



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

ABN
96 095 684 389
WEBSITE
www.frontierresources.net.au

3 March 2022

Field Sampling at Gascoyne REE Project Discovers Further Outcropping Ironstones

Highlights:

- Recently completed field sampling program identifies further outcropping ironstones at Lyon_12 and Lyon_13, following up high priority targets identified by SGC
- Lyon_11 ironstone extended along strike for approximately 220m, with additional sampling testing for high grade Neodymium and Praseodymium from previous result of 4800ppm TREO
- Total of 154 rock chip samples sent to ALS Laboratory, with assays expected by end March
- Mineralogy study being undertaken by Diamantina Laboratories to confirm Light Rare Earths are contained in monazite mineralisation
- Heritage surveys in planning and Program of Works (PoW) application submitted for maiden drill program Q2, 2022
- Further drilling programs to be planned to investigate potential ironstones and carbonatites not obvious at surface obscured by shallow calcrete cover with no historical REE exploration
- The Gascoyne region is proving to be the next major rare earth mineral district in Australia, with multiple new discoveries being made by Dreadnought Resources¹ and with Hastings' world class Yangibana REE mine progressing towards operation
- Federal Government's first project financing package for the construction of a rare earth mine and production plant in Australia awarded to Hastings, supports the rapid development worldwide of decarbonisation technologies in e-mobility and renewable energy generation and the importance of rare earths to the Australian economy²

Mr Brian Thomas, Non Executive Director commented "The discovery of additional ironstones at the Company's Gascoyne rare earth project is an exciting development. These ironstones have never been sampled for rare earths and are identical to the ironstones that host the major rare earth mine at Hastings, less than 3km away. The close proximity to Yangibana, combined with the recent successes of our neighbouring tenement holder Dreadnought Resources (ASX:DRE) discovering high grade ironstones and REE bearing carbonatites, highlights the fertile nature of the area. This validates the Company's conviction to be an early mover in the region to explore for rare earths. We are eagerly awaiting the assay results and planning the first drill program for Q2 this year to test these new discoveries."

Frontier Resources Ltd (ASX: FNT) (**Frontier** or the **Company**) is pleased to announce the completion of the recent successful field program to investigate multiple high priority targets identified by Southern Geoscience Consultants (SGC). The high priority targets prospective for rare earths were identified from the significant airborne magnetic-radiometric survey recently flown at the Gascoyne Rare Earths Project in Western Australia (**Gascoyne Project**). The review identified multiple high priority targets within the Durlacher Supersuite lithology which hosts Hastings Technology Metals' (ASX:HAS) world-class Yangibana Mineral Resource³ of 27.42Mt @ 0.97% TREO with 0.33% Nd₂O₃+Pr₆O₁₁, and Dreadnought Resources multiple discoveries¹. 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.

A total of 154 rock chip samples have been sent to ALS Laboratory, with assay results expected by the end of March. The Company is also undertaking a detailed mineralogy study with Diamantina Laboratories in Perth to potentially confirm the association of Light Rare Earths with monazite mineralisation, if present, and classification of rock types such as ironstones and carbonatites. A maiden drill program is planned to commence in Q2 2022.

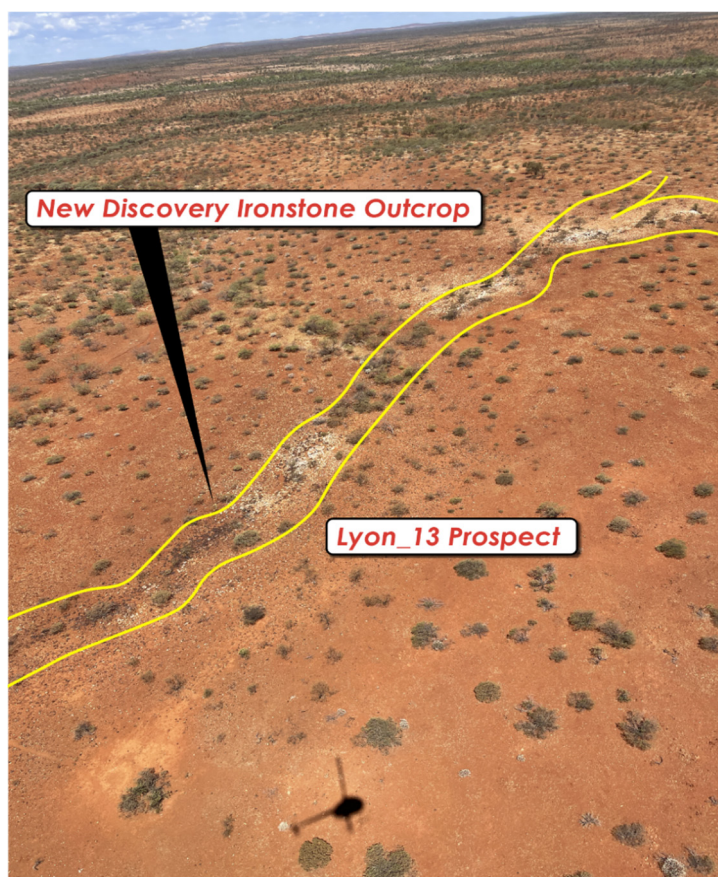


Figure 1. New discovery of ironstone outcrop at Lyon_13 prospect at the Lyons Project. Note, no scale provided



Figure 2. Additional sampling at ironstone discovered at Lyon_11 Prospect, which returned 4800ppm TREO in reconnaissance sampling, with the aim to identify if higher grade Neodymium and Praseodymium is present.

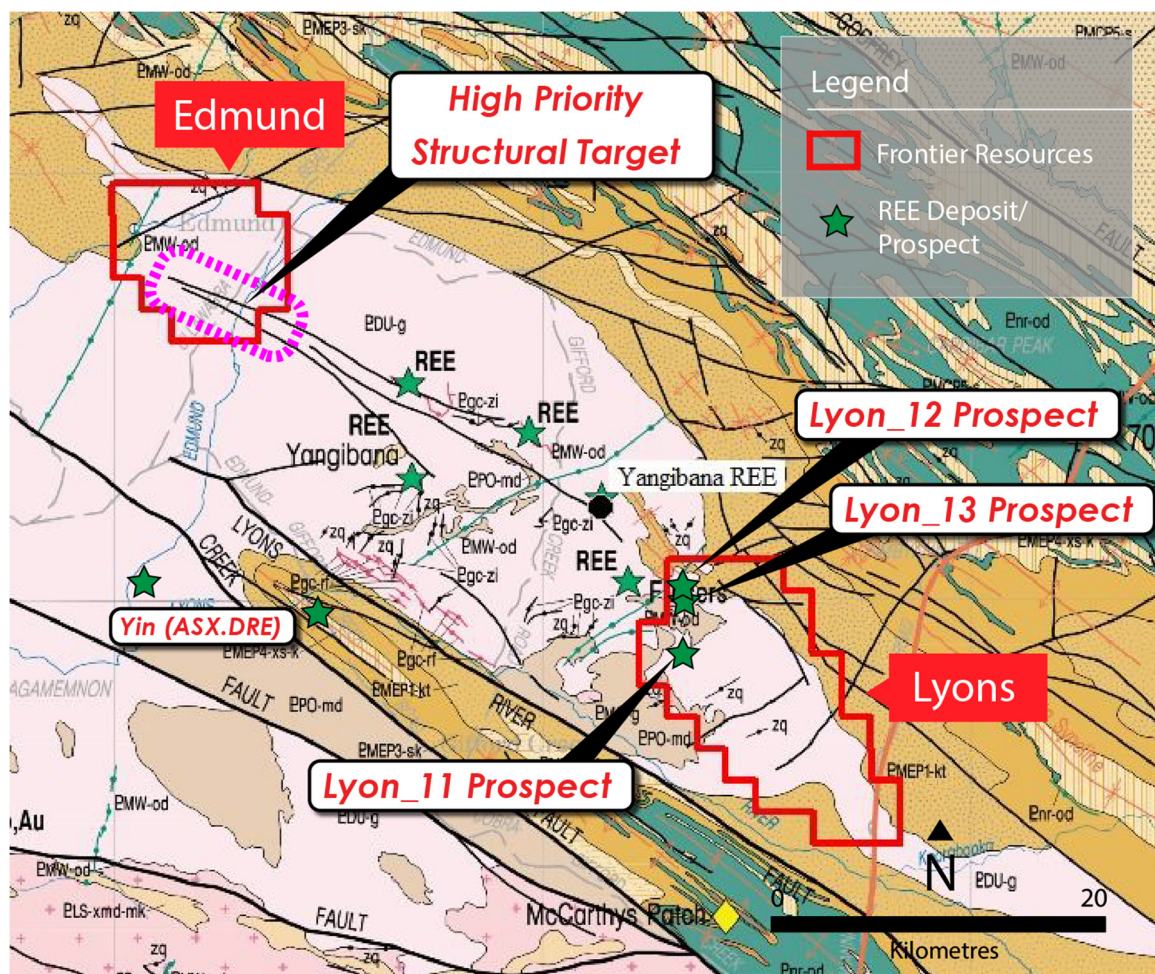


Figure 3. Location of Lyons and Edmund Rare earths projects in the Gascoyne, Western Australia, with geology overlay, highlighting the prospective Durlacher Granite in pink underlying the project areas.

Critical Rare Earth Minerals Thematic - Global Markets and Supply Chain Security

The world is at an inflexion point for the global rare earths sector amid a drive by rare earths magnet-end users to secure responsible and reliable sources of supply. China has a dominant position in the rare earth supply chain accounting for approximately 60% of rare earths produced and 87% of end use extraction and processing⁴.

The Biden administration's push to reduce U.S. reliance on Chinese imports has renewed U.S. domestic efforts to produce rare earths minerals, critical to the production of electric vehicles and electronics, labelling the controlling influence of rare earths by China "a national security risk"⁵.

Neodymium and Praseodymium concentrate (Nd Pr) are vital components used to manufacture permanent magnets used every day in advanced technology products ranging from electric vehicles to wind turbines, robotics, medical applications, digital devices and many other applications. Nd Pr is in short supply and is a critical raw material in the manufacture of ultra-strong, high performance Nd Fe B permanent magnets.

While traditional petrol and diesel combustion engine motor vehicles each use approximately 0.7kg of Nd Pr oxide, electric or hybrid vehicles require an additional 1kg.

The increased demand from electrification of transport through EVs and the decarbonisation of the energy sector through to wind turbines has created pressure for new supply sources to be brought online rapidly.² The spot market price of Nd Pr oxide is experiencing multi year highs, increasing 45% in Q4 2021 due to short supply and increased demand, Figure 4.

The rare earths industry is transitioning from industrial to new energy market drivers and the distribution of market value has shifted to Nd & Pr and other magnet rare earths. China's aggressive growth driven by decarbonisation will see application growth in many sectors including industrial motors with replacement of older technology with new standards.

Supply chain security and access to critical raw materials remains the most important topic in the sector, with the price of critical materials generally increasing due to strong demand from e-mobility and renewable energy sectors. It has become widely accepted that to tackle the difficulties in securing the necessary critical materials, there needs to be collective action by national governments, the private sector and on an international front. This was clearly highlighted in the US Wilson Centre Supply Chain Initiative *"The Mosaic Approach: a Multidimensional Strategy for Strengthening America's Critical Minerals Supply Chain"* paper published.

In the private sector, this was demonstrated by General Motors and GE Renewable Energy signing a non-binding Memorandum of Understanding (MoU) with the view to establish new secured supply chains, as well as improving on existing supplies of critical materials for magnet manufacturing.

On an international level, the South Korean mining agency urged for closer ties with Australia to promote further investment in the Australian mining and manufacturing space. The current impact of the global semiconductor shortage has shown how important adequate investment in all steps of a supply chain is, especially as supply of raw and processed materials, moves away from almost total reliance on China.⁶

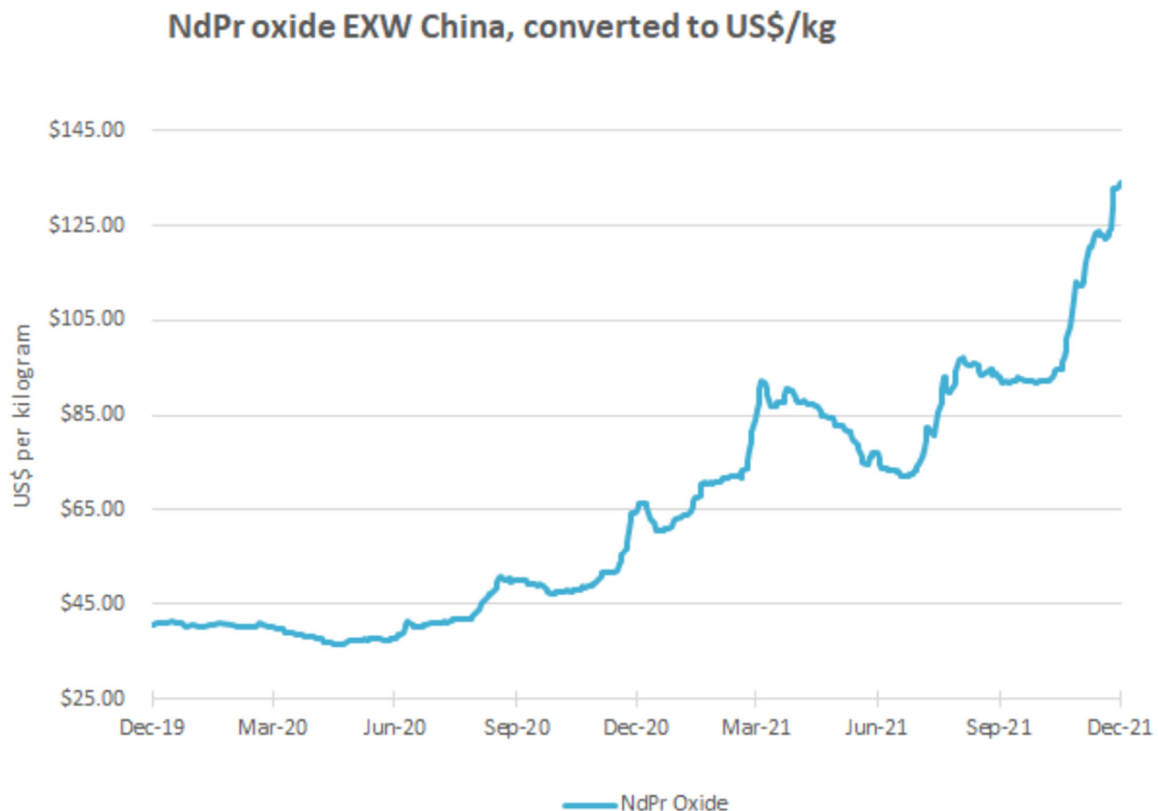


Figure 4: NdPr Oxide Price EXW China inclusive VAT converted to US\$

Gascoyne Rare Earth Element Project – Background

The REE-bearing Yangibana ironstones within the Durlacher Supersuite lithology were first targeted by prospectors in 1972 as base metal bearing gossans, however, the REE potential of the ironstones wasn't assessed until 1985 and remained underexplored until Hastings acquired the project in 2011. Hastings has since delineated a world-class JORC 2012 Mineral Resource³ of 27.42Mt @ 0.97% TREO with 0.33% Nd₂O₃+Pr₆O₁₁ and a ratio of 52% Nd Pr:TREO making it one of the highest value REE projects for ore value per kg.

Despite the region's prospectivity for REE's, very limited exploration has been undertaken at the Gascoyne Project, in part due to shallow alluvial cover which has led to the area being overlooked. The south-eastern Lyons tenement E09/2515 does have some areas of outcrop at the historic Tabletop Well⁶ copper prospect and where the recent ironstone outcrop was discovered.

With the use of modern exploration techniques and a renewed focus on REE's there is an exciting opportunity for the discovery of economic REE mineralisation.

Access into the project area is good with a combination of well-maintained gazetted and station roads located on Edmund, Gifford Creek and Wanna Pastoral Leases which will greatly assist exploration work programs.

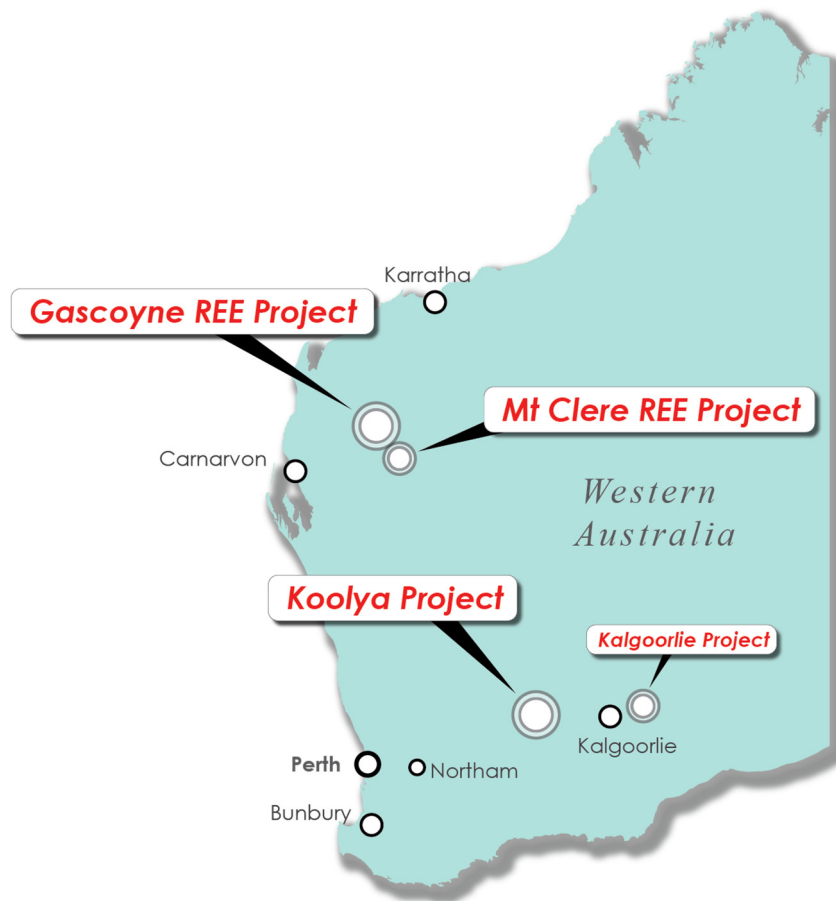


Figure 5. Location Map of the Gascoyne REE Projects and Koolya HPA Project in Western Australia.

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

Brian Thomas
Non-Executive Director

For additional information please visit our website at www.frontierresources.net.au

FRONTIER RESOURCES LTD

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

- ¹ 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)
- ² [Rare earth project a gem for regional WA | Ministers for the Department of Infrastructure](#)
- ³ 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)
- ⁴ [Executive summary – The Role of Critical Minerals in Clean Energy Transitions – Analysis - IEA](#)
- ⁵ [Chinese rare earth minerals are 'a national security risk' : Sen. Mark Kelly \(yahoo.com\)](#)
- ⁶ ASX.ARU: 31 Dec 2021 "Quarterly Activities Report and Appendix 5B" [Quarterly Activities Report and Appendix 5b \(weblink.com.au\)](#)
- ⁷ Minedex Site; Tabletop Well (S0023828), 16km ENE of Gifford Creek Hmsd