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www.frontierresources.net.au

ASX: FNT

ASX Limited
Market Announcements Platform
27 October 2021

ACTIVITIES REPORT – QUARTER ENDED 30th SEPTEMBER 2021

- Results from the first eight trenches (ST01-ST08) and first 33 rock samples have been received and demonstrate the continuity of gold mineralisation between historical trench results along the Saki I, II and III veins. Surface continuity of veins will assist in determining viability of a maiden JORC Resource from historical drill holes.
 - Results from the first batch of 121 trench samples include **1m @ 9.13g/t Au (Saki I vein), 2m @ 6.28g/t Au (Saki I vein), 1m @ 8.02g/t Au (Saki II vein) and 5m @ 3.50g/t Au (Saki II vein)**.
 - Results from the first 33 of the 67 outcrop rock samples taken include **29.1g/t Au** at the Saki I vein, **9.93g/t Au** at the Saki II vein and **13.5g/t Au** and **11.75g/t Au** along the Saki III vein.
 - Acquisition of prospective ionic clay hosted rare earth element (REE) project in the Murray Basin heavy mineral province, South Australia.
 - Aircore drilling is being planned to investigate the project area for the presence of laterally extensive shallow clay hosted rare earth mineralisation.
 - Company's focus in REE directly in line with global push for carbon neutrality driven by renewable energy (particularly wind turbine) installations and Electric Vehicle (EV) adoption driving global demand for the combination of rare earths.
 - \$2,257,291 raised via a Placement and oversubscribed Rights Issue.
-

Frontier Resources Limited (**Frontier** or the **Company**) is pleased to provide its quarterly report for the three month period ending 30 September 2021. During the quarter the Company announced the acquisition of prospective ionic clay hosted rare earth element (**REE**) project in the Murray Basin heavy mineral province, South Australia and released results of the first eight trenches and rock sampling at the Saki Prospect in PNG.

Murraydium Rare Earth Project Acquisition

During the quarter the Company announced it had entered into a conditional Binding Heads of Agreement (**HoA**) to acquire all of the shares in Southern Rare Earths Pty Ltd (**Southern Rare Earths**) which holds four exploration licence applications in the Murray Basin region in South Australia that are considered to be prospective for ionic clay hosted rare earth elements (REE) (**Murraydium Project**).



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Figure 1. Location Map of the Southern Rare Earth's Pty Murraydium Projects in the south-eastern region of South Australia.

The Murraydium Project (**Project**) is located in the south-eastern region of Naracoorte in South Australia's Murray Basin, consisting of four exploration licence applications, covering an area of 873 square kilometres. The region is seeing a renewed focus for REE minerals with the success of Australian Rare Earths (ASX:AR3) at its 100% owned Koppamurra Project, host to an inferred mineral resource of 39.9 Mt @ 725 ppm TREO¹.

Tenement Details

Details of the tenements which cover the project area are set out in the table below. The four exploration tenements that make up the Murraydium Project, all are 100% owned by Southern Rare Earths and all have the same tenement identification number:

Murraydium Project	Tenement	Registered Holder	Ownership
Naracoorte	ELA 2021/00058	Southern Rare Earths Pty Ltd	100%
Bordertown	ELA 2021/00058	Southern Rare Earths Pty Ltd	100%
Jip Jip	ELA 2021/00058	Southern Rare Earths Pty Ltd	100%
Keith	ELA 2021/00058	Southern Rare Earths Pty Ltd	100%

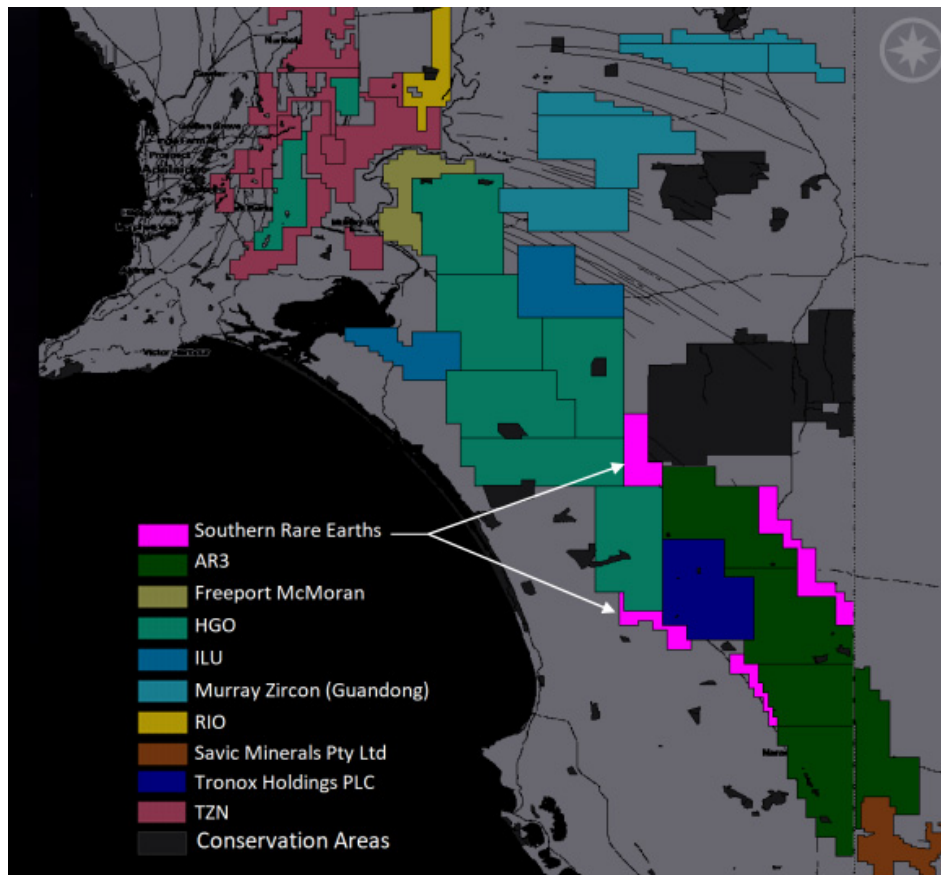


Figure 2. Tenement Map of the Southern Rare Earth's Pty Murraydium Projects in the south-eastern region of South Australia.

Regolith hosted REE deposits - background

There are several known types of regolith hosted REE deposits globally including, ion adsorption clay deposits, alluvial and placer deposits (Jowitt et al 2017). The development of potentially economic regolith-hosted REE deposits requires a combination of a REE enriched protolith and weathering processes that concentrate the REE in the regolith⁴. Ion adsorption type REE deposits are the dominant source of heavy REE currently mined in the world, with all economic examples of this type of deposit confined almost exclusively to areas underlain by granitic rocks in southern China⁵. REE mineralisation in the Murray Basin at Australian Rare Earths (ASX:AR3) Koppamurra Project is hosted by clay material interpreted to have been deposited onto a limestone base (Gambier Limestone) and accumulated in an interdunal, lagoonal or estuarine environment. The mineralogy of the clay is indicative of formation under mildly alkaline conditions in a marine or coastal environment from fine grained sediments either river transported or windblown thereby supporting this interpretation.

Mineralogical test work conducted on a clay sample from the Koppamurra Project area established that the dominant clay minerals are smectite and kaolin, and the few REE-rich minerals detected during the SEM investigation are not considered inconsistent with the suggestion that a significant proportion of REE are distributed in the sample as adsorbed elements on clay and iron oxide surfaces¹. Work to date suggests that the source of the REE at Koppamurra is most likely basalt associated alkali volcanics of the Newer Volcanics Province in south-eastern Australia, with the wider Koppamurra project area being considered prospective for rare earth mineralisation.

However, whilst Koppamurra clays display ionic character, and the deposit shares a number of similarities with both ion adsorption clay deposits and volcanic ash fall placer deposits, there are also a number of



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differences, with further work required before a genetic model for REE mineralisation at Koppamurra and the broader Murray Basin can be conclusively defined. In addition, further work is required to better define metallurgical recoveries, process flow sheets, effective mining methods, and project economics¹.

Critical Minerals - REE market and forecasts

Critical minerals are metals and non-metals that have important economic functions, cannot be easily substituted and face some degree of supply risk. Supply risks can stem from geological scarcity, geopolitical issues, trade policy or other factors, resulting in critical mineral lists differing by jurisdiction.

Critical minerals typically have an important role in industrial applications, but it is their vital, and rapidly growing, role in new technologies that is sparking interest and expectations of faster demand growth.

Economic security and supply-chain reliability is also driving attention in critical minerals, as some governments look to avoid the negative impacts of trade dependence and related market shocks. Increasing awareness of mineral sourcing ethics, including environmental and social impacts, is driving further interest in mineral supply chains (e.g. EU battery regulations and industry led cobalt traceability measures)⁶.

Permanent rare earth magnets are used extensively in low-emissions technologies like wind turbines and electric vehicles, and the forecast demand is expected to grow⁶ (Figure 3).

The average annual growth for the price of magnet metals over the next 10 years to 2030 (in real terms) is projected to be 8-9% (Figure 4). The global rare earths market was valued at around US\$2 billion in 2020, and is forecast to grow to around US\$12billion by 2030, up an average 16% a year⁷ (Figure 4).

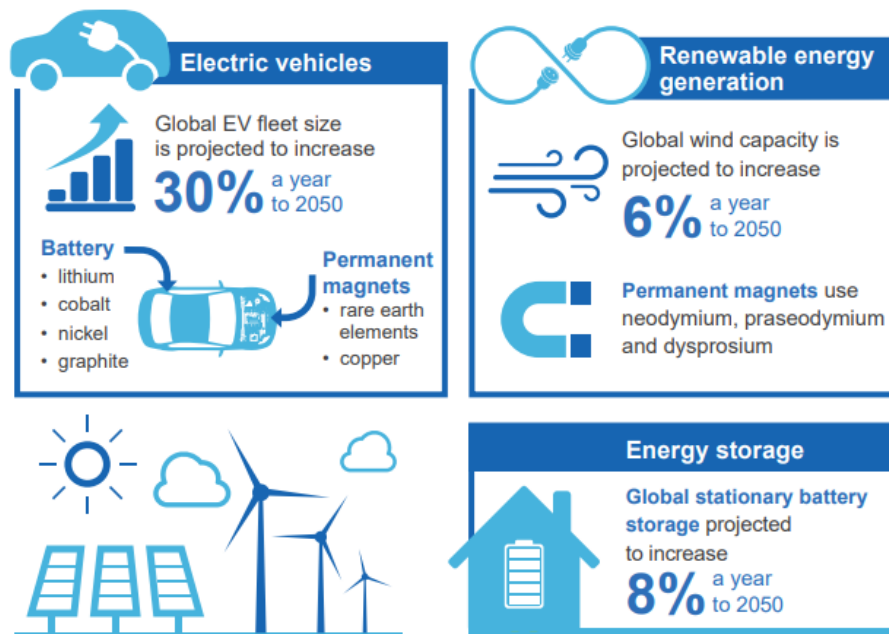


Figure 3. Critical Minerals such as rare earth elements that make up permanent magnets are expecting strong demand due to growing demand from electric vehicles and renewable energies such as wind turbines⁶.



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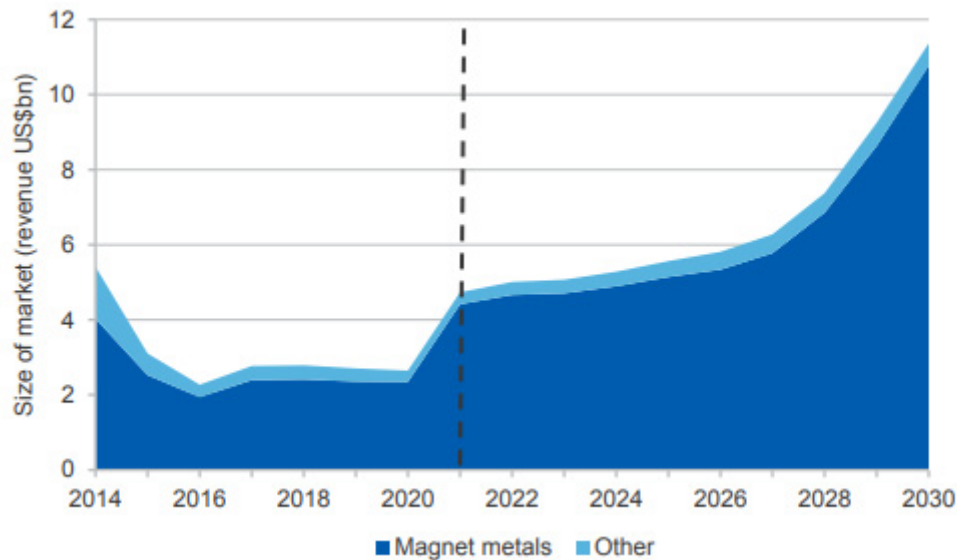


Figure 4. Rare earths market size outlook⁷. Source: Roskill (2021); Department of Industry, Science, Energy and Resources (2021).

Proposed exploration and study activities on the Murraydium Project

The Company proposes to undertake the following exploration and study activities:

- Review of available desktop literature including geological models and historical exploration data
- Field mapping to confirm prospective geological horizons to validate geological models and assist in exploration targeting
- Extensive surface sampling and testing as required
- Systematic drilling in the early stages testing for a broad scale, relatively shallow deposit including but not limited to auger, push tube and aircore drilling
- Surface excavations of costeans for sampling and bulk metallurgical studies

Key terms of the Transaction

Subsequent to the quarter on 1 October 2021 the Company completed the acquisition of 100% of the issued capital of Southern Rare Earths from the shareholders of the entity, none of whom were related parties to the Company. The consideration (**Consideration**) payable for the Acquisition pursuant to the HoA was approved by shareholders at a meeting held on 16 September 2021 and comprised of:

- 57,692,307 fully paid ordinary shares at a deemed issue price of \$0.013;
- Class A Performance Shares vest if within 24 months of the date of issue the Company achieves at least one drill intercept grading a minimum of 400ppm TREO over at least 10 metres.
- The class B Performance Shares vest if within 36 months of the date of issue the Company delineates a JORC compliant resource of a minimum of 15 million tonnes grading a minimum of 500ppm TREO.

In addition to the Consideration, Frontier has reimbursed Project Risk Pty Ltd, a shareholder of Southern Rare Earths, \$35,000 (plus GST) being expenses incurred in applying for and maintaining the tenement applications.



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Capital Raising & Underwritten Rights Issue

In conjunction with the Acquisition the Company received firm commitments for a capital raising of \$1,300,000 (before costs) at a price of \$0.013 per share by way of a placement to professional and sophisticated investors (**Capital Raising**). CPS Capital and Inyati Capital acted as Joint Lead Managers (**JLMs**) to the Capital Raising. The JLM's were issued 10,000,000 options over Frontier Shares at an issue price of \$0.00001 (each exercisable at \$0.02 and expiring 3 years from the date of issue).

The Capital Raising and issue of new shares and options was completed on 6 August 2021. The funds raised from the Capital Raising will be applied to exploration and development work on the Company's Tolukuma Gold Tenement, the Murraydium Project, general working capital purposes and business development purposes.

In conjunction with the Placement the Company undertook a fully underwritten non-renounceable entitlement offer of 73,637,743 new Shares at an issue price of \$0.013 per new Share on the basis of one (1) new Share for every eight (8) existing shareholders held to raise \$957,291 (**Rights Issue**).

The Rights Issue closed on 15 September 2021 heavily oversubscribed. A total of 52,339,544 new Shares were issued and allotted on 22 September 2021 to eligible shareholders who subscribed under the offer. On 1 October 2021 allotment of the shortfall Shares was completed. In accordance with the terms of the Underwriting agreement, the Underwriter, CPS Capital was issued 10,000,000 options over Frontier Shares at an issue price of \$0.00001 (each exercisable at \$0.02 and expiring 3 years from the date of issue).

Saki Initial Results Include 29.1g/t Gold in Rock Sample

During the quarter the Company announced the results of the first of two batches of assay results from its recently completed trench and rock sampling program at Saki.

Results of 121 trench samples, from the first eight hand dug trenches (ST01 to ST08) have been received from a total of 374 samples taken along 33 hand dug trenches. Continuity of gold mineralisation has been established over 300m between Degom and Mandi Creeks (Figure 5). Significant gold grades (Table 1) include:

1. ST01: **10m @ 2.56g/t Au** and **1m @ 9.13g/t Au** along Saki I vein in Degom Creek
2. ST02: **8m @ 2.22g/t Au** including **2m @ 6.28g/t Au**; **1m @ 8.26g/t Au** along Saki I vein
3. ST05: **4m @ 4.53g/t Au** including **1m @ 8.02g/t Au** along Saki I-II veins in Mandi Creek
4. ST07: **1m @ 0.52g/t Au**; **2m @ 0.82g/t Au**; **2m @ 2.08g/t Au** along Saki II vein
5. ST08: **5m @ 3.50g/t Au** including **1m @ 5.01g/t Au** along Saki II vein

Results of 33 rock samples have been received from a total of 67 samples taken by Frontier along creeks and outcrop sites. A total of 17 samples results are greater than 2g/t Au with 5 greater than 5g/t Au (Table 2 and Figure 6).

Along the Saki I and II veins, rock sample results include:

- **29.1, 9.93, 8.39 and 4.09g/t Au.**

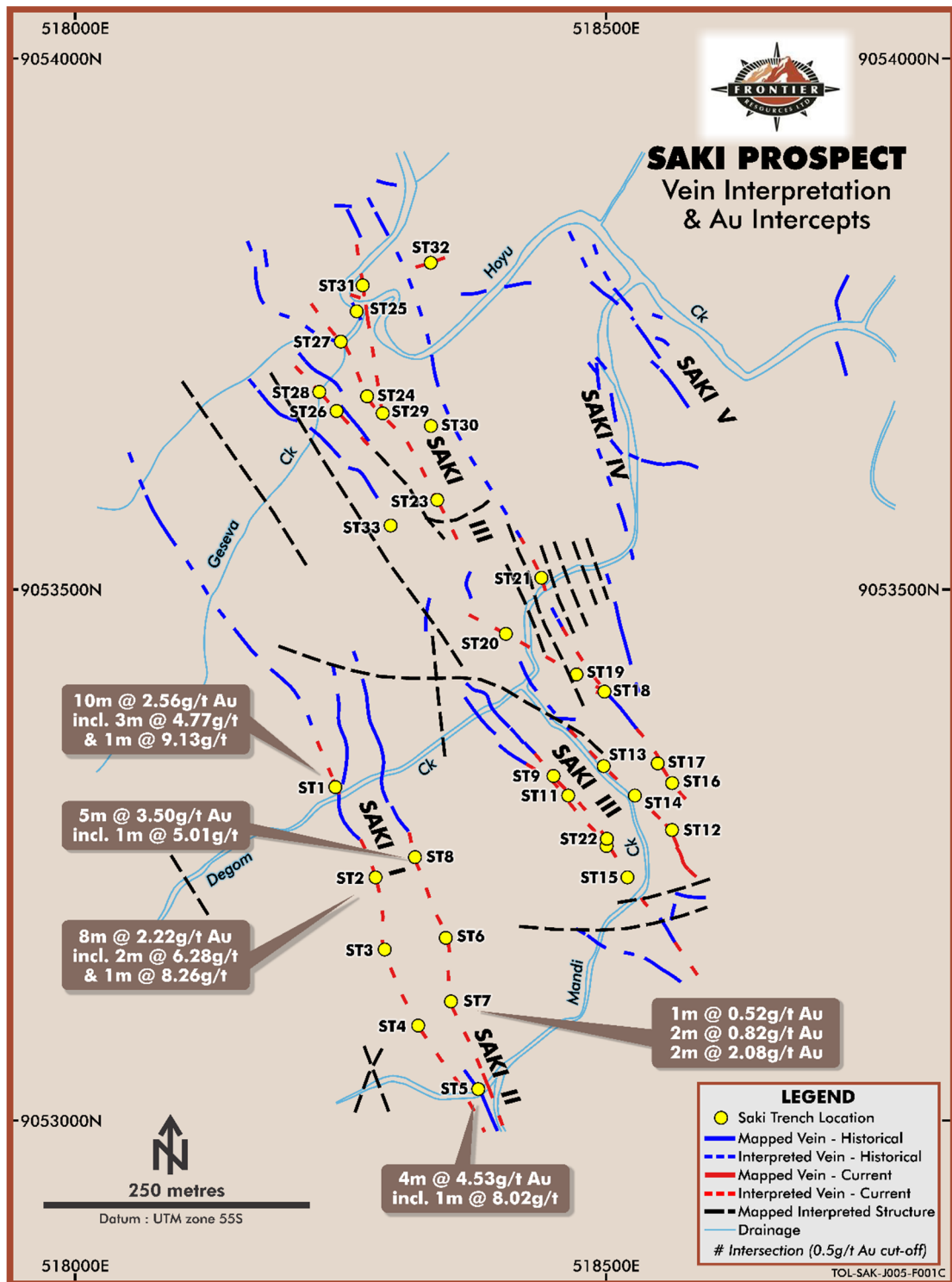
Along the Saki III vein, rock samples include:

- **11.75, 9.55, 6.96, 5.38 and 4.08g/t Au.**



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Table 1: Saki ST01 to ST08 Trench Highlights (Refer to Appendix A).

Trench ID	Intersection (0.5g/t Au cut-off)	Location Description
ST01	10m @ 2.56g/t Au + 2.15g/t Ag incl. 3m @ 4.77g/t Au + 1.38g/t Ag and 1m @ 9.13g/t Au + 3.28g/t Ag	Saki I Vein outcrop. Degom Creek
ST02	8m @ 2.22g/t Au + 2.42g/t Ag incl. 2m @ 6.28g/t Au + 6/10g/t Ag and 1m @ 8.26g/t Au + 5.84g/t Ag	Saki I Vein SE
ST05	4m @ 4.53g/t Au + 1.90 g/t Ag incl. 1m @ 8.02g/t Au + 2.81g/t Ag; 2m @ 1.12g/t Au + 5.50g/t Ag; 5m @ 1.11g/t Au + 1.54g/t Ag; 5m @ 0.90g/t Au + 2.35g/t Ag	Saki I-II Veins. Mandi Creek
ST07	1m @ 0.52g/t Au; 2m @ 0.82g/t Au; 2m @ 2.08g/t Au.	Saki II Vein SE
ST08	5m @ 3.50g/t Au + 1.23g/t Ag incl. 1m @ 5.01g/t Au.	Saki II Vein SE

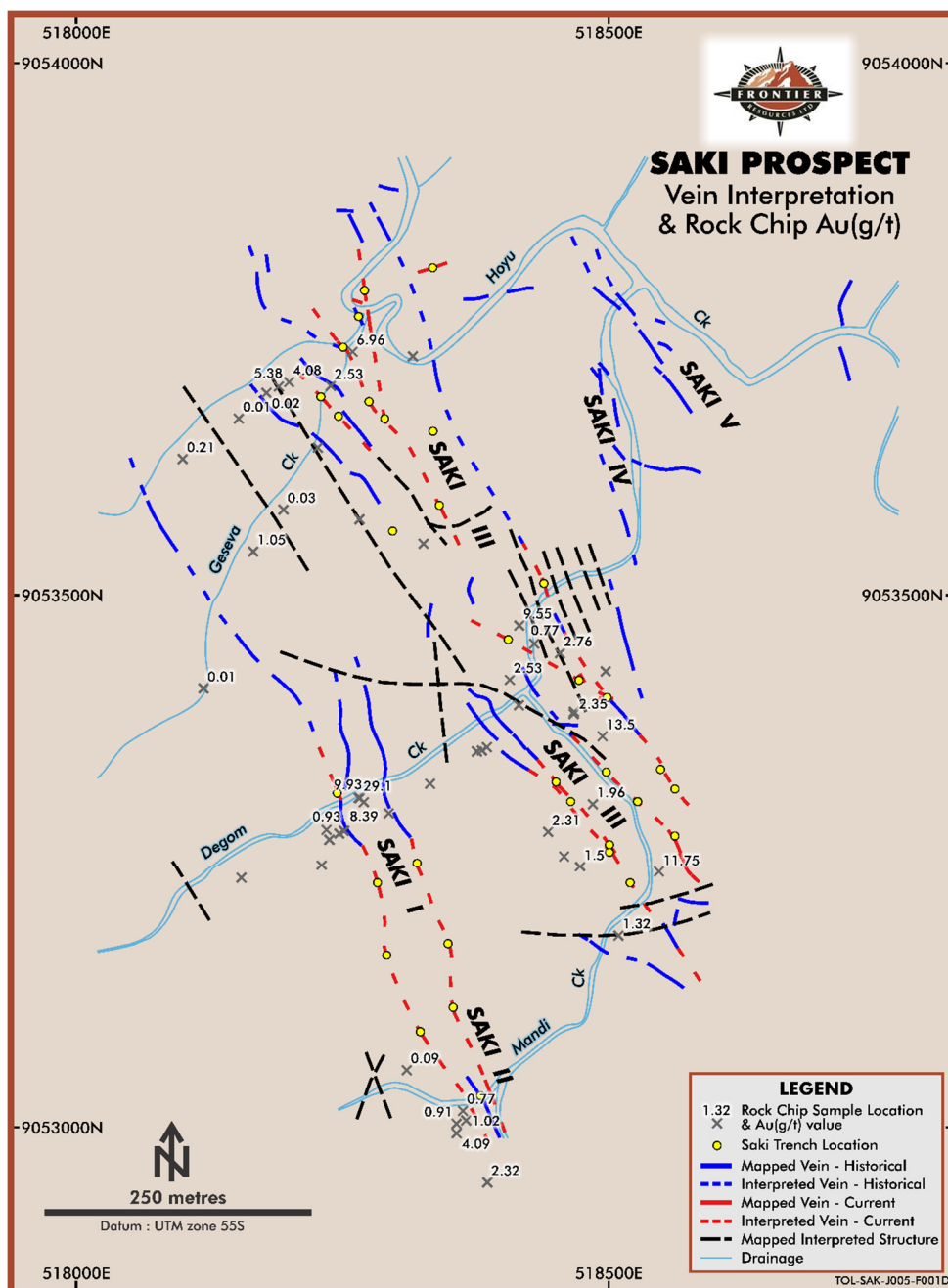


Figure 6: Frontier Initial 33 Rock Sample Results.



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Table 2: Results from 33 Rock Samples Received to date from a Total of 67 taken by Frontier.

Sample ID	Easting	Northing	Description	Au (g/t)	Ag (g/t)
98155	518369	9053030	Saki splay vein. Quartz sulphide vein	4.09	3.77
98156	518398	9052984	Saki II vein 1-2 m wide with crystalline quartz	2.32	8.7
98157	518247	9053315	Host volcanic rock extremely silicified with vugs. Saki I outcrop	0.933	4.08
98158	518322	9053089	Extreme to complete silicification of andesite host rock	0.09	0.19
98159	518278	9053345	Oxidised stockwork-sheeted crystalline quartz vein. Vuggy texture	29.1	19.45
98160	518277	9053345	A 20 cm wide quartz sulphide vein. Saki II vuggy texture along fractures	9.93	32.5
98161	518506	9053403	Massive 1m outcrop. Milky crystalline & translucent grey quartz vein	13.5	29.3
98173	518282	9053341	Milky crystalline quartz occur as clasts. Vuggy quartz	8.39	35.6
98174	518375	9053051	Milky crystalline quartz	0.769	20.8
98175	518378	9053042	Milky crystalline quartz	1.025	23.2
98176	518369	9053039	Translucent, moss & comb quartz with small clasts of milky quartz	0.907	29.4
98177	518521	9053215	Quartz vein outcrop part of Saki III vein system	1.32	9.04
98178	518559	9053275	New vein 1m wide	11.75	14
98179	518497	9053339	New vein 1m wide. Milky & translucent	1.955	12.55
98180	518485	9053280	50cm wide quartz vein with moss/saccharoidal textures, sulphides leached out	1.5	4.32
98181	518455	9053313	2m wide massive quartz vein with translucent crystalline	2.31	16.35
98182	518428	9053507	30cm vein with wide alteration halo	9.55	13.55
98183	518419	9053456	10cm quartz veins. Translucent, comb/saccharoidal quartz	2.53	6.68
98184	518442	9053490	50cm quartz vein in 2m wide structure	0.771	4.16
98185	518466	9053481	40cm translucent, saccharoidal quartz	2.76	1.53
98186	518479	9053424	20cm quartz outcrop. Saccharoidal, vuggy with clay-FeO stains coating	2.35	1.6
99918	518112	9053664	Quartz vein with strong wall rock alteration	0.207	2.71
99919	518165	9053702	Non-quartz vein structure	0.012	1.15
99920	518191	9053726	Drusy quartz vein	0.019	0.1
99921	518202	9053732	Drusy quartz vein	5.38	6.93
99922	518212	9053736	Crustiform, drusy quartz vein hosted in the volcanics	4.08	7.85
99923	518146	9053518	Quartz vein with breccia like texture hosted in volcanics	0.368	2.71
99924	518132	9053448	Quartz vein hosted in agglomerate	0.011	0.04
99925	518166	9053561	Quartz vein hosted in intrusive	1.8	4.25
99926	518178	9053577	Quartz vein hosted in intermediate intrusive	1.045	5.53
99927	518207	9053616	Quartz vein in coarse grained mafic intrusive	0.027	1.04
99928	518251	9053732	Quartz vein hosted in coarse grained mafic intrusive	2.53	79.6
99929	518271	9053764	Quartz vein hosted in med-coarse grained mafic intrusive	6.96	6.81

Geological and vein mapping (Figure 7) has been an integral part of the fieldwork program to assist in defining vein continuity at surface between historical drillholes. Geological 1:500 scale maps across Saki I, II and III veins have been completed and will be reviewed by an independent Resource consulting group as part of the process to define a Mineral Resource.



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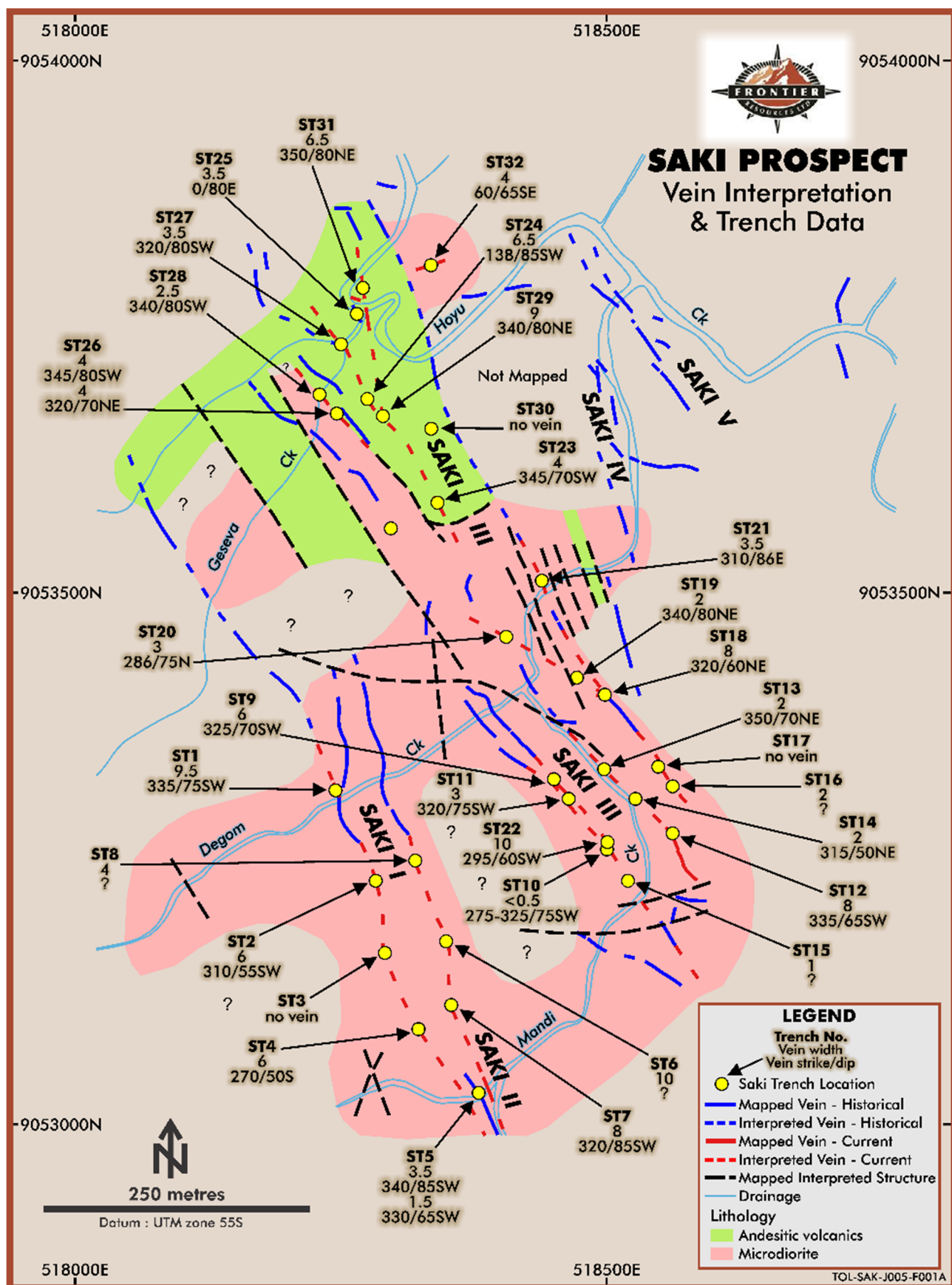


Figure 7: Saki Geology and Vein Orientation Map.



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Board Changes

Subsequent to the quarter on 22 October 2021 the Company announced that Mr Brian Thomas accepted an invitation to join the Board of Frontier and was appointed as a Non-Executive Director effective 22 October 2021.

Mr Thomas is a very experienced Director and Corporate Executive with significant domestic and international resources management experience. He is the principal of a boutique corporate advisory practice working with small to mid-market capitalisation companies and investor groups predominantly in the resources industry overseeing market oriented technical reviews plus advising on corporate finance, mergers & acquisitions and investor relations. He has held both Executive and Non-Executive Director roles with numerous ASX listed and unlisted companies after an extensive career in the financial services sector in corporate stockbroking, investment banking, funds management and corporate banking. He has more than 35 years of mining and exploration industry experience in a broad range of commodities from precious and base metals, bulk and industrial minerals, diamonds plus oil and gas.

Mr Thomas graduated from the University of Adelaide with a BSc in Geology and Mineral Economics, the University of Western Australia Business School with an MBA and the Securities Institute of Australia (now FinSIA) with a certificate in Applied Finance and Investment.

The Board further advised that Ms Jessica O'Neil had resigned as a Director of the Company. The Board wishes to thank Ms O'Neil for her contribution made during her tenure as a Non-Executive Director.

ASX Additional Information

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$150,000. Full details of exploration activity during the September 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: \$62,105. 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:

30/07/2021	Trading Halt
3/08/2021	Proposed issue of securities - FNT
3/08/2021	Murraydium Rare Earth Project Acquisition
6/08/2021	Notice Under Section 708A
6/08/2021	Application for quotation of securities - FNT
12/08/2021	Details of Company Address
13/08/2021	Appendix 3G
17/08/2021	Notice of General Meeting, Notice of Access and Proxy Form
17/08/2021	Notice of General Meeting/Proxy Form
19/08/2021	Becoming a substantial holder
24/08/2021	Ceasing to be a substantial holder
27/08/2021	Proposed issue of securities - FNT



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27/08/2021	Cleansing Notice Under Section 708AA(2)(F)
27/08/2021	Non-Renounceable Entitlement Offer Document
27/08/2021	Investor Presentation August 2021
30/08/2021	Saki Initial Results Include 29.1g/t Gold in Rock Sample
16/09/2021	Results of Meeting
20/09/2021	Notice of Rights Issue Shortfall
22/09/2021	Application for quotation of securities - FNT
24/09/2021	Change of Director's Interest Notice
28/09/2021	Closing Date for Nominations
29/09/2021	Annual Report to Shareholders
29/09/2021	Appendix 4G and Corporate Governance Statement

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

- ¹ 29/6/21 - Prospectus - Australian Rare Earths Limited (ar3.com.au)
- ² Adamas Intelligence September 2020
- ³ Jowitt SM., Wong VNL., Wilson SA., Gore O., 2017. Critical metals in the critical zone: controls, resources and future prospectively of regolith hosted rare earth elements. Australian Journal of Earth Sciences, 64:8, 1045-1054, DOI: 10.1080/08120099.2017.1380701
- ⁴ Sanematsu K., and Watanabe Y., 2016. Characteristics and Genesis of Ion Adsorption-Type Rare Earth Element Deposits. Society of Economic Geologists Inc. Reviews in Economic Geology V.28, pp 55-70
- ⁵ Outlook for Selected Critical Minerals (industry.gov.au)
- ⁶ Roskill (2021) - Department of Industry, Science, Energy and Resources (2021)

Authorised by the Board of Frontier Resources.

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

FRONTIER RESOURCES LTD

Competent Person Statement:

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.

Frontier Resources Ltd Exploration Licence Information (Papua New Guinea)

Exploration Licence Number and Name	Ownership	sub-blocks	AREA (sq.km)*	Grant Date	Expiry Date
EL2531 - Tolukuma	100% Frontier Copper PNG Ltd	65	223.00	25-Feb-19	24-Feb-21
ELA2529 - Gazelle	100% Frontier Copper PNG Ltd	211	719.51	N/A	N/A
Total of Granted EL's		65	223.00		

*1 sub-block approx. 3.41 sq.km

NB: The PNG Mining Act-1992 stipulates that EL's are granted for a renewable 2 year term (subject to satisfying work and expenditure commitments) and the PNG Government maintains the right to purchase up to 30% project equity at "Sunk Cost" if/when a Mining Lease is granted.

Frontier Resources Ltd Exploration Licence Information (Australia)

Exploration Licence Number and Name	Ownership	AREA (sq.km)	Grant Date	Expiry Date
ELA2021/00058	100% Southern Rare Earths Pty Ltd	873.00		

NB: Tenement EL2531 currently subject to an extension renewal process.

There was no change in the ownership status of the Company's tenements during the quarter.