ASX Announcement
17 February 2025

High-Grade Tin, Titanium, Tantalum & Niobium Identified at Itinga Project, Brazil

HIGHLIGHTS

- **Exceptional Critical Mineral Results**: Reconnaissance sampling at the Itinga Project, situated in the heart of Brazil's Jequitinhonha Valley, has returned outstanding results, most above detection limit, including:
- **Significant High-Grade Tin & Tantalum & Titanium Rock Chips (tin and titanium results above detection limit)[1]:**
  - **PIZ092: >20%* Sn & 5.51% Ta** *(Cassiterite)*
  - **PIZ093: >20%* Sn & 2.18% Ta** *(Cassiterite)*
  - **PIZ094: >20%* Sn & 1.04% Ta** *(Cassiterite)*
  - **PIZ091: >33%* TiO_2** *(Rutile/Ilmenite)*
- **Key High-Grade Niobium Samples[2] (results above detection limit):**
  - **PIZ095: >50% Nb_2O_5 & 13.15% Ta** *(Columbite)*
  - **PIZ089: 43.3% Nb_2O_5 & 16.05% Ta** *(Columbite)*
- **Previous assays confirmed high-grade tin up to 7% and titanium oxide up to 14.5%[3].**
- **Extensive Mineralised Pegmatites:** High grade mineralisation coincides with multiple **coarse Cassiterite** (tin oxide), **Columbite (Niobium/Tantalum)** and **Titanium (Rutile/Ilmenite)** pegmatites, with strike extent corridors extending **up to 750m x 200m[3]**.
- **Significant Exploration Upside:** The **large, underexplored pegmatite systems** at Itinga have **never undergone modern exploration**, presenting a **compelling opportunity** for Perpetual to unlock their full potential through targeted exploration.
- **Next Steps:** A **dedicated team** will conduct expanded exploration over the coming months to assess project scale and further opportunities.
- Primary exploration efforts remain focused on advancing nearby **high-grade lithium** assets.

Perpetual Resources Ltd ("**Perpetual**" or "**the Company**") (ASX: PEC) is pleased to announce that recent reconnaissance sampling at its Itinga project located in the prolific Jequitinhonha Valley region of Minas Gerais, Brazil, has returned exceptionally high Tin, Tantalum and Niobium mineralisation across multiple pegmatites.

---

[1] *Standard oxide conversions applied – Titanium (TiO_2: 1.6681)**
[2] *Standard oxide conversions applied – Niobium (Nb_2O_5: 1.4305)**
[3] *See PEC Announcement 22nd July 2024*

Perpetual Resources Ltd
T: 08 6256 5390
E: info@perpetualresources.co
W: perpetualresources.co
ACN: 154 516 533
Principal & Registered Office:
Suite 2, 68 Hay Street, Subiaco, Western Australia 6008

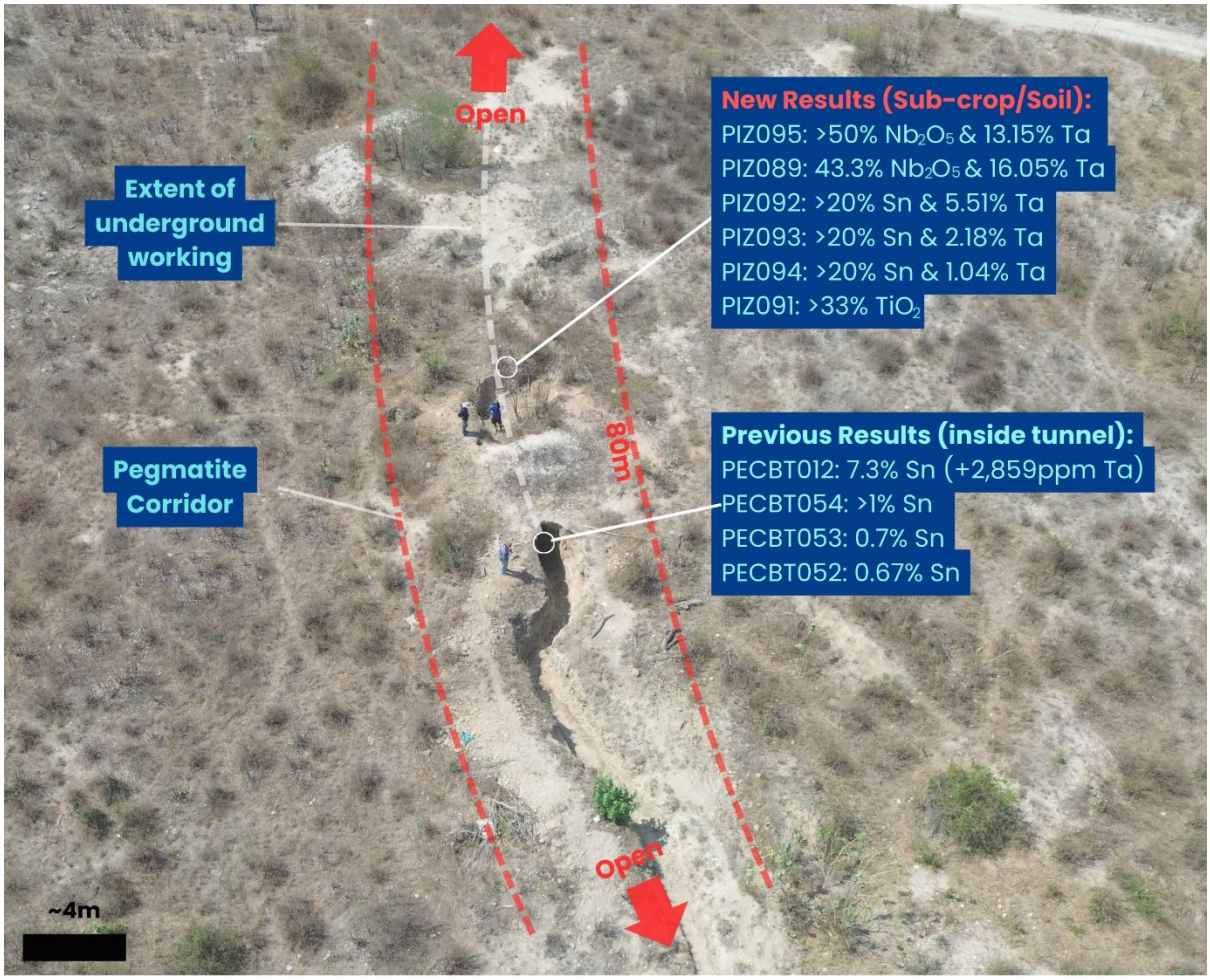

Figure 1: Artisanal mine (Garimpo) located within Itinga license 831542/2004. New results that have exceeded detection limit in testing have been sent for resampling[4].

Perpetual Exploration Manager, Allan Stephens commented on the results:

"With strong progress at Perpetual's lithium exploration assets in the region, we are also advancing our broader exploration portfolio. These latest results from Itinga are exceptional in grade and reaffirm the project's potential within a tier-1 mining jurisdiction.

The confirmation of high-grade niobium oxide (>50%) alongside high-grade tin mineralisation (>20%) has prompted us to expand our exploration focus and include this exciting area for follow-up work.

With niobium and tin recognised as critical minerals for the future, these results present an exciting opportunity to advance multiple high-value commodities alongside our rapidly developing lithium projects."

[4] *See PEC Announcement 22nd July 2024 for previous results.*

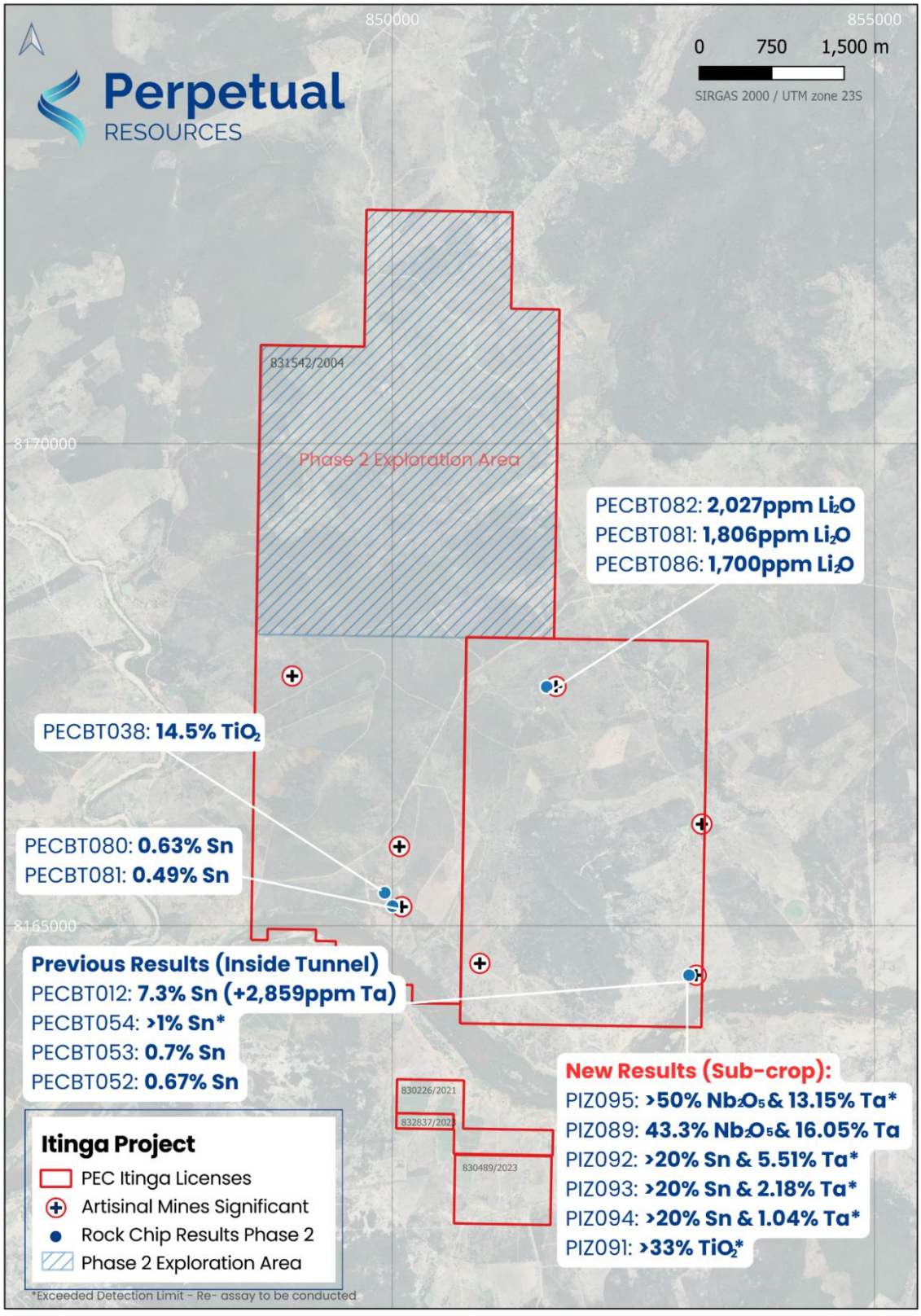

Figure 2: Itinga Project area (license 831542/2004) showing location of high-grade niobium, tin and tantalum mineralisation. [5]

[5] *See PEC Announcement 22nd July 2024 for previous results.*

** Conversion factors applied to elemental values.*

Overview of Reconnaissance Program

In October 2024, Perpetual's field team conducted reconnaissance fieldwork at its Itinga Licenses, following up on previously identified anomalies in tin, titanium, lithium, and tantalum (refer to ASX announcement dated 22 July 2024).

Recent fieldwork (January 2025) has re-targeted 'garimpos' (artisanal mines) where previous sampling recorded anomalous results. Testing of coarse dense metals within highly weathered pegmatites has now confirmed high-grade mineralisation, including niobium (>50% Nb_2O_5), tin (>20%), and tantalum (>15%).

Earlier exploration was primarily focused on lithium, meaning dense material was not a priority at the time. These results now provide a strong foundation to advance the search for strategic metals within the prolific Itinga Pegmatite Field, an area with a history of significant small-scale mining but limited modern exploration.

Geologically, this district predominantly consists of pegmatites derived from G4 Suite granites, which are rich in fluids and incompatible chemical elements. These conditions produce the pegmatites found in the Araçuaí and Itinga regions, which are enriched in critical minerals essential to the global energy transition.

Titanium Anomalisms

Upcoming fieldwork will focus on highly anomalous titanium samples (14.5% TiO_2 and >33% TiO_2) occurring ~2km apart. Initial indications suggest the presence of ilmenite and/or rutile, minerals commonly associated with tin-bearing pegmatites, further enhancing the area's prospectivity.

Follow-up exploration will assess the economic significance and scale of this Titanium mineralisation, evaluating its potential as an additional high-value asset within the broader project portfolio.

Next Steps

With drill preparations for lithium well advanced and on track for a Q2 2025 commencement, Perpetual will also deploy a dedicated exploration team to follow up on recent high-grade results and assess the scale of new mineral occurrences.

The Itinga License hosts extensive artisanal workings, providing a strong foundation for reinterpretation and target sampling. This next phase of exploration is scheduled to begin in March/April aligning with the transition from the wet to dry season in northern Minas Gerais – ensuring optimal field conditions for exploration.

- ENDS -

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

KEY CONTACT
Julian Babarczy
Executive Chairman
E info@perpetualresources.co

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.

COMPLIANCE STATEMENTS

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.

Disclaimer

No representation or warranty, express or implied, is made by Perpetual that the material contained in this document will be achieved or proved correct. Except for statutory liability and the ASX Listing Rules which cannot be excluded, Perpetual and each of its directors, officers, employees, advisors and agents expressly disclaims any responsibility for the accuracy, correctness, reliability or completeness of the material contained in this document and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person through use or reliance on any information contained in or omitted from this document.

Reporting visual estimates of mineralisation

Visual assessments of mineral abundance should never be viewed as a stand-in for laboratory analyses, especially when concentrations or grades are of primary economic importance. Visual estimates may also fail to provide any insight into impurities or detrimental physical properties that are pertinent to valuations.

Competent Person Statement

The information in this report related to Geological Data and Exploration Results is based on data compiled by Mr. Allan Harvey Stephens. Mr. Stephens is an Exploration Manager at Perpetual Resources Limited and is a member of both the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). He possesses sound experience that is relevant to the style of mineralisation and type of deposit under consideration, as well as the activities he is currently undertaking. Mr. Stephens qualifies as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves.' He provides his consent for the inclusion of the matters based on his information, as well as information presented to him, in the format and context in which they appear within this report.

Previous disclosure

This announcement 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 relevant market announcements, and that all material assumptions and technical parameters underpinning those results continue to apply and have not materially changed

Appendix A – Rock Type Descriptions

Table 1 –Sample Descriptions and Locations

Figure	Easting	Northing	Lithology	Commentary
1	8164459.6	853145.5	Artisanal Working – sub-crop pegmatite with soil.	Tuca's Garimpo

Appendix B – Assay Results

Significant values highlighted in green. Coordinates provided in *SIRGUS 2000 /UTM 23S*, Sampling Methods described in Appendix C: JORC Code, 2012 Edition - Table 1. All samples were collected from artisanal excavations, as shown in Figure 2. These small, circular excavations have a maximum width of 3m, with all samples sourced from within. Coordinates provided represent the centroid of the workings, reflecting an approximate location. Field investigations have determined this approach to be sufficient for early-stage exploration.

			ME-MS89L	ME-XRF15b	ME-XRF15c	ME-MS89L	ME-MS89L	ME-XRF15b	ME-MS89L
ID	**North**	**East**	***Nb (ppm)***	***Nb (%)***	***Nb (%)***	***Sn (ppm)***	***Ta (ppm)***	***Ta (%)***	***Ti (%)***
PIZ089	8164459.6	853145.5	>25,000	>20	35.0	4890	>25,000	*16.05*	0.575
PIZ090	8164459.6	853145.5	187			22	76.5		<0.005
PIZ091	8164459.6	853145.5	686			47	223		>25.0
PIZ092	8164459.6	853145.5	9,570	1.10		>25,000	>25,000	*5.51*	0.177
PIZ093	8164459.6	853145.5	6,620	0.724		>25,000	19,150	*2.18*	0.684
PIZ094	8164459.6	853145.5	10,250	1.045		>25,000	>25,000	*3.24*	0.023
PIZ095	8164459.6	853145.5	>25,000	>20	30.3	15,700	>25,000	*13.15*	0.438

Note: Cells left blank indicate that the element was not tested using that specific method.

Appendix C: JORC Code, 2012 Edition – Table 1 report

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.	• The rock chip samples, weighing around 2-5 kilograms each, were selected from exposed outcrops and weathered areas in the field. It's important to note that these samples do not accurately reflect the potential mineral grade at greater depths. • The type of mineralisation being sought after is associated with pegmatite intrusions that host rare earth pegmatites, and the likely sources are specific S-type Granites and Leucogranites
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	• No Drilling Completed

Criteria	JORC Code explanation	Commentary
	so, by what method, etc).	
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• No Drilling Completed
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 samples were logged sufficiently for geological interpretation.
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	• No Drilling Completed • All samples were fully crushed, and either a split or the entire sample was pulverised to create a representative composite rock chip sample, depending on the laboratory's procedure. • The samples, with an average size of 2-5 kilograms, were collected for lithium and rare element confirmation rather than the assessment of grade in potentially non-representative and weathered samples.

Criteria	JORC Code explanation	Commentary
	sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• Samples were assayed via ME-MS89L for 56 elements suites at ALS located in Belo Horizonte, Brazil. • Subsequent re-testing was conducted for overlimit using ME-XRF15b and ME-XRF15c. • No standards duplicates or blanks accompany these initial samples that will not be used other than to indicate potentially interesting lithium contents of the variably weathered samples. ○ Checks of the analytical values of CRM's used by the laboratory against the CRM specification sheets were made to assess whether analyses were within acceptable 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.	• No verification will be undertaken for these initial samples that will not be used in any resource estimate. The samples are to determine the levels of Li and other valuable elements in grab samples

Criteria	JORC Code explanation	Commentary
	• Discuss any adjustment to assay data.	
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.	• All sample locations were measured using a handheld Garmin GPS using WGS84 and UTM coordinates - Coordinates provided in SIRGUS 2000 /UTM 23S • The accuracy is considered sufficient for a earl-stage exploration.
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.	• . No Drilling Conducted • No Sample Compositing has been applied.
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.	• No Drilling Conducted
Sample security	• The measures taken to ensure sample security.	• Samples have been securely packed in polyweave backs and sealed with cable ties to mitigate contaminants or un-approved handling. • Samples were couriered to Belo Horizonte through a commercial courier and transported by PEC Personnel
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No reviews or audit completed to date.

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 licence to operate in the area.	• PEC own's 100% exploration rights to 12 tenements located in Minas Gerais, Brazil, through its wholly owned subsidiary Perpetual Resources Do Brasil LTDA. • Itinga Project: 830489/2023, 830490/2023, 830226/2021, 832837/2023, 832503/2003 & 831542/2004 • Padre Paraiso: 830491/2023 & 830492/2023 • Ponte Nova: 832017/2023, 832018/2023 & 832019/2023 • Isabella 830167/2014
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• No prior formal exploration is known on any of the tenements however there has been some informal exploration and production by artisanal miners in and adjacent to Itinga, Ponte Nova & Padre Paraiso Projects.
Geology	• Deposit type, geological setting and style of mineralisation.	• The geological features of the areas consist of granite & sedimentary rocks from the Neoproterozoic era within the Araçuaí Orogen. These rocks have been intruded by fertile pegmatites rich in lithium, which have formed through the separation of magmatic fluids from peraluminous S-type granitoids and leucogranites associated with the Araçuaí Orogen.
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	• No drilling activities are being reported.

Criteria	JORC Code explanation	Commentary
	not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No analytical results are being reported. • No aggregation methods applied.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• No drilling activities are being reported
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	• Maps and images are included within body of text.

Criteria	JORC Code explanation	Commentary
	view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• All relevant and material exploration data for the target areas discussed, has been reported or referenced. • Samples were taken from subcrop exposure around artisanal workings. They consist mostly of single-mineral material and are not classified as homogeneous, representative rock chips.
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.	• All relevant and material exploration data for the target areas discussed, has been reported or referenced. • The general location of visual occurrences photographed have been provided, in Appendix A, Table 1
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Follow up work to be conducted in short term to understand develop more occurrences and potential scalability