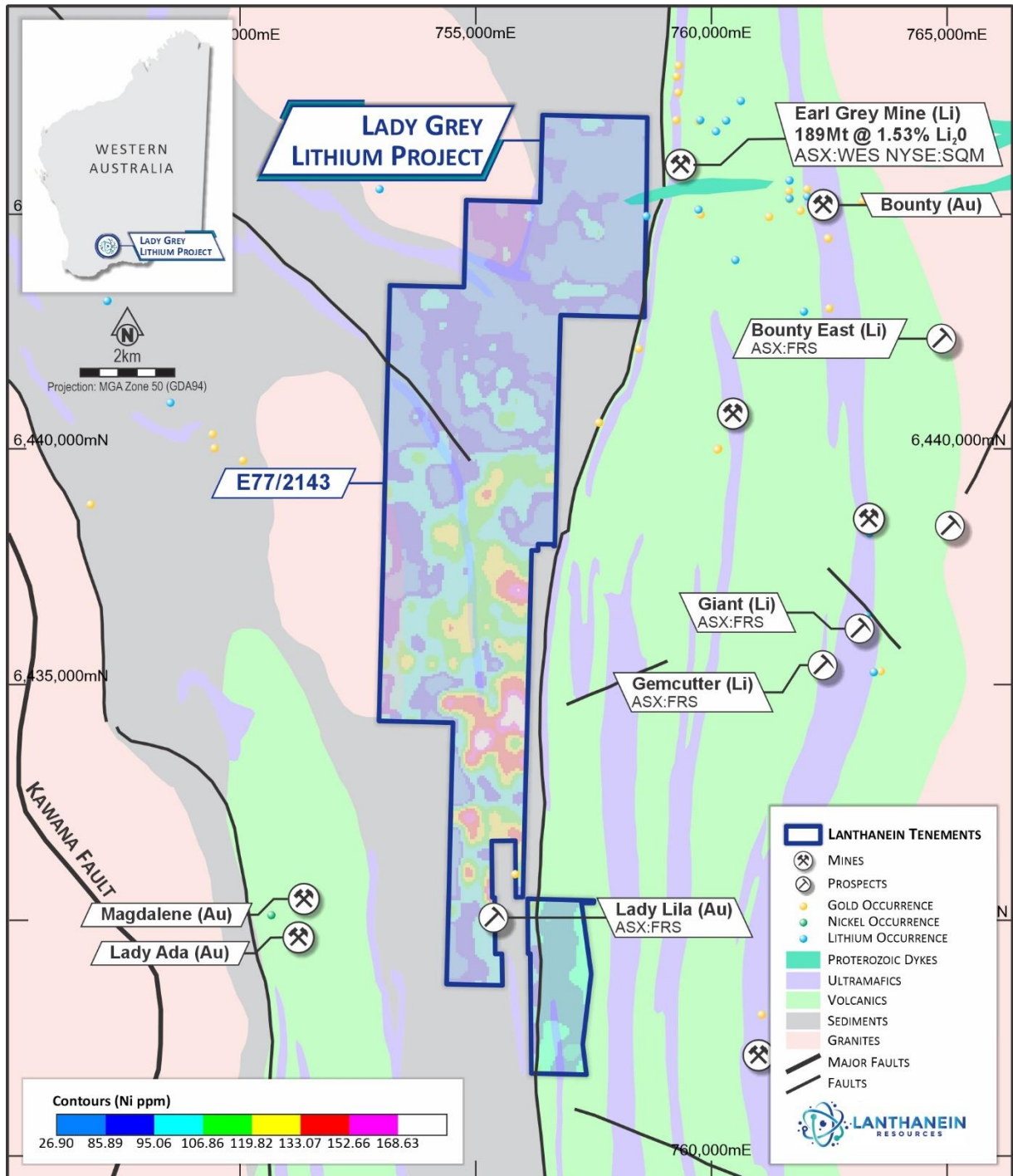


Figure 7: New Nickel Anomalies at the Lady Grey Lithium Project

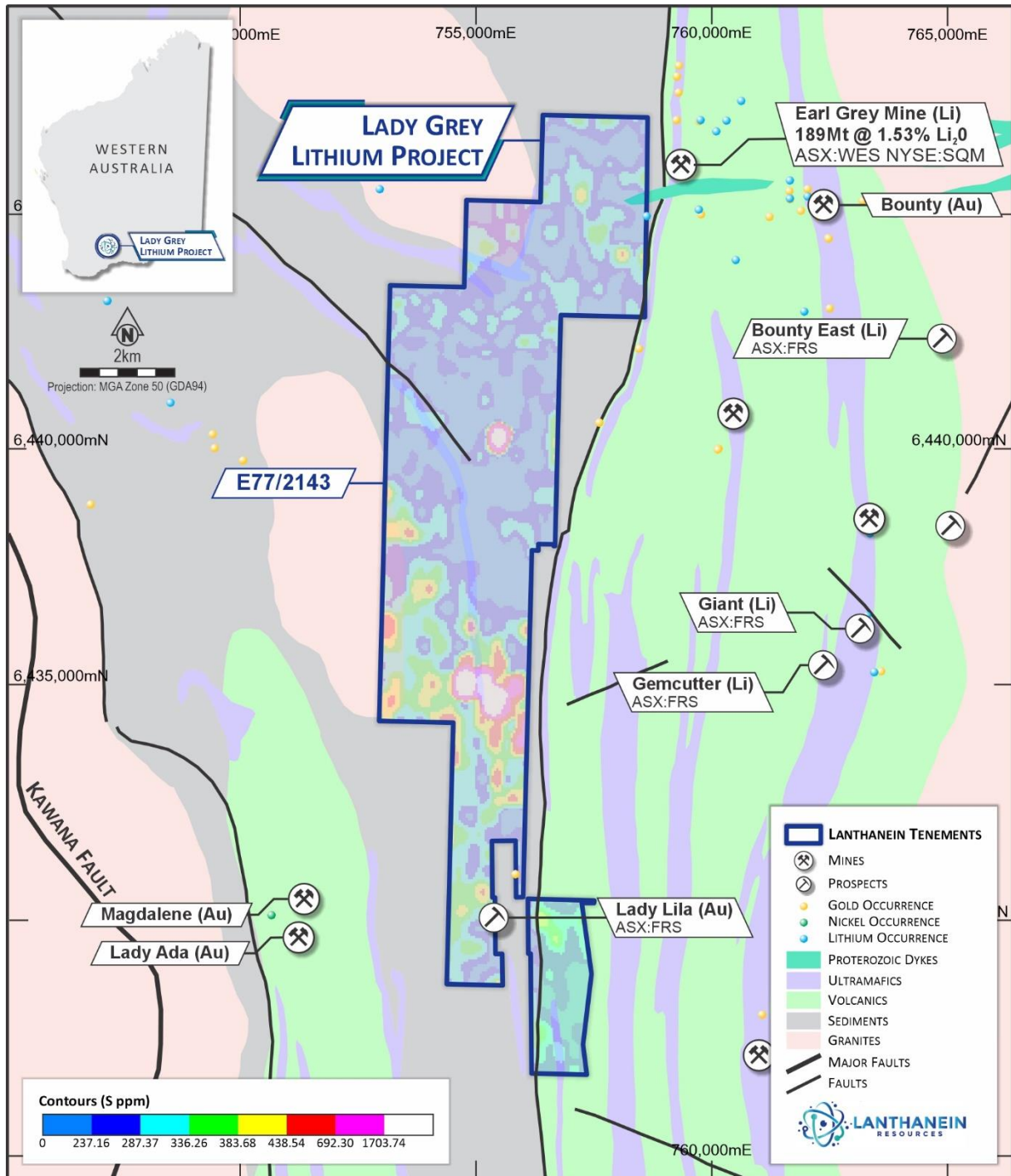


Figure 8: New Sulphur Anomalies at the Lady Grey Lithium Project

Figures 5 through 8 show the soil anomalies delineated from the sampling results. The five gold soil anomalies in Figure 5, represent areas with >50ppb Au – considered highly anomalous using this soil sampling technique. The largest gold anomaly extends over 2km of strike and is located in a highly favourable structural setting. The copper and nickel anomalies

**ADDRESS**

Level 8, 99 St Georges Terrace
Perth WA 6000

PHONE

+61 (08) 9486 4036

ABN

96 095 684 389

WEBSITE

www.lanthanein.com

are spatially adjacent to each other along with the high sulphur with a peak value of 5.33% and 50 samples >0.05% which would indicate the presence of weathered sulphides. Exploration reconnaissance and further geochemical sampling is planned to investigate the potential for magmatic sulphides and the presence of gossanous outcrop or subcrop.

Samples were assayed at LabWest Minerals Analysis Pty Ltd (LabWest) using the Ultrafine+ technique. Analysis used the <2µm Ultrafine+ method for 53 elements along with the lithium and pathfinder elements such as caesium, tantalum, rubidium, niobium and tin.

About the Lady Grey Project

The Lady Grey Lithium project is located on the Southern Cross - Forrestania Greenstone Belt a proven Tier 1 lithium mining district (Figures 1 and 2). Neighbours are major miners / developers including Covalent Lithium (Wesfarmers-SQM 50/50 JV) – 189Mt @ 1.5% Li₂O at the Earl Grey Mine (Earl Grey pegmatite). IGO acquired WSA's high grade nickel mines at Flying Fox & Spotted Quoll, and are exploring for lithium, and the historic Bounty gold mine that produced ~1Moz gold.

Corporate**Placement**

On 3 May 2024 the Company announced it had received firm commitments from sophisticated investors to raise \$2,200,000 (before costs) via a placement (**Placement**) of 488 million shares at an issue price of 0.45¢ per share (**Placement Shares**). The funds raised from the Placement will be used primarily to fund exploration, including drilling at the Lady Grey lithium, gold, copper and nickel Project, Western Australia.

Allotment of a total of 488,727,225 Placement Shares occurred as planned on 15 May 2024.

Director Resignation

Mr Peter Swiridiuk resigned as Non-Executive Director of the Company effective 23 April 2024. Peter had been a Director of Lanthanein since 2014 and was instrumental in the development of the Company's interests in Papua New Guinea as well as significantly contributing to the exploration efforts on the Company's Australian projects.

ASX Additional Information

- ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$440,000. Full details of exploration activity during the March quarter are set out in this report.

**ADDRESS**

Level 8, 99 St Georges Terrace
Perth WA 6000

PHONE

+61 (08) 9486 4036

ABN

96 095 684 389

WEBSITE

www.lanthanein.com

- 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: \$85,600. 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

Releases submitted to the ASX during the Quarter included:

16/07/2024	Lady Grey Exploration Update
03/07/2024	Letter to Shareholders - Notice of General Meeting
03/07/2024	Notice of General Meeting/Proxy Form
15/05/2024	Cleansing Notice
15/05/2024	Lady Grey Exploration Update
14/05/2024	Application for quotation of securities - LNR
03/05/2024	Proposed issue of securities - LNR
03/05/2024	Lanthanein Placement Raises \$2.2M for Lady Grey Exploration
01/05/2024	Trading Halt
29/04/2024	Gold, Copper & Nickel Soil Anomalies at Lady Grey Project
24/04/2024	Quarterly Activities/Appendix 5B Cash Flow Report
23/04/2024	Final Director's Interest Notice
23/04/2024	Director Resignation
22/04/2024	New Large High Tenor Lithium Caesium Anomaly at Lady Grey
11/04/2024	Lady Grey Exploration Update

Reference

¹ David Chapman, Geoscience Australia, Australia Resource Reviews, Lithium 2018.

LANTHANEIN RESOURCES LTD**Western Australian Projects**

The information in this announcement that relates to Exploration Results and other geological information has been compiled under the supervision of Mr Thomas Langley. Mr Langley is a member of the Australian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy and is a consultant to the Company. Mr Langley has sufficient experience which is relevant to the style of mineralisation and type 23 of deposit under consideration and the activity he is undertaking 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 ('the JORC Code')". Mr Langley consents to the inclusion in the report 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.

**ADDRESS**

Level 8, 99 St Georges Terrace
Perth WA 6000

PHONE

+61 (08) 9486 4036

ABN

96 095 684 389

WEBSITE

www.lanthanein.com

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.



ADDRESS
 Level 8, 99 St Georges Terrace
 Perth WA 6000
PHONE
 +61 (08) 9486 4036

ABN
 96 095 684 389
WEBSITE
 www.lanthanein.com

Schedule 1 – Lanthanein Resources Limited Tenement Information as at 30 June 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
EL6969 – Murraydium (SA)	100% LNR via Southern Rare Earths Pty Ltd	671km ²	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

There were no changes in the Company's interests in the above 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")

30 June 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation (if expensed)	-	(13)
(b) development	-	-
(c) production	-	-
(d) staff costs	-	-
(e) administration and corporate costs	(188)	(686)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	4	31
1.5 Interest and other costs of finance paid	-	(9)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	(71)	126
1.9 Net cash from / (used in) operating activities	(255)	(551)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) entities	-	-
(b) tenements	-	(1,500)
(c) property, plant and equipment	-	-
(d) exploration & evaluation (if capitalised)	(440)	(2,251)
(e) investments	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
2.2 Proceeds from the disposal of:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) investments	-	-
(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)	-	114
2.6 Net cash from / (used in) investing activities	(440)	(3,637)

3. Cash flows from financing activities		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	2,199	4,399
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	(154)	(310)
3.5 Proceeds from borrowings	-	250
3.6 Repayment of borrowings	-	(250)
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	-	-
3.10 Net cash from / (used in) financing activities	2,045	4,089

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	1,443	2,892
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(255)	(551)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(440)	(3,637)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	2,045	4,089

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 (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	2,793	2,793

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	2,793	1,443
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,793	1,443

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**

86

-

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 \$85,600

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

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. 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 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
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.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (Item 1.9)	(255)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	(440)
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(695)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	2,793
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	2,793
8.7 Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	4.02
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: 29 July 2024

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.