FINAL REPORT ON AREA SURRENDERED EL 27645
PLENTY RIVER REGION, NORTHERN TERRITORY

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Plenty River Project
1:100 000 Mapsheets: 5852 Delny, 5853 Utopia, 5952 Dneiper
1:250 000 Mapsheets: SF5310 Alcoota, SF5311 Huckitta
Commodities: Cu, Pb, Zn, Mo, Au, Ag

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Minesite Services Australia
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Abstract:
EL 27645 forms part of FAR Resources Plenty River Project which consists of 11 granted exploration licences covering 3,080km² in the Harts Range/Plenty River area of the Northern Territory, see figure 2. This licence covers part of the Jinka Domain, north of the Delny Fault Zone, the Kanandra Domain between the Delny Shear Zone and the Entire Point Fault Zone and part of the Harts Range Domain which is to the south of the Entire Point Fault Zone. There was no field work conducted on those areas of EL 27645 that were surrendered.

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1. LOCATION

EL 27645 is located some 150km to the northeast of Alice Springs in the Northern Territory. The licence has an irregular shape having a north-south length of 55km with an maximum east-west width of 44km and lies between 22° 24’S to 22° 63’S and 134° 36’E to 135° 00’E. The licence is located upon the Delny, Delmore Downs, Macdonald Downs, Alcoota and Mt Riddock pastoral leases to the northwest of the Harts Range Police Station and Atitjre Community. The Plenty Highway passes to the south of the licence and the Delmore Downs and Alcoota access road traverses part of the licence.

![Figure 1 Location Map](image-url)
2. **TITLE HISTORY**

Mineral Tenure

EL 27645 was granted on 14/04/2010 and this report is the Final Report which covers activities in the surrendered portion of the licence during the period 14/04/2010 to 14/06/2013, being the first three years of tenure. The licence has an area of 369 graticular blocks (1,170 km\(^2\)). On 14/6/2013 184 graticular blocks (585 km\(^2\)) were voluntarily surrendered see Figure 4 below.
Real Property

EL 27645 is located on the following real property parcels:

NT PPL 1126 (NTP 714) “Delmore Downs Station” which is owned by DG Holt, (c/ Delmore Downs Station via Alice Springs NT).

NT PPL 1127 (NTP 756) “Delny Station” which is owned by DG Holt (c/ Delmore Downs Station via Alice Springs NT).

NT PPL 989 (NTP 2453) “Mt Riddock Station” which is owned by Harts Range Pty Ltd (c/ Wardell Nominees Pty Ltd, Smith St Mall Darwin NT).

NT PPL 1116 (NTP 3120) “Macdonald Downs Station” which is owned by CM & MM Chalmers (PMB 81 via Alice Springs NT).

NT PL 1032 (NTP 4029) “Alcoota Station” which is owned by the Alcoota Aboriginal Corporation (c/ CLC 33 Stuart Highway NT).

Other Stakeholders

Other stakeholders in the area, (but not on the licence), are the Alcoota and Waite River aboriginal communities which are located to the west of this licence.
The areas shaded in light blue above were surrendered in the fourth year of tenure.
3. **ACCESS**

Access to the exploration licence from Alice Springs is northwards along the Stuart Highway for 68km to the intersection of the Plenty Highway then 81 km along the Plenty Highway to the Delmore Downs Access road, then another 36km down this road. This is located on the western side of the licence area. This road then traverses the licence for 27km. Access throughout the remainder of the licence is via station roads and fence lines. Access is considered to be poor to fair due to vegetation density.
4. GEOLOGICAL SETTING

The Plenty River project is located in a north-south traverse across the Aileron Province from the Georgina Basin in the north to the Irindina Province in the south.

Georgina Basin
The Georgina Basin is a Paleoproterozoic sedimentary basin that contains dolostone, limestone, sandstone, siltstone and shale. It is a widespread intracratonic basin that was initiated as part of the Centralian Superbasin and extends east into Queensland. It unconformably overlies the Aileron Province, Tennant Region, Murphy Inlier, McArthur and south Nicholson Basins and Lawn Hill Platforms. It is interpreted to be contiguous at depth with the Wiso and Daly Basins and conformably overlies the Kalkarinji Province.

Aileron Province
The Aileron Province is a Palaeoproterozoic metamorphic and igneous terrain containing variably metamorphosed sediments, meta-volcanic rock, calc-silicate rocks, dolerite, mafic rocks and granites. It forms part of the Arunta Region and is a poly-deformed and metamorphosed basement terrain along the southern margin of the North Australian Craton. It is unconformably overlain by the Ngalia, Amadeus, Murraba, Georgina and Eromanga Basins and has largely faulted relationships with the Wurumpi and Irindina Provinces.

Irindina Province
The Irindina Province is characterised by a Neoproterozoic metamorphic terrain that contains metasedimentary gneiss, quartzite, mafic amphibolite and felsic migmatites. It forms part of the Arunta Region and is a fault bounded metasedimentary and igneous province that formed a deep depocentre within the Centralian Superbasin and was metamorphosed in the Ordovician. It is fault contacted with the Aileron Province to the north and unconformably overlain by the Eromanga Basin to the south.
Figure 6
Geological Setting

(after Scrimgour I and Raith J, 2001)
i. Regional Geology

The regional geology can be divided into 3 main tectonic elements, separated by east-west trending shear systems. The southernmost of these elements, the Harts Range Domain, comprises upper amphibolite to granulite facies metasediments belonging to the Harts Range Group. Dominant lithologies include migmatite, metapelite, metabasite, garnet-biotite gneiss and subordinate calc-silicate rock marble and quartzite. The Harts Range Group underwent peak metamorphism during the Larapinta Event at 480-460 Ma. To the north of the Harts Range Domain is the Kanandra Domain, this contains the Kanandra Granulite which belongs to the palaeoproterozoic Strangways Metamorphic Complex. The Kanandra Granulite forms part of a 150-200km long, west trending belt of intermittently outcropping belt of pelitic and mafic granulites that includes the Bleechmore Granulite to the west. This domain comprises felsic and mafic granulites with garnet-bearing pelitic and semi-pelitic migmatite and rare calc-silicate rock, intruded by deformed granite.

The third major geological element in the licence area is located to the north of the Kanandra Granulite, and is termed the Jinka Domain. This comprises a narrow (5-25km wide) belt of low-pressure amphibolite to granulite facies metasediments intruded by extensive granites. It extends from the Perenti Metamorphics in the west to the Jervois Range in the east, a total distance of more than 100km.

Two major shear zones separate the three tectonic elements in this region: the Entire Point Shear Zone which separates the Harts Range Domain from the Kanandra Domain and the Delny Shear Zone which separates the Kanandra Domain from the Jinka Domain to the north. The Entire Point Shear Zone trends east-northeast, dips steeply south and merges with the east-southeast striking Delny Shear Zone in the Plenty Rivers Project area. The Delny Shear Zone is a major east-southeast striking structure more than 150km in length and is locally up to 3km wide. A substantial gravity gradient is evident across the shear zone, implying it is a major crustal feature.
Figure 7
Regional Geology
ii. Licence Geology

Locally the basement rocks of interest are covered by a thin veneer of Tertiary to recent sediments. The Tertiary Waite Formation forms a significant impediment to exploration of underlying bedrock.

The Jinka Domain occurs in the northern portion of the licence and comprises metasedimentary rocks intruded by granites. Metamorphism occurred at amphibolite to granulite facies and low pressures during the Strangways Event. The rocks of the Jinka Domain in the licence area include the following:

- Utopia Quartzite, (Plu); muscovite bearing metaquartzite
- Ledan Schist, (Pln); two-mica schist with minor metaconglomerate.
- Dnieper Granite, (Pgd); Grey biotite granite, grading into orthogneiss locally hornblende bearing or quartz deficient.
- Cackleberry Metamorphics, (PCv); Calc-silicate rock, layered amphibolite, quartzofeldspathic gneiss

The Jinka Domain is separated from the Kanandra Domain by the Delny Shear zone.

The Delny Shear Zone is a steeply south-dipping shear zone locally up to 3km wide.

The central tectonic element is the Kanandra Domain, and consists of:

- Kanandra Granulite, (PÇk); quartz-feldspathic schist containing local retrograde shear zones.

The Kanandra Domain is separated from the Harts Range Domain by the Entire Point Shear Zone.

The Entire Point Shear Zone is a steeply south dipping upper amphibolite shear zone.

The southern tectonic element in the licence is the Harts Range Domain which consists of the following:

- pÇh; Pelitic, calcareous and psammitic and felsic gneisses, leucocratic gneiss, quartzites and amphibolites.
- pÇh1; quartz and garnet bearing amphibolite, minor plagioclase-hornblende gneiss.
- pÇh2; meta-calc silicate rock, flaggy quartzite, biotite quartzite, rare calcite-bearing gneiss
- pÇh3; leucocratic biotite-quartz-feldspar gneiss.
Figure 8
Licence Geology
5. GEOLOGICAL ACTIVITIES

Office Studies
During the period our Plenty River Project GIS database was completed and examined to indicate areas which needed further exploration. The result was the surrender of 50% of the licence area in June 2013.

Field Studies
There was no field work conducted on those areas of EL 27645 that were surrendered.

6. CONCLUSIONS

From the examination of previous explorers’ data and the available published data FAR Resources has concluded that the likelihood of discovering large base metal deposits in the surrendered area is very low and has accordingly surrendered this area.