ASX Announcement 18 December 2023

Further Extension of Multi-Commodity Mineralisation within Northern Zone of Ngualla Carbonatite Complex

- **Drilling for the 2023 exploration programme successfully completed**
- **57 holes for a total of 4,190m drilled across the highly prospective Northern Zone and Breccia Zone targets (3,979m of RC drilling and 211m of DD drilling)**
- **Northern Zone and Breccia Zone are located ~2km North and North-East, respectively, from the Bastnaesite Zone that forms the basis of the Ngualla Rare Earth Project's Ore Reserves and Mineral Resources**
- **Assays received for the first batch of RC samples from 13 holes within the Northern Zone, confirming widespread and shallow mineralisation of niobium, phosphate and rare earths**
  - **NRC352: 10m at 0.55% Nb_2O_5 from surface including 4m at 0.69% Nb_2O_5 from 6m, as well as 6m at 1.42% TREO from surface**
  - **NRC356: 14m at 0.55% Nb_2O_5 from 14m including 10m at 0.61% Nb_2O_5 from 14m, as well as 14m at 14.5% P_2O_5 from 16m**
  - **NRC359: 24m at 0.40% Nb_2O_5 from surface; 10m at 0.49% Nb_2O_5 from 28m including 4m at 0.72% Nb_2O_5 from 30m; and 10m at 13.6% P_2O_5 from 12m**
- **Rare earths mineralisation includes elevated levels of heavy rare earth elements dysprosium and terbium**
- **Further assays from the Northern and Breccia zones are imminent, with a number of key targets still pending**

Peak Rare Earths Limited (ASX: **PEK**) (**"Peak"** or the **"Company"**) is pleased to announce the first set of assays from its exploration programme targeting the multi-commodity potential of the Ngualla carbonatite system, with results demonstrating further widespread and shallow mineralisation of niobium, phosphate and rare earths within the highly prospective Northern Zone target area.

Results follow the recent completion of Peak's exploration drilling campaign where a total of 57 holes for 4,190m were successfully completed across the Northern Zone and Breccia Zone prospects. Peak awaits assay results of numerous key targets from across these two areas with results anticipated through early 2024.

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

"The first assay results are very encouraging and demonstrate widespread and shallow mineralisation of niobium, phosphate and rare earths in the outer region of the Northern Zone. We are eagerly awaiting results from key targets within the central region of the

Northern Zone, where we have previously encountered high-grade intercepts of these commodities. We remain of the view that the Ngualla Deposit is world-class with the potential to support a multi-generational and multi-commodity mining project."

Exploration programme overview

Peak commenced an exploration programme earlier in the year focusing on the multi-commodity potential of the Ngualla carbonatite complex. Whilst Ngualla remains highly prospective for a range of critical commodities, the broader deposit remains largely unexplored given the historical focus on the central rare earth zone (which forms the basis of the Ngualla Project's Ore Reserves and Mineral Resources). Importantly, the existing Special Mining Licence ("SML") for the Ngualla Rare Earth Project ("Ngualla Project") extends to any other minerals found to occur in association with rare earth elements.

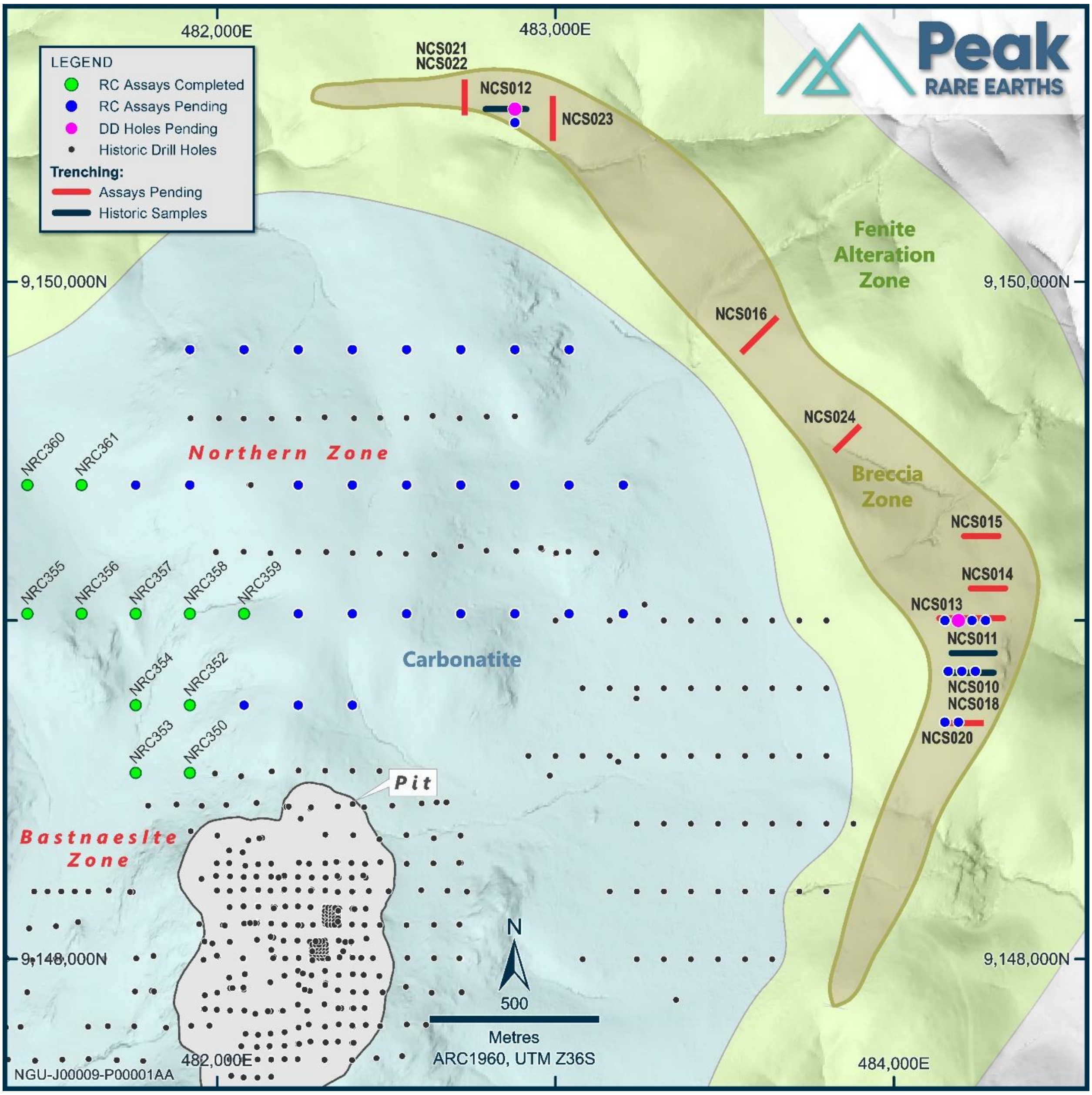
Drilling pertaining to the current exploration programme has focused on the Northern Zone and Breccia Zone; two highly prospective targets within the Ngualla deposit. Key objectives of this drilling campaign included:

1. Understanding the outer extent of mineralisation of niobium, phosphate and rare earths within the Northern Zone;
2. Progressing infill drilling within the Northern Zone to augment previous drilling from 2012, where Peak encountered shallow and high-grade mineralisation of niobium, phosphate and rare earths (See Appendix 1.a); and
3. Undertaking a maiden drilling programme within the Breccia Zone where previous rock chip and trench sampling in 2017 demonstrated significant fluorite and rare earth mineralisation (see Appendix 1.b).

Drill targets in the Northern Zone have been informed by a geological model developed by SRK as part of the exploration programme.

ASX Announcement 18 December 2023

Figure 1. Plan view showing 2023 Northern Zone and Breccia Zone drilling programmes and location of holes with results received to date



ASX Announcement 18 December 2023

Geological results and interpretation

A summary of key results for the 13 holes received is set out in Table 1. Assays analysed to-date largely extend to the South-West of the Northern Zone with the purpose of these holes to test the outer extent of mineralisation of the Northern Zone in this direction.

Based on the assays received, niobium, phosphate and rare earth mineralisation are broadly coincident in the Northern Zone, occurring in transported iron-rich sediments and a residual apatite-magnetite unit that infill the irregular karstic surface of the carbonatite (Figure 2). Results demonstrate the extension of mineralisation of niobium, phosphate and rare earths to the South West of the Northern Zone. High grades of the three commodities were returned in NRC358 and NRC359 on the far western margins of the transported and weathered Northern Zone (Figure 2).

Evaluation of the Northern Zone rare earth mineralisation demonstrates a higher proportion of magnet rare earths dysprosium, terbium, neodymium and praseodymium relative to total rare earth oxides than the Bastnaesite Zone (Table 2). On current spot prices, the basket value of the Northern Zone rare earth assemblage is 43% higher than the Bastnaesite Zone. Critically, the Northern Zone is highly enriched in heavy rare earths dysprosium and terbium which is uncommon light rare earth dominant projects.

Peak is awaiting results from a further 33 RC holes from the Northern Zone including a number of key infill targets within the centre of this area, with holes NRC364 – NRC383 currently at the Nagrom lab facilities in Perth for assay.

Figure 2. Drill section of the Northern Zone showing niobium and phosphate mineralised intersections within colluvium and weathered carbonatite

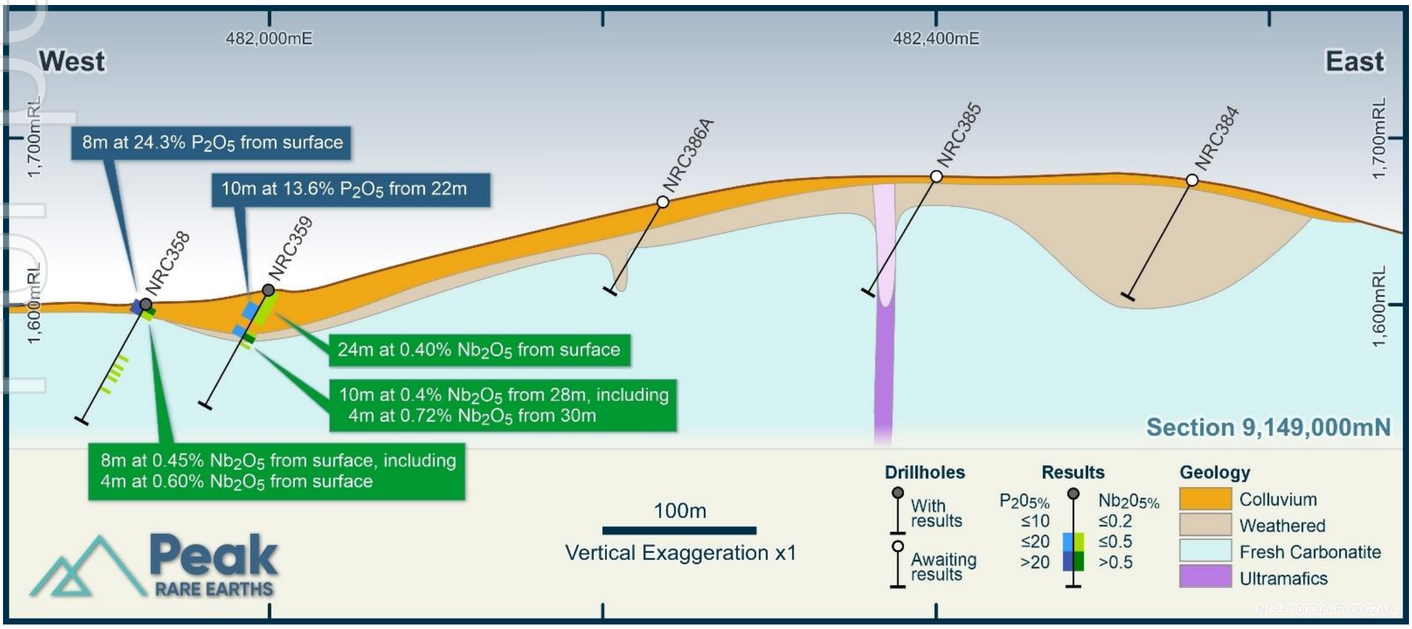
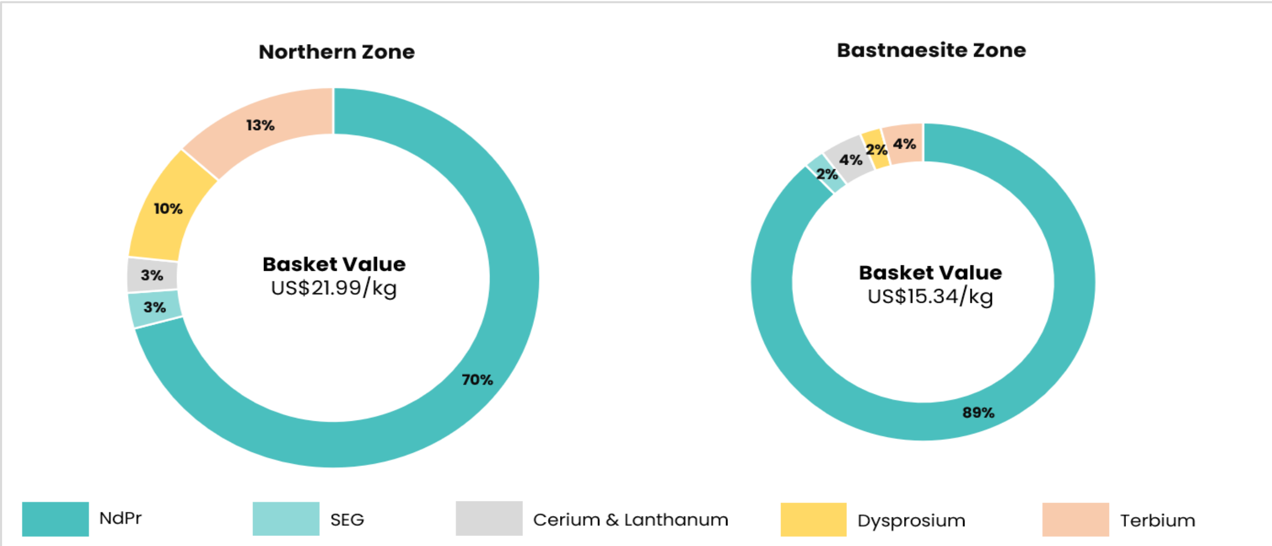


Table 1. Northern Zone drill intersections

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	Intercept
Niobium (Nb_2O_5)							
NRC350	481,916	9,148,542	80	0	10	10	0.34%
NRC352	481,918	9,148,743	80	0	10	10	0.55%
			incl.	*6*	*10*	*4*	*0.69%*
NRC353A	481,776	9,148,546	10	0	10*	10	0.29%
NRC353	481,767	9,148,542	70	0	18	18	0.41%
NRC356	481,586	9,149,014	80	14	28	14	0.55%
			incl.	*14*	*24*	*10*	*0.61%*
NRC358	481,927	9,149,025	80	0	8	8	0.45%
			incl.	*0*	*4*	*4*	*0.60%*
NRC359	482,001	9,149,012	80	0	24	24	0.40%
				28	38	10	0.49%
			incl.	*30*	*34*	*4*	*0.72%*
Phosphate (P_2O_5)							
NRC352	481,918	9,148,743	80	0	10	10	12.2%
NRC353	481,767	9,148,542	70	0	8	8	13.4%
NRC356	481,586	9,149,014	80	16	30	14	14.5%
NRC358	481,927	9,149,025	80	0	8	8	24.3%
NRC359	482,001	9,149,012	80	12	22	10	13.6%
NRC361	481,598	9,149,397	56	0	8	8	12.8%
Rare Earths (TREO)							
NRC350	481,916	9,148,542	80	0	4	4	1.89%
			Incl.	*0*	*2*	*2*	*2.05%*
NRC351	482,061	9,148,752	79	0	2	2	1.34%
NRC352	481,918	9,148,743	80	0	6	6	1.42%
NRC353A	481,776	9,148,546	10	0	4	4	1.06%
NRC353	481,767	9,148,542	70	0	4	4	1.08%
NRC359	482,001	9,149,012	80	0	16	16	1.22%
				28	34	6	1.29%
NRC361	481,598	9,149,397	56	0	4	4	1.19%
				10	12	2	1.31%
				52	56*	4	1.18%

Note: Coordinate system in Arc 1960 UTM zone 36S. * = hole ended in mineralisation. Samples are 2m composites from angled -60 west RC drilling.
Niobium: Intersections with a minimum width of 8m at >0.25% niobium oxide are reported. Intersections calculated using a 0.25% Nb2O5 lower cut and a maximum of 2m internal dilution. Selected intersections >0.5% Nb2O5 in italics.
Phosphate: Intersections with a minimum width of 8m at >10% phosphate are reported. Intersections calculated using a 10% P2O5 lower cut and a maximum of 2m internal dilution.
REO: Intersections calculated using a 1% REO lower cut and a maximum of 2m internal dilution. Selected intersections >2%REO in italics. REO = Total Rare Earth Oxides including yttrium. See Table 2 for relative distribution of individual rare earth oxide

Figure 3. Basket value of rare earth assemblage within Northern Zone



Based on spot prices as at 15 December 2023 (Asian Market) – Neodymium US$64/kg, Praseodymium US$64.0/kg, Lanthanum – US$0.6/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 Northern Zone above 1% REO and the Weathered Bastnaesite Zone Mineral Resource

		Northern Zone*		Mineral Resource**	
Rare Earth Oxides		REO Grade %	% of Total REO	REO Grade %	% of Total REO
Lanthanum	La_2O_3	0.314	21.8	1.310	27.6
Cerium	CeO_2	0.641	44.5	2.293	48.3
Praseodymium	Pr_6O_{11}	0.074	5.16	0.227	4.77
Neodymium	Nd_2O_3	0.274	19.0	0.784	16.5
Samarium	Sm_2O_3	0.042	2.91	0.076	1.60
Europium	Eu_2O_3	0.011	0.76	0.014	0.29
Gadolinium	Gd_2O_3	0.027	1.87	0.029	0.61
Terbium	Tb_4O_7	0.003	0.20	0.002	0.05
Dysprosium	Dy_2O_3	0.011	0.76	0.004	0.07
Holmium	Ho_2O_3	0.002	0.10	0.000	0.01
Erbium	Er_2O_3	0.003	0.23	0.002	0.03
Thulium	Tm_2O_3	0.000	0.02	0.000	0.00
Ytterbium	Yb_2O_3	0.002	0.12	0.001	0.01
Lutetium	Lu_2O_3	0.000	0.01	0.000	0.00
Yttrium	Y_2O_3	0.037	2.56	0.100	0.20
Total REO* **		**1.44**	**100.0**	**4.75**	**100.00**

Recent and previous Northern Zone drilling. ** 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.

Radionuclides and deleterious elements

Drill samples have also been analysed for deleterious element levels, with assays completed to date demonstrating that mineralisation of niobium, phosphate and rare earths within the Northern Zone are associated with low levels of radionuclides (thorium and uranium) and heavy metals (cadmium and lead). Many phosphate and niobium projects globally are constrained by high levels of these elements, particularly when producing intermediate products and concentrates that require shipping or that are used in direct agricultural applications.

Table 3. Radionuclides and deleterious elements (Northern Zone)

Element	Basis	Value (ppm)
Thorium	Th	102
Uranium	U	106
Cadmium	Cd	7
Lead	Pb	627

Note: Calculated from recent and previous Northern Zone drilling intervals above 0.25% Nb_2O_5

Status and next steps

All drilling related to this current exploration campaign has now been completed. A second set of RC samples (NRC364 – NRC383) from the Northern Zone are currently being assayed at the Nagrom lab in Perth which includes a number of high priority targets from the central Northern Zone. Trench samples for the Breccia Zone are also undergoing analysis at Nagrom with assay results from these samples imminent.

The third and final batch of drilling samples are currently being prepared for dispatch to Perth. This final batch includes core from two diamond drill holes from the Breccia Zone. Although assays have not yet been completed, visual inspection of both diamond drill cores (DD048 and DD049) shows distinct bands of fluorite mineralisation (Figure 4). It is anticipated that assays for this final batch of samples will be completed early in the new year.

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	RC samples being prepared for dispatch to Perth
Breccia Zone (fluorite and rare earths)	
Trench samples	Assays pending
RC holes NRC389 – NRC410	RC samples being prepared for dispatch to Perth
DD holes NDD048 – NDD049	DD core being prepared for dispatch to Perth

ASX Announcement 18 December 2023

Figure4. Photos of core from NDD049 (39m to 46m) showing a thick intersection of logged weathered fluorite from 39.3m to 44.5m.

Key: yellow border – slightly weathered, brecciated, medium grained rock; red border – weathered, fractured fluorite, oxidised to haematite and limonite, porous; green border-moderately weathered, brecciated mixed fluorite / breccia zone, porous in patches with pervasive hematite alteration

ASX Announcement 18 December 2023

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

Bardin Davis	**Media inquiries:**
Chief Executive Officer	Michael Vaughan
	Fivemark Partners
	+61 422 602 720

Competent Persons Statement

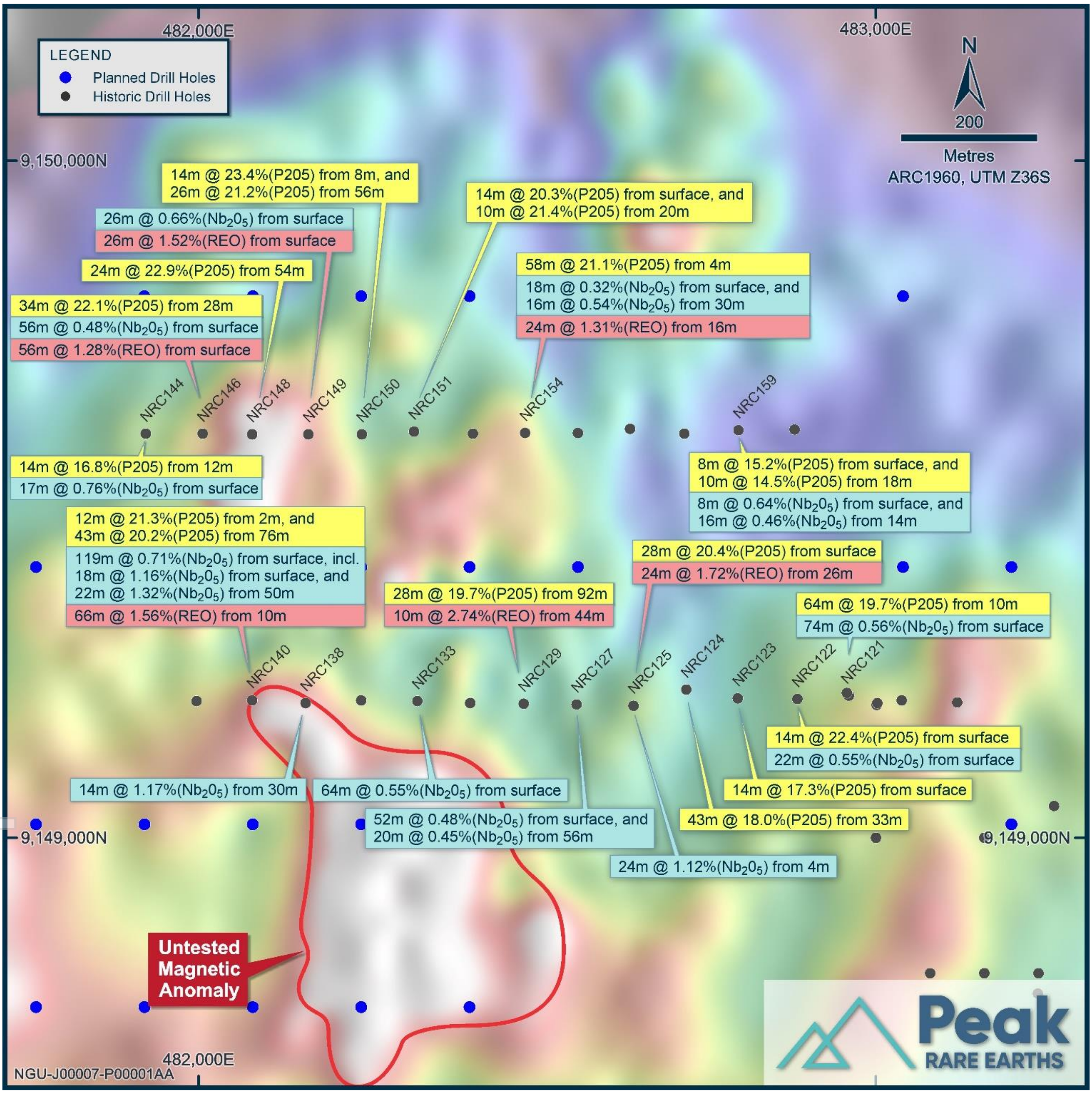
Information in this Announcement that relates to exploration results is based upon work undertaken by Maggie Hughes, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG). Maggie Hughes has sufficient experience that is relevant to the style of mineralisation and type 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.

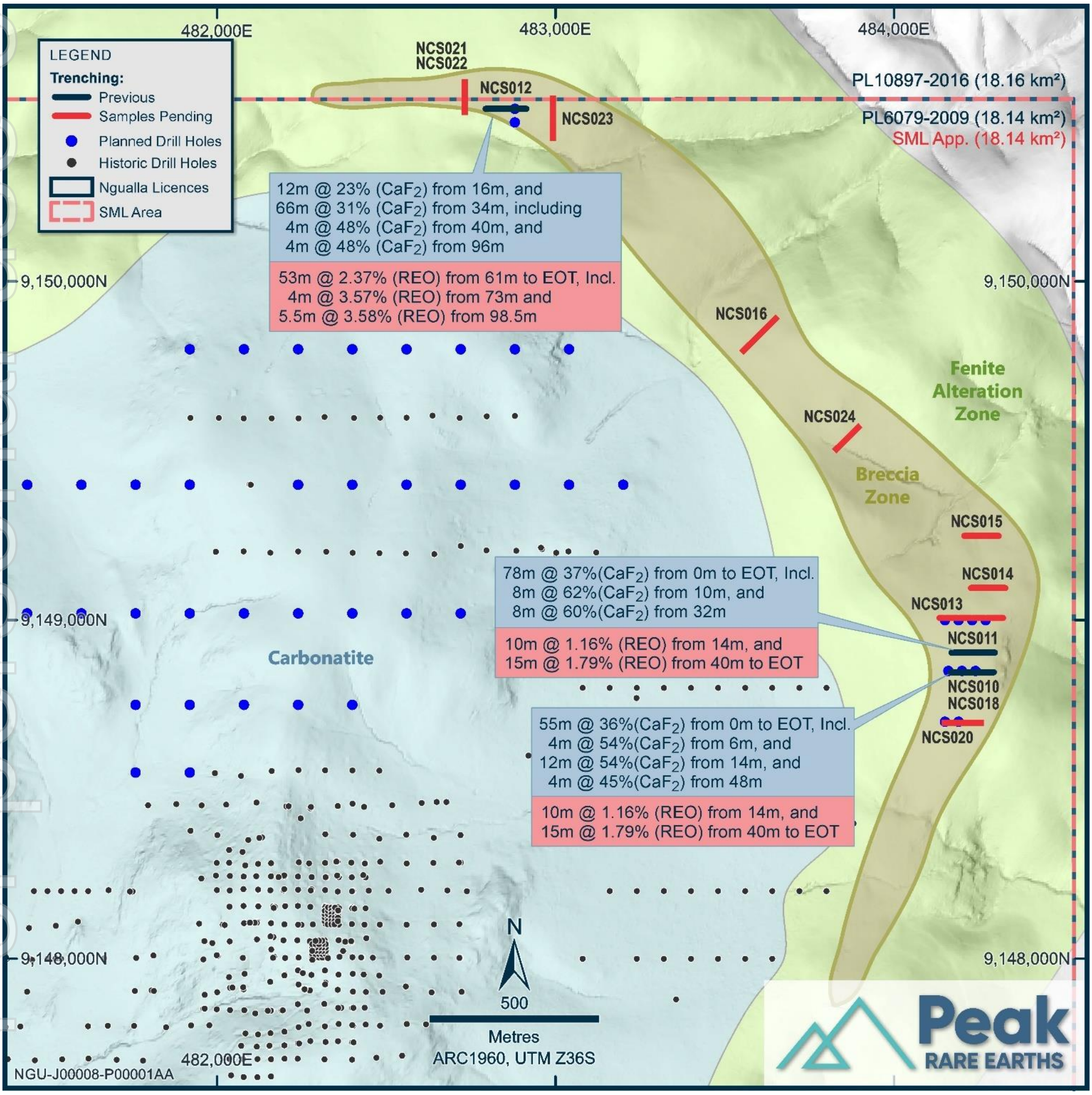
ASX Announcement 18 December 2023

Appendix 1(a): Previous intercepts (Northern Zone)[1]



[1] Refer to announcement 'Exploration programme to commence on the critical mineral potential at the Ngualla deposit' on 9 June 2023 for overview of previous drilling results

Appendix 1(b): Previous intercepts (Breccia Zone)[2]



---

[2] Refer to announcement 'Exploration programme to commence on the critical mineral potential at the Ngualla deposit' on 9 June 2023 for overview of previous drilling results

Appendix 2: 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 RC samples were collected over 1 m intervals. A 3-tier riffle splitter was used to split and combine adjacent samples to form a 2 m composite, with a 2 kg split submitted for laboratory testing. Diamond core samples were collected over a nominal interval length of 2 m within lithological units and core run blocks. Quarter core samples were submitted for geochemical testing. The total lengths of all drill holes were sampled and submitted for assaying. 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.).	The RC samples were collected using track mounted rigs equipped with 5.5" face sampling button bits and 6 m rods. The diamond core samples were collected using PQ3 coring equipment in the weathered friable material at surface

		(up to 6m) and HQ3 equipment in fresh material. A rod length of 6 m was used. Because of the weathered nature of the host rock and the disseminated nature of the mineralisation, it was not considered possible or necessary to orient the core.
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.	For the RC program, a face sampling bit was used to improve recovery and reduce contamination. Each sample was weighed, with the weight compared to the theoretical weight estimated from the hole diameter and expected density. The drill rods were air flushed after each sample to minimise contamination. The RC sample moisture content was qualitatively logged and recorded. Diamond core samples were collected using triple-tube coring equipment. The drilling was performed in short runs and at slow rates to maximise core recovery. The runs were marked and checked against the drillers' core blocks to ensure any core loss was recorded. A number of studies have been conducted at Ngualla to assess whether there is any relationship between recovery and grade, with no significant correlation identified. Material from the drill return and cyclone overflow have been periodically collected and assayed, and good correlation with the primary sample grades was observed. A number of DDH and RC twinned holes have been drilled at Ngualla. Close lithological and grade correlation was observed between the twinned datasets, with no evidence of significant differences that may indicate issues with one or both of the sampling methods.
Logging	Whether core and chip samples have been	All DDH and RC intervals were geologically

	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.	logged, with information pertaining to lithology, mineralogy, weathering, and magnetic susceptibility collected and recorded. RC sample weights were recorded. DDH recovery relative to drill length was recorded. RQD was measured and recorded for DDH intervals. Because the DDH cores were not oriented, structural orientation data were not recorded. The logging datasets comprised a mix of qualitative (lithology, weathering, mineralogy) and quantitative (RQD, magnetic susceptibility, recovery) information. The remaining three-quarter core pieces were returned to the core trays and stored for reference or subsequent testing. A small amount of material from each 1 m RC sample was collected and stored in chip trays. All core samples and chip trays were photographed. Logging was performed on the full length of each hole, with the level of detail considered appropriate to support mineral resource estimation studies.
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 technique. Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	RC chip samples were collected from each 1 m interval using a standalone 3-tier riffle splitter configured to give a 1/8 split. A scoop was used to collect an equal-sized portion from adjacent samples, which were combined to produce 2 m composites. Replicate samples were collected to confirm that scooping did not introduce significant bias or precision issues. Core samples were terminated at lithological contacts and at the end of

	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.	each core run (which were marked by core blocks) or at 2 m intervals within lithological units. The cores were longitudinally split using a core saw for fresh material and a knife for weathered material, with quarter-core samples submitted for assaying. 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. Twinned DDH and RC datasets were examined to confirm that the sample collection procedures had not resulted in significant bias or precision issues. The QA data does not indicate that there are any significant issues with the weight/particle size combinations used for sample preparation.
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)	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.

	and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	The element suite for each method comprised: Fused Bead XRF: Al, Ba, Ca, Cu, Fe, K, Na, Ni, Mg, Mn, P, Pb, S, Si, Ti, Zn, Zr, LOI. Peroxide Fusion Digest with ICP finish: Cd, Ce, Dy, Eu, Er, Gd, Ho, La, Lu, Nb, Nd, Pr, Sc, Sm, Ta, Tb, Th, Tm, U, Y, Yb. 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. Peak have twinned 33 RC holes with DDH at Ngualla. Comparisons between the two datasets indicate the pairs generally show very good lithological and grade correlation. 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 other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	The spatial data for Ngualla are reported using the ARC 1960 UTM, Zone 36S coordinate system. Drill collars were surveyed using a handheld GPS. A DGPS survey is currently being conducted, which will replace the GPS surveys once complete. Down hole surveys were completed during drilling using Reflex Gyro Sprint-IQTM, with readings taken at a nominal interval of every 10m down all DDH holes and RC holes. The elevation for each drill hole 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	Data spacing for reporting of Exploration Results.	The nominal drill hole spacing is 40 x 150 m in the Breccia Zone and 160 x 200 m in the

and distribution	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.	Northern Zone. 1 m RC drill samples were combined in the field to form 2 m composite samples for final assay submission; 2 m composites are considered adequate for resource estimation and for the definition needed for the likely mining techniques for this style of mineralisation.
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 local karstic and magmatic structures display a variety of orientations and most of the drilling has been conducted on east-west traverses with holes angled 60° to the west. This orientation is considered suitable for the dominant mineralisation orientations. No orientation-based sampling biases have been identified or are expected for this style of mineralisation.
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.

Appendix 3: 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 ~18.14km^2 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 Resources 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.	The Ngualla Project is centred on the Ngualla Carbonatite, a 4 km x 3.5 km pipe-like intrusive body composed of carbonate mineral-rich, alkaline igneous rocks. The predominant components of the complex are an annular calcite carbonatite (and magnesiocarbonatite) and a central body of ferrocarbonatite. Weathering of the Ngualla carbonatite complex and landscape evolution were critical factors in the formation of the rare earth oxides, phosphate and niobium mineralisation. The mechanism of weathering differs according to carbonatite type and the different processes of mineralisation. Mineralisation has been residually enriched in the oxide zone at surface through weathering and the removal of carbonate minerals to variable depths of up to 140 m vertically. Rare earth elements are enriched in the central ferrocarbonatite relative to the calcite carbonatite and magnesiocarbonatite, but the calcite carbonatite is the main source of phosphate and niobium. Fluorite mineralisation has been identified within a 3.8 km long structural zone or brecciated fenite within the alteration halo that surrounds the intrusive carbonatite.

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 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.	The drill hole plan in Figure 1 illustrates the distribution of drilling and the details are tabulated in Table 1.
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.	The massive and consistent nature of the mineralisation at Ngualla and the resulting uniform grade distribution does not require the statement of any higher-grade intervals when using a 1% REO lower cut-off grade, a 10% phosphate lower cut-off grade and a 0.25% niobium oxide lower cut-off grade. Rare earth grade is reported as 'Total Rare Earth Oxide', (REO), which is calculated as the sum of the individual 14 rare earth oxides plus yttrium, as shown in Table 2 of this document. No metal equivalents are reported in the intersection table.
Relationship between mineralisation	These relationships are particularly important in the reporting of	Ngualla's rare earth and phosphate mineralisation occurs as a thick

widths and intercept lengths	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').	horizontal blanket developed over an irregular karstic surface that has both vertical and horizontal form and is developed on a vertical primary magmatic fabric, therefore there are both horizontal and vertical controls. Drilling reported is all at 60° to the west to best intersect both the vertical and horizontal components. All reported intersections are down hole lengths.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	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.
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).	Further drilling and sampling will be planned following completion and assessment of the current program.

	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	