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Heritage Surveys Underway at Lyons Rare Earth Project

- **Heritage avoidance surveys underway ahead of maiden drill program**
- **Site works to begin shortly after heritage approvals with earthworks company engaged**
- **Drilling expected to start early September with drill contractor secured**
- **RC drilling to target the exceptional high-grade rare earth results from rock chips at outcropping ironstones over >2.5km strike length**
- **Priority drill targets in the outcropping ironstones analogous to Hastings Technology Metals rare earth deposits and Dreadnought Resources Yin discovery adjacent to Lanthanein's Lyons Project, 2.5km and 32km away respectively**
- **Additional Program of Works (PoW) application lodged to allow for extended drilling campaign of the Rare Earth Elements (REE) bearing ironstones and carbonatites prospects at the 100% owned Lyons Project**

Lanthanein Technical Director Brian Thomas commented "The geological team are excited to be progressing towards the maiden drill program at the 100% owned Lyons rare earths project with the heritage avoidance surveys now underway. We will get the drilling started as soon as possible pending the final heritage surveys and completion of the siteworks, with drilling anticipated to start in early September."

"It is also encouraging to see the success of Dreadnought Resources at their nearby Yin project, where they are drilling outcropping ironstones analogous to Lanthanein's Lyons Project and have discovered REE mineralisation that confirms genuine scale potential of rare earths in the ironstones. Remarkably, similar to the Lyons project, Yin has never been drilled before, highlighting the significant underexplored nature of Yin and Lanthanein's Lyons and Edmund Projects."

"We look forward to our upcoming drill program which is expected to take 4 - 6 weeks with regular updates throughout August to October 2022."

Lanthanein Resources Ltd (ASX: FNT) (Lanthanein or the Company) is pleased to announce that heritage surveys have commenced ahead of the maiden drill program at the Lyons Rare Earths Project in the Gascoyne of Western Australia (**Lyons Project**). Lanthanein Resources acknowledges the traditional custodians of the land on which the company operates and pays 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.

The proposed drill program will target high-grade rare earth mineralisation discovered at outcropping ironstones and additional interpreted carbonatite intrusives and ironstones undercover (Figure 1 and 2). 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 with 0.33% Nd₂O₃+Pr₆O₁₁, and Dreadnought Resources multiple discoveries².

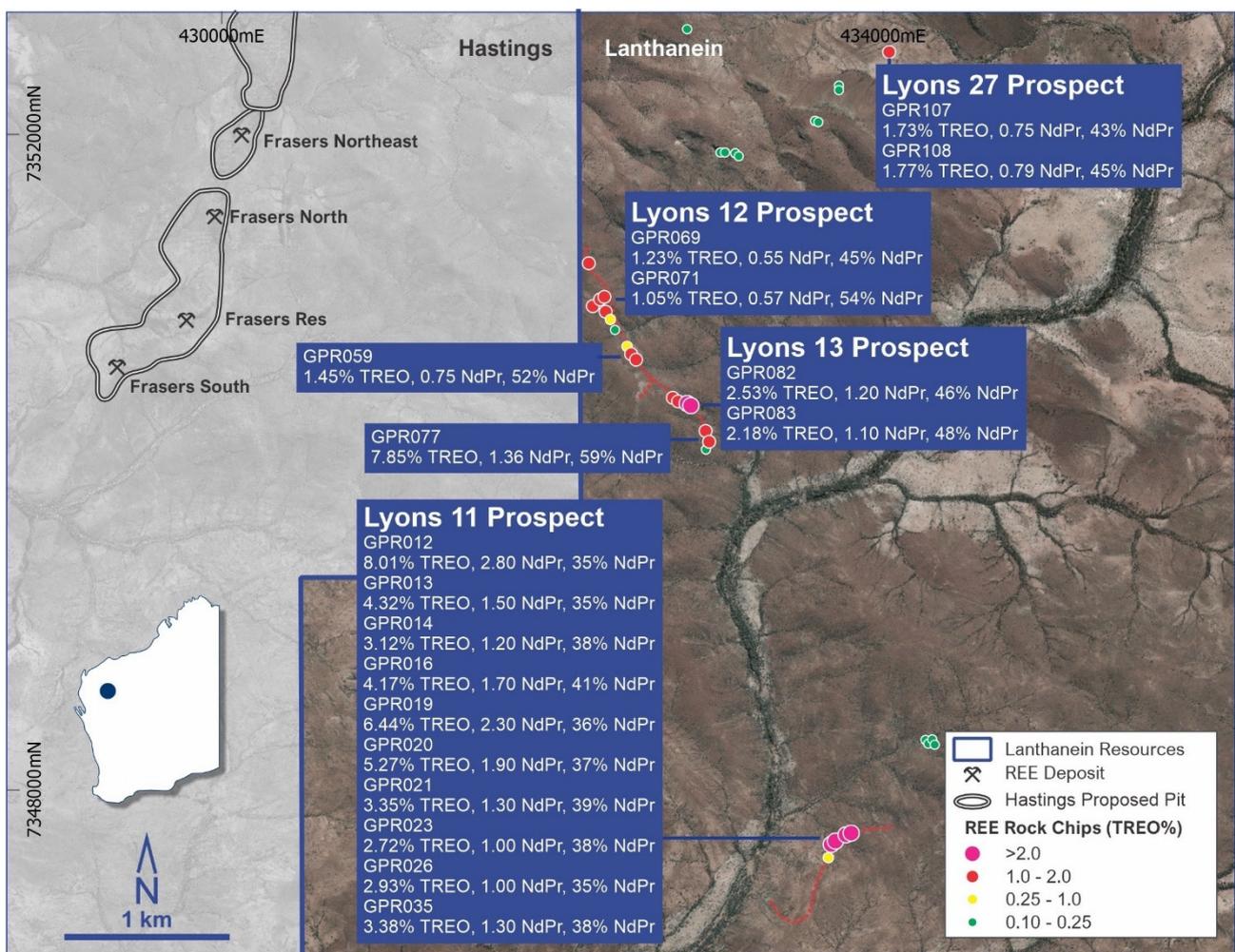


Figure 1. High grade REE bearing ironstones discovered to date initial focus of the maiden drill program (Refer ASX release 21 March 2022).

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.

Further rock chip sampling, ground based geophysics 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 3, 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 within the Company's tenure where no historical REE exploration has occurred.

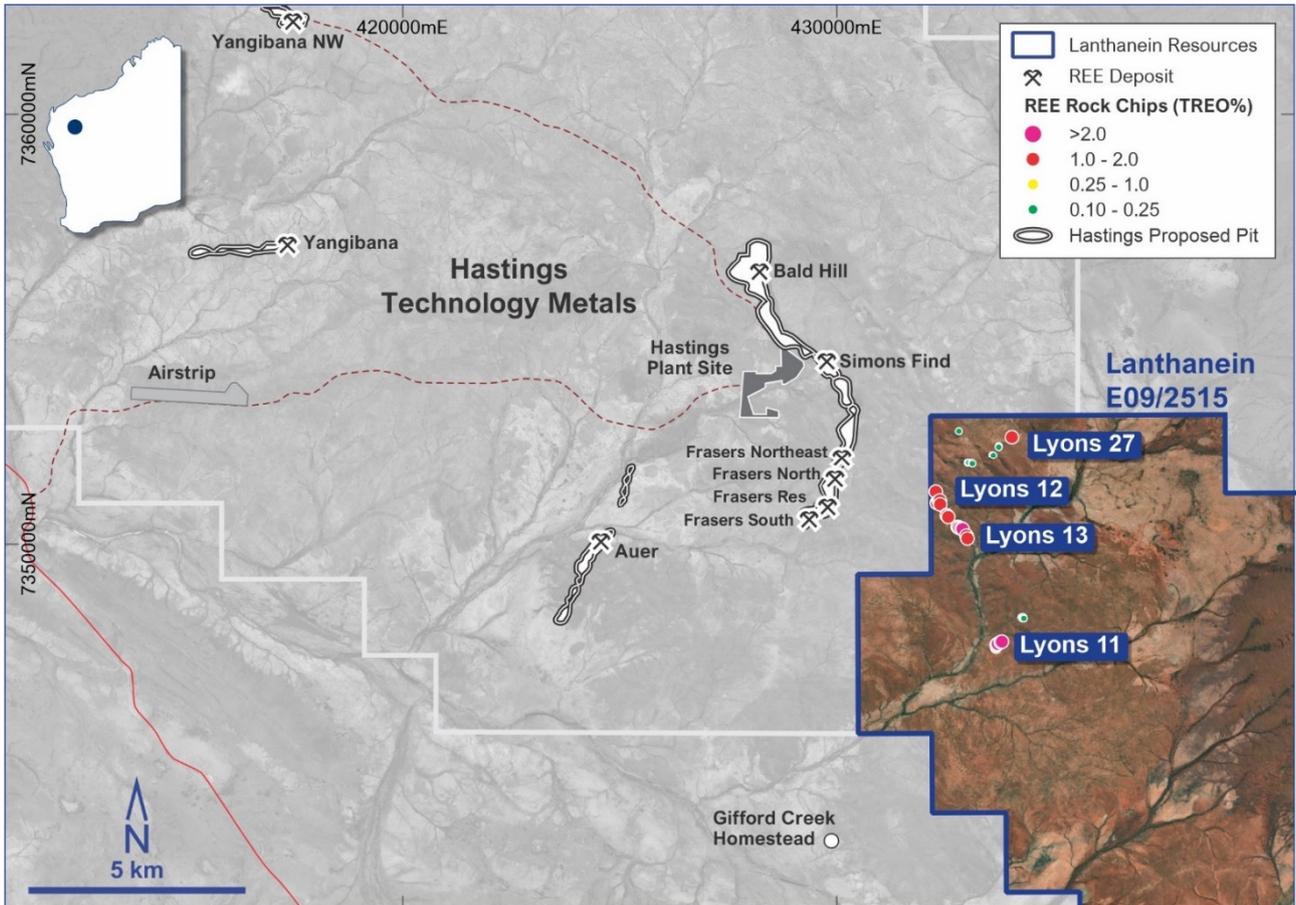


Figure 2. Lyons REE Project adjacent to Hastings Technology Metals (ASX.HAS) Yangibana REE mine.

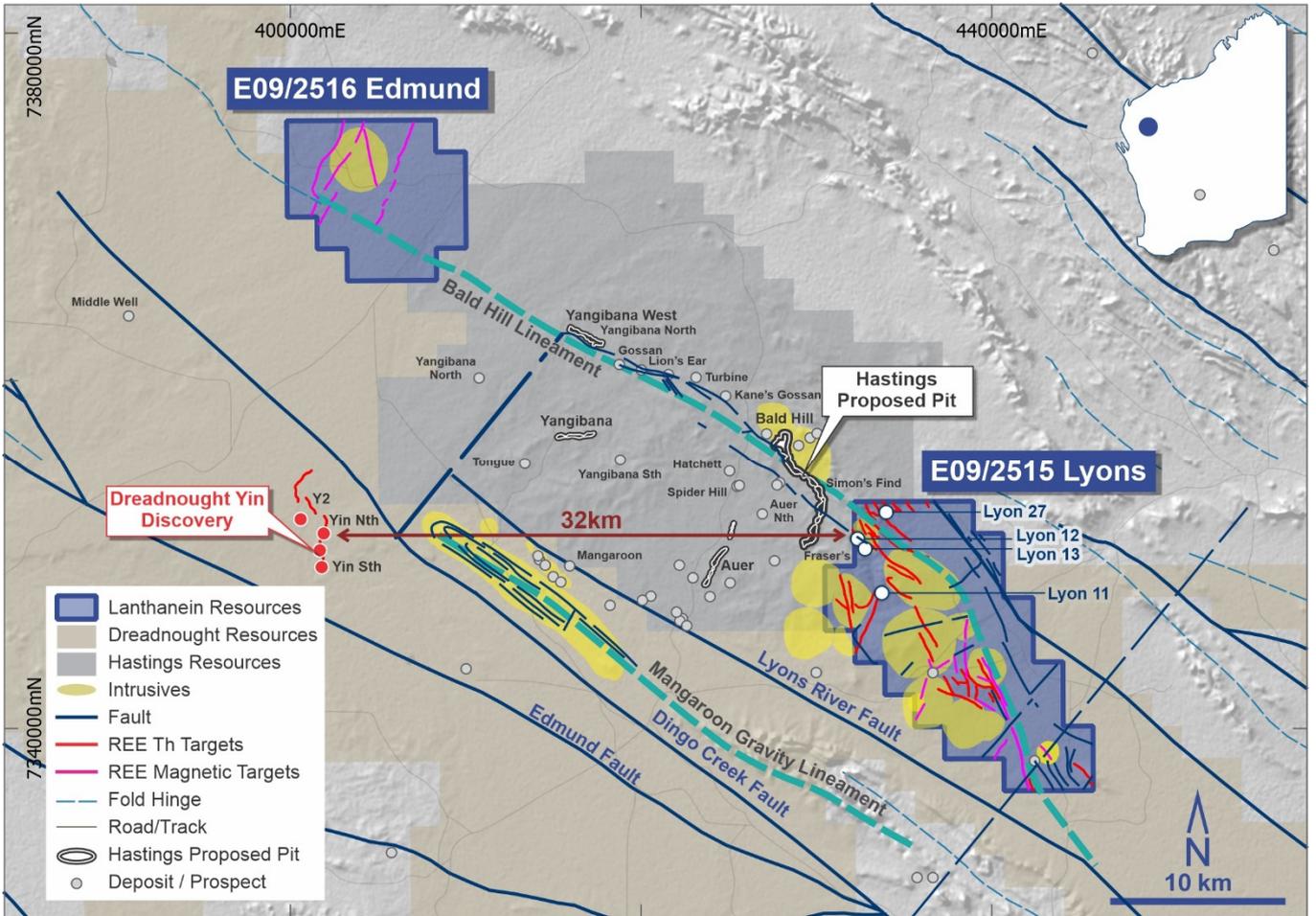


Figure 3. Lanthanein Resources Lyons and Edmund Projects within close proximity of Dreadnought Resources Yin discovery and Hastings Technology Metals Yangibana REE mine.

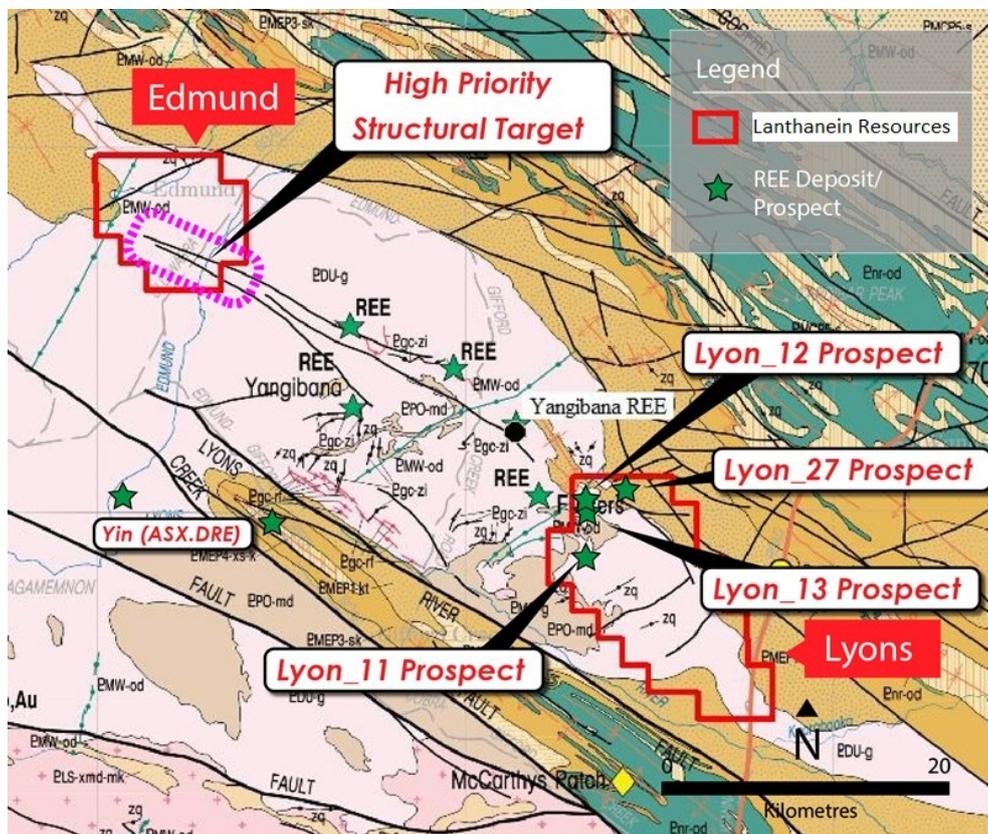


Figure 4. Lyons and Edmund Projects in the Gascoyne WA (geology overlay), highlighting the prospective Durlacher Suite of the Gifford Creek Carbonatite Complex, in pink underlying the project areas

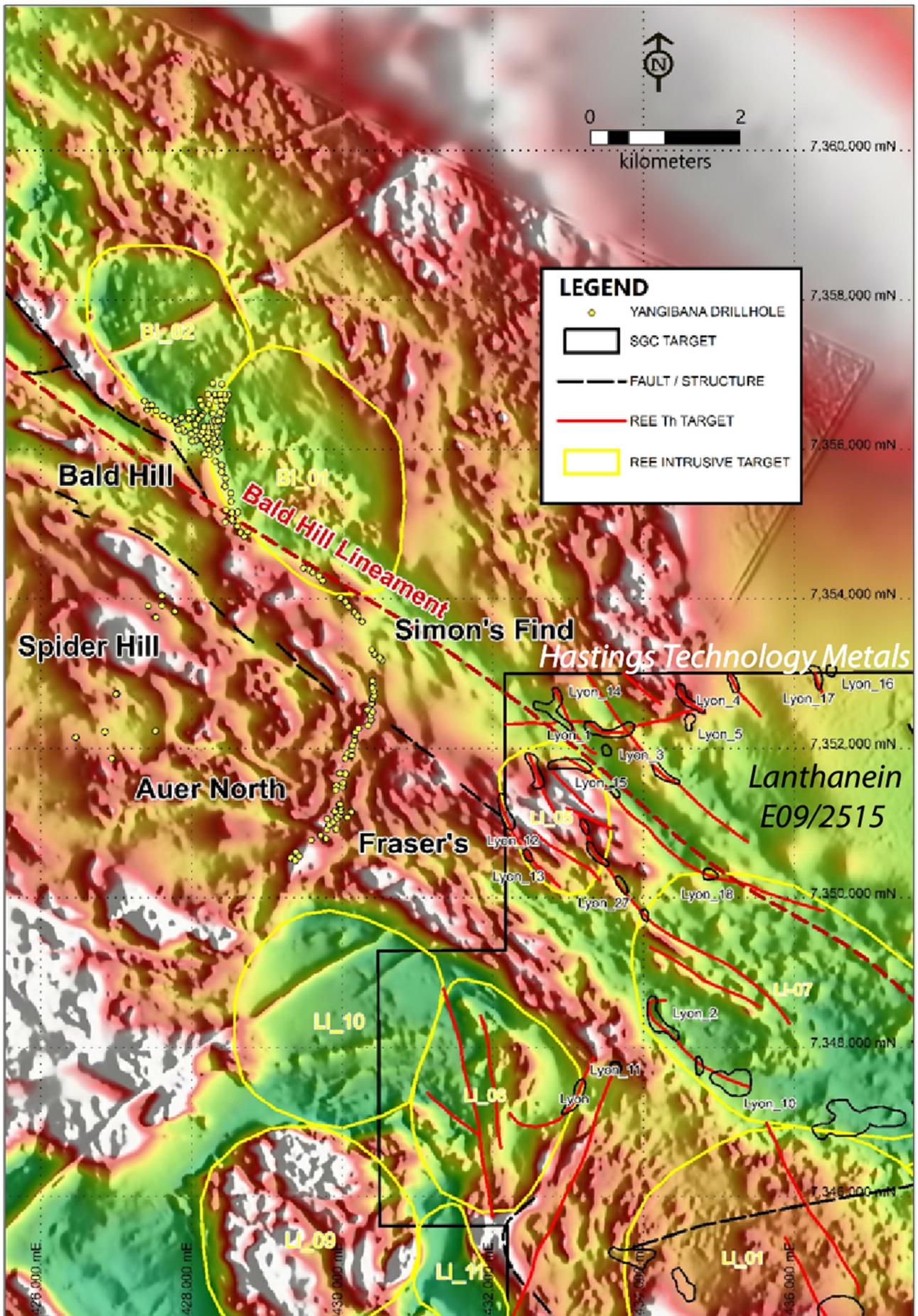


Figure 5. Interpreted intrusives with RTPVD1 filtered magnetic imagery, highlighting relationship with rare earth mineralisation at Hasting's Yangibana Project and target areas on Lanthanein's Lyons Project

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://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://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.