22 April 2024

HIGH PRIORITY REE AND PEGMATITE TARGETS IDENTIFIED IN BRAZIL

- **Minas Gerais state application 830177/2024 covering 1,087Has a high priority target for pegmatites.**
- **Goiás state application 860164-5/2024 covering 3,262Has a high priority target for rare earth elements (REE) in ionic clays or carbonatites.**

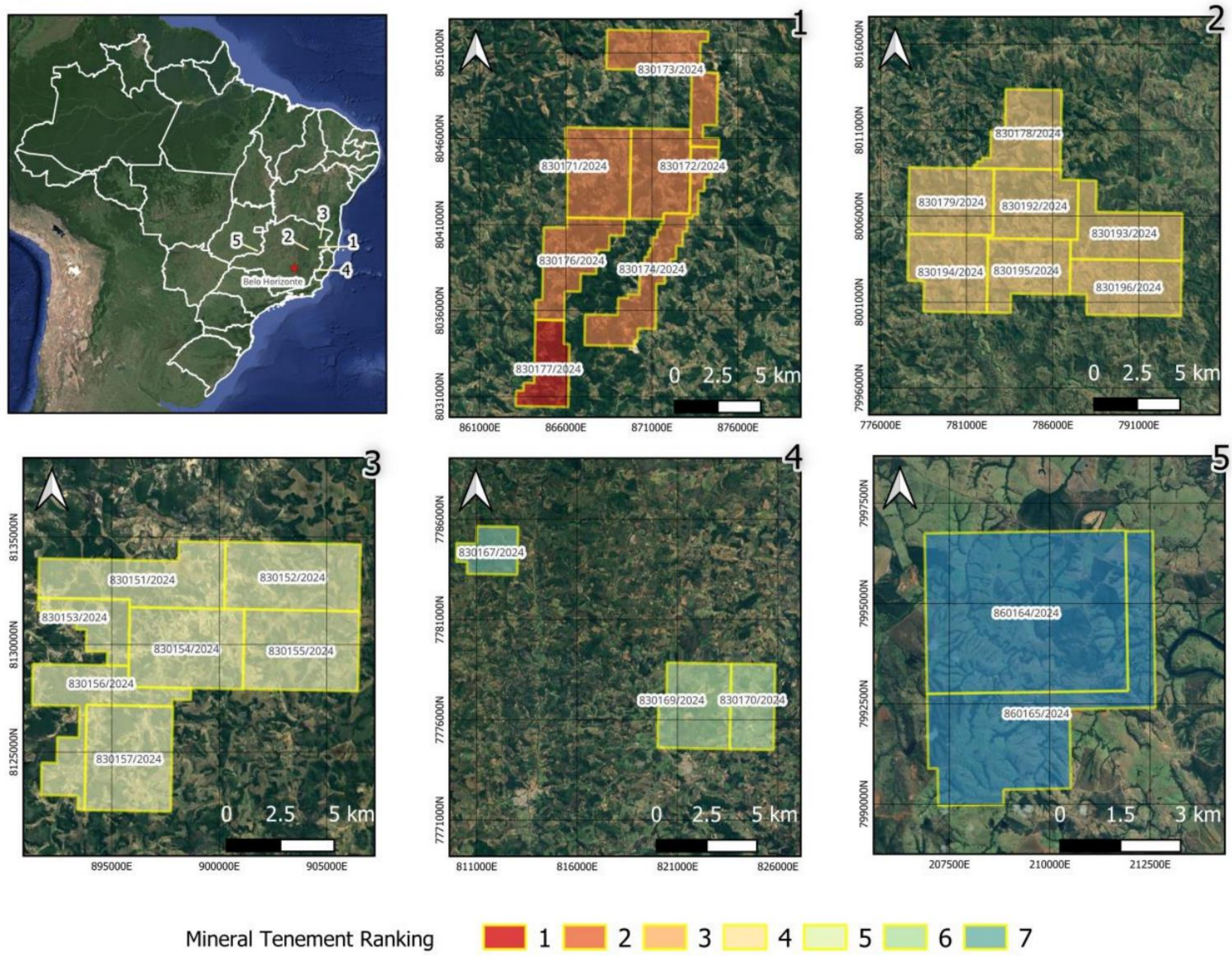
Patagonia Lithium Ltd (ASX:PL3, Patagonia or **Company)** is pleased to advise that through geophysics, artificial Intelligence, machine data analysis and reference to existing deposit structures it has identified and prioritised exploration targets for its Brazilian concessions as follows:

LCT Pegmatites – lithium hard rock

The concessions will be explored for lithium in the order below:

State	Mineral Tenement	Ranking Pegmatites	Parameters
MG	830.177/2024	1	Partially embedded within the context of lithium mineralisation (metasediments), the targeting results exhibiting the highest similarity values align with the NE-SW trend in proximity to the area, but not inserted in the tenement. The ternary geophysical pattern, F factor, and U/Th ratio serve as characteristic indicators for lithium mineralisation.
MG	830.172/2024 830.174/2024 830.171/2024 830.173/2024 830.176/2024 830.178/2024	2	Partially integrated within the context of lithium mineralisation in both metasediments and leucogranites, the ternary geophysical pattern appears anomalous, but distant from lithium occurrences. It exhibits areas of potassic alteration enhancement and is proximal to the trend of targeting similarity.
MG	830.179/2024 830.192/2024 830.193/2024 830.194/2024 830.195/2024 830.196/2024	3	Embedded within ancient volcano-sedimentary rocks of the Archean era, predating the formation of metasediments, it showcases a pattern of low similarity with lithium occurrences identified through targeting. The ternary geophysical pattern appears diffuse, featuring restricted zones with elevated F parameter values. While geographically close, they do not share the same mineralisation context (metasediments).

LCT Pegmatites Ranking



Rare Earth Elements

State	Mineral Tenement	Ranking	Parameters
GO	860.164/2024	1	It is situated within the local anomaly of Uranium and Thorium. This anomaly encompasses the metasomatic zone identified through ternary geophysical interpretation based on MVI, ASA, and DZ, as well as the theoretical model derived from the proportions observed in Araxá - MG. The local anomaly can be divided into two parts. The first of greater magnitude, aligns with the 125 AZ alignment and coincides with the confluence of the drainage network in a topographic low, suggesting a potential accumulation of radioactive minerals rich in Rare Earth Elements. The second anomaly, located to the northwest of the area, also enriched in Uranium and Thorium, sits atop a topographic high. This anomaly may represent an anomalous finitized zone, when associated with the context of the host rock (schist).

State	Mineral Tenement	Ranking	Parameters
GO	860.165/2024	**2**	It is situated within the regional Uranium and Thorium anomaly, bordering the Catalão I carbonatite. The anomaly's pattern is concentric to the core of the carbonatite. This anomaly encompasses the zones of silicification and metasomatism identified through MVI, ASA, and DZ analyses, as well as those derived from the theoretical model based on the proportions observed in Araxá-MG.
MG	830.153/2024 830.156/2024 830.152/2024 830.155/2024 830.151/2024 830.154/2024 830.157/2024	**3**	It is located within two Cambrian granite suites: the Faísca Suite, composed of leucocratic S-type granites, and the Aimorés Suite, consisting of Type I or C granites characterized by high-K calc-alkaline composition. The ternary geophysical pattern reveals enrichment in Uranium, Thorium, and Potassium. Differentiated granites, especially those abundant in REE, have the capacity to generate ionic adsorption clay deposits through weathering processes.

The Company is arranging for a field crew to spend 4-5 days soil and rock chip sampling and mapping the faults at a finer scale at 860164-5/2024 for rare earths. GE21 will identify and describe rock outcrops, analysing the local geomorphology, and observing and describing the weathering mantle that may contain REE. A pan concentrate survey is planned, to identify heavy REE-bearing minerals, such as monazite, xenothermite and bastnasite in ionic clays and outcrops.

Phillip Thomas, Executive Chairman commented "We are delighted with the quality of the targets we have put together through research and satellite geophysics processing. As soon as the concessions are granted, we will commence ground exploration."

Authorised for release by the Board of the Company.

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Competent Person Statement

The information in this announcement that relates to exploration results is based on, and fairly represents information compiled by Phillip Thomas, MAIG FAusIMM, Technical Adviser of Patagonia Lithium Ltd and is Executive Chairman, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Thomas has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Thomas consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

About Patagonia Lithium Ltd

Patagonia Lithium has two major lithium brine projects – Formentera/Cilon in Salar de Jama, Jujuy province and Tomas III at Incahuasi Salar in Salta Province of northern Argentina in the declared lithium triangle. It has also applied **for 41,746 Has** of concessions exploring for **ionic REE clays, Niobium, and lithium in pegmatites**. Four exploration concession packages have been applied for. 830178/2024 has been granted.

Since listing on 31 March 2023, recharge water analysis, surface sampling and MT geophysics have been completed in preparation of an upcoming drill program at Formentera, where the first well JAM 24-01 has been completed with MT Geophysics at Tomas III showing low resistivity and very prospective. In July 2023, a 13 hole drill program was submitted for approval which was granted in January 2024. Samples as **high as 1,100ppm lithium** (2 June 2023 announcement) were recorded at Formentera and resistivity values as low as 0.3Ω.m were recorded during the MT Geophysics survey at Formentera making the project highly prospective. The Company confirms it is not aware of any new information or data that materially affects the information in this announcement.

JORC Code, 2012 Edition – Table 1 report Patagonia Lithium Ltd ASX:PL3 Goias State applications 830164/2024 and 830165/2024

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• There was no sampling as the application concession 830164/165 is still waiting to be granted. Publicly available radiometric data was acquired from the bureau of mineral resources in the state of Goias, Brazil. • The geophysics that measure Uranium, Thorium and Potassium were derived from satellite data accessing the Data from CPPLL, Codemge/Codemig, Metago, and others projects publicly available. • Acquisition and processing of LANDSAT, Sentinel 1, ASTER scenes, pre-processing, spectral analysis and evaluation/prioritization of results and the evaluation and processing of geophysical data was undertaken. • Public data from technical papers, the Catalao REE deposit and references on field sampling, drilling, geological lithologies and distances from source were collated.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic,*	• No drilling was undertaken.

Criteria	JORC Code explanation	Commentary
	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 method, etc).	
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• No sampling was undertaken. The geophysics data analysed that included radiometric, magnetic and gravity data is publicly available.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• No logging was undertaken but the Artificial Intelligence model did reference sampling ratios of elements and distances from deposits of occurrences of rare earths. See sample of table below for REE. Araxa is a closeby deposit.

	Carbonatite complex	Total (km^2)	Carbonatite		Silicate rocks		Fenitisation		Other		Reference
			km^2	%	km^2	%	km^2	%	km^2	%	
1	Amba Dongar	6.7	3.2	47.7	2.6	39.4	0.7	10.3	0.2	2.5	William-Jones and Palmer (2002)
2	Otjisazu	11.9	0.9	7.9	10.7	90.0	0.3	2.1			Gunthorpe and Buerger (1986)
3	Araxá	21.2	7.0	33.0	5.4	25.4	8.8	42.6			Traversa et al. (2001); Issa Filho et al. (1984)
4	Panda Hill	9.8	1.9	19.3			7.9	80.4	0.03	0.3	Basu and Mayila (1986)
5	Naantali	3.5	0.2	4.3			3.4	95.6			Woodard and Hölttä (2005)
6	Fen	6.5	3.3	50.7	0.6	9.7	2.6	39.6			Kresten and Morogan (1986)
7	Callander Bay	7.8	0.002	0.03	0.3	4.0	7.5	96.0			Currie and Ferguson (1971)
8	Kangankkunde	2.9	0.2	6.2			2.7	93.8			Bowden (1985)
9	Sokli	62.9	21.6	34.4	13.5	21.5	27.8	44.2			Sarapää et al. (2013)
10	Okorusu	8.2	0.2	2.7	2.7	32.7	4.9	59.5	0.4	5.1	Pirajno (1994)
11	Lueshe	4.4	2.8	64.6	0.8	17.9	0.8	17.5			Maravic and Morteani (1980)
12	Sarfartôq	78.5	1.0	1.3			13.2	16.8	64.3	81.9	Secher and Larsen (1980)
13	Pollen	1.3	0.2	17.4	0.8	56.0	0.4	26.6			Robins and Tysseland (1983)
14	Virulundo Mountain	9.2	5.2	56.4			4.0	43.6			Torró et al. (2012)
15	Alnö	6.1	0.4	6.3	3.7	61.5	2.0	32.2			Morogan and Lindblom (1995)
16	Copperhead	0.01	0.00003	0.5	0.01	97.9			0.0001	1.7	Rugless and Pirajno (1996)
17	Ipanema	9.3	0.0002	0.002	0.6	6.0	8.8	94.0			Guarino et al. (2012)
18	Salitre I	43.3	2.4	5.5	31.1	71.7	8.3	19.1	1.6	3.7	Barbosa et al. (2012)
19	Loe Shilman (Western)	0.2	0.08	56.1			0.1	43.9			Mian and Le Bas (1986)
20	Oka	8.4	5.0	59.4	2.4	28.8	1.0	11.8			Lentz et al. (2006)
21	Afrikanda	5.6	0.3	4.9	3.7	66.1	1.6	29.0			Wu et al. (2013)
22	Newania	3.2	2.3	71.3			0.8	25.4	0.1	3.3	Schleicher et al. (1997)
23	Barra do Itapirapuã	4.4	3.1	69.1			1.4	30.9			Andrade et al. (1999)
24	Aley	7.0	4.8	68.3	0.006	0.08	2.2	31.6			McLeish et al. (2010)
25	Siilinjärvi	14.8	1.2	8.11	13.59	91.9					Puustinen (1970)
26	Qaqarssuk	11.8	3.5	29.8			8.3	70.2			Kunzendorf and Secher (1987)
	Average	13.4	2.7	27.9	3.6	27.7	4.6	40.6	2.6	3.8	

Note: Surface areas calculated from available geological maps in referenced documents.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and*	• Not applicable as no sampling undertaken.

Criteria	JORC Code explanation	Commentary
	appropriateness of the sample preparation technique. • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• Raw data from the magnetic surveys was reprocessed into 1D inversions.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Not applicable as no sampling undertaken.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations*	• Accuracy of the data is between 50-150m with data obtained at 400-600m intervals. Gravity data is more unreliable and thus was

Criteria	JORC Code explanation	Commentary
	used in Mineral Resource estimation. • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	given a lower ranking.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• 400-600m spacing depending on the satellite data used.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Orientation was perpendicular to earth surface
Sample security	• *The measures taken to ensure sample security.*	• Not applicable as no sampling undertaken
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Not applicable as no sampling undertaken

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• Mining concession 830.164/2024 and 830165/2024 are still pending being granted in the state of Goais, Brazil – the concessions when granted will be 100% owned by Patagonia Lithium subsidiary PL3 Mineracao Brazil Ltda. The licence when granted is for a 3 year period unless it is renewed for a further period. It has been referenced for lithium exploration. Both concessions cover a total of 3,262 Has.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• No exploration has been undertaken on this concession application. Adjacent to 830164/2024 is the CMOC Niobium mine. This is a private operation and information is not readily available on drill core data.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The first target zone, of greatest importance, is the metasomatic zone. The second, an anomaly of Thorium and Uranium located within a structure aligned to the 125-degree Azimuth, is characterized by a topographic low that may be associated with the accumulation of radioactive minerals (possibly Monazites?) and potentially, Rare Earth Elements. The third zone, the second anomaly situated northwest of the area, also enriched in Uranium and Thorium, is located at the summit of a topographic elevation. This anomaly may represent an igneous body with chemical characteristics similar to carbonatite, albeit smaller, not identified in the MVI magnetic geophysics data. • The Catalão I alkaline–carbonatite–phoscorite complex (ferro niobium mine adjacent) contains both fresh rock and residual (weathering-related) niobium mineralization. The fresh rock niobium deposit consists of two plug-shaped orebodies named Mine II and East Area, respectively emplaced in carbonatite and phlogopitite. Together, these orebodies contain 29 Mt at

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		1.22 wt.% Nb2O5 (measured and indicated). In closer detail, the orebodies consist of dyke swarms of pyrochlore-bearing, olivine-free phoscorite-series rocks (nelsonite) that can be either apatite-rich (P2 unit) or magnetite-rich (P3 unit). Dolomite carbonatite (DC) is intimately related with nelsonite. Natropyrochlore and calciopyrochlore are the most abundant niobium phases in the fresh rock deposit. Pyrochlore supergroup chemistry shows a compositional trend from Ca–Na dominant pyrochlores toward Ba-enriched kenopyrochlore in fresh rock and the dominance of Ba-rich kenopyrochlore in the residual deposit. Carbonates associated with Ba-, Sr-enriched pyrochlore show higher δ18OSMOW than expected for carbonates crystallizing from mantle-derived magmas. We interpret both the δ18OSMOW and pyrochlore chemistry variations from the original composition as evidence of interaction with low-temperature fluids which, albeit not responsible for the mineralization, modified its magmatic isotopic features. The origin of the Catalão I niobium deposit is related to carbonatite magmatism but the process that generated such niobium-rich rocks is still being determined and might be related to crystal accumulation and/or emplacement of a phosphate–iron-oxide magma.
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is*	• The main geophysical data coming from georeferenced PDFs, highlighted by the correlation between samples is the F parameter, followed by the thorium-uranium ratio. There is a high correlation between Kd potassium factor and Thorium.

Criteria	JORC Code explanation	Commentary
	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.	
Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable – 1D inversion was used to better define the fenitization in the radiometric and magnetic surveys.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• Not Applicable as no drilling was undertaken.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant*	• Not Applicable as no drilling was undertaken.

Criteria	JORC Code explanation	Commentary
	discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• *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.*	• Not Applicable as no drilling was undertaken.
Other substantive exploration data	• *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.*	• See above for detailed geophysical results - Carbonatites and alkaline-silicate rocks are the most important sources of rare earth elements (REE) and niobium (Nb). Cooling and crystallizing carbonatitic and alkaline melts expel multiple pulses of alkali-rich aqueous fluids which metasomatize the surrounding country rocks, forming fenites during a process called fenitization. We are exploring for these rocks. These alkalis and volatiles are original constituents of the magma that are not recorded in the carbonatite rock, and therefore fenites are a key focus of a carbonatite system and our exploration efforts. • RGB 3,2,10 – ratio 4,12 – PCA band 8,3 were used to identify lithium minerals. **Sentinel-2** imagery (low resolution – pixel 32m) yielded poor results so we will use Hi Res spectral.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• We intend to commence soil sampling and rock chip sampling as soon other the exploration concessions are granted 830164/2024 and 830165/2024.