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Trench samples confirm widespread and extensive high-grade fluorspar mineralisation at Ngualla

- **Critical minerals exploration programme is targeting the multi-commodity potential of the Ngualla carbonatite system**
  - Primary focus remains on progressing the world-class Ngualla Rare Earth Project to a targeted Financial Investment Decision
  - Longer term potential to develop a multi-commodity and multi-generational project
- **Successful completion of analysis of trench samples from the Breccia Zone**
  - Located ~2km northeast of Bastnaesite Zone that forms the basis of the Ngualla Rare Earth Project's Ore Reserves and Mineral Resources
- **344 samples assayed from nine trenches across the ~3.7km extent of the Breccia Zone**
- **Assays demonstrate extensive high-grade fluorspar mineralisation across entire ~3.7km Breccia Zone extent, with key intercepts including**
  - NC010: 70m (EOT) at 36% CaF_2 from 0m
  - NCS013: 114m at 46% CaF_2 from 32m including 44m at 65% CaF_2 from 80m
  - NCS020: 34m at 39% CaF_2 from 42m including 8m at 68% CaF_2 from 64m
- **Overall prospectivity of the Breccia Zone further enhanced by significant rare earth mineralisation within northern trenches, with key intercepts including**
  - NCS021: 68m at 2.9% TREO from 24m including 6m at 6.9% TREO from 26m
  - NCS023: 28m at 2.0% TREO from 30m including 6m at 3.5% TREO from 38m
- **Assay results are imminent from recent drilling in the Breccia Zone, which will further define the extent and depth of fluorspar mineralisation**
- **Fluorspar is an increasingly critical commodity and a key input mineral into green energy and transition technologies**

Peak Rare Earths Limited (ASX: **PEK**) (**"Peak"** or the **"Company"**) is pleased to announce the next set of assay results from its critical minerals exploration programme. The results cover the remaining Breccia Zone trench samples and demonstrate widespread and extensive high-grade fluorspar mineralisation across the entire ~3.7km extent of the area. Importantly, extensive and high-grade rare earth mineralisation has also been identified within the northern Breccia Zone, which may complement the existing rare earth Ore Reserves and Minerals Resources within the Ngualla Rare Earth Project ("**Ngualla Project**").

Commenting on the trench sample assay results, the CEO of Peak, Bardin Davis, said:

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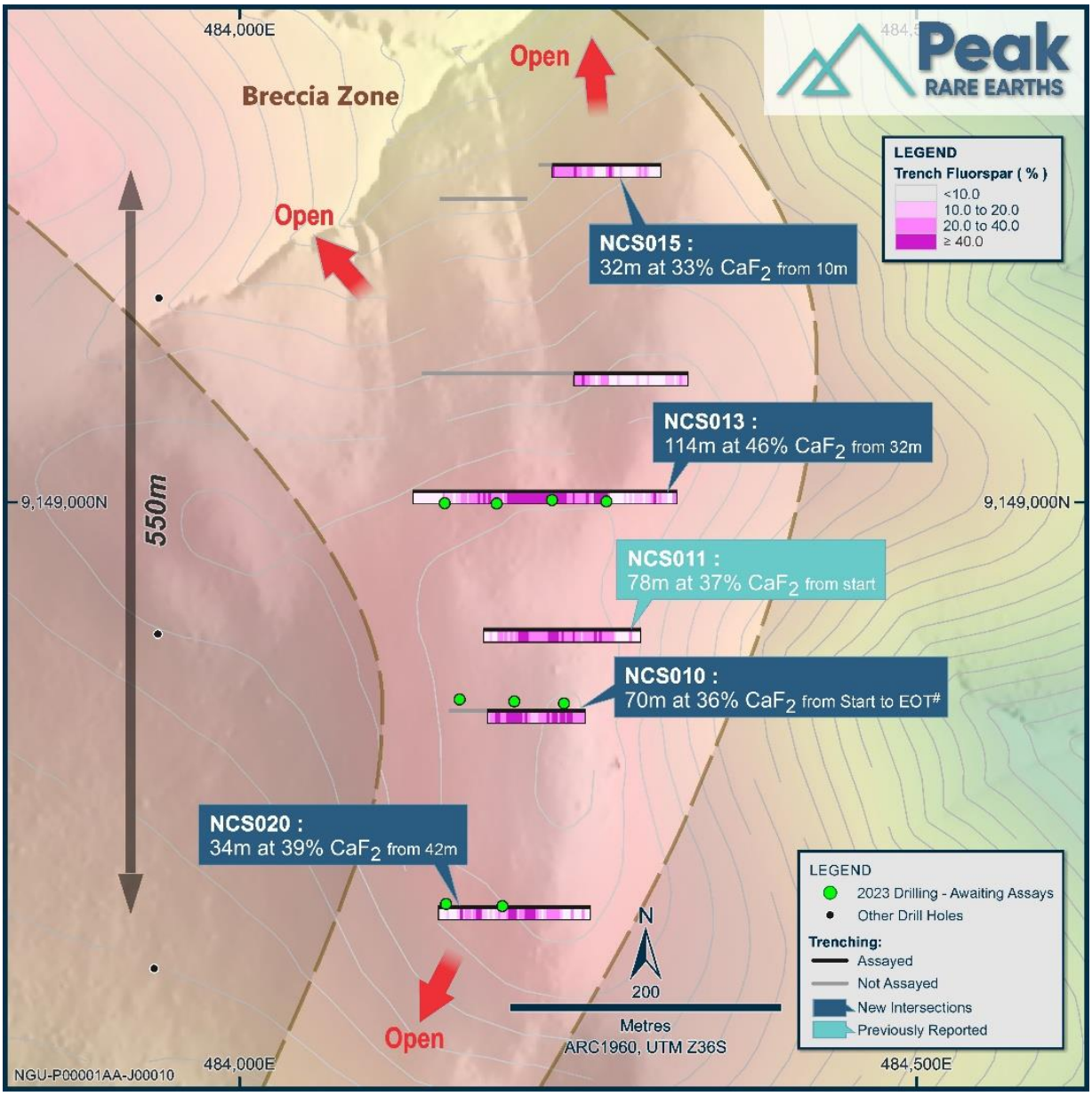
"We are extremely excited by the Breccia Zone assay results. The fluorspar intercepts are very high-grade relative to other global fluorspar projects and the Breccia Zone has the potential to be a globally significant fluorspar deposit. The rare earth mineralisation intercepted in the northern trenches is also very encouraging. We remain of the view that the Ngualla deposit can support a world-class, multi-commodity and multi-generational project."

Assay results from the recently completed drilling campaign in the Breccia Zone are anticipated within the March Quarter and will further define the extent and depth of mineralisation.

Figure 1. High grade fluorite mineralisation within southern Breccia Zone



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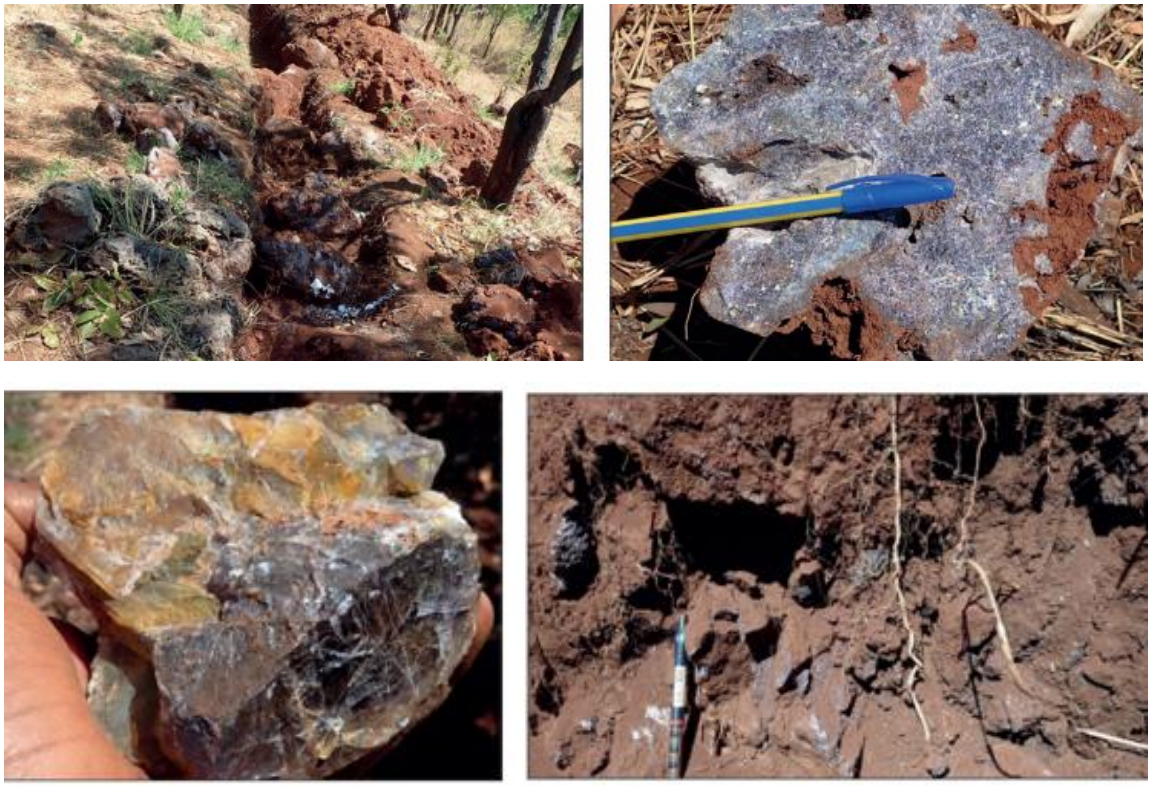
Previous trench work within the Breccia Zone

A maiden exploration field programme was undertaken within the Breccia Zone during 2017. It followed earlier reconnaissance rock sampling and geological mapping, which identified a large zone of brecciation containing visible fluorite mineralisation. As part of the exploration field programme, 12 surface trenches were excavated, which broadly covered the length of the Breccia Zone (Appendix 1).

Given the exploration focus on rare earths at the time, samples from only three of the 12 trenches were originally transported to Perth for analysis. Assay results from these three trenches confirmed extensive high grade fluorite mineralisation within the Breccia Zone with intersections as high as 62% CaF_2[1]. As part of the current critical minerals exploration programme, which commenced in 2023, selected samples from the remaining nine trenches within the Breccia Zone were dispatched from site to Nagrom's laboratory in Perth for analysis. Intervals for sampling were selected based on whether there was visible fluorite and for 3 metres either side.

Figure 2. Trenching from 2017 Breccia Zone field programme



Pictured: Top Left – Trench NCS013 looking east from 74 metres; top right – close up of high intensity fluorspar mineralisation rock sample from trench NCS013 at 74 metres; bottom left – large fluorspar crystals from trench NCS013 at 94 to 95 metres; bottom right – unweathered high intensity purple fluorspar in side wall of trench NCS013 at 96 metres.

[1] 'ASX Announcement –'Wide zones of high grade fluorite discovered at Ngualla' – 20 February 2017. The Company confirms that at this time it is not aware of any new information or data that materially affects the information included in the announcement.

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Geological results and interpretation

Assay results from the surface trench samples identify wide and continuous zones of high-grade fluorspar mineralisation. Highlights from the trench sampling include:

Trench ID	Intersection
NCS013	114m at 46% CaF_2 from 32m *including*: • *44m at 65% CaF_2 from 70m; and* • *10m at 52% CaF_2 from 134m*
NCS020	22m at 28% CaF_2 from 14m and 34m at 39% CaF_2 from 42m *including*: • *6m at 54% CaF2 from 52m;* • *8m at 68% CaF2 from 64; and* • *14m at 23% CaF2 from 78m*

See Table 1 for full report of all intersections.

The mineralisation is located in the ring of hills formed by the alteration halo that surrounds the intrusive Ngualla Carbonatite. Fluorite and rare earth mineralisation occur within this fenite alteration in a structural zone of brecciation and associated carbonatite dykes that can be traced over a strike length of 3.7km (Appendix 1). The fluorspar is weathered at surface in some areas but gives a distinctive and recognisable texture (Figure 2).

The assay results are from two areas tested by the 2017 trenching program. In the southern area, the new results have extended the zone of fluorspar mineralisation defined by trenching to a total strike length of 550m (Figure 1). Previously released results from NCS013 indicate a horizontal width of up to 170m. The fluorspar varies in intensity and the banding indicates a subvertical dip.

Shallow soil cover masks rock outcrop on the flanks of the hill on which the discovery outcrops are located. Possible extensions to the fluorspar remain untested to the east and west, with several trenches starting and / or ending in mineralisation. Mineralisation remains open along strike to the north and south.

In the northern area, approximately 2km to the northwest, all three trenches returned wide zones of high-grade rare earths in addition to the fluorite (Figure 3). Highlights from the REO assays include:

Trench ID	Intersection
NCS021	68m at 2.9% REO from 24m *including* • *6m at 6.9% REO from 26m;* • *14m at 3.1% REO from 44m; and* • *20m at 3.2% REO from 72m*

See Table 1 for full report of all intersections.

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A Reverse Circulation ("**RC**") and Diamond Drilling ("**DD**") program designed to test the depth and width extent of the mineralisation beneath the trenches and gain an understanding of any structural trend on the mineralisation was completed in late 2023 (Appendix 1). The samples are currently being analysed at Nagrom, Perth with results anticipated by end of the March Quarter.

Figure 3. Fluorite and rare earth mineralisation within northern Breccia Zone

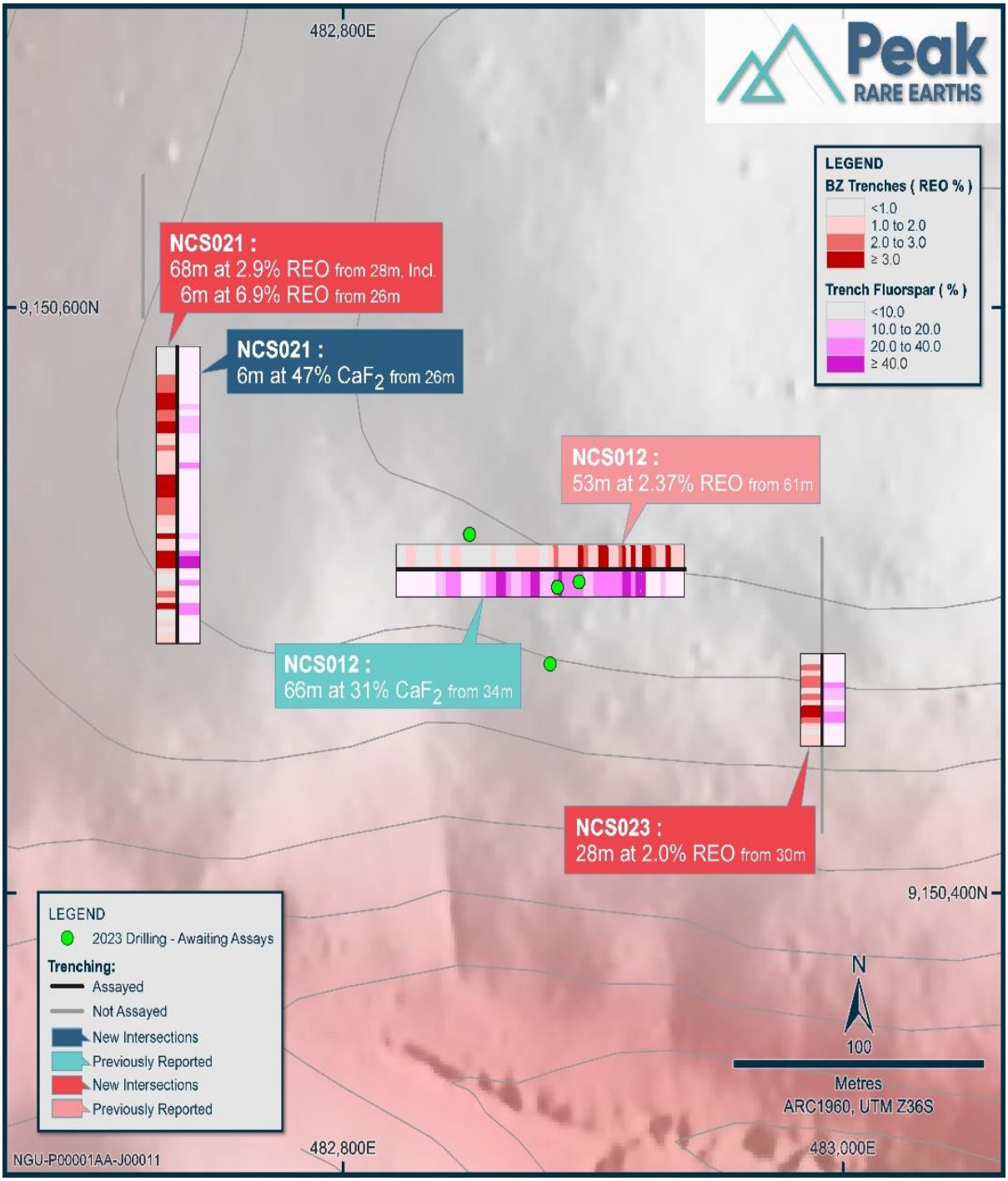

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Table 1(a). Breccia Zone trench intersections – fluorspar

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	Intercept (%)
Fluorspar (CaF_2)							
NCS010	484,184	9,148,846	70	0	70	70*	36
			incl.	***6***	***10***	***4***	***54***
			and	***14***	***26***	***12***	***54***
			and	***48***	***52***	***4***	***45***
			and	***59***	***63***	***4***	***47***
NCS013	484,129	9,149,008	193	22	30	8	15
				32	146	114	46
			incl.	***70***	***114***	***44***	***65***
			and	***134***	***144***	***10***	***52***
				164	170	6	13
				172	188	16	22
NCS014	484,232	9,149,095	98	16	32	16	31
				34	42	8	22
				84	90	6	15
				92	98	6*	16
NCS015	484,222	9,149,249	88	10	42	32	33
				50	56	6	39
				72	82	10	16
NCS019	484,197	9,148,906	16	2	8	6	21
NCS020	484,148	9,148,701	110	14	36	22	28
				42	76	34	39
			incl.	***52***	***58***	***6***	***54***
			and	***64***	***72***	***8***	***68***
				78	92	14	23
NCS021	482,734	9,150,486	100	10	14	4	23
				26	32	6	47
			incl.	***26***	***30***	***4***	***53***
				72	78	6	18
NCS023	482,992	9,150,421	100	38	44	6	23
				46	52	6	20

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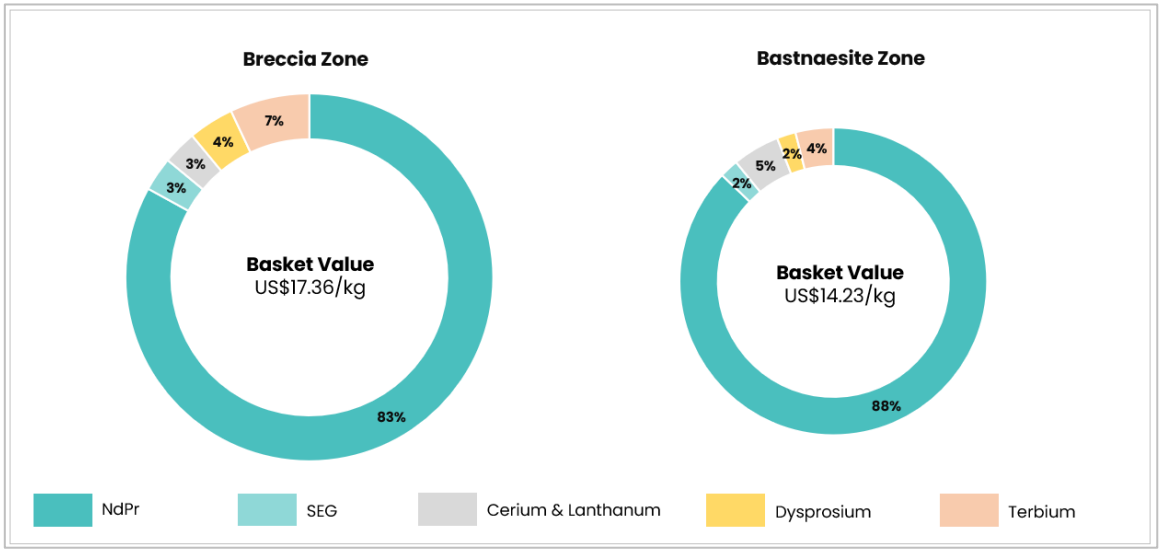
Table 1(b). Breccia Zone trench intersections – rare earths

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	Intercept (%)
Rare Earths (TREO)							
NCS010	484,184	9,148,846	70	54	63	9	1.2#
NCS011	484,197	9,148,906	98	86	90	4	2.3
NCS013	484,129	9,149,008	193	22	28	6	1.1
NCS015	484,222	9,149,249	88	48	56	8	3.6
			incl.	***50***	***54***	***4***	***5.9***
				64	68	4	1.5
NCS020	484,148	9,148,701	110	6	10	4	2.1
				18	28	10	1.3
				66	82	16	1.7
			incl.	***78***	***82***	***4***	***2.5***
				88	108	20	1.8
			incl.	***104***	***108***	***4***	***2.4***
NCS021	482,734	9,150,486	100	0	8	8*	1.2
				12	20	8	2.3
				24	92	68	2.9
			incl.	***26***	***32***	***6***	***6.9***
			and	***44***	***58***	***14***	***3.1***
			and	***72***	***92***	***20***	***3.2***
NCS023	482,992	9,150,421	100	30	58	28	2.0
			incl.	***38***	***44***	***6***	***3.5***
			and	***50***	***54***	***4***	***2.2***

Note: Coordinate system in Arc 1960 UTM zone 36S. * = trench started and/or ended in mineralisation. # = Extension to intersection for NCS010 previously reported in ASX release dated 20 February 2017: Wide zones of high-grade fluorite identified at Ngualla.
Samples are predominantly 2m length intervals except to accommodate geological boundaries, from trenches which were excavated to in-situ weathered bedrock.
Fluorite: Intersections calculated using a lower grade cut of 10% CaF_2, minimum of 4m length, no internal dilution. Selected intersections >40% CaF_2 with a minimum length of 3m in italics. Fluorite grade is reported from laboratory fluorine analyses on the assumption that all fluorine (F) is present as fluorite (CaF_2), which is supported by field observations and calcium : fluorine geochemistry and ratios. Analysis by Nagrom, Perth, by fusion in nickel crucibles with ISE finish.
REO: Intersections calculated using a 1% REO lower cut and a maximum of 2m internal dilution. Selected intersections >2%REO with a minimum length of 3m in italics. REO = Total Rare Earth Oxides including yttrium. See Table 2 for relative distribution of individual rare earth oxide.

Figure 4. Basket value of rare earth assemblage within Breccia Zone



Based on spot prices as at 31 January 2024 (Asian Market) – Neodymium US$58.0/kg, Praseodymium US$60.5/kg, Lanthanum – US$0.8/kg, Cerium – US$0.9/kg, Samarium – US$2.0/kg, Europium – US$25.6/kg, Gadolinium – US$29.1/kg, Terbium – US$1,139.7/kg and Dysprosium – US$384.1/kg

Table 2. Individual rare earth oxide grades and percentage of total REO in the Breccia Zone above 1% REO and the Weathered Bastnaesite Zone Mineral Resource

		Breccia Zone*		Mineral Resource**	
Rare Earth Oxides		**REO Grade %**	**% of Total REO**	**REO Grade %**	**% of Total REO**
Lanthanum	La_2O_3	0.61	25.3	1.310	27.6
Cerium	CeO_2	1.08	45.1	2.293	48.3
Praseodymium	Pr_6O_{11}	0.13	5.4	0.227	4.77
Neodymium	Nd_2O_3	0.45	19.2	0.784	16.5
Samarium	Sm_2O_3	0.05	2.3	0.076	1.60
Europium	Eu_2O_3	0.01	0.5	0.014	0.29
Gadolinium	Gd_2O_3	0.02	0.9	0.029	0.61
Terbium	Tb_4O_7	0.002	0.1	0.002	0.05
Dysprosium	Dy_2O_3	0.005	0.2	0.004	0.07
Holmium	Ho_2O_3	0.001	0.03	0.000	0.01
Erbium	Er_2O_3	0.001	0.05	0.002	0.03
Thulium	Tm_2O_3	0.000	0.004	0.000	0.00
Ytterbium	Yb_2O_3	0.001	0.03	0.001	0.01
Lutetium	Lu_2O_3	0.000	0.004	0.000	0.00
Yttrium	Y_2O_3	0.018	0.83	0.100	0.20
Total REO* **		**2.37**	**100.0**	**4.75**	**100.00**

* Breccia Zone trenches >= 1%REO. ** Ngualla 2016 weathered Bastnaesite Zone Mineral Resource >= 1% REO. Refer to the ASX announcement 24 October 2022 for Mineral Resource estimates. The Company confirms that at this time it is not aware of any new information or data that materially affects the information included in the announcement. The Company further confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the market announcement.

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Radionuclides and deleterious elements

Drill samples from the Breccia Zone have been analysed for deleterious element levels, with assays completed to date demonstrating that mineralisation of fluorspar and rare earths within the Breccia Zone are associated with low levels of radionuclides (thorium and uranium) and arsenic.

Table 3. Radionuclides and deleterious elements (Breccia Zone)

Element	Basis	Value (ppm)
Thorium	Th	93
Uranium	U	23
Arsenic	As	22

Note: Calculated from Breccia Zone trench intervals above 40% CaF_2.

Status and next steps

All drilling related to the Breccia Zone has now been completed including 10 RC holes for 755 metres and 2 DD holes for 211 metres. Drill samples are currently being assayed at the Nagrom lab in Perth with results anticipated during the March Quarter. The results from the drilling undertaken within the Breccia Zone will further define the extent and depth of fluorite and rare earth mineralisation within the area.

Assay results for the remaining 31 RC drill holes from the Northern Zone are also expected during the March Quarter. The Northern Zone remains highly prospective for a range of critical commodities including niobium, phosphate and rare earths.

Table 4. Drilling and assay status

Sample	Comment
Northern Zone (niobium, phosphate and rare earths)	
RC holes NRC350 – NRC363	Assays completed
RC holes NRC364 – NRC383	Assays pending
RC holes NRC384 – NRC388	Assays pending
Breccia Zone (fluorite and rare earths)	
Trench samples	Assays completed
RC holes NRC389 – NRC410	Assays pending
DD holes NDD048 – NDD049	Assays pending

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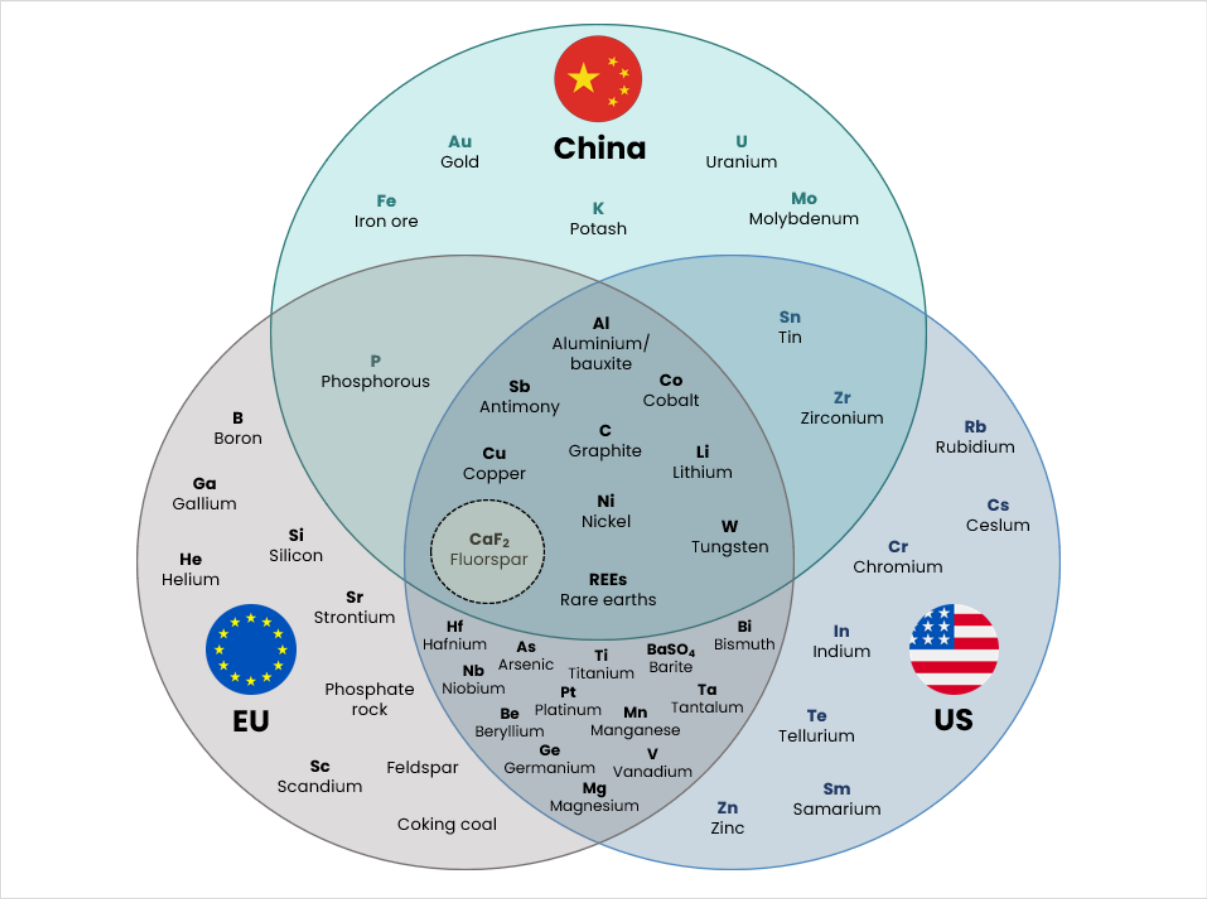
Fluoride Market Overview

Fluorspar is an increasingly critical global commodity given its role in a range of important industrial, green energy and high-tech applications. Along with rare earths, fluorspar is one of only a few minerals with critical mineral status in China, the United States and the European Union and is also deemed a critical mineral in Canada, Japan and Australia.

Figure 5. Critical mineral classification[1]



[1]IRENA, The U.S Department of Energy

Demand drivers

Fluorspar is an industrial mineral with a range of uses in manufacturing, technology and green energy. Fluorspar is used as a flux in steel and aluminium production, and as a key input material in the production of fluorochemicals including Hydrogen Fluoride ("**HF**") and Teflon. HF plays an important role in the green energy transition and is used as:

- Electrolyte salt (LiPF6) - in lithium-ion batteries;
- Purification agent - for graphite anodes;
- Etching agent - in semi-conductors;
- Purification and texturisation agent - for solar panels; and

- Purification and enrichment agent – in processing uranium ore (which also uses fluorine gas).

In addition, fluoride-ion batteries are a possible future substitute technology for lithium-ion batteries within EVs and energy storage applications.

Supply drivers

Global fluorspar production is highly concentrated with ~90% of global production coming from four countries. Whilst China is the world's largest fluorspar producer, it is also a net-importer given the growth of its downstream fluorochemicals industry. Similarly, the European Union and United States have prominent fluorochemical sectors and are significant importers of fluorspar feedstock.

Table 5. Global fluorspar production[1]

Country	Annual production (ktpa)	% of global production
China	5,700	68.7%
Mexico	970	11.7%
South Africa	420	5.1%
Mongolia	350	4.2%
Vietnam	220	2.7%
Other	640	7.6%
Total	**8,300**	**100.0%**

[1]U.S Geological Survey, Mineral Commodity Summaries, January 2023

Given the strategic importance of independent sources of fluorspar, Peak has received strong inbound interest from a range of parties with respect to future collaboration opportunities around the development and supply of fluorspar from the Ngualla Project.

A summary of global fluorspar deposits is set out in Table 6.

Table 6. Global fluorspar deposits

Project	Owner	Location	Status	Reserve	Resource
St Lawrence[1]	Canada Fluorspar	Canada	Development	-	10Mt @ 41.0% CaF_2
Windsor/ Speewah[2]	Tivan	Australia	Development	-	27Mt @ 9.5% CaF_2
Storuman[3]	Tertiary Minerals	Sweden	Development	-	28Mt @ 10.2% CaF_2
Ashram[4]	Commerce Resources	Canada	Development	-	249Mt @ 4.7% CaF_2
Nokeng[5]	Sepfluor	South Africa	Operation	12Mt @ 26.6% CaF2	12Mt @ 26.6% CaF_2
Doornhoek[6]	Eurasian Resources Group	South Africa	Development	-	517Mt @ 13.8% CaF_2
Liard[7]	Ares Strategic Mining	Canada	Development	-	3Mt @ 32.0% CaF_2
Moina[8]	Mazel Resources	Australia	Development	-	25Mt @ 16.0% CaF_2

[1]Updated Pre-Feasibility Study Ni 43-101 Report, March 2023
[2]King River Copper Limited Maiden Mineral Resource Estimate for Speewah Fluorite Project, 23 February 2018
[3]Tertiary Minerals website (https://www.tertiaryminerals.com/storuman-fluorspar-project-sweden)
[4]Commerce Resources website (https://commerceresources.com/projects/the-ashram-rare-earth-element-and-fluorspar-deposit/)
[5]Sepfluor website (https://www.sepfluor.co.za/our-business/mining-exploration/nokeng)
[6]Doornhoek Fluorspar Project Presentation, Junior Indaba, 2 June 2016
[7]Ares Strategic Mining website (https://www.aresmining.com/liard-property)
[8]Moina Project Summary, Geotech International, April 2020

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This announcement is authorised for release by the Company's Executive Chairman and Chief Executive Officer.

Bardin Davis

Chief Executive Officer

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Competent Persons Statement

Information in this Announcement that relates to exploration results is based upon work undertaken by Maggie Hughes, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG). Maggie Hughes has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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' (JORC Code). Maggie consents to the inclusion in this announcement of the matters based on her information in the form and context in which it appears.

Forward Looking Statements

Certain statements contained in this announcement may constitute forward-looking statements, estimates and projections which by their nature involve substantial risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. When used in this announcement, the words "anticipate", "expect", "estimate", "forecast", "will", "planned", and similar expressions are intended to identify forward-looking statements or information. Such statements include without limitation: statements regarding timing and amounts of capital expenditures and other assumptions; estimates of future reserves, resources, mineral production, optimisation efforts and sales; estimates of mine life; estimates of future internal rates of return, mining costs, cash costs, mine site costs and other expenses; estimates of future capital expenditures and other cash needs, and expectations as to the funding thereof; statements and information as to the projected development of certain ore deposits, including estimates of exploration, development and production and other capital costs, and estimates of the timing of such exploration, development and production or decisions with respect to such exploration, development and production; estimates of reserves and resources, and statements and information regarding anticipated future exploration; the anticipated timing of events with respect to the Company's projects and statements; strategies and the industry in which the Company operates and information regarding the sufficiency of the Company's cash resources. Such statements and information reflect the Company's views, intentions or current expectations and are subject to certain risks, uncertainties and assumptions, and undue reliance should not be placed on such statements and information. Many factors, known and unknown could cause the actual results, outcomes and developments to be materially different, and to differ adversely, from those expressed or implied by such forward looking statements and information and past performance is no guarantee of future performance. Such risks and factors include, but are not limited to: the volatility of prices of rare earth elements and other commodities; uncertainty of mineral reserves, mineral resources, mineral grades and mineral recovery estimates; uncertainty of future production, capital expenditures, and other costs; currency fluctuations; financing of additional capital requirements; cost of exploration and development programs; mining risks; community protests; risks associated with foreign operations; governmental and environmental regulation; the volatility of the Company's stock price; and risks associated with the Company's by-product metal derivative strategies. There can be no assurance that forward looking statements will prove to be correct.

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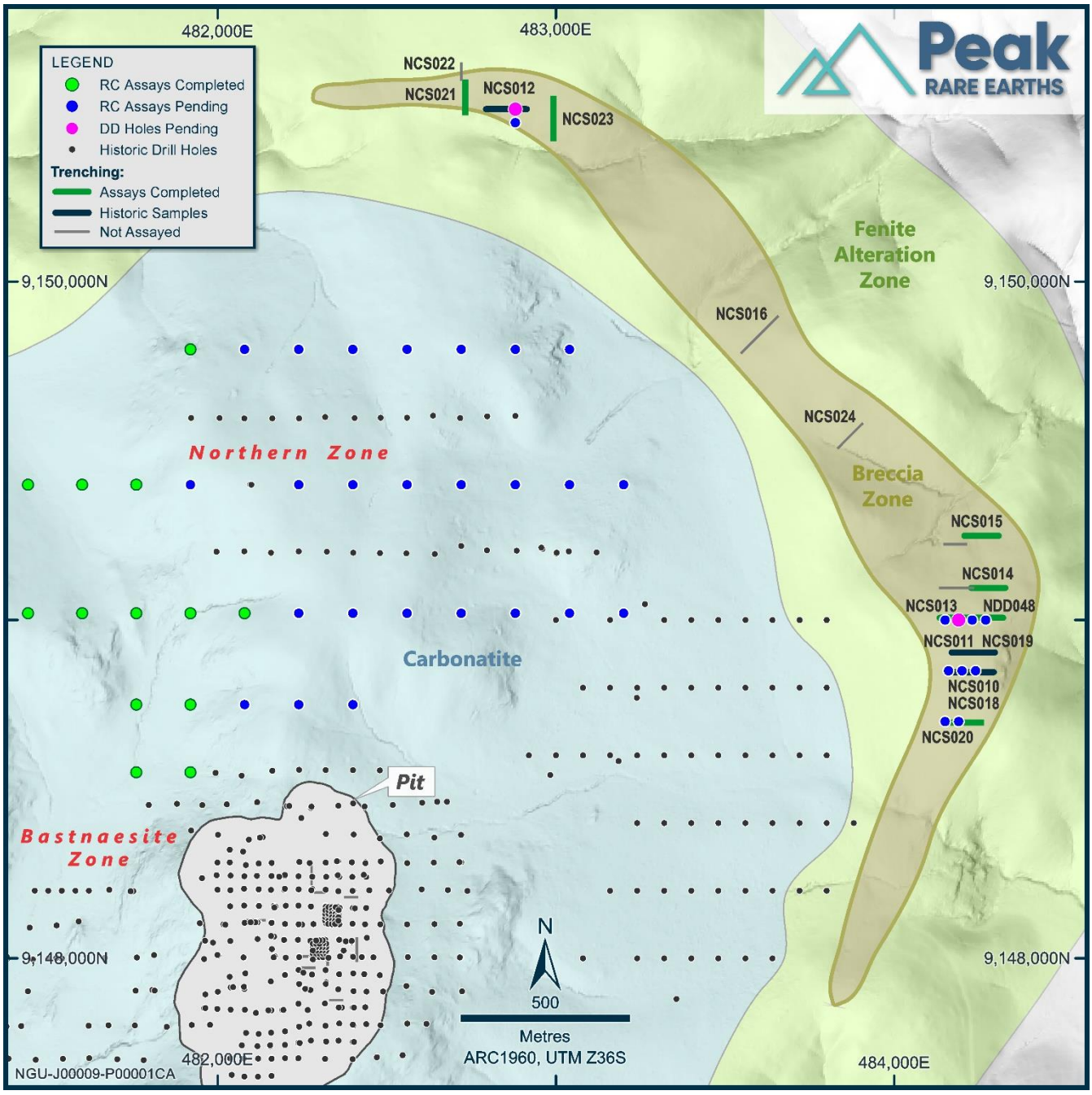
Appendix 1: Status of current drilling programme



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Appendix 2: Location of trenches

Trench ID	East	North	RL	Azimuth	Length (m)
NCS010	484,184	9,148,846	1,594	90	70
NCS011	484,197	9,148,906	1,595	90	98
NCS012	482,822	9,150,510	1,644	90	114
NCS013	484,129	9,149,008	1,567	90	193
NCS014	484,232	9,149,095	1,554	90	98
NCS015	484,222	9,149,249	1,519	90	88
NCS016	483,549	9,149,790	1,579	45	150
NCS018	484,184	9,148,846	1,590	270	28
NCS019	484,197	9,148,906	1,590	270	16
NCS020	484,148	9,148,701	1,578	90	110
NCS021	482,734	9,150,486	1,625	0	100
NCS022	482,720	9,150,597	1,624	0	48
NCS023	482,992	9,150,421	1,630	0	100
NCS024	483,834	9,149,509	1,571	45	100
NCS025	484,149	9,149,224	1,519	90	62
NCS026	484,232	9,149,095	1,554	270	96

Coordinate system in Arc 1960 UTM zone 36S.

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Appendix 3(a): Section 1 Sampling Techniques and Data (JORC Code 2012 Edition)

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

Criteria	Explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.	The base and sides of the trench were cleaned by hand of rubble and debris prior to geological logging and the excavation and sampling of a sub-channel to reduce the potential for contamination. Any occasional coarse fragments were crushed by hand to enable them to pass through a riffle splitter. A consistent volume of material was collected from each 1m interval and split down to a representative 1kg sample using a 3-tiered riffle splitter. The final samples are predominantly 2m long, collected from a shallow cut channel approximately 20cm wide and 10cm deep along the bottom of the trench, which was excavated to in-situ weathered bedrock. Occasionally samples are 1.5 to 2.5m in length to accommodate observed geological boundaries. The 2kg 2m assay samples despatched to the laboratory were composited from 1m riffle split sub-samples of 1kg weight. The samples are considered representative of the channel sampled. Intervals for sampling were selected based on whether there was visible fluorite and for 3m either side. The

		remainder of the trenches were not sampled for assay but reference samples were taken and are currently stored at camp. Sample preparation and assaying procedures are described below.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	Not applicable.
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.	Not applicable.
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.	All trench intervals were geologically logged, with information pertaining to lithology, mineralogy, weathering, and magnetic susceptibility collected and recorded. Sample weights were recorded. A sketch to scale of the northern wall of each trench was completed.
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 appropriateness of the sample preparation	A total sample weight of 10kg was collected over each 1m sub-channel length. The 10kg bulk sample was passed through a riffle splitter to reduce to a representative 1kg sample. Two 1m, 1kg samples were combined to

	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.	give a 2kg 2m composite sample for despatch to the sample preparatory laboratory. Peak has established a set of quality assurance (QA) protocols, which include the collection and insertion of field duplicates and certified reference samples into the sample stream prior to submission to the laboratory. Coarse crushed blanks are inserted by the laboratory prior to sample preparation. The QA samples are inserted at random, but at a frequency that averages 1:30 for each type. Sample sizes are considered appropriate for this style of mineralisation.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	A 50 g pulp from each sample was submitted to Nagrom, Perth for assaying using XRF analysis and peroxide fusion digest with ICP finish. For XRF analysis, the prepared sample is fused in lithium borate flux with lithium nitrate additive. The resultant glass bead is analysed by XRF. For peroxide fusion digest, the prepared sample is fused with sodium peroxide and digested in dilute hydrochloric acid. The resultant solution is analysed by ICP. The element suite for each method comprised: Fused Bead XRF: Prepared sample is

		fused in lithium borate flux with lithium nitrate additive. The resultant glass bead is analysed by XRF. Analytes: Al, Ba, Ca, Cu, Fe, K, Na, Ni, Mg, Mn, P, Pb, S, Si, Ti, Zn, Zr, LOI. Peroxide Fusion Digest with ICP finish: Prepared sample is fused with sodium peroxide and digested in dilute hydrochloric acid. The resultant solution is analysed by ICP. Analytes: Cd, Ce, Dy, Eu, Er, Gd, Ho, La, Lu, Nb, Nd, Pr, Sc, Sm, Ta, Tb, Th, Tm, U, Y, Yb. Fusion in Nickel Crucibles With ISE Finish: Prepared sample is fused and then leached with water. The resultant solution is buffered and then read with a Fluoride Ion Selective Electrode. This method gives total fluoride values. Analytes: F No geophysical tools have been used to determine element grades for mineralisation at Ngualla. Laboratory performance was monitored using the results from the QA samples inserted by Peak (see above). The Standards consist of Certified Reference Materials prepared by OREAS Australia. Inter-laboratory checking of analytical outcomes is routinely undertaken to ensure continued accuracy and precision by the primary laboratory. All QA data are stored in the Ngualla database and regular studies are

		undertaken to ensure laboratory performance is within acceptable levels of accuracy. The QA studies confirm that accuracy and precision are within industry accepted limits.
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.	Significant intersections were verified by alternative Peak personnel. No independent verification has been completed. As these are trench samples, twinned holes are not applicable. Primary data were handwritten onto pro-forma logging sheets in the field and then entered into Excel spreadsheets at the Ngualla site office. The spreadsheets include in-built validation settings and look-up codes. Scans of original field data sheets are digitally stored and secured. The data entered into the spreadsheets are reviewed and validated by the field geologist before being imported into a secure central database, managed by SRK Australia. Data collection and entry procedures are documented, and all staff involved in these activities are trained in the relevant procedures. With the exception of setting grades recorded as below detection to half the detection limit in the extracts used for mineral resource estimation, no adjustments to any the assay data have been made.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and	The spatial data for Ngualla are reported using the ARC 1960 UTM, Zone 36S coordinate system.

	other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	Trench collars were surveyed using a handheld GPS. The elevation for each trench collar was adjusted to the elevation of a laterally coincident point on the topographic surface derived from a LiDAR survey flown for Peak by Digital Mapping Australia Pty Ltd in 2012. The LiDAR data have a reported accuracy of 10 cm in elevation and 15 cm north and south.
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.	Trenches are marked at 1m intervals and interval logged to 5cm precision for lithology and mineral intensity intervals. Data spacing of 2m was used for composite sample length. The logging and sampling intervals are considered sufficient to establish geological and grade continuity.
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.	The trenches are orientated perpendicular to strike and are considered to provide unbiased reflection of the horizontal width of the mineralisation. Structural orientation measurements are collected using a compass and clinometer. No drilling results are discussed.
Sample security	The measures taken to ensure sample security.	The chain of custody of samples is managed by Peak. The samples are kept in sealed bags at an onsite storage facility prior to being trucked to the SGS laboratory Mwanza by Peak personnel. The Mwanza laboratory checks the received samples against the sample

		despatch forms and issues a reconciliation report. Following sample preparation, the pulp samples are transported to Nagrom, Perth by tracked air freight.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	An SRK Consultant audited Peak's sampling, QAQC, and data entry protocols during a site visit at the start of the drilling campaign and considered the procedures to be consistent with industry best practice, and the data of sufficient quality for resource estimation.

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Appendix 3(b): Section 2 Reporting of Exploration Results (JORC Code 2012 Edition)

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

Criteria	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.	The mineralisation lies wholly within the Special Mining Licence 693/2023 granted to Mamba Minerals Corporation Limited on 25 April 2023 (Mamba Minerals). Mamba Minerals was incorporated to hold the SML to develop and operate the Ngualla Project. Its shareholders on incorporation and currently are Peak 100% subsidiary, Ngualla Group UK Limited (NGUK), and the Office of the Treasury Registrar for and on behalf of the United Republic of Tanzania Government (the Registrar). NGUK holds 84% of the issued capital of Mamba Minerals, with the Registrar holding 16%. The SML is initially for a term of 30 years over the area set out in the original SML application, which covers ~18.14km2 and contains the Ngualla Project deposit. The SML area will be expanded in the future to include an existing Prospecting Licence (PL 10897/2016) and the expired Prospecting Licence (PL 9157/2013). The initial term will also be amended to be the shorter of 33 years and the life of the mine, with the ability to extend on application in accordance with the law at the time. There is no habitation or farming on the mineralised area and there are no wilderness, historical sites, national parks

		or environmental settings known to Peak at this time that would impede development and operation of the Ngualla Project.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No systematic exploration for rare earths or niobium had been undertaken at Ngualla prior to Peak acquiring the project in 2009. Limited reconnaissance exploration and surface sampling for phosphate had been undertaken by a joint Tanzanian-Canadian university based non-government organisation in the early 1980s.
Geology	Deposit type, geological setting and style of mineralisation.	Fluorite mineralisation has been identified within a 3.8 km long, 200m wide structural zone or brecciated fenite within the alteration halo that surrounds the intrusive Ngualla Carbonatite. The rare earth mineralisation occurs within this zone associated with the fluorite and quartz veining or iron oxides though to be the weathered equivalent of ferroan dolomite carbonatite dykes within the structural zone.
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.	The trench plan in Appendix 1 illustrates the distribution of the trenches and the details are tabulated in Table 1. No drilling results are being reported.

	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.	Fluorite: Intersections calculated using a lower grade cut of 10% CaF_2, minimum of 4m length, no internal dilution. Selected intersections >40% CaF_2 with a minimum length of 3m in italics. Fluorite grade is reported from laboratory fluorine analyses on the assumption that all fluorine (F) is present as fluorite (CaF_2), which is supported by field observations and calcium:fluorine geochemistry and ratios. Analysis by Nagrom, Perth, by fusion in nickel crucibles with ISE finish. REO: Intersections calculated using a 1% REO lower cut and a maximum of 2m internal dilution. Selected intersections >2%REO with a minimum length of 3m in italics. REO = Total Rare Earth Oxides including yttrium. See Table 2 for relative distribution of individual rare earth oxide. No metal equivalents are reported in the intersection table.
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 (e.g. 'down hole length, true width not known').	Mapping observations indicate mineralisation geometry is perpendicular to the trenches and hence the interval logging provides a true representation of the true horizontal width of the mineralisation. No drilling is being reported.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant	The accompanying document is considered to represent a balanced

	discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	report. Reporting of grades is done in a consistent manner. All previous significant intersections have been fully reported in previous releases.
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.	The accompanying document is considered to represent a balanced report. Reporting of grades is done in a consistent manner. All previous significant intersections have been fully reported in previous releases.
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.	Multi-element assaying is carried out on all samples, including for potentially contaminating elements and radioactive elements such as uranium and thorium. Other exploration data is not considered material to this document at this stage.
Further work	The nature and scale of planned further work (e.g. 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.	A follow up drilling program to test the width and grade of mineralisation at depth and in fresh rock was completed towards the end of 2023, comprising 11 RC holes and 2 diamond drill holes. The samples are currently awaiting assay results, which are expected to be received in early 2024.