

ACTIVITIES REPORT

QUARTER ENDED 30 SEPTEMBER 2022

Gascoyne Rare Earth Elements (REE) Project

- Lyons Prospect maiden drill program commenced in the quarter
 - Heritage avoidance surveys completed ahead of drilling program
-

Lanthanein Resources Limited (**Lanthanein** or the **Company**) is pleased to provide its quarterly report for the three-month period ending 30 September 2022.

Gascoyne Rare Earth Elements (REE) Project, Western Australia

During the quarter the Company advised that heritage avoidance surveys had been completed ahead of the maiden drill program at the Lyons Rare Earths prospect at the Gascoyne Rare Earths Project in Western Australia (**Gascoyne Project**).

Lanthanein Resources acknowledges the traditional custodians of the land on which the Company operates and pay respect to their Elders past, present and emerging. The heritage surveys are critical to ensure sites of significance for traditional owners are protected and not disturbed.



Figure 1. Heritage Survey team at the Lyons Project
Left to right; Greg Carlo, Tom Langley, Zach Merrit, Peter Salmon and Tom O'Riley

The heritage surveys were completed with no impediments for the track and site clearances for the maiden drill program.

Site works for drilling began shortly after completion of the heritage surveys with RC drilling commencing in September.



Figure 2: Topdrill RC Drill Rig on the Lyons 11 Prospect

The drill program was designed to target high-grade rare earth mineralisation discovered at outcropping ironstones at Lyons 11, 12, 13 and 27 (**Figure 3**) and additional interpreted carbonatite intrusives and ironstones undercover. The drill program investigated high priority targets located within the Gifford Creek Carbonatite Complex, host to Hastings Technology Metals' (ASX:HAS) world-class Yangibana Mineral Resource¹ of 27.42Mt @ 0.97% TREO with 0.33% Nd₂O₃+Pr₆O₁₁, and Dreadnought Resources multiple discoveries².

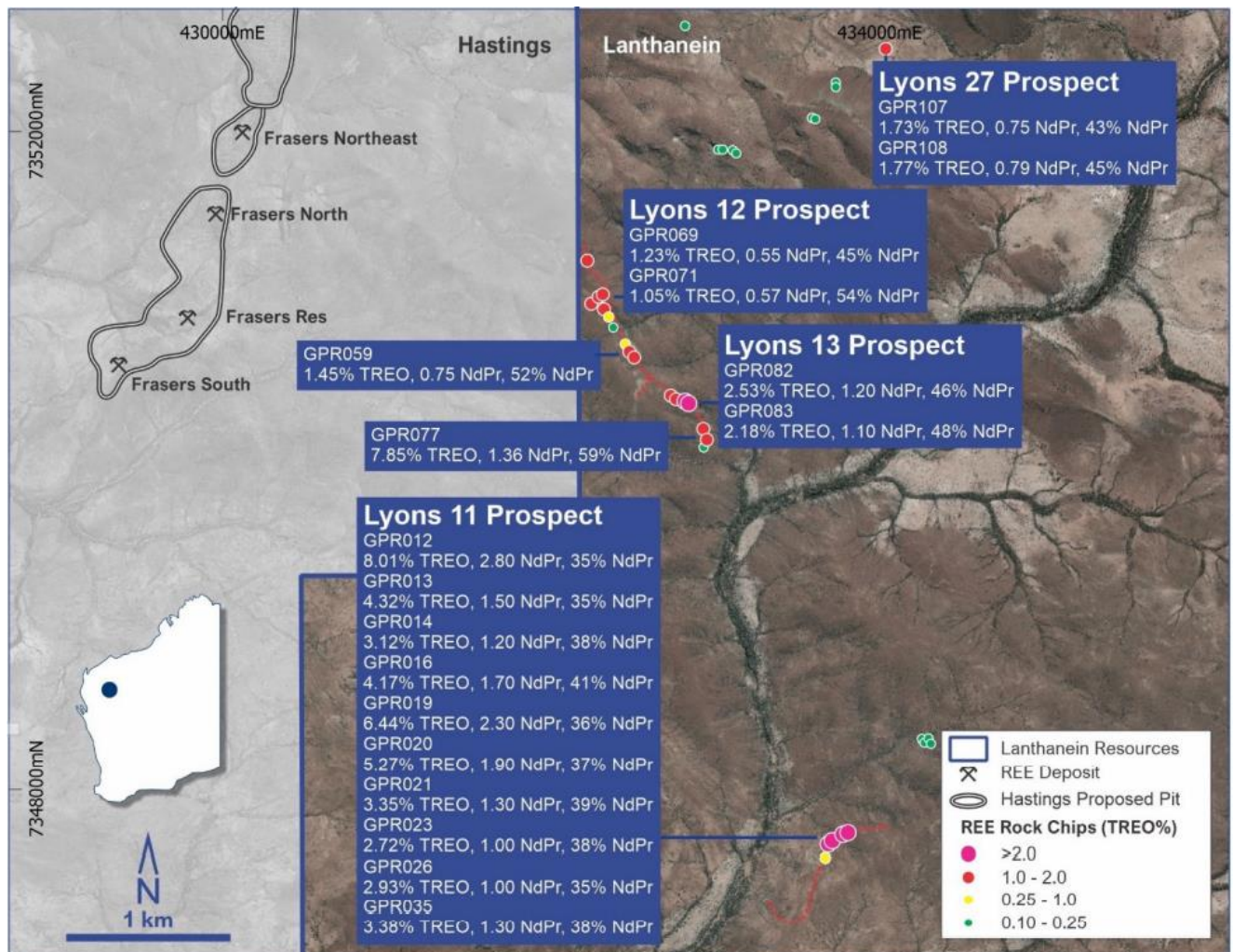


Figure 3: High grade REE bearing ironstones discovered to date will be the initial focus of the maiden drill program.

Additional Program of Works (PoW) applications have also been lodged with the Department of Mines, Industry Regulation and Safety (DMIRS) to allow for extensions to the initial drilling campaign. Drilling will be critical to understanding the resource potential of the mineralised ironstones, to determine width, grade, and continuity at depth and along strike of interpreted ironstone trends.

Further rock chip sampling, ground based geophysics and drilling programs are also planned to investigate additional targets not yet followed up, including thorium and magnetic anomalies throughout the Lyons Project and the high priority structural target along the major Bald Hill lineament which transects both the Edmund and Lyons Project Areas (**Figure 4**). The Bald Hill lineament is the major control on rare earth mineralisation at Hastings Technology Metals Yangibana mine and represents a very high priority target for Lanthanein. Potential remains for further discoveries of ironstones and carbonatites within the company's tenure where no historical REE exploration has occurred.

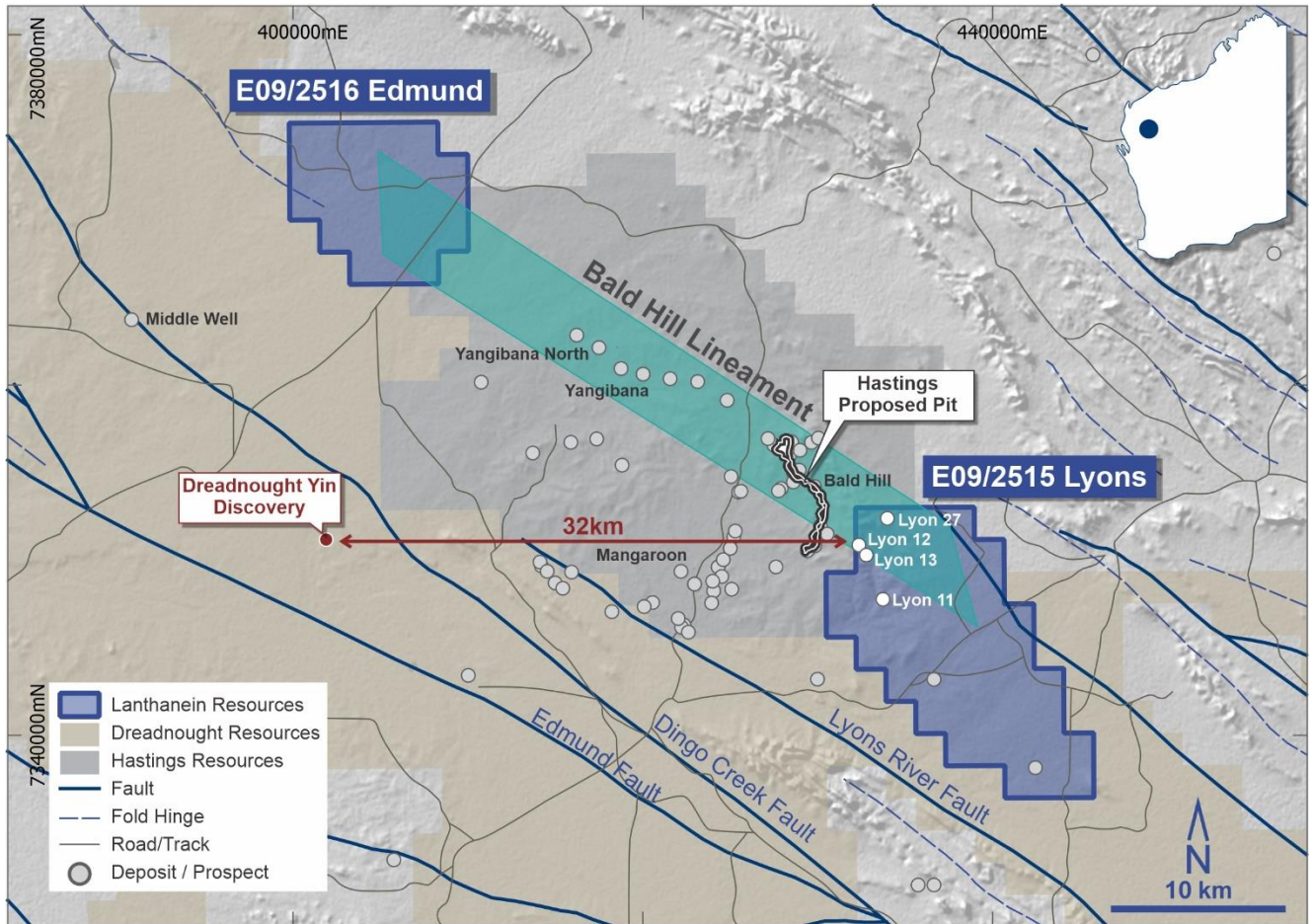


Figure 4: Lanthanein Resources Lyons and Edmund Projects located within close proximity of Dreadnought Resources' Yin discovery and Hastings Technology Metals Yangibana REE mine.

Subsequent to the quarter the Company advised that the Lyons REE Project maiden drill program had been completed with a total of 53 drill holes for 3,510m drilled, at an average depth of 66m.

Mineralised REE ironstones that outcrop at surface underwent drill testing with positive visual results confirming the continuity of ironstones along strike and at depth. Widths of main ironstone trend intersected at Lyons 12 and Lyons 13 recorded up to a 1 – 4m thick zone analogous to Hastings Technology Metals deposits Simons Find, Frasers and Bald Hill ~2.5km away.

Ironstones occur within a broader up to 15m wide fenitic alteration halo which may carry REE mineralisation (Figure 2). Samples sent to ALS Laboratory for rush analysis with first results expected mid-November.

Further rock chip sampling, high resolution satellite spectral interpretation and drilling programs are planned to investigate additional targets not yet followed up, including thorium and magnetic anomalies throughout the Lyons Project and the high priority structural target along the major Bald Hill lineament which transects both the Edmund and Lyons Project Areas (**Figures 5 and 6**).

The Bald Hill lineament is the major control on rare earth mineralisation at Hastings Technology Metals Yangibana mine and represents a very high priority target for Lanthanein. Potential remains for further discoveries of ironstones and carbonatites within the Company's tenure where no historical REE exploration has occurred.

The Company recently received \$200,000 in funding from the Department of Mines Industry Regulation and Safety (**DMIRS**) to investigate potential for large tonnage REE carbonatites similar to Lynas Corporation's Mount Weld deposit in Western Australia.

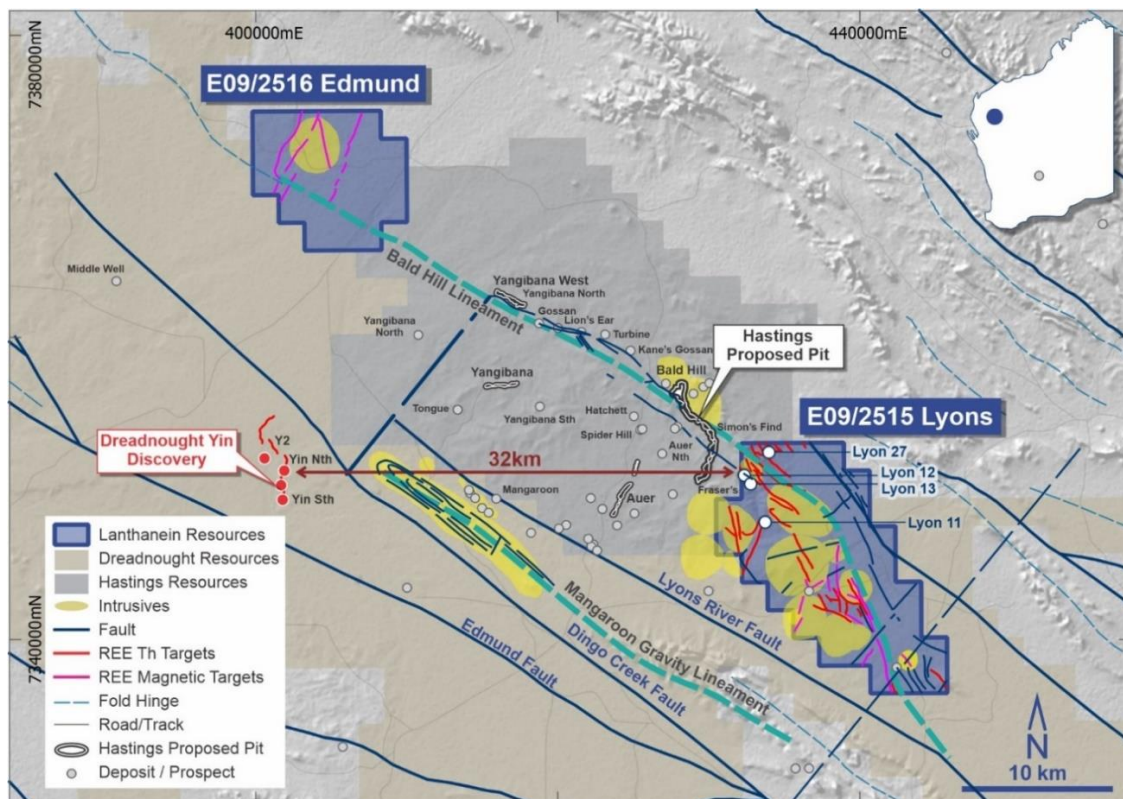


Figure 5. Lanthanein Resources Lyons and Edmund Projects located within close proximity of Dreadnought Resources Yin discovery and Hastings Technology Metals Yangibana REE mine.

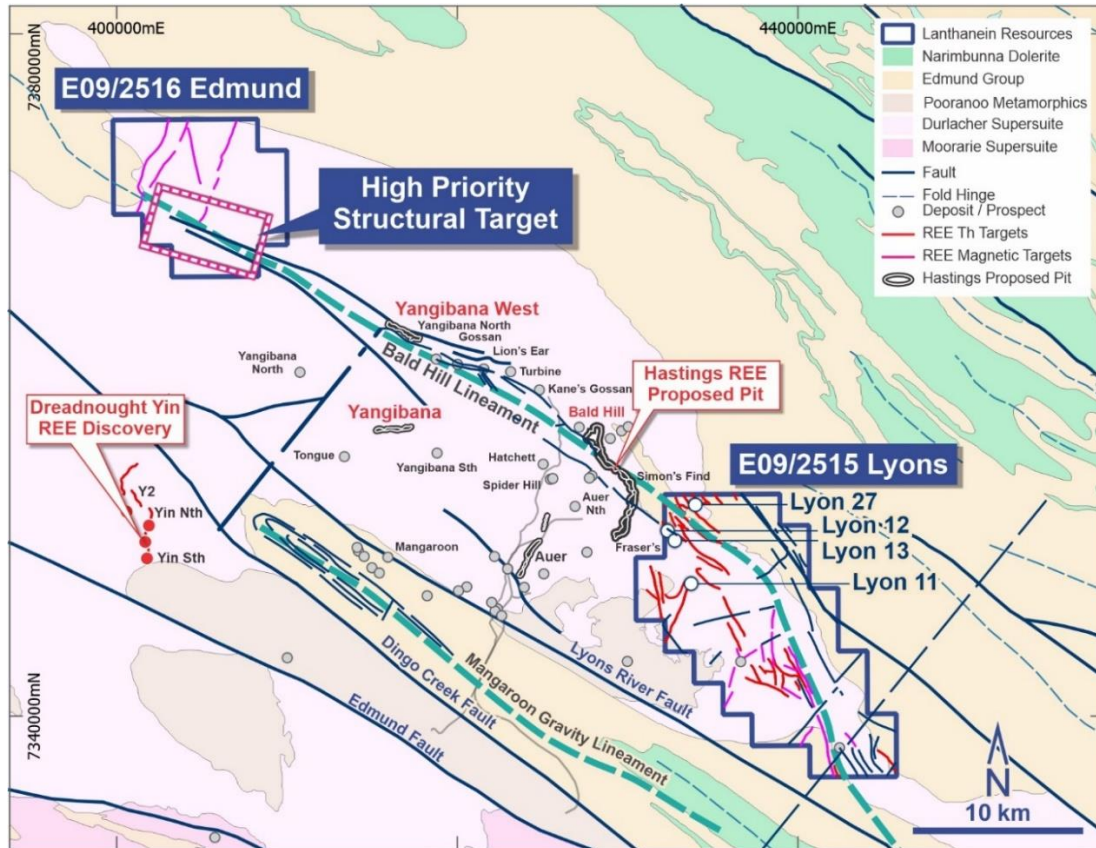


Figure 6. Location of Lyons and Edmund Projects in the Gascoyne, Western Australia, (geology overlay), highlighting the prospective Durlacher Suite of the Gifford Creek Carbonatite Complex, in pink underlying the project areas.

Mt Clere

No activity for the quarter.

Murraydium

Company consultants continued gathering landholder data for a community relations campaign in advance of the planned drilling program.

Koolya

The Marlinyu Ghoorlie Traditional Owners and their heritage consultants Terra Rosa Consulting conducted a reconnaissance field visit to scope a clearance survey of the area requested for the planned drill program.

Corporate

\$1.75M Placement

On 3 August 2022, the Company advised that it received firm commitments from sophisticated investors to raise \$1,750,000 (before costs) via a placement of 125 million shares at an issue price of \$0.014 per share.

The subscribers to the Placement were offered 1 free attaching option exercisable at \$0.03 expiring 31 December 2024 (**Placement Options**) for every two Placement Shares subscribed



for. The Company sought quotation of the 62,500,000 Placement Options which were listed under the ASX code "LNRO" on 10 August 2022.

The funds raised from the Placement will be used primarily to fund up-coming drilling campaigns at the Company's Gascoyne Rare Earth Elements (REE) Project and the Murraydium Ionic Clay REE Project.

The Placement was managed by Inyati Capital Pty Ltd (**Inyati**). Pursuant to the mandate with Inyati the Company paid a 6% commission on funds raised under the Placement. Inyati also received 12.5 million options at an issue price of \$0.00001 per option and otherwise on the same terms as the Placement Options.

Allotment of the shares was completed on 10 August 2022.

ESG

The Company continues to monitor the progress and development of the frameworks 21 core metrics created by the World Economic Forum's Stakeholder Capitalism Metrics.

The metrics have been organised into four pillars – Principles of Governance, Planet, People and Prosperity – which are aligned with the essential elements of the UN Sustainable Development Goals. Each pillar is comprised of, up to 7 themes, considered to be the most important to society, the planet and the economy and the most universally relevant to all companies. Each critical in providing comprehensive understanding in measuring corporate performance and sustainable value creation.

By benchmarking our ESG progress against WEF's framework we look forward to clearly demonstrating our commitment and progress towards the benchmarks provided in the WEF ESG reporting framework and to clearly communicate our ongoing progress.

We will be sharing the Company's ESG reporting updates in our Quarterly and Annual Reports, and will make these available on our website.

Since January we have been working towards setting an ESG baseline, we look forward to sharing the baseline report once completed. In the meantime please see the comparison report below, showing the progress made so far.

ASX Additional Information

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$286,000. Full details of exploration activity during the September quarter are set out in this report.
2. ASX Listing Rule 5.3.2: There was no substantive mining production and development activities during the quarter.
3. ASX Listing Rule 5.3.5: Payment to related parties of the Company and their associates during the quarter: \$121,562. 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.



Releases submitted to the during the Quarter included:

30/09/2022	Lyons REE Project Maidel Drill Program Update
23/09/2022	Annual Report to shareholders
23/09/2022	Appendix 4G and Corporate Governance Statement
16/09/2022	Lyons REE Project Maiden Drill Program Update
13/09/2022	Director Nominations and Annual General Meeting Update
12/09/2022	Lyons REE Project Maiden Drill Program Commenced
30/08/2022	Siteworks Commenced for Maiden Drill Program
19/08/2022	LNRO Top 20 Security Holders
18/08/2022	Heritage Survey Complete Ahead of Maiden Drill Program
16/08/2022	Application for quotation of securities - LNR
10/08/2022	Cleansing Notice
10/08/2022	Application for quotation of securities - LNR
10/08/2022	Notification regarding unquoted securities - LNR
10/08/2022	Target Market Determination - Options Issue
10/08/2022	Options Prospectus
10/08/2022	Proposed issue of securities - LNR
10/08/2022	Heritage Surveys Underway at Lyons Rare Earth Project
08/08/2022	PNG Project Sale Update
03/08/2022	Investor Presentation
03/08/2022	Proposed issue of securities - LNR
03/08/2022	Lanthanein Completes \$1.75M Placement
01/08/2022	Trading Halt
29/07/2022	Quarterly Activities/Appendix 5B Cash Flow Report

The information referred to in this report relates to the following sources:

¹ ASX.HAS: 5 May 2021 "Yangibana Project updated Measured and Indicated Resource tonnes up by 54%" [b07ebf9d-03c.pdf \(investi.com.au\)](#). The HAS Resource estimate comprises 4.9Mt @1.01% TREO in the Measured category, 16.24Mt @0.95% TREO Indicated and 6.27Mt @0.99% TREO Inferred.

LANTHANEIN RESOURCES LTD

Competent Person's Statement:

Papua New Guinea and South Australian Projects.

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by or compiled under the supervision of Peter Swiridiuk - Member of the Aust. Inst. of Geoscientists. Peter Swiridiuk is a Technical Consultant and Non-Executive Director for Lanthanein Resources. Peter Swiridiuk has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter Swiridiuk consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. Additionally, Mr Swiridiuk confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

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.



ABOUT LANTHANEIN:

Lanthanein is focused on Rare Earth Elements and battery metals, directly in line with global push for carbon neutrality driven by renewable energy (particularly wind turbine) installations and Electric Vehicle adoption driving global demand for the combination of rare earths. Following the recent acquisitions of Southern Rare Earths Pty Ltd and Dalkeith Capital Pty Ltd, Lanthanein has secured 100% interest in the Murraydium, Gascoyne, Koolya and Kalgoorlie projects which are all located in Australia. Lanthanein also owns 100% of the Tolukuma project in PNG.



Schedule 1 – Tenement Information

Lanthanein Resources Limited Tenement Information (Australia) as at 30 September 2022

Tenement Number and Name	Ownership	Sub-blocks	Area (sq.km)	Application /Grant Date	Expiry Date
E 09/2515 - Gascoyne (WA)	100% Dalkeith Capital Pty Ltd	47	147.02	17-Dec-21	16-Dec-26
E 09/2516 - Gascoyne (WA)	100% Dalkeith Capital Pty Ltd	25	78.35	17-Dec-21	16-Dec-26
E 77/2796 - Koolya (WA)	100% Dalkeith Capital Pty Ltd	47	138.78	05-Nov-21	04-Nov-26
E 77/2797 - Koolya (WA)	100% Dalkeith Capital Pty Ltd	28	82.68	05-Nov-21	04-Nov-26
E 27/648 - Kalgoorlie (WA)	100% Dalkeith Capital Pty Ltd	5	14.76	10-Jun-21	
E 52/4012 - Mt Clere (WA)	100% Dalkeith Capital Pty Ltd	191	591.63	23-Mar-22	22-Mar-27
EL6717 - Murraydium (SA)	100% Southern Rare Earths Pty Ltd	78	876.00	06-Apr-22	05-Apr-28
Total of Granted Tenements		421	1,929.22		

No changes in tenements occurred during the quarter.

Lanthanein Resources Limited Exploration Licence Information (Papua New Guinea)

Exploration Licence Number and Name	Ownership	Sub-blocks	Area (sq.km)*	Grant Date	Expiry Date
EL2531 - Tolukuma	100% Frontier Copper PNG Ltd	65	223.00	25-Feb-19	24-Feb-23
ELA2529 - Gazelle	100% Frontier Copper PNG Ltd	211	719.51	N/A	N/A
Total of Granted EL's		65	223.00		

*1 sub-block approximately 3.41 sq.km

Notes: The PNG Mining Act-1992 stipulates that EL's are granted for a renewable 2 year term (subject to satisfying work and expenditure commitments).

The PNG Government maintains the right to purchase up to 30% project equity at "Sunk Cost" if/when a Mining Lease is granted.

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 September 2022

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation (if expensed)	(9)	(9)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	-	-
	(e) administration and corporate costs	(239)	(239)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	4	4
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)	(55)	(55)
1.9	Net cash from / (used in) operating activities	(299)	(299)

2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation (if capitalised)	(277)	(277)
	(e) investments	-	-
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 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 (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(277)	(277)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	1,750	1,750
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	(119)	(119)
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)	-	-
3.10	Net cash from / (used in) financing activities	1,631	1,631

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	4,027	4,027
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(299)	(299)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(277)	(277)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,631	1,631

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 (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	5,082	5,082

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	3,082	3,082
5.2	Call deposits	2,000	2,000
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)	5,082	5,082

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**

121

-

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 \$121,562

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)	(299)
8.2	Capitalised exploration & evaluation (Item 2.1(d))	(277)
8.3	Total relevant outgoings (Item 8.1 + Item 8.2)	(576)
8.4	Cash and cash equivalents at quarter end (Item 4.6)	5,082
8.5	Unused finance facilities available at quarter end (Item 7.5)	-
8.6	Total available funding (Item 8.4 + Item 8.5)	5,082
8.7	Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	8
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: 31 October 2022

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.