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EXPLORATION TARGET DEFINED FOR TRANSITION'S RARE EARTH ELEMENT DISCOVERY

Key Highlights

- **Exploration Target is estimated from 2022 drilling at the Company's 100% owned Barkly Zone, Northern Territory. Significant drilling intercepts are documented in release to shareholders dated 10 November 2022.**
- **Drilling data indicate strong, consistent and continuous rare earth element (REE) mineralisation including high-grade intersections up to 4,836 ppm Total Rare Earth Oxides in clays.**
- **Mineralisation is open in all directions.**
- **Importantly, mineralisation encountered in drilling is strongly enriched in the high-value magnet rare earths of neodymium (Nd) and praseodymium (Pr) — the core enablers of decarbonisation — comprising 33.1% of the Exploration Target composition of TREO (the 'NdPr ratio' or '% NdPr') compared to global averages of under 20% in other known deposits.**
- **At Vanadis, the REE mineralisation occurs within a few metres of the vanadium-enriched zone, creating a 'combination project' of two sub-horizontal horizons of parallel mineralisation that contribute to economic prospectivity.**
- **Preliminary mineralogical investigation is underway to facilitate metallurgical test work to evaluate whether the REEs have the potential to be economically recovered.**

Barkly REE Exploration Target

Transition Minerals Limited (the Company) is pleased to report interpretation of results from samples collected from a total of 1,553 metres drilled over 98 holes at the Vanadis (Figure 1), Kiana and Benmara prospects of the Barkly Project, Northern Territory (Transition Minerals 100%).

Figure 1: Drilling at Vanadis.

The Exploration Target (Table 1) of 70–420 million tonnes at 1,300–1,950 ppm Total Rare Earth Oxides (TREO) is reported in accordance with the JORC Code (2012) and has been determined by a Competent Person.

The potential quantity and grade of the Exploration Target is conceptual in nature; there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Table 1: Barkly Exploration Target

Category	Million Tonnes	TREO (ppm)	% NdPr
Exploration Target	70 – 420	1,300 – 1,950	33.1

The Company has commenced mineralogical investigation utilising RSC's scanning electron microscope and geochemical expertise. This is intended to facilitate subsequent laboratory test work to indicate whether the REEs have the potential to be economically recovered. This preliminary mineralogical assessment is anticipated to conclude early in 2023.

Drill samples were initially analysed by a standard 4-acid digest at the laboratory to gather multi-element information to assess the broad geological controls on mineralisation. This method may understate REE grades, and the Company subsequently commissioned a more accurate analysis for REEs by flux fusion. This was undertaken on 61 samples including samples with high TREO and a subset of samples with high vanadium. This resulted in an increase in the maximum TREO assessment to 4,836 ppm. Concurrently an average increase of 17% in vanadium was observed by comparison to the original laboratory vanadium results, resulting in a maximum vanadium analysis of 0.51% V_2O_5.

Notably, both the REE and vanadium mineralisation is open in all directions (Figure 2). At Vanadis, the sub-horizontal REE mineralisation occurs within 2–4 m of the vanadium-enriched Vanadis beds (Figure 3, Figure 4, Figure 5 and Figure 6). Some drillholes at Vanadis do not intersect REE mineralisation, and it is thought that these holes were terminated above the consistently observable mineralised zone (Figure 5). The Company is now working to understand the controls on REE mineralisation better, to help with the next stage of exploration.

Encouragingly, drilling encountered very low concentrations of radiogenic thorium (Th) and uranium (U) at Vanadis. This means that the project may not suffer from the significant permitting, processing, disposal and management costs typically associated with elevated ionising radiogenic elements found in hard rock REE deposits.

Preliminary assessment of the *combined* potential for commercially feasible vanadium and REE extraction indicates that the project presents a unique opportunity to develop a future-facing minerals project. The project has excellent potential to contribute to Australia's green energy transition, and provide access to a reliable, secure, and resilient supply of multiple critical minerals.

The combination of *both* V *and REE* prospectivity, from surface, makes this a unique project in a safe jurisdiction at the pivotal time in the world's quest for a sustainable future.

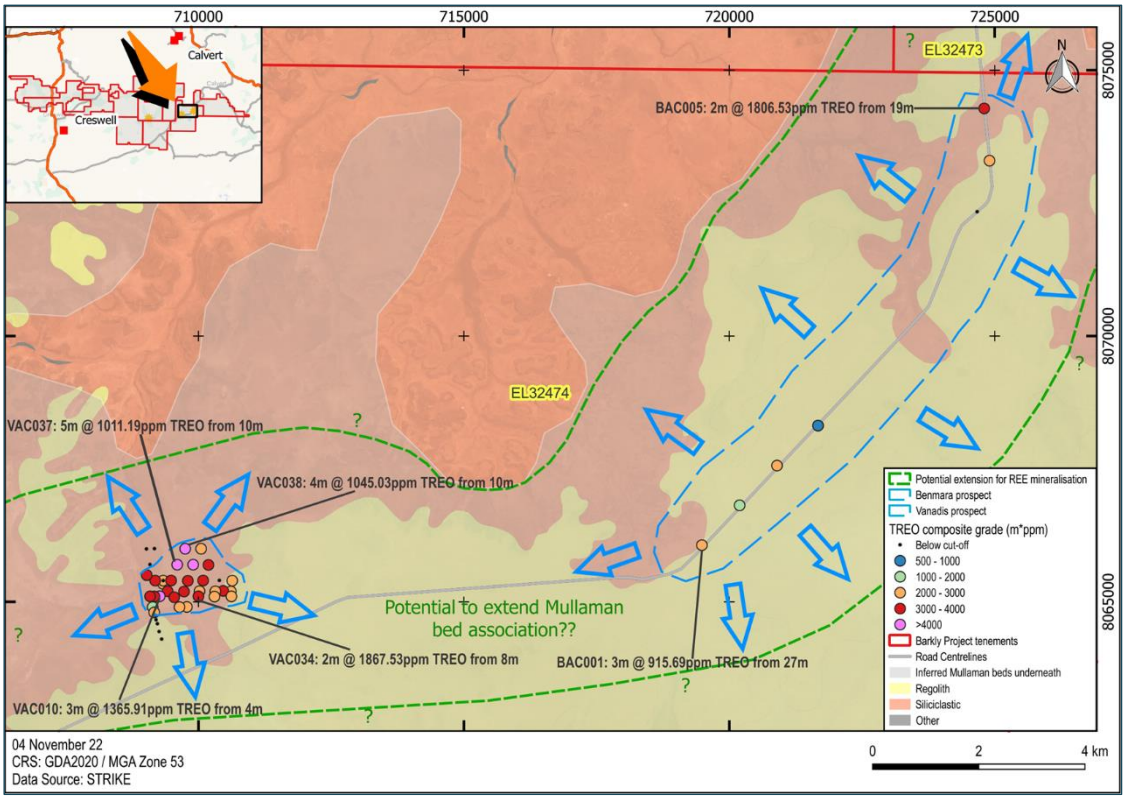

Figure 2: Drilling at Vanadis and Benmara indicates the TREO mineralisation is open in all directions and may be continuous in the ~12 kilometre gap between the closest drillholes of each prospect.

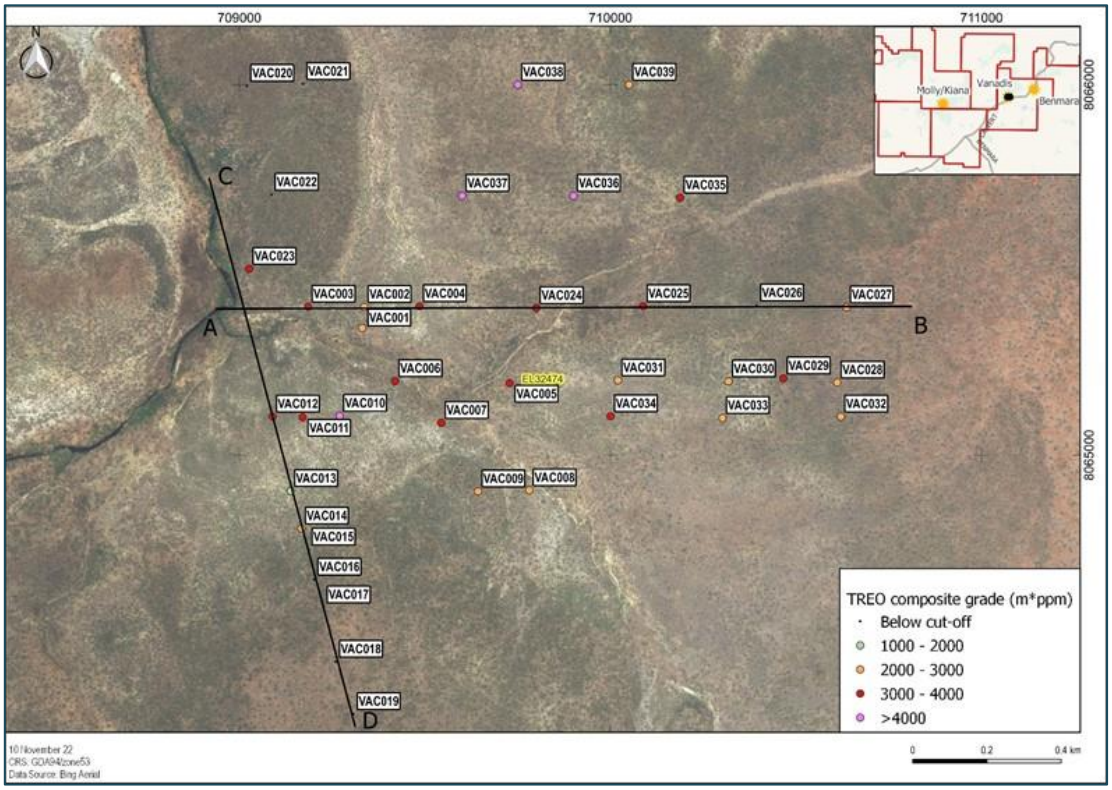

Figure 3: Drillholes and TREO grade, in coloured markers, at Vanadis.

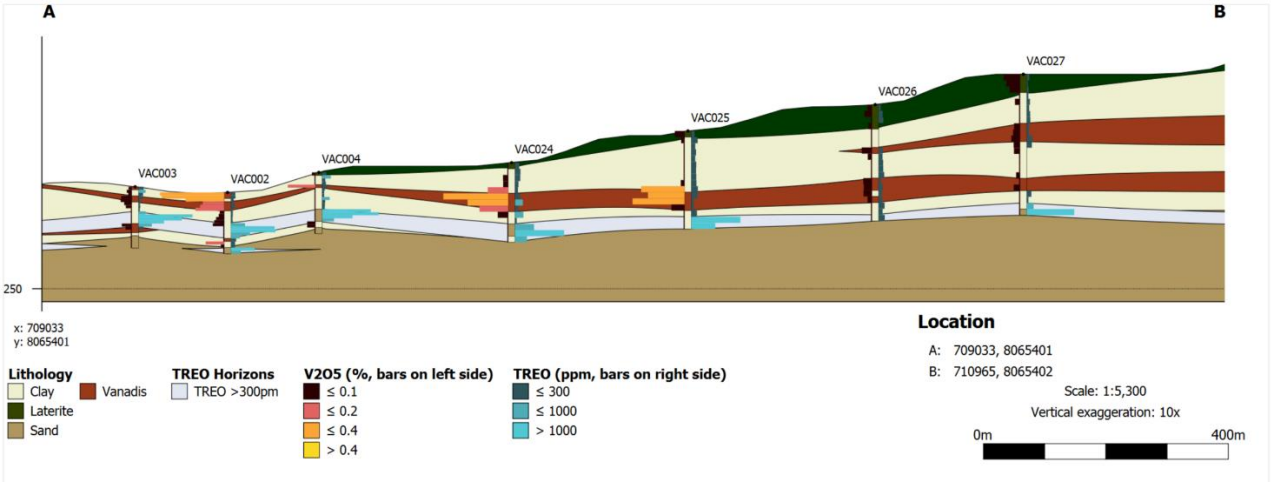

Figure 4: Vanadis west (left) to east (right) cross-section demonstrating the stacked vanadium mineralised beds overlying the TREO horizon (10x vertical exaggeration).

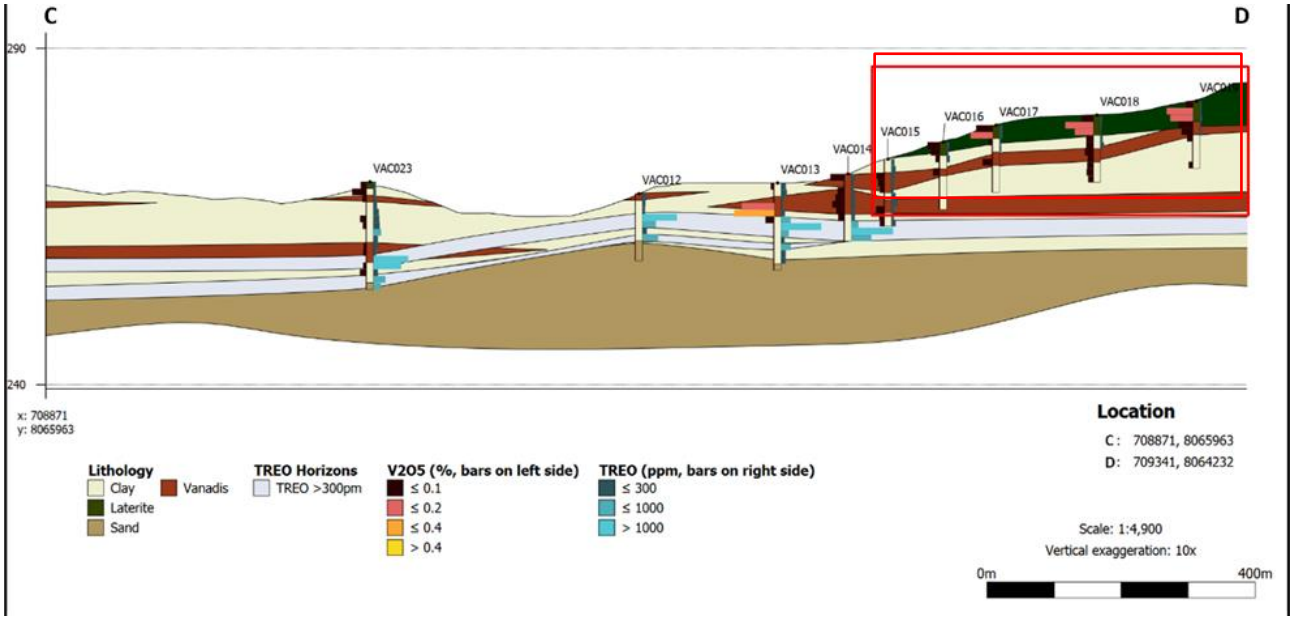

Figure 5: Vanadis north (left) to south (right) cross-section demonstrating the stacked vanadium mineralised beds overlying the TREO horizon (10x vertical exaggeration) and shallow drilling in the south (inside red box).

Interval (m)	V_2O_5 (%)	TREO (ppm)
0 – 0.5	**0.391**	194
0.5 – 1.0	**0.459***	222*
1.0 – 1.5	**0.255**	125
1.5 – 2.0	**0.158**	129
2.0 – 2.5	**0.146**	192
2.5 – 3.0	0.019	101
3.0 – 3.5	0.027	85
3.5 – 4.0	0.054	82
4.0 – 4.5	0.064	70
4.5 – 5.0	0.105	81
5.0 – 5.5	0.009	**638**
5.5 – 6.0	0.017*	**2896***
6.0 – 6.5	0.010*	**2541***
6.5 – 7.0	0.007	**867**
7.0 – 7.5	0.011	408
7.5 – 8.0	0.095	236
8.0 – 8.5	0.019	186
8.5 – 9.0	0.020	184
9.0 – 9.5	0.016*	**1132***
9.5 – 10.0	0.006	447

* *Corrected following Li-Borate fusion analysis (ME-MS81)*

Figure 6 Drillhole VAC002 drill chips and laboratory assay values for vanadium and rare earths

Next Steps

The Company has identified that the Barkly Project, encompassing 8,124 km^2 of granted tenure, has the potential to contain a large-scale, high-grade clay-hosted REE project, in addition to the prospectivity of the vanadium target. The next steps include the following.

1. Initial mineralogical and metallurgical test work to commence the characterisation of REE and vanadium mineralisation, to ascertain the potential processing and recovery options of a rare earth element and vanadium product streams.
2. Consider a preliminary scoping exercise to determine possible REE and V extraction scenarios.
3. Pending results of the preliminary mineralogical and metallurgical testing, the Company will look to report a Mineral Resource Estimate in accordance with JORC (Q1 2023).
4. Given that the REE target is open in all directions, Transition is planning a significant drilling campaign to expand the initial resource (Q2-3 2023).
5. IPO is planned for 2023 pending favourable market conditions.

Transition Minerals will be seeking additional financial support to undertake these planned future works in the coming months.

For further information, please contact:

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Competent Person Statement

The information in this shareholder release that relates to an Exploration Target is based on information evaluated by René Sterk who is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM), a Certified Practising Geologist, a Registered Professional Geologist and holds an ex-officio position on the JORC committee and who has sufficient experience relevant 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 (JORC Code 2012). Mr Sterk is Chairman of Transition Minerals Limited and he consents to the inclusion in this report of the information in the form and context in which it appears. Mr Sterk indirectly holds shares in Transition Minerals Limited, and is the main shareholder and managing director of RSC, the geological service company contracted to undertake the exploration work on behalf of Transition Minerals Limited.

JORC 2012 EDITION — TABLE 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

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.*	• All samples were collected through a cyclone into plastic bags at 0.5m intervals (holes VAC001 – VAC005) or 1m intervals (VAC006 – VAC039, KAC001 – KAC052, BAC001 – BAC007). All samples were weighed before individually passed through a 50:50 riffle splitter for homogenising, then subsampled into ~2kg samples within numbered calico bags. • Duplicate samples were collected every 20th sample. • A 2mm sieve fraction was collected for each sample interval, washed and stored in chip trays for geological logging purposes. • The <2mm fraction of each sieved sample was collected in a container and transferred into a specialised cup for use in a portable XRF unit for analysis using a 3 Beam geochemical setting. • Holes were screened using pXRF results for V, La, Ce and, to a lesser extent, Nd and Pr to determine potential presence of V and REE mineralisation. • The Competent Person has reviewed the sampling procedures and considers that the sampling was commensurate with industry standards current at the time of drilling and is appropriate for the indication of the presence of mineralisation.
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).*	• McLeod Drilling used a Reverse Circulation Aircore drill rig mounted on a 6-wheel drive Toyota Landcruiser. • Aircore drilling uses a 76mm mini face sampling RC hammer bit where the sample is collected at the face and returned inside the inner tube. The drill cuttings are removed by the injection of compressed air into the hole via the annular area between the inner tube and the drill rod. • Aircore drill rods are 3m NQ rods. • All aircore drill holes were between 9m and 35m in length and drilled vertically. • The Competent Person has inspected the drilling programme and

Criteria	JORC Code explanation	Commentary
		considers that drilling technique was commensurate with industry standards current at the time of drilling and is appropriate for the indication of the presence of mineralisation.
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.*	• Assessment of recovery was undertaken by weighing each sample and recording these weights. • All efforts were made to ensure the sample was representative. • No relationship appears to exist between sample recovery and grade, but no work has been undertaken to confirm this.
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 geologically logged to include details such as colour, grain size, indicative moisture content and lithology. • Collars were located using a handheld GPS • The holes were logged in both a qualitative and quantitative manner • All chip trays were photographed.
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.*	• All samples were collected through a cyclone into plastic bags at 0.5m intervals (holes VAC001 – VAC005) or 1m intervals (VAC006 – VAC039, KAC001 – KAC052, BAC001 – BAC007). All samples were then individually passed dry through a 50:50 riffle splitter for homogenising, then subsampled into ~2kg samples within numbered calico bags. • Selected samples were subsequently sent to ALS Laboratories for analysis.
Quality of assay data and	• *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*	• 1186 samples, including duplicates, blanks and standards, were sent to ALS Laboratories in Townsville for multi-element analysis via 4-acid digest (laboratory code ME-MS61r). The digestion of REE's is not considered complete. • A prepared sample (0.25g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with

Criteria	JORC Code explanation	Commentary
laboratory tests	*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.*	dilute hydrochloric acid and analysed by inductively coupled plasma-mass spectrometry (ICP-MS). • NOTE: Four acid digestions are able to dissolve most minerals; however, although the term "near-total" is used, depending on the sample matrix, not all elements are quantitatively extracted. • A small subset of 61 samples were subsequently analysed at ALS Laboratories via Li-Borate Fusion followed by acid digest and analysed by ICP-MS (laboratory code ME-MS81), which is considered to be a total digestion. • A <2mm sieved fraction of each sieved sample was collected in a container and transferred into a specialised cup for use in a portable XRF unit for analysis using a 3 Beam geochemical setting on 15 seconds per beam. • Holes were screened using pXRF results for V, La, Ce and, to a lesser extent, Nd and Pr to determine potential presence of V and REE mineralisation. • Selection of 2kg split sample intervals for submission to ALS laboratories for geochemical analysis was conducted over intervals assessed as potentially mineralised using pXRF screening. • Field duplicates were collected every 20th sample. • CRM standards were inserted into laboratory sample submissions every 20th sample.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No verification of sampling, no use of twinned holes. • Data is exploratory in nature and is compiled into excel spreadsheets. • Rare earth element analyses were originally reported in elemental form but have been converted to relevant oxide concentrations as in the industry standard.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The location of drill hole collar was undertaken using a hand-held GPS which has an accuracy of +/- 5m using UTM MGA94 Zone 53. • The quality and adequacy are appropriate for this level of exploration.

Criteria	JORC Code explanation	Commentary
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.*	• Spacing was defined by pre-cleared drill lines between 150 and 300m apart. Holes were spaced between 150m and 300m along each cleared line, guided by pXRF screening of drill cuttings. • Data spacing and distribution are sufficient to establish the degree of geological and grade continuity for the Exploration Target estimation procedure. • 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.*	• It is believed that the drilling has intersected the geology at right angles and reported intersections are near true width. • It is believed that no bias has been introduced through the drilling orientation.
Sample security	• *The measures taken to ensure sample security.*	• All samples have been in the custody of Transition Minerals and consulting exploration professionals from RSC. • Best practices were undertaken at the time. • All residual sample material (pulps) is stored securely.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• None undertaken.

Section 2 Reporting of Exploration Results

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

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.*	• Tenement status confirmed on NT STRIKE. • The tenements are in good standing with no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• No relevant previous exploration has been undertaken.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenements are within the Greater McArthur Basin, Northern Territory. • Transition Minerals is exploring for vanadium, other base metals and REE deposits. • This release refers to REE mineralisation related to lateritic weathering processes on Cretaceous sedimentary rocks (Mullaman Beds).

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent*
		• Exploration results have been released in previous announcements by the Company.

Criteria	JORC Code explanation	Commentary
	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.*	• REE analysis intervals were aggregated using downhole sample length-weighted averages with a lower cut-off of 325ppm TREO-CeO_2, with no upper limit 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').*	• All holes are believed to intersect the mineralisation at 90 degrees and therefore represent true widths. • All intercepts reported are down hole lengths.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See main body of the announcement.
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 other relevant data has been reported. • The reporting is considered to be balanced. • Where data has been excluded, it is not considered material.
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*	• The project area has been subject to exploration for uranium, base metals, diamonds and vanadium. • All relevant exploration data has been included in this report.

Criteria	JORC Code explanation	Commentary
	contaminating substances.	
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.*	• Further exploration drilling is required, including step-out drilling and in-fill drilling. • Samples from the Vanadis prospect area are undergoing mineralogical analysis to facilitate metallurgical test work to determine whether the REEs may be economically extracted.