

Cerberus Resources Pty Ltd

EL31692 Leila Creek Project

Partial surrender report for the period:
21 September 2018 to 21 September 2022

Target Commodities: Base Metals, Gold, Silver

Bauhinia Downs SE5303 (1:250,000)
Batten 6065 and Mallapunyah 6064 (1:100,000)

Prepared by Cerberus Resources Pty Ltd
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Abstract

- EL31692 (Project) is located approximately 75km SW of Borroloola.
- Cerberus is assessing the potential of the Project for Stratiform, sediment-hosted Pb-Zn-Ag (+/- Cu) deposits.
- Previous exploration and mineral development activities in the Project area have highlighted several geological and geophysical anomalies.
- A total of 22 sub-blocks were relinquished from the Project during 2022, leaving 9 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.
- This work suggested that the relinquished blocks have low potential to host economic mineralisation at reasonable mining depths, and no further work is recommended

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1. Introduction

EL31692 (Project) is located in two separate parts ~75km SW of Borroloola (Figure 1). The Project is located on the McArthur River Station (NT Portion 4317 - Perpetual Crown Lease). Access to the Project areas from the McArthur River Mine is via the Carpentaria Highway, and then minor roads and tracks heading to Bessie Springs and Leila Creek. All maps in this report are shown using the GDA94 Geographic datum or in MGA94 using the Zone 53 projection.

2. Tenure

EL31692 was granted for a 6-year period commencing on 21 September 2018, and originally covered 31 sub-blocks, in two separate parts because the central portion of the original application was lost to a competitor (Figure 2; Table 1).

A total of 22 sub-blocks were relinquished from the southern portion of the Project area during 2022, leaving 9 retained sub-blocks (Figure 3; Table 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.

Within the Project area, the formations of prime interest for hosting mineralisation are the Barney Creek Formation, and also the Donnegan and Hot Springs Members. There are significant areas comprised of Roper Group and the Nathan Group sediments, which overlie the target McArthur Group rocks.

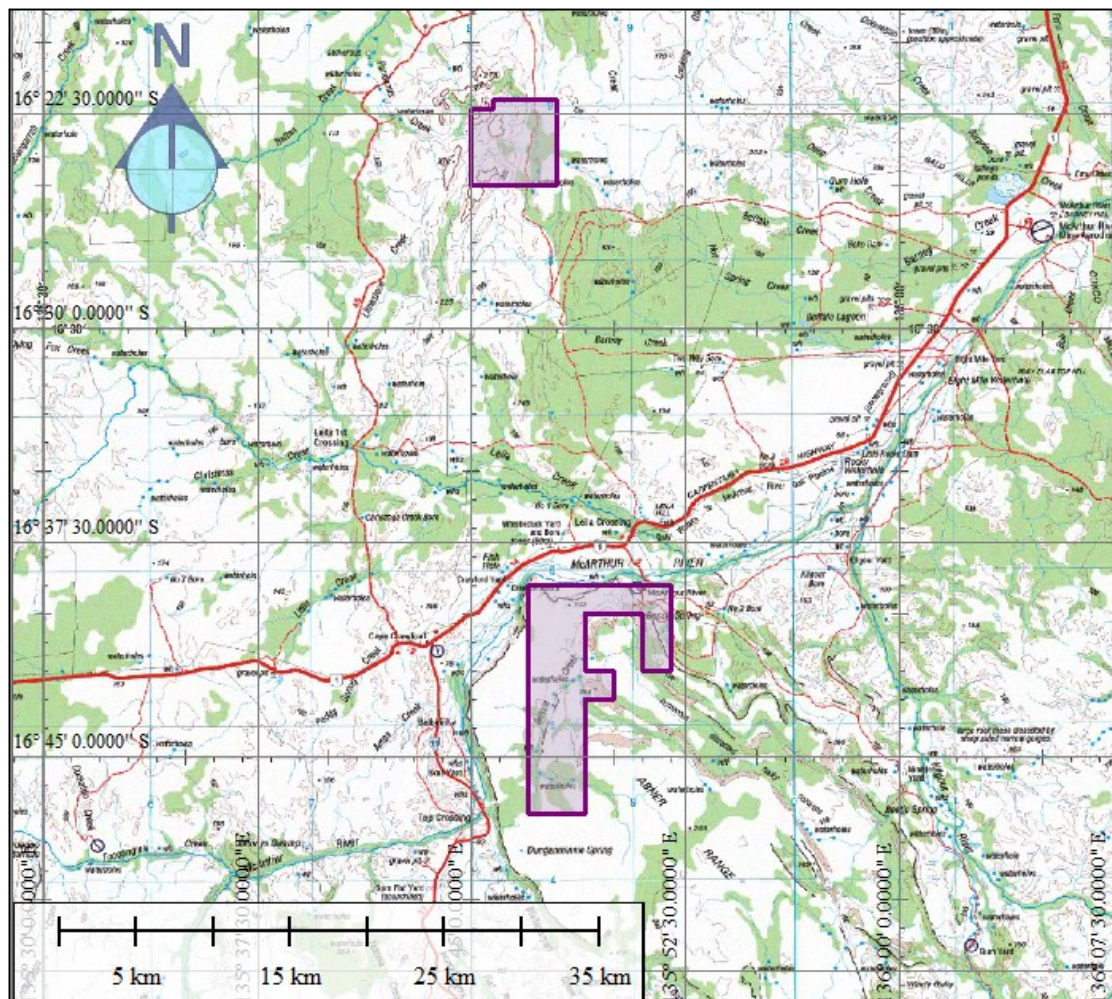


Figure 1: Location map (GDA94 Geographic).

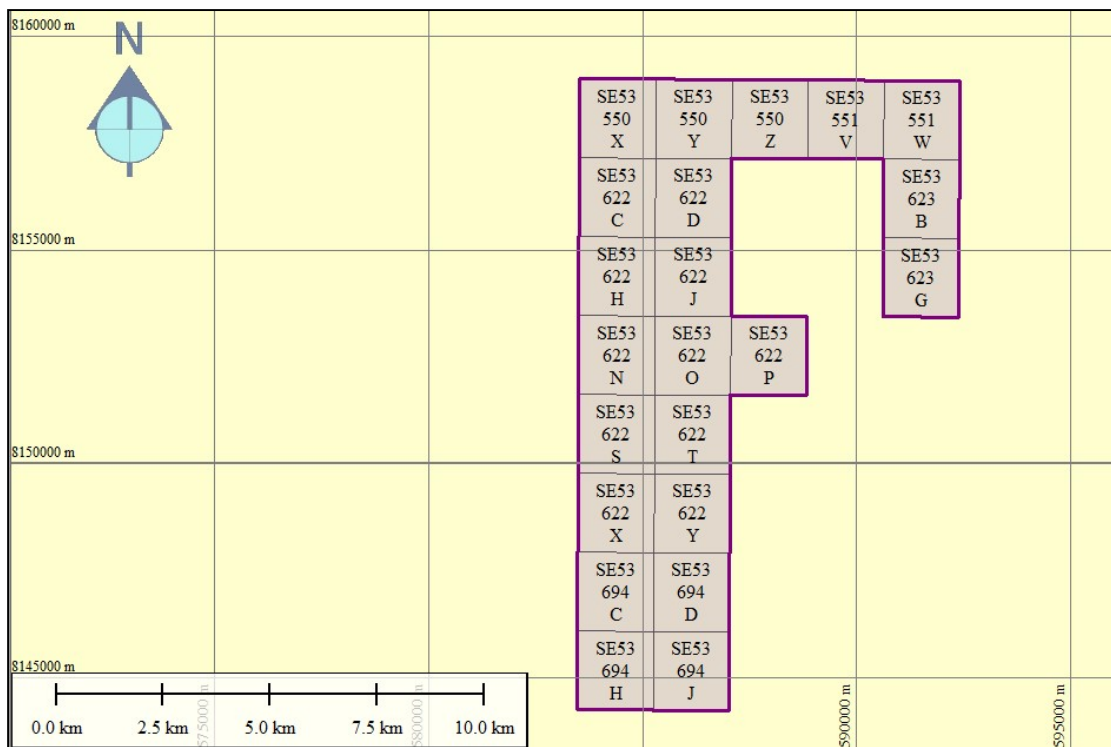
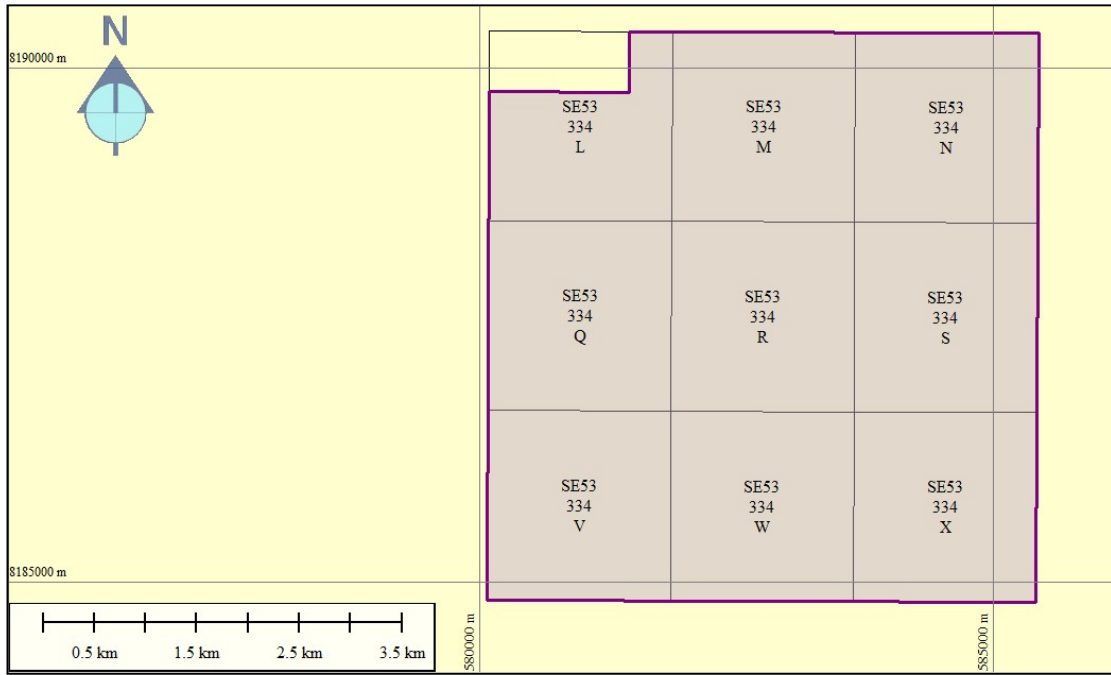


Figure 2: Tenement map (MGA94 Zone 53).

Table 1: Sub-Block List

BLOCK	GRID_ID	BIM	SUB_BLOCK
334	SE53334V	SE53	V
334	SE53334W	SE53	W
334	SE53334X	SE53	X
334	SE53334Q	SE53	Q
334	SE53334R	SE53	R
334	SE53334S	SE53	S
334	SE53334L	SE53	L
334	SE53334M	SE53	M
334	SE53334N	SE53	N
550	SE53550X	SE53	X
550	SE53550Y	SE53	Y
550	SE53550Z	SE53	Z
551	SE53551V	SE53	V
551	SE53551W	SE53	W
622	SE53622C	SE53	C
622	SE53622D	SE53	D
623	SE53623B	SE53	B
694	SE53694C	SE53	C
694	SE53694D	SE53	D
622	SE53622X	SE53	X
622	SE53622Y	SE53	Y
622	SE53622S	SE53	S
622	SE53622T	SE53	T
694	SE53694H	SE53	H
694	SE53694J	SE53	J
622	SE53622H	SE53	H
622	SE53622J	SE53	J
623	SE53623G	SE53	G
622	SE53622N	SE53	N
622	SE53622O	SE53	O
622	SE53622P	SE53	P

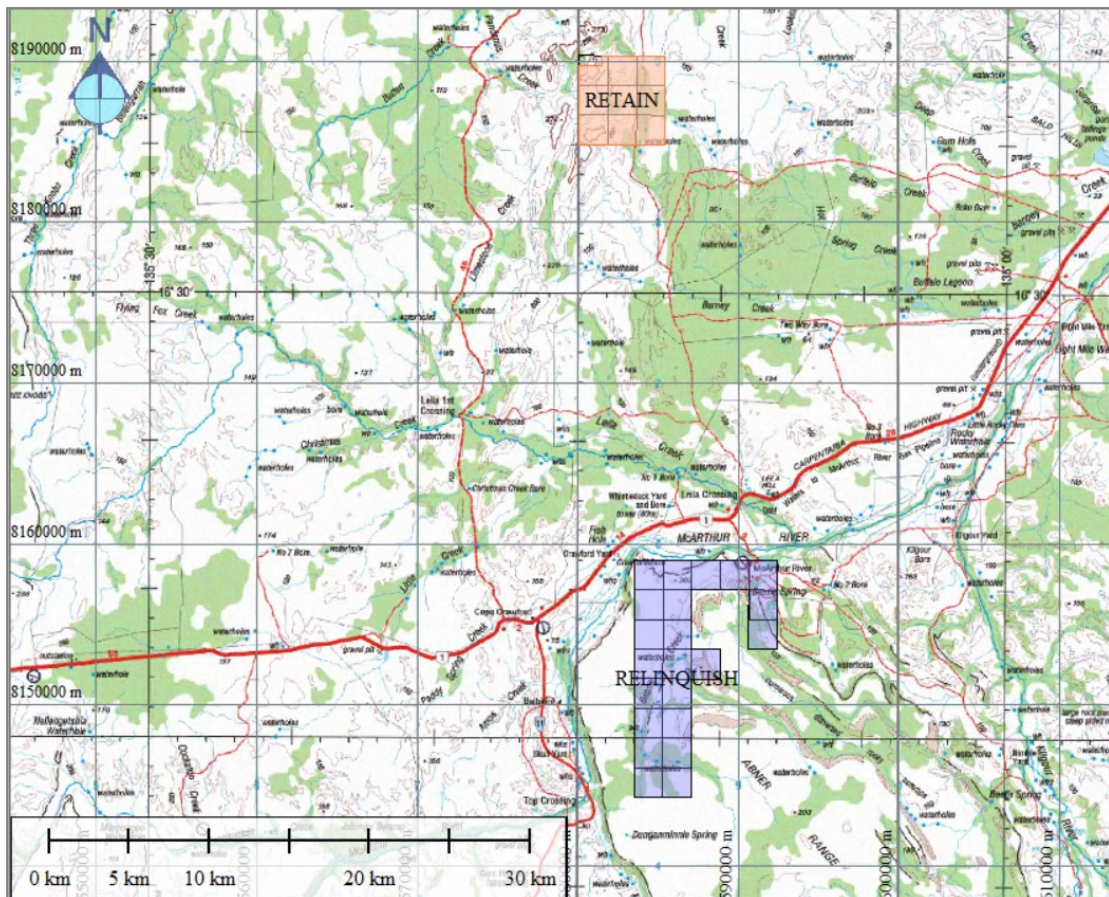


Figure 3: Tenement map showing retained sub-blocks on 21 September 2022 (orange shading). Relinquished blocks shown in purple shading. (MGA94 Zone 53).

Table 2: List of relinquished sub-blocks on 21 September 2022.

BLOCK	GRID_ID	BIM	SUB_BLOCK	UNIQ_ID
550	SE53550X	SE53	X	84468
550	SE53550Y	SE53	Y	84469
550	SE53550Z	SE53	Z	84470
551	SE53551V	SE53	V	84471
551	SE53551W	SE53	W	84472
622	SE53622C	SE53	C	84828
622	SE53622D	SE53	D	84829
623	SE53623B	SE53	B	84832
694	SE53694C	SE53	C	86628
694	SE53694D	SE53	D	86629
622	SE53622X	SE53	X	86268
622	SE53622Y	SE53	Y	86269
622	SE53622S	SE53	S	85908
622	SE53622T	SE53	T	85909
694	SE53694H	SE53	H	86988
694	SE53694J	SE53	J	86989
622	SE53622H	SE53	H	85188
622	SE53622J	SE53	J	85189
623	SE53623G	SE53	G	85192
622	SE53622N	SE53	N	85548
622	SE53622O	SE53	O	85549
622	SE53622P	SE53	P	85550

4. Exploration history

Previous exploration in the general area of the Project has included stream sediment sampling, minor soil and rock chip sampling, mapping, structural analysis, geophysical surveys (including AEM), and only minor drilling.

The ground was most recently held by Ripple Resources Pty Ltd under EL30080 and EL30074. Ripple did not undertake much ground work, due to the depth of the prospective target horizons, as deduced from 3D basin analysis modelling by FrogTech (see CR2015-376; CR2016-327; CR2016-484; CR2017-279).

5. Summary of work undertaken

The 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 near surface geology of the topographically elevated southern portion of the Project is dominated by folded units of the Roper and Nathan Groups. Base metal exploration within this area is challenging, because the main target Barney Creek Depositional Cycle lies at significant depth.

The review suggested that the relinquished sub-blocks have low potential to host economic mineralisation at reasonable mining depths, and no further work is recommended.

7. Confidentiality Statement

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8. References

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