



## ACTIVITIES REPORT

### QUARTER ENDED 30 JUNE 2022

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#### Gascoyne Rare Earth Elements (REE) Project

- Intrusive Targets Defined in 3D Model
- Positive metallurgy results on rock chip samples from high grade outcropping REE ironstones at Lyons 11 achieving 92% recovery of TREO at 38% grade
- Maiden drill program planned for next quarter

#### Murraydium Ionic Clay REE Project

- Exploration Licence 6717 granted by South Australia's Department for Energy and Mining
- Drilling approvals (EPEPR) received from South Australia's Department for Energy and Mining

#### Mt Clere REE and Lithium Pegmatite Project

- 960.1ppm maximum TREO recorded in Historic Surface Sample
- Programme of Works Application lodged with DMIRS

#### Koolya Kaolin and HPA Project

- Heritage Clearance process in train

#### Tolukuma PNG

- Conditions of the Binding Terms Sheet has been changed so as to be satisfied by 28 September 2022

#### Corporate

- Change of Company name

#### ESG

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

## Gascoyne Rare Earth Elements (REE) Project, Western Australia

During the quarter the Company announced its drill targeting plan and rationale for the upcoming maiden drill program at the Gascoyne Rare Earths Project in Western Australia (**Gascoyne Project**).

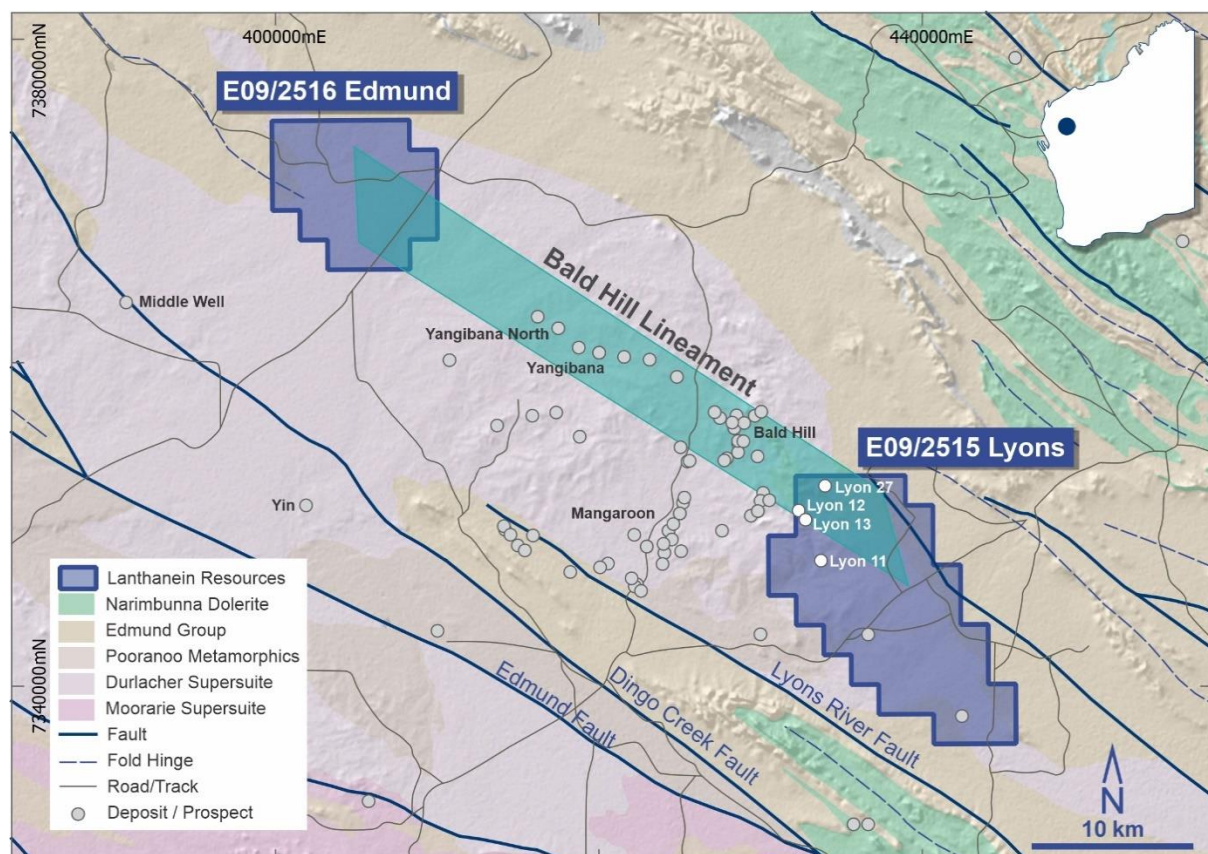
The drill program will target high-grade rare earth mineralisation discovered at outcropping ironstones and additional interpreted carbonatite intrusives and ironstones under cover (**Figures 2 and 3**).

The drill program will investigate high priority targets located within the Gifford Creek Carbonatite Complex, host to Hastings Technology Metals' (ASX:HAS) world-class Yangibana Mineral Resource<sup>1</sup> of 27.42Mt @ 0.97% TREO with 0.33%  $\text{Nd}_2\text{O}_3 + \text{Pr}_6\text{O}_{11}$ , and Dreadnought Resources multiple discoveries<sup>2</sup>.

A description of the proposed drill targets over the Lyons and Edmund prospects is set out in Schedule 1 to this report.

Further rock chip sampling, ground based geophysics, 3D modelling 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.

Potential remains for further discoveries of ironstones and carbonatites where no historical REE exploration has occurred.



**Figure 1: Location map of the Lyons and Edmund Prospects**



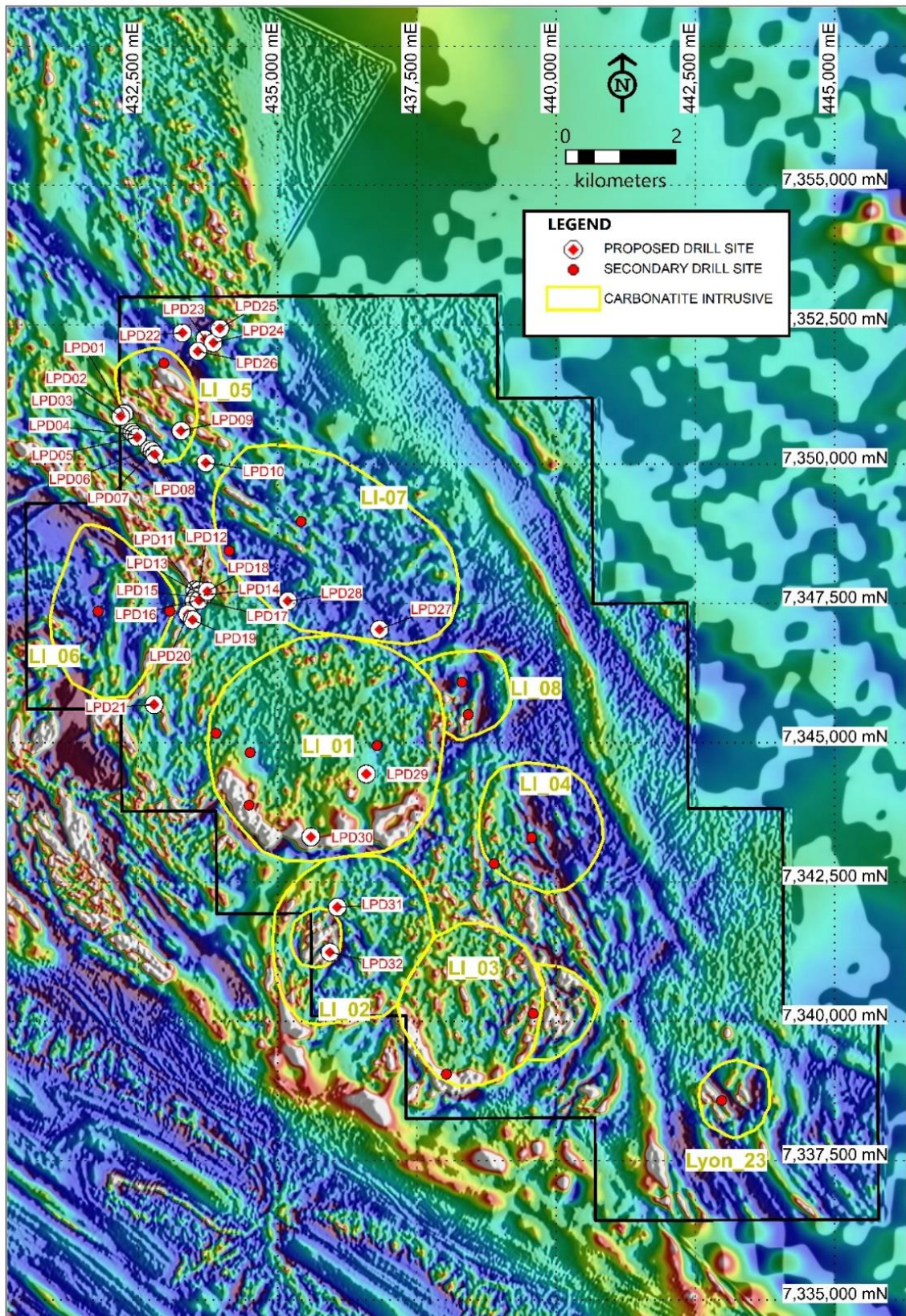
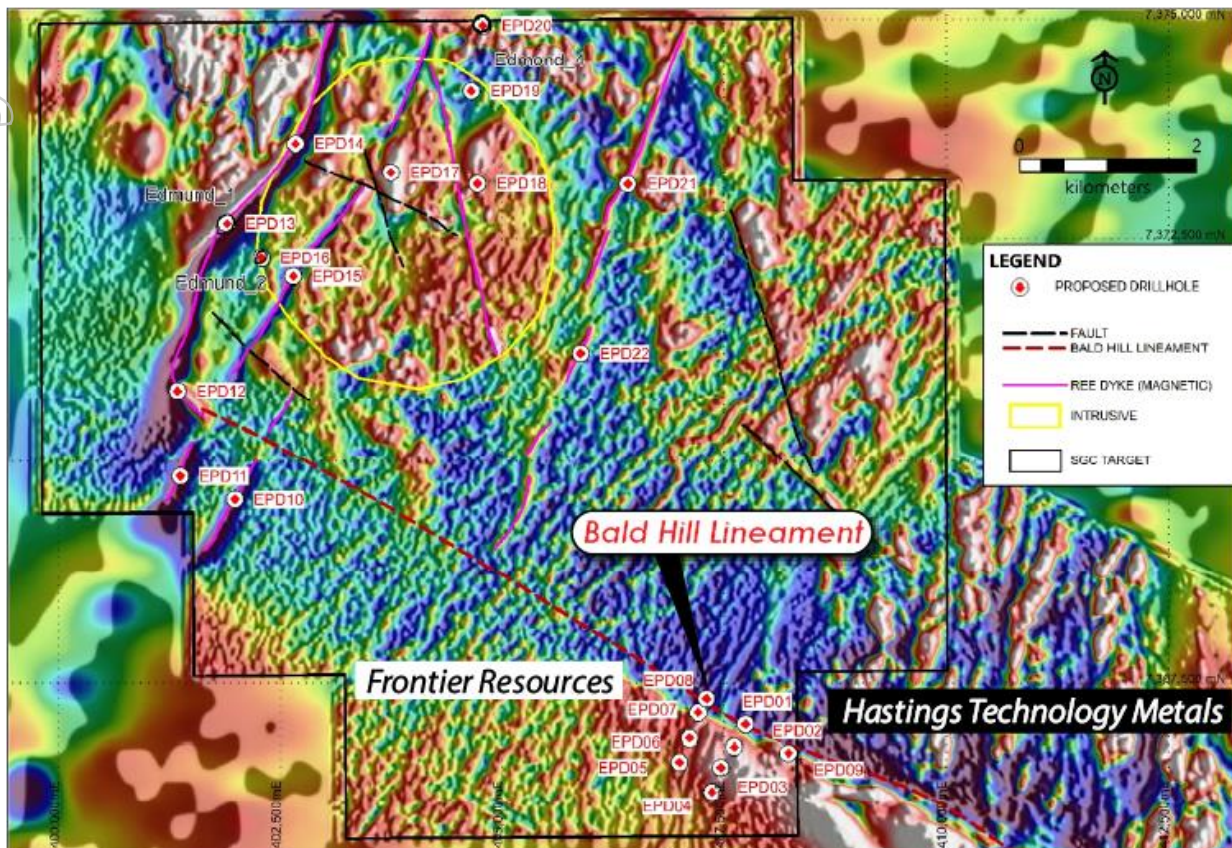


Figure 2. Lyons Proposed Drill Sites on Magnetic (RTPVD1) Image





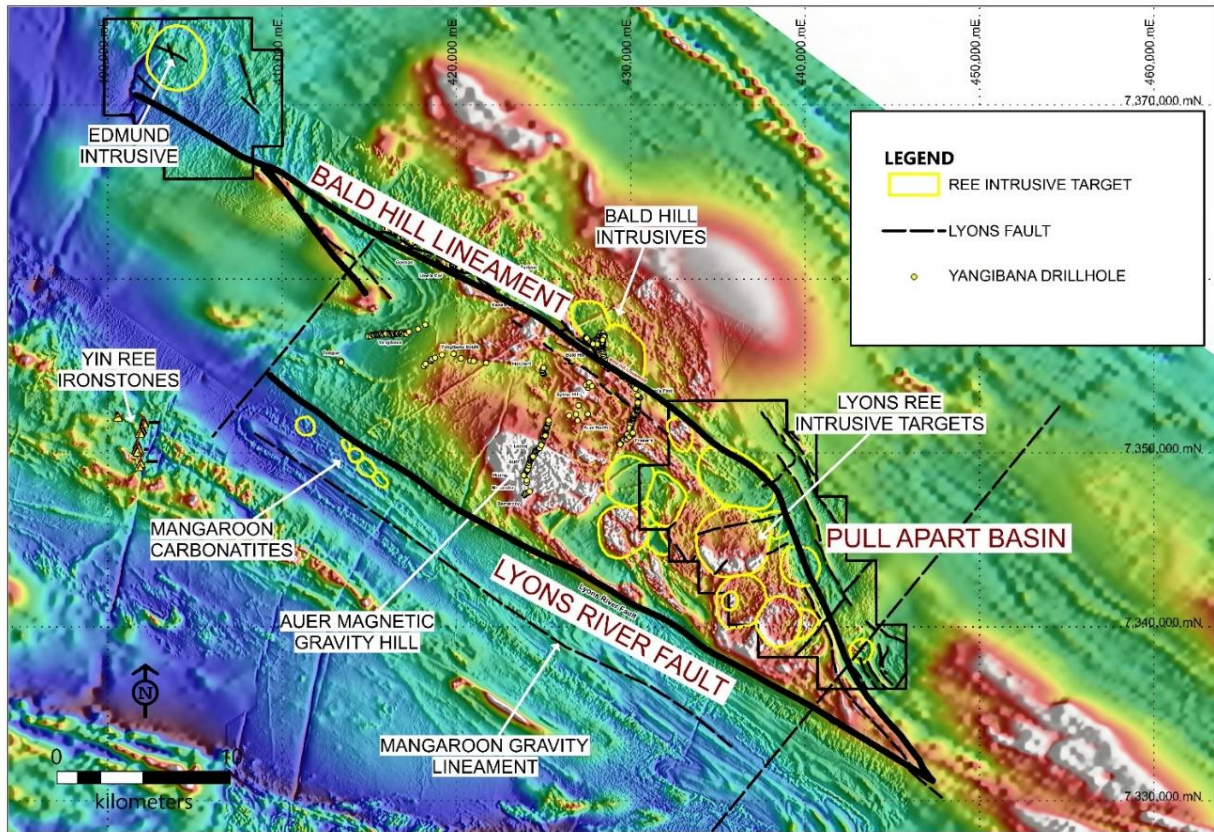
**Figure 3. Edmund Project Proposed Drillhole Sites on Magnetic (RTPVD1) Image**

### **Intrusive Targets Defined in 3D Model**

During the quarter the Company announced the results of 3D modelling of airborne magnetic geophysical data.

Results demonstrated a number of interpreted intrusive carbonatite centres present within the Company's Lyons Block in its Gascoyne project. The 100% owned Lanthanein Lyons block occurs within a structurally prospective Rhomboidal Pull Apart Basin (Figure 4) which is host to the Hastings and Lanthanein REE anomalous ironstone dykes.





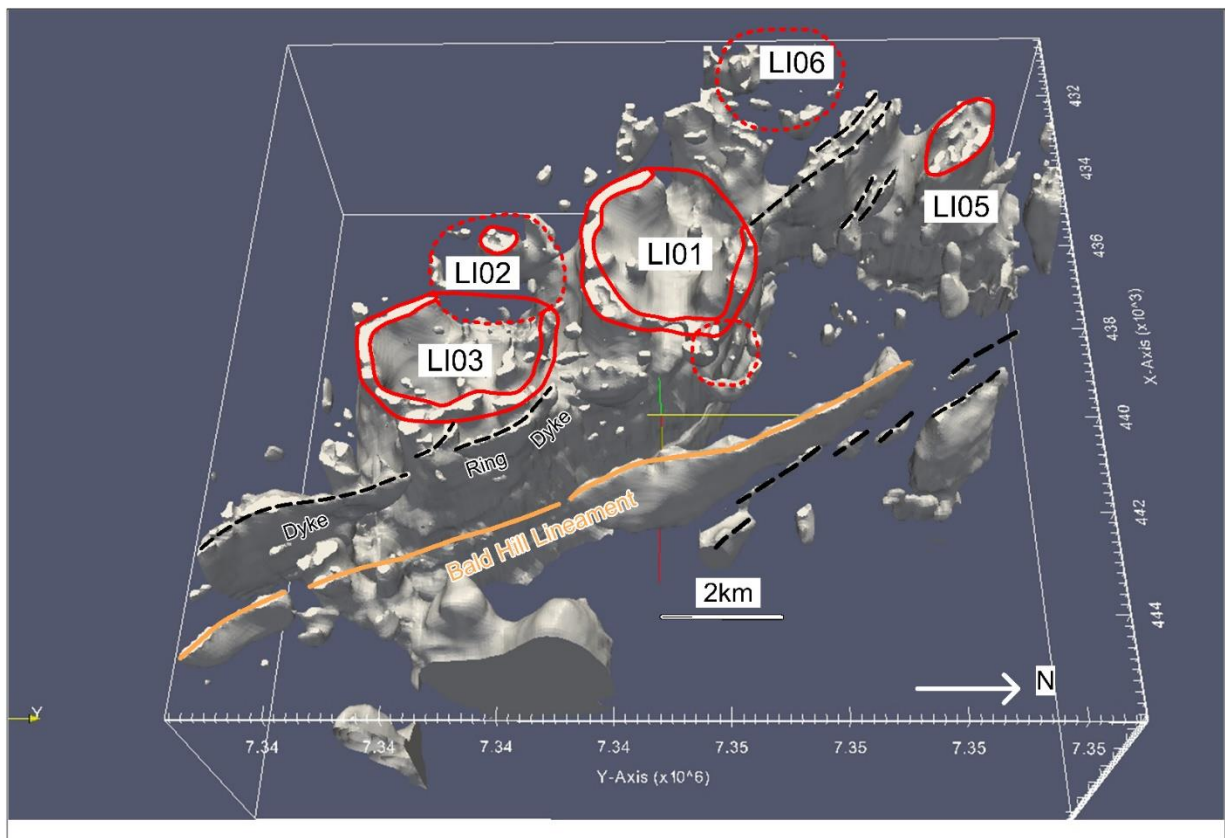
**Figure 4. Map showing the Lyons Block REE intrusive Targets within a Rhomboidal Pull Apart Basin**

Independent consultant and expert on carbonatite intrusives, Franco Pirajno, has reviewed the geophysical modelling, rock sampling results and proposed drill sites. Franco will evaluate results from the upcoming maiden drilling program and has approved of the drill sites which are in part designed to test the outer magnetic aureoles of the carbonatite intrusive targets (refer to ASX Announcement dated 26 April 2022).

Franco Pirajno is a highly cited researcher with considerable experience in the fields of tectonics, ore deposit geology and mineral exploration having worked extensively in Western Australia with published papers on both the Mt Weld and Gifford Creek REE Carbonatites<sup>4 5</sup>. He is currently adjunct Professor at the Centre for Exploration Targeting (University of Western Australia).

The Mount Weld plug is well defined by aeromagnetic and gravity data that describe a high-density vertical cylindrical body, 3 to 4 km in diameter, surrounded by a low-density halo about 0.5km wide<sup>1</sup>. Recent drilling results by Lynas Rare Earth Limited confirm continuous Rare Earth Element (REE) mineralisation along the 1,020m drill core at an average grade of 2.22% REO. Shallower enriched grades include 13.67% REO at 42 to 62m depth<sup>3</sup>.

At least three intrusive targets have been modelled as vertical cylindrical bodies 2 to 4km in diameter within the Lyons Block and extend to over 2km depth (Figure 5). Since 2011 there has been detailed exploration within the Gifford Creek Ferrocarbonatite Complex Pull Apart Basin (Figure 4) focussing on REE within the Yangibana ironstone veins. Intrusive Carbonatite targets represent a new large-tonnage REE target within the area.



**Figure 5. Lyons Block 3D Magnetic Susceptibility Model Looking West Showing Intrusive Targets**

Intrusive Target LI01 occurs as a 4.3km diameter interpreted intrusive with a distinctive modelled outer magnetic halo at surface (Figure 5). It extends to over 1km depth and emanates from a larger magnetic intrusive body at greater depth (Figure 6). Anomalous Thorium linear zones which occur within this circular target area are drill targets for REE ironstone. Anomalous Th along the southern magnetic aureole is also a drill target.

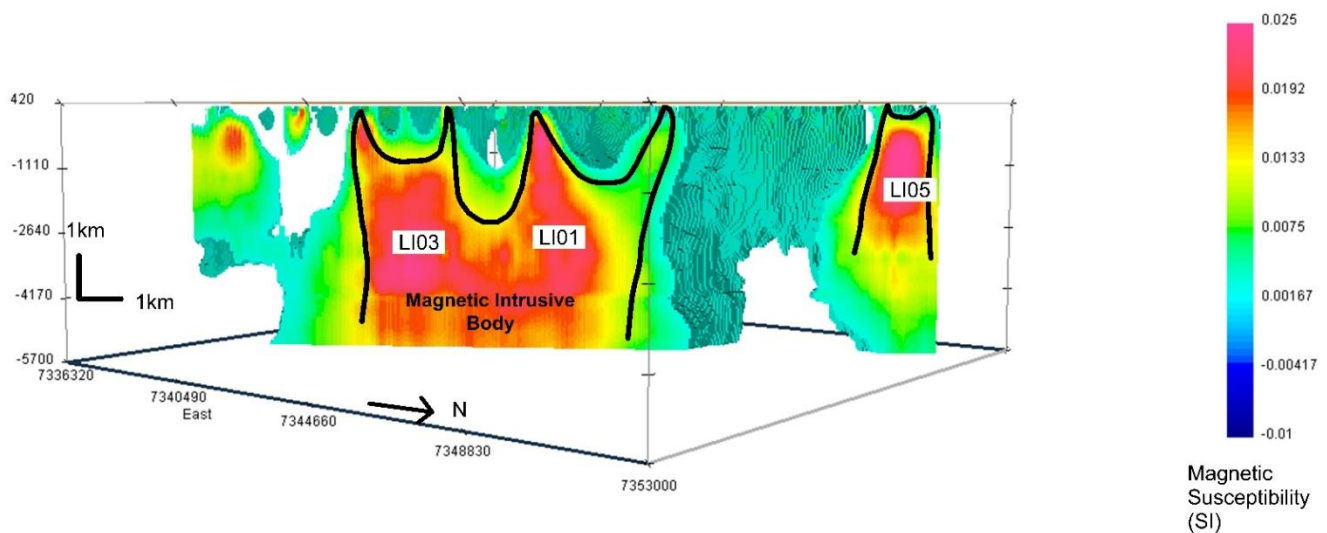
Intrusive Target LI03 occurs as a circular 2.8km diameter magnetic aureole emanating from a > 2km depth magnetic intrusive source (Figure 6).

Intrusive Target LI05 has a 2km x 1.3km topographical 'amphitheatre' style surface expression. The 3D magnetic modelling shows a near surface magnetic aureole emanating from a larger magnetic source at 2km depth (Figure 6). This target occurs adjacent to the Bald Hill Lineament and numerous NNW trending



Thorium lineament REE ironstone dyke drill targets trend through the feature which are planned to be drill tested. Additional target areas are being defined through continued interpretation of the 3D modelled magnetic data.

The Bald Hill Lineament is a significant REE target and has a modelled magnetic signature extending to over 1km depth (Figures 4 and 5).



**Figure 6. Lyons Block 3D Magnetic Model Cross-Section Looking Southwest**

Heritage avoidance surveys have been postponed due to positive cases of COVID-19 onsite. In line with the Company's Health and Safety protocols to ensure the health and well-being of the heritage group, consultants and staff, the survey was temporarily shut down with all personnel leaving site. The heritage surveys are expected to re-commence in the second half of June.

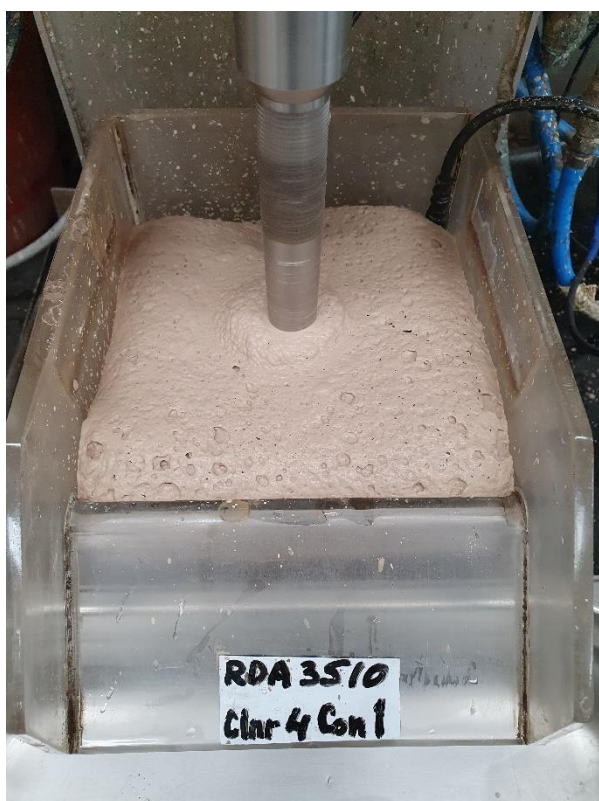
### **Positive Metallurgy Results for Gascoyne REE Project**

During the quarter the Company received results from metallurgical flotation test work carried out on outcropping ironstones at the Lyons Rare Earths Project in the Gascoyne, Western Australia (**Lyons Project**) confirmed ongoing similarities between Lanthanein REE projects and the adjacent Hastings deposit.

Initial metallurgical test work was undertaken to determine the amenability of the ironstones to produce a commercially treatable monazite concentrate (Figure 7). Encouragingly comparable results were returned, similar to results announced by Hastings Technology Metals (ASX.HAS) and Dreadnought Resources (ASX.DRE). While the results achieved are very positive, further bulk samples across the project will better reflect potential concentrator feed. More representative sampling will be undertaken during the maiden drilling program.

The headline results were achieved after a 90µm primary grind and four stages of cleaning. The flotation flowsheet recovered a single rougher concentrate which was then subject to a 20µm regrind to liberate rare earth oxides.

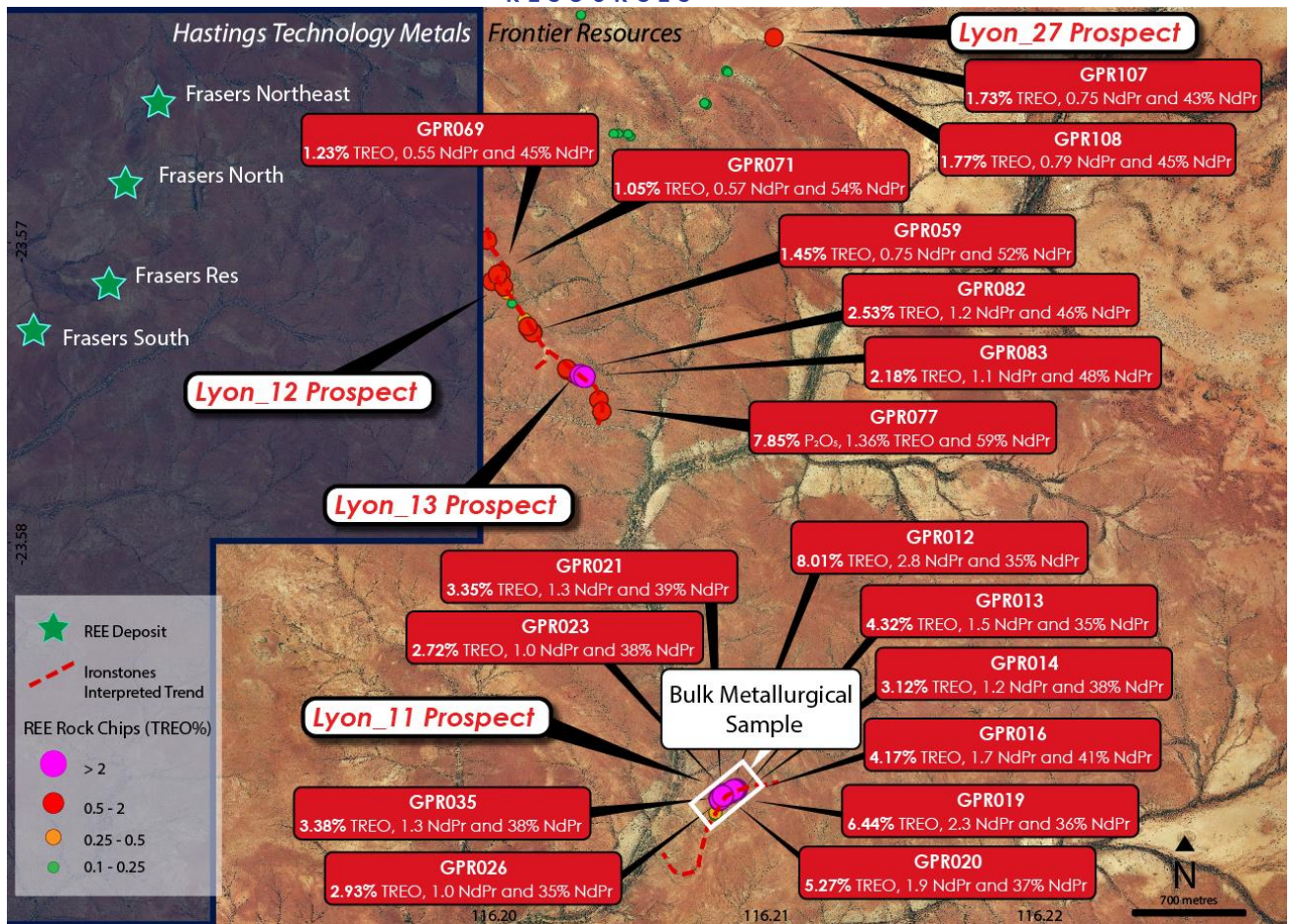
- 96.7% Nd<sub>2</sub>O<sub>3</sub> recovery at 13.9% grade achieved in concentrate.
- Initial metallurgical results from outcropping REE ironstone at Lyons\_11 achieved 92% recovery of TREO at 38% grade.
- Lyons TREO are comprised of a significant proportion of neodymium and praseodymium (Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>). Importantly, the TREO has been confirmed as being predominantly hosted in monazite which is well-known to be amenable to commercial processing.



An initial flotation circuit using bulk surface samples from Lyons\_11 (Figure 7) performed well, achieving a recovery of 96.7% at 13.9% Nd<sub>2</sub>O<sub>3</sub> grade in concentrate. This is calculated to be an average 92% recovery of total rare earth oxides (TREO) at 38% grade in final concentrate.

**Figure 7. Successful flotation test work at Lyons\_11.**





**Figure 8. Map showing the location of high-grade rock chip samples at the Lyons Project and the location of mapped outcropping ironstones and their interpreted extensions under shallow cover. The Lyons metallurgical composite sample consisted of ironstone samples from Lyon\_11 (GPR012, GPR019 and GPR020).**

Heritage surveys were commenced during the quarter to allow site works to begin at Lyons and Edmund for a maiden drilling program. Heritage surveys are expected to be completed in the next quarter.

Lanthanein anticipates drilling to commence in late next quarter pending the final heritage survey approvals and completion of siteworks. There have been some delays in organising the heritage surveys, which is a common theme throughout the mining and exploration industry at present. While this is not ideal, the Company has been proactive and pragmatic in ensuring the heritage surveys are done as soon as possible.

## Murraydium Ionic Clay Hosted REE Project, South Australia

The Murraydium Project is located in the south-eastern region of Naracoorte in South Australia's Murray Basin, consisting of four exploration licence blocks, covering an area of 873km<sup>2</sup>, owned 100% by Southern Rare Earths (SRE) a wholly owned subsidiary of Lanthanein (Figures 9 and 10). The region is seeing a renewed focus for REE minerals with the success of Australian Rare Earths (ASX:AR3) at their 100% owned Koppamurra Project, host to an inferred mineral resource of 39.9 Mt @ 725 ppm TREO<sup>6</sup>.

During April, the South Australian Department of Mines and Energy granted the Exploration Licence EL6717. The Company proceeded to finalise an Exploration Programme for Environment Protection and Rehabilitation (EPEPR) with the Department of Mines and Energy for approval for a drilling programme.

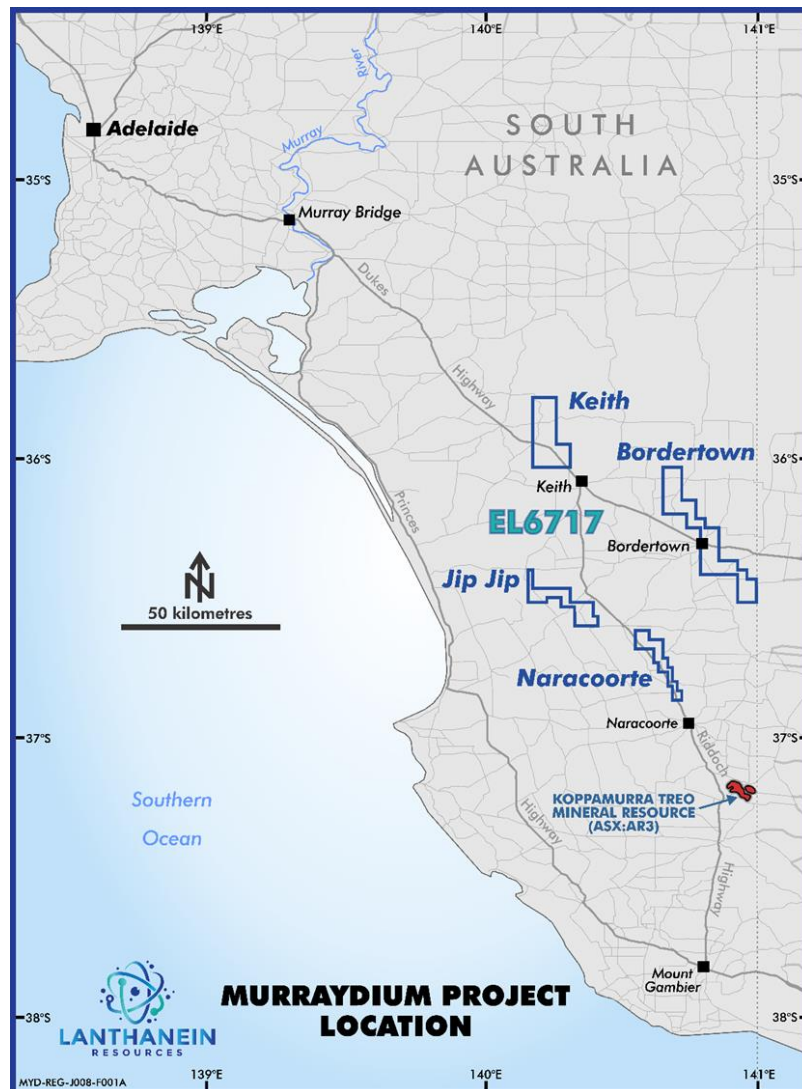


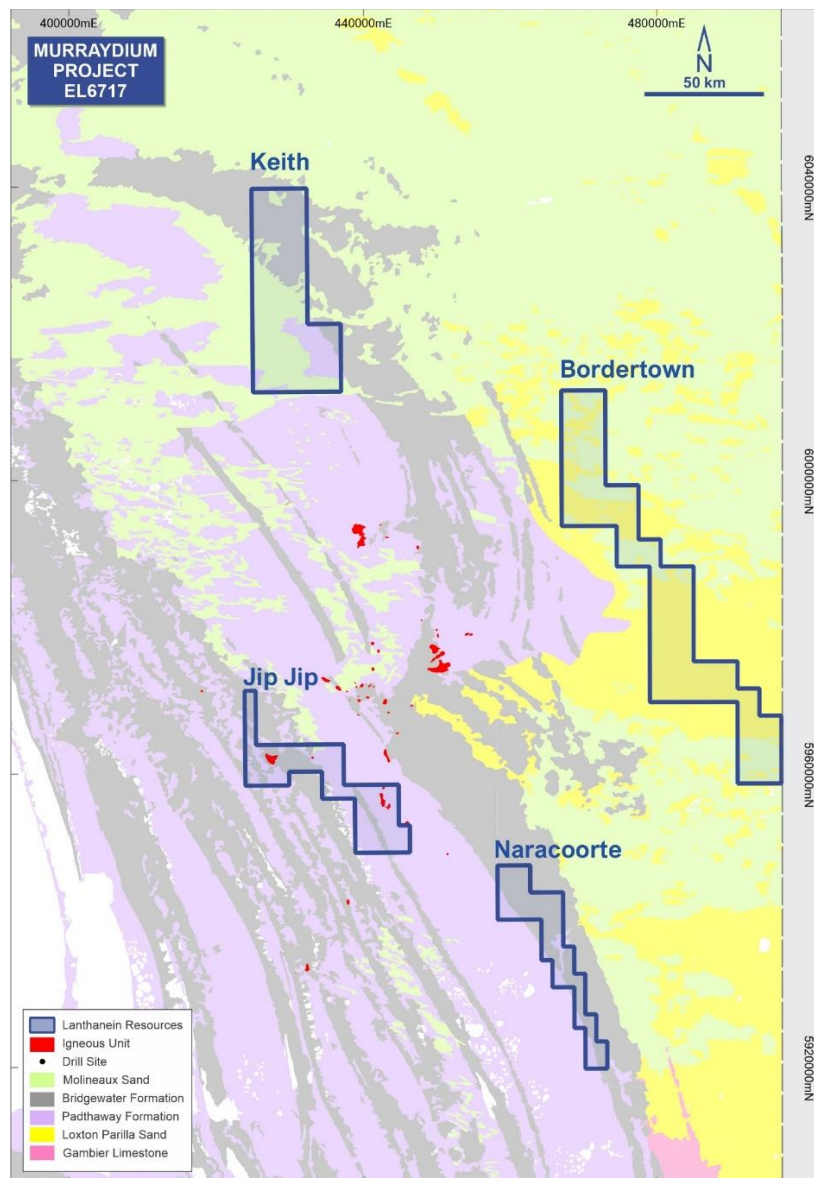
Figure 9: Location Map of Murraydium Ionic Clay Hosted REE Exploration Project.



On 24 June, the Company advised that South Australia's Department for Energy and Mining had granted an Exploration Program for Environment Protection and Rehabilitation (**EPEPR**) approval for EL6717.

The approval allows for a total of 307 Air Core drill holes to be drilled on roadside verges within the four tenement blocks Naracoorte, Bordertown, Jip Jip and Keith (Figure 10) to investigate the project area for the presence of laterally extensive shallow clay hosted REE mineralisation.

A suitable drill contractor from South Australia has been sourced with Aircore drilling capability mounted on turbo diesel Toyota 6x6 Landcruiser. Under the EPEPR process, South Australian exploration licence holders have statutory requirements including the identification of relevant environmental, social and economic impacts and obtain relevant approvals prior to undertaking exploration activities.



**Figure 10: Drill hole plan for the Naracoorte, Bordertown, Jip Jip and Keith tenement blocks**



## Mt Clere REE and Lithium Pegmatite Project, Western Australia

During the quarter the Company undertook interpretation of historical data at the Mt Clere Rare Earths and Lithium Project in Western Australia (**Mt Clere Project**). The review identified multiple high priority targets within the Durlacher Supersuite lithology which hosts Hastings Technology Metals' (ASX:HAS) world-class Yangibana Mineral Resource<sup>1</sup> of 27.42Mt @ 0.97% TREO with 0.33% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>.

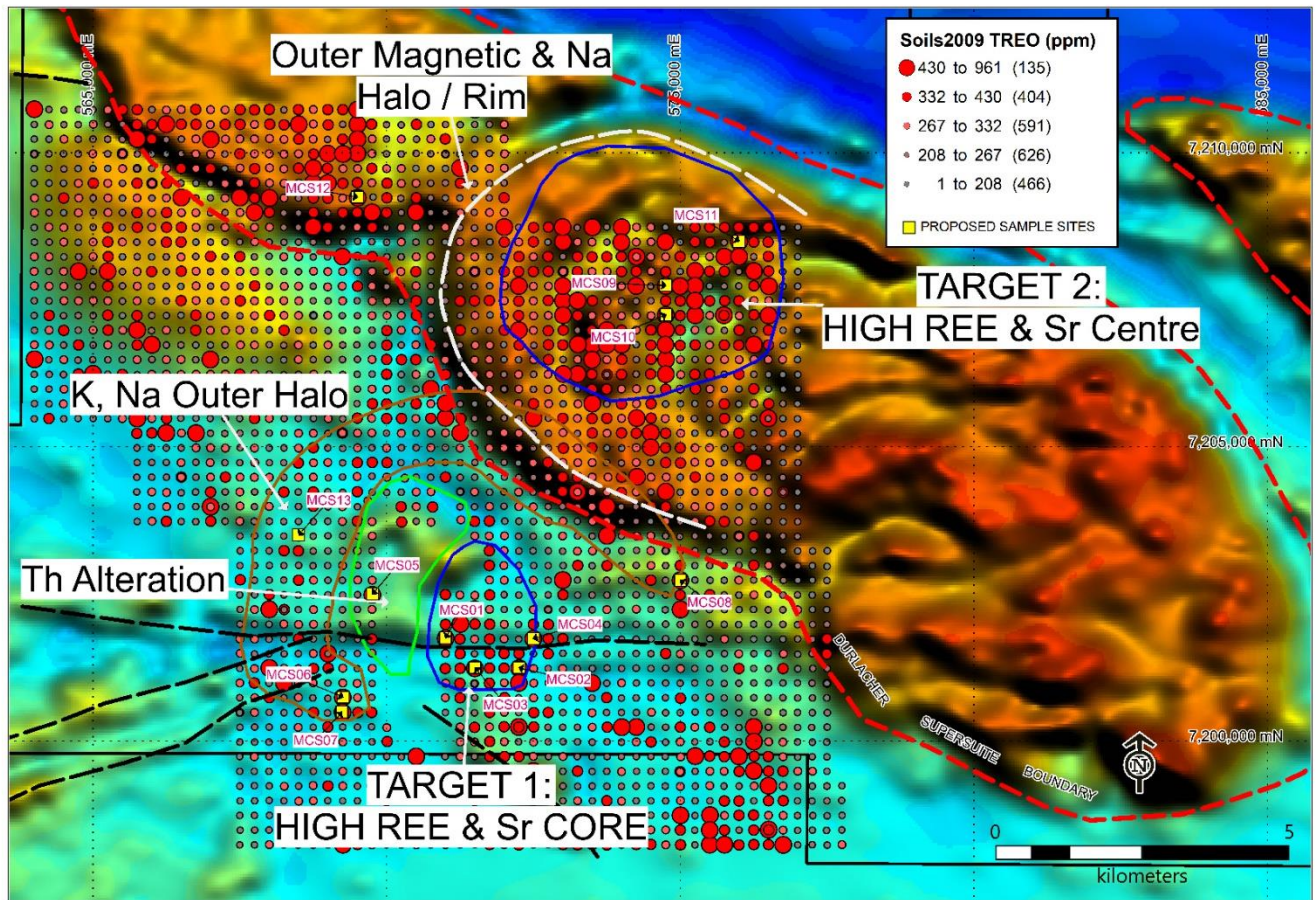
A field reconnaissance and sampling program was completed to inspect the target areas with a total of 17 rock chip samples collected. An extensive gridded auger sampling program is planned across the broader project area to cover the remainder of the Durlacher Supersuite intrusives and key target areas identified from an extensive reinterpretation of open file geophysics and the historical geochemical data review.

A Programme of Work application has also been submitted to DMIRS for a RC drilling programme.

The Mt Clere project comprises one exploration licence application E52/4012 covering approximately 350km<sup>2</sup>, located on the major Ti Tree Shear Zone which may be analogous to the relationship between the Lyons River Fault and the Gifford Creek Carbonatite Complex, host to Hastings Technology Metals Yangibana mine. Mt Clere is located along the northern margin of the Yarlalweelor Gneiss Belt, with major bodies of Proterozoic Durlacher Supersuite and Moorarie Supersuite granites also prospective for lithium bearing pegmatites. The review of publicly available data recorded fifty-one (51) pegmatites mapped across the Mt Clere Project area by the Geological Survey of Western Australia (GSWA). The surface extent and potential for these pegmatites to host lithium mineralisation will be a primary focus of initial work programs.

Lanthanein will commence an extensive gridded surface sampling program as soon as possible designed to identify and validate the potential of rare earth elements and lithium mineralisation within the Mt Clere project area. Follow-on exploration will depend on the results of this initial work program but are expected to include a detailed and systematic exploration program comprising of a combination of soil geochemical sampling, rock sampling and geophysical surveys across the high priority target areas, prior to drilling programs being undertaken.



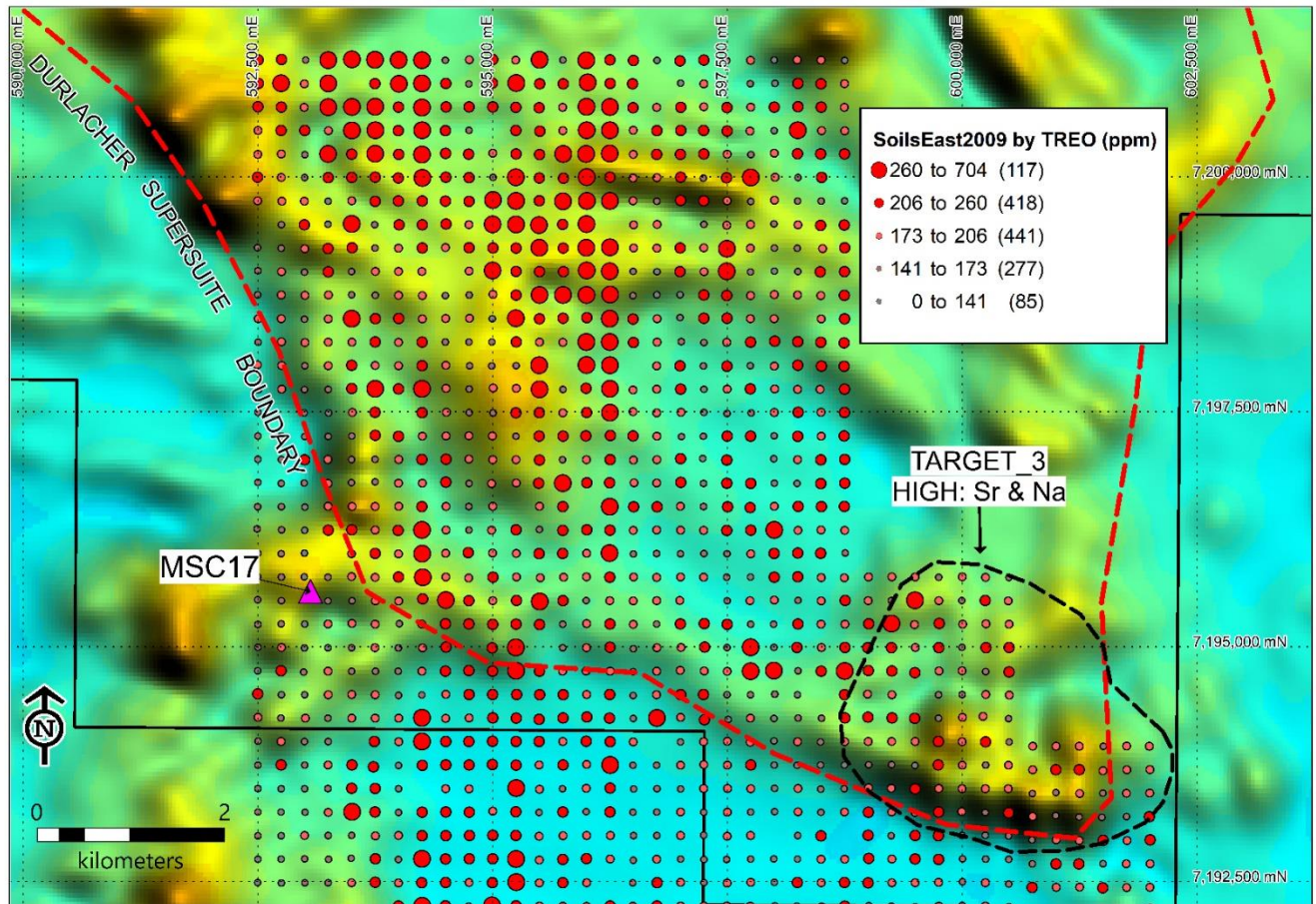


**Figure 11. Mt Clere Project target areas1 & 2 in the western half of the project, showing elevated total rare earths recorded in historical surface samples dataset on magnetics image.**

Target 1 is a high priority area for fenitic alteration leading to mobilisation of REE and Nb concentrations. It has a 1700m diameter inner core of anomalous REE (up to 737.2 ppm TREO) and associated Sr, with an outer potassic and sodic alteration halo (Figure 11). Follow-up auger sampling is recommended.

Target 2 has an anomalous centre of REE and Sr, an outer alteration halo of Na coincident with a magnetic rim, and inner anomalous potassium/potassic alteration. Anomalous REE and Niobium in soils have mobilised throughout this target area which is recommended for follow-up auger sampling and ground microgravity geophysical surveying.





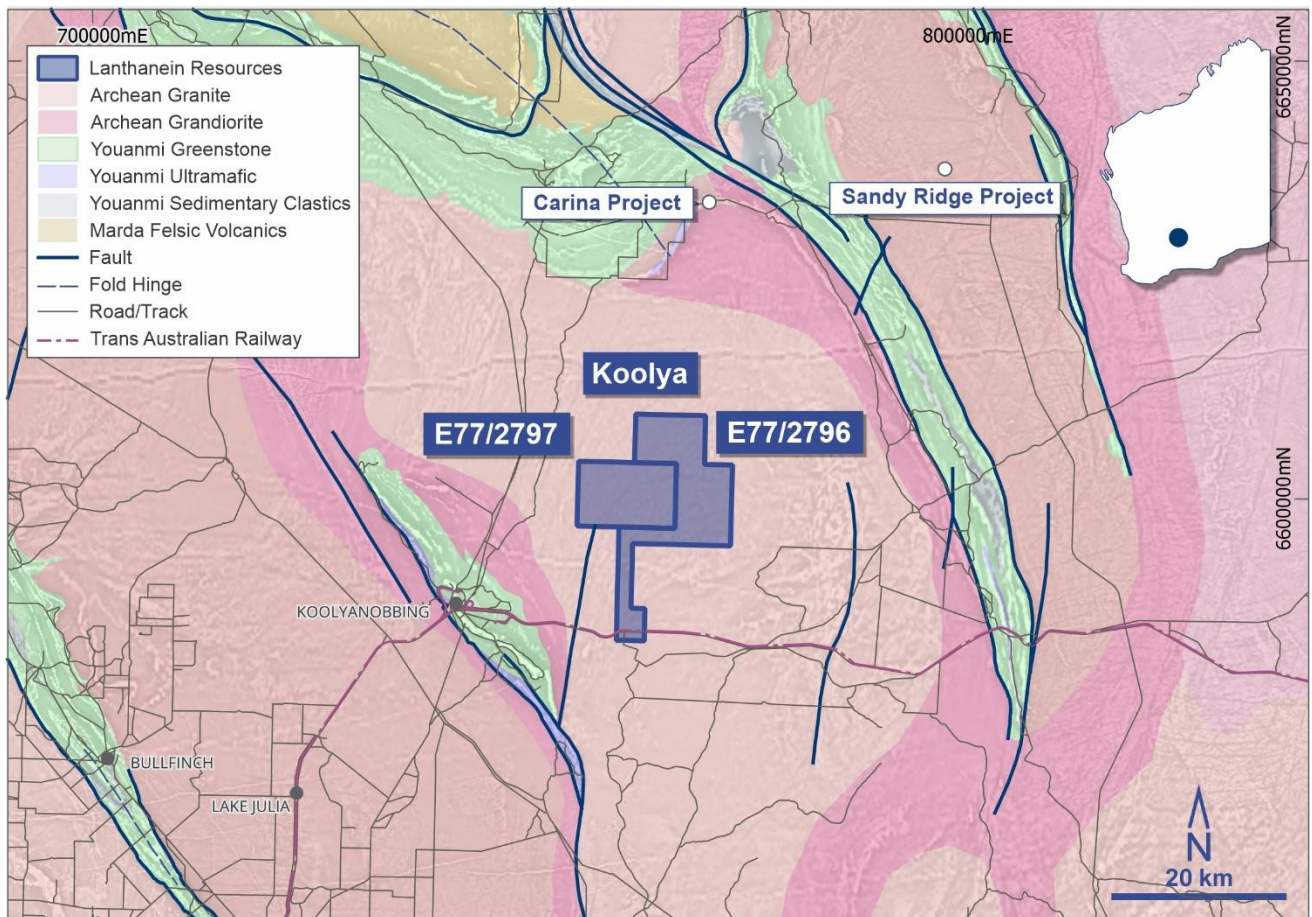
**Figure 12. Mt Clere Project target area 3 in the eastern half of the project, showing elevated total rare earths recorded in historical surface samples dataset on magnetics image.**

Target 3 occurs on the edge of the Durlacher Supersuite (Figure 12) which is anomalous in Sr along its magnetic boundary and Na which may indicate fenitic alteration and mobilisation of REE and Nb. Anomalous REE (up to 268.19 ppm) and Nb within this target area are recommended for further follow-up auger sampling and ground Microgravity surveying. Samples site MSC17 appears to have iron enrichment and select samples will be sent in for mineralogy/SEM to help distinguish rock types.



## Koolya Kaolin and HPA Project, Western Australia

The Koolya Kaolin and HPA project area is located in a proven high quality kaolin producing region with Tellus Holdings Sandy Ridge kaolin mine 30km away to the north-east and Kula Gold's (ASX.KGD) recent discovery 80km south (Figure 13).



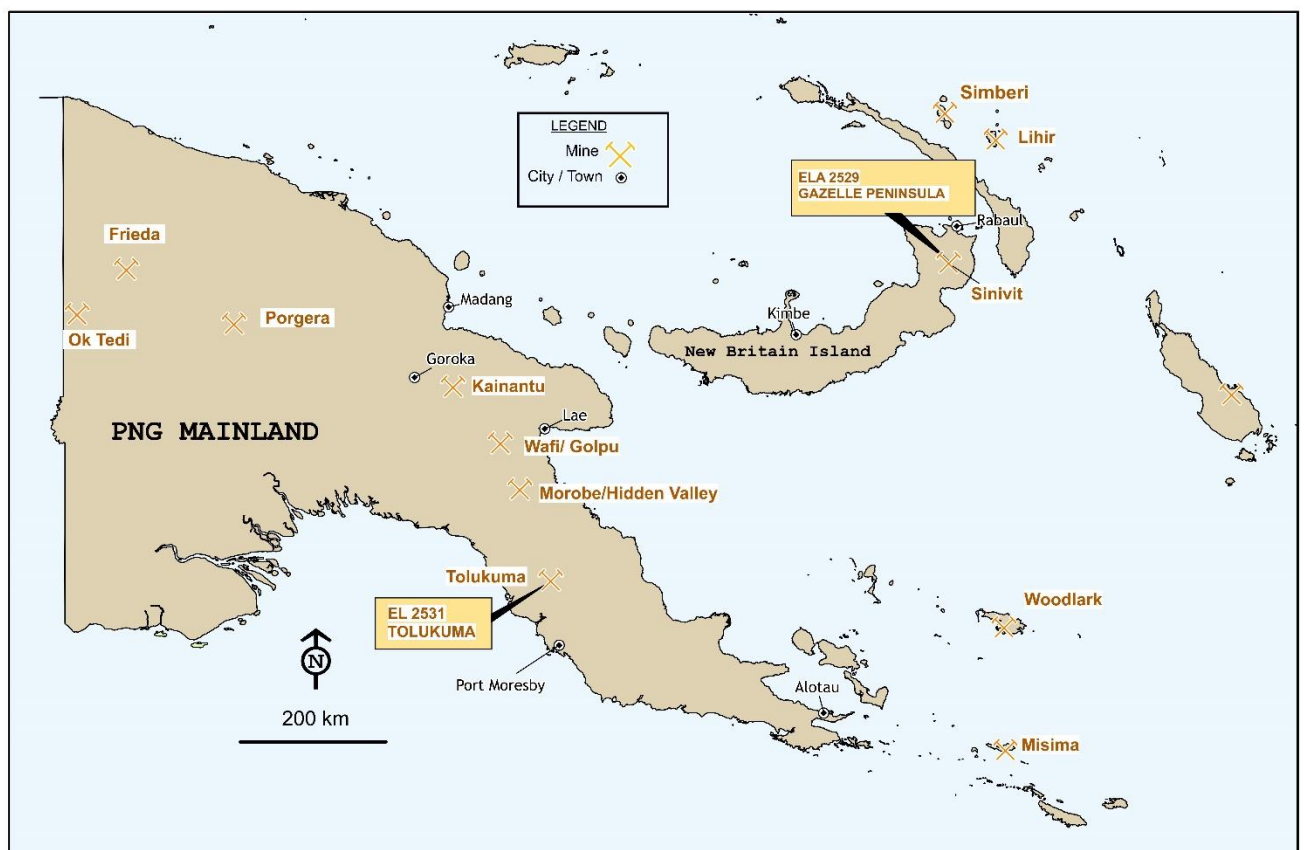
**Figure 13. Location Map of the Koolya Project in Western Australia.**

During the Quarter a Heritage Notice was issued to the Marlinyu Ghoorlie Native Title Claimant Group (Native Title Determination Application WAD647/2017). Marlinyu Ghoorlie have notified their Heritage Service Provider who have contacted the Company to arrange for Heritage Clearances. Delays brought about by weather and health protocols have delayed the commencement of the surveys which are anticipated to commence next quarter.

## Tolukuma, Papua New Guinea (PNG)

Lanthanein's tenement in Papua New Guinea (EL2531) surrounds the Tolukuma gold Mining Lease ML104 in the Central Province, 70km North of the national Capital of Port Moresby (Figure 14). A new owner is currently being sought for ML104 to refurbish the mine.

The Company has previously announced the signing of an agreement with PNG based Lole Mining Limited for the sale of its wholly owned subsidiary Frontier Copper PNG Ltd, the holder of the Tolukuma Exploration Licence EL2531. In addition, Frontier Copper (PNG) Ltd is also the applicant for an Exploration Licence ELA2529 which covers the old Sinivit Gold Mine in the Gazelle Peninsula on New Britain Island.



**Figure 14. Location of Tolukuma EL2531 and Gazelle ELA2529.**

Under a binding terms sheet, Lole has agreed to pay to Lanthanein A\$2m comprised of A\$500,000 cash and a further A\$1.5m either in cash or by way of the issue of fully paid ordinary shares in Lole. Further consideration of A\$1m is payable to Lanthanein if, within 5 years, an aggregate minimum of 500,000 oz of gold of not less than JORC (2012) indicated category of resource is identified on the tenements. The additional consideration is payable in either cash or shares (or a combination of cash and Lole Shares, at the election of Lole).





## About Lole Mining Limited

Lole Mining Ltd was incorporated in Papua New Guinea (**PNG**) as a public company under the Companies Act 1997. It has secured the rights to acquire the Tolukuma Gold Project, in PNG including five exploration permits surrounding the Tolukuma mine for a landholding of 1,600km<sup>2</sup> across the Tolukuma gold structure. The company has also secured the Mt. Penck copper/gold exploration license on New Britain Island in PNG.

Lole is focusing its efforts on developing the Tolukuma Gold Project (Tolukuma) located in the Central Highlands, PNG. Tolukuma was an operating gold mine until 2015 and Lole plans to recommence operations. Tolukuma was discovered in 1986 and commissioned in 1995 and has since been operating mostly as an underground mine with a small open pit to source oxide ore for blending purposes.

## Corporate

### Company Name Change

Following shareholder approval at a General Meeting on 12 May 2022, the Company proceeded to officially change its name with the Australian Securities and Investments Commission. On 24 May, the Company commenced trading under the name "Lanthanein Resources" with ASX ticker code LNR.

### Change of Share Registry

The Company advised on 6 June 2022 that it had changed its provider for shareholder registry services from Computershare Limited to Automic Pty Ltd (**Automic**).

Shareholders can easily and efficiently manage their holdings via Automic's secure and highly accessible online investor portal. The portal provides, among other things, an online interface to update and manage shareholder details, view balances and transaction history.

### Shareholder registration online

Shareholders that are not already a user of Automic's investor portal may visit <https://investor.automic.com.au> and signup to register their details using the two simple steps provided in the setup process.

Shareholders with any queries in relation to their Lanthanein Resources Limited holding are advised to contact Automic at [hello@automicgroup.com.au](mailto:hello@automicgroup.com.au) or on 1300 288 664 (within Australia) or +61 2 9698 5414 (outside Australia).

For additional information please visit our website at <http://www.lanthanein.com/>



## ESG

Lanthanein is happy to announce that the Company has adopted the ESG reporting framework created by the World Economic Forum's Stakeholder Capitalism Metrics. In January 2022, the Company also engaged in the impact monitoring platform SocialSuite to monitor the progress and development of the frameworks 21 core 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.



## Period Comparison (Period 1 vs 2)

Governance		Period 1 (Jan to Mar 2022)				Period 2 (Apr to Jun 2022)							
Code	Description	Status	Progress (A1-A5)				Status	Progress (A1-A5)					
GOVERNING PURPOSE													
GO-01-C1	Setting purpose	DRAFT	P	P			REPORTED	P	P				
QUALITY OF GOVERNING BODY													
GO-02-C1	Governance body composition	DRAFT	P	P	C	C	P	REPORTED	P	C	C	C	C
STAKEHOLDER ENGAGEMENT													
GO-03-C1	Material issues impacting stakeholders	DRAFT	P					DRAFT		C	C	C	
ETHICAL BEHAVIOUR													
GO-04-C1	Anti-corruption practices	REPORTED	C	P	C			REPORTED	C	C	C		
GO-04-C2	Mechanisms to protect ethical behaviour	REPORTED	C	C				REPORTED	C	C			
RISK AND OPPORTUNITY OVERSIGHT													
GO-05-C1	Integrating risk and opportunity into business process	DRAFT	P	P	P	P	P	REPORTED	C	C	C	C	C
Planet		Period 1 (Jan to Mar 2022)				Period 2 (Apr to Jun 2022)							
Code	Description	Status	Progress (A1-A5)				Status	Progress (A1-A5)					
CLIMATE CHANGE													
PL-01-C1	GHG emissions	REPORTED	C	N	N			REPORTED	C	N	N		
PL-01-C2	TCFD implementation	REPORTED	N	N	N			REPORTED	N	N	N		
NATURE LOSS													
PL-02-C1	Land use and key biodiversity areas	DRAFT						DRAFT		N	N		N
FRESHWATER AVAILABILITY													
PL-03-C1	Water consumption	DRAFT						DRAFT					
People		Period 1 (Jan to Mar 2022)				Period 2 (Apr to Jun 2022)							
Code	Description	Status	Progress (A1-A5)				Status	Progress (A1-A5)					
DIGNITY AND EQUALITY													
PE-01-C1	Diversity and inclusion	REPORTED	P	P	P	P	C	REPORTED	C	C	C	C	C
PE-01-C2	Pay equality	REPORTED	P	P	P	C		REPORTED	C	C	C	C	
PE-01-C3	Wage level	REPORTED	P	P				REPORTED	N	N			
PE-01-C4	Child, forced or compulsory labour	REPORTED	P					REPORTED	C				
HEALTH AND WELL-BEING													
PE-02-C1	Health and safety	REPORTED	P	N				REPORTED	C	C			
SKILLS FOR THE FUTURE													
PE-03-C1	Training provided	DRAFT	P	P				REPORTED	C	N			
Prosperity		Period 1 (Jan to Mar 2022)				Period 2 (Apr to Jun 2022)							
Code	Description	Status	Progress (A1-A5)				Status	Progress (A1-A5)					
EMPLOYMENT AND WEALTH GENERATION													
PR-01-C1	Rate of employment	DRAFT	P	P				VERIFIED	N	N			
PR-01-C2	Economic contribution	REPORTED	C	C				VERIFIED	C	C			
PR-01-C3	Financial investment contribution	REPORTED	C	C				VERIFIED	C	C			
INNOVATION OF BETTER PRODUCTS AND SERVICES													
PR-02-C1	Total R&D expenses	REPORTED	C					VERIFIED	C				
COMMUNITY AND SOCIAL VITALITY													
PR-03-C1	Total tax paid	REPORTED	C					VERIFIED	C				



## ASX Additional Information

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$269,000. Full details of exploration activity during the June 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: \$114,687. 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:

24/06/2022	Murraydium Ionic Clay Hosted REE Project Drilling Approval
10/06/2022	Gascoyne REE Project - Intrusive Targets Defined in 3D Model
06/06/2022	Change of Share Registry Details
23/05/2022	Company Name Change & New ASX Code - LNR
13/05/2022	Change of Director's Interest Notice
13/05/2022	Notification regarding unquoted securities - FNT
12/05/2022	Results of Meeting
11/05/2022	Positive Metallurgy Results for Gascoyne REE Project
04/05/2022	960.1ppm TREO in Historic Surface Sample at Mt Clere Project
29/04/2022	Quarterly Activities Report
29/04/2022	Quarterly Cashflow Report
26/04/2022	Drill Plan Targeting Gascoyne Rare Earth Element
19/04/2022	Exploration Licence Granted at Murraydium Rare Earth Project
08/04/2022	Letter to Shareholders - Notice of General Meeting
08/04/2022	Notice of General Meeting/Proxy Form

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

<sup>1</sup> ASX.HAS: 5 May 2021 "Yangibana Project updated Measured and Indicated Resource tonnes up by 54%" [b07ebf9d-03c.pdf \(investi.com.au\)](https://investi.com.au/b07ebf9d-03c.pdf). 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.

<sup>2</sup> ASX.DRE: 1 Feb 2022 "Rare Earths, Phosphate, Niobium & Zircon Results From Mangaroon (DRE 100%)" [a531f354-fd1.pdf \(investi.com.au\)](https://investi.com.au/a531f354-fd1.pdf).

<sup>3</sup> ASX.LYC: 1 March 2022. "Mt Weld Drilling Confirms Continuous Rare Earth Mineralisation".

<sup>4</sup> Pirajno *et.al.* AusIMM Australian Ore Deposits. "Mount Weld and Gifford Creek rare earth element carbonatites".

<sup>5</sup> Pirajno *et.al.* Lithos (2014). "The Gifford Creek Ferrocarbonatite Complex, Gascoyne Province, Western Australia: Associated fenitic alteration and a putative link with the ~ 1075 Ma Warakurna LIP".

<sup>6</sup> 29/6/21 - Prospectus - Australian Rare Earths Limited (ar3.com.au)





## 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 June 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		

During the quarter the Company acquired 100% interest in EL6717. No other 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 June 2022

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation (if expensed)	(41)	(451)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	-	-
	(e) administration and corporate costs	(233)	(576)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	1	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)	41	17
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(232)</b>	<b>(1,006)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire:		
	(a) entities	-	-
	(b) tenements	(4)	(110)
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation (if capitalised)	(228)	(473)
	(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 (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 (provide details if material)	-	-
2.6	<b>Net cash from / (used in) investing activities</b>	<b>(232)</b>	<b>(583)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	2,719
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	-	(193)
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	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>2,526</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	4,491	3,088
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(232)	(1,006)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(232)	(583)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	2,526



## 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	-	2
4.6	<b>Cash and cash equivalents at end of period</b>	<b>4,027</b>	<b>4,027</b>

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	2,027	2,491
5.2	Call deposits	2,000	2,000
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>4,027</b>	<b>4,491</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**

115

-

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      \$114,687

## 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 **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.

<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)	(232)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	(228)
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(460)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	4,027
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	4,027
8.7 <b>Estimated quarters of funding available (Item 8.6 divided by Item 8.3)</b>	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: 29 July 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.