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

ABN
96 095 684 389

WEBSITE
www.lanthanein.com

21 October 2022

Highly Encouraging Visual Results at Lyons Maiden REE Drill Program

Lanthanein Resources Ltd (ASX:LNR) (**Lanthanein** or the **Company**) encloses an updated ASX release relating to visual results from the maiden REE drill program at the Lyons Prospects. The updated announcement adds a JORC table 1 and drill collar information.

This announcement has been authorised for release on behalf of Lanthanein Resources by:

Matthew Foy
Company Secretary
Tel: +61 8 9486 4036

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

ABN
96 095 684 389

WEBSITE
www.lanthanein.com

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Highly Encouraging Visual Results at Lyons Maiden REE Drill Program

- **RC drilling programme completed for total of 53 drill holes for 3,510m drilled, at an average depth of 66m**
- **Prospective REE bearing ironstones intersected at all prospects Lyons 11, 12, 13 and 27**
- **Lyons 27 in the north-western area intercepted up to 6m thick ironstone, open in all directions, Figure 1**
- **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**
- **Ironstones are analogous to Hastings Technology Metals[1] rare earth deposits and Dreadnought Resources[2] Yin discovery adjacent to Lanthanein's Lyons Projects, 2.5km and 32km away respectively**
- **Exciting pipeline of future drill targets with multiple interpreted ironstone trends and carbonatites under thin cover still to be drill tested in Q4, 2022 and 2023**

Mr Brian Thomas, Lanthanein Technical Director commented "We are extremely pleased with our first drill program at Lyons Rare Earth's project which has intersected consistent ironstones at Lyons 11, 12, 13 and 27 prospects. At these 4 prospects ironstone outcrop at surface and were a logical starting point for our maiden drill program. The visual logs of RC chips confirm the ironstones are continuous along strike and at depth, providing a solid base for future drill programs to build out any potential REE resources."

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ABN
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"Samples have been sent for rush analysis to ALS Laboratory in Perth, with first assay results expected in the next 3- 4 weeks. Assay results will be released as they become available, and I look forward to updating the market."

"The team is extremely excited by the visual drilling results which recorded up to 6m thick ironstones and remain open down dip and along strike. The encouraging results from Lyons 27 opens up the northwest area of the tenement to be highly prospective. Furthermore, following ongoing interpretation of the highly detailed geophysics and our improved understanding of the targeting for REE ironstones and ferro-carbonatites we have an exciting pipeline of future drill targets to be tested in 2023."

Photo 1. Ironstone Outcrop at Lanthanein's Lyons 12 prospect with Drilling Rig in the background.

Lanthanein Resources Ltd (ASX: FNT) (**Lanthanein** or the **Company**) is pleased to announce that drilling has been completed at the Lyons Rare Earths Project in Western Australia (**Lyons Project**). The proposed drill program targeted high-grade rare earth mineralisation discovered at the outcropping ironstones at Lyons 11, 12, 13 and 27 (Figures 3 and 4).

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

LANTHANEIN RESOURCES

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PHONE
+61 (08) 9486 4036

ABN
96 095 684 389

WEBSITE
www.lanthanein.com

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 (Figures 5, 6) 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 1. LYRC047 chip trays from the Lyons 27 prospect, intersected a 6m wide interval starting from 19m depth, with further 1m intervals of ironstone recorded at 27m and 31m.

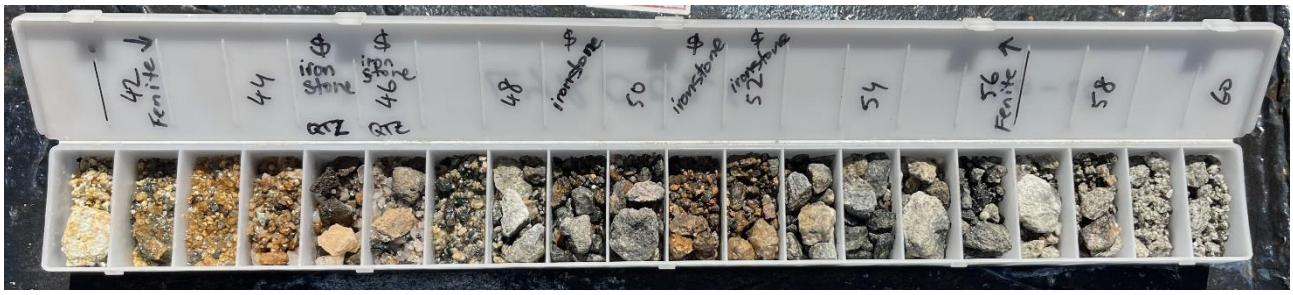

Figure 2. LYRC026 chip tray from the Lyons 12 prospect, intersected two parallel ironstone trends over 2m intervals between 44 – 46m and 50 – 52m, within a broader 15m wide fenitic alteration zone that may potentially be associated with low grade REE mineralisation.

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ABN
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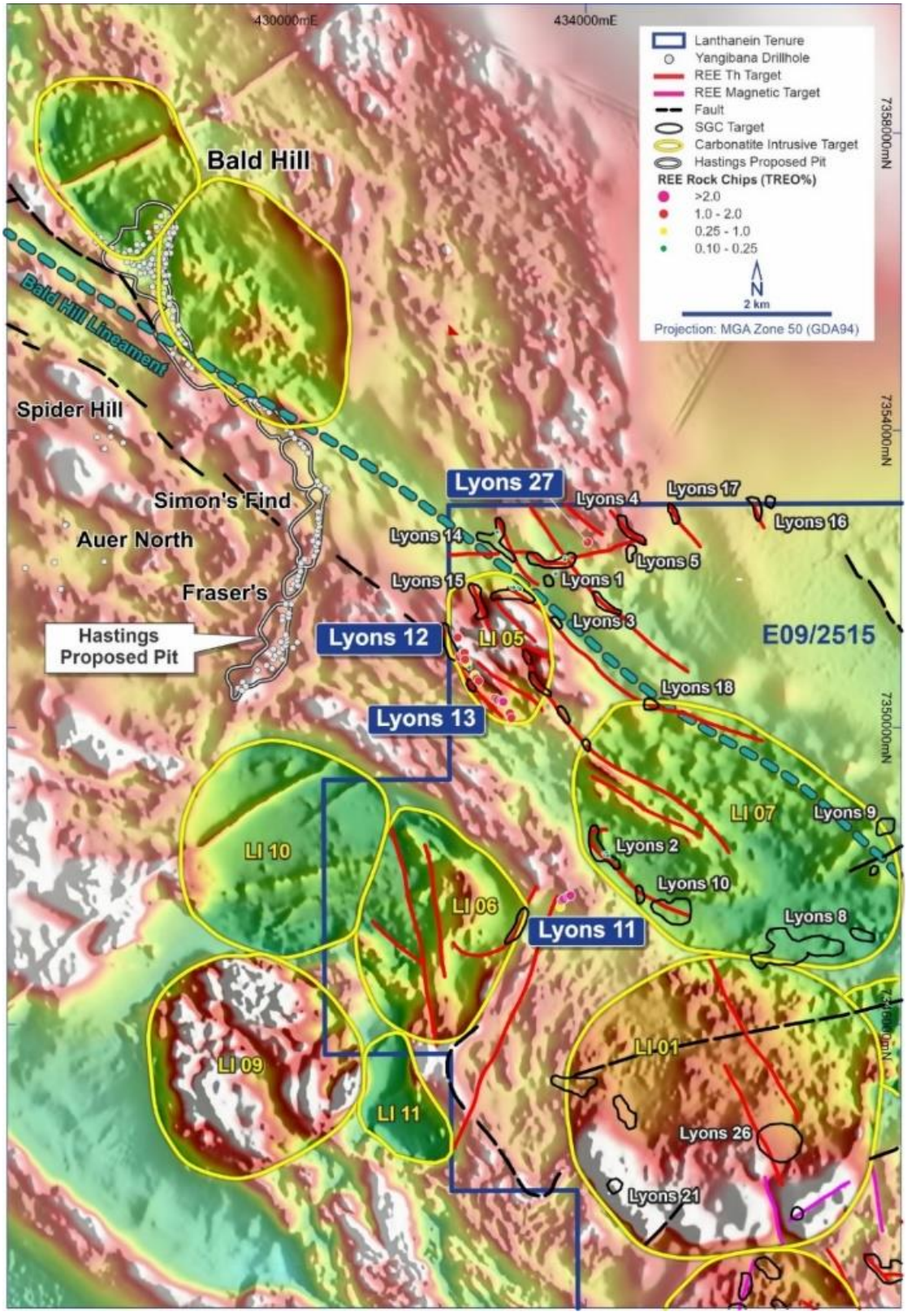

Figure 3. Interpreted intrusives with RTPVD1 filtered magnetics imagery, highlighting relationship with rare earth mineralisation at Hastings, and target areas on Lanthanein's Lyons Project.

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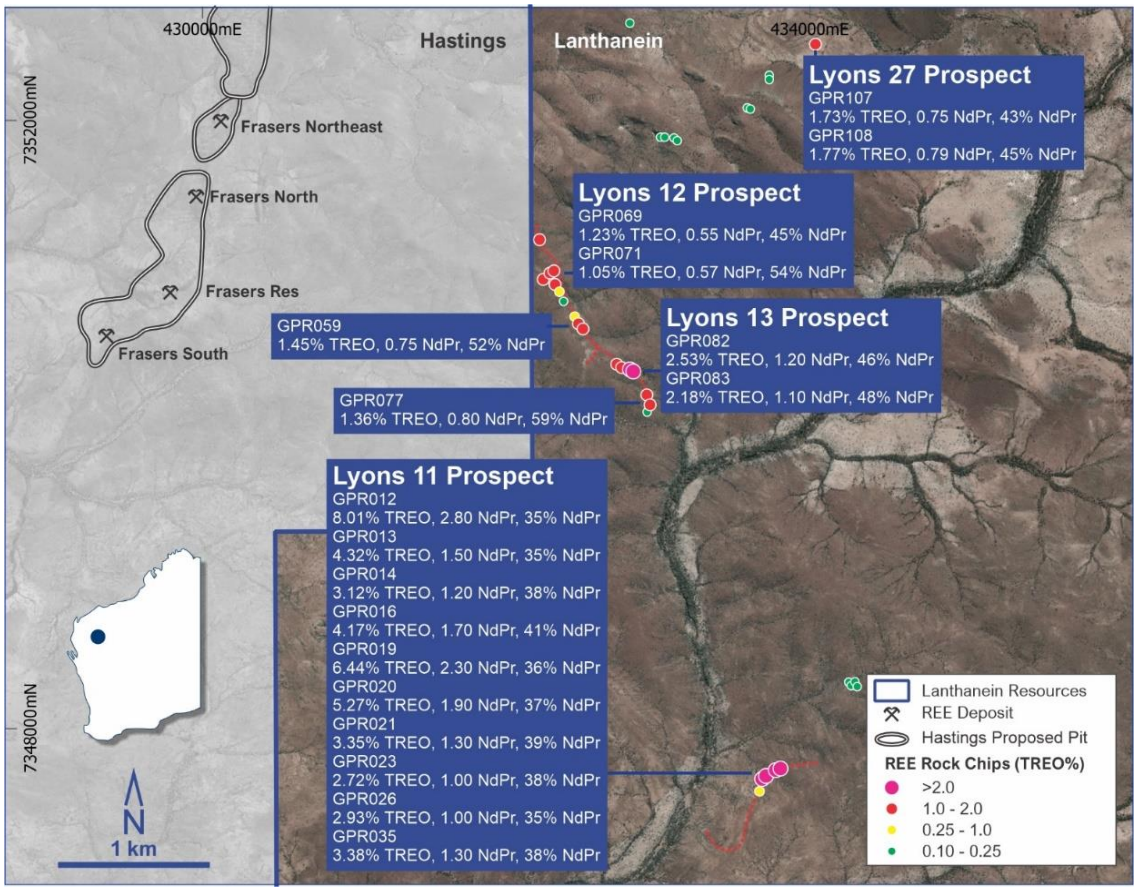

Figure 4. High grade REE bearing ironstones discovered to date that are the initial focus of the maiden drill program (refer ASX release 21 March 2022).

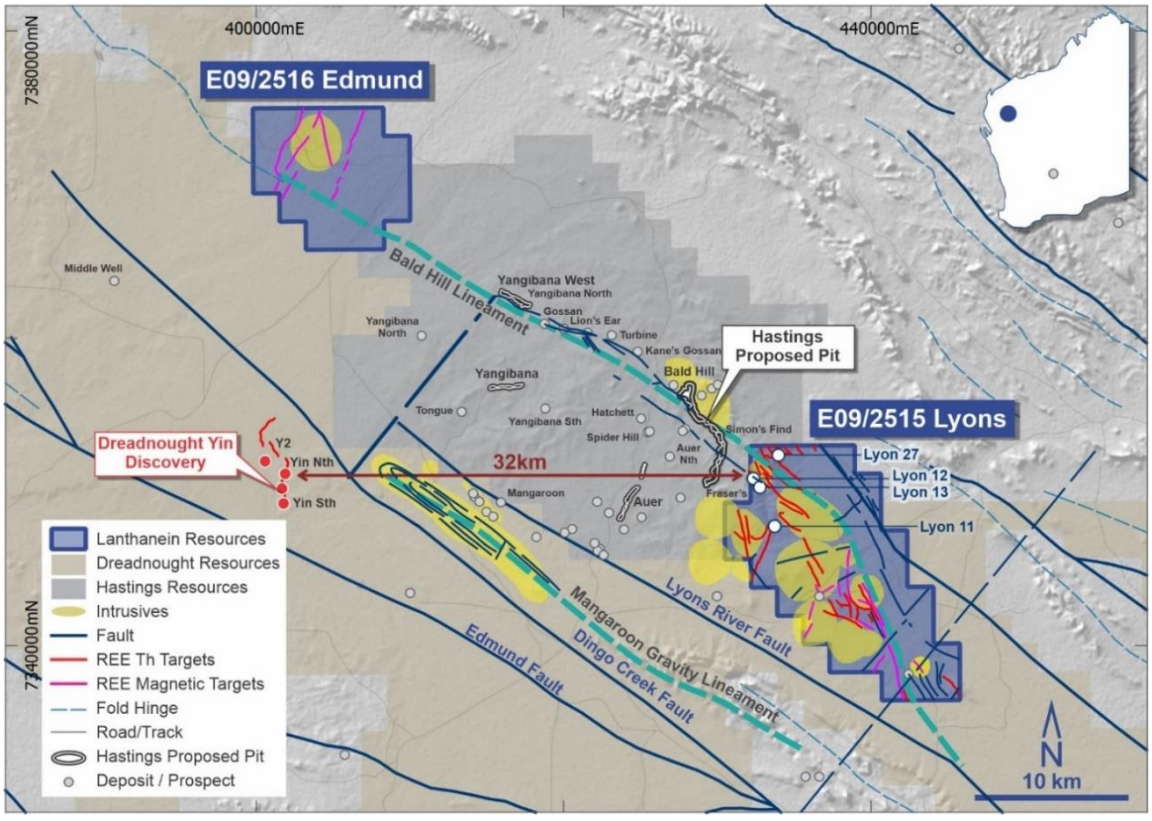

Figure 5. Lanthanein Resources Lyons and Edmund Projects located within close proximity of Dreadnought Resources Yin discovery and Hastings Technology Metals Yangibana REE mine.

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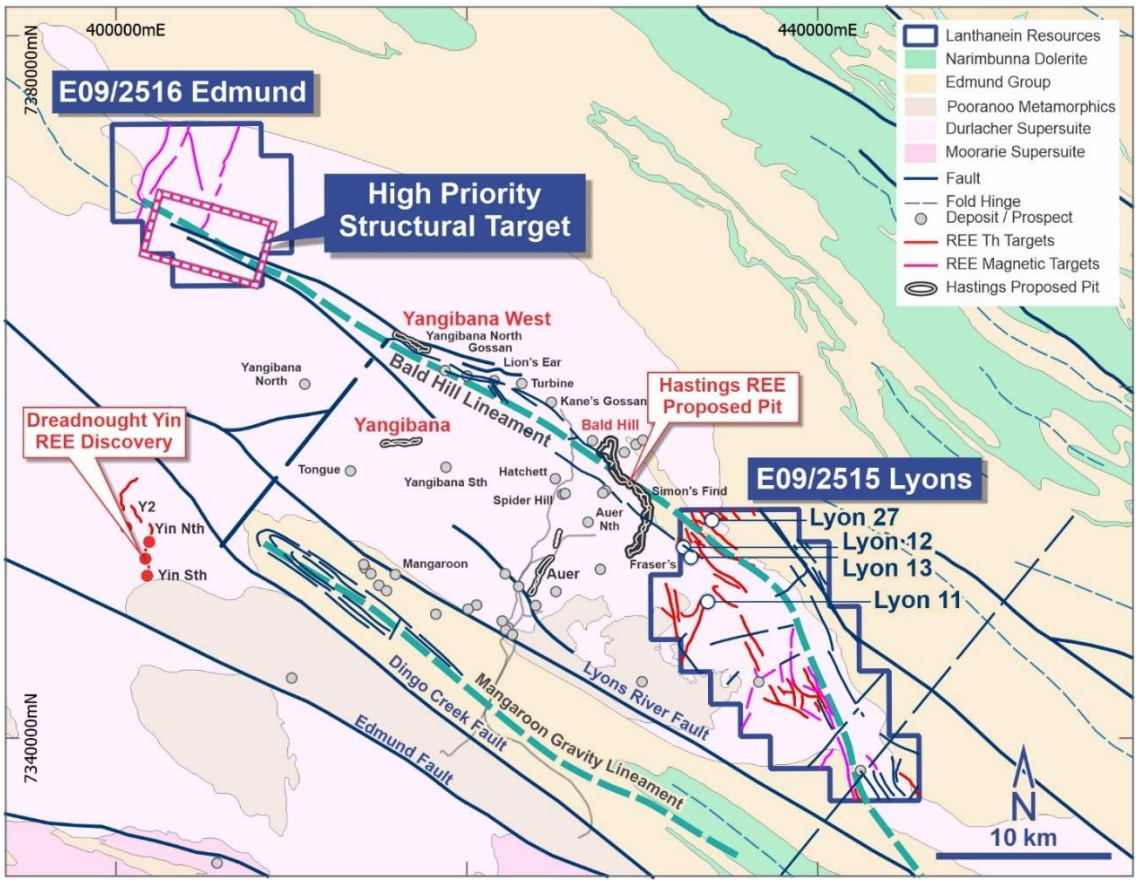

Figure 6. Location of Lyons and Edmund Projects in the Gascoyne, Western Australia, (geology overlay), highlighting the prospective Durlacher Suite of the Gifford Creek Carbonatite Complex, in pink underlying the project areas.

This announcement has been authorised for release by the Directors of the Company.

For additional information please visit our website at www.lanthanein.com

LANTHANEIN RESOURCES LTD

The information referred to in this announcement 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.
[2] ASX.DRE: 28 July 2022 "Assays Confirm Yin as a High Grade Rare Earth Discovery" 5a699d6e-eab.pdf (investi.com.au)

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 format and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

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ADDRESS
Level 8, 99 St Georges Terrace
Perth WA 6000
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ABN
96 095 684 389

WEBSITE
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Competent Person's Statement

The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Thomas Langley who is a member of the Australian Institute of Geoscientists (MAIG) and a member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr. Thomas Langley is a consultant of Lanthanein Resources Limited, and is a shareholder, however Mr. Thomas Langley believes this shareholding does not create a conflict of interest, and Mr. Langley 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 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.

Competent Person's Statement

The information in this report that relates to Geophysical Exploration Results is based on information compiled by 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.

Table 1: Potentially mineralised intervals as confirmed by visual inspection of RC drill chips

Hole ID	From (m)	To (m)	Interval (m)	Lithology	Prospect
LYRC001	33	34	1	Ironstone	Lyons 11
LYRC002	6	9	3	Ironstone	
LYRC003	53	54	1	Ironstone	
LYRC004	6	8	2	Ironstone	
LYRC005	79	80	1	Ironstone	
LYRC008	48	50	2	Ironstone	
LYRC009	90	91	1	Ironstone	
LYRC010	13	14	1	Ironstone	
LYRC012	10	11	1	Ironstone	
LYRC014	16	17	1	Ironstone	Lyons 13
LYRC015	19	20	1	Ironstone	
LYRC016	17	19	2	Ironstone	
LYRC017	65	66	1	Ironstone	
LYRC018	7	10	3	Ironstone	Lyons 12
LYRC019	38	40	2	Ironstone	
LYRC020	56	60	4	Ironstone	
LYRC021	17	21	4	Ironstone	
LYRC022	39	41	2	Ironstone	
LYRC022	43	45	2	Ironstone	
LYRC023	57	60	3	Ironstone	
LYRC024	17	24	7	Ironstone	

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Hole ID	From (m)	To (m)	Interval (m)	Lithology	Prospect
LYRC025	32	35	3	Ironstone	Lyons 12
LYRC026	44	46	2	Ironstone	
LYRC026	50	52	2	Ironstone	
LYRC027	12	16	4	Ironstone	
LYRC028	29	30	1	Ironstone	
LYRC028	34	35	1	Ironstone	
LYRC029	59	60	1	Ironstone	
LYRC030	43	46	3	Ironstone	
LYRC031	70	72	2	Ironstone	
LYRC032	32	34	2	Ironstone	
LYRC033	54	56	2	Ironstone	
LYRC034	88	91	3	Ironstone	
LYRC035	34	36	2	Ironstone	
LYRC036	30	34	4	Ironstone	
LYRC037	54	56	2	Ironstone	
LYRC038	22	26	4	Ironstone	
LYRC039	48	50	2	Ironstone	
LYRC040	6	10	4	Ironstone	
LYRC041	6	8	2	Ironstone	
LYRC041	36	40	4	Ironstone	
LYRC042	43	46	3	Ironstone	
LYRC045	30	33	3	Ironstone	Lyons 27
LYRC046	73	76	3	Ironstone	
LYRC047	19	25	6	Ironstone	
LYRC048	5	7	2	Ironstone	
LYRC048	42	45	3	Ironstone	
LYRC050	39	41	2	Ironstone	

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Table 2: Drill Collar Data (GDA94 MGAz50)

Hole ID	Easting	Northing	Dip	Azimuth	EOH	Type	Prospect
LYRC001	433562	7347720	-60	130	132	RC	Lyons 11
LYRC002	433589	7347700	-60	128	84	RC	
LYRC003	433600	7347773	-60	134	138	RC	
LYRC004	433642	7347745	-60	132	42	RC	
LYRC005	433582	7347798	-60	134	162	RC	
LYRC006	433546	7347830	-60	131	162	RC	
LYRC007	433670	7347762	-60	148	42	RC	
LYRC008	433655	7347799	-60	148	72	RC	
LYRC009	433631	7347783	-60	148	102	RC	
LYRC010	433779	7347784	-60	164	36	RC	
LYRC011	433764	7347819	-60	164	60	RC	
LYRC012	433862	7347802	-60	160	36	RC	
LYRC013	433842	7347849	-60	160	84	RC	
LYRC014	432841	7350177	-60	45	84	RC	Lyons 13
LYRC015	432691	7350314	-60	36	48	RC	
LYRC016	432637	7350341	-60	43	36	RC	
LYRC017	432567	7350322	-60	50	78	RC	
LYRC018	432410	7350613	-60	60	24	RC	Lyons 12
LYRC019	432377	7350583	-60	50	54	RC	
LYRC020	432351	7350559	-60	50	78	RC	
LYRC021	432420	7350578	-60	26	36	RC	
LYRC022	432398	7350539	-60	32	78	RC	
LYRC023	432373	7350502	-60	36	72	RC	
LYRC024	432461	7350529	-60	42	36	RC	
LYRC025	432439	7350506	-60	42	48	RC	
LYRC026	432406	7350471	-60	50	66	RC	
LYRC027	432490	7350506	-60	34	30	RC	
LYRC028	432464	7350466	-60	35	42	RC	
LYRC029	432439	7350426	-60	40	78	RC	
LYRC030	432493	7350411	-60	35	66	RC	
LYRC031	432468	7350381	-60	50	84	RC	
LYRC032	432349	7350671	-60	48	48	RC	
LYRC033	432314	7350642	-60	54	66	RC	
LYRC034	432278	7350611	-80	50	108	RC	
LYRC035	432262	7350776	-60	50	48	RC	
LYRC036	432241	7350815	-60	34	48	RC	
LYRC037	432207	7350771	-60	36	72	RC	
LYRC038	432213	7350852	-60	36	42	RC	
LYRC039	432187	7350818	-60	36	66	RC	

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ABN
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Hole ID	Easting	Northing	Dip	Azimuth	EOH	Type	Prospect
LYRC040	432217	7350926	-60	53	48	RC	Lyons 12
LYRC041	432187	7350896	-60	52	60	RC	
LYRC042	432197	7350991	-60	40	54	RC	
LYRC043	433463	7351984	-60	66	84	RC	Lyons 3
LYRC044	433704	7352230	-60	211	54	RC	
LYRC045	434034	7352497	-60	245	42	RC	Lyons 27
LYRC046	434021	7352435	-60	243	84	RC	
LYRC047	433891	7352593	-60	228	84	RC	
LYRC048	433930	7352632	-60	228	72	RC	
LYRC049	433835	7352546	-60	45	60	RC	
LYRC050	433864	7352576	-60	225	48	RC	
LYRC051	433700	7350034	-60	74	42	RC	Lyon_P2
LYRC052	433269	7350630	-60	62	60	RC	Lyon_P3
LYRC053	435602	7348619	-60	35	30	RC	Lyons 28

LANTHANEIN RESOURCES

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Perth WA 6000
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96 095 684 389

WEBSITE
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JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Reverse Circulation (RC) drilling was undertaken to produce samples for assaying. Two sampling techniques were utilised for this program, 1m metre splits directly from the rig sampling system for each metre and 3m composite sampling from the spoil piles. Samples submitted to the laboratory were determined by the site geologist. **1m Splits** From every metre drilled a 2-3km samples (split) was sub-sampled into a calico bag via a Metzke cone splitter from each metre of drilling. **3m Composites** All remaining spoil from the sampling system was collected in buckets in rows adjacent to the rig. An aluminium scoop was used to then sub-sample each spoil pile to create a 2-3kg 3m composite sample in a calico bag. Only at Lyons 11 prospect as a 3m composite collected. All samples are submitted to ALS Laboratories in Perth for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30). **Rock Chips** • Rock Chips were collected by Gascoyne Geological Services Geologist and submitted for analysis. Rock chips are random, subject to bias and often unrepresentative for the typical widths required for economic consideration. They are by nature difficult to duplicate with any acceptable form of precision or accuracy. • Rock chips have been collected by Gascoyne Geological Services to assist in characterising different lithologies, alterations and expressions of mineralisation. In many instances, several rock chips were collected from a single location to assist with characterising and understanding the different lithologies, alterations and expressions of mineralisation present at the locality. • Rock chips were submitted to ALS Laboratories in Perth for determination of Rare Earth Oxides

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Criteria	JORC Code explanation	Commentary
		by Lithium Borate Fusion XRF (ALS Method ME-XRF30).
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	**RC Drilling** Topdrill undertook the program utlising a Drill Rigs Australia track mounted Schramm T685WS drill rig with additional air from an auxillary compressor and booster. Bit size was 5 ¾ inch.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	**RC Drilling** Drilling was undertaken using a 'best practise' approach to achieve maximum sample recovery and quality through the mineralised zones. Best practise sampling procedure included: suitable usage of dust suppression, suitable shroud, lifting off bottom between each metre, cleaning of sampling equipment, ensuring a dry sample and suitable supervision by the supervising geologist to ensure good sample quality. At this stage, no known bias occurs between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	RC chips were logged by a qualified geologist with sufficient experience in the geological terrane and relevant styles of mineralisation using an industry standard logging system which could eventually be utilised within a Mineral Resource Estimation. Lithology, mineralisation, alteration, veining, weathering and structure were all recorded digitally. Chips were washed each metre and stored in chip trays for preservation and future reference. RC pulp material is also analysed on the rig by pXRF, scintillometer and magnetic susceptibility meter to assist with logging and the identification of mineralisation. Logging is qualitative, quantitative or semi-quantitative in nature.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality*	**RC Drilling** From every metre drilled, a 2-3kg sample (split) was sub-sampled into a calico bag via a Metzke cone splitter.

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Criteria	JORC Code explanation	Commentary
	and appropriateness of the sample preparation technique. • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	QAQC in the form of duplicates and CRM's (OREAS Standards) were inserted through the ore zones at a rate of 1:50 samples. Additionally, within mineralised zones, a standard and a blank were inserted. 2-3kg samples are submitted to ALS Laboratories (Perth), oven dired to 105ºC and pulverised to 85% passing 75um to produce a 0.66g charge for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30). Standard laboratory QAQC is undertaken and monitored. **Rock Chips** Entire rock chips were submitted to the lab for sample prep and analysis.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	**Laboratory Analysis** Lithium Borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE determination. Standard laboratory QAQC is undertaken and monitored by the laboratory and by the company upon assay result receival. **Rock Chips** • All samples were submitted to ALS Laboratories in Wangara, Perth where 1-3kg rock chips samples were crushed so that >70% of material passes through -6mm, the sample is then pulverised to >85% passing 75 micron. • A 66-gram aliquot of pulverised sample is fused with 12:22 lithium borate flux containing an oxidizing agent, and poured to form a fused disk. The resultant disk is then analysed by XRF spectrometry specifically for Rare Earths (ALS Method ME-XRF30) • Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE determination. • No standards, duplicates or blanks submitted with rock chips. Airborne geophysical data including magnetics and

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Criteria	JORC Code explanation	Commentary
		radiometrics (eK, eTh, eU) were collected by MagSpec Airborne Surveys. The survey was flown with a Cessna 206 aircraft. Magnetic data was collected from a G-823A cesium vapour magnetometer using a 50m line spacing and 30m sensor height. Radiometric data was collected from an RSI RS-500 gamma-ray spectrometer of 32L Crystal Volume flown at 30m sensor height and 50m line spacing. All readings (X,Y,Z) were within a 2m accuracy. Traverse Line Direction was East-West.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	**Logging and Sampling** Logging and sampling were recorded directly into a digital logging system, verified and eventually stored in an offsite database. Significant intersections are inspected by senior company personnel. No twinned holes have been drilled at this time. No adjustments to any assay data have been undertaken. **Rock Chips** • Rock chip and geological information is written in field books and coordinates and track data saved from handheld GPSs used in the field. • Gascoyne Geological Services geologist inspected and logged all rock chips. • Field data is entered into excel spreadsheets to be loaded into a database.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Collar position was recorded using a Garmin handheld GPS which has an accuracy of +/- 5m. • GDA94 Z50s is the grid format for all xyz data reported. Azimuth and dip of the drill hole was recorded after the completion of the hole using a Reflec Sprint IQ Gyro. A reading was undertaken every 10th metre with an accuracy of +/- 1º azimuth and +/- 0.3º dip.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral*	See drill table for hole positions. Data spacing at this stage is not suitable for Mineral Resource Estimation.

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied. • *Whether sample compositing has been applied.*	
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Drilling was undertaken at a near perpendicular angle to the interpretated strike and dip of the ironstone outcrops and modelled magnetic data. No sample bias is known at this time.
Sample security	• *The measures taken to ensure sample security.*	All geochemical samples were collected, bagged, and sealed by Gascoyne Geological Services staff and delivered to Bishops Transport in Carnarvon. Samples were delivered directly to ALS Laboratories in Wangara, Perth by Bishops Transport ex Carnarvon.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The program is continuously reviewed by senior company personnel.

Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Lanthanein Resources Ltd entered into a conditional agreement to acquire all of the shares in Dalkeith Capital Pty Ltd (Dalkeith) which holds two granted exploration licences in the Gascoyne Region of Western Australia. The acquisition was completed on 4 January 2022. • The Gascoyne Project consists of 2 granted Exploration Licenses (E09/2515 and E09/2516). • All tenements are 100% owned by Dalkeith Capital. • The Gascoyne Project covers 2 Native Title Determinations including the Thudgari (WAD6212/1998) and the Combined Thiin-Mah, Warriyangka, Tharrkari and Jiwarli (WAD464/2016). • The Gascoyne Project is located over the following pastoral leases; Edmund, Gifford Creek, and Wanna.

LANTHANEIN RESOURCES

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

ABN
96 095 684 389

WEBSITE
www.lanthanein.com

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historical exploration of a sufficiently high standard was carried out in the region by a few parties including: Hurlston Pty Ltd 1986-1987: WAMEX Report A23584 Newmont 1990: WAMEX Report A32886 Newcrest 1990: WAMEX Report A36887 Desert Energy 2006-2007: WAMEX Reports A78056, A80879
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Gascoyne Project is located within the Gascoyne Province of the greater Capricorn Orogen – the region that records the collision of the Pilbara-Glenburgh Terrane at 2215–2145 Ma (Ophthalmian Orogeny) and eventual collision of Pilbara/Glenburgh and Yilgarn at 2005–1950 Ma (Glenburgh Orogeny), the Gifford Creek Carbonatite Complex (GCCC) intrudes the Durlacher Supersuite (including Yangibana and Pimbyana Granites) and the Pooranoo Metamorphics. The c.1360 Ma GCCC is composed of; • ~NW striking Lyons River Sills (calcio-, magnesio- and ferrocarbonatites) • ~NE striking fenite (alteration) veins • Yangibana Ironstones (REE ore bodies) • Magnetite-biotite dykes • Carbonatites in the region are thought to have been generated from melting of the Glenburgh Orogen-fertilized mantle during reactivation of structures (e.g. Lyons River Fault) at c. 1370 Ma followed by magma ascent along the same structures. • The Gascoyne Project is prospective for Ferrocarbonatite hosted REEs.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	An overview of the drilling program is given within the text within this document.

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	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No pXRF readings or metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	Drilling is undertaken close to perpendicular to the dip and strike of the mineralisation. The true thickness of the mineralisation intersected in drill holes cannot currently be calculated.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Refer to figures within this report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• The accompanying document is a balanced report with a suitable cautionary note.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical*	• Suitable commentary of the geology encountered are given within the text of this document.

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	survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Additional RC drilling Diamond Drilling Metallurgical test work Resource Modelling