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## **PARTIAL RELINQUISHMENT REPORT FOR EXPLORATION LICENCE 32473: BARKLY PROJECT, NORTHERN TERRITORY.**

*Holder:* Transition Minerals Ltd  
*Operator:* Transition Minerals Ltd  
*Reporting Period:* 21 May 2021 to 30 June 2023  
*Sheet Reference:* Calvert Hills 1:250,000 (SE53-08)  
*Due Date:* 4 August 2023  
*Author:* R C B Hall  
*Date:* 25 July 2023  
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### **Abstract**

This report adheres to provisions of s29 and (Regulation86(1)) of the Mineral Titles Act 2010. Due to the extent of the tenement area and insufficient time and capacity to conduct intensive exploration activities, a 100% waiver of reduction for Year 2 was applied for and approved. In a subsequent Company review of the tenement, the potential for any significant mineralisation was deemed low, and it was decided to partially relinquish a total of 48 blocks, leaving 201 blocks to be retained. Effective cessation of the nominated blocks was 5 June 2023.

Maps showing the nominated blocks and reduced title area, are included in the following report.

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## Title history and Terms of Reference

The Calvert Hills district of the Northern Territory is host to relict regolith-landforms which form distinct flat-lying plateaux and isolated land surface remnants in the form of mesas (e.g., Wright, 1963). This distinctive topography results in resistant ferruginous laterites overlying kaolinised Lower Cretaceous-age sandstones and minor conglomerates of shallow-marine origin, i.e., The Yirrkala and Walker River Formations (formerly the Mullaman Beds). Upper Cambrian Montejinni limestone and Lower-Cambrian Antrim Plateau Volcanics underlie the Mullaman Beds. The Project Area has been affected by deep weathering and laterisation and contains anomalous values of immobile elements contained within the pervasive and resistant ferruginous laterite residuum, where it has concentrated due to extensive down-wasting since throughout the Cretaceous. In addition, the intact in situ sediments below the laterite cap have also been mineralised to greater and lesser degrees and are the focus of ongoing investigation.

The area is accessible from the Tablelands Highway (State Route 11) to the west, and Calvert Road (State Route 16) that bisects the general area (Figure 1). There is historical anecdotal evidence to support previous exploration activities within the area of interest, which have focused on base metals (Cu, Pb, Zn, U, etc.) and precious metals (gold) as well as exploration for diamonds (e.g., Stockdale Prospecting Ltd). Figure 2 shows the current outline of the tenement (black outline with dense yellow hatching) and the pre-relinquishment outline.

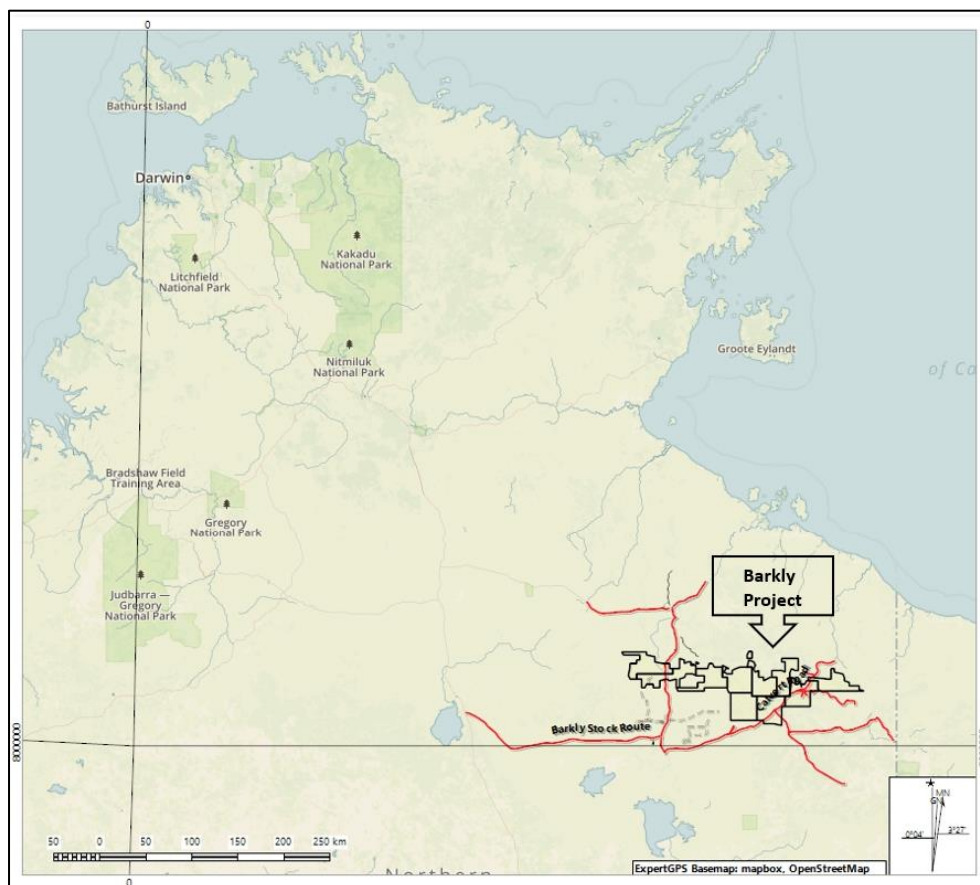


Figure 1: Location of the Transition Minerals Ltd Barkly Project.

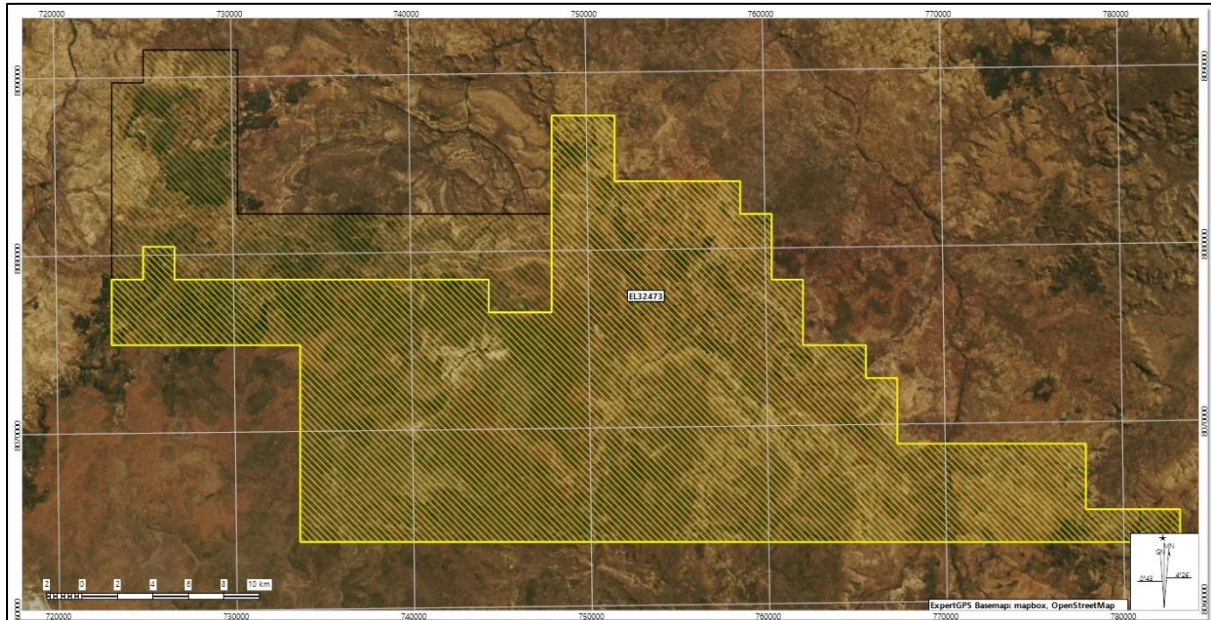


Figure 2. Previous and current outline of tenement EL32473. Relinquished area shown in light hatching.

### Licence Details

EL32473 comprised a total of 249 blocks granted to Transition Minerals Ltd on 21 May 2021. Cessation of the 48 nominated blocks occurred on 5 June 2023, with the remaining 201 blocks scheduled for expiry on 20 May 2027.

### Target Commodities

The tenement was applied for due to its prospective nature regarding the surficial laterite capping which was deemed significant for the occurrence of Group 4-11 transition minerals.

Since granting of the tenement, Transition Minerals Ltd has attempted to explore the project area for polymetallic targets containing consolidated economic-grades of group 4–11 transition metals and rare earth elements (REE). Due to their chemically inert nature, vanadium and REEs are known to concentrate extensively within relict landforms associated with weathered regoliths and buried palaeosurfaces that are permissive hosts for these targeted minerals. On this basis, the Company is currently pursuing a dedicated dual-commodity exploration program. Other commodities including gold, uranium, iron ore and potash, have also been explored for historically.

### Exploration rationale

The targeted minerals occur within Cretaceous-age marine sediments assigned to the Mullaman Beds (Yirrkala and Walker River formations), which extend a short distance to the north of the tenement, where they are eroded away by Tertiary-age drainages dissecting the northern edge of the plateau (i.e., cut-backs). At the time of granting the target sediment basin boundaries were roughly estimated, with the blocking being conducted to ensure their incorporation into the tenement. The basin was subsequently outlined in more detail following a further desk top study (Figure 3).



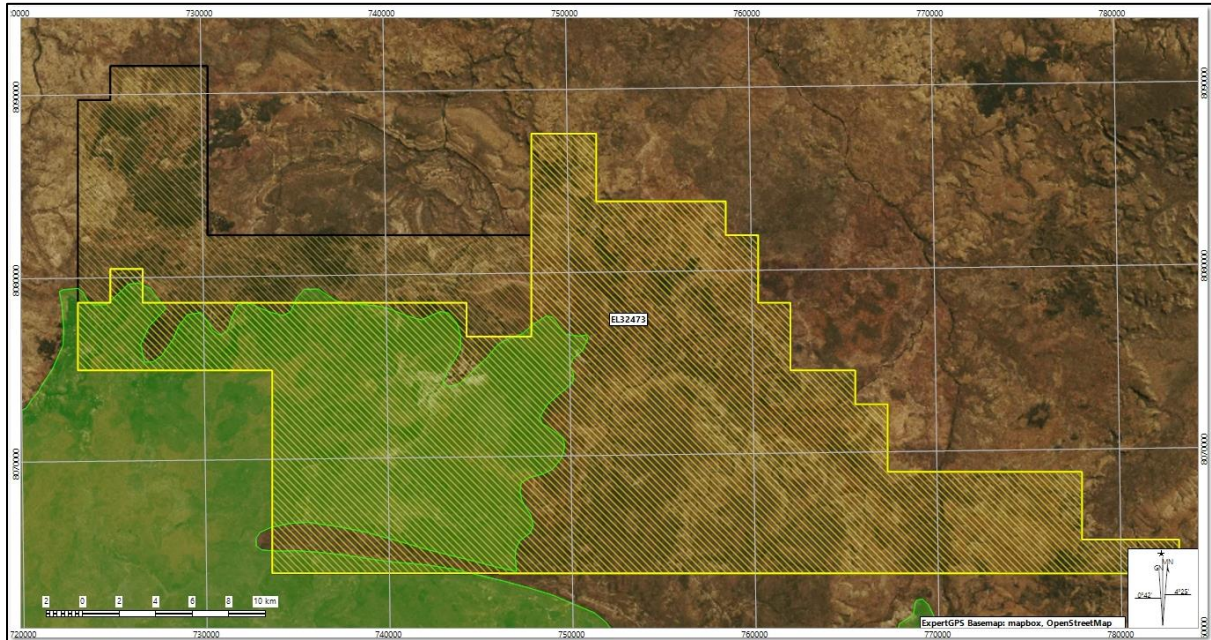


Figure 3. Tenement EL32473 in relation to the mineralised Mullaman Beds (green outline and solid fill). The current tenement outline straddles this geological boundary.

### Exploration Activities Summary

Exploration activities have not been conducted on the relinquished blocks prior to their surrender, due to a focussed exploration assessment of tenements EL32453, EL32456 and EL32474, where Year 2 maiden drilling activities delineated vanadium and REE exploration targets and the fact that the area covered by the surrendered blocks did not contain the targeted sediments and were thus deemed non-prospective.

Desktop reviews, including the study that supported the decision to relinquish of blocks from this tenement, included:

- Compilation of a digital terrain model (2m and 5m resolution);
- Compilation of CSIRO-NTGS Digital Information Package 20 (DIP20) subsurface geology, Bouger (gravity) and Magnetic (1vd RTP) maps;
- Report writing

### Reason for Relinquishment (Regulation 86(5))

The partial surrender of title is due to the non-occurrence of targeted mineralised Mullaman Beds (cf. Figure 3) in the surrendered portion and this area is therefore considered non-prospective by The Company for targeted polymetallic group 4-11 transition minerals and REEs. Figure 4 shows details of areas relinquished and retained and Table 1 details the individual blocks surrendered.

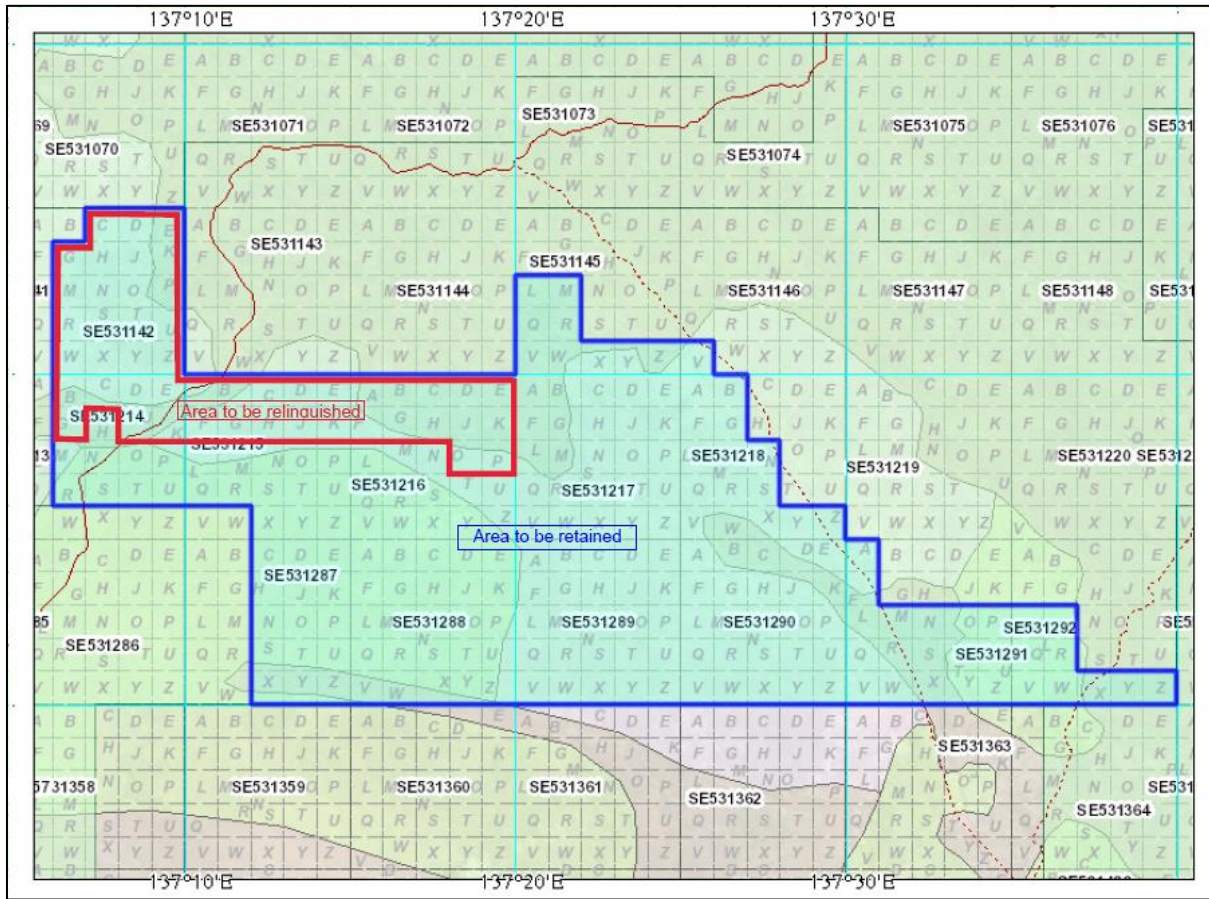


Figure 4. EL32473 showing blocks to be relinquished (red polygon = partial reduction area).

**EL32473 – Block List**

Grid ID	BIM	Block	Sub Block
SE531142C	SE53	1142	C
SE531142D	SE53	1142	D
SE531142E	SE53	1142	E
SE531142G	SE53	1142	G
SE531142H	SE53	1142	H
SE531142J	SE53	1142	J
SE531142K	SE53	1142	K
SE531142M	SE53	1142	M
SE531142N	SE53	1142	N
SE531142O	SE53	1142	O
SE531142P	SE53	1142	P

SE531142R	SE53	1142	R
SE531142S	SE53	1142	S
SE531142T	SE53	1142	T
SE531142U	SE53	1142	U
SE531142W	SE53	1142	W
SE531142X	SE53	1142	X
SE531142Y	SE53	1142	Y
SE531142Z	SE53	1142	Z
SE531214B	SE53	1214	B
SE531214C	SE53	1214	C
SE531214D	SE53	1214	D
SE531214E	SE53	1214	E
SE531214G	SE53	1214	G
SE531214J	SE53	1214	J
SE531214K	SE53	1214	K
SE531215A	SE53	1215	A
SE531215B	SE53	1215	B
SE531215C	SE53	1215	C
SE531215D	SE53	1215	D
SE531215E	SE53	1215	E
SE531215F	SE53	1215	F
SE531215G	SE53	1215	G
SE531215H	SE53	1215	H
SE531215J	SE53	1215	J
SE531215K	SE53	1215	K
SE531216A	SE53	1216	A
SE531216B	SE53	1216	B
SE531216C	SE53	1216	C
SE531216D	SE53	1216	D

Grid ID	BIM	Block	Sub Block
SE531216E	SE53	1216	E
SE531216F	SE53	1216	F
SE531216G	SE53	1216	G
SE531216H	SE53	1216	H
SE531216J	SE53	1216	J
SE531216K	SE53	1216	K
SE531216O	SE53	1216	O
SE531216P	SE53	1216	P

Table 1. Blocks comprising partial reduction area.

### **Acknowledgement and Warranty**

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