

Cerberus Resources Pty Ltd

EL32181 Lamont Pass Project

Partial surrender report for the period:
30 July 2021 to 29 July 2023

Target Commodities: Base Metals, Gold, Silver

Bauhinia Downs SE5303 (1:250,000)
Glyde 6164 (1:100,000)

Prepared by Cerberus Resources Pty Ltd
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Abstract

- EL32181 (Project) is located approximately 75km SSW of Borroloola.
- Cerberus is assessing the potential of the Project for hydrothermal Pb-Zn-Cu SEDEX and associated deposit styles.
- Previous exploration and mineral development activities in the Project area have highlighted several geological and geophysical anomalies.
- A total of 85 sub-blocks were relinquished from the Project during 2023, leaving 36 retained sub-blocks.
- Work on the relinquished blocks involved reviews of previous exploration activities and assessment of publicly available remote sensing and geophysical datasets. Geological reconnaissance was undertaken to field check geological interpretations and to assess geophysical anomalies.

Contents

	<u>Page</u>
Abstract	2
1. Introduction	4
2. Tenure	4
3. Geology	4
4. Exploration History	9
5. Summary of work undertaken	9
6. Conclusion and recommendations	10
7. Confidentiality Statement	10
8. References	11

1. Introduction

EL32181 (Project) is located ~75km SSW of Borroloola (Figure 1). The Project is located on the McArthur River and Spring Creek Stations.

Access to the Project areas from the McArthur River Mine is via the Carpentaria Highway, and then minor roads and exploration tracks.

All maps in this report are shown using the GDA94 Geographic datum or in MGA94 using the Zone 53 projection.

2. Tenure

EL32181 was granted for a 6-year period commencing on 30 July 2021, and covers 121 sub-blocks (~397.9km²). The Project comprises three separate blocks.

A total of 85 sub-blocks were relinquished from the Project at the end of Year 2, leaving 36 active sub-blocks (Figure 2; Attachments 1 and 2).

3. Geology

The Project is situated near the world-class McArthur River (HYC) Pb-Zn-Ag Deposit, as well as several other significant base-metal deposits/ prospects such as at Teena, Myrtle, Amelia, Larra Keyah, Squib, Cooks and Cox (Coxco).

The Project area lies within the Palaeo- to Mesoproterozoic McArthur Basin, part of the NW-SE trending Carpentaria Zinc Belt, which extends from Mount Isa to Arnhem Land. The McArthur Basin contains a 5km to 10km thick package of mostly unmetamorphosed sedimentary and volcanic rocks deposited between ~1800Ma and 1575Ma, and unconformably overlies 1890Ma to 1820Ma metamorphosed and deformed igneous basement rocks of the Pine Creek and Arnhem Provinces. Palaeozoic and younger sedimentary sequences of the Georgina, Arafura and Carpentaria Basins unconformably overlie the McArthur Basin rocks.

A deep seismic reflection survey (Rawlings et al. 2004) showed the entire succession is essentially horizontal, with a thickness of ~8km that shows no significant variation either side of the Walker and Batten Fault Zones.

The presence of a world-class deposit of Pb-Zn-Ag mineralisation at HYC was first indicated by the discovery in 1955 of a small outcrop of jasper containing hemimorphite. The deposit was subsequently delineated with drilling, but due to the fine-grained nature of the sulphides that precluded adequate metallurgical recovery, was not immediately developed. After extensive metallurgical testing, mining started in 1995.

The HYC deposit is located immediately west of the Emu Shear Zone on the eastern margin of the Batten Fault Zone (Ahmad et al., 2013). Mineralisation is hosted by the HYC Pyritic Shale Member lithofacies of the ~1640Ma Barney Creek Formation. The immediate host sequence is interpreted to have been deposited within a tectonically induced sub-basin.

Many researchers (see summaries in Large et al., 2001 and Ireland et al., 2004) have concluded that the HYC mineralisation was emplaced at the sediment-water interface from a stratified brine pool that developed in the deepest part of a fault-controlled sub-basin adjacent to the Emu Fault Corridor. Hydrothermal fluids are inferred to have entered the brine pool as a series of pulses related to seismic activity along growth faults.

The general Project area extends across the southern portions of the Emu Fault Zone, and is interpreted to cover several sub-basins containing units of the BCF under Cambrian Cover. The breccia-hosted Coxco – Larra Keyah – Amelia trend passes under the cover into the northern portion of the Project (Figure 3).

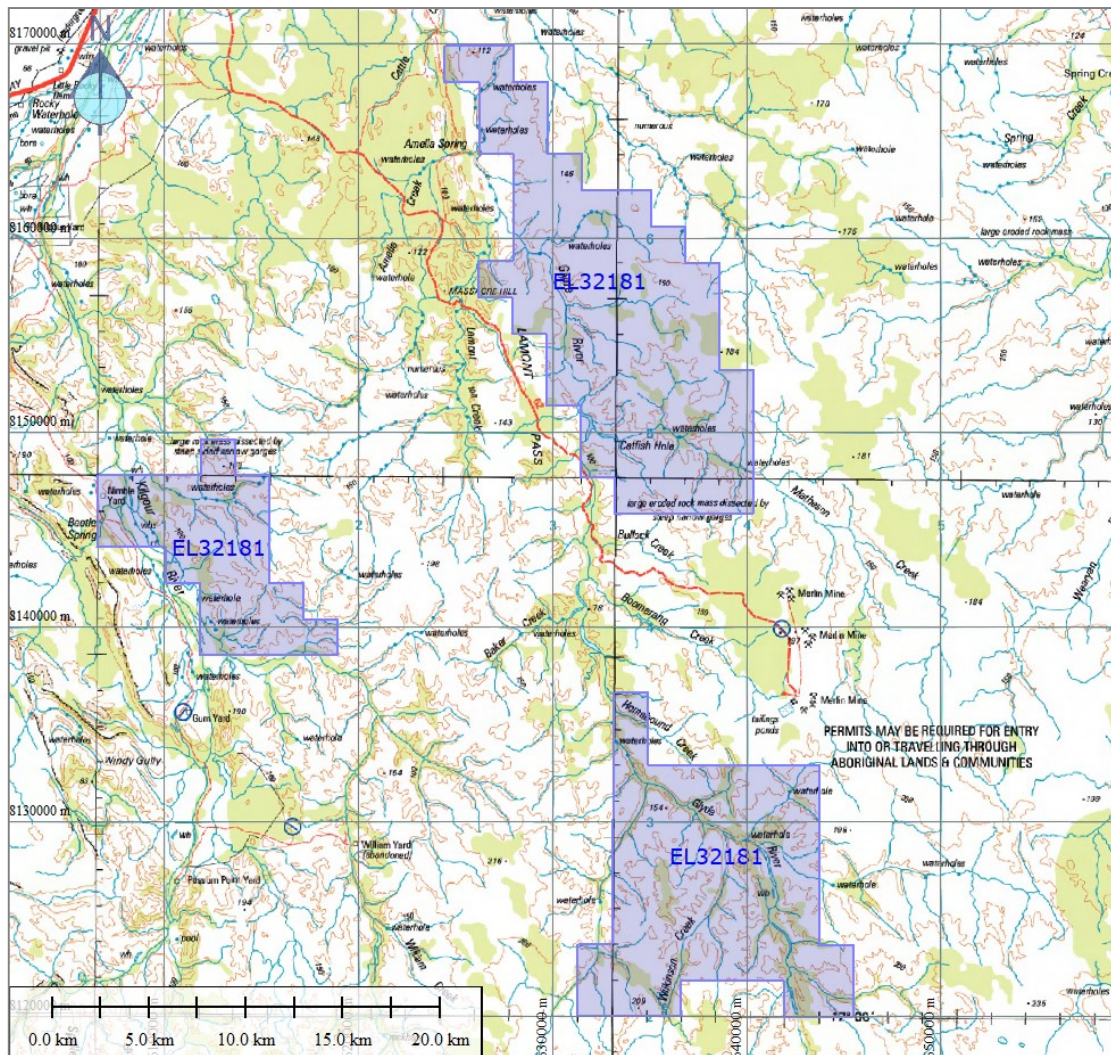


Figure 1: Location map (MGA94 Zone 53).

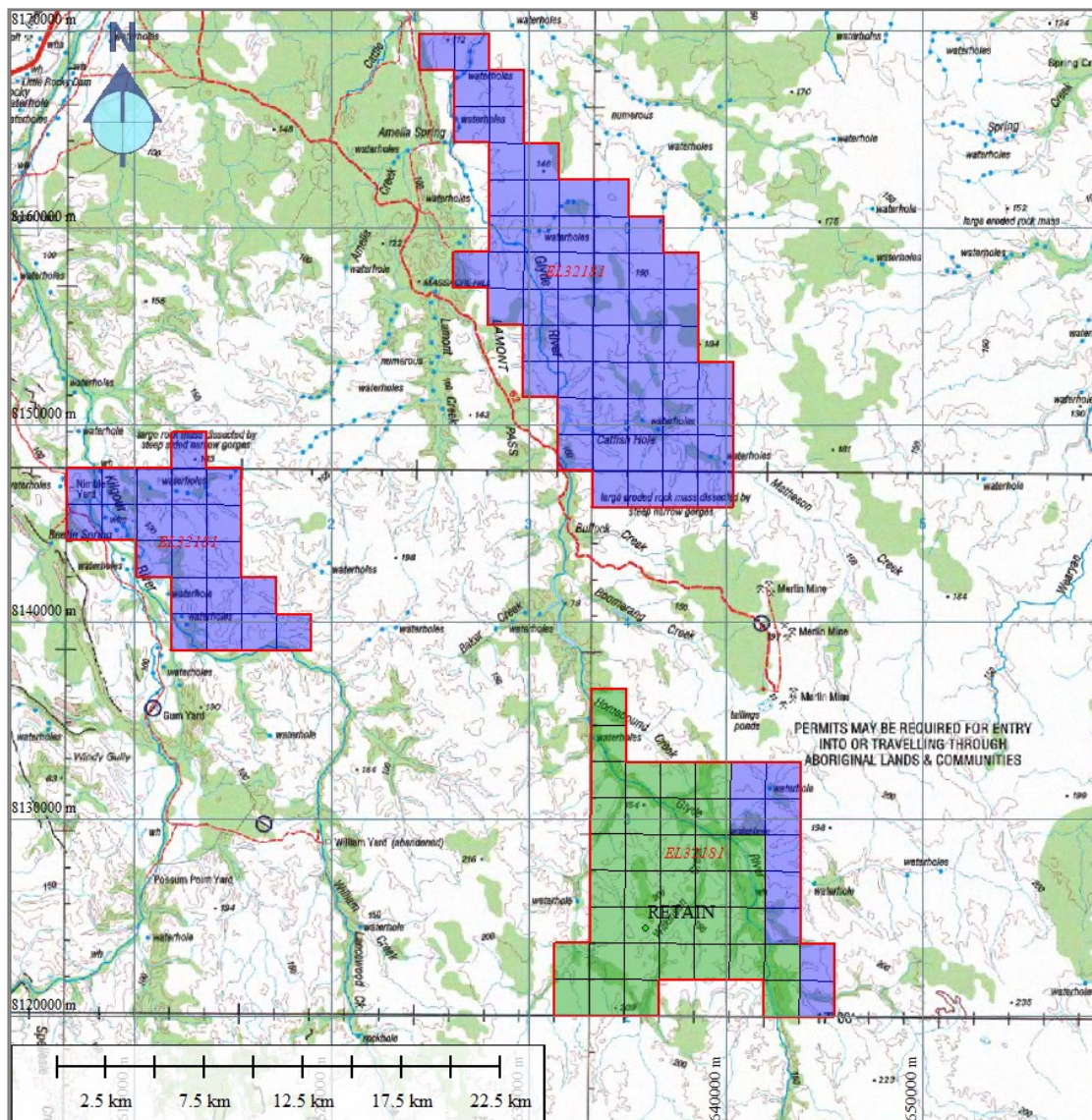


Figure 2: Tenement map showing retained (green) and relinquished sub-blocks (purple; MGA94 Zone 53).

4. Exploration history

The area within and surrounding the Project has previously been explored by a number of companies including Armour Energy Limited / Ripple Resources, MMG, Sandfire, Pacifico, Rox, TNG/Todd River, Glencore and Marindi Metals.

Previous work included mapping, stream sediment, soil and rock chip sampling, ground and airborne magnetic and electromagnetic surveys, but little drilling. The area has also been the subject major research projects by the NT Geological Survey in-conjunction with CSIRO and universities (excellent GIS packages dealing with the McArthur Basin (DIP12, DIP15, PhD by Jamie Rogers, CODES 1996 etc).

In 2012-13, Armour Energy Limited and Ripple Resources Pty Ltd undertook a high-resolution FALCON AGG and magnetic survey across the southern extensions of the Emu Fault Zone under shallow Cambrian cover (PR2013-0005).

During 2014, Armour Energy and Ripple Resources completed a 1,275m vertical drill hole (LP3) into a ~4km long, north-striking AGG gravity anomaly adjacent to the Emu Fault (CR2017-265/279). LP3 is located near the southern end of the northern block of EL32181.

5. Summary of work undertaken

The relinquished area is sparsely drilled, so interpretations of the target bedrock geology rely heavily on the interpretation of geophysical datasets, and understanding of basement features from better drilled areas near the Project.

The following desk-top review work was undertaken on the relinquished sub-blocks:

- Reviewed open-file company reports and other public domain documents (ASX announcements, company annual reports and presentations) and geological papers outlining historical exploration activities.
- Assessment of publicly available geophysical, Landsat, SPOT, ASTER and SRTM/GDEM data over the region.
- Assessment of potential mineralisation features and exploration targets.

Geological reconnaissance was undertaken to field check geological interpretations and to assess geophysical anomalies.

6. Conclusion and recommendations

The potential for the Project area to contain Cu-Pb-Zn mineralisation appears to be reasonable, however, exploration in the relinquished areas is going to be challenging because of access difficulties and because the main target Barney Creek Formation lies under cover sequences.

7. Confidentiality Statement

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8. References

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