Transition Minerals Limited
13–15 Rheola Street
West Perth WA 6005
Australia
+61 (8) 9467 1444

# PARTIAL RELINQUISHMENT REPORT FOR EXPLORATION LICENCE 32454: 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 |
| *Copies To*: | Department of Industry, Tourism and Trade |

titles.info@nt.gov.au

## 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 57 blocks, leaving 192 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.

## Contents



## List of Figures



## List of Tables

## 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 from the east (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 hatching) and the pre-relinquishment outline.

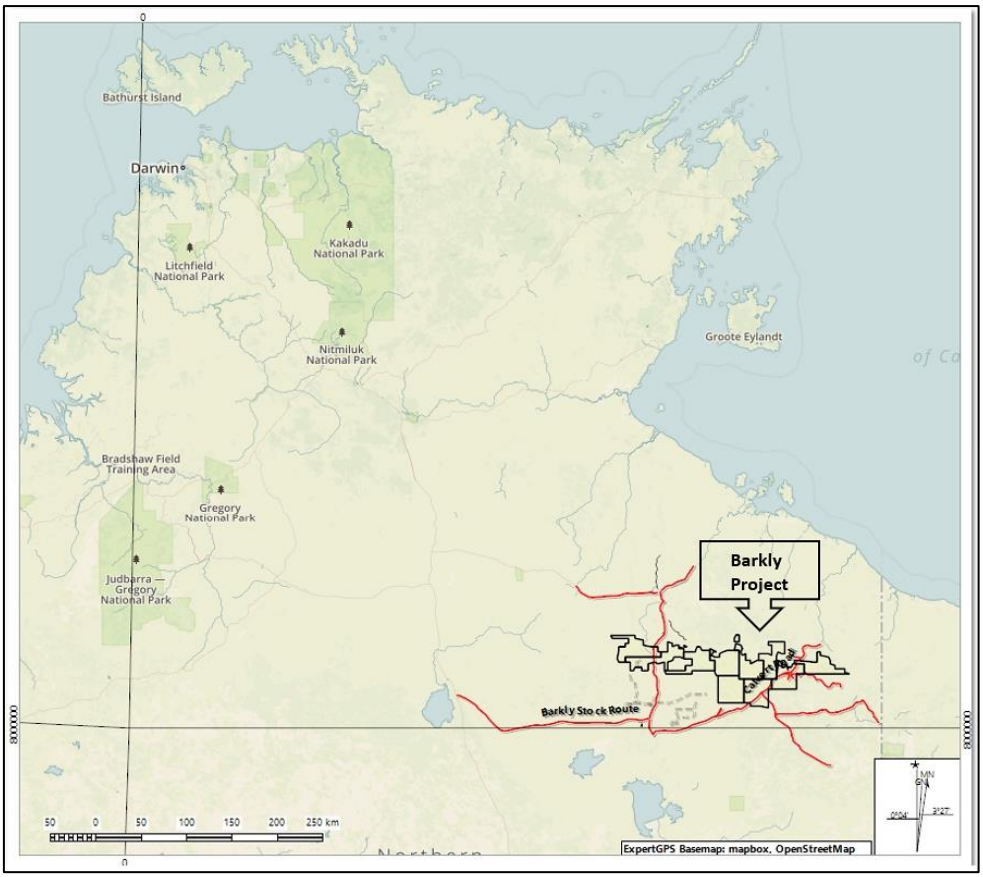


*Figure 1: Location of the Transition Minerals Ltd Barkly Project.*

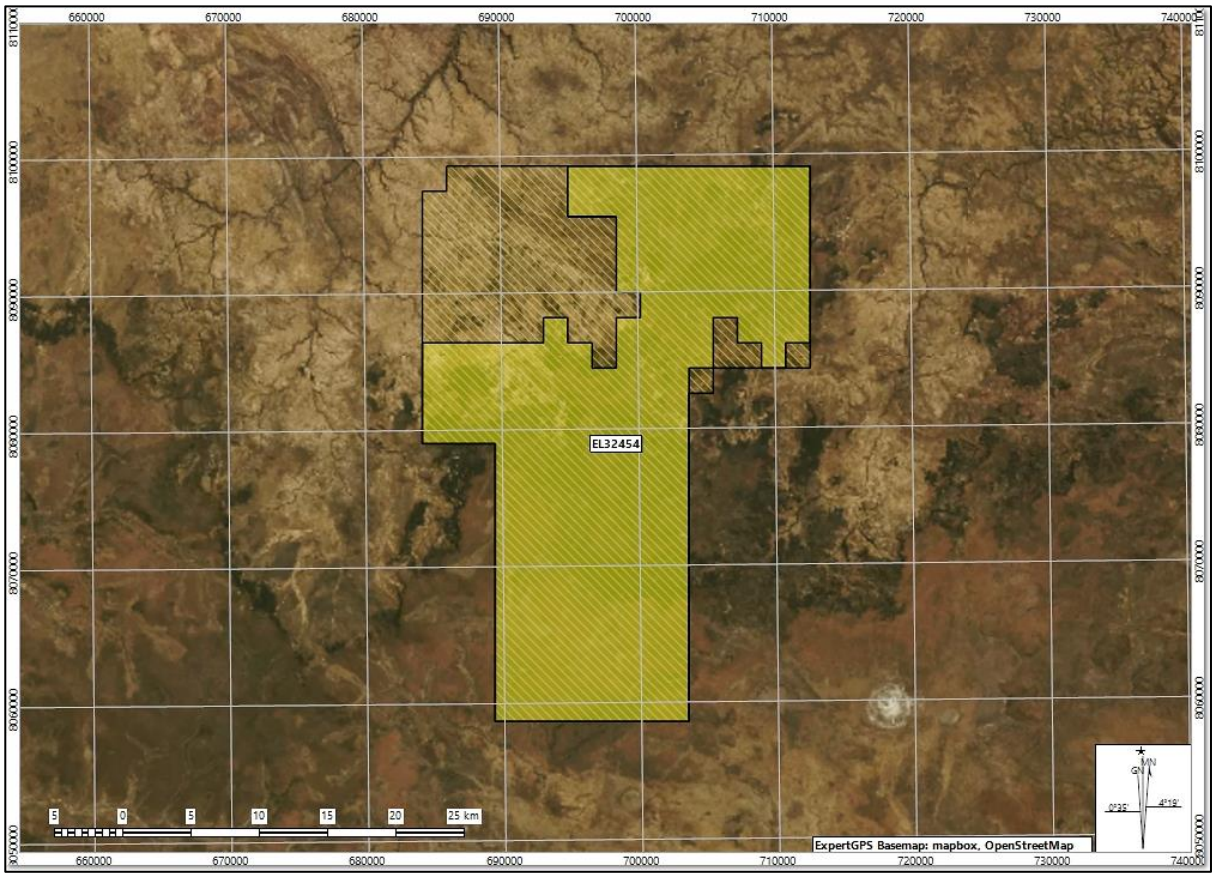


*Figure 2. Previous and current outline of tenement EL32454. Relinquished area shown in light hatching.*

## Licence Details

EL32454 comprised a total of 249 blocks granted to Transition Minerals Ltd on 21 May 2021. Cessation of the 57 nominated blocks occurred on 5 June 2023, with the remaining 192 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 are 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).

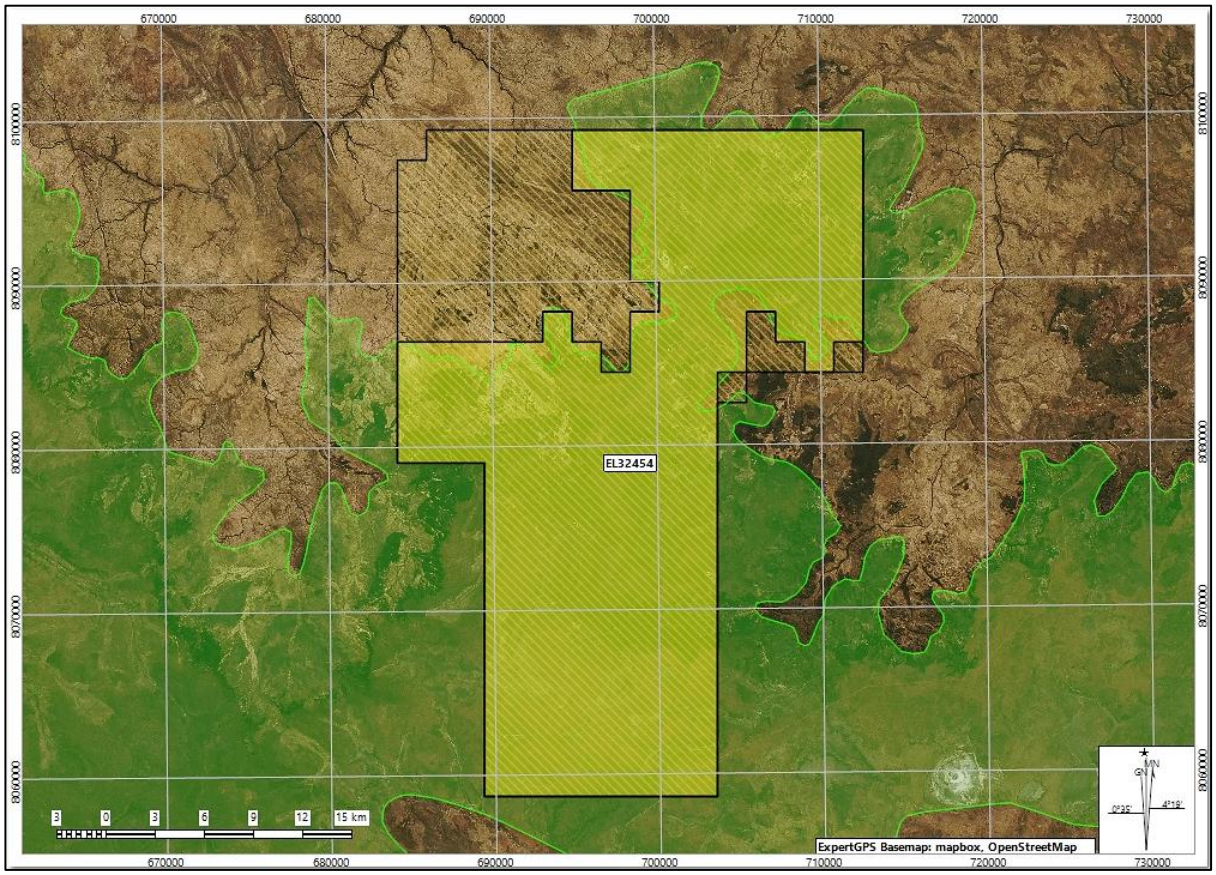


*Figure 3. Tenement EL23454 in relation to the mineralised Mullaman Beds (green outline and solid fill). The current tenement outline straddles this geological boundary.*

## 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 does not contain the targeted sediments and were thus considered 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.

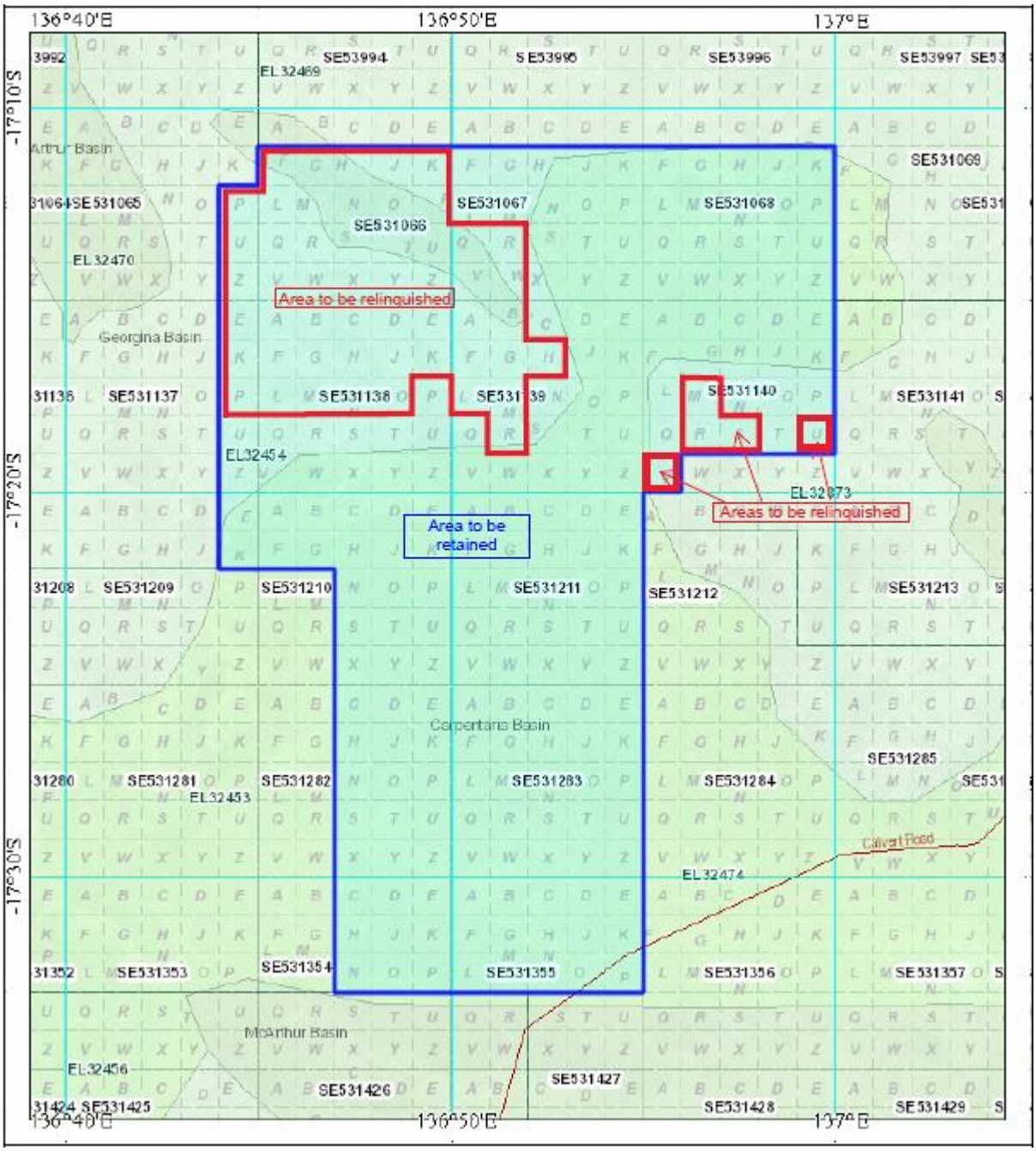


*Figure 4. EL32454 showing blocks to be relinquished (red polygon = partial reduction area).*

**EL32454 – Block List**

| Grid ID | BIM | Block | Sub Block |
|---|---|---|---|
| SE531065P | SE53 | 1065 | P |
| SE531065U | SE53 | 1065 | U |
| SE531065Z | SE53 | 1065 | Z |
| SE531066F | SE53 | 1066 | F |
| SE531066G | SE53 | 1066 | G |
| SE531066H | SE53 | 1066 | H |
| SE531066J | SE53 | 1066 | J |
| SE531066K | SE53 | 1066 | K |
| SE531066L | SE53 | 1066 | L |
| SE531066M | SE53 | 1066 | M |
| SE531066N | SE53 | 1066 | N |
| SE531066O | SE53 | 1066 | O |
| SE531066P | SE53 | 1066 | P |
| SE531066Q | SE53 | 1066 | Q |
| SE531066R | SE53 | 1066 | R |
| SE531066S | SE53 | 1066 | S |
| SE531066T | SE53 | 1066 | T |
| SE531066U | SE53 | 1066 | U |
| SE531066V | SE53 | 1066 | V |
| SE531066W | SE53 | 1066 | W |
| SE531066X | SE53 | 1066 | X |
| SE531066Y | SE53 | 1066 | Y |
| SE531066Z | SE53 | 1066 | Z |
| SE531067Q | SE53 | 1067 | Q |
| SE531067R | SE53 | 1067 | R |
| SE531067V | SE53 | 1067 | V |
| SE531067W | SE53 | 1067 | W |
| SE531137E | SE53 | 1137 | E |

| Grid ID | BIM | Block | Sub Block |
|---|---|---|---|
| SE531137K | SE53 1 | 137 | K |
| SE531137P | SE53 | 1137 | P |
| SE531138A | SE53 | 1138 | A |
| SE531138B | SE53 | 1138 | B |
| SE531138C | SE53 | 1138 | C |
| SE531138D | SE53 | 1138 | D |
| SE531138E | SE53 | 1138 | E |
| SE531138F | SE53 | 1138 | F |
| SE531138G | SE53 | 1138 | G |
| SE531138H | SE53 | 1138 | H |
| SE531138J | SE53 | 1138 | J |
| SE531138K | SE53 | 1138 | K |
| SE531138L | SE53 | 1138 | L |
| SE531138M | SE53 | 1138 | M |
| SE531138N S | E53 | 1138 | N |
| SE531138O | SE53 | 1138 | O |
| SE531139A | SE53 | 1139 | A |
| SE531139B | SE53 1 | 139 | B |
| SE531139F | SE53 | 1139 | F |
| SE531139G | SE53 | 1139 | G |
| SE531139H | SE53 | 1139 | H |
| SE531139L | SE53 | 1139 | L |
| SE531139M | SE53 | 1139 | M |
| SE531139R | SE53 | 1139 | R |
| SE531140M | SE53 | 1140 | M |
| SE531140R | SE53 | 1140 | R |
| SE531140S | SE53 | 1140 | S |
| SE531140U | SE53 | 1140 | U |
| SE531140V | SE53 | 1140 | V |

*Table 1. Blocks comprising partial reduction area.*

***Acknowledgement and Warranty***

*1. Subject to 2, the tenure holder acknowledges that this report, including the material, information and data incorporated in it, has been made under the direction or control of the Northern Territory (the State) within the meaning of section 176 of the Copyright Act 1968 (Cwth).*

*2. To the extent that copyright in any material included in this Report is not owned by the State, the tenure holder warrants that it has the full legal right and authority to grant, and does hereby grant, to the Territory, subject to any confidentiality obligation undertaken by the Territory, the right to do (including to authorise any other person to do) any act in the copyright, including to:*

- *use;*
- *reproduce;*
- *publish; and*
- *Communicate in electronic form to the public, such material, including any data and information included in the material.*

*3. Without limiting the scope of 1 and 2 above, the tenure holder warrants that all authorisations and consents have been obtained for all acts referred to in 1 and 2 above, to ensure that the doing of any of the acts is not unauthorised within the meaning of Section 29(6) of the Copyright Act (Cwth).*