# BROADMERE PROJECT

# EL32721

# PARTIAL SURRENDER REPORT

## EL32721: 03 May 2022 to 29 April 2025

**1:250,000 SHEETS: Bauhinia Downs**

**Title Holder: Baudin Resources Pty Ltd**

**(100% owned subsidiary of Encounter Resources Ltd)**

**Target Commodities: Copper, Zinc, Lead**

**Compiled by: Vincent Crombez**

**Date: May 2025**

## Abstract / Summary

The Broadmere Project is located approximately 830km southeast of Darwin, and approximately 600km North-northeast of Tennant Creek.

Exploration tenement EL32721 was granted to Baudin Resources Pty Ltd (a fully owned subsidiary of Encounter Resources Ltd – "Encounter") on 3 May 2022 for a period of six years. The tenement will currently expire on 2 May 2028.

The Broadmere Project area structurally sits within the Southern McArthur Basin. The tenure covers areas along the eastern edge of the Beetaloo Sub-basin, the informal Broadmere depocenter and the Mallapunyah Fault Zone.

The Broadmere tenure is considered prospective for sedimentary hosted copper, zinc and lead mineral systems.

Encounter completed a review of the Broadmere project tenure in June 2024 and decided to surrender blocks with lower prospectivity and where targets were below explorable depths.

Since its grant date, the following work has been completed within the surrendered part of EL32721:

- Desktop geophysical review – Interpretation of the historical seismic lines over the project area and integration with available geological and other geophysical datasets.

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# 1. Introduction

Exploration tenement EL32721 Broadmere is located approximately 830km southeast of Darwin, and approximately 600km North-northeast of Tennant Creek (Figure 1). Tenement EL32721 is on the Bauhinia Downs 1:250,000 scale NTGS geological map sheet. It was granted to Baudin Resources Pty Ltd (a fully owned subsidiary of Encounter Resources Ltd – "Encounter") on 3 May 2022 for a period of six years. The tenement will currently expire on 02 May 2028.

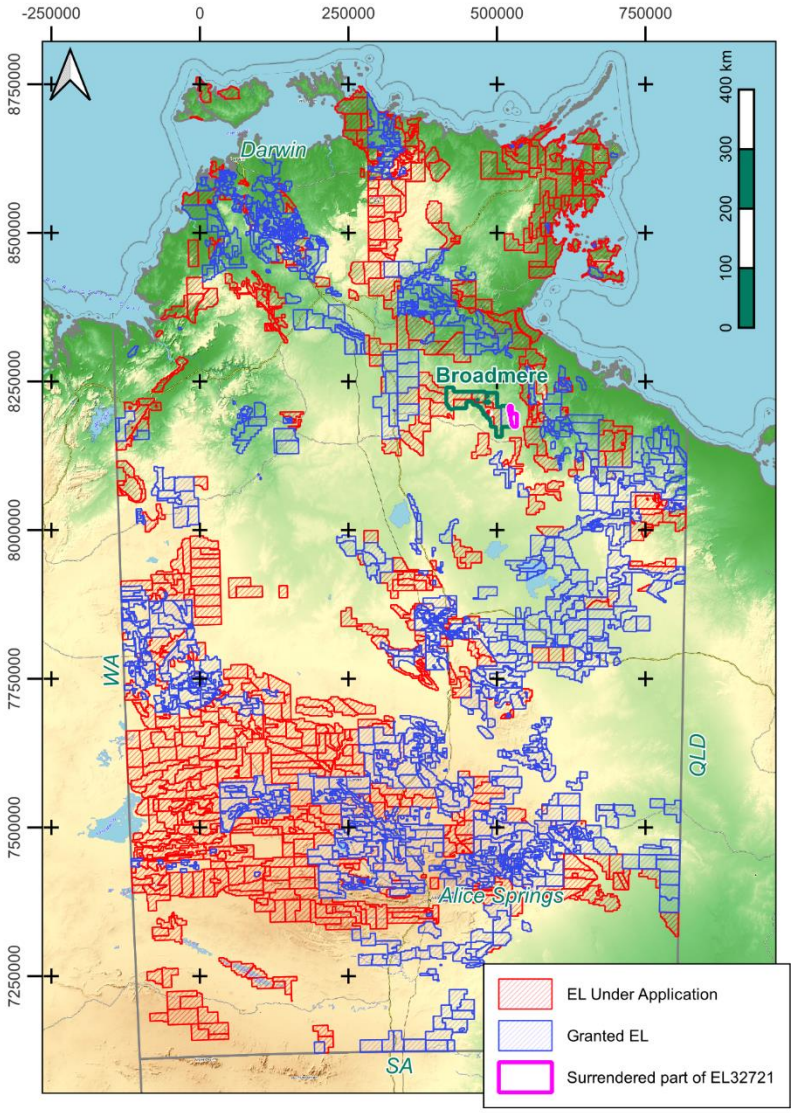


**Figure 1: Broadmere Project location with location of the surrendered part of EL32721.**

The Broadmere project tenure is considered prospective for sedimentary hosted copper, zinc and lead mineral systems. Encounter completed a review of the Broadmere project tenure in June 2024 and decided to surrender blocks with lower prospectivity and where targets were below explorable depths.

Since its grant date, the following work has been completed within the surrendered part of EL32721:

- Desktop geophysical review – Interpretation of the historical seismic lines over the project area and integration with available geological and other geophysical datasets.

## 2. Location, physiography and access

The Broadmere Project tenure is located approximately 830km southeast of Darwin, approximately 600km North-northeast of Tennant Creek, and 240km east of Daly Waters (Figure 1).

Access from Darwin and Katherine is excellent via the sealed Stuart Highway, then left onto the Carpentaria Highway and then left on the Broadmere Station Access Road. Internal access is via a network of station tracks.

The Broadmere project area lies on the Broadmere and Tanumbirini pastoral lands.

The climate in the Broadmere area is semi-arid, sub-desert and is characterized by wet and dry seasons with most of the rain falling between November and March. The landscape comprises flat sandy plains and low-level hills.

## 3. Leasing Summary

Currently, the Broadmere project comprises mineral exploration tenement EL32721 (Table 1). Baudin Resources Pty Ltd has also applied for five tenements to be added to the Project tenure. These are EL32937, EL32938, EL33617, EL33720 and EL33915 applications for which is under consideration by the Authority at the time of writing of this report. Application for EL33616 was withdrawn by Baudin Resources in Q4 2024.

Tenement EL32721 is on the Bauhinia Downs 1:250,000 scale NTGS geological map sheet. The ELs under application extend over to the Tanumbirini and Hodgson Downs 1:250,000 scale NTGS geological map sheets (Figure 2).

**Table 1: Exploration licenses in the Broadmere Project**

| Title | Grant date | Number of blocs | Number of blocs surrendered | Retained number of blocks | Partial surrender date | Expiry Date |
|---|---|---|---|---|---|---|
| EL32721 | 03/05/2022 | 250 | 87 | 163 | 29/04/2025 | 02/05/2028 |
| EL32937 | Application | 250 | | | | |
| EL32938 | Application | 230 | | | | |
| EL33617 | Application | 118 | | | | |
| EL33720 | Application | 250 | | | | |
| EL33915 | Application | 114 | | | | |
| EL33616 | Withdrawn | | | | | |

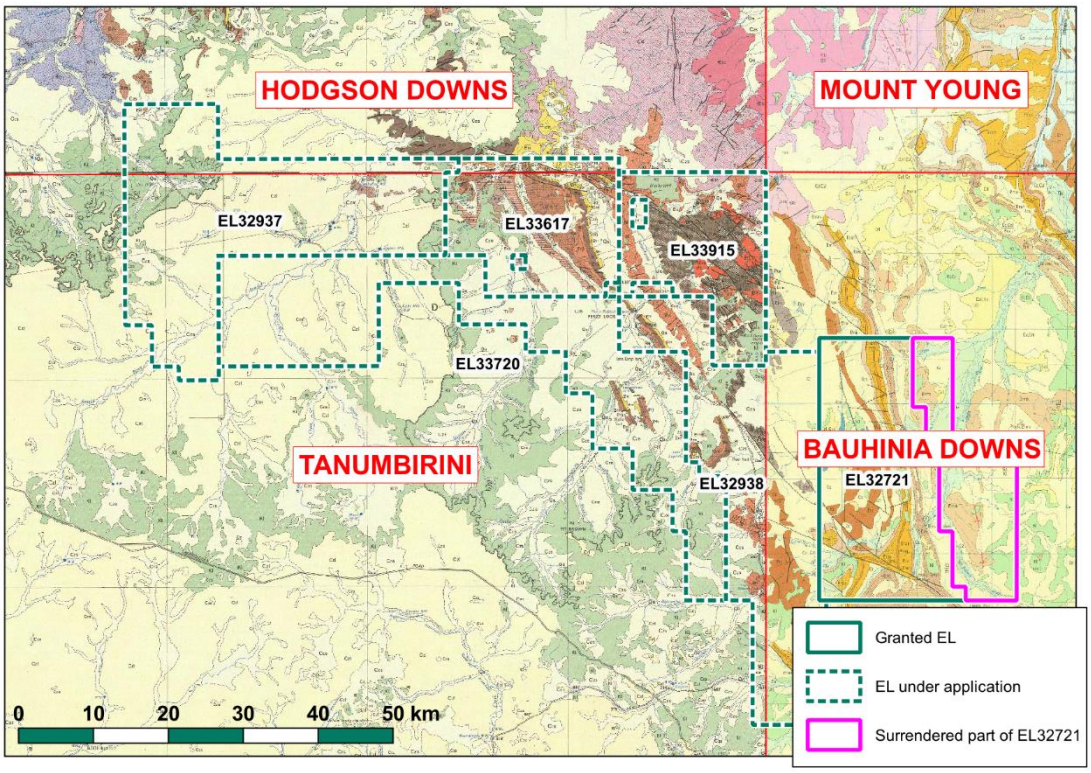


**Figure 2: Broadmere Project - Encounter Tenure**
**(background surface geology from 1:250K geological map sheets).**

# 4. Geological setting

The Broadmere Project area structurally sits within the Southern McArthur Basin.

## *4.1. McArthur Basin*

The McArthur Basin is a Paleo to Mesoproterozoic basin, which extends over approximately 180,000 square kilometres across north-eastern Northern Territory. The Basin comprises of a predominantly marine succession of non-metamorphosed sediments interpreted to be up to 10 kilometres thick within the depocenters.

The McArthur Basin overlies the Pine Creek Orogen, Murphy Province and Arnhem Province, and underlies the Phanerozoic sediments of the Georgina, Carpentaria and Arafura Basins.

The Southern McArthur Basin is dominated by a number of large-scale fault zones that have influenced deformation and sedimentation throughout Basin's evolution. The McArthur Basin comprises a number of depocenters, the most prominent of which is the Beetaloo Sub-basin (Figure 3).

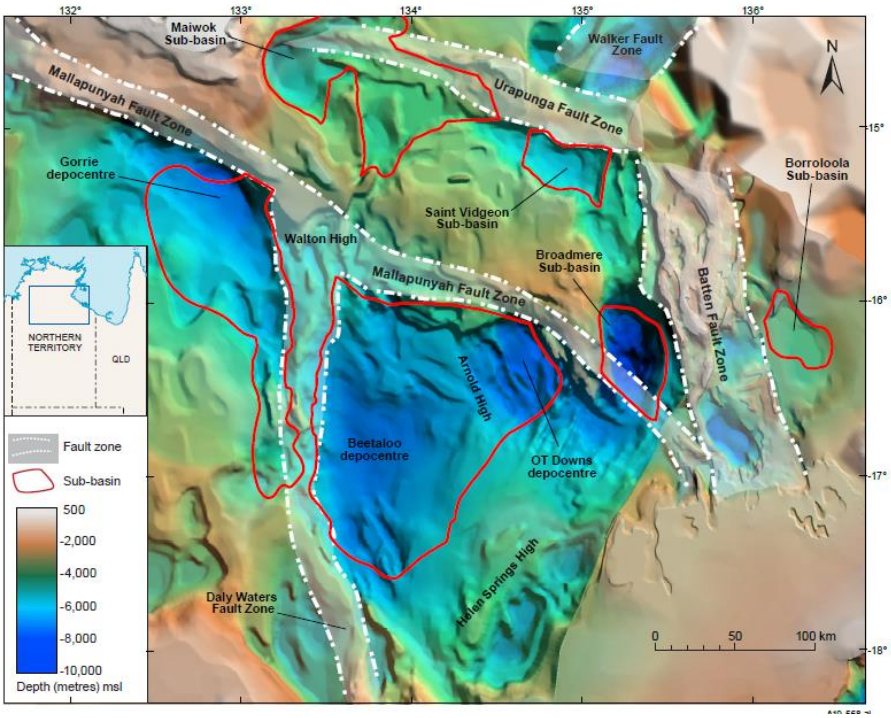


**Figure 3: Location of the Beetaloo Sub-basin and other informal depocenters in the Southern McArthur Basin (Williams. 2019).**

### *4.2. Beetaloo Sub-basin*

The Beetaloo Sub-basin is a composite depocenter divided by the Daly Water Fault Zone (DWFZ), that separates the sub-basin into two distinct areas (Figure 3). The compartment west of the DWFZ is informally named the Gorrie depocenter. The compartment to the east is subdivided by the less prominent Arnold High into the Beetaloo and OT Downs depocenters.

The Beetaloo sub-basin contains an interpreted succession of sedimentary and minor volcanic rocks, up to 9000m thick in the depocenter. The rocks are assigned to a number of stratigraphic groups or their equivalents - the Paleoproterozoic Tawallah and McArthur groups, and the Mesoproterozoic Nathan and Roper groups (Figure 4). The Roper Group is of considerable economic interest as it is a potential host for unconventional and conventional petroleum resources, as well as for sediment hosted base metal mineral systems.

The Broadmere Project tenure covers areas of the eastern edge of the Beetaloo Sub-basin, the informal Broadmere depocenter and the Mallapunyah Fault Zone (Figure 5).

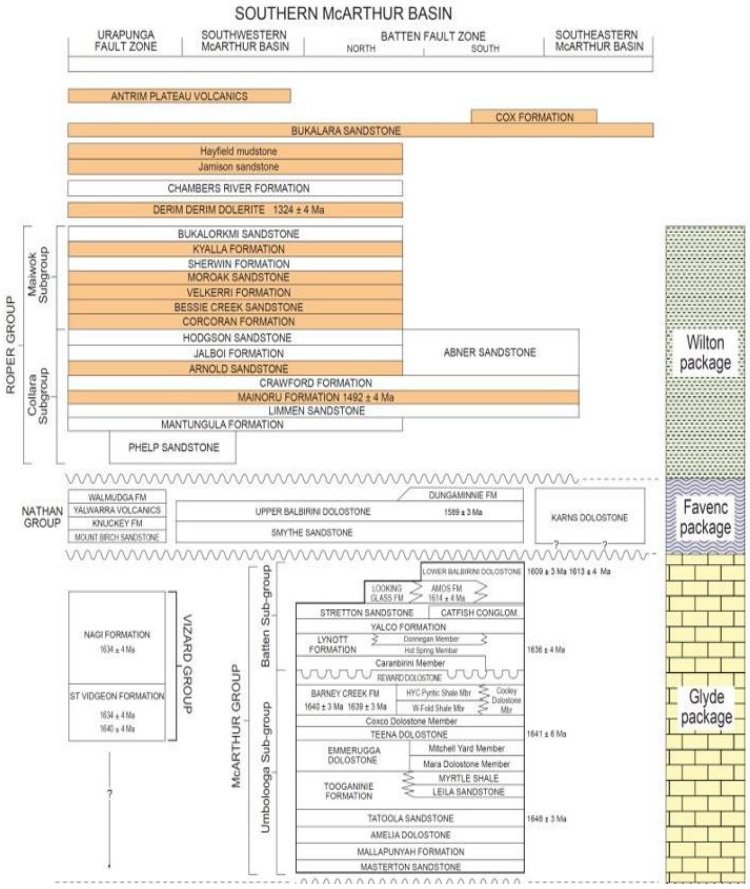


**Figure 4: Stratigraphy of the McArthur Basin (Williams, 2019)**

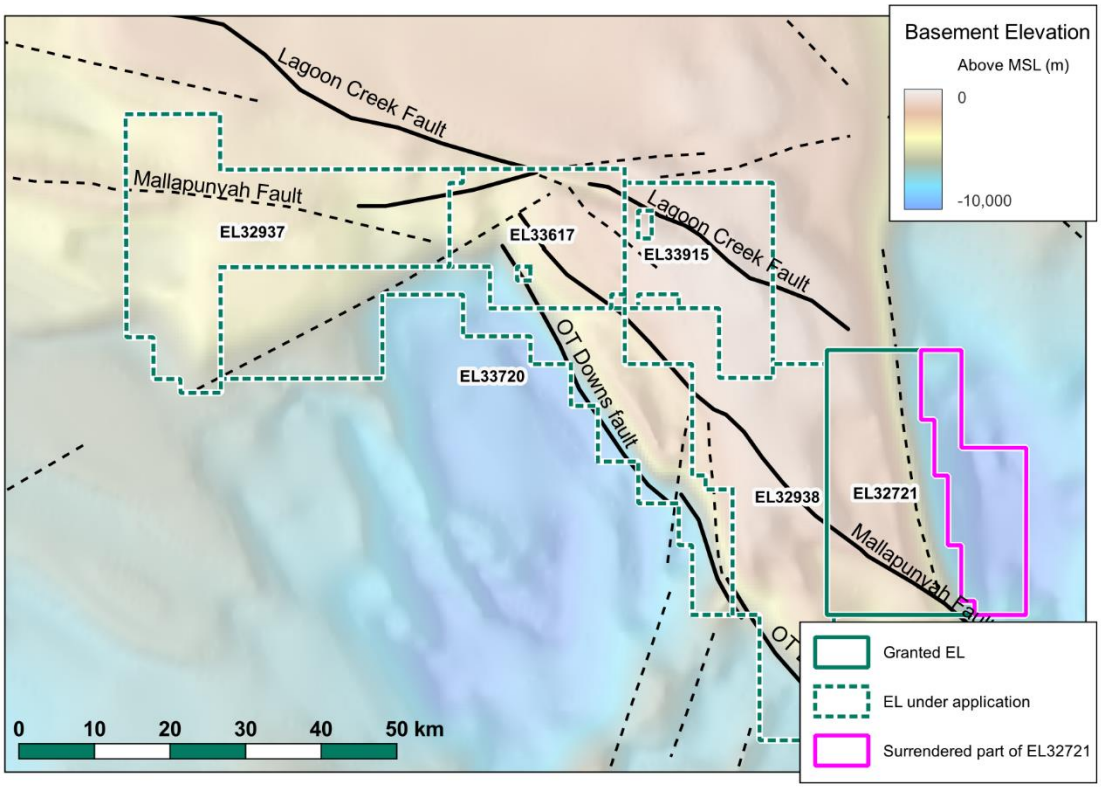


**Figure 5: Location of Broadmere tenure with major depocenters and fault zones. (SEEBASE depth-to-basement background from Geognostics, 2021).**

## 5. Partial relinquishment details for EL32721

A total of 87 blocks were surrendered for EL32721 on the 29 April 2025. The blocks are located in the eastern part of the tenement (Figure 6).

Exploration activities since the grant of the tenement included:

- Desktop geophysical review – Interpretation of the historical seismic lines over the project area and integration with available geological and other geophysical datasets.

A recent desktop review of the tenement did not highlight significant targets within explorable depth in part of the exploration licence. This significantly diminished the prospectivity of this area. Subsequently, a decision was made to surrender these blocs.


**Figure 6: EL32721 partial surrender area (in red)**

### *5.1. Desktop geophysical reviews*

Review of regional dataset in the vicinity of the Broadmere project resulted in the identification of two target intervals for sediment hosted mineral systems: the Maiwok Sub-group containing the Velkerri Formation; and the older Collara Sub-group.

Interpretation of the legacy seismic data over the Broadmere sub-basin did not highlight significant targets within explorable depth in the Maiwok subgroup in the eastern part of EL32721, with the base of the Velkerri Formation being observed below 1000m depth (Figure 7).

Integration of the historical seismic data with geological 1:250k geological maps suggest the wide extent of the Collara Sub-group over the western part of EL32721, in areas that could be intersected by regional structures (e.g. Mallapunyah Fault and Lagoon Creek Fault).

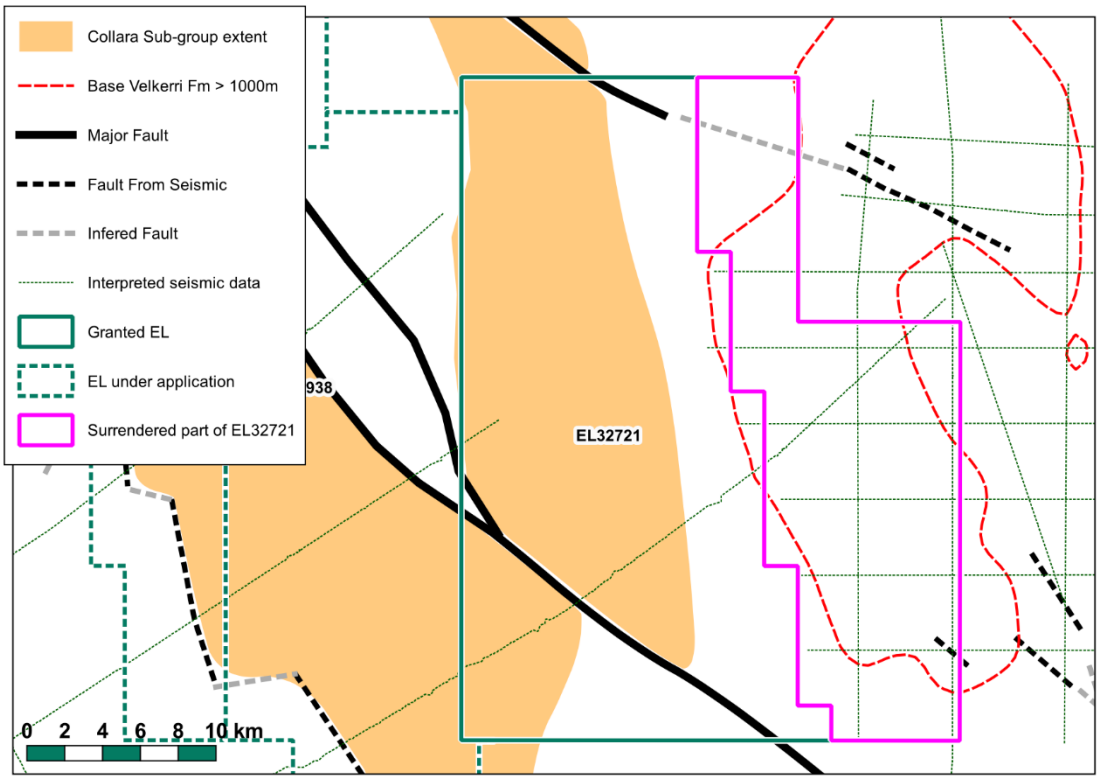


**Figure 7: Results from integration of historical seismic data with available geological and geophysical datasets. Note that the depth to the base of Velkerri was calculated from time (s TWT) to depth (m) with a single interval velocity.**

## 6. Conclusions

By surrendering areas on EL32721, Encounter is aiming at focussing its exploration activities on the most prospective part of the project areas. Indeed, the company is encouraged by its recent review of the seismic data available on the entire project area.

## 7. References

Geognostics, 2021. OZ SEEBASE® 2021 (March). Geognostics Australia Pty Ltd.

Williams B, 2019. Definition of the Beetaloo Sub-basin. Northern Territory Geological Survey, Record 2019-01.

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