

7 November 2024

High-grade niobium, tantalum and REE mineralisation confirmed at Tântalo Project, Brazil

Highlights

- **First pass reconnaissance sampling as part of due diligence at Tântalo Project, Brazil confirms high-grade niobium, tantalum, and rare earth element (REE) at artisanal workings present within the project area.**
- **Results to date include:**
 - **47.3% Nb₂O₅ and 20.7% Ta₂O₅ with 3,251 ppm partial REO**
 - **23.8% Ta₂O₅ and 31.8% Nb₂O₅ with 6,775 ppm partial REO**
 - **25.0% Ta₂O₅ and 11.2% Nb₂O₅ with 10,422 ppm (1%) partial REO**
- **Samples were taken from the northwestern area of the project.**
- **Extensive existing artisanal workings (Garimpos) will be followed up as a priority guide to prospective target areas**
- **Strategy is to produce using low-cost gravity separation Nb-Ta concentrate for an offtake partner, blended if required**
- **Plans to move rapidly to drilling on selected priority targets**

Power Minerals Limited (ASX: **PNN**, **Power** or **the Company**) is pleased to announce high-grade niobium, tantalum, and rare earth elements (REE) sampling results at the Tântalo Project in Brazil.

The samples were collected as part of an initial reconnaissance sampling program in the northern extent of the Tântalo Project. Results have confirmed the presence of niobium-tantalum-REE pegmatite intrusions exposed in artisanal workings at Tântalo, with highlight results including:

- **47.3% Nb₂O₅ and 20.7% Ta₂O₅ with 3,251 ppm partial REO in sample P0973/24**
- **25.0% Ta₂O₅ and 11.2% Nb₂O₅ with 10,422 ppm (or 1.04%) partial REO in sample P0974/24**
- **41.1% Nb₂O₅ and 10.7% Ta₂O₅ with 9,236 ppm (or 0.92%) partial REO in sample P0975/24**

See Table 1 for all niobium, tantalum, and partial rare earth oxide sampling results from this phase of sampling at the Tântalo Project.

The sampling program is a key component of Power’s due diligence process in respect of its exclusive option to acquire the Tântalo Project (ASX announcement 25 September 2024). The Project is located immediately south of the Company’s Nióbio niobium, REE and lithium Project, in Paraiba state, Brazil.

Using the same technique as used in the Nióbio Project, Power collected rock-chip samples directly from outcropping pegmatite intrusions exposed in artisanal workings (Figures 2). Mafic, darker minerals were concentrated and sent for analyses as the niobium (Nb) tantalum (Ta) and other REE elements are generally hosted in the dark-coloured minerals of columbite, tantalite, tourmaline, and micas.

This sampling method is more rapid and cost-effective than systematic channel sampling at this early stage of exploration. The aim is to rapidly rank the targets based on concentrate element relative values and ratios, as a heavy mineral concentrate would be a natural product in this mineralised environment.

A total of five samples have now been analysed. Niobium and tantalum results are plotted in comparison with results from the nearby Nióbio Project (ASX announcement 28 August 2024) and with Summit Minerals results (SUM: ASX announcement 24 June 2024) showing similarly high values (Figure 1).

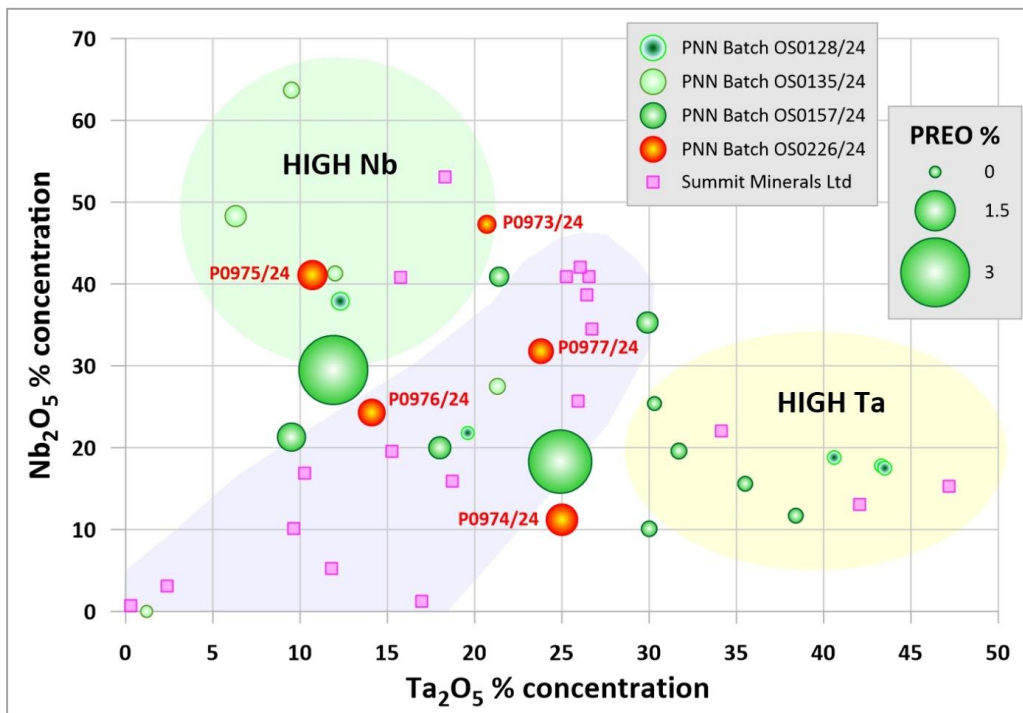


Figure 1: Results of the initial five samples from Power’s Tântalo Project shown in orange. Power’s samples show very similar populations to those reported for Power’s Nióbio Project further north (ASX 28 August 2024 release).

The new samples show examples of both Nb-rich and Ta-Nb-rich intermediate sub-groups. The samples contain elevated partial REO with P0974/24 reaching over 1% PREO (size of circle reflects PREO concentrations). Sample values from Summit Minerals (SUM:ASX announcement 24 June 2024) showing similarly high values (REE results not shown for Summit samples).



Figure 2: Artisanal working sampled by P0973-24 (refer to Table 1).

“These are exciting results from our first-pass sampling program and confirm that high-grade niobium-tantalum-REE mineralised pegmatites are also present within our Tântalo Project. The results have provided a strong level of initial confidence in the Project’s exploration potential. Power plans to undertake a maiden drilling program at both Projects as soon as possible.”

Power Minerals Managing Director, Mena Habib

Next steps

Power recently signed a Term Sheet for an exclusive Option with Brazilian company, Cooperativa dos Trabalhadores de Minerio e Agricultura de Equador e Serido (COOTMAES), to acquire the Tântalo Project. Key terms of the Term Sheet include are outlined in ASX announcement of 25 September 2024.

Upon executing the Option, Power entered into a 60-day period of due diligence, which has included the reconnaissance sampling. Power now plans to conduct a first-pass drilling program, subject to site access, to further confirm the presence of mineralisation with the project area.

Power’s strategy is then to produce a niobium-tantalum concentrate for initial testing by prospective offtake partners.

Tântalo Project background

The Tântalo Project consists of 12 granted permits covering 5,780.54 hectares (57.80km²), as shown in Figure 3. The permits include a number of “Permissão de Lavra Garimpeira” (PLGs), which can require a simplified environmental licence (“Licença de Operação para Pesquisa - LOP”) prior to the commencement of on-ground exploration work and drilling.

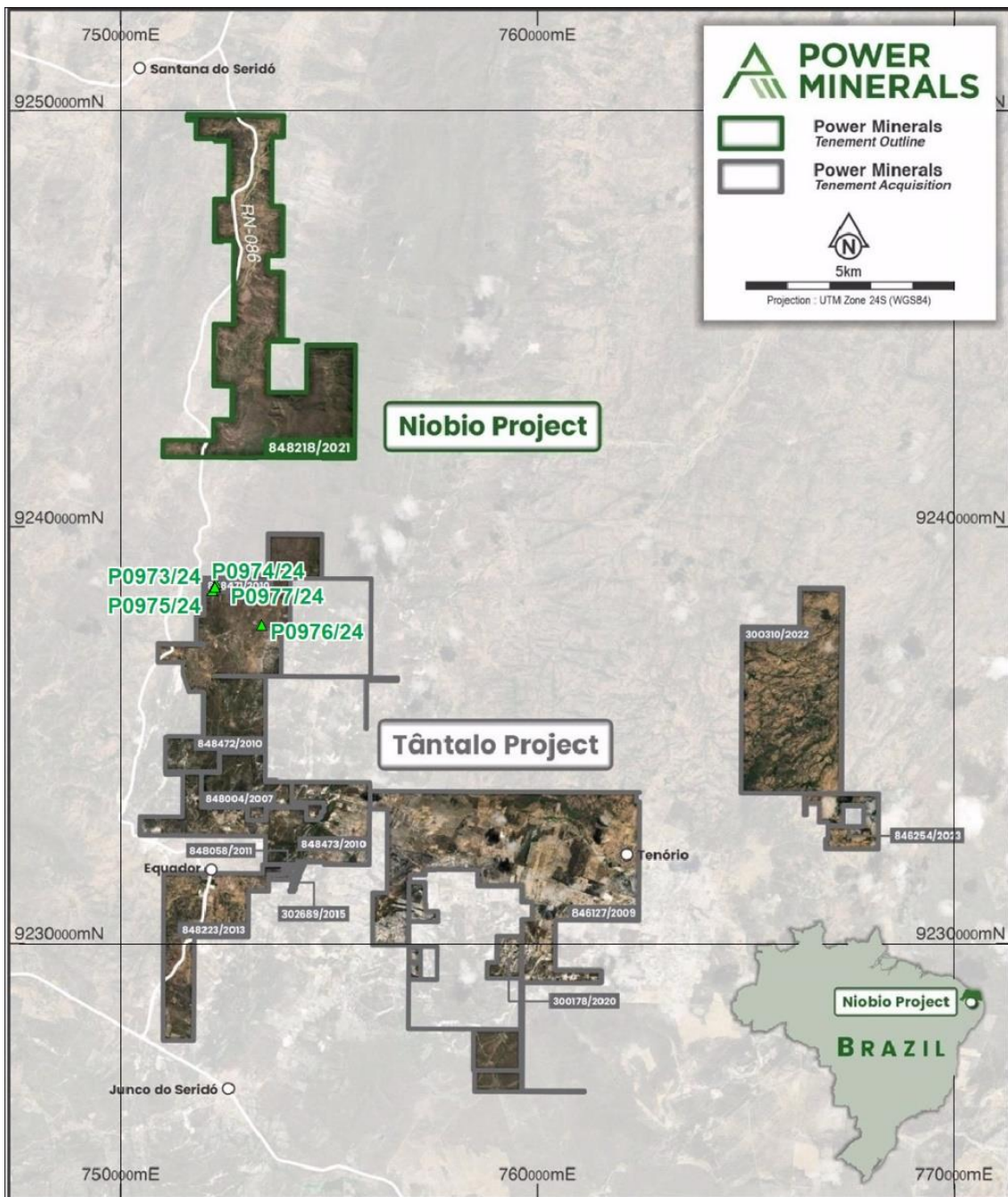


Figure 3: Tântalo project location map, showing sampling locations.

Commentary on sampling program

The analytical sampling results were completed by ASIC Services (a division of Alex Stewart International laboratories) in Santos, Brazil. The concentrate samples were pressed into a pellet after sample preparation and then analysed by industry standard XRF to provide quantitative oxide results.

Additional elements were measured but only by qualitative XRF and these have not been reported because their absolute values are unreliable. These qualitative analyses did report the presence of gold, platinum, and other REE's but until further analyses are complete their significance is uncertain.

Currently little is known regarding the mineralogy of the artisanal workings, but it is believed there are generally exploiting pegmatite intrusions hosting mineralisation. There will likely be different populations of pegmatites in age and mineralogical variations reflecting crystallisation zonation based on distance and petrophysical conditions from any concealed granitoid source at depth, thus providing opportunities for variations in the proportion of prospective elements. The current sampling confirms Ta-Nb and REE occur in the workings tested.

The exploration objective is to locate mineralised sources to produce Nb-Ta concentrate products using low-cost gravity separation. Having a range of sources provides an opportunity for blending to produce superior and in-demand concentrate products. This is why mafic mineral concentrates are the preferred sampling medium, as they quickly and efficiently discriminate those pegmatites and artisanal workings that warrant further attention.

Authorised for release by the Board of Power Minerals Limited.

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ABOUT POWER MINERALS LIMITED

Power Minerals Limited is an ASX-listed exploration and development company. We are committed to the development of our lithium assets in Argentina into significant lithium producing operations, the exploration of our niobium prospective assets in Brazil and delivering value from our non-core Australian assets.

Competent Persons Statement

The information in this document that relates to the Nióbio and Tântalo Nb-Ta Projects in Brazil has been prepared with information compiled by Steven Cooper, FAusIMM (No 108265). Mr Steven Cooper is the Exploration Manager and is a full-time employee of the Company. Mr Steven Cooper has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Mr Steven Cooper consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

Table 1: All sample niobium, tantalum, and partial rare earth oxide results from the Tântalo Project.

| SAMPLE | East_WGS84 | North_WGS84 | Nb ₂ O ₅ % | Ta ₂ O ₅ % | CeO ₂ ppm | La ₂ O ₃ ppm | Nd ₂ O ₃ ppm | Pr ₂ O ₁₁ ppm | PREO ppm |
|----------|------------|-------------|-------------------------------------|-------------------------------------|-------------------------|---------------------------------------|---------------------------------------|--|-------------|
| P0973/24 | 752247 | 9238595 | 47.3 | 20.7 | 100 | 100 | 3010 | 41 | 3251 |
| P0974/24 | 752282 | 9238667 | 11.2 | 25 | 3140 | 30 | 7200 | 52 | 10422 |
| P0975/24 | 752263 | 9238587 | 41.1 | 10.7 | 4790 | 11 | 4260 | 175 | 9236 |
| P0976/24 | 753379 | 9237674 | 24.3 | 14.1 | 1400 | 100 | 6250 | 166 | 7916 |
| P0977/24 | 752196 | 9238491 | 31.8 | 23.8 | 2601 | 70 | 3949 | 155 | 6775 |

JORC Code, 2012 Edition – Table 1 Tântalo Nb-Ta Project, Brazil

Section 1 Sampling Techniques and Data

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

| Criteria | JORC Code explanation | Commentary |
|------------------------------|---|---|
| <i>Sampling techniques</i> | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> Selective rock chip concentrate samples have been collected for geochemistry during reconnaissance field examination. The samples are not designed to estimate mineralized grades as this is the first stage of exploration activity in the local areas. On site pXRF data has been used as a guide only and only used to indicate elevated tantalum and niobium values exist. Due to the small analytical window and lack of preparation homogenisation the reported field pXRF values are uncertain and cannot be relied upon. Partial Rare Element Oxides (PREO) includes only values available for La₂O₃, CeO₂, Pr₆O₁₁ and Nd₂O₃. Values for other REO are available but are qualitative only (simply confirming their presence) and not reported as they cannot be relied upon |
| <i>Drilling techniques</i> | <ul style="list-style-type: none"> 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). | <ul style="list-style-type: none"> No drilling undertaken. |
| <i>Drill sample recovery</i> | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> No drilling undertaken. |
| <i>Logging</i> | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> No drill sampling was performed. Samples are described and photographed with the location from which it was taken. The location and sample number are recorded. |

| Criteria | JORC Code explanation | Commentary |
|---|--|---|
| <i>Sub-sampling techniques and sample preparation</i> | <ul style="list-style-type: none"> • <i>The total length and percentage of the relevant intersections logged.</i> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> | <ul style="list-style-type: none"> • No sub-sampling has been conducted. The concentrate samples for geochemistry were focused on determining the presence or absence of Nb-Ta and REE mineralization. • The raw material is concentrated in a pan, dried, and then magnetic separation at 7000 gauss to recover the final concentrate. • The same standardized method has been applied to all rock chip or stream sediment samples collected in the nearby PNN Nióbio Project. • The sample size was considered appropriate for the material's grain size and the sampling's objective. |
| <i>Quality of assay data and laboratory tests</i> | <ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>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.</i> | <ul style="list-style-type: none"> • Collected samples have been submitted to the commercial laboratory ASIC Services, part of Alex Stewart International, in Santos, São Paulo state, Brazil, for detailed analyses. • The concentrate was analysed after preparation to produce a pressed pellet suitable for reading the X-Ray fluorescence (XRF) reading equipment. The XRF scanning uses a specific calibration curve for Nb-ore and presents quantitative data as oxides, plus moisture. An additional multi-element scan using the XRF provided qualitative oxide data. This qualitative data is not presented as it is uncalibrated. • Only quantitative values are obtained for the rare earth elements Ce, La, Nd and Pr. Other REE are indicated in the qualitative XRF data but are not reported due to high uncertainty. • Results are received as pdf documents directly from the laboratory. |
| <i>Verification of sampling and assaying</i> | <ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> | <ul style="list-style-type: none"> • No drilling was undertaken. • No data has been adjusted. • Results received as pdf documents that are then OCR into spreadsheets which are then checked. Final data storage is within a MS Access relational database, where additional validation checks are performed. |
| <i>Location of data points</i> | <ul style="list-style-type: none"> • <i>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.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> | <ul style="list-style-type: none"> • Coordinates are in WGS84 datum, UTM Zone 24S. • Sample locations were measured using handheld Garmin GPS. • GPS topographic control used is +/-5m. • Location coordinates are provided in the main text. |

| Criteria | JORC Code explanation | Commentary |
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| <i>Data spacing and distribution</i> | <ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> | <ul style="list-style-type: none"> • Sampling was not designed to constrain resources. • Current activity is only at reconnaissance level exploration. |
| <i>Orientation of data in relation to geological structure</i> | <ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>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.</i> | <ul style="list-style-type: none"> • Concentrate samples for geochemistry were focused on mineralized structures to determine the presence or absence of Nb-Ta and REE mineralization. • At this discovery stage geometrics is not critical as it is point sampling only. |
| <i>Sample security</i> | <ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> | <ul style="list-style-type: none"> • Samples were delivered or transported to the ASIC Services commercial laboratory after selection and packaging by the PNN geologist engaged to carry out the field program. |
| <i>Audits or reviews</i> | <ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> | <ul style="list-style-type: none"> • None undertaken at this early stage. |

Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
|--|--|---|
| <i>Mineral tenement and land tenure status</i> | <ul style="list-style-type: none"> • <i>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.</i> • <i>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.</i> | <ul style="list-style-type: none"> • The current samples are from permit 848.471/2010 in the Paraiba State, Brazil and held by Brazilian company Cooperativa dos Trabalhadores de Minerio e Agricultura de Equador e Serido (COOTMAES). • PNN has entered into a binding Term Sheet for an exclusive Option to acquire the permit, which is part of the Tântalo Project, subject to 60-day period due diligence. See ASX announcement 25 September 2024. • The permits are granted and believed to be in good standing with the relevant government authorities. |
| <i>Exploration done by other parties</i> | <ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> | <ul style="list-style-type: none"> • There are no known records of previous modern exploration within the permit areas but due diligence is being undertaken by PNN to confirm. • There are extensive artisanal workings but these are not documented. |

| Criteria | JORC Code explanation | Commentary |
|---|--|---|
| <i>Geology</i> | <ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> | <ul style="list-style-type: none"> • Possible tantalum-niobium, beryllium, tin, and lithium bearing pegmatites formed at the end of the Brasiliano cycle (500-450 Ma) are targets within the Borborema Pegmatite Province (BPP) of northeast Brazil. |
| <i>Drill hole Information</i> | <ul style="list-style-type: none"> • <i>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:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> • <i>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.</i> | <ul style="list-style-type: none"> • No drilling was completed. |
| <i>Data aggregation methods</i> | <ul style="list-style-type: none"> • <i>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.</i> • <i>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.</i> • <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> | <ul style="list-style-type: none"> • No data was aggregated. • No metal equivalent values are reported. |
| <i>Relationship between mineralisation widths and intercept lengths</i> | <ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>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').</i> | <ul style="list-style-type: none"> • Current activity is only reconnaissance level exploration. Concentrates are spot samples not intended for any grade determination over a width. |
| <i>Diagrams</i> | <ul style="list-style-type: none"> • <i>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.</i> | <ul style="list-style-type: none"> • A geological map with significant sample results will be provided when available. |
| <i>Balanced reporting</i> | <ul style="list-style-type: none"> • <i>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</i> | <ul style="list-style-type: none"> • Laboratory geochemical results for the PNN sampling are provided in the body of the announcement. The objective was only to confirm |

| Criteria | JORC Code explanation | Commentary |
|---|--|---|
| | <i>Exploration Results.</i> | that Nb-Ta-REE mineralization is present within the permit area. |
| <i>Other substantive exploration data</i> | <ul style="list-style-type: none"> <i>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.</i> | <ul style="list-style-type: none"> On site pXRF data has been used as a guide only and only used to indicate elevated tantalum and niobium values exist. Due to the small analytical window and lack of preparation homogenisation the exact reported pXRF values are uncertain and cannot be relied upon. |
| <i>Further work</i> | <ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> | <ul style="list-style-type: none"> Further field work to complete mapping of the property and to conduct additional geochemical sampling is planned in the near future. Power's initial field work programs will be designed to define targets for a maiden drilling program (subject to results) |