

Address Level 8, 99 St Georges Tce Perth, WA 6000 Phone +61 8 9486 4036

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

ASX:FNT

29 April 2022

## **ACTIVITIES REPORT – QUARTER ENDED 31 MARCH 2022**

# Gascoyne Rare Earth Elements (REE) Project

- Processing and interpretation of all aeromagnetic and radiometric geophysical data finalised
- Anomalies generated that were ground checked had extensive rock chip sampling programme with exceptional high-grade rare earth results across multiple targets including:
  - 8.01% TREO (2.8% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon 11 (GPR012)
  - 6.44% TREO (2.3% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon\_11 (GPR019)
  - 5.27% TREO (1.9% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon\_11 (GPR020)
  - 4.32% TREO (1.53% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon\_11 (GPR013)
  - 4.17% TREO (1.69% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon 11 (GPR013)
  - 3.38% TREO (1.3% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon\_11 (GPR035)
  - 2.53% TREO (1.15% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon 13 (GPR082)
  - 1.23% TREO (0.55% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon\_12 (GPR069)
  - 1.77% TREO (0.79% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>) Lyon\_27 (GPR108)
- Geological review provides multiple high priority carbonatite and REE bearing ironstone drill targets for upcoming maiden drill program
- Priority drill targets on interpreted circular carbonatite bodies identified in magnetics imagery showing similarities to Hastings Yangibana rare earth deposits adjacent to Frontier's Lyons and Edmund Projects
- DMIRS approval received for Program of Works (PoW) Reverse Circulation (RC) drill program with drilling contract awarded
- Heritage surveys planned to commence in current quarter to allow site works to begin and drilling of targets with drill contract signed
- Metallurgical test work in progress with results expected by end of April to determine the amenability of the ironstones to produce a commercially treatable monazite concentrate

# **Murraydium Ionic Clay REE Project**

- Numerous deposits and prospects in the region including Australian Rare Earths (ASX:AR3) Koppamurra Project with an Inferred Mineral Resource of 39.9 Mt @ 725 ppm TREO<sup>2</sup>
- Project geology consists of extensive series of stranded shorelines formed

- during marine regression in Miocene to early Pliocene, the primary host to regional REE mineralisation
- Murray Basin sediments have the potential to host a high value REE assemblage with low radioactivity ore characteristics
- A series of auger, push tube and aircore drilling planned to investigate for the presence of laterally extensive shallow clay hosted rare earth mineralisation
- Post end of quarter, Exploration Licence Granted at Murraydium South Australian Rare Earth Project on ground prospective for ionic clay hosted rare earth elements (REE) in the Murray Basin heavy mineral province, South Australia
- Program for Environment Protection and Rehabilitation (PEPR) lodged with SA Dept of Mines and Energy for drilling approvals

## Mt Clere REE and Lithium Pegmatite Project

• Exploration Licence granted and HPA signed with local Nharnuwangga Wajarri and Ngarlawangga People

# **Koolya Kaolin and HPA Project**

 Programme of Works (POW) application approved by DMIRS for reconnaissance drilling programme

## **Tolukuma PNG**

 Frontier signs a Binding Terms Sheet for the sale of its wholly owned subsidiary Frontier Copper (PNG) limited, the holder of the Tolukuma EL2531

# Corporate

- Highly experienced international mining executive, David Frances, appointed Non-Executive Chairman
- Material acquisition of Rare Earth Elements (REE's) and High Purity Alumina (HPA) Projects completed

Frontier Resources Limited (**Frontier** or the **Company**) is pleased to provide its quarterly report for the three month period ending 31 March 2022.

#### Acquisition of Gascoyne Rare Earth Element, High Purity Alumina and Gold Projects, Western Australia

At the beginning of quarter the Company advised it had has completed the acquisition of Dalkeith Capital Pty Ltd (**Dalkeith**) which holds two granted exploration licences in the Gascoyne Region of Western Australia (Figure 1) that are considered to be prospective for REE's (**Gascoyne Project**), two granted exploration licences prospective for bright white kaolin and High Purity Alumina (**HPA**) located 460km east of Perth (**Koolya Project**) and one exploration licence application prospective for gold 50km east of Kalgoorlie (**Kalgoorlie Project**).

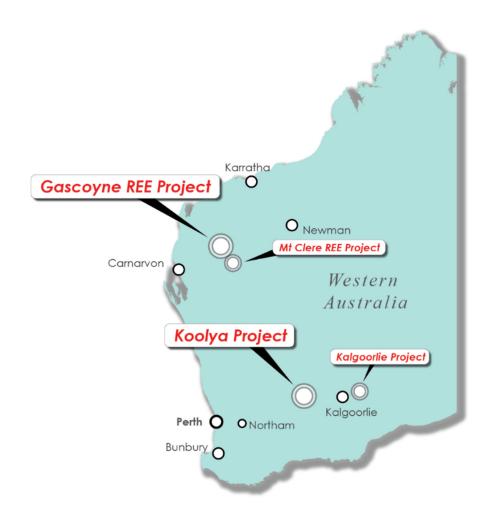


Figure 1. Location Map of the Frontier's Projects in Western Australia.

## Gascoyne REE Project, Western Australia

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>2</sup> of 27.42Mt @ 0.97% TREO with 0.33%  $Nd_2O_3+Pr_6O_{11}$  and a ratio of 52% Nd Pr:TREO making it one of the highest value REE projects for ore value per kg.

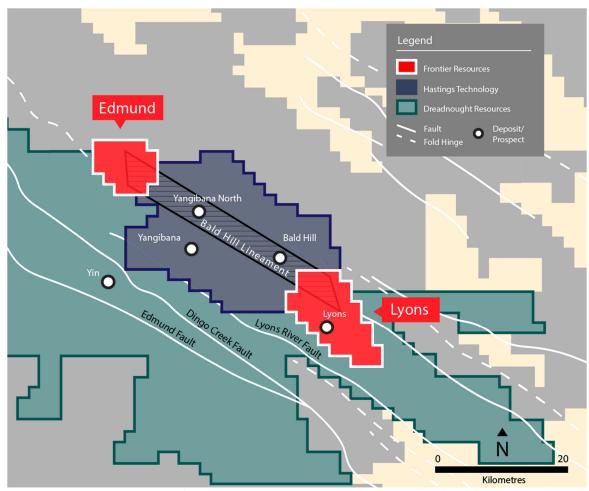


Figure 2. Location Map of the Edmund and Lyons tenements which make up the Gascoyne Project in Western Australia.

Despite the region's prospectivity for REE's, very limited exploration has been undertaken at the Gascoyne Project (Figure 2), 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 small areas of outcrop, where the historic copper prospect Tabletop Well<sup>4</sup> occurs.

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 target definition within the prospective Durlacher Supersuite across the entire project area. Southern Geoscience have been appointed to process the survey data to assist in targeting and planning of future exploration programs.

## Airborne Magnetic-Radiometric Survey

During the quarter the Company advised that multiple high priority targets prospective for rare earths had been identified by Southern Geoscience Consultants (**SGC**) from the significant airborne magnetic-radiometric survey flown at the Gascoyne Rare Earths Project.

The detailed survey was flown with 50m line spacing at a low altitude with sensor height of 30m, a significant improvement on the existing public data flown at 500m line spacing in the 1990's. The survey

data highlighted 30 prospective REE anomalies across the 230km² project area, Figures 3 & 4.

The targets were identified by SGC using a multi-faceted approach utilising radiometrics, magnetics, structural and lithological data and satellite imagery, to infer their prospectivity and potential association with REE ironstones or carbonatites. The targets generated from the SGC report will now be the focus for immediate sampling programs and will assist in designing drill programs to commence in Q2 2022.

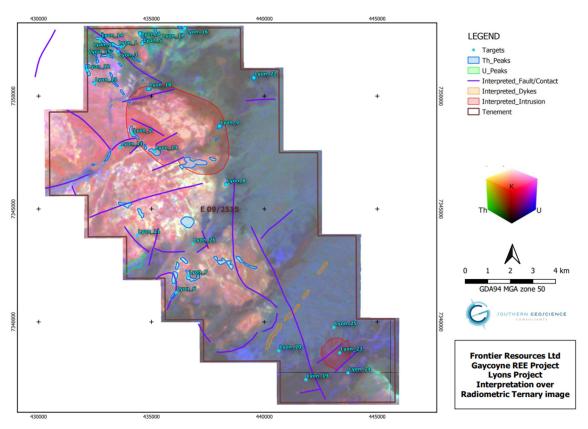


Figure 3. Frontier Resources Gascoyne REE Lyons Project Interpretation over Radiometric Ternary image.

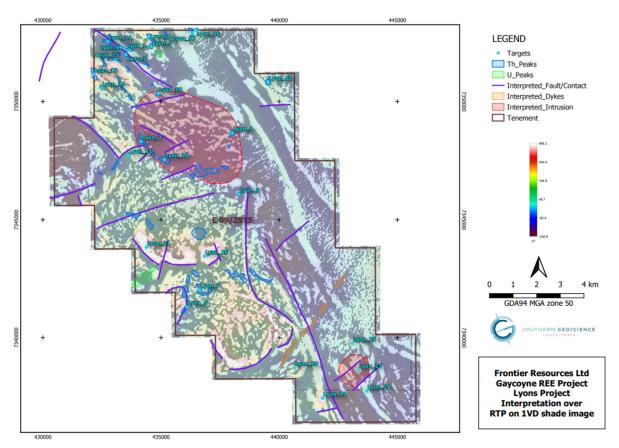


Figure 4. Frontier Resources Gascoyne REE Lyons Project Interpretation over Magnetics RTP on 1VD shade image.

#### **Technical Discussion - Southern Geoscience Target Generation Report**

A total of 30 targets, 26 from Lyons and 4 from Edmunds, have been identified and ranked according to the following selection criteria;

- Thorium radiometric anomalism
- Association with a lineament/fault
- Magnetic anomalism
- Potential ironstone outcrop

Due to the high level of outcrop and subcrop (particularly at Lyon), analysis of radiometric data, focusing primarily on Thorium anomalism, was used as a major selection criterion for targeting REE. Competitor success was initially based on analysis of these data and thus trends extending onto FNT tenements were closely examined.

The magnetic data (Figure 5) were used as a direct anomaly detector, to project features identified from radiometric data below cover and for assessing magnetic signatures for areas completely covered by surficial sediments, particularly at Edmunds.

At Lyons, targets classified as priority 1 and located in the interpreted prospective NW section of the tenement include Lyon\_1, Lyon\_3, Lyon\_4, Lyon\_5, Lyon\_14, Lyon\_16 and Lyon\_17. All these targets are recommended for follow up with field checking and assessment with a handheld scintillometer. The location of these anomalies to the SE of known REE prospects represents the highest priority to be checked in-field for similar characteristics.

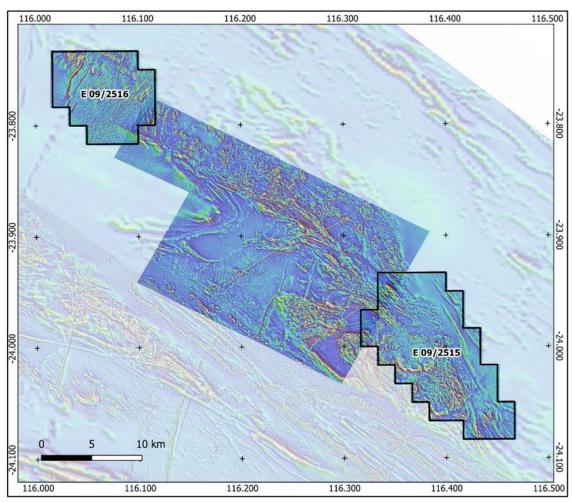


Figure 5. Location of Lyon and Edmund project area showing RTP 1VD magnetic data.

Other targets within Lyons include *Lyon\_09* and *Lyon\_11*, identified as minor radiometric anomalies around the edge of an area of low magnetism and near an interpreted inflection in the Bald Hill Lineament. **Lyon\_22** is an odd isolated discrete Thorium and magnetic anomaly to the NE of the tenement area and worthy of additional interest in the area.

Targets classified as priority 2 within Lyons tenement should be followed up initially with field checking (where outcropping) and with further exploration recommended based on any re-ranking after field checks. Due to the extensive cover over the Edmund project, only two priority 1 (*Edmund\_1* and *Edmund\_2*) targets were identified that satisfied the exploration criteria for potential REE ironstones. The area may be suited to other mineral occurrences with magnetic anomalism and structural complexity recommended to drive any further exploration in this respect.

## Field Sampling at Gascoyne REE Project Discovers High Grade Rare Earths

On 3 March 2022 Frontier advised the completion of a 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.

A systematic field sampling program was completed to investigate high priority targets located within the

Gifford Creek Carbonatite Complex. On 21 March 2022 Frontier announced Exceptional high-grade rare-earth results from rock chips across multiple targets at the Gascoyne Rare Earths Project (Figure 6). A total of 134 rock chip samples were sent to ALS Laboratory with a peak result of 8.01% TREO (Figure 7). Of note, 54 samples returned potentially economic REE grades of >0.1% combined  $Nd_2O_3+Pr_6O_{11}$ , and 31 samples greater than 1% TREO.

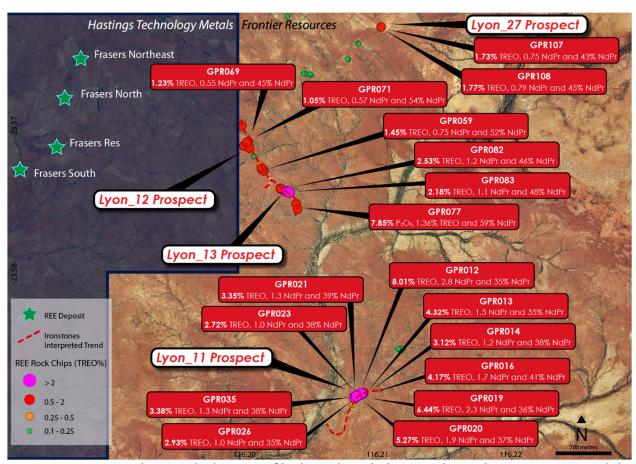


Figure 6. Map showing the location of high-grade rock chip samples at the Lyons Project and the location of mapped outcropping ironstones and their interpreted extensions under shallow cover.

The Company also completed a detailed mineralogy study with Diamantina Laboratories in Perth, which importantly confirmed the presence of monazite mineralisation in ironstones. Initial metallurgical test work in progress with results expected by the end of April to determine the amenability of the ironstones to produce a commercially treatable monazite concentrate. Heritage surveys are in planning and applications for the necessary permits have been submitted to allow for a maiden drill program in the later half of Q2, 2022. Drilling will be critical to understanding the resource potential of the mineralised ironstones, to determine width, grade plus continuity at depth and along strike of interpreted ironstone trends.

Further rock chip sampling and drilling programs are planned to investigate additional targets not yet followed up, including thorium geophysical anomalies throughout the Lyons Project and the high priority structural target along the major Bald Hill lineament which transects the Edmund Project. Potential remains for further discoveries of ironstones and carbonatites where no historical REE exploration has occurred.





Figure 7. High-grade ironstone at Lyon\_11 prospect returning a peak of 8.01% TREO, above samples GPR027 (2.07% TREO) and sample GRP032 (3.05% TREO) Mineralogy.

## Mineralogy

The ironstones discovered at the Lyons Project, like the Yangibana ironstones, are unique to REE deposits globally due to the high proportion of neodymium and praseodymium in the total rare earth oxides, with rock chips from Lyons containing up to a 58.8% Nd:Pr ratio (Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub> content of TREO).

Diamantina Laboratories completed mineralogical analysis of the ironstones, which included SEM analysis of samples along with polarising light microscopy studies of polished thin sections. Results concluded sample GPR036 (2.17% TREO) is classified as a Monazite bearing siliceous ironstone, which supports light rare earths and are predominantly associated within the phosphate mineral monazite, analogous to the Yangibana and Dreadnought ironstones (Figure 8).

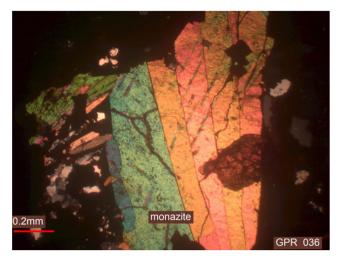




Figure 8. Monazite bearing siliceous ironstone sample GPR036 (2.17% TREO).

## **Drilling Contract Awarded, Rig Secured**

On 31 March 2022 the Company advised it had executed a drilling contract to undertake maiden drill program at the Gascoyne Rare Earths Project. The drill program will target high grade rare earth mineralisation discovered at outcropping ironstones.

Initial metallurgical test work will commence shortly to determine the amenability of the ironstones to produce a commercially treatable monazite concentrate. Heritage surveys are in planning and applications for the necessary permits have been submitted to allow for a maiden drill program in the later half of Q2, 2022. Drilling will be critical to ascertaining the resource potential of the mineralised ironstones, determining the width and grade plus continuity at depth and along strike of the interpreted ironstone trends.

Further rock chip sampling and drilling programs are planned to investigate additional targets not yet followed up, including thorium geophysical anomalies throughout the Lyons Project and the high priority structural target along the major Bald Hill lineament which transects the Edmund Project. Potential remains for further discoveries of ironstones and carbonatites where no historical REE exploration has occurred.

Sample ID	Latitude	Longitude	TREO %	Nd <sub>2</sub> O <sub>3</sub> +Pr <sub>6</sub> O <sub>11</sub> %	NdPr % of TREO	Prospect
GPR009	-23.981248	116.347250	0.32	0.11	34.30%	
GPR010	-31.780803	115.755302	0.48	0.16	33.30%	
GPR012	-23.980632	116.348347	8.01	2.80	35.00%	
GPR013	-23.980636	116.348298	4.32	1.53	35.40%	
GPR014	-23.980653	116.348220	3.12	1.19	38.10%	
GPR015	-23.980680	116.348160	2.18	0.78	35.80%	
GPR016	-23.980770	116.348014	4.17	1.69	40.50%	
GPR017	-23.980804	116.347975	3.06	1.15	37.60%	
GPR018	-23.980835	116.347808	0.48	0.12	25.00%	
GPR019	-23.980855	116.347771	6.44	2.30	35.70%	
GPR020	-23.980892	116.347747	5.27	1.93	36.60%	
GPR021	-23.980899	116.347705	3.35	1.30	38.80%	
GPR022	-23.980910	116.347674	1.70	0.61	35.90%	
GPR023	-23.980915	116.347637	2.72	1.02	37.50%	
GPR024	-23.980930	116.347600	0.67	0.20	29.90%	Lyon_11
GPR026	-23.980950	116.347554	2.93	1.02	34.80%	
GPR027	-23.980984	116.347493	2.07	0.65	31.40%	
GPR028	-23.981003	116.347462	0.42	0.10	23.80%	
GPR029	-23.981043	116.347442	2.17	0.66	30.40%	
GPR030	-23.981083	116.347425	1.58	0.50	31.60%	
GPR032	-23.981109	116.347391	3.05	1.04	34.10%	
GPR035	-23.981145	116.347289	3.38	1.27	37.60%	
GPR036	-23.981190	116.347293	2.17	0.67	30.90%	
GPR037	-23.981217	116.347287	0.55	0.15	27.30%	
GPR038	-23.981241	116.347273	1.22	0.47	38.50%	
GPR039	-23.981268	116.347251	0.65	0.18	27.70%	
GPR040	-23.981295	116.347236	0.50	0.14	28.00%	
GPR041	-23.981290	116.347287	1.12	0.37	33.00%	
GPR042	-23.981245	116.347306	0.38	0.11	28.90%	
GPR064	-23.952874	116.334555	0.31	0.12	38.70%	
GPR065	-23.952680	116.334375	0.29	0.11	37.90%	
GPR066	-23.952555	116.334379	0.87	0.40	46.00%	
GPR069	-23.952288	116.333653	1.23	0.55	44.70%	Lyon 12
GPR070	-23.951895	116.334011	0.62	0.29	46.80%	LyOn_12
GPR071	-23.951825	116.334241	1.05	0.57	54.30%	
GPR072	-23.949934	116.333349	0.38	0.14	36.80%	
GPR074	-23.950003	116.333385	0.52	0.25	48.10%	
GPR054	-23.955176	116.336116	0.58	0.27	46.60%	
GPR055	-23.955141	116.336124	0.71	0.32	45.10%	
GPR056	-23.955138	116.336073	1.06	0.47	44.30%	
GPR057	-23.955080	116.336018	0.72	0.32	44.40%	
GPR058	-23.954989	116.335930	0.79	0.37	46.80%	
GPR059	-23.954905	116.335850	1.45	0.75	51.70%	
GPR060	-23.954808	116.335833	0.57	0.27	47.40%	
GPR062	-23.954421	116.335629	0.47	0.20	42.60%	Lyon_13
GPR076	-23.959555	116.340292	0.69	0.26	37.70%	
GPR077	-23.958913	116.340107	1.36	0.80	58.80%	
GPR078	-23.957232	116.338215	1.14	0.58	50.90%	
GPR079	-23.957157	116.338159	0.76	0.34	44.70%	
GPR081	-23.957414	116.338653	0.97	0.50	51.50%	
GPR082	-23.957520	116.339012	2.53	1.15	45.50%	
GPR083	-23.957583	116.339252	2.18	1.05	48.20%	
GPR107	-23.938774	116.350821	1.73	0.75	43.40%	Lyon_27
GPR108	-23.938765	116.350828	1.77	0.79	44.60%	_, _, _,

Table 1: Significant (>0.1%  $Nd_2O_3+Pr_6O_{11}$ ) rock chip results (GDA94)

## Mt Clere REE and Lithium Project

During the quarter the Company was advised by DMIRS that exploration licence E52/4012 in the Gascoyne Region of Western Australia, considered to be prospective for REE's and lithium pegmatites had been granted (Figure 9).

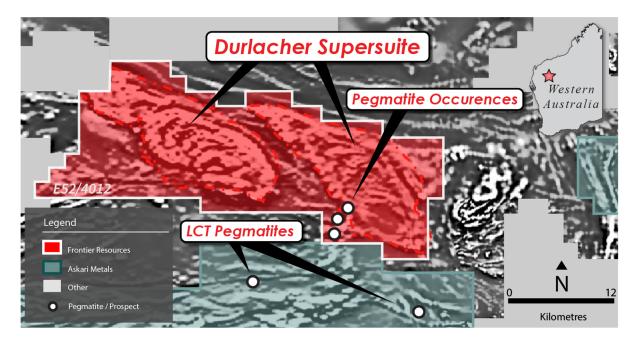


Figure 9. Mt Clere Project covering ~350km² of Durlacher Supersuite prospective for rare earths and lithium bearing pegmatites.

Frontier has commenced desk top studies of historical data and open file geophysics to be followed by a field reconnaissance program as soon as possible designed to identify and validate the potential of rare earth elements and lithium mineralisation within the Mt Clere project area.

Initial indications from the desk top work are that the area is highly prospective for both REE's and LCT pegmatites as evidenced by reports from neighbouring tenement holders. Follow on exploration will depend on the results of this initial work program but are expected to include a detailed and systematic exploration program comprising of a combination of soil geochemical sampling, rock sampling and high resolution geophysical surveys across the high priority target areas, prior to drilling programs being undertaken.

## Koolya High Purity Alumina Project, Western Australia

The project area is located in a proven high quality kaolin producing region with Tellus Holdings Sandy Ridge kaolin mine 30km away to the north-east and Kula Gold's (ASX.KGD) recent discovery 80km south (Figure 10).

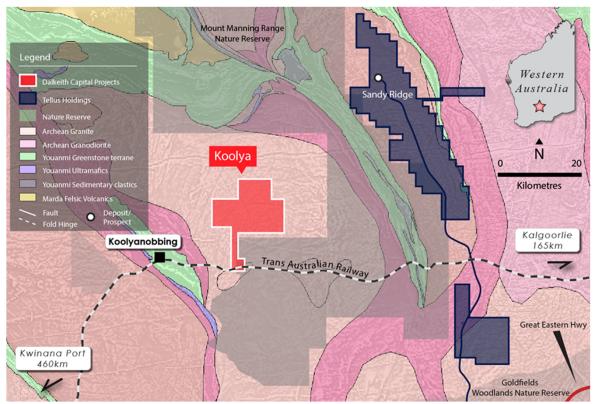


Figure 10. Location Map of the Koolya Project in Western Australia.

Koolya is a drill ready project with reconnaissance drilling to be undertaken to investigate the depth, thickness, ISO brightness, mineralogy, and alumina content over the project area. The tenure is highly supportive of a large-scale development, with no competing land ownership of Pastoral Lease or freehold farmland minimising barriers and costs of development compared to other ASX-listed projects. In the event of a potential development of a mine, there is excellent infrastructure with the Trans Australian Railway adjoining the project, allowing for increased economies of scale via bulk transport of up to 5,000t per train movement.

During the quarter DMIRS approved the applications lodged for Programmes of Work (PoW's) for the planned drill programme. Contracts have been let for re-establishment of access for the drilling with a decision on heritage clearances expected early in the next quarter.

## **Murraydium Project Drillhole Planning, South Australia**

The Murraydium Project is located in the south-eastern region of Naracoorte in South Australia's Murray Basin, consisting of four exploration licence blocks, covering an area of 873km², owned 100% by Southern Rare Earths (SRE) recently acquired by Frontier (Figure 11 and 12). The region is seeing a renewed focus for REE minerals with the success of Australian Rare Earths (ASX:AR3) at their 100% owned Koppamurra Project, host to an inferred mineral resource of 39.9 Mt @ 725 ppm TREO¹.

Post the end of the quarter, the South Australian Department of Mines and Energy granted the Exploration Licence EL6717. Subsequently the Company lodged a Programme for Environment Protection and Rehabilitation (PEPR) with the Department of Mines and Energy for approval for a drilling programme.

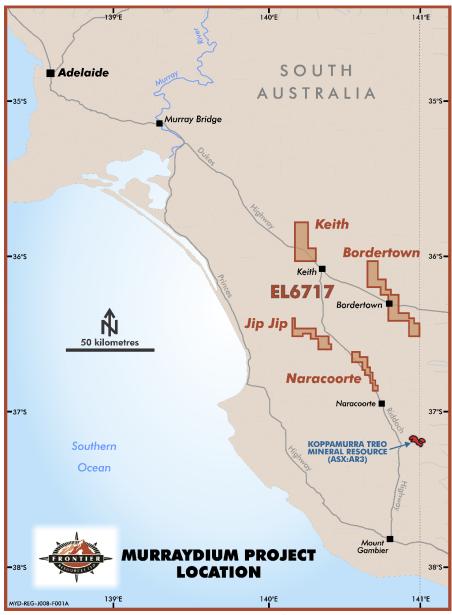


Figure 11. Location Plan of EL6717.

The Company proposes to undertake a review of available desktop literature including geological models and historical exploration data as well as field mapping to confirm prospective geological horizons to validate geological models and assist in exploration targeting. It is anticipated that extensive surface sampling and testing will be completed as required and that systematic drilling will be conducted in the early stages testing for a broad scale, relatively shallow deposit including but not limited to auger, push tube and aircore drilling.

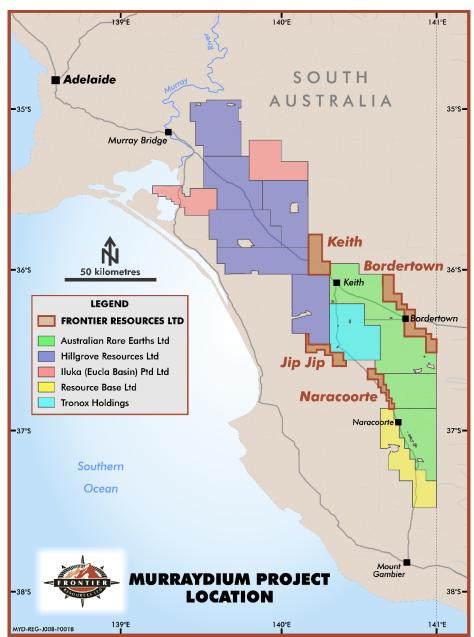


Figure 12. Southern Rare Earths Tenements, South Australia.

## Papua New Guinea (PNG)

During the quarter, Frontier Resources announced announce the renewal of its tenement EL2531 (Figure 13) in Papua New Guinea for a further two year term to 24<sup>th</sup> February 2023.

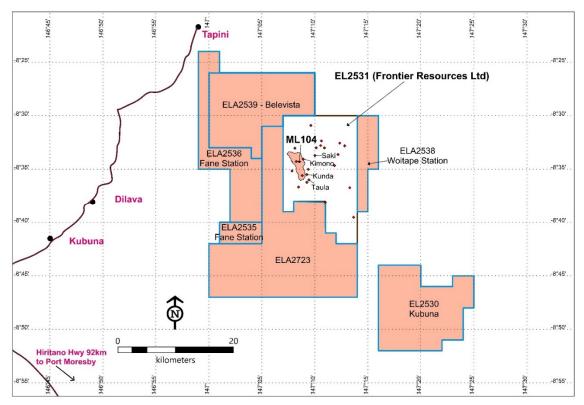


Figure 13. Frontier Gold Prospects Nearby Tolukuma Mine (ML104) and Associated ELs.

Frontier subsequently announced that it has signed an agreement with PNG based Lole Mining Limited for the sale of its wholly owned subsidiary Frontier Copper PNG Ltd, the holder of the Tolukuma Exploration Licence EL2531 which surrounds the Tolukuma gold mine. In addition, Frontier Copper (PNG) Ltd is also the applicant for an Exploration Licence ELA2529 which covers the old Sinivit Gold Mine in the Gazelle Peninsula on New Britain Island (Figure 14).

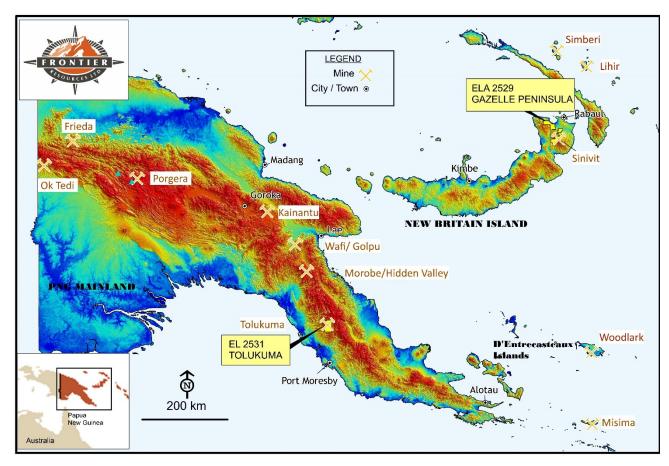


Figure 14. Location of Tolukuma EL2531 and Gazelle ELA2529.

Under a binding terms sheet, Lole has initially agreed to pay to Frontier A\$2m comprised of A\$500,000 cash and a further A\$1.5m either in cash or by way of the issue of fully paid ordinary shares in Lole. Further consideration of A\$1m is payable to Frontier if within 5 years an aggregate minimum of 500,000 oz of gold of not less than JORC (2012) indicated category of resource is identified on the tenements. The additional consideration is payable in either cash or shares (or a combination of cash and Lole Shares, at the election of Lole).

## **About Lole Mining Limited**

Lole Mining Ltd was incorporated in Papua New Guinea (**PNG**) as a public company under the Companies Act 1997. It has secured the rights to acquire the Tolukuma Gold Project, in PNG including five exploration permits surrounding the Tolukuma mine for a landholding of 1,600 km<sup>2</sup> across the Tolukuma gold structure. The company has also secured the Mt. Penck copper/gold exploration license on New Britain Island in PNG.

Lole is focusing its efforts on developing the Tolukuma Gold Project (Tolukuma) located in the Central Highlands, PNG. Tolukuma was an operating gold mine until 2015 and Lole plans to recommence operations. Tolukuma was discovered in 1986 and commissioned in 1995 and has since been operating mostly as an underground mine with a small open pit to source oxide ore for blending purposes.

Tolukuma has a history of strong gold production. For 19 years between 1996 and 2015 the mine produced 874,575 oz Au and 2,364,997 oz Ag. Gold production for the first 11 years of mine life totalled

some 667,342 oz Au or an average of 60,667 oz Au per annum (peaking at 85,715 oz Au) at an average milled grade of 15.75 g/t ranging from 9.6 g/t to 22.3 g/t.

#### Papua New Guinea (PNG) Saki Prospect Exploration

Frontier announced a Maiden Inferred Resource of 2.0 Mt @ 2.0 g/t gold for 128,000 oz Au estimated for the Saki system of gold veins that occur 3km to the north-east of the Tolukuma Gold Mine (Figure 13).

Frontier requested Steve Rose of Rose and Associates, Mining Geology Consultants (RMG), carry out a Mineral Resource estimate over the Saki Gold Prospect. Saki is an epithermal gold deposit, with mineralisation sitting in a series of north-west striking veins which outcrop or lie close to surface.

Saki has 46 historical diamond drill holes for a total of totalling 4191.85 metres. Recent mapping by Frontier geologists showed the extent and outcrop of mineralised veins and together with trenching results has allowed the Mineral Resource to be classified.

The Mineral Resource estimate of 2.0 Mt @ 2.0 g/t gold for 128,000 ounces Au (using a 1 g/t Au cutoff) has been classified using JORC 2012 (Table 1A).

Table 1A: Saki Mineral Resource Estimate using 1g/t Au cut-off

Classification	Volume (Mm3)	Tonnes (Mt)	Gold (g/t)	Ounces Au
Inferred	0.8	2.0	2.0	128,000

**Note:** Figures are rounded to reflect appropriate level of confidence. Apparent differences may occur due to rounding.

#### Papua New Guinea (PNG) Taula Prospect Exploration

Frontier completed total of **17** hand trenches (TT001 to TT016) at the Taula prospect in PNG (Figure 15) with at total **249** channel samples taken along with **56** rock samples. Final trench results included:

- 2m @ 25.85g/t Au + 312g/t Ag within a broader mineralised zone of 9m @ 9.25g/t Au + 112.60g/t Ag from quartz veins within trench TT016.
- 5m @ 7.05g/t Au + 27.62g/t Ag from trench TT014, a further 260m along strike from TT016 to the southeast within a vuggy quartz vein.

  Results from the final 38 rock samples include:
- 15.65g/t Au + 74.2g/t Ag and 13.35g/t Au + 64.4g/t Ag within outcrop along the vein system.

These results confirm the high grade tenor of gold and silver mineralisation of the Taula vein system that was initially discovered along strike from the Tolukuma gold vein system by Newmont prior to the commencement of mining.

The Taula vein occurs as a 1m to 8m wide structure, comprising sheeted 20cm to 1.0m wide pinch and swell, massive and sheared-brecciated quartz-sulphide-manganese-limonite veins, which trends NNW-NW and dips steeply to the SW. The Taula vein has been traced for 750m and mineralisation associated with a high-level multi-phase intrusive stock which intrudes a sequence of andesitic volcanics predominantly tuffs.

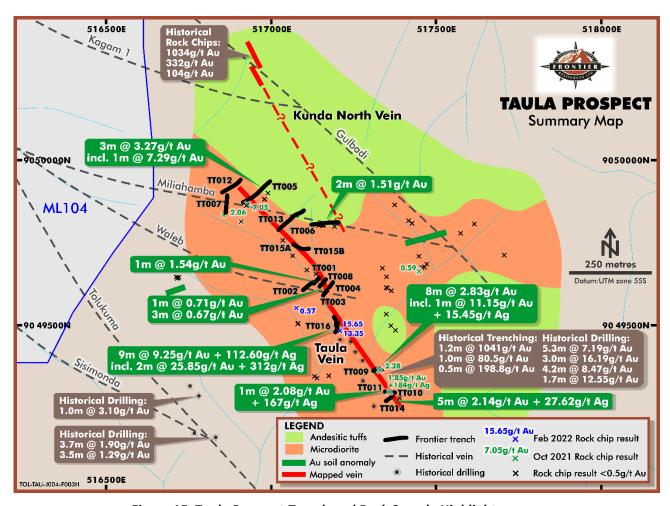


Figure 15. Taula Prospect Trench and Rock Sample Highlights.

## **Corporate and Finance**

#### **Dalkeith Capital Acquisition**

Following shareholder approval in December 2021 the Company completed the acquisition of Dalkeith Capital Pty Ltd on 4 January 2022 and issued the shareholders of Dalkeith 75,000,000 ordinary shares and 37,500,000 unquoted Performance Shares as follows:

18,750,000 Class C Performance Shares (expiring 4 January 2027); and

18,750,000 Class D Performance Shares (expiring 4 January 2027).

#### **Board Changes**

On 4 February 2022 the Company was pleased to announce the appointment of David Frances as Non-Executive Chairman.

Mr Frances is an international executive of nearly 30 years with a track record of transacting, discovering, funding, developing and operating assets in Australia and Africa. He has been a key figure in the transformation of several companies including Province Resources and their proposed 8GW green hydrogen project in Western Australia.

Mr Frances has served as Chairman both Executive and Non-Executive, President, Managing Director and Non-Executive Director for a variety of ASX and TSX listed and private Companies across a diverse range of business. He has dealt with multiple governments at all levels and specialises in the delivery of tough projects in complex jurisdictions. He is committed to seeing companies move towards adopting the global standard for Environmental, Social and Governance (ESG) metrics and disclosures as released by the World Economic Forum.

The Board further advised that Mr Alec Pismiris had resigned as Non-Executive Chairman of the Company.

## **Grant of Director Incentive Options**

On 21 March 2022 the Company advised that the Board had resolved, subject to shareholder approval, to grant Mr David Frances 11,250,000 options exercisable at \$0.045 expiring three years from the date of issue. The Company will seek shareholder approval for the issue of incentive options to Mr Frances at a forthcoming shareholder meeting on 12 May 2022. Further details of the proposed grant of options are set out in the meeting documents dated 8 April 2022.

## Lole Mining Ltd Sale Agreement and upcoming General Meeting

Under the Binding Terms Sheet entered into with Lole on 18 March 2022, in consideration for the acquisition of the Tolukuma Gold Project, Lole has agreed to pay Frontier A\$2 million comprised of A\$500,000 cash and a further A\$1.5m either in cash or by way of the issue of fully paid ordinary shares in Lole (Lole Shares), at the same issue price as the initial public offering to be conducted by Lole, or a combination of Lole Shares and cash, at the election of Lole (Initial Consideration).

Further consideration of A\$1m is payable to the Company if within 5 years of payment of the Initial Consideration an aggregate minimum of 500,000 oz of gold of not less than JORC (2012) indicated category of resource is identified on the Tenements (**Milestone**). The additional consideration is payable in either cash or Lole Shares (or a combination of cash and Lole Shares, at the election of Lole).

The Lole Shares will be issued at the volume weighted average price of Lole Shares over the 30 days in which trading in Lole Shares occurred prior to the announcement of the achievement of the Milestone.

Completion under the Binding Terms Sheet is conditional on:

- completion of due diligence enquiries by Lole in relation to Frontier PNG the Tenements and the proposed transaction generally;
- Lole obtaining renewal of ML 104 (which the Company understands is well advanced);
- Lole either successfully completing its planned initial public offering and listing on the ASX or some other recognised securities exchange or the securities in Lole being sold to another company that is listed on ASX or some other recognised securities exchange; and
- Frontier obtaining the approval of its shareholders including under ASX Listing Rule 11.4 (if required) and Frontier obtaining all other required approvals and authorisations required for the proposed transaction. Given that Lole has not yet determined whether or not it will undertake a listing directly (and if so whether or not that listing will be on ASX or some other recognised securities exchange) the application of Listing Rule 11.4 is not certain at this stage. Accordingly, on 8 April 2022, Frontier provided shareholders with a notice of a General Meeting to be held on 12 May 2022 to obtain conditional approval under Listing Rule 11.4 to cover this possibility and to satisfy this condition to the transaction (should it apply). If shareholders do not approve the transaction for the purposes of Listing Rule 11.4, then the transaction will not proceed.

In the event that the securities in Lole are sold to another company, then to the extent Frontier is to be issued securities in that entity (rather than Lole) the issue price calculated in the same manner as set out above.

Each of the above conditions are to be satisfied by 31 July 2022, or such later date as the parties agree, acting reasonably. If Lole does not successfully complete either its planned listing on a stock exchange (including the ASX) or the sale of its securities to another listed company, then the transaction will not proceed.

## **ASX Additional Information**

- 1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$92,000. Full details of exploration activity during the March quarter are set out in this report.
- 2. ASX Listing Rule 5.3.2: There was no substantive mining production and development activities during the quarter.
- 3. ASX Listing Rule 5.3.5: Payment to related parties of the Company and their associates during the quarter: \$73,607. The Company advises that this relates to non-executive directors' remuneration and additional technical consulting fees. Please see the Remuneration Report in the Annual Report for further details on Directors' Remuneration.

## Releases submitted to the during the Quarter included:

19/04/2022	Exploration Licence Granted at Murraydium Rare Earth Project
08/04/2022	Letter to Shareholders - Notice of General Meeting
08/04/2022	Notice of General Meeting/Proxy Form
31/03/2022	Gascoyne REE Project- Drilling Contract Awarded, Rig Secured
22/03/2022	Cleansing Notice
22/03/2022	Application for quotation of securities
21/03/2022	Proposed issue of securities

21/03/2022	High-Grade Rare Earth Discoveries Confirmed
18/03/2022	PNG Project Sale
18/03/2022	Trading Halt
14/03/2022	Half Yearly Report and Accounts
03/03/2022	Gascoyne REE Project Discovers Further Outcropping Ironstone
28/02/2022	128,000oz Au Maiden Inferred Resource at Saki Prospect PNG
15/02/2022	Tolukuma Tenement Renewed
11/02/2022	Multiple Priority 1 Targets at Gascoyne Rare Earths Project
07/02/2022	Response to ASX Price and Volume Query
04/02/2022	Initial Director's Interest Notice
04/02/2022	Final Director's Interest Notice
04/02/2022	Director Appointment/Resignation
04/02/2022	Appointment of Non-Executive Chairman
28/01/2022	Quarterly Activities Report
28/01/2022	Quarterly Cashflow Report
18/01/2022	Gascoyne Rare Earths Airborne Survey Data Review Underway
05/01/2022	Cleansing Notice
05/01/2022	Taula Trench & Rock Sample Results Include 1m @ 11.15g/t Au
04/01/2022	Acquisition of REE & High Purity Alumina Projects Completed
04/01/2022	Application for quotation of securities
04/01/2022	Notification regarding unquoted securities

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

Authorised by the Board of Frontier Resources.

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

#### **FRONTIER RESOURCES LTD**

#### Competent Person's Statement: Papua New Guinea and South Australian Projects

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by or compiled under the supervision of Peter Swiridiuk - Member of the Aust. Inst. of Geoscientists. Peter Swiridiuk is a Technical Consultant and Non-Executive Director for Frontier 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.

## Competent Person's Statement: Western Australian Projects

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

<sup>&</sup>lt;sup>1</sup> Adamas Intelligence September 2020

<sup>&</sup>lt;sup>2</sup> ASX.HAS: 5 May 2021 "Yangibana Project updated Measured and Indicated Resource tonnes up by 54%" b07ebf9d-03c.pdf (investi.com.au)

<sup>3</sup> ASX.DRE: 11 June 2021 "High-grade Rare Earth Element Ironstones outcropping at Mangaroon"

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

<sup>&</sup>lt;sup>5</sup> KulaGold | Kaolin discovered by Kula Gold at Southern Cross

<sup>&</sup>lt;sup>6</sup> Premium Kaolin for Ceramic Applications - Tellus Holdings

<sup>&</sup>lt;sup>7</sup> Backing Australia's critical minerals sector | Prime Minister of Australia (pm.gov.au)

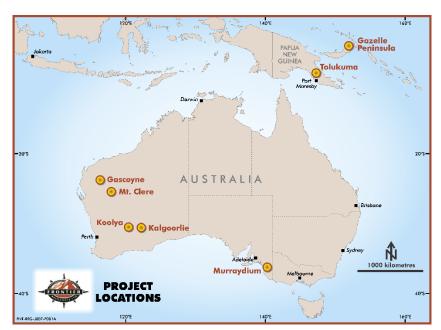
<sup>&</sup>lt;sup>8</sup> Allied Market Research, World High Purity (HPA) – Opportunities and forecasts 2015-2022 b564fa17-d73.pdf (investi.com.au)

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.

#### **ABOUT FRONTIER:**

Frontier is focused on Rare Earth Elements and battery metals, directly in line with global push for carbon neutrality driven by renewable energy (particularly wind turbine) installations and Electric Vehicle adoption driving global demand for the combination of rare earths. Following the recent acquisitions of Southern Rare Earths Pty Ltd and Dalkeith Capital Pty Ltd, Frontier has secured 100% interest in the Murraydium, Gascoyne, Koolya and Kalgoorlie projects which are all located in Australia. Frontier also owns 100% of the Tolukuma project in PNG.



Gascoyne Rare Earth Elements (REE) Project – These two tenement blocks will be the focus of exploration for light rareearth oxide's of Neodymium (Nd2O3) and Praseodymium ( $Pr_6O_{11}$ ) critical to the production of permanent magnets with demand set to increase 5x by 2030. The Gascoyne REE Project adjoins the worldclass 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. Rare earth elements are essential to the clean and technology revolutions taking place around the world. Their deposits are relatively fast to drill and develop, with low capex, simple metallurgy and a high value offtake product.

Mt Clere Project – Frontier has been granted an EL covering a significant new area prospective for rare earths and lithium pegmatites in the eastern

Gascoyne Province. The strategic pegging of the Mt Clere Project is a great opportunity to expand our exploration focus for rare earths and lithium to complement our existing Gascoyne Project. An initial desktop review has highlighted numerous sites of interest including some pegmatite occurrences. Ongoing review and compilation of historical datasets will identify additional targets to assist in future exploration programs.

Koolya High Purity Alumina (HPA) Project - Prospective for bright white kaolin and High Purity Alumina located 460km east of Perth. The Kaolin market is growing with High Purity Alumina investment in EV and battery market for ceramic coated separators driving global demand. Koolya is a drill ready project with reconnaissance drilling to be undertaken to investigate the depth, thickness, ISO brightness, mineralogy, and alumina content over the project area.

Kalgoorlie Project – This tenement application is located 50km east of Kalgoorlie, 5km southwest of the Jubilee Mining Centre and 6km northeast of the Queen Lapage Mining Centre. Once granted, initial exploration work will focus on the site of historic prospecting activity followed by an extensive geochemical sampling program, with Air Core drilling to follow pending positive results.

Murraydium Project – EL6717 consists of four tenement blocks are within the Murray Basin and along strike of the Australian Rare Earth's (ASX:AR3) Koppamurra Rare Earths (REE) prospect which already has established Mineral Resources at Red Tail and Yellow Tail. Recent drilling by AR3 confirms clay hosted rare earth mineralisation adjacent Frontier's Naracoorte Tenement Block with results including 2m @ 1008 ppm TREO. Frontier will undertake an initial significant drilling program along existing roads and tracks to identify occurrences of clay hosted REE mineralisation.

#### Frontier Resources Ltd Tenement Information (Australia)

Tenement			Area	Application	
Number and Name	Ownership	Sub-blocks	(sq.km)	/Grant Date	Expiry Date
E 09/2515 - Gascoyne (WA)	100% Dalkeith Capital Pty Ltd	47	147.02	17-Dec-21	16-Dec-26
E 09/2516 - Gascoyne (WA)	100% Dalkeith Capital Pty Ltd	25	78.35	17-Dec-21	16-Dec-26
E 77/2796 - Koolya (WA)	100% Dalkeith Capital Pty Ltd	47	138.78	05-Nov-21	04-Nov-26
E 77/2797 - Koolya (WA)	100% Dalkeith Capital Pty Ltd	28	82.68	05-Nov-21	04-Nov-26
E 27/648 - Kalgoorlie (WA)	100% Dalkeith Capital Pty Ltd	5	14.76	10-Jun-21	
E 52/4012 - Mt Clere (WA)	100% Dalkeith Capital Pty Ltd	191	591.63	23-Mar-22	22-Mar-27

EL6717 - Murraydium (SA)	100% Southern Rare Earths Pty Ltd	78	876.00	06-Apr-22	05-Apr-28
	Total of Granted Tenements	421	1,929.22		

**Tolukuma Project** - Frontier's only tenement in Papua New Guinea (EL2531) surrounds the Tolukuma gold Mining Lease ML104 in the Central Province, 70km North of the national Capital of Port Moresby. A new owner is currently being sought for ML104 to refurbish the mine. Given the proximity of high grade gold prospects within EL2531, Frontier is focusing on developing potential resources within EL2531 that will be required for future mill-feed once the mine has re-opened.

#### Frontier Resources Ltd Exploration Licence Information (Papua New Guinea)

Exploration Licence			Area		
Number and Name	Ownership	Sub-blocks	(sq.km)*	<b>Grant Date</b>	Expiry Date
EL2531 - Tolukuma	100% Frontier Copper PNG Ltd	65	223.00	25-Feb-19	24-Feb-23
ELA2529 - Gazelle	100% Frontier Copper PNG Ltd	211	719.51	N/A	N/A
	Total of Granted FI's	65	223 UU		

<sup>\*1</sup> sub-block approximately 3.41 sq.km

Notes: The PNG Mining Act-1992 stipulates that EL's are granted for a renewable 2 year term (subject to satisfying work and expenditure commitments).

The PNG Government maintains the right to purchase up to 30% project equity at "Sunk Cost" if/when a Mining Lease is granted. Licence EL2531 is currently subject to an extension renewal process.