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12 September 2022

Lyons REE Project Maiden Drill Program Commenced

- **RC drilling programme at Lyons 11 Prospect underway**
- **Targeting exceptional high-grade rare earth element (REE) results from rock chips at outcropping ironstones over >2.5km strike**
- **Ironstones are analogous to Hastings Technology Metals rare earth deposits and Dreadnought Resources Yin discovery adjacent to Lanthanein's Lyons Projects, 2.5km and 32km away respectively**

Mr Brian Thomas, Lanthanein Technical Director commented "The commencement of our maiden drill program at the exciting Lyons rare earths project is a major step forward for Lanthanein. After a delay of a week brought about by heavy unseasonal rain in the Gascoyne, the Topdrill RC drill rig commenced drilling at the outcropping Lyons 11 ironstone late last Friday."

"We are particularly encouraged by the ongoing exploration success by Dreadnought's at their Yin Project and the new Sabre discovery which demonstrates the significant REE potential of the Gifford Creek Ferrocarbonatite Complex. The significant endowment of rare earth minerals in the Gascoyne is now being recognised by the broader market. The surge in modern exploration in the region has highlighted the potential for more rare earth discoveries such as Yin and Sabre plus further Lyons REE bearing ironstone discoveries."

"The recent \$110m placement by Hastings Technology Metals (ASX:HAS) with Australian and international institutional investors to accelerate the development of the Yangibana Rare Earths Project has highlighted the Gascoyne as a world class region for the supply of REE's. Also Hastings acquisition of a 22% strategic shareholding in Neo Performance Materials (TSX:NEO), a global leader in the downstream processing of rare earth elements and the production of advanced materials, including permanent magnets funded by a \$150m package from Wyloo Metals, Tattarang's metals and mining arm is also a significant endorsement of the rare earths potential of the Gascoyne region."

"I look forward to updating the market on progress with the program as drilling progresses."

Lanthanein Resources Ltd (ASX: FNT) (**Lanthanein** or the **Company**) is pleased to announce that drilling has commenced at the Lyons Rare Earths Project in Western Australia (**Lyons Project**). The proposed drill program will target high-grade rare earth mineralisation discovered at the outcropping ironstones and additional interpreted carbonatite intrusives and ironstones undercover at Lyons (Figure 1 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 Resource¹ of 27.42Mt @ 0.97% TREO, 0.33% Nd₂O₃+Pr₆O₁₁, and Dreadnought Resources multiple discoveries².

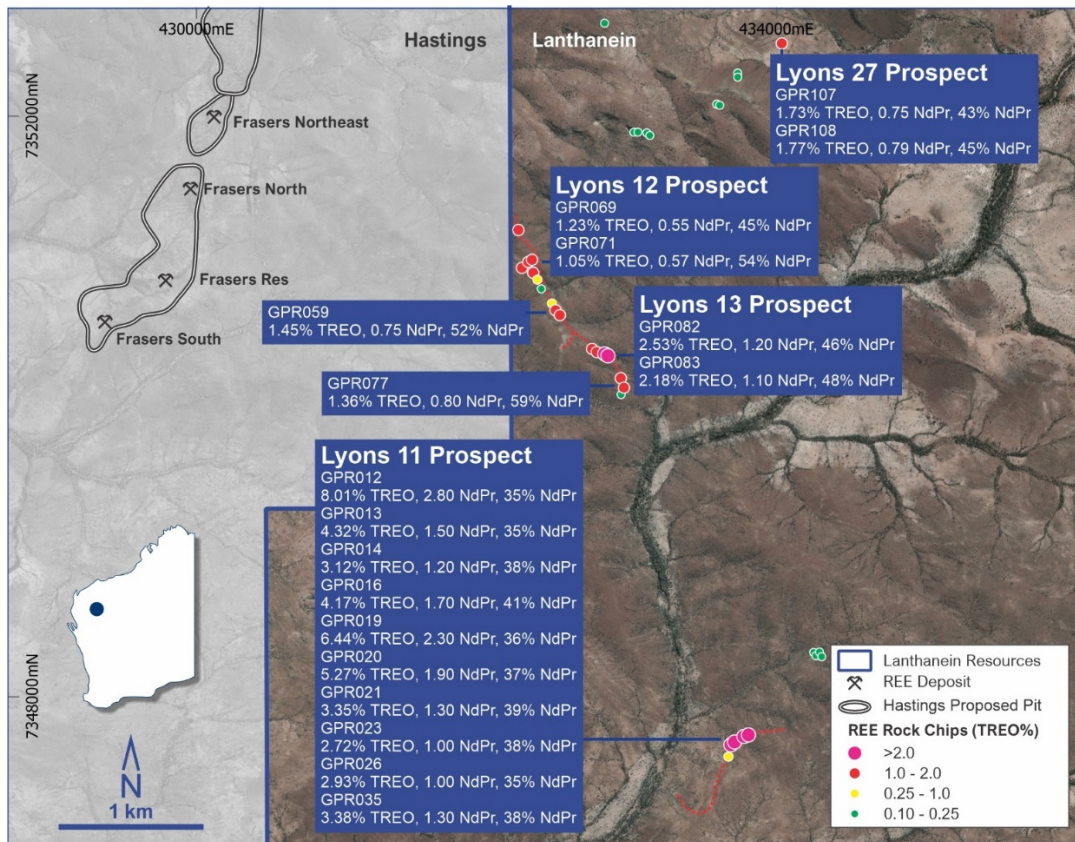


Figure 1. High grade REE bearing ironstones discovered to date will be the initial focus of the maiden drill program.



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

An additional Program of Works (PoW) application has 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.

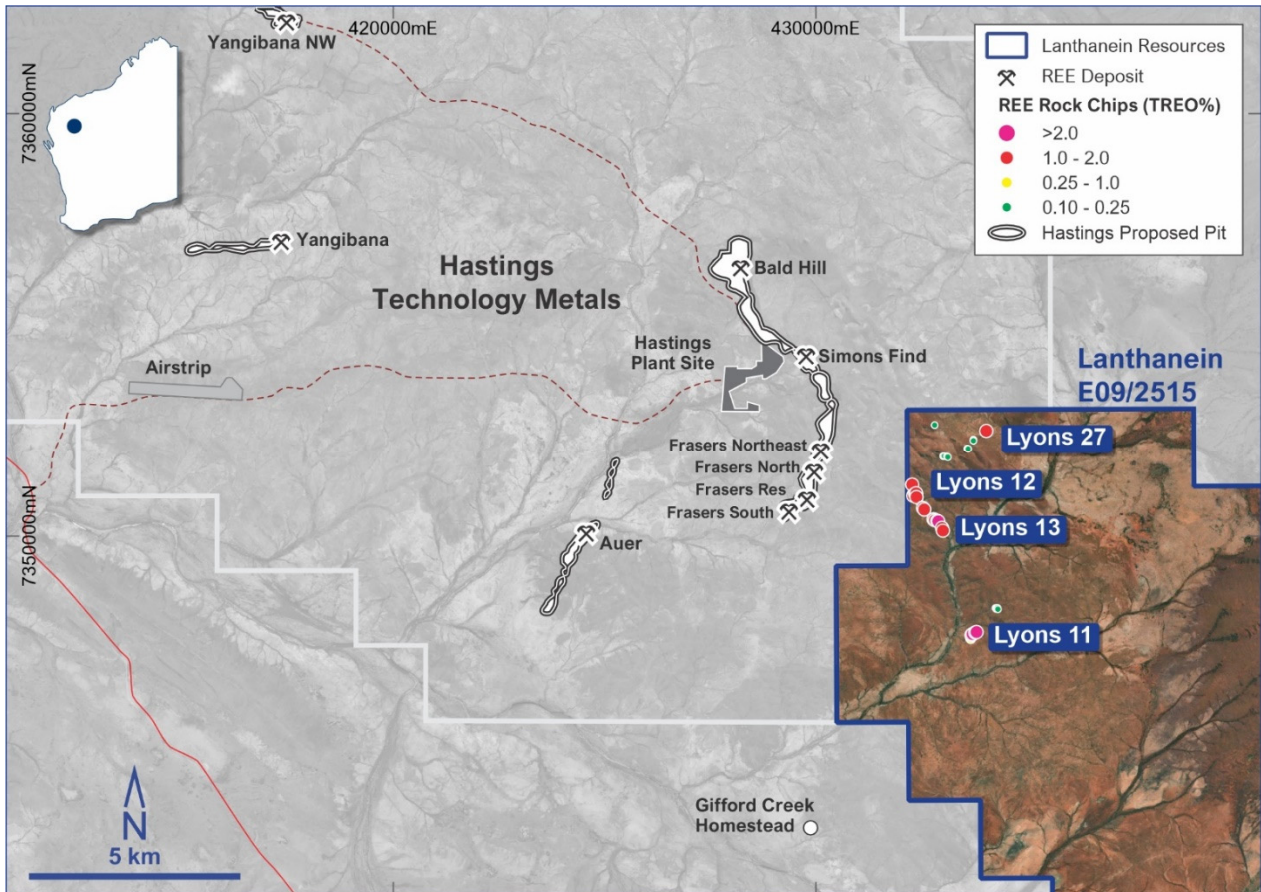


Figure 3. Lyons REE Project adjacent to Hastings Technology Metals (ASX.HAS) Yangibana REE mine.

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 4 and 5). 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 (Figure 6) within the Company's tenure where no historical REE exploration has occurred.

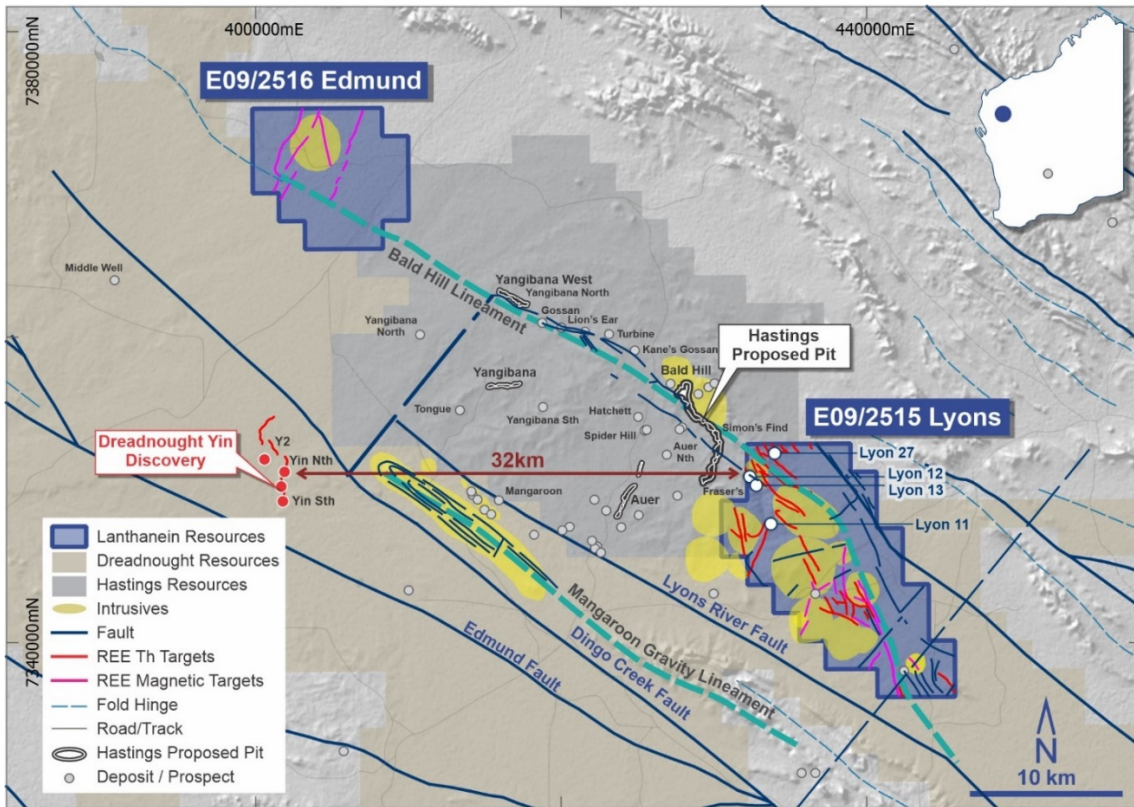


Figure 4. Lanthanein Resources Lyons and Edmund Projects located within close proximity of Dreadnought Resources Yin discovery and Hastings Technology Metals Yangibana REE mine.

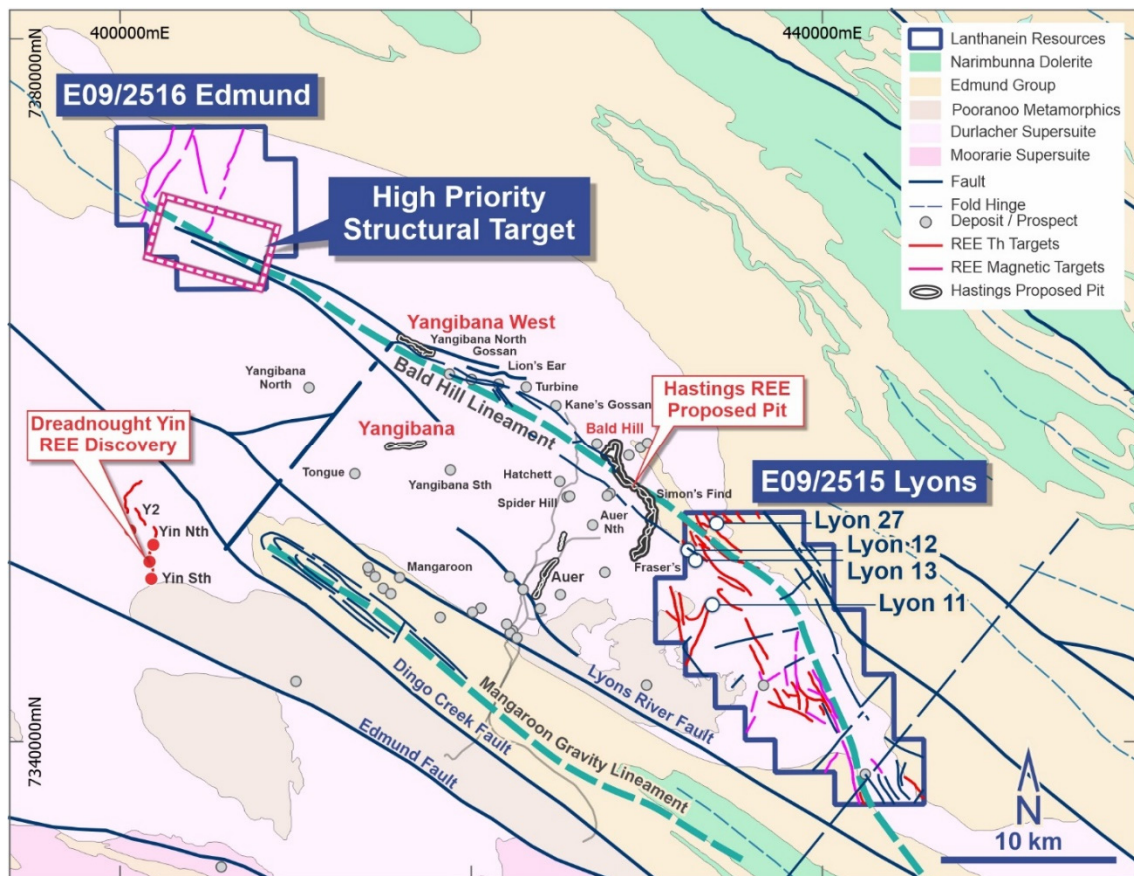


Figure 5. Location of Lyons and Edmund Projects in the Gascoyne, Western Australia, (geology overlay), highlighting the prospective Durlacher Suite of the Gifford Creek Carbonatite Complex, in pink underlying the project areas.

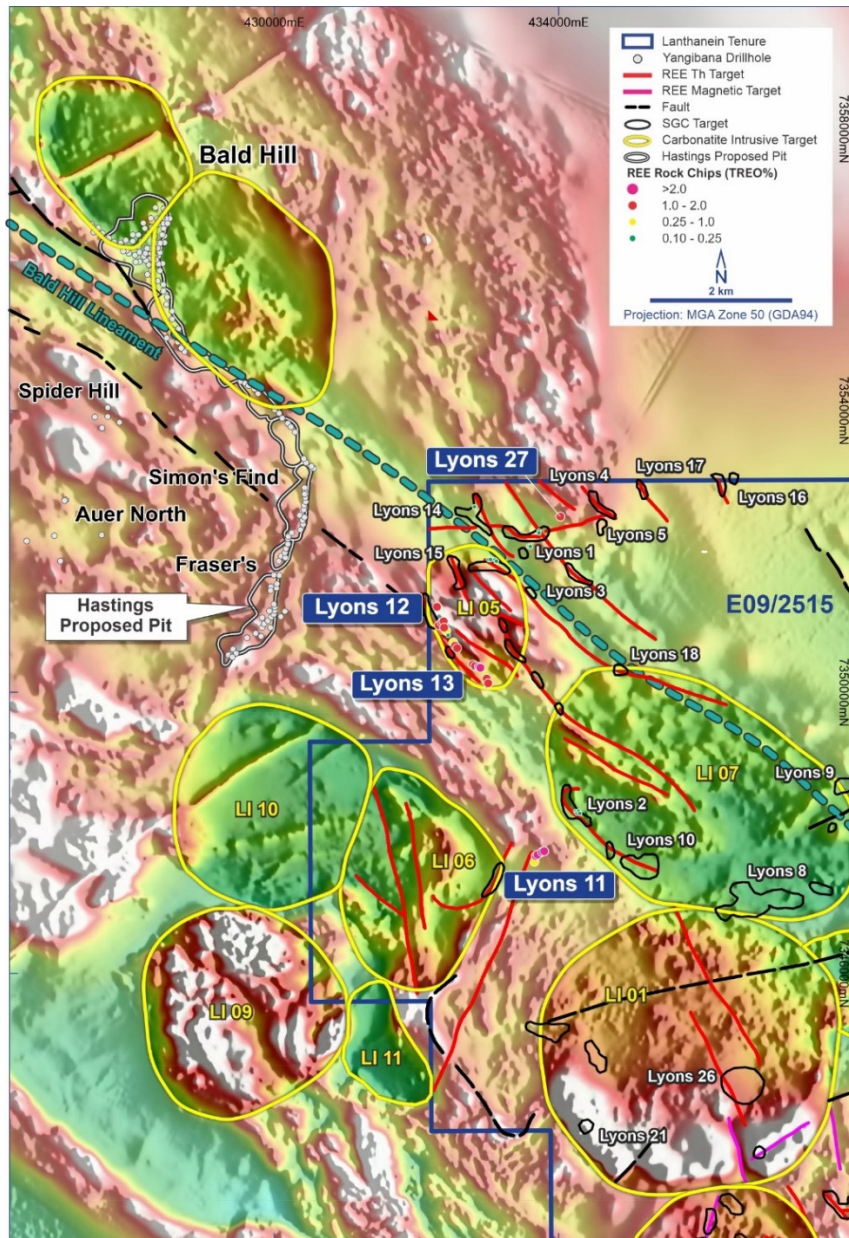


Figure 6. Interpreted intrusives with RTPVD1 filtered magnetics imagery, highlighting relationship with rare earth mineralisation at Hastings, and target areas on Lanthanein's Lyons Project.

Lanthanein also wishes to announce it has lodged a withdrawal for ELA27/648, a gold project near Kalgoorlie.

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 \(investi.com.au\)](https://www.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.

² ASX.DRE: 28 July 2022 "Assays Confirm Yin as a High Grade Rare Earth Discovery" [5a699d6e-eab.pdf \(investi.com.au\)](https://www.investi.com.au/5a699d6e-eab.pdf)

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.

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.