



Lanthanein Resources
ASX:LNR

LADY GREY LITHIUM ACQUISITION

Highly prospective LCT pegmatite project acquisition
directly adjacent to Tier 1 Earl Grey lithium mine

DECEMBER 2023



www.lanthanein.com



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Technical Information

This presentation includes disclosure of scientific and technical information. The information in this document is based on, and fairly represents information and supporting documentation reviewed by Mr Thomas Langley, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Thomas Langley is a Director of the Company. Mr Thomas Langley 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". Mr. Langley consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

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Certain information contained in this presentation may contain "forward-looking statements". Forward-looking statements may include, but is not limited to, information with respect to the future financial and operating performance of Lanthanein, its subsidiaries and affiliates, the estimation of Mineral Reserves and Mineral Resources, realization of Mineral Reserve and Mineral Resource estimates, costs and timing of development of Lanthanein's projects, costs and timing of future exploration, timing and receipt of approvals, consents and permits under applicable legislation, results of future exploration and drilling and adequacy of financial resources. Forward-looking statements are often characterized by words such as "plan", "expect", "budget", "target", "project", "intend", "believe", "anticipate", "estimate" and other similar words or statements that certain events or conditions "may" or "will" occur.

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Forward-looking statements are based on the reasonable assumptions, estimates, analysis and opinions of management made in light of their experience and their perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. Lanthanein believes that the assumptions and expectations reflected in such forward-looking statements are reasonable.

Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been considered by Lanthanein. Although Lanthanein has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, the forward looking information contained in this release is expressly qualified in its entirety by this qualifying statement and readers should not place undue reliance on forward-looking statements. Lanthanein does not undertake to update any forward-looking statements, except in accordance with applicable securities laws.

Corporate Overview



Lanthanein Resources
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Experienced Board in lithium exploration, project development, corporate, funding, M&A

CURRENT SHARES ON ISSUE 1,121,575,570

CASH (30 SEPTEMBER 2023) \$1.34M

MARKET CAP (\$0.011 7/12/2023) \$12.34M

UNLISTED OPTIONS 223,250,011

PERFORMANCE RIGHTS 45,673,076

TOLU PNG SALE (SCRIP/CASH) \$2M

ENTERPRISE VALUE \$10.99M



BRIAN THOMAS

Technical Director

Brian is an experienced Director and Corporate Executive with significant domestic and international resources management experience. Brian is currently Non-Executive Chairman of Azure Minerals, developer of the Andover Lithium Project



DAVID FRANCES

Non-Executive Chairman

David is an international executive of 30 years with a track record transacting, discovering, funding, developing and operating assets in Australia and Africa. David is Managing Director of Province Resources planning to develop one of WA's major green hydrogen projects.



THOMAS LANGLEY

Non-Executive Director

10+ years exploration and mining experience. Thomas has a BSc Geology (UWA) and a MSc Economic Geology (CODES) with a focus on the discovery of company making projects. MAIG, MAusIMM.



ANEES SABET

Non-Executive Director

Anees is an established businessman with a track record of identifying and developing resource projects. He is the founder and CEO of Syndicate Minerals Pty Ltd a globally diversified private exploration company focused on exploring large mineral systems for metals crucial to the energy transition.



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Introduction

Highly prospective acquisition of the Lady Grey Lithium Project directly adjacent to Covalent Lithium's (SQM/ Wesfarmers 50/50 JV) Earl Grey Mine, 189Mt @ 1.53% Li₂O*

Lady Grey Lithium Project is situated within Exploration Licence E77/2143 covering ~77sqkm

Tier 1 Location of granted tenure with ~ 18km of strike along Forrestania Greenstone Belt with proven world class lithium potential

Earl Grey open pit is located 400 metres directly to the east of Lanthanein's tenement boundary

Located ~365km due east of Perth, Western Australia, approximately 5 hours from Perth by road via the Great Eastern Highway

* Comprising 66Mt @ 1.58% Li₂O Measured, 106Mt @ 1.52% Li₂O Indicated and 17Mt @ 1.11% Li₂O Inferred



Lady Grey Lithium

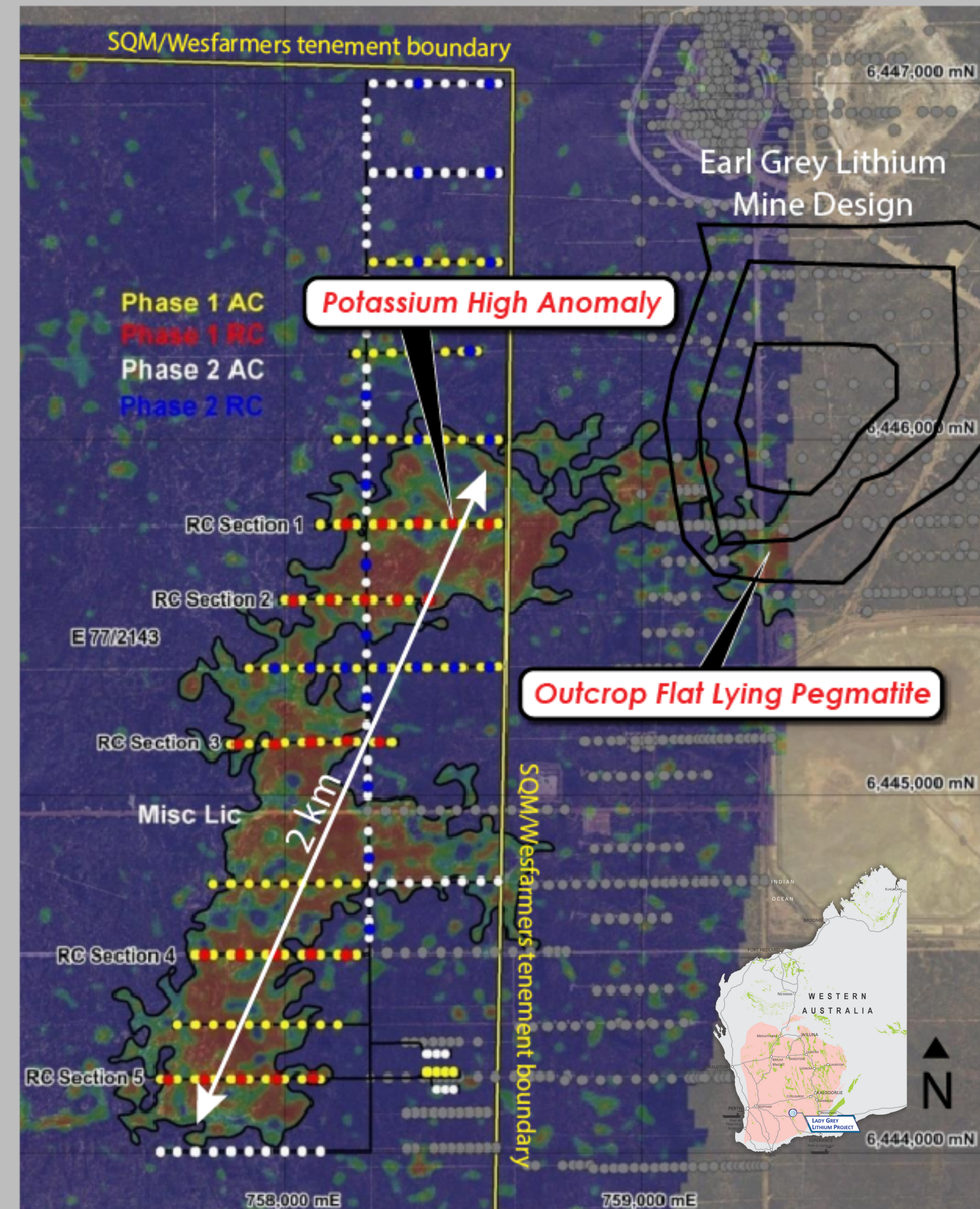
Large coherent Potassium anomaly potentially structurally related to Earl Grey pegmatites

Potential for shallow flat-lying LCT pegmatites

Located on the Southern Cross - Forrestania Greenstone Belt - proven Tier 1 lithium mining district

Neighbours are major miners / developers

- 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
- Historic Bounty gold mine that produced ~1Moz gold



Lady Grey Lithium



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Historical geochemical data indicates the presence of rare element pegmatite(s)

Anomalous rock samples returning elevated Li (up to 298 ppm), Cs (up to 46 ppm), Rb (up to 1463 ppm) and Ta (up to 783 ppm) (ASX 6 Dec 23)

Quartz sub-crop and float in the general area of the elevated soil and rock geochemistry may represent 'quartz cores' commonly present in complex zoned rare-element pegmatites

2km long high $>0.3\%$ K radiometric signal - priority drill target

Mapped continuation into Lanthanein tenure of the Split Rocks Unit host to the Earl Grey pegmatite



Photo Above: White quartz outcrop on powerline track within the 2km Potassium anomaly

Lady Grey Lithium

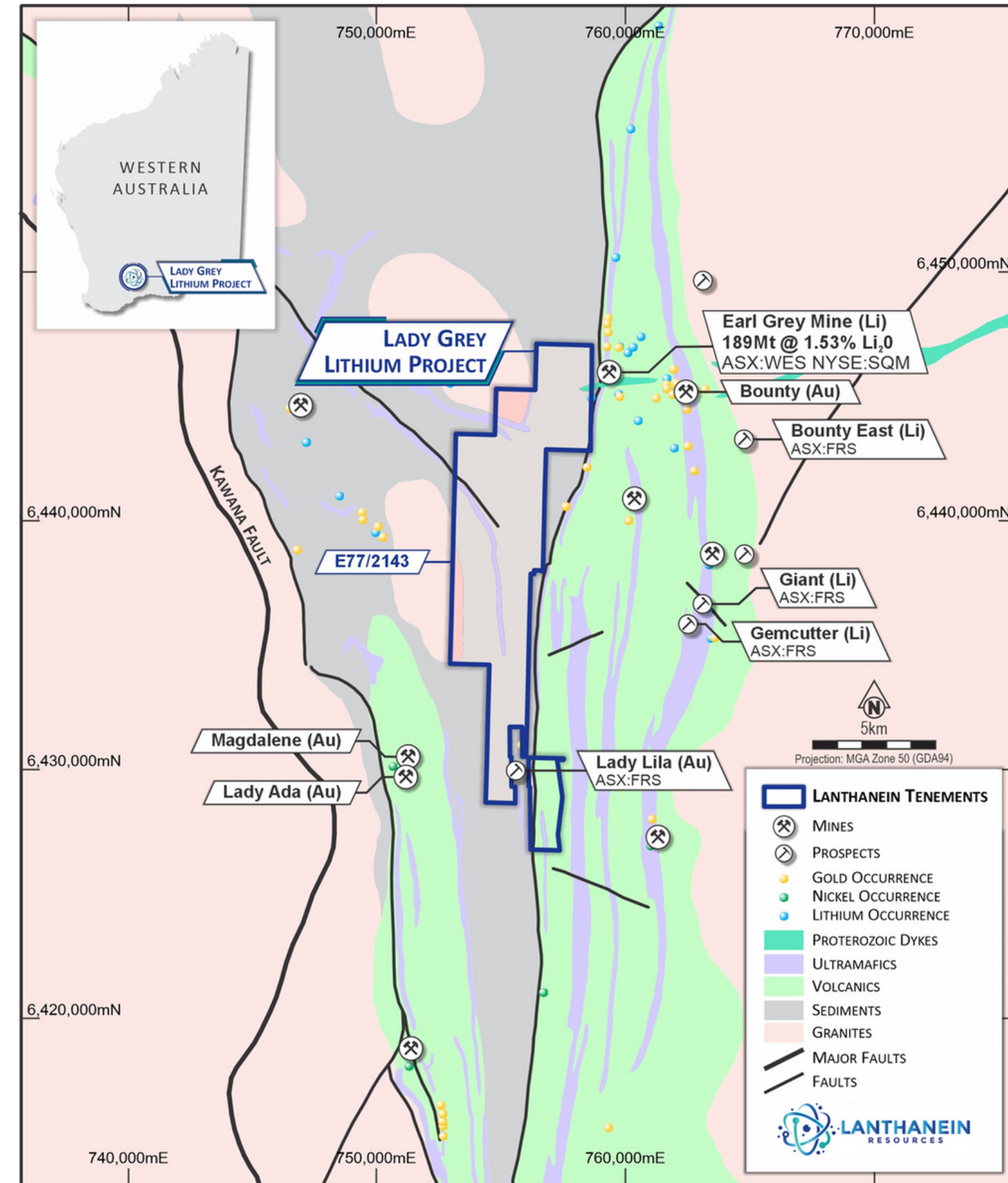
Earl Grey pegmatite sill is exposed only in the south-western corner of the Earl Grey deposit. The sill dips gently northward, sub-horizontally under the historic Earl Grey gold mine

Covalent Lithium's pegmatite is thickest against the western fault, thinning to stringer mineralisation along the eastern side of the deposit, indicating that the direction of injected pegmatite intrusion is most likely west to east

Interpretation and planning underway to target zones of potential pegmatite accumulation and associated lithium mineralisation

Current priorities

- Drilling early 2024 (February - March)
- POW approved for 193 Aircore and 50 RC drillholes
- Heritage Approvals for expanded drill programs
- Extensive soil geochem program across other targets
- Strong newsflow through to late 2024





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