

TITLE HOLDER: XAVIER RESOURCES PTY LTD

OPERATOR: RESOLUTION MINERALS LTD



EL 28886 Annual and Final Report for the period
15/02/2019 to 18/12/2019

February 2020

Target Commodities: Li, Co, REE, Cu, Au
Mapsheets 100K: Utopia (5853)
Mapsheets 250K: ALCOOTA (SF5310)

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Abstract

EL 28886 was surrendered by Xavier Resources Pty. Ltd., a subsidiary company of RESOLUTION MINERALS Limited in December 2019. Although no on-ground work was completed on EL 28886, a desktop review indicated the tenement was low priority relative to adjacent tenure and for this reason Resolution Minerals Ltd could not justify any further work on the tenement.

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1 Introduction

EL 28886 was surrendered by Xavier Resources Pty. Ltd., a subsidiary company of Resolution Minerals Ltd in December 2019, based on recommendations from a tenement consolidation review. No on-ground work was completed during the reporting period.

1.1 Location & Access

EL 28886 is located in the Harts Range, central Australia approximately 175km north-east of Alice Springs. Access from Alice Springs is north via the Stuart Highway (70km), then east along the Plenty Highway (110km) then north along the Arapunya Road (70km) to McDonald Downs Station, then west along Mount Swan Road to Delmore Downs homestead (32km).

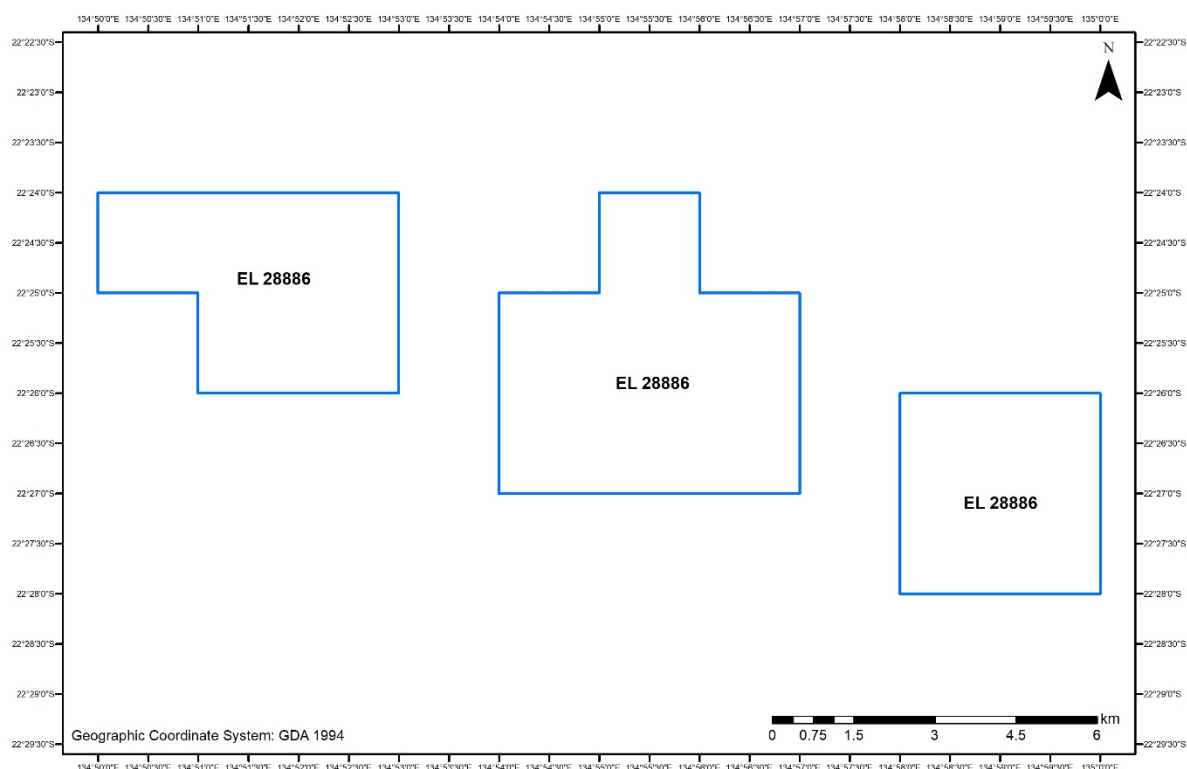


Figure 1: Location map for EL 28886

1.2 Regional Geology

The project area is located within the Palaeoproterozoic Aileron Province of the Arunta Region less than 5km south-west of the Neoproterozoic to Paleozoic Georgina Basin margin. The Arunta Region is a poly-deformed and metamorphosed basement terrain located along the southern margin of the North Australian Craton, which is unconformably overlain by the Ngalia, Amadeus, Murraba, Georgina and Eromanga Basins (Scrimgeour, 2003).

The Aileron Province is comprised of variably metamorphosed clastic sediments, meta-volcanic rocks, calc-silicate rocks, dolerite, mafic rock and granite and is prospective for metamorphosed VMS and carbonate replacement Pb-Zn-Cu, iron-oxide Cu-Au, orogenic Au, W(-Mo), Sn, mafic-hosted Ni-Cu, vermiculite, hydrothermal U, and apatite- and pegmatite-hosted REE-U(-P) (Scrimgeour, 2003).

The Georgina Basin is an intracratonic basin that was initiated as part of the Centralian Superbasin and contains sediments including dolostone, limestone, shale, sandstone and siltstone. The Georgina Basin

has known occurrences of sedimentary phosphate (e.g. Wonarah phosphate deposit), lead-zinc (along the southern margin) and there are also frequent oil shows throughout the basin (Dunster et. al., 2007).

1.3 Local Geology

EL 28886 is predominantly comprised of Palaeoproterozoic Aileron Province Reynold Range Group of the Arunta Region, with a significant component of granites and gneisses along the north-east portion of tenure and a lesser component of and Strangways Metamorphic Complex in the western most extent of the tenure. EL 28886 surface geology is characterized by transported regolith in the central portion of the tenure including, overbank and channel deposits on alluvial plains, floodplains, fans and swamps. The remainder of tenure is characterized by in-situ regolith, including variably weathered bedrock on erosional plains, rises, hills and plateau surfaces (STRIKE, 2018).

According to Mackie (2017) the license area is dominated by sheared west northwest trending, extensively cropping out upper greenschist facies Ledan Schist (1770Ma). The Ledan Schist is comprised of quartz-muscovite and/or biotite (andalusite) schists, which along with the conformably overlying Utopia Quartzite have undergone progressive deformation involving regional shearing-D1a, followed by folding - D1b, producing stretching lineation-L1b. F1b fold axes trend east-south to east.

The angular unconformity at the base of the Ledan Schist is locally resting on protolithic volcanoclastics of Delmore Metamorphics (1775Ma). These quartz cordierite and quartz anthophyllite rocks (assigned to upper Strangways Metamorphic Complex) are intensely deformed producing a strong mylonitic fabric and stretching lineation. The above Ledan package rocks (1770 - 1730Ma) are intruded by syntectonic plutons namely Ida and Mt Swan Granites (1730 - 1710Ma) in the south. These granites occur coincident with the west-north-west trending Delny - Mt Sainthill Fault zone, which transects the project area and an unnamed granite to the north (Mackie, 2017).

Ida and Mt Swan Granites are gneissic biotite granites, the latter displaying large (100mm) phenocrysts of aligned microcline. The northern faulted contact with unnamed granite is sharply defined on AMAG whereas Ida/Mt Swan Granite/Ledan package contact is more diffuse and strongly magnetic (magnetite-rich skarn?) (Mackie, 2017).

The Bundey River flows from central south to northeast across eastern license area forming recent fluvial deposits overlying remnants of Tertiary Waite Formation. Interestingly, the Perenti copper deposit - hosting shear zone (located 8km southeast of license area) trends west-north-west into and across license area (Mackie, 2017).

Recent research by NTGS (AGES 2013) of the Perenti drill core shows a broadly similar style of alteration as ILOGWA IOCG belt i.e. fluorite-hematite-chlorite-silica, which considerably upgrades the prospectivity for Cu-Au deposits within the project area (Mackie, 2017).

1.4 Previous Exploration

Historic exploration has focused on shear hosted copper, vein and sediment-type uranium, kimberlitic intrusions (diamonds), IOCGU (iron oxide copper gold uranium) and ISCG (iron sulphide copper gold) mineralisation.

Table 1: Previous Exploration Summary (adapted from Mackie, 2017)

Year	Company	Description
1970	CPM	Targeting the Perenti Cu prospect – IP survey, 3 diamond holes
1971	VAM Ltd	IP survey
	Kratos Uranium NL	Airborne radiometrics
1972	Asarco	Rock chip sampling
1973	Neptide Minerals	Rock chip sampling
1977	Otter Exploration NL	Airborne radiometrics, rock chip sampling

1983	WMC	Stream sediments
	CRAE	Ground magnetics, rock chips, soils and auger drilling
1989	Track Minerals Pty Ltd	Stream sediments and rock chips.
	CRAE	Gravel samples, stream sediments, loam samples.
2002	Tanami Gold NL	Rock chips
2003	Astro Mining NL	Diamond exploration?
2005	Tanami Gold NL	Rock chips
2009	Nupower Resources	Rock chips
2010	Toro Energy Ltd	SkyTEM

2 Work Completed

2.1 Geological Activities & Office Studies

A desktop review on tenure was completed during the reporting period. This enabled an assessment for future exploration activities across the entire Arunta Project, however the project ranked too low to justify further work.

3 Conclusion & Recommendations

No on-ground work was completed on EL 28886, due to exploration being focused on other higher priority projects. After completing a tenement consolidation review across all tenements, Resolution Minerals opted to relinquish EL 28886.

4 References

Dunster, J.N., Kruse, P.D., Duffett, M.L. and Ambrose, G.J., 2007. Geology and resource potential of the southern Georgina Basin. NTGS Digital Information Package DIP007.

Mackie, A.W., 2017. EL28886 Annual Technical Report 5, Delmore Downs. Gempart NT Pty. Ltd.

Scrimgeour, I., 2003. Developing a revised framework for the Arunta Region. Australian Geoscience Exploration Seminar (AGES) 2003. NTGS Record 2003-001.