2013

ANNUAL REPORT EL 27645

PERIOD: 14/4/2012 TO 13/4/2013 PLENTY RIVER REGION, NORTHERN TERRITORY

FAR Resources Pty Ltd PO Box 96 Palmerston NT 0831

Plenty Rivers 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



Abstract:

EL 27645 forms part of FAR Resources Plenty Rivers Project which consists of 11 granted exploration licences covering 3,480km² in the Harts Range/ Plenty River area of the Northern Territory, see figure 2. The area is considered to be prospective for base metals, precious metals and industrial minerals. Work conducted in the third year consisted of a comprehensive literature survey of the whole of the areas that form the Plenty Rivers Project. 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. Preliminary field exploration has proven encouraging for the interpretation of existing datasets with further work recommended for the upcoming year.

Contact Details:

Tenement Holder:

FAR Resources Pty Ltd

PO Box 96 Palmerston NT 0831

Contact: Mr Andrew Jettner

Report Author:

Minesite Services Australia

19 Flametree Cct Rosebery NT 0831

Contact: Mr Andrew Jettner

Tel: 0447 092 764

Email: andrew@minesiteservices.com.au

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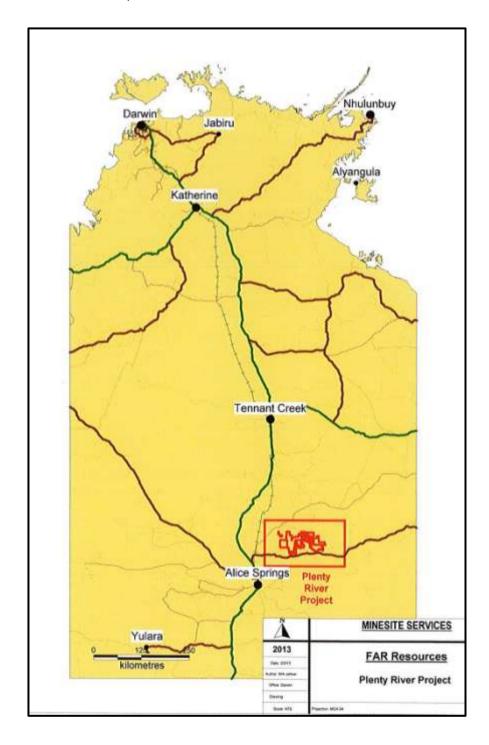
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1. LOCATION

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 eastwest 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 Atitire Community. The Plenty Highway passes to the south of the licence and the Delmore Downs and Alcoota access road traverses part of the licence.



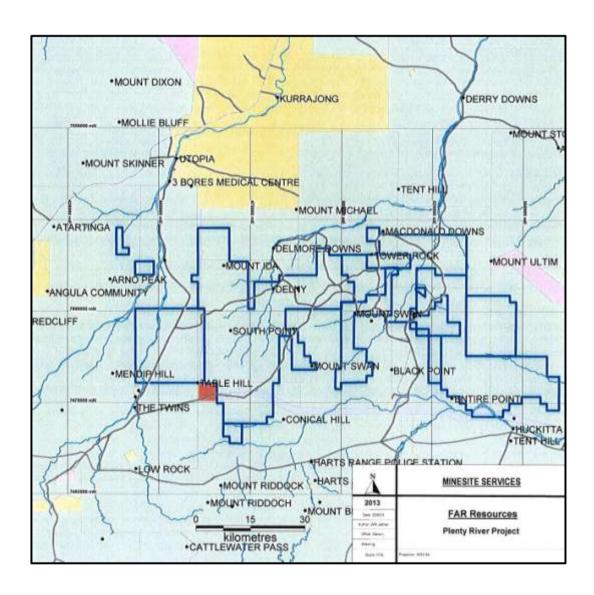
2. TITLE HISTORY

Mineral Tenure

EL 27645 was granted on 14/04/2010 and this report is the Third Annual Technical Report which covers activities in the period 14/04/2012 to 13/04/2013, being the third year of tenure. The licence has an area of 369 graticular blocks (1,170 km²).

EL 27645 forms part of the Plenty Rivers Project which consists of 11 granted exploration licences covering a total area of 1,104 graticular blocks (3,480km²)

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. This style of mining has continued on and off to the present day with the Mud Tank Mine still operating in the eastern Arunta Region today.



Real Property

EL 27645 is located on the following real property parcels:

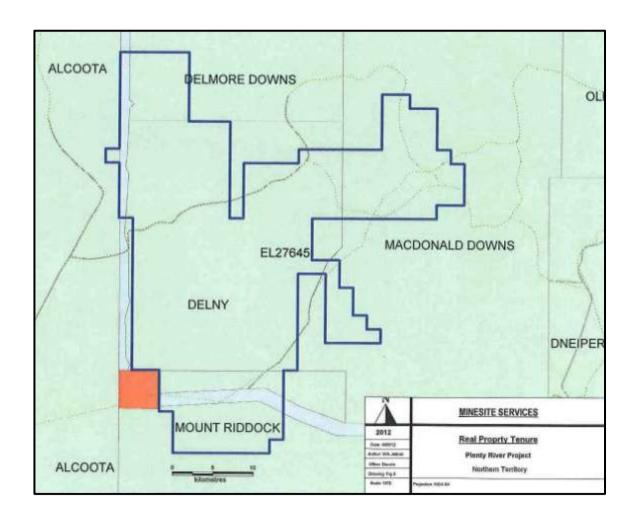
NT PPL 1126 (NTP 714) "Delmore Downs Station" which is owned by DG Holt, (c/ Delmore Downs Station via Alice Springs NT).

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).

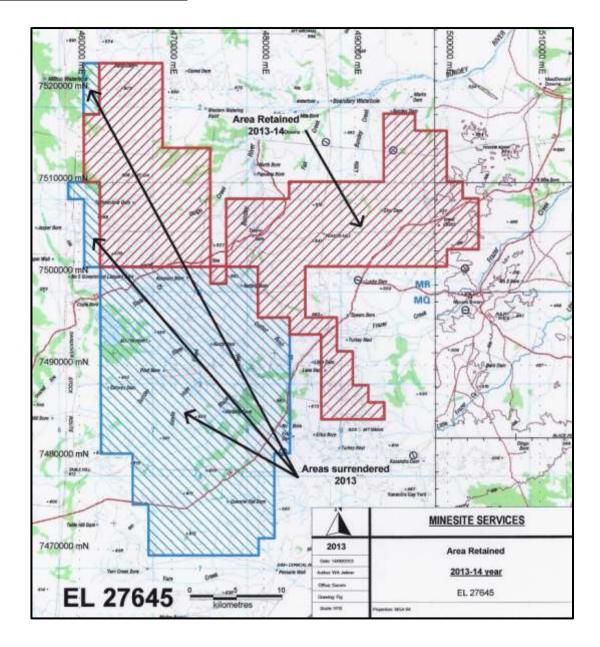
NT PL 1032 (NTP 4029) "Alcoota Station" which is owned by the Alcoota Aboriginal Corporation (c/ CLC 33 Stuart Highway NT).



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.

Area Surrendered in June 2013



The area shaded in light blue above was surrendered in the fourth year of tenure.

3. PHYSIOGRAPHY

The landforms and geology of the Plenty River Project Area of which EL 27645 forms an integral part consist of 3 geological domains, the northern Jinka Domain, the central Kanandra Domain and the southern Harts Range Domain. EL 27645 occurs within all three domains which are described here.

i. Geomorphology

Jinka Domain

The geomorphology of the Jinka Domain consists of low rounded hills that are desiccated by drainage systems heading north into the Georgina Basin. The number and frequency of these hills are much less than that found in the Kanandra Domain to the south. This licence mainly is located on the fan-like anastomosing drainage systems due to its irregular shape.

Kanandra Domain

The Kanandra Domain primarily consists of low angular and rounded hills that are incised by numerous drainage lines forming a fenestral pattern. Erosion along these drainage lines can give rise to quite steep slopes on occasion.

Harts Range Domain

The Harts Range Domain contains wide open sandy plains in the areas on the southern edge of the licence along the Plenty Highway. To the north of this area east-west trending rocky hills consisting of Harts Range Group rocks occur. Areas of low ridges with incised drainage lines are formed upon rocks of the Tertiary Waite Formation.

ii. Biogeography

Jinka Domain

In this domain three vegetation types occur in the licence area, they are: low open woodlands consisting of Coolibah low-open woodland with an open-grassland understorey in the main drainage systems, a mixed species low-open woodland consisting of Ironwood and Whitewood low open woodland with a open grassland understorey, and thirdly a tall open scrubland containing a Mulga tall open scrubland with a Woolybutt open grassland understorey.

Kanandra Domain

The vegetation in this domain may be classified as a mixed species low open woodlands containing Ironwood and Whitewood with a low open grassland understorey in areas on soils derived from the Tertiary Waite Formation. In other areas along drainage lines the Melaleuca and Eucalypt species increase in numbers to a woodland regime.

Harts Range Domain

The vegetation in this domain may be classified as a mixed species low open woodland containing Ironwood and Whitewood with a low open grassland understorey in areas on soils derived from the Tertiary Waite Formation. In other more sandy areas an Acacia dominated very open woodland with an open grass understorey is present.

iii. Hydrology

The surface hydrology is very limited in this arid area of central Australia. Seasonal rains fall during the northern wet season, (depending on the year), and quickly runoff. The licence area is held under real property tenure as cattle stations whose main pursuit is open range cattle grazing. For the majority of the year water is supplied by bores, either to earth dams (turkey nests) or to sealed tanks and dispensed to the cattle via regulated cattle troughs. The ground water regimes of the three domains are described here:

Jinka Domain

The groundwater of the Jinka Domain consists of locally fractured rocks based around the known shear zones. Bores drilled in this area generally give the best flows of the three domains. Flow rates are greater than 0.5 l/s.

Kanandra Domain

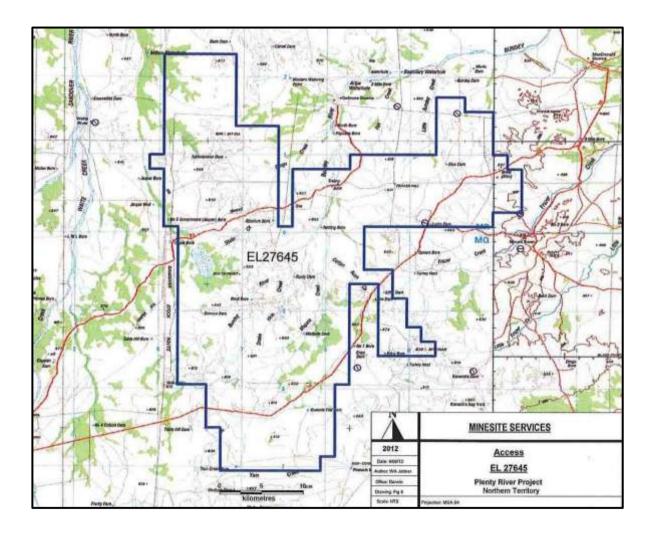
The groundwater of the Kanandra Domain consists of locally fractured rocks based around shear zones and faults. They have flow rates of between 0.05 and 0.51/s and generally higher salinities.

Harts Range Domain

The groundwater of the Harts Range Domain is again based on localised fracturing associated with structural elements and have low flow rates (0.05 - 0.5l./s) and high salinities (>1500mg/l).

4. 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.



5. 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.

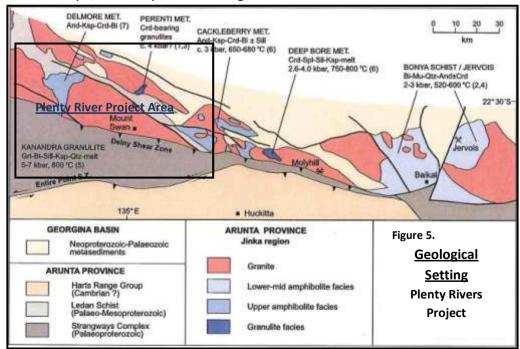
Aileron Province

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).

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.

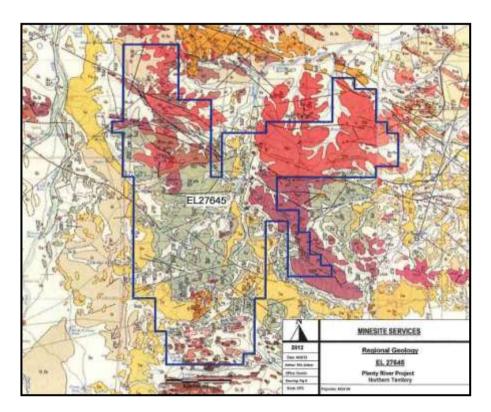
To the north of the Harts Range Domain is the Kanandra Domain, this contains the Kanandra Granulite which belongs to the palaeoproterozoic Strangways Metamorphic Complex. The Kanandra Granulite forms part of a 150-200km long, west trending belt of intermittently outcropping belt of pelitic and mafic 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, (P\(\infty\)); 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.

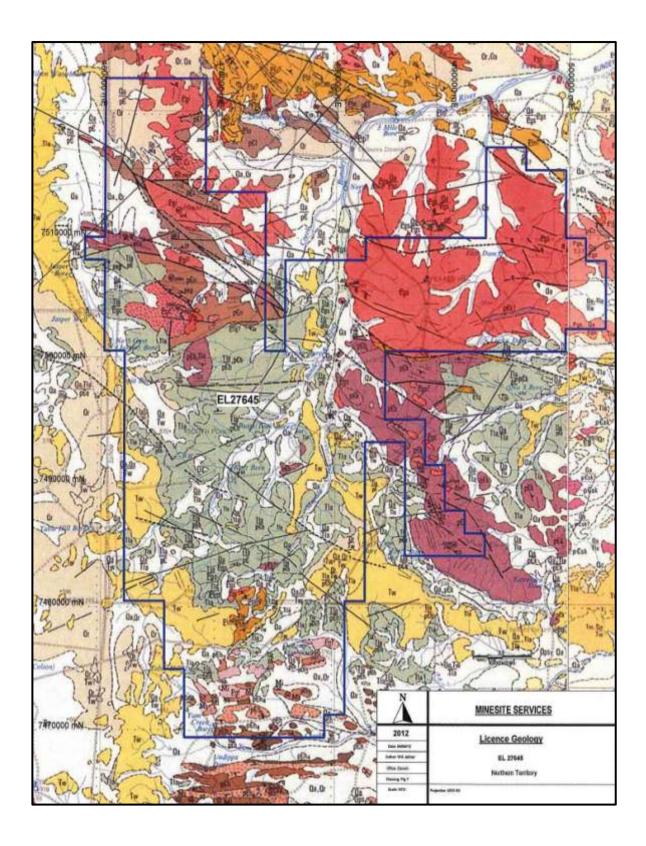
The central tectonic element is the Kanandra Domain, and consists of:.

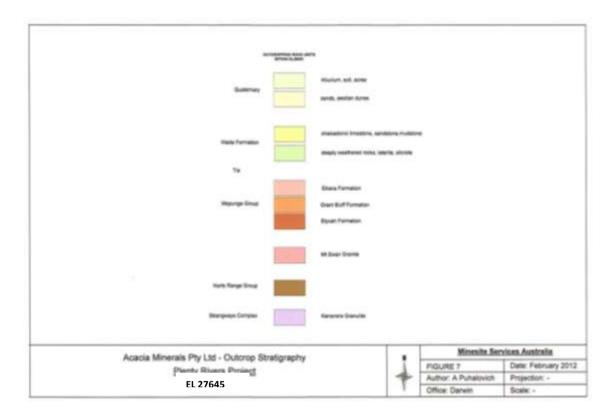
 Kanandra Granulite, (PEk); quartzo-feldspathic schist containing local retrograde shear zones.

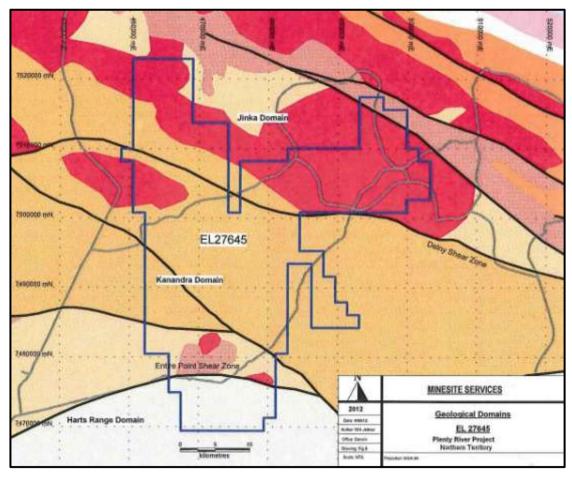
The Kanandra Domain is separated from the Harts Range Domain by the Entire Point Shear Zone. The Entire Point Shear Zone is a steeply south dipping upper amphibolite shear zone.

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

- pch; Pelitic, calcareous and psammitic and felsic gneisses, leucocratic gneiss, quartzites and amphibolites.
- p \in h₅; quartz and garnet bearing amphibolite, minor plagioclase-hornblende gneiss.
- pCh₄; meta-calc silicate rock, flaggy quartzite, biotite quartzite, rare calcite-bearing gneiss
- p\(\int\)h₃; leucocratic biotite-quartz-feldspar gneiss.







6. EXPLORATION AND MINING HISTORY

Exploration

Table 1. Historical Exploration Licences and Open File Reports

Licence	Licence	Tenure Period		Open File Company
No	Holder	From	То	Reports
AP 1726	Central Pacific Minerals	07/04/1967	06/04/1969	CR1969-0010
AP 2162	Central Pacific Minerals	09/12/1968	08/12/1970	CR1970-0098
AP 2587	Kratos Uranium	27/01/1970	26/01/1972	CR1971-0040
EL 32	Neptide Mineral Exploration	12/03/1972	20/03/1973	CR1973-0208
EL 1453	Otter Exploration	01/04/1977	31/03/1979	CR1978-0048
				CR1979-0035
				CR1979-0091
EL 2390	Jays Exploration	24/04/1980	23/04/1982	CR1981-0196
EL 2493	CRA Exploration	12/09/1981	11/09/1982	CR1982-0358
EL 2498	CRA Exploration	12/09/1981	11/09/1982	CR1982-0042
EL 5902	Track Minerals	20/06/1988	02/06/1989	CR1989-0705
EL 7993	PNC Exploration	26/03/1993	24/03/1995	CR1994-0325
				CR1995-0298
				CR1995-0475
EL 9373	Helix Resources	12/12/1996	20/09/1999	CR1998-0115
				CR1999-0038
				CR1999-0117
				CR1999-0460
EL 22897	Rio Tinto Exploration	19/04/2002	26/07/2004	CR2003-0156

Exploration activities have been conducted in the licence area for a number of years by a large number of exploration companies, a brief summary of each is presented here:

AP 1726

In 1968 Central Pacific explored Authority to Prospect AP 1726 (jointly held with Magellan Petroleum (NT) Pty Ltd) covering the western part of the Plenty River project area following up reports of previous prospecting and uranium mineralisation (Figure 17). A small tungsten show was found 7km NE of Delny Homestead in thin quartz veins in garnetiferous gneiss along a contact with the Mount Swan Granite. Several workings (including a 4m deep shaft) extend for about 900m along the contact. Several other small workings were reported which may be mica shows developed in muscovite pegmatite intruded into the Arunta Complex. A weakly anomalous phosphate value of 750ppm P_2O_5 was recorded from the Arltunga Beds in the eastern part of the AP.

AP 2162

In 1970 Central Pacific completed an IP survey and drilling over the Perenti copper prospect under AP 2162, located in the northern central part of the Plenty River project area (Figure xx). The target was 18km shear zone along which quartz veins with disseminated boxwork and weak copper had been recorded. Drilling intersected true width 11.9m at 0.6% Cu (with Pb and Zn >50ppm, and Au and Ag <0.5 dwt/ton). This prospect was on the adjacent EL 28223.

EL 2587

Kratos explored AP 2587 in 1970-1971 for uranium in joint venture with Pechiney (Australia) Exploration Pty Ltd and completed an airborne radiometric survey. The AP extends from Delny Homestead south to the Hart Range Police Station and extends eastward over Mt Swan with about 50% within the Plenty River project area. Fifteen anomalies were identified; only 1 was in the Mt Swan Granite and the remainder within basement rocks or Tertiary or Quaternary sediments. Ground follow-up of the 4 best anomalies was made with detailed descriptions, spectrometer readings and colorimetric assays of various samples, and cross section sketches and photographs at each locality. No anomalous U was found.

EL 32

In 1973 Neptide completed limited reconnaissance rockchip sampling on EL32 and assayed for a range of elements including base metals. Sample MC1 assayed 1000ppm Cu and 2000ppm Pb. Samples MC24 and MTS5 assayed 1000ppm Cr. Samples JV1 assayed 100ppm Cu, 2500ppm Pb, 1500ppm Cr and 2000ppm Ni, and JV2 assayed 0.2% Cu, 1000ppm Pb and 1000ppm Zn. The exact location of the MC, MTS and JV series samples are not specified in the reports with the maps showing only the numbers.

EL 1453

In 1977-1978 Otter explored EL1452 (Bundey River), EL1453 (Mt Ida), EL1454 (Mollie Bluff) and EL1455 (Albert Bore) for uranium, located predominantly to the northwest of the Plenty River Project area but overlapping the northern part of EL27645 (Figure 22). Otter completed a systematic 1km line spaced survey for uranium mineralisation using an airborne detector system (with data presented as total count, uranium count and U/Th ratio), and ground follow up of anomalies recorded from the survey using hand held spectrometers and the collection of rock/stream sediment samples for assay/petrography. EL1453 Mt Ida is the only tenement of the Otter group listed above that covers part of Plenty Rivers EL27645. It was considered prospective on account of reported tantalum and wolfram occurrences, suggesting pegmatite/skarn situations which might also be favourable for uranium mineralisation. Of the 99 airborne anomalies at least 3 of the Mt Ida anomalies (C25, C27 and C38) are due to concentrations of uranium, namely 46, 36 and 215 ppm respectively. The uranium occurs as uraniferous leucoxene within quartz feldspathic microgneisses, along contact zones with intrusive granite/pegmatite dykes (C27 and C38) or quartz veins (CR25). Scheelite mineralisation was also discovered in the same general area of this Mt Ida U-W zone - a sample of epidotised calc-silicate rock from the C38 pegmatite dyke occurrence assayed 2.65% W, quartz muscovite gneiss taken at C27 assayed 230ppm W. Traces of scheelite were also noted to the south of C43.

ELs 2493 and 2498

In 1981-1983 CRAE explored for base metals and kimberlitic rocks by completing reconnaissance geochemical drainage surveys, with follow up ground magnetometer surveys, rock chip sampling, auger soils and heavy mineral-gravel sampling, in the Delmore Downs (EL2498), Tent Hill near Huckitta Outstation (EL2790), Frazer Creek (EL2788), MacDonald Downs (EL2789), Mount Ida (EL2493) and Red Tank (EL4017) areas.

EL2493 Mount Ida is located on EL27645 and partly on 28352 in the west of the Plenty River tenement group. Weakly anomalous lead, zinc, tin, silver, copper and uranium values were followed up by further drainage sampling, ground radiometric traverses and rock chip sampling. Anomalies were not upgraded and mineralisation was not indicated, with the anomalies thought to be a response to lithologies rather than mineralisation. Follow-up radiometric responses on the BMR airborne regional survey revealed nothing of interest; the radiometric anomalies were a response to small outcrops of granite and metamorphic rocks in areas of alluvium. The geology consists of extensive Tertiary sediments and weathering surfaces overlying various granites and gneisses of the Arunta Complex.

EL2498 Delmore Downs is located across the southern parts of Plenty River ELs 27645 and 28081. Weakly anomalous uranium values were followed up by further drainage sampling and ground radiometric traverses. Thorium was found elevated relative to uranium in rock and drainage samples throughout the area. The geology consists of Tertiary sediments and weathering products overlying amphibolite, gneiss and calc-silicate of the Lower Proterozoic Harts Range Group.

EL2789 MacDonald Downs was located immediately north of CRAE EL2788 and covers parts of Plenty River ELs 27645, 28081, 28190, and 28223. In 1981, follow up drainage anomalies included detailed drainage, soil and rock chip sampling, reconnaissance geological mapping and a ground magnetometry survey. Geochemical methods did not indicate large scale mineralisation, although a high order lead anomaly was identified which weathering surfaces developed on various granites and gneisses of the Arunta metamorphic complex and onlapping Upper Proterozoic to Palaeozoic sediments of the Georgina Basin.

EL 5902

In 1989 Track Minerals held EL5902, and completed stream sediment sampling, geological traverses and rockchip sampling, which failed to locate any signs of gold or base metal mineralisation. The EL is centred on Delmore Downs on the Bundey River, in the north western part of the Plenty River project area.

Track provided a summary of the mineralisation styles in the area, based principally on the Otter CR19790035 report by Kojan:

Several mineral occurrences have been reported associated with the Delny-Mount Sainthill Fault Zone.

- o The Molyhil Mine (80km ESE of the Delmore EL), where coarse scheelite and clots of molybdenite are observed within a magnetite-chlorite skarn in calc-silicate rocks and high grade, thermally metamorphosed sediments.
- o Otter C38 anomaly of traces of uraniferous leucoxene in microgneiss adjacent to pegmatite, which analysed up to 215ppm U.

- o Grab sample of calc-silicate with scheelite from close to pegmatite analysed 2.65% W.
- o Another pegmatite 3.5km N of C38 contained traces of scheelite, with maximum 0.1%
- W. Bundey River prospect small quantities of tantalite in pegmatite along a gneiss-microgneiss contact. Utopia prospect – two tantalite occurrences within EL5903 (Skinner).

Wolfram occurrence in Delmore Downs described as pegmatite veins cutting a roof pendant of garnet gneiss close to a granite contact.

Perenti prospect, 7km SW of Tower Rock, described as having disseminated copper minerals within a quartz breccia reef.

EL 7993

PNC exploration within the Arunta Block focused primarily for unconformity-related uranium mineralisation, in addition to pegmatite-related, skarn-related and fault controlled styles, possibly related to highly uraniferous granites in the orogen. PNC discovered the Yambla prospect in 1992 which occurs some 50km to the south of the licence area. Within EL 7993 PNC failed to locate any significant anomalies.

EL 9373

Helix Resources held EL 9373 between 1996 and 1999 and conducted geochemical sampling consisting of stream sediment, lag sampling and rock chip sampling. Their target commodity was gold and no positive results were located in their sampling.

EL 22897

EL22897 was transferred from Rio Tinto to Southern Cross (80%) and Bohuon Resources Pty Ltd (20%) in 2003. However, the licence was cancelled due to delays in getting approvals from the Central Land Council.

Mining

Mine/Prospect Modat Mineral Name Site Id Field Commodity **Orebody Type** Undippa 1 Vein 30 Undippa Mica Undippa 2 45 Undippa Mica Vein 57 Undippa Undippa 3 Vein Mica Undippa 4 76 Undippa Vein Mica Undippa 6 68 Undippa Mica Vein

Undippa

Undippa

Undippa

Mica

Mica

Mica

Table 2. Historical Mines and Prospects

There is only one known mining field in the area of EL 27645, this is the Undippa Mica Field, 8 mineral occurrences are listed in the MODAT Database within the licence area.

87

1821

106

Undippa 8

Undippa 9

Undippa 10

Vein

Vein

Vein

7. EXPLORATION RATIONALE

EL 27645 forms an integral part of the Plenty Rivers Project which consists of 11 exploration licences having an aggregate area of 3,720km². This licence occurs in the all three of the geological domains near the centre of the project area.

The northern part of the Plenty River Project area comprising the Metamorphic-Granite Complex (Jinka Belt) is prospective for volcanic hosted Cu-Pb-Zn-Ag-Au deposits and Cu-W-Au-Mo skarns and other replacement deposits, stockwork vein gold occurrences, and granite hosted Sn-Ta-W deposits. The southern and western areas of the tenements cover an uplifted block of Strangways Metamorphics (the Kanandra Granulite), which contains rocks that elsewhere are known to consist of acid and basic volcanogenic rocks and immature sediments which host iron formations, Cu-Pb-Zn-Au mineralization, and are usually metamorphosed to granulite facies. Basement rocks exposed are quartz-feldspar granulites, basic granulites, magnetite bearing amphibolites and other calc-silicates. Float shows massive magnetite and hematite and suggests iron formation occurs beneath cover. Basement is also intruded by ultramafic dunite-serpentinite and granite bosses which are fracture related. Fracturing, volcanism and igneous intrusion began in Lower Proterozoic time and extended to the Carboniferous (Alice Springs Orogeny). Isolated patches of Ledan Schist are present northeast of Mount Swan. The Ledan Schist is considered to be prospective for quartz-vein-hosted Au-only mineralisation, as it has a low metamorphic grade and is situated close to the NW-SE trending Delny Shear Zone structure.

Specific mineralisation models are:

1. Nickel-copper-cobalt in serpentinised ultramafics interpreted to be intrusive gabbroperidotite-dunite bodies. Maximum nickel value is 1.2% Ni, 240ppm Cu and 300ppm Co in a lateritised serpentinite dunite south of No. 4 Dam. Another serpentinised ultrabasic body is at the Hammer Prospect near No. 1 Dam (also called Middle Dam) with 4700ppm Ni and 750ppm Cu. Several other ultrabasic bodies have been reported (Figure 16). The ultramafic bodies occur both in the central Kanandra Granulite and the Metamorphic- Granite Complex to the north. Those within the Kanandra Granite have been compared with However, the No. 4 Dam occurrence is in the Alpine-type (ophiolitic) serpentinites. Metamorphic-Granite Complex Belt. This sequence is located to the north of the major east-west orientated retrograde shear zone, the Delny Fault Zone. This shear transects the tenement, separating granites to the north from (previously Irindina Metamorphics) to the south. It flanks the southern margin of a west-northwest trending deep crustal fracture which has been the locus for series of granite intrusions. Rocks within the fault zone appear to be lower units of the Strangways Metamorphic Complex and/or younger felsic volcanics updomed by granitic intrusion. Deep crustal fracturing is supported by extensive barite-fluorite veining in the vicinity of the fault and deep sourced ultramafic intrusions.

- 2. <u>Orogenic shear zone hosted gold mineralisation</u>. Gold has been discovered in gossanous sulphidic quartz vein breccias along the DFZ 4km east of the tenement at Bruces Copper Prospect with maximum values up to 53g/t Au. The breccias are either copper-rich or copper-poor:
- Gossanous sulphidic copper poor breccia veins associated with Type 2 quartz veins, possibly focused on straights rather than jogs.
- Gossanous copper rich veins in Type 2 shears. Pyritic veins that may be related to reverse movement on the Type 3 faults.

Geochemical sampling along the Delny Fault Zone in the eastern part of the Plenty River project area in the Halfway Dam area has reported some anomalous gold in stream sediments and silicified ridges and quartz veins that require systematic sampling.

- 3. <u>Base metal mineralisation</u>. Within the Arunta Province, significant Zn-Cu-Pb (Ag-Au) mineralisation is restricted to the SE Aileron Province (1810-1800 Ma and 1765 Ma) and the Warumpi Province (1620-1610Ma) (Hussey, Huston and Claoué-Long, 2005; Huston, Hussey and Frater, 2006). The Perenti Copper Prospect is the most advanced copper prospect in the Plenty River project area. Copper mineralisation occurs in a quartz-filled shears which cut across the Mount Swan Granite. Chalcopyrite varies from 2 to 4% in the host rock, but one hole drilled by Central Pacific in 1970 intersected 11.9m at 0.6% Cu (with Pb and Zn >50ppm, and Au and Ag <0.5 dwt/ton). The target was 18km shear zone along which quartz veins with disseminated boxworks and weak copper had been recorded.
- 4. <u>Tungsten-molybdenum mineralisation</u>. At the Delmore Downs wolfram prospect (Delny 1 and 2), wolframite occurs in pegmatite veins close to a granite contact. Eluvial wolframite occurs in this area (1.32t WO3 concentrate, 0.6t WO3 concentrate). Small quantities of tantalite have been produced from the Bundey River prospect and from the Utopia prospect; in both situations, the tantalite occurs within pegmatite. Scheelite has been discovered at Anomaly C38 and a location 3.5km to the north; Anomaly C38 assayed 2.65% W in calc-silicate rock near a pegmatite dyke.
- 5. <u>Fluorite-barite mineralisation</u> is recorded to the east of the Plenty River project area along major crustal fractures mentioned above within the northern Metamorphic-Granite Complex. Examples of fluorite/barite occurrences within the easternmost Plenty River EL include:
- 1. NTGS Site 1531 fluorite/barite, breccia fill
- 2. NTGS Site 1532 fluorite/barite, breccia fill
- 3. NTGS Site 2003 barite
- 4. NTGS Site 2004 barite/fluorite
- 5. NTGS Site 2005 barite
- 6. <u>Plenty River Mica Field</u>. Multiple mica workings in pegmatite occur throughout the southern part of the tenement within the Harts Range Group. Most of these were exploited in the 1950s.

8. EXPLORATION INDEX MAP

There has been no exploration index map constructed at this time.

9. GEOLOGICAL ACTIVITIES

Office Studies.

During the year the 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.

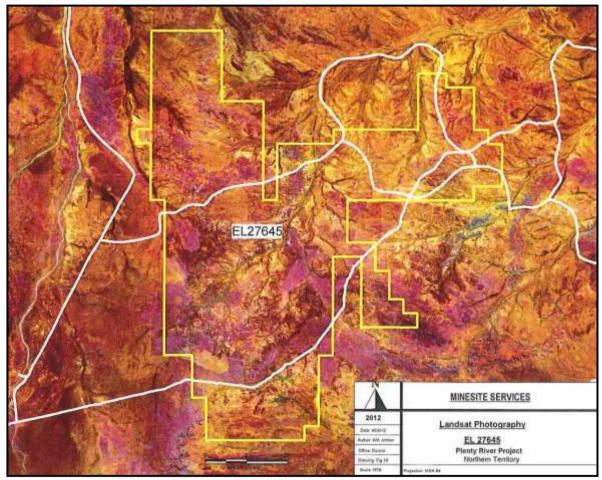
Field Studies

Field work on the licence during the year consisted of 2 site visits by Mr A Jettner of Minesite Services and Mr P Harris of Stratus Resources for examination of sites of interest with the intention of planning future on ground exploration strategies. Work consisted of a ground magnetometer survey undertaken by A Jettner and K Flockhart in August 2012 over an area of interest located 13.5km southwest of the Delmore Downs Homestead. This area contained a sply fault from the Delny Shear Zone.

10. REMOTE SENSING

There were no remote sensing surveys done during the year. Included below is an image taken from the DME Strike dataset, LANDSAT 7.

The tiles are: Landsat 7 Run W2, Path 102, Row 75, Path 102, Row 76 Acquisition dates 1999.



(After DME Strike Dataset)

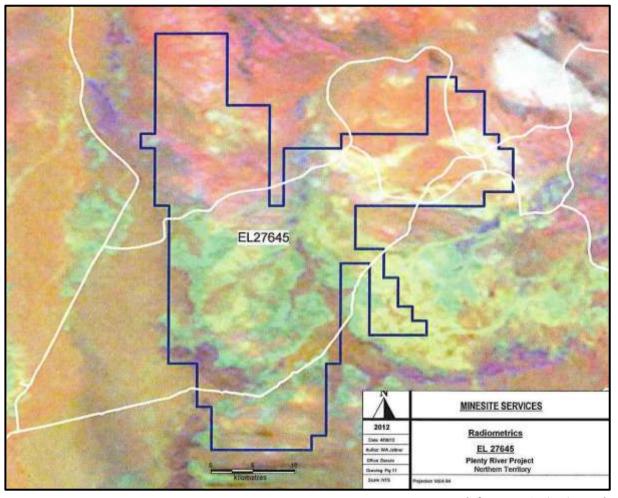
11. GEOPHYSICAL ACTIVITIES

Radiometrics

There have been no radiometric surveys conducted during the year.

As can be seen from the following image obtained from the DME STRIKE dataset, the radiometrics closely follow the modern drainage systems and the underlying geology.

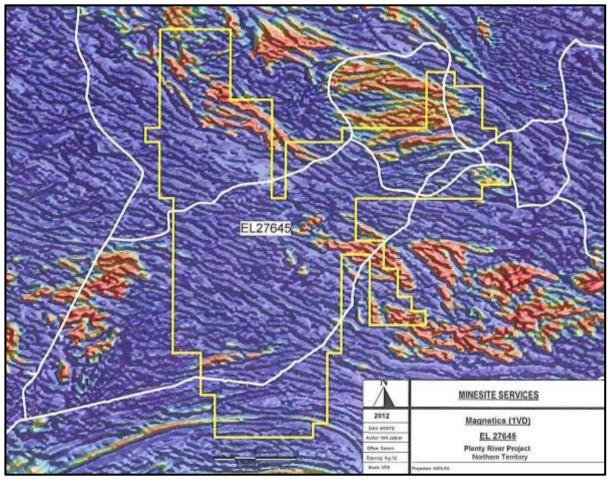
The Kanandra Granulite has elevated levels of thorium, whilst the Jinka domain has elevated levels of potassium. Minor uranium is shown as the blue areas of which none appears in the licence area.



(After DME Strike dataset)

<u>Aeromagnetics</u>

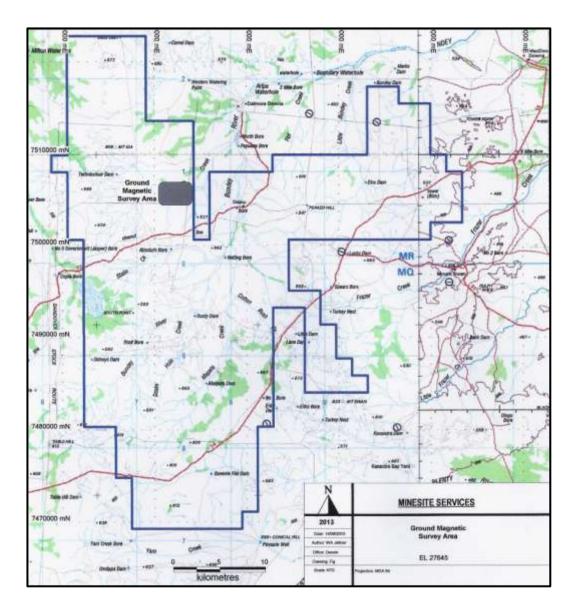
As can be seen from the image below (taken from the DME STRIKE dataset) the area encompassed by the Kanandra Granulite exhibits a generally higher magnetic signature than the two surrounding terrains to the north and south of this region. The bounding shear zones (Delny Shear Zone to the north and Entire Point Shear Zone to the south) can also be picked quite clearly along with a number of other shear zones that can be inferred by the disruption to the overall magnetic signature.



(After DME Strike dataset)

Ground Magnetics

During the year a ground magnetic survey was undertaken in an area located 13.5km to the southwest of the Delmore Downs Homestead. The survey area is located in the figure below. Unfortunately there were no magnetic anomalies worth follow-up work indicated by the survey. The survey contained 2650 data points and was undertaken by A Jettner and K Flockhart in August 2012.



12. SURFACE GEOCHEMISTRY

There were no surface geochemical samples taken by the titleholders during the year.

The following are recorded in the DME Strike dataset for the licence area.

- 36 rock chip samples
- 236 soil samples
- 11 whole rock samples
- 329 stream sediment samples
- 0 diamond indicator mineral samples

These sample results are not recorded in this technical report's dataset.

13. DRILLING

There were no drilling activities undertaken during the year.

There are no drill holes recorded on the DME drill database for the licence area.

14. GEOTECHNICAL STUDIES

There were no geotechnical studies conducted during the year.

15. RESOURCES AND RESERVE ESTIMATION

There were no resource or reserve estimations done during the year.

16. CONCLUSIONS AND RECOMMENDATIONS

From the field exploration conducted during the third licence year the author feels that further exploration is definitely warranted with base metal commodities and IOCG mineralisation models being targeted.

Initial exploration has indicated a problem relying on the stream sediment sampling and soil sampling of past workers. With the streams being flooded with sands derived from the abundant granites in the area the reliability of using this method without some form of calibration must be questioned. The same goes for soil sampling when done in areas that are not residual soils as the wind transported sands and soils render this exploration method ineffective where it is tried without understanding the nature of the regolith.

Further exploration is recommended; concentrating on geological mapping, rock chip sampling of available outcrop and soil sampling in areas of residual soils. Further ground magnetometer surveys will also be conducted over suitable areas of interest.

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