# RELINQUISHMENT REPORT EL 28223

PERIOD: 30/3/2011 TO 29/3/2016 PLENTY RIVER REGION, NORTHERN TERRITORY

FAR Resources Pty Ltd PO Box 96 Palmerston NT 0831

# Plenty Rivers Project

1:100 000 Mapsheets: 5952 Dneiper 1:250 000 Mapsheets: SF5311 Huckitta Commodities: Cu, Pb, Zn, Mo, Au, Ag



#### Abstract:

EL 28223 forms part of FAR Resources Plenty Rivers Project which consists of 8 granted exploration licences covering 610km² in the Harts Range/ Plenty River area of the Northern Territory. The area was considered to be prospective for base metals, precious metals and industrial minerals.

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Any information included in this report that originates from historical reports or other sources is listed in the "References" section at the end of the document.

This report may be released to open file as per Regulation 125(3)(a).

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(Digital Format)

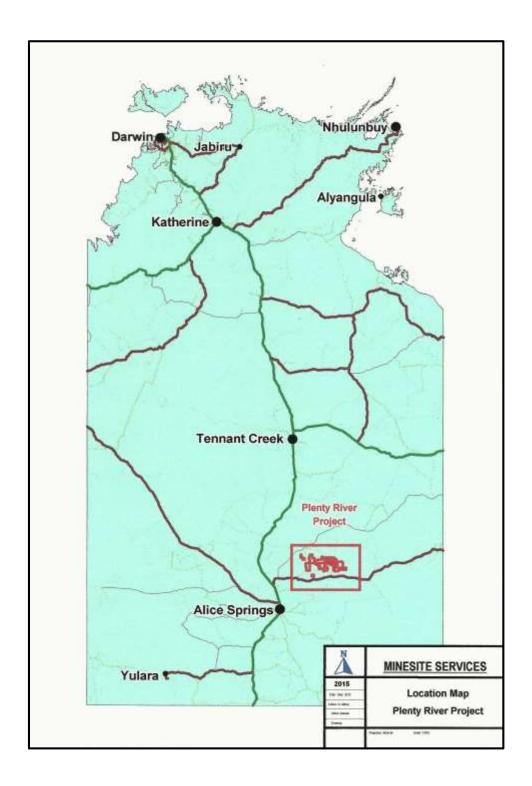
Appendix 1 EL 28223 METADATA

Appendix 2 Surface Geochemistry Text File

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#### 1. LOCATION

EL 28223 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 11km with an average east-west width of 14km and lies between 22° 16′S to 22° 41′S and 135° 11′E to 135° 19′E. The licence is located upon the Dneiper pastoral lease to the northeast of the Harts Range Police Station and Atitire Community. The Plenty Highway passes to the south of the licence and the Derry Downs access road traverses part of the licence.



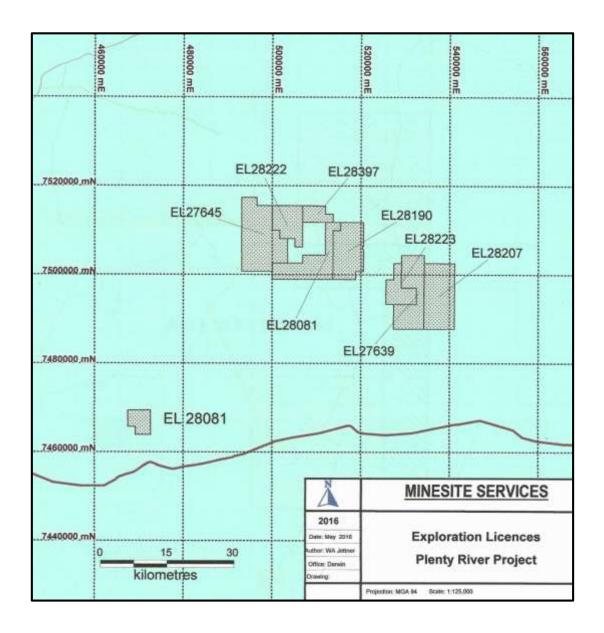
#### 2. TITLE HISTORY

#### **Mineral Tenure**

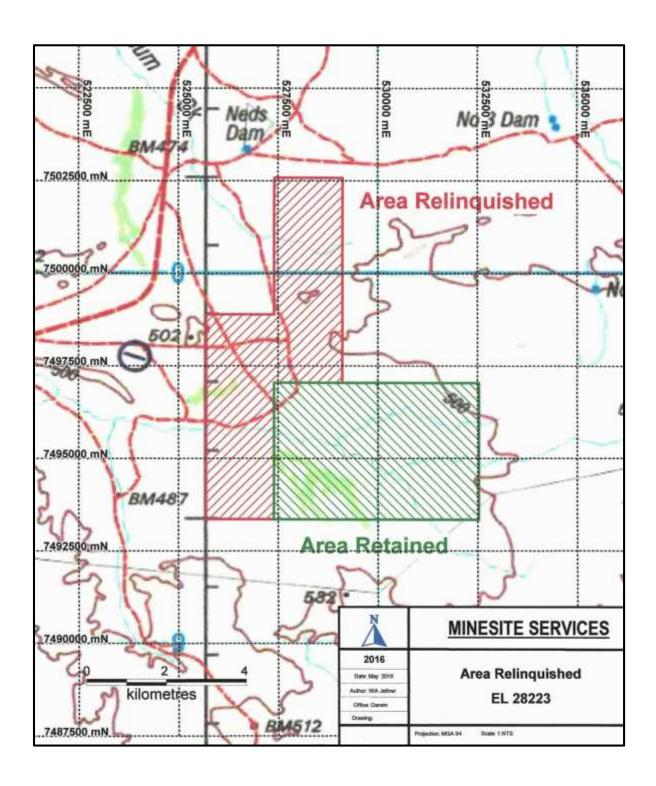
EL 28223 was granted on 30/03/2011 and this report is the Relinquishment Report which covers activities in the period 30/03/2011 to 29/03/2016, being the first five years of tenure. The licence has an area of 12 graticular blocks (37 km²) of which 6 blocks were relinquished at the end of year 5.

EL 28223 forms part of the Plenty Rivers Project which consists of 8 granted exploration licences covering a total area of 193 graticular blocks (610km²)

The regional area has a mineral exploration history going back to the 1880s when the Harts Range garnet and mica fields were found and exploited by small scale miners.

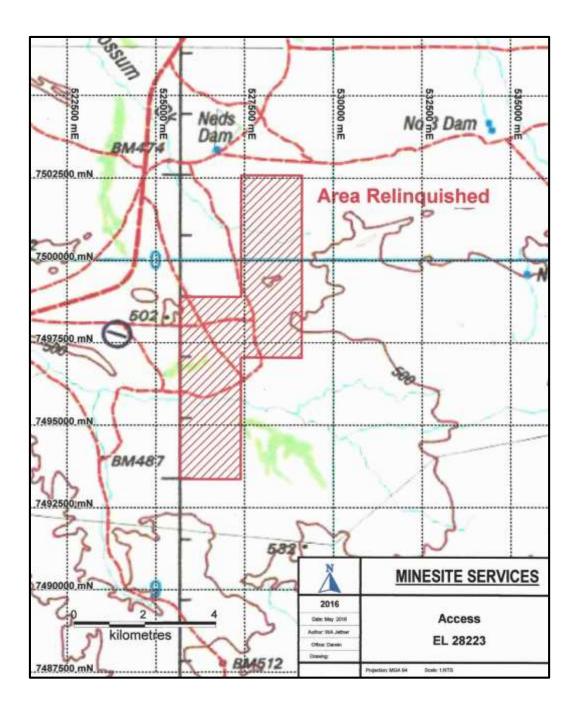


At the end of the fifth year of tenure a voluntary 50% reduction was undertaken with 6 blocks being relinquished and 6 blocks retained.



#### 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 166 km along the Plenty Highway to the Harts Range Police Station, then another 22km to the Derry Downs turnoff. Traversing 30km northwards along the Derry Downs road to the Dneiper Station homestead. This is located on the western side of the licence area. Access throughout the remainder of the licence is via the Dneiper Station roads and fence lines. Access is considered to be good to excellent.



#### 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 Paleaoproterozoic 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.

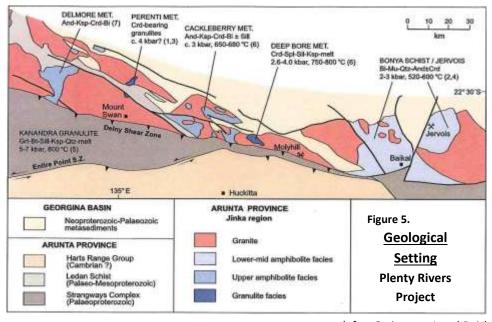
#### Aileron Province

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 Ordivician. It is fault contacted with the Aileron Province to the

north and unconformably overlain by the Eromanga Basin to the south.



(after Scrimgour I and Raith J, 2001).

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## 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.

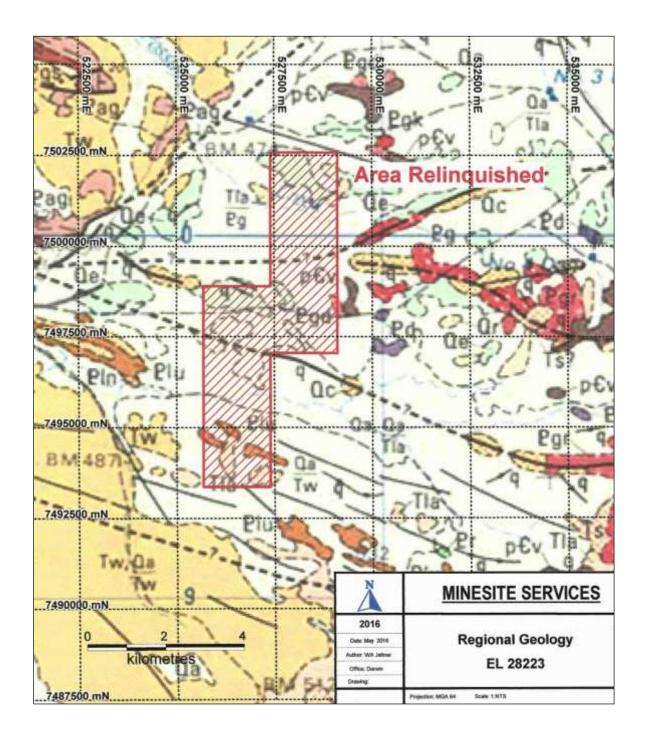
The third major geological element in the licence area is located to the north of the Kanandra Granulite, and is termed the Jinka Domain.

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.



## 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.
- Dneiper Granite, (Pgd); Grey biotite granite, grading into orthogneiss locally hornblende bearing or quartz deficient.
- Cackleberry Metamorphics, (PEv); Calc-silicate rock, layered amphibolite, quartzo-feldspathic gneiss

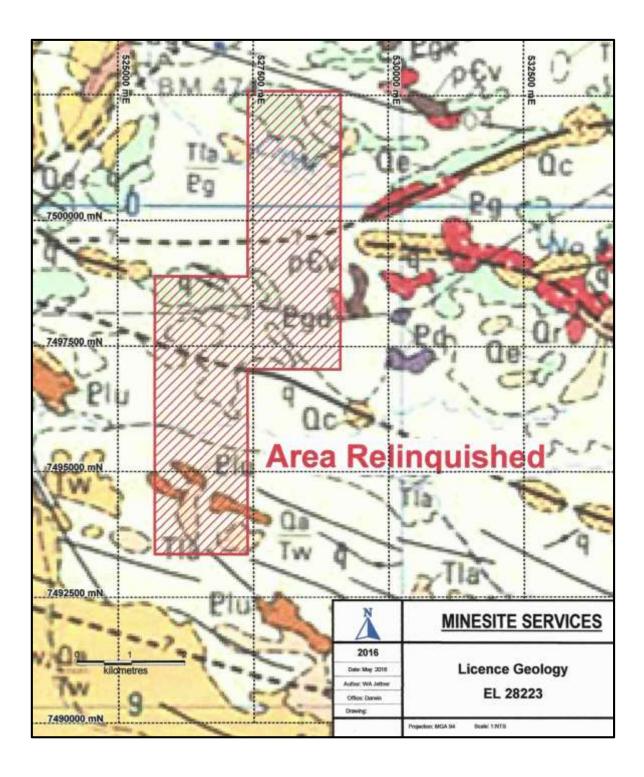
The Jinka Domain is separated from the Kanandra Domain by the Delny Shear zone The Delny Shear Zone is a steeply south-dipping shear zone locally up to 3km wide.

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

• Kanandra Granulite, (PEk); quartzo-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.



#### 5. GEOLOGICAL ACTIVITIES

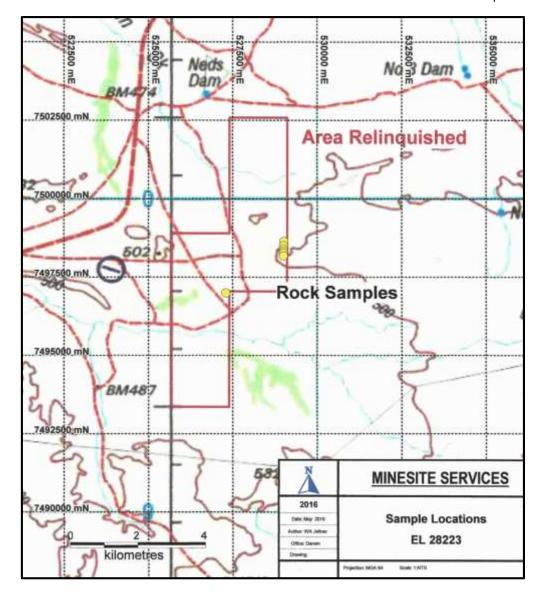
#### Office Studies.

During the period a broad scale literature survey was completed on the whole of the Plenty Rivers Project area (11 ELs), which consisted of examining previous explorers data as submitted to the DME as well as current thinking on mineralising systems in the eastern Arunta Region. EL 28223 is an integral part of this project area and is included in this ongoing study.

#### **Field Studies**

Field work on the licence during the 5 year period consisted of several site visits by Mr A Jettner of Minesite Services and Mr P Harris of Stratus Resources for general geological reconnaissance. There were only 5 rock samples analysed in the relinquished portion of EL28223 and none of these returned anomalous results.

Their locations are shown below.



The locations and results of this sampling are attached to this report in appendix 2

#### 7. CONCLUSIONS

The rock sampling over the relinquished area of EL 28223 was disappointing with no geochemical anomalies located. As a consequence there were 6 blocks relinquished from this licence at the end of the fifth year of tenure.