ASX Announcement
12 March 2025

Metallurgical test work results confirm Raptor as true Ionic Adsorption Clay REE mineralisation with excellent recoveries

HIGHLIGHTS

- **Metallurgical Results Confirm Ionic Adsorption Clay (IAC) REE Mineralisation at Raptor**
  - All nine metallurgical tests from composite maiden drill samples confirm **Ionic Adsorption Clay (IAC) REE mineralisation** with impressive Magnet REE "MREE" (Neodymium-Praseodymium-Terbium-Dysprosium) **recoveries up to 94%.**
  - In un-optimised conditions, all four high-value rare earth elements ('MREE') Neodymium-Praseodymium-Terbium-Dysprosium (Nd, Pr, Dy, Tb) exhibited high recoveries at all prospects.
- **High Recoveries Verified by ANSTO Testing**
  - Samples were tested by the Australian Nuclear Science and Technology Organisation ('ANSTO') under standard ionic desorption conditions, with high recoveries including the following:
    - PER-C6: 2 m – 5 m, 3 m composite head grade **5,327 ppm TREO** incl. **1,327 ppm MREO with 94% recovery**[1]
    - PER-C1: 6 m – 9 m, 3 m composite head grade **5,362 ppm TREO** Incl. **1,802 ppm MREO with 84% recovery**
    - PER-C2: 4 m – 7 m, 3 m composite head grade **4,252 ppm TREO** Incl. **1,168 ppm MREO with 81% recovery**
    - PER-C8: 8 m – 11 m, 3 m composite head grade **6,397 ppm TREO** incl. **1,669 ppm MREO with 72% recovery**
- **Strong Comparisons to Established Projects**
  - Raptor's metallurgy compares favourably to Meteoric Resources (ASX:MEI) nearby project which hosts a JORC Mineral Resource Estimate of 545 million tonnes @ 2,561 ppm[2].
- **Next Steps: Advancing Exploration & Development**
  - Planning is now underway for follow-up work programs to build on these strong results.

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[1] Note the recovery relates to the MREO component not the TREO

[2] For additional information, please refer to Meteoric Resources (ASX:MEI) ASX Announcement dated 14 May 2024, titled "150% Increase in Soberbo Mining Licence Mineral Resource" and 8 December 2023, titled "Outstanding Ionic Clay Recoveries".

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Perpetual Resources Ltd ("Perpetual" or "the Company") (ASX: PEC) is pleased to announce the results of an initial metallurgical test work program, completed by Australian Nuclear Science and Technology Organisation ('ANSTO') on composite samples from recent drilling at Perpetual's high-grade Raptor REE project, located in the prolific Caldeira Alkaline Complex in Minas Gerais, Brazil. Nine composite samples were collected to represent REE mineralisation intersected in shallow auger drilling. The results have confirmed very strong recoveries of REE from the available samples. Testing definitively confirms the presence of true Ionic Adsorption Clay REE mineralisation at multiple targets within the project. The higher-value Magnet REE's Nd+Pr+Tb+Dy (Neodymium-Praseodymium-Terbium-Dysprosium) show the best recoveries with a 69% average of all the samples.

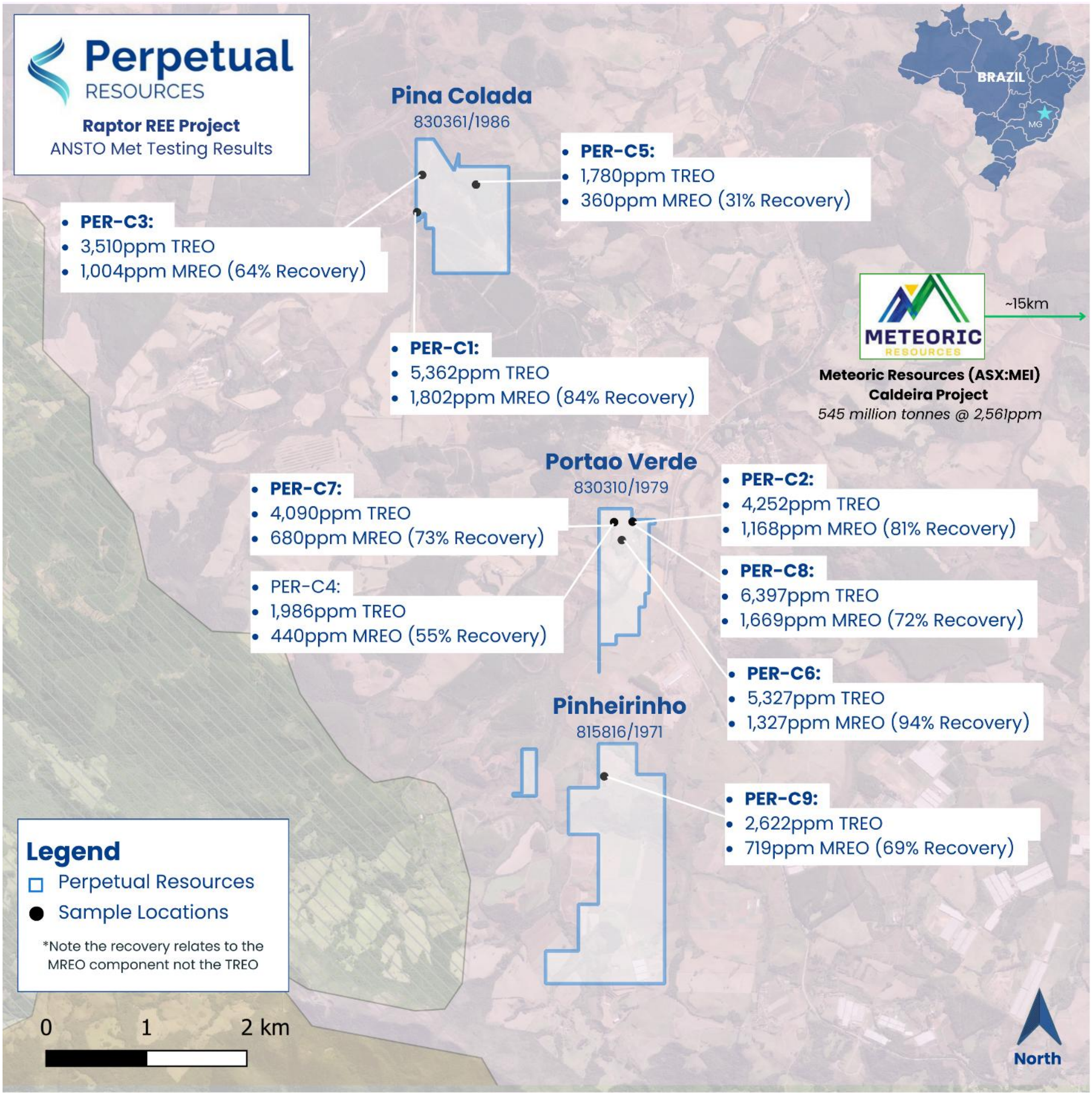

Figure 1: Highlights from Metalurgical test work following PEC's maiden drill program at the Raptor REE Project, Caldeira, Minas Gerais.

Perpetual's Executive Chairman, Mr. Julian Babarczy, commented:

"These outstanding metallurgical results confirm Raptor as a genuine Ionic Adsorption Clay rare earth discovery, with exceptional recoveries of key magnet rare earth elements. Seeing up to 94% recoveries of the magnet rare earth elements is highly encouraging and reinforces the project's strong potential. With low impurity levels and favourable metallurgy, Raptor is emerging as a highly attractive REE asset, in a Tier-1 jurisdiction. We are now advancing follow-up work programs to unlock further value from this exciting discovery".

Scope of Metallurgical Test Work Raptor REE Project

The overall objective of the work program was to assess the leachability of the REE mineralisation across the Raptor project. The metallurgical sample program included the following:

- PEC geologists selected twenty-seven, one metre interval samples to produce nine, three metre composites. These were sent directly from Brazil to ANSTO in Australia.
- The three metre composites were sub-sampled for head assay and diagnostic leach tests.
- Head assays of nine samples were determined by XRF (in-house) and tetraborate digest/ICPMS (ALS, Brisbane).
- Following assay, nine diagnostic desorption tests were carried out.
- Analysis of test liquors by ICP-OES (in-house) and ICP-MS (ALS, Brisbane) characterised the residual material and important impurities.
- The final step was to characterise the mineralogy of two samples using QEMSCAN.

A summary of the metallurgical test work results is provided below, with detailed results included in the tables and appendix.

Metallurgical Test Work Results

The desorption tests indicate the presence of moderate to high quantities of desorbable

REEs, with magnet REE extractions of:
> 80% in three out of nine tests;
> 70% in five out of nine tests;
> 60% in seven out of nine tests;
> 50% in eight out of nine tests;

Total rare earth (TREY-Ce) extractions, excluding cerium, range from 28-88%, with 8 of the 9 samples having extractions greater than 50%. The higher-value Magnet REE's Nd+Pr+Tb+Dy (Neodymium-Praseodymium-Terbium-Dysprosium) show the best recoveries with a 69% average of all the samples. 93.8% was the maximum magnets extraction (from PER-C6).

The low Ce recovery (< 15%) across the samples (except sample PER-C4) is beneficial for selective recovery of the high value magnet rare earth elements and reduced costs in downstream processing.

Gangue element dissolutions are fairly typical for IACs although sample PER-C8 has a noticeably greater Ca concentration in the ore and the leach liquor. This area requires further drilling to assess the possible host lithology at depth. The ratio of TREY/Al in the leach liquors was also favourable. In general, the gangue element dissolution was relatively low at pH 4.

The average thorium (Th) content of the samples was 52 ppm and the average uranium (U) content was 9 ppm. These U/TREY ratios are comparable to other IAC deposits.

Two samples were selected for mineralogical characterisation, which was carried out using QEMSCAN (an automated mineralogical analysis technique), and manual scanning electron microscopy (SEM).

Kaolinite, biotite/annite, muscovite, K-feldspar and smectites are the major gangue minerals in the samples, while minor and trace concentrations of Fe oxide/hydroxide, chamosite, Mn oxide/hydroxide, organic material, rutile/anatase, quartz, zircon, ilmenite, magnesio chromite and crandallite group minerals were also detected. Minor concentrations of REE containing minerals include monazite, cerianite and florencite.

Raptor REE Project

The Raptor Tenements are located near Meteoric Resources' (ASX:MEI) Tier 1 Caldeira ionic clay REE project, one of the world's highest-grade REE deposits, with a JORC resource[3]. of 545 Mt at 2,561 ppm TREO. Positioned within the Poços de Caldas Alkaline Complex, Brazil's largest at 800 km², the tenements host REE mineralisation in nepheline syenite and related alkaline intrusives formed during major magmatic events. Intense weathering has led to an extensive clay regolith, with nearby projects identifying mineralisation through shallow drilling and sampling.

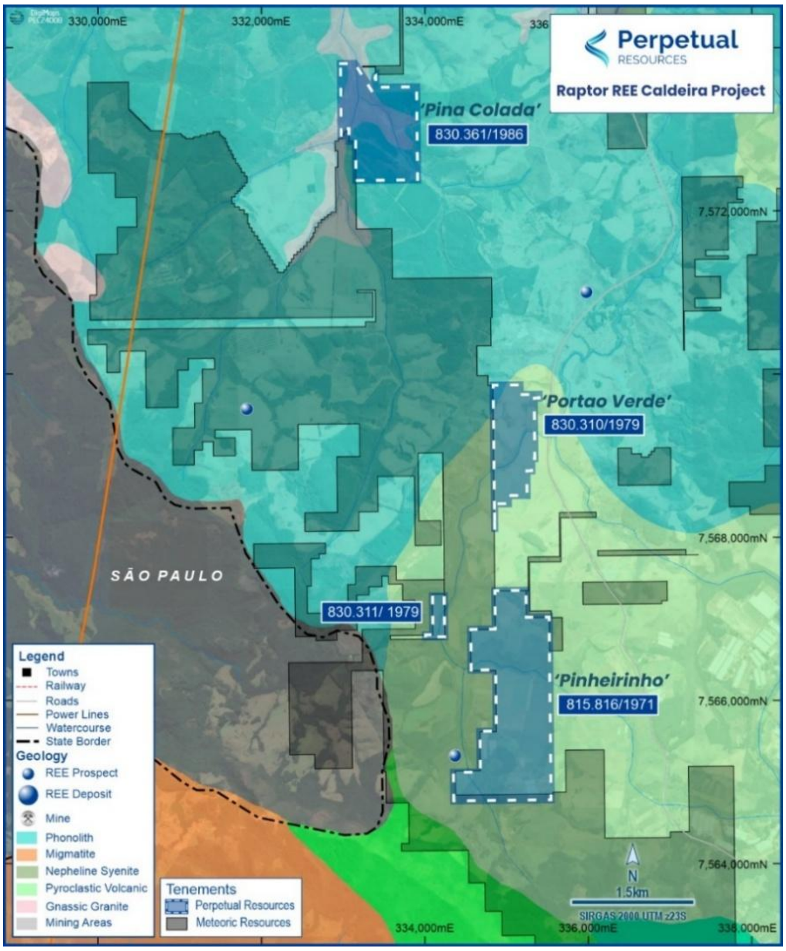

Figure 2: Perpetual Resources Licenses within the Caldeira region, Minas Gerais, Brazil.

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[3] *For additional information, please refer to Meteoric Resources (ASX:MEI) ASX Announcement dated 14th May 2024, titled "150% Increase in Soberbo Mining Licence Mineral Resource".*

The four Raptor licenses are separated into 3 project areas (Portão Verde, Pina Colada & Pinheirinho) and all located with a <3 km radius and have a combined strategic footprint of 318 ha.

Previously Reported Raptor Results - Summary

- Results returned and reported previously confirmed significant high-grade REE potential at Portão Verde, Pina Colada and Pinheirinho Prospect. The Portão Verde and Pina Colada prospects are located approximately 0.8 km and 5 km north of the Pinheirinho license, respectively, highlighting the scale and growth potential of the Raptor Project. For relative locations, refer to Figures 1 & 2. Results and highlights below were reported on the ASX, 13 September 2024. Assay results indicate presence of REEs both at surface and within the shallow saprolite, with all holes ending in mineralisation suggesting substantial potential upside at depth, as is evident at other nearby Caldeira-style clay-hosted REE deposits.
- Grades compare favourably to Meteoric Resources (ASX:MEI) proximal and similar style ionic clay REE project, which contains a JORC Mineral Resource Estimate of 545 million tonnes @ 2,561 ppm[4].
- Highlighted drill intercepts from Perpetual's maiden drill program include:
  - RPT0018: **5 m @ 5,591 ppm TREO (35% Nd+Pr)** ending in 5,533 ppm TREO (33% Nd+Pr).
  - RPT0019**: 3 m @ 3,569 ppm TREO (27% Nd+Pr)** from 6 m, ending in 3,846 ppm TREO (31% Nd+Pr).
  - RPT0012: **12 m @ 4,601 ppm TREO (23% Nd+Pr)** ending in 2,914 ppm TREO (24% Nd+Pr).
  - RPT0011: **7 m @ 4,240 ppm TREO (23% Nd+Pr)** ending in 2,722 ppm TREO (21% Nd+Pr).
  - RPT0010**: 10 m @ 2,546 ppm TREO (21% Nd+Pr)** ending in 1,834 ppm TREO (22% Nd+Pr).
  - RPT0002**: 2 m @ 3,165 ppm (27.7% Nd+Pr)** ending in 4,398 ppm TREO (29.4% Nd+Pr)
  - RPT0020: **10 m @ 1,607 ppm TREO (16.5% NdPr)** ending in 1,641 ppm TREO (14.9% Nd+Pr)
- Results confirm that REE mineralisation is now evident across all three (3) Raptor Project areas (Pina Colada, Portao Verde and Pinheirinho prospects), located within the Tier-1 Caldeira high-grade ionic REE region.
- Significantly higher-value Neodymium-Praseodymium (Nd+Pr) rare earths also confirmed, with individual drill holes showing **up to 35% Nd+Pr ratios**.

For additional detail related to these results please refer to the ASX announcement dated 13th September 2024.

[4] For additional information, please refer to Meteoric Resources (ASX:MEI) ASX Announcement dated 14th May 2024, titled "150% Increase in Soberbo Mining Licence Mineral Resource".

Portão Verde Prospect

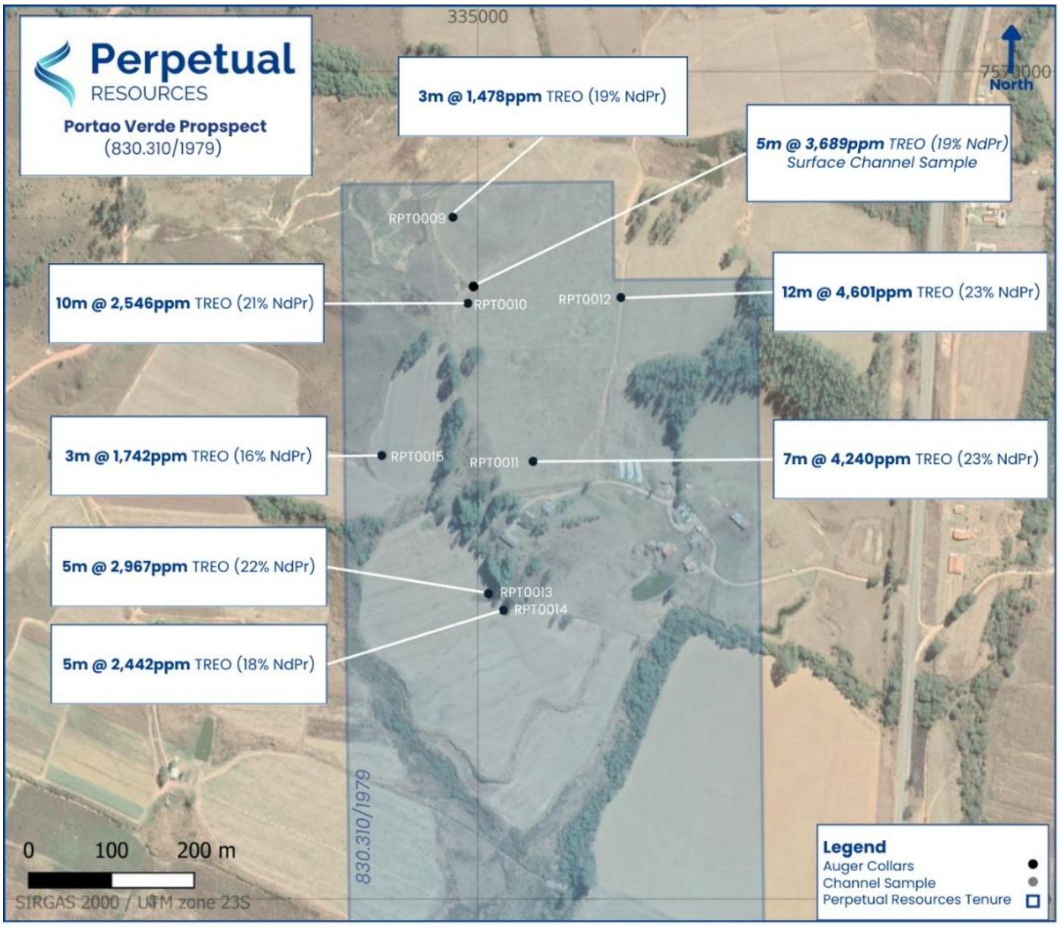

Figure 3: Highlight drill and surface results located on the Portao Verde Prospect as at 13 September 2024 (license 830.361/1979).

All reported drill results demonstrate that mineralisation or significant anomalies begin within 1 metre of the surface and persist to the end of the hole, suggesting potential for deeper mineralisation. As with earlier results, deeper drilling was constrained by the handheld auger's capacity to penetrate beyond certain depths due to variable ground conditions. Perpetual is currently evaluating the use of a more robust drill rig for future exploration programs.

Pina colada Prospect

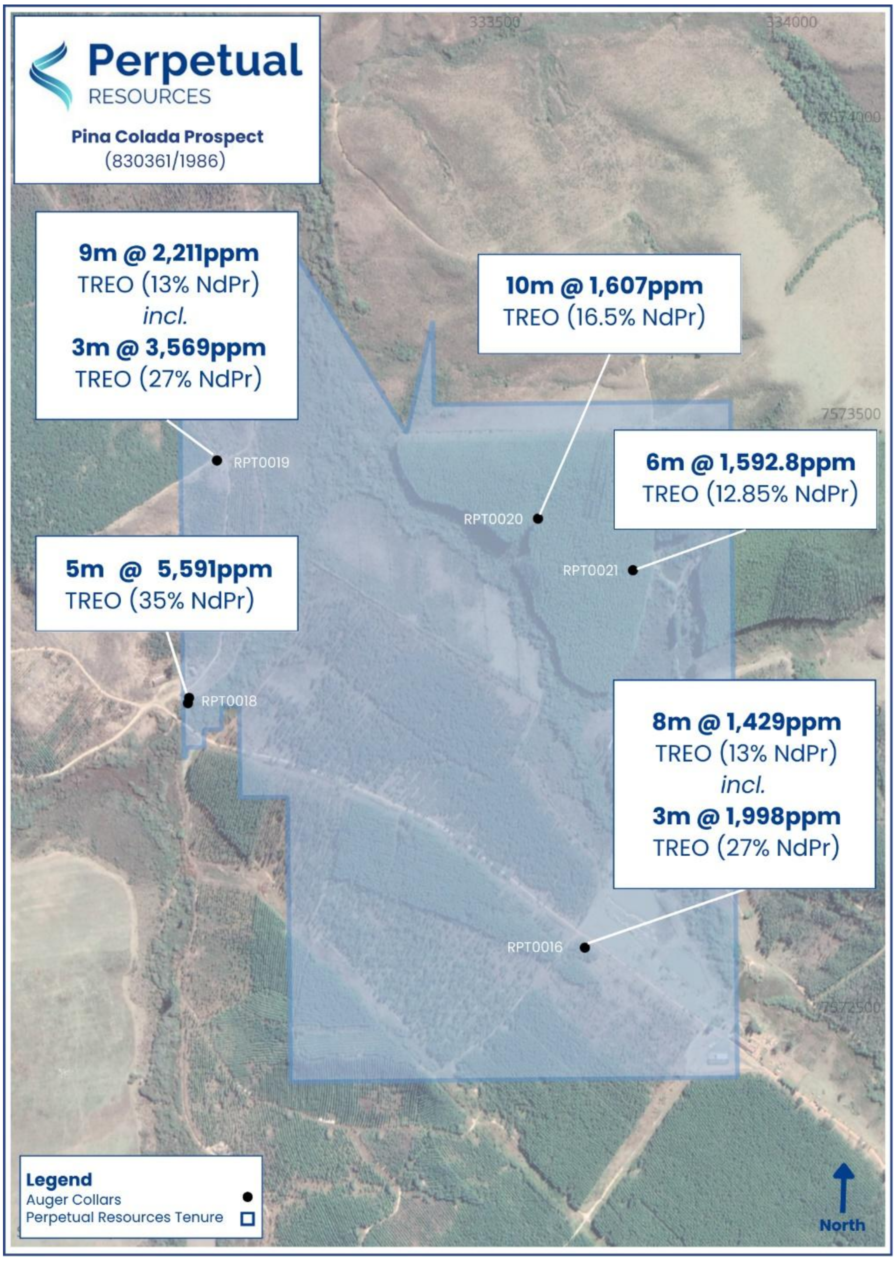

Figure 4: All drill results located on the Pina Colada Prospect (license 830.310/1986) as at 13 September 2024.

Previously reported results underscore the significant prospectivity of the Raptor Project, confirming the presence of high-grade, clay-hosted rare earth elements (REE) and the potential for Ionic-Adsorption Clay (IAC) style mineralisation across an expanding area within Perpetual's project areas.

The Ionic-Adsorption Clay (IAC) style mineralisation confirmed by the recent metallurgical testwork, is characteristic of Caldeira-style IAC mineralisation. The weathered host rocks identified include breccias and intrusive rocks from the Poços de Caldas Intrusive Complex.

Pinheirinho Prospect

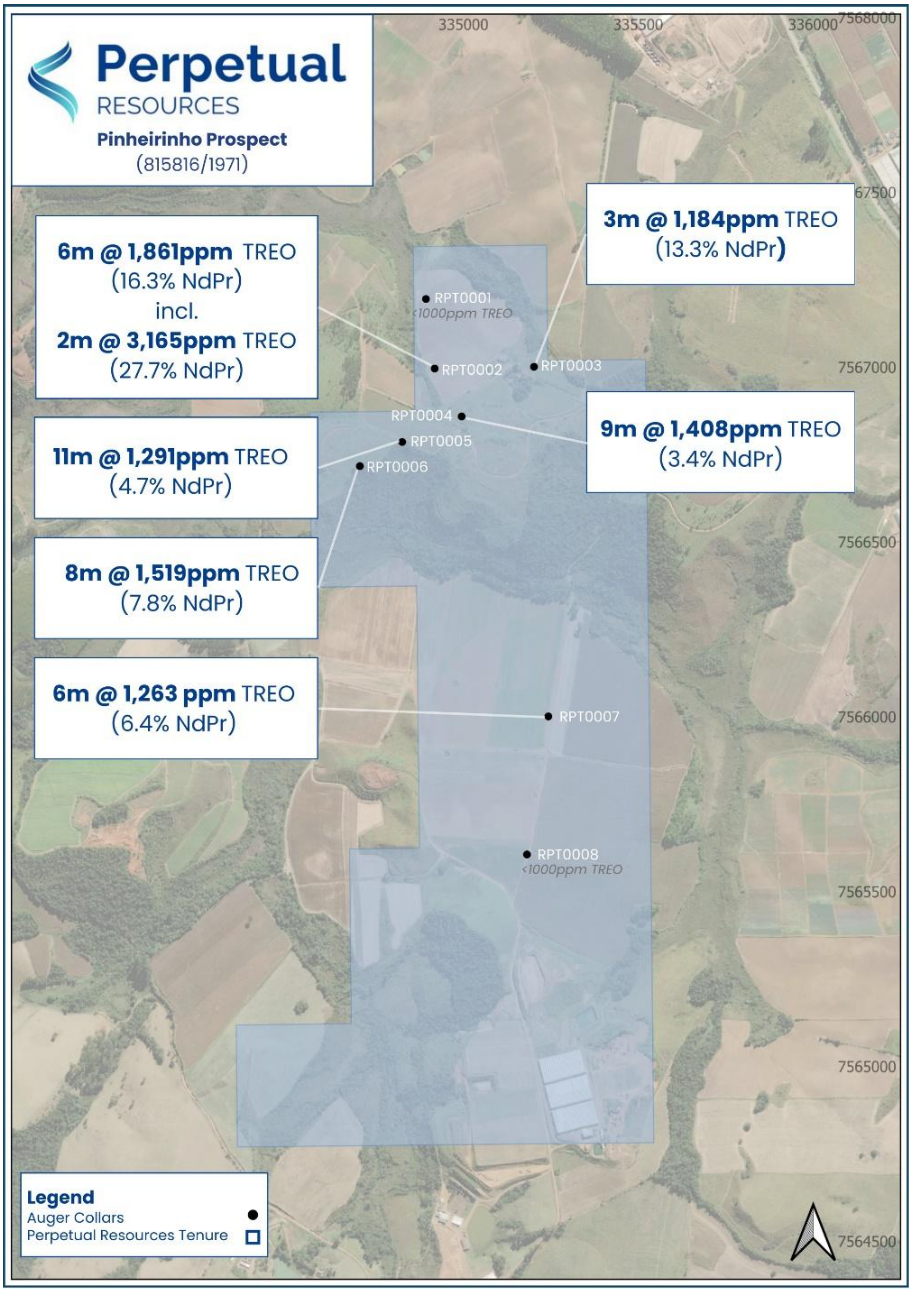

Figure 5: All drill results located on the Pinheirinho Prospect (license 815.816/1971) as at 13 September 2024.

Next Steps

1. **Pathway to Resource Definition:**
   While Perpetual's exploration team is primarily focused on advancing its portfolio of lithium assets in Minas Gerais, Brazil, a Phase 2 Raptor drilling program is being planned with the view to schedule and implement when appropriate. The drilling is likely to target depth extensions to the known high-grade zones, with expansion into underexplored areas where relevant. This drilling will aim to advance the project towards a JORC-compliant resource.

2. **Metallurgical program:**
   Given the positive results from the initial metallurgical test work and the confirmation that Raptor hosts true Ionic Adsorption Clay (IAC) style mineralisation, further detailed metallurgical analysis will be considered. Any additional metallurgical studies will be undertaken following further drilling and completion of project goals.

Renegotiation of Remaining Raptor Payments

Perpetual has reached an agreement to further amend the payment terms for the remaining consideration related to the Raptor Project.

Under the revised terms (which replace those detailed in the recent quarterly report[5], the outstanding amount has been reduced by 20% to US$176,000, with payments now scheduled quarterly through to May 2026. As part of the new agreement, an additional payment of US$43,962 will become payable if the Neodymium and Praseodymium (NdPr) price reaches or exceeds US$75/kg within the next 18 months.

Perpetual appreciates the vendor group's cooperation in achieving this outcome.

- ENDS -

This announcement has been approved for release by the Board of Perpetual.

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[5] Please see ASX release dated 24th January 2025

Table 1: Details of composite sample Assay results, PEC and ANSTO Comparison.

ANSTO HEAD GRADE RESULTS – RAPTOR PROJECT													
Metallurgical Sample Data							PEC Reported Results		ANSTO Composite Results				
Hole	Sample ID	Weight (g)	Composite ID	Hole ID	From (m)	To (m)	TREO+Y ppm	PEC Avg TREO+Y ppm	LREO ppm	HREO ppm	MREO ppm	TREO ppm	TREO+Y ppm
RPT0018	**T0116**	1380	PER-C1	RPT0018	2	3	4790.2						
RPT0018	**T0117**	1350	PER-C1	RPT0018	3	4	5498.1	5274.0	4707	396	1802	5103	5362
RPT0018	**T0118**	1530	PER-C1	RPT0018	4	5	5533.7						
RPT0012	**T0080**	1150	PER-C2	RPT0012	4	5	4274.9						
RPT0012	**T0081**	1030	PER-C2	RPT0012	5	6	4279.7	4091.4	3639	302	1168	3940	4252
RPT0012	**T0082**	1280	PER-C2	RPT0012	6	7	3719.4						
RPT0019	**T0126**	1030	PER-C3	RPT0019	6	7	2566.6						
RPT0019	**T0127**	1340	PER-C3	RPT0019	7	8	4295.2	3569.5	3113	230	1004	3343	3510
RPT0019	**T0128**	1220	PER-C3	RPT0019	8	9	3846.8						
RPT0010	**T0063**	1490	PER-C4	RPT0010	5	6	2023.4						
RPT0010	**T0064**	1470	PER-C4	RPT0010	6	7	2145.8	1971.5	1747	116	440	1863	1986
RPT0010	**T0065**	1310	PER-C4	RPT0010	7	8	1745.5						
RPT0020	**T0133**	1340	PER-C5	RPT0020	4	5	1623.2						
RPT0020	**T0134**	1170	PER-C5	RPT0020	5	6	1757.8	1782.9	1579	103	360	1682	1780
RPT0020	**T0135**	690	PER-C5	RPT0020	6	7	1967.6						
RPT0011	**T0071**	1380	PER-C6	RPT0011	2	3	5480.2						
RPT0011	**T0072**	650	PER-C6	RPT0011	3	4	4841.2	5099.6	4017	477	1327	4494	5327
RPT0011	**T0073**	860	PER-C6	RPT0011	4	5	4977.5						
RPT0010	**T0060**	980	PER-C7	RPT0010	2	3	3275.6						
RPT0010	**T0061**	900	PER-C7	RPT0010	3	4	5174.4	3711.5	3737	174	680	3911	4090
RPT0010	**T0062**	1210	PER-C7	RPT0010	4	5	2684.4						
RPT0012	**T0084**	1560	PER-C8	RPT0012	8	9	3469.1						
RPT0012	**T0085**	1040	PER-C8	RPT0012	9	10	8029.3	6436.2	5488	437	1669	5924	6397
RPT0012	**T0086**	1190	PER-C8	RPT0012	10	11	7810.1						
RPT0002	**T0007B**	2180	PER-C9	RPT0002	3	4	1364.8						
RPT0002	**T0008B**	2040	PER-C9	RPT0002	4	5	1932.8	2565.3	2353	155	719	2508	2622
RPT0002	**T0009B**	2440	PER-C9	RPT0002	5	6	4398.3						

Table 2: Metallurgical hole location, REE oxide group results and REE extraction data.

Sample and Location Data								ANSTO Composite Head Grade and REE Oxide components							Recovery Summary					
Comp ID	Hole Id	Easting (m)	Northing (m)	RL	Hole Depth	From (m)	To (m)	LREO ppm	HREO ppm	MREO ppm	TREO-Y ppm	TREO+Y ppm	MREO %	HREO %	LRE %	HRE %	MRE %	TREY %	TREY-Ce %
PER-C1	RPT0018	332985	7573021	1287	5	2	5	4707	396	1802	5103	5362	34	7.4	69	67	84	68.3	77.8
PER-C2	RPT0012	335173	7569727	1319	12	4	7	3639	302	1168	3940	4252	27	7.1	66.2	65	81	66.3	75.6
PER-C3	RPT0019	333032	7573421	1290	9	6	9	3113	230	1004	3343	3510	29	6.6	44.1	50.8	64	44.6	60.2
PER-C4	RPT0010	334988	7569720	1317	10	5	8	1747	116	440	1863	1986	22	5.8	42.9	46.5	55	43.4	54.1
PER-C5	RPT0020	333573	7573323	1310	10	4	7	1579	103	360	1682	1780	20	5.8	18.2	17.6	31	17.6	27.9
PER-C6	RPT0011	335067	7569529	1311	7	2	5	4017	477	1327	4494	5327	25	9	75.7	81.3	94	78.4	87.6
PER-C7	RPT0010	334988	7569720	1317	10	2	5	3737	174	680	3911	4090	17	4.2	35.9	57.1	73	37.6	68.2
PER-C8	RPT0012	335173	7569727	1319	12	8	11	5488	437	1669	5924	6397	26	6.8	56.7	63.7	72	58.2	65.3
PER-C9	RPT0002	334918	7566996	1352	7	3	6	2353	155	719	2508	2622	27	5.9	49.5	50.6	69	49.1	64

About Perpetual Resources Limited

Perpetual Resources Limited (Perpetual) is an ASX listed company pursuing exploration and development of critical minerals essential to the fulfillment of global new energy requirements.

Perpetual is active in exploring for lithium and other critical minerals in the Minas Gerais region of Brazil, where it has secured approximately 12,000 hectares of highly prospective lithium exploration permits, within the pre-eminent lithium (spodumene) bearing region that has become known as Brazil's "Lithium Valley".

Perpetual also operates the Beharra Silica Sand development project, which is located 300km north of Perth and is 96km south of the port town of Geraldton in Western Australia.

Perpetual continues to review complementary acquisition opportunities to augment its growing portfolio of exploration and development projects consistent with its critical minerals focus.

Competent Person Statement

The information summarised in this document relating to Exploration projects and results is based on information provided by Mr Karl Weber, a professional geologist with over 25 years' experience in minerals geology including senior management, consulting, exploration, resource estimation, and development. Mr Weber completed a Bachelor of Science with Honours at Curtin University in 1994; is a member of the Australasian Institute of Mining and Metallurgy (Member No. 306422) and thus holds the relevant qualifications as Competent Person as defined in the JORC Code. Mr Weber is contracting to Perpetual Resources. Mr Weber has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Weber consents to the inclusion of this information in the form and context in which it appears.

Previous disclosure

The information in this report contains references to prior Exploration Results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply.

Forward-looking statements

This announcement contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

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Appendix 1

Table 1. REE and Gangue Assay Results from Metallurgical Samples

Rare Earth Element Composition of the Composite Head Samples (ppm)									
Elements	PER-C1	PER-C2	PER-C3	PER-C4	PER-C5	PER-C6	PER-C7	PER-C8	PER-C9
La	1930	1645	1015	578	390	1820	905	2550	814
Ce	570	485	776	529	635	536	1650	741	573
Pr	357	243	197	93	70	262	144	343	147
Nd	1125	703	627	263	220	778	407	1005	444
Sm	135	85	78	31	28	97	47	117	50
Eu	36	24	19	9	7	30	14	34	12
Gd	83	59	42	23	17	88	35	94	30
Tb	9	7	5	3	2	12	4	11	3
Dy	42	40	25	15	14	77	23	60	18
Ho	7	8	5	3	3	17	4	11	3
Er	17	21	13	8	8	48	12	28	9
Tm	2.0	2.6	1.8	1.1	1.4	6.0	1.6	3.5	1.1
Yb	11	13	9	6	8	33	8	18	6
Lu	1.6	2.0	1.6	0.9	1.1	4.8	1.4	2.6	0.9
Y	204	245	132	97	77	656	142	372	89
LREE	3982	3076	2615	1463	1315	3396	3106	4639	1978
HREE	343	262	199	101	89	414	151	379	134
Magnets	1533	994	854	374	307	1129	579	1420	611
TREE+Y	4529	3583	2946	1660	1482	4466	3398	5390	2201
MREO	1802	1168	1004	440	360	1327	680	1669	719
TREYO	5362	4252	3510	1986	1780	5327	4090	6397	2622
MREO/TREYO (%)	33.6	27.5	28.6	22.1	20.2	24.9	16.6	26.1	27.4

LRE = La, Ce, Pr, Nd; HRE = Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu; Magnets = Pr, Nd, Tb, Dy; MREO = magnet oxides; TREYO = Total oxides plus Y

Gangue Composition of the Composite Head Samples (wt% or ppm where stated)									
Elements	PER-C1	PER-C2	PER-C3	PER-C4	PER-C5	PER-C6	PER-C7	PER-C8	PER-C9
Al	15.5	15.2	18.0	13.9	18.3	13.3	16.7	12.1	17.7
Ca	0.01	0.02	0.02	0.03	0.01	0.01	0.02	0.18	0.01
Fe	3.50	6.70	4.19	2.46	4.11	2.70	3.77	5.82	3.81
K	5.39	3.53	3.12	7.66	2.68	7.70	3.79	3.38	3.66
Mg	0.14	0.15	0.12	0.16	0.09	0.16	0.17	0.90	0.19
Mn	0.25	0.55	0.29	0.029	0.14	0.09	0.18	0.15	0.09
Na	0.20	<0.05	0.08	0.10	<0.05	<0.05	<0.05	<0.05	<0.05
P	0.05	0.05	0.05	0.04	0.15	0.02	0.04	0.31	0.04
S	0.13	0.08	0.002	<0.001	0.004	0.004	0.01	<0.001	<0.001
Sc_ppm	3	1	3	1	8	<0.5	1	29	2
Si	22.1	20.7	19.6	24.3	19.0	24.8	21.1	22.1	19.9
Th_ppm	42	44	49	35	48	71	45	93	40
U_ppm	8	6	7	3	11	11	4	23	6
Zn	0.018	0.030	0.027	0.020	0.018	0.019	0.021	0.026	0.012

Table 2. Hole Collars

Coordinates Presented in SIRGUS 2000 23S

Hole_ID	MGA_East	MGA_North	RL	Max_depth	Lease_ID	Prospect
RPT0001	334893	7567195	1340	2	815.816/1971	Pinheirinho
RPT0002	334918	7566996	1352	7	815.816/1971	Pinheirinho
RPT0003	335202	7567001	1354	3	815.816/1971	Pinheirinho
RPT0004	334995	7566859	1382	9	815.816/1971	Pinheirinho
RPT0005	334704	7566717	1368	11	815.816/1971	Pinheirinho
RPT0006	334825	7566786	1377	8	815.816/1971	Pinheirinho
RPT0007	335243	7566001	1339	6	815.816/1971	Pinheirinho
RPT0008	335182	7565606	1386	6.7	815.816/1971	Pinheirinho
RPT0009	334970	7569824	1334	4	830.310/1979	Portao Verde
RPT0010	334988	7569720	1317	10	830.310/1979	Portao Verde
RPT0011	335067	7569529	1311	7	830.310/1979	Portao Verde
RPT0012	335173	7569727	1319	12	830.310/1979	Portao Verde
RPT0013	335013	7569369	1310	4.6	830.310/1979	Portao Verde
RPT0014	335031	7569349	1319	5	830.310/1979	Portao Verde
RPT0015	334884	7569536	1319	6	830.310/1979	Portao Verde
RPT0016	333652	7572600	1304	8	830.361/1986	Pina Colada
RPT0017	332983	7573012	1287	1.9	830.361/1986	Pina Colada
RPT0018	332985	7573021	1287	5	830.361/1986	Pina Colada
RPT0019	333032	7573421	1290	9	830.361/1986	Pina Colada
RPT0020	333573	7573323	1310	10	830.361/1986	Pina Colada
RPT0021	333733	7573236	1300	6	830.361/1986	Pina Colada

JORC CODE, 2012 Edition Table 1

Section 1 Sampling Techniques and Data

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.	• Original drill samples referenced here were collected from mechanised auger drilling, locally known as Trado, a geochemical sampling method and a standard method for mineral exploration in weathered terrains. The samples collected are representative of the material being drilled by the auger. • Drill samples samples are collected as 1m intervals, or less where an obvious geological change occurs. Intervals are measured by the operators, the whole sample from the interval is homogenised and then quartered and one portion is collected as the representative sample for assay from the sample interval. • Samples are not collected for the top 50cm where vegetation dominates the sample. Samples are not collected in water saturated ground. • The representative samples collected for assay averaged 1.5 kg in weight. The assay samples are then prepared for assay, crushed to 75% passing 3mm, then a 250 g split is pulverised to >95% passing 150# (~0.105 mm) with 50 g split for final assay. • Following initial Metalurgical test work, the remainder of two samples "PER-C2", and "PER-C8" were used for mineralogical studies.
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, 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).	• Auger drilling was completed using a mechanised handheld auger, resulting in a 5-inch (12.5 cm) diameter hole. • The drilling is an open hole method, meaning there is a significant chance of some contamination from the surface and other parts of the auger hole. Holes are vertical and not oriented. At 12 m depth orientation is not required.
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	• Samples were geologically logged in the field during drilling. • Sample recovery was recorded and was good. The auger drilling provides a close to 100% sample recovery, there is no known relationship to sample recovery and the assay result.

Criteria	JORC Code explanation	Commentary
	may have occurred due to preferential loss/gain of fine/coarse material.	
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.	• Samples were geologically logged in the field during drilling. They do not support a Mineral Resource Estimation, or mining studies. The samples have been used for preliminary Metallurgical test work. The geological logging has been undertaken to a level that will allow geological modelling for Mineral Resource Estimations when and if required.
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. • 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.	• Sub sampling by quartering of the original drill sample is best practice for this type of sample and provides a suitable sample weight. • The damp nature of the clay material means “splitting” via riffle or rotary method is not possible. The manual quartering is appropriate for the nature of the samples. • Duplicate were used at a 10% rate, REE standard were not available at the time of drilling. Laboratory provided blanks and standards have not shown any issues with QAQC. Where results are considered questionable due to REE content and ratios, without triggering QAQC protocols the samples are checked by another laboratory and not reported until check samples are returned. • Sample size is appropriate for the material being sampled. **ANSO sub-sampling and sample preparation for Metallurgical Test work:** • The entire portion of each 1 m interval sample was combined to produce nine ~3 kg, 3 m interval composites. The composites were dried at 50 °C and crushed (where required) to < 1 mm. A 500 g portion of each composite was obtained by rotary splitting and pulverised. • The remaining portion was retained. The pulverised sample was split into 80 g portions for diagnostic desorption tests and 50 g portions for head assay and mineralogical assessment. The assay sample was dried at 105 °C and the mass loss determined. Sample Characterisation

Criteria	JORC Code explanation	Commentary
		• The nine samples were analysed by XRF at ANSTO for major gangue elements (Al, Ca, Fe, K, Mg, Mn, Na, P, Si, Zn). The REE's and Y, along with U, Th and Sc in the samples were analysed by fusion digest/ICP-MS (lithium tetraborate method) at ALS Geochemistry Laboratory, Brisbane. Diagnostic Desorption Tests • Diagnostic desorption tests were conducted on the nine samples under the following desorption conditions: • 80 g pulverized sample; • 0.5 M $(NH_4)_2SO_4$ as lixiviant; • pH 4; • 0.5 h; • Ambient temperature (~22 °C); and • 4 wt% solids density.
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.	• The assay technique used by SGS Geosol Laboratory was IMS95A for 48 elements, is a complete digest using the Lithium Borate Fusion technique. This is a standard industry practice for REE assay. • The laboratory uses Certified Reference Material (CRM), repeats and blanks to ensure QAQC requirements are met. • Where results are considered questionable due to REE content and ratios the samples are checked by another laboratory and not reported until check samples are returned. • Check samples are undertaken by ALS Laboratories in Brazil, using the equivalent method ME-MS81D for trace and whole rock element analysis. • Internal QAQC undertaken by ANSTO and their representative laboratory was not reviewed by PEC Geologists, the QAQC data is assumed correct for their release of the data and results to PEC. The laboratory has strict quality control procedures, ensuring accuracy and precision assay data. The laboratory uses duplicate assays, standards, and blanks to monitor and maintain quality.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes.	• Significant results reported here are confirmed from data supplied to PEC staff and consultant geologists. • No Twin holes.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>

Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
Discuss any adjustment to assay data.

</td><td>

Primary data is imported via a modern database administration process with security and QA QC protocols applied.
No adjustments are made.
Adjustments to the data were made to transform the elemental values into the oxide values.
The conversion factors used are included in the table below.

<table>
<tr><th>Element</th><th>Oxide</th><th>Factor</th></tr>
<tr><td>Ce</td><td>Ce02</td><td>1.1713</td></tr>
<tr><td>La</td><td>La203</td><td>1.1728</td></tr>
<tr><td>Sm</td><td>Sm203</td><td>1.1596</td></tr>
<tr><td>Nd</td><td>Nd203</td><td>1.1664</td></tr>
<tr><td>Pr</td><td>Pr6011</td><td>1.2082</td></tr>
<tr><td>Dy</td><td>Dy203</td><td>1.1477</td></tr>
<tr><td>Eu</td><td>Eu203</td><td>1.1579</td></tr>
<tr><td>Tb</td><td>Tb407</td><td>1.1762</td></tr>
<tr><td>Gd</td><td>Gd203</td><td>1.1526</td></tr>
<tr><td>Ho</td><td>Ho203</td><td>1.1455</td></tr>
<tr><td>Er</td><td>Er203</td><td>1.1435</td></tr>
<tr><td>Tm</td><td>Tm203</td><td>1.1421</td></tr>
<tr><td>Yb</td><td>Yb203</td><td>1.1387</td></tr>
<tr><td>Lu</td><td>Lu203</td><td>1.1371</td></tr>
<tr><td>Y</td><td>Y203</td><td>1.2699</td></tr>
</table>

Weighted averages of samples >500ppm TREO were used to calculate significant intercepts.

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<tr><td>Location of data points</td><td>

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.

</td><td>

A handheld GPS was used to collect location data for the surface samples and auger drilling. This is accurate to within 5m and is considered sufficient for exploration sampling.
SIRGAS2000 UTM 23S has been used in Project maps, with Lat/Long used in the country scale maps.
Quality and adequacy of the topographic control suits the reconnaissance nature of the exploration activities.

</td></tr>
<tr><td>Data spacing and distribution</td><td>

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.

</td><td>

Drill holes and channel samples are reconnaissance and therefore widely spaced, making use of existing tracks and clearing where possible.
Data spacing is sufficient to establish grade and geological continuity, given the saprolite clay horizon that hosts the IAC REE mineralisation is generally sub horizontal, the

</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	• Whether sample compositing has been applied.	vertical drilling intervals are most likely close to true thickness. More data is required before a Mineral Resource is applied. • Compositing samples used in metallurgical test work resulted in 9 composite samples, each comprised of 3m intervals, they were all consecutive intervals from within REE mineralized zones. Sample composite information and results of each composite are included in the Table of Results within the report.
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.	• Drilling is vertical and the targeted clay horizons, hosting the REE mineralisation, are close to horizontal hence unbiased sampling is inferred. • Unknown at this stage if orientation introduces any bias or not in relation to possible structure..
Sample security	• The measures taken to ensure sample security.	• Samples were collected, stored and transported by company representatives hence all activities are considered secure. • Metallurgical samples were sent directly from Brazil to ANSTO using DHL Express freight service, via Australian Customs.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• PEC have reviewed the sampling techniques and data collected by the Brazilian company undertaking the work, there have been no issues recognised to date. Exploration and data management has been to a very high standard.

Section 2 Reporting of Exploration Results

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 license to operate in the area.	• The following Tenement comprise the Raptor Project, - 815.816/1971 - 830.310/1979 - 830.361/1986 - 830.311/1979 • Perpetual Resources Ltd has an exclusive option to acquire 100% of the above mineral rights relating to rare earth elements, niobium and scandium. The tenements are held by Brazilian company, Mineracao Serra Do Sao Domingos Ltda. • No material impediments are known in relation to the tenements.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Previous exploration data is not known for the project. Bauxite mining has occurred on a portion of 815.816/1971. Clay mining (for ceramics) within alluvial areas has occurred on 830.361/1986.
Geology	• Deposit type, geological setting and style of mineralisation.	• The REE mineralisation reported is of ionic absorption clay (IAC) nature. The style of the REE mineralisation is typical of the region and has been confirmed by metallurgical test work.

Drill hole information	• A summary of all information material to the under-standing 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.
		• All results and material information is Included in the report as a Collar table, all holes are vertical.

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	• Significant intercepts shown on figures and in tables were calculated using values > 500 ppm TREO only in consecutive intervals of saprolite samples originally sampled meter by meter. No upper cuts were used. • Weighted averages were calculated for all intercepts.

Criteria	JORC Code explanation	Commentary
	examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	
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').	• The mineralisation reported is related to weathered alkaline intrusive and volcanic rocks. The saprolitic clay resulting from the weathering profile is assumed to be close to horizontal (perpendicular to drilling) or following the natural surface (a low angle to drilling), however geological structures may cause as yet unknown irregularities and controls. • Down hole lengths are reported, and true width is not known, it is expected to be close to the down hole length.
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.	• Appropriate maps are included in the report. The wide spaced reconnaissance and shallow nature of the drilling precluded the usefulness of sections at this stage.
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.	• All REE results have been reported and summarised as TREO results, including Nd+Pr oxide results. • Metallurgical test work results have also been reported, with relevant TREE+Y, HREE, LREE and Magnet REE (Neodymium-Praseodymium-Terbium-Dysprosium) grouping.
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.	• No other data is considered relevant 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.	• PEC will undertake exploration field work to follow up the results reported here and to investigate lateral extensions and depth extension to existing REE anomalies. • Auger and Aircore drilling is considered appropriate next stage exploration in areas considered highly prospective. • Further detailed metallurgical test work and mineralogical studies will be undertaken at the appropriate time following further drilling. • Detailed ground geophysics, mapping and surface sampling will continue as required applied in the next phase of exploration.

Section 3 Estimation and Reporting of Mineral Resources

Not applicable

Section 4 Estimation and Reporting of Ore Reserves

Not applicable