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## Encouraging First Pass Rock Chip Results & Desktop Review

### Highlights:

- **Discovery of Rare Earth Elements (REE) mineralised ironstone with maximum assay of 4800ppm Total Rare Earth Oxide's (TREO's) returned from sample GPR010 at outcropping ironstone, with a combined 1600ppm Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>**
- **Highly encouraging data review of Geoscience Australia - Capricorn Regional Electromagnetic Survey highlights the Gifford Creek Carbonatite Complex underlies Frontier's Gascoyne Project, (see Figure 1)**
- **Newly identified outcrop not yet sampled which may represent another ferro-carbonatite ironstone for immediate field inspection, (see Figure 2)**
- **Southern Geoscience appointed to process the recently flown magnetic-radiometric survey to assist in targeting and planning of future exploration programs**

**Frontier Resources Ltd** (ASX: FNT) (**Frontier** or the **Company**) is pleased to announce assay results from the reconnaissance rock chip sampling program completed at the Gascoyne Project have confirmed the presence of rare earth oxide mineralisation in the outcropping mineralised ironstone. The ongoing desktop review of the project area by the Frontier technical consultant Tom Langley has recently focussed on Geoscience Australia's Capricorn Regional Electromagnetic Survey<sup>1</sup> which has provided encouraging findings with the interpretation that the Gifford Creek Carbonatite Complex underlies part of the Gascoyne Project area.

Mr Brian Thomas, Non-Executive Director commented "The Geoscience Australia electromagnetic survey confirms our belief that the Gascoyne Project is conducive to hosting significant rare earth oxide mineralisation. The Gifford Creek Carbonatite Complex is a large mineral system, with multiple rare earth deposits discovered to date and host to the world class Yangibana deposit. From the geophysical data we can infer the continuation of the Gifford Creek Carbonatite Complex into our tenure which is highly encouraging. Furthermore, the assays returned from the first pass rock chip sampling program has confirmed rare earth oxide mineralisation at an outcropping ironstone, which requires further investigation."

"Geoscience Australia's work has recently been highlighted as a driving factor behind the discovery of Chalice Mining's Gonville deposit, and this data will now help drive our exploration strategy going forward. I look forward to progressing the Company's existing

projects and our growing REE portfolio, exploring for critical metals that can help the world reach targets of being net zero carbon by 2050.”

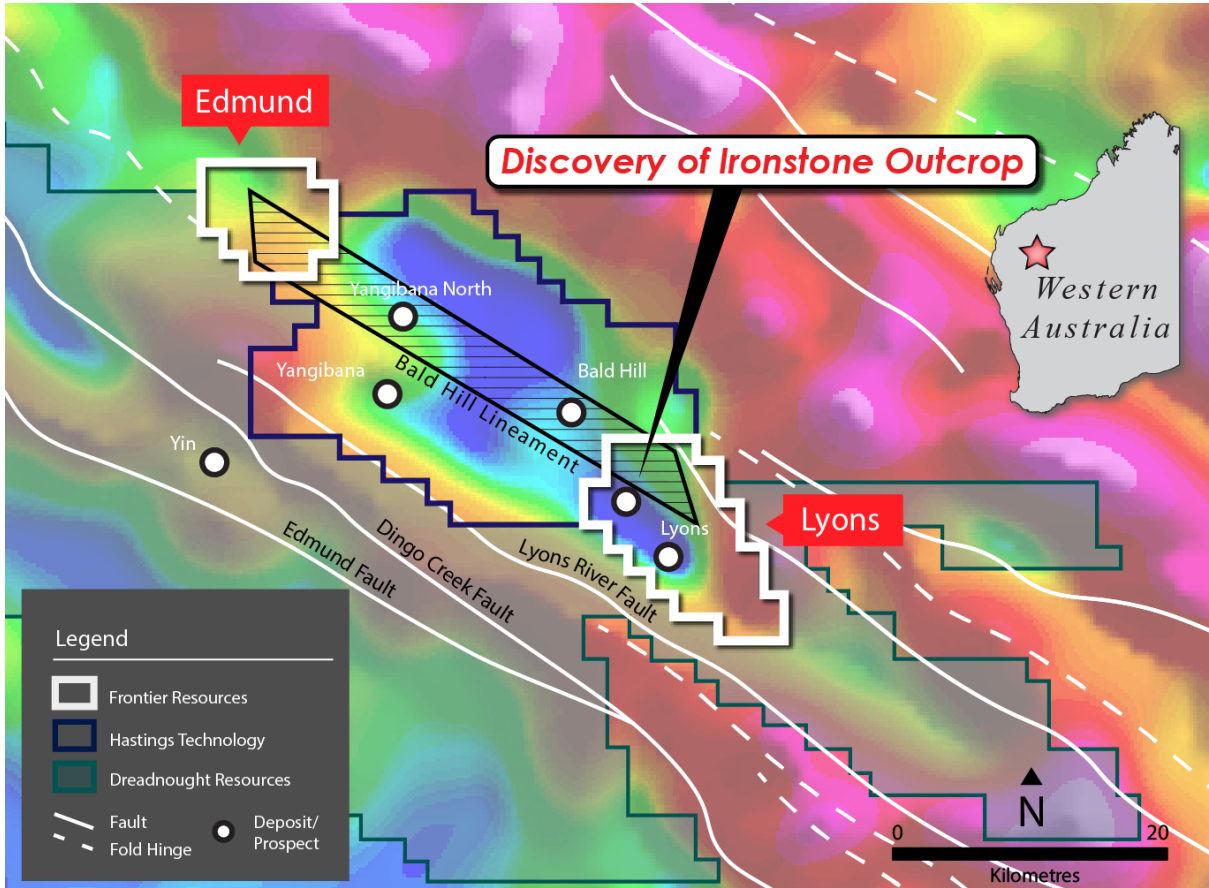


Figure 1. Gascoyne Project overlay with Geoscience Australia AEM image highlighting the conductive low associated with the Gifford Creek Carbonatite Complex. Image accessed via Geoscience Australia website (refer to link below).

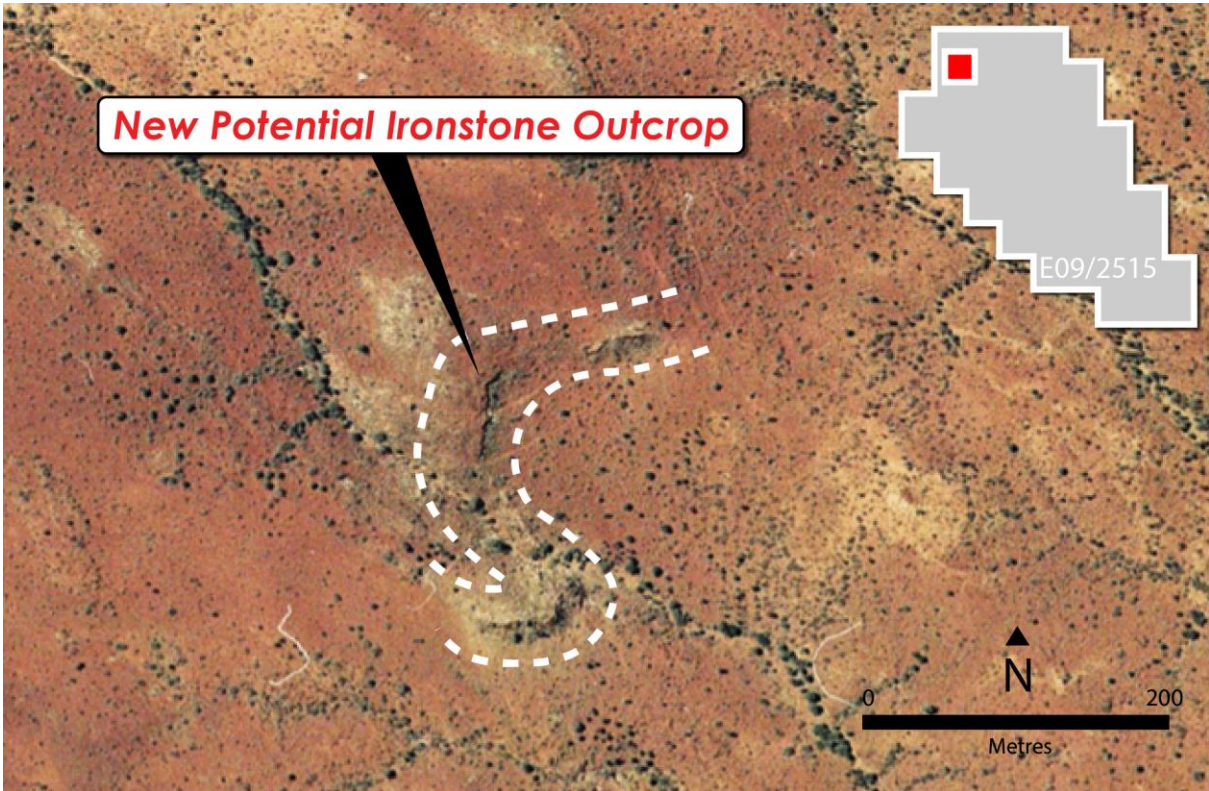


Figure 2. New area of interest for follow up not yet sampled which may be a potential outcropping ferro-carbonatite.



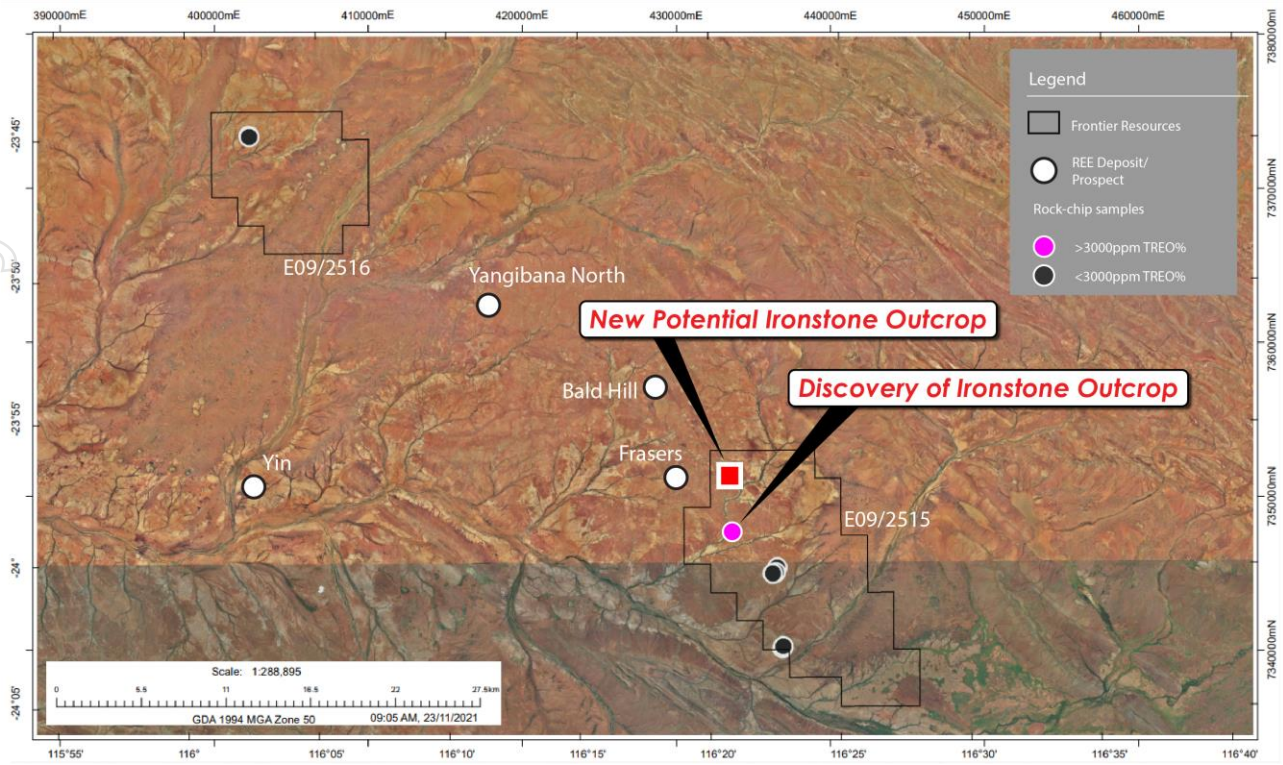


Figure 3. Map showing the location of rock-chip samples with maximum result of 4800ppmTREO.

## Gascoyne Rare Earth Element Project – Background

The Gascoyne REE Project adjoins the world-class Yangibana Deposit (ASX:HAS ~A\$460 million market capitalisation) in the Gascoyne Region of Western Australia, set to be the next REE producer outside of China by 2023. The project area is also proximal to recent discoveries made by Dreadnought Resources at their Mangaroon Project located ~15kms southwest of the Yangibana REE Resource<sup>2</sup> (ASX:DRE ~A\$127 million market capitalisation).

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 Technology Metals (ASX:HAS) acquired the project in 2011. Hastings has since delineated a world-class JORC 2012 Mineral Resource<sup>3</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> and a ratio of 52% Nd Pr:TREO making it one of the highest value REE projects for ore value per kg.

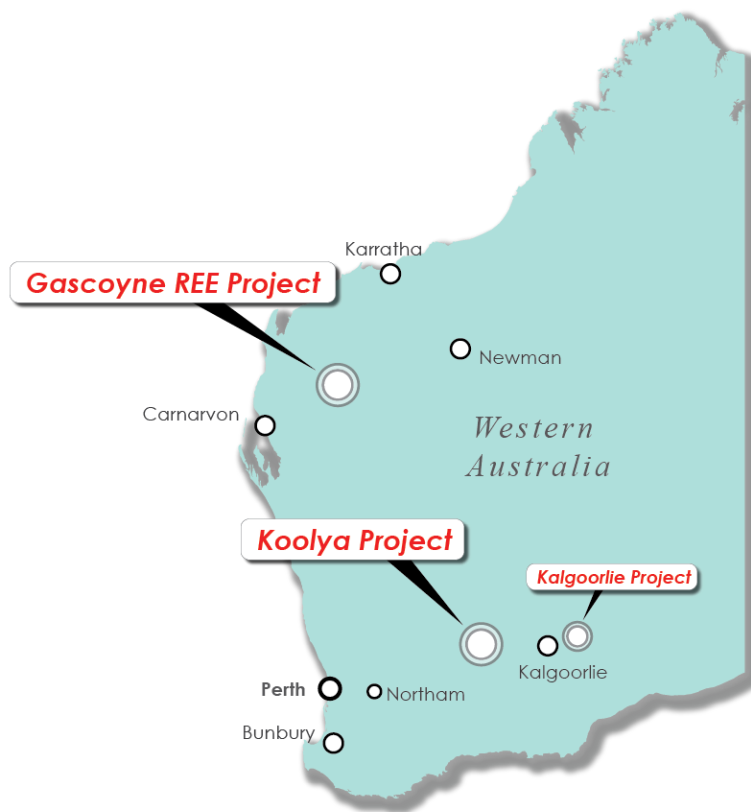


Figure 4. Location Map of the Gascoyne and Koolya Projects in Western Australia

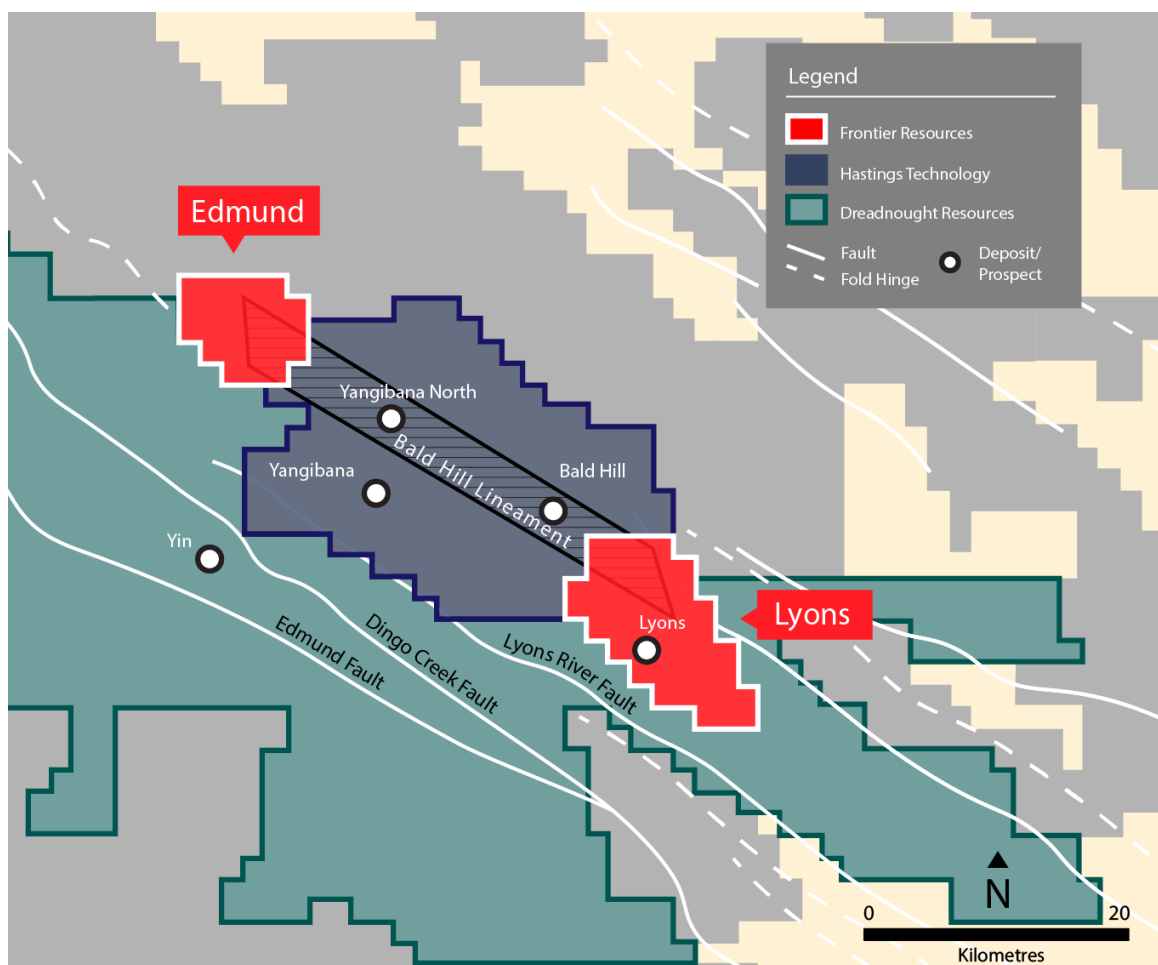


Figure 5. Location Map of the Edmund and Lyons tenements which make up the Gascoyne Project in Western Australia

Despite the region's prospectivity for REE's, very limited exploration has been undertaken at the Gascoyne Project, in part potentially due to shallow alluvial cover which has led to the area being overlooked historically, however the south eastern Lyons tenement E09/2515 has areas of outcrop, which includes the historic copper prospect Tabletop Well<sup>4</sup>.

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. A detailed airborne magnetic-radiometric survey consisting of 5,189 line kilometres has been flown over the entire tenement area with the data gathered from this survey assisting with target definition within the prospective Durlacher Supersuite across the entire project area.

Access into the project area is very 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.

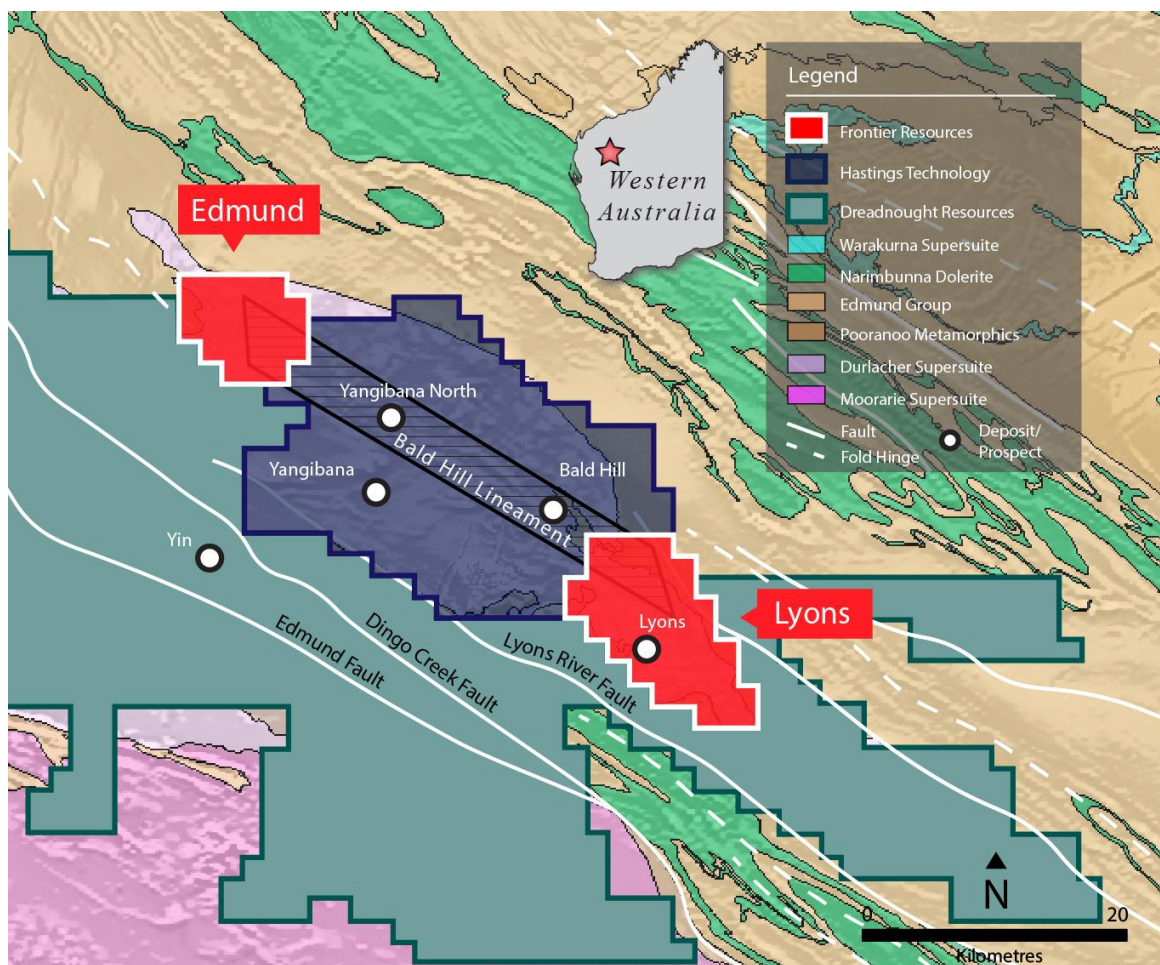


Figure 6. Geology and Tenement Map of the Gascoyne and Koolya Projects in Western Australia

Sample ID	Easting	Northing	TREO %	Nd <sub>2</sub> O <sub>3</sub> +Pr <sub>6</sub> O <sub>11</sub>	(Nd <sub>2</sub> O <sub>3</sub> +Pr <sub>6</sub> O <sub>11</sub> ) % of TREO
GPR001	402255	7373340	0.04	<0.01	
GPR002	402242	7373399	0.03	<0.01	
GPR003	436509	7345353	0.03	<0.01	
GPR004	436523	7345382	0.01	<0.01	
GPR005	436925	7340266	0.02	<0.01	
GPR006	436885	7340124	0.03	<0.01	
GPR007	436430	7345064	0.06	<0.01	
GPR008	436233	7345003	0.02	<0.01	
<b>GPR009</b>	<b>433597</b>	<b>7347696</b>	<b>0.321</b>	<b>0.11</b>	<b>34%</b>
<b>GPR010</b>	<b>433592</b>	<b>7347690</b>	<b>0.481</b>	<b>0.16</b>	<b>33%</b>

Figure 7. Rock-chip results from reconnaissance rock chip sampling at the Gascoyne Project (GDA94 MGA Zone50).

## Future Work

Frontier will undertake further sampling at the mineralised ironstone with the aim of finding higher grade along the strike of the outcrop. Further heli-supported field reconnaissance and sampling programs across the areas not yet covered as soon as possible to validate the potential of rare earth elements mineralisation within the Gascoyne project area. Follow up exploration will depend on the results of these initial work programs and interpretation of the recently flown magnetic-radiometric data, prior to drilling programs being undertaken.

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

**Alec Pismiris**  
**Non-Executive Chairman**

For additional information please visit our website at [www.frontierresources.net.au](http://www.frontierresources.net.au)

## FRONTIER RESOURCES LTD

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

<sup>1</sup> Capricorn 2013 AEM TEMPEST survey, M.T. Costelloe; accessed via

<https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/81642>

<sup>2</sup> ASX.DRE: 11 June 2021 "High-grade Rare Earth Element Ironstones outcropping at Mangaroon"

[b564fa17-d73.pdf \(investi.com.au\)](https://www.investi.com.au/b564fa17-d73.pdf)

<sup>3</sup> 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)

<sup>4</sup> Minedex Site; Tabletop Well (S0023828), 16km ENE of Gifford Creek Hmsd

## Competent Person's Statement

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 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.

## 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	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<b>Rock Chips</b> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Rock chips were submitted to ALS Laboratories in Perth for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30).</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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</li> </ul>	No drilling undertaken.

Criteria	JORC Code explanation	Commentary
	<i>method, etc).</i>	
Drill sample recovery	<ul style="list-style-type: none"> <li>• Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>• Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>• 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.</li> </ul>	No drilling undertaken.
Logging	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	No drilling undertaken.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• 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.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p><b>Rock Chips</b></p> <p>Entire rock chips were submitted to the lab for sample prep and analysis.</p>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• 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.</li> </ul>	<p><b>Rock Chips</b></p> <ul style="list-style-type: none"> <li>• All samples were submitted to ALS Laboratories in Wangara, Perth where 1-3kg rock chips samples were crushed so that &gt;70% of material passes through -6mm, the sample is then pulverised to &gt;85% passing 75 micron.</li> <li>• 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</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<p>disk. The resultant disk is then analysed by XRF spectrometry specifically for Rare Earths (ALS Method ME-XRF30)</p> <ul style="list-style-type: none"> <li>Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE determination.</li> <li>No standards, duplicates or blanks submitted with rock chips.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<p><b>Rock Chips</b></p> <ul style="list-style-type: none"> <li>Rock chip and geological information is written in field books and coordinates and track data saved from handheld GPSs used in the field.</li> <li>Gascoyne Geological Services geologist inspected and logged all rock chips.</li> <li>Field data is entered into excel spreadsheets to be loaded into a database.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All sample locations were recorded with a Garmin handheld GPS which has an accuracy of +/- 5m.</li> <li>GDA94 MGA Z50.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<p>Sample spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for a Mineral Resource.</p>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<p>At this early stage of exploration, mineralisation thickness, orientation and dips are not known.</p>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All geochemical samples were collected, bagged, and sealed by Gascoyne Geological Services staff and delivered to Bennalong Transport in Carnarvon.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Samples were delivered directly to ALS Laboratories in Wangara, Perth by Bennalong Transport ex Carnarvon.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits have been completed.

## 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	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<p>Frontier Resources Ltd entered into a conditional agreement to acquire all of the shares in Dalkeith Capital Pty Ltd (Dalkeith) which holds two exploration licence applications in the Gascoyne Region of Western Australia. The acquisition of Dalkeith remains subject to receipt of shareholder approval in general meeting.</p> <ul style="list-style-type: none"> <li>The Gascoyne Project consists of 2 pending Exploration Licenses (E09/2515 and E09/2516).</li> <li>All tenements are 100% owned by Dalkeith Capital.</li> <li>The Gascoyne Project covers 2 Native Title Determinations including the Thudgari (WAD6212/1998) and the Combined Thiin-Mah, Warriyangka, Tharrkari and Jiwarli (WAD464/2016).</li> <li>The Gascoyne Project is located over the following pastoral leases; Edmund, Gifford Creek, and Wanna.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historical exploration of a sufficiently high standard was carried out in the region by a few parties including:</li> </ul> <p>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</p>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Gascoyne Project is located within the Gascoyne Province, 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 Dulurcher Supersuite (including Yangibana and Pimbyana Granites) and the Pooranoo Metamorphics.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>The c.1360 Ma GCCC is composed of;</p> <ul style="list-style-type: none"> <li>• ~NW striking Lyons River Sills (calcio-, magnesio- and ferrocarbonatites)</li> <li>• ~NE striking fenite (alteration) veins</li> <li>• Yangibana Ironstones (REE ore bodies)</li> <li>• Magnetite-biotite dykes</li> </ul> <p>• Carbonatites in 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.</p> <p>• The Gascoyne Project is prospective for Ferrocarbonatite hosted REEs.</p>
Drill hole Information	<ul style="list-style-type: none"> <li>• 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: <ul style="list-style-type: none"> <li>◦ easting and northing of the drill hole collar</li> <li>◦ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>◦ dip and azimuth of the hole</li> <li>◦ down hole length and interception depth</li> <li>◦ hole length.</li> </ul> </li> <li>• 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.</li> </ul>	No drilling undertaken.
Data aggregation methods	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No drilling undertaken.
Relationship	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of</li> </ul>	No drilling undertaken.

Criteria	JORC Code explanation	Commentary
between mineralisation widths and intercept lengths	<p>Exploration Results.</p> <ul style="list-style-type: none"> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	
Diagrams	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to figures within this report.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The accompanying document is a balanced report with a suitable cautionary note.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical 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.</li> </ul>	<ul style="list-style-type: none"> <li>Suitable commentary of the geology encountered are given within the text of this document.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed airborne magnetic – radiometric surveys, surface geochemistry and mapping prior to drilling</li> </ul>