Annual and Final Report EL 26975
Period: 23/07/2009 to 13/09/2012
Barrow Creek Region, Northern Territory

Fertoz Ltd
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Barrow Creek Project

1:100 000 Mapsheets: 5654 Barrow, 5655 Crawford, 5754 Home of Bullion, 5755 Taylor
1:250 000 Mapsheets: SF6306 Barrow Creek

Commodity: Phosphate, Tin, Tantalite, REE

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Fertoz Ltd
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Abstract:

EL 26975 forms part of Fertoz Pty Ltd’s Barrow Creek Project which consists of 5 granted exploration licences (EL 27036, EL 26974, EL26975, EL26977) covering 2,769 km² in the Murray Downs area of the Northern Territory, see figure 2. The area is considered to be prospective for phosphate mineralisation. The presence of high grade igneous and metamorphic rocks in this area of the Aileron Province which have given rise to pegmatite intrusions make the area also prospective for Rare Earth Elements (REE).

Work conducted in the third year consisted of desk top studies and the submission of a Mine Management Plan for the Barrow Creek Project focussing initially on EL 26915.

Early in 2012 the Mine Management Plan was approved and a bond of $47,222 lodged with the Government. Fertoz does not have the funds to drill EL 26975 in 2013 and has made the decision to relinquish the tenement.

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1. **LOCATION**

EL 26975 is located some 190km to the north of Alice Springs on Stirling and Neutral Junction Stations. It is located within the 1:250K Mapsheets SF6306 Barrow Creek and the 1:100K Mapsheets 5654 Barrow, 5655 Crawford, 5754 Home of Bullion, and 5755 Taylor. The tenement is located between 21° 10’S to 21° 41’S and 133° 32’E to 134° 04’E.

![Figure 1. EL 26975 Location Map](image)

2. **TITLE HISTORY**
Mineral Tenure
Exploration Licence 26975 was granted to FSL World Holdings on 23rd of July 2009 for a period of 6 years, expiring on 22nd July 2015. Fertoz Ltd purchased the licence in late October 2010. This technical report is the Third Annual and Final Report and covers activities in the period 23/07/2011 to 22/07/2012, being the third year of tenure. The exploration licence consists of 265 graticular blocks (860km²). At the end of the second year an application of waiver of reduction was granted by the Department of Resources and so the area remained at 265 blocks.

EL 26975 forms part of the Barrow Creek Project which consists of 5 granted exploration licences covering a total area of 892 graticular blocks (2,769 km²).

Real Property
The licence is located within PPL 1103 “Stirling Station” which is owned by Stirling Station Pty Ltd (Stirling Station via Alice Springs NT 0872), “Neutral Junction Station” which is owned by Mr CO & Mrs E Frith (“Glenarden” Roma QLD 4455). The Tara Community which is freehold land on Neutral Junction Station is excluded from the licence.

Other Stakeholders
Other stakeholders in the licence area consist of the owners and occupiers of the Tara Community, a freehold allotment that was excised from the Neutral Junction pastoral lease.
3. **PHYSIOGRAPHY**

i. **Geomorphology**

The Barrow Creek area is characterised by sandy and alluvial plains with an average height of about 450 metres above sea level, which pass into hilly country and low ranges with a maximum relief rarely exceeding more than 200 m above the surrounding plain. The most important of these include the Davenport, Crawford, Osbourne and Dulcie Ranges.

ii. **Biogeography**

Sand plains are covered by thick grasses, particularly spinifex (Triodia), and sparse low shrubs and trees such as mallee, bloodwood, desert currajong, and witchetty bush. Major watercourses such as the Hanson and Sandover Rivers and Taylor Creek are lined by eucalyptus, Grevillea and various low trees and shrubs. Ridges support sparse shrubs, low trees and abundant Spinifex. Stands of mulga and mallee occur in some areas.

iii. **Hydrology**
Barrow Creek township has an annual rainfall of approximately 290 mm, which mostly falls between October and March. There are typically around 30 rainy days per year. The average annual evaporation (as measured at the nearest station in Alice Springs) is 2.9 m.

4. **ACCESS**

Access to the EL from Alice Springs is 190km north via the Stuart Highway to Barrow Creek. The licence covers an irregular shape and consists of some 265 graticular blocks having an area of 860km$^2$. The licence measures approximately 70km in length and is aligned northwest-southeast and is located just to the east of Barrow Creek.

Access around the licence area is relatively slow with few fence lines and station tracks. Large areas of granite and granite derived sands in the licence also hamper access throughout the licence. Heavy stands of eucalypt and acacia species make traversing the terrain off road impossible in many areas.

5. **GEOLOGICAL SETTING**

Fertoz’s Barrow Creek Project consists of five granted tenements, totalling 2,769 km$^2$. The project lies along the margin between the Palaeoproterozoic to Mesoproterozoic Tennant Creek Inlier to the north and the Aileron Province to the south. These are overlain by Cambrian to Palaeozoic
sediments of the Georgina and Wiso Basins in a geological setting that is interpreted to be prospective for phosphate.

Significantly, the Aileron Province hosts a variety of other commodities including:
- metamorphosed volcanogenic massive sulphide and carbonate replacement lead-zinc-copper
- iron-oxide copper-gold
- orogenic gold
- tungsten
- tin and tantalum,
- mafic hosted nickel-copper
- hypothermal uranium
- mafic-hosted vanadiferous magnetite.

1. Regional Geology

EL 27036 is located within the Aileron Province adjacent to an outcropping section of the Georgina Basin. It also contains a major northwest to south east trending structural corridor which contains the Stirling fault. The Aileron Province is a poly-deformed and metamorphosed basement terrain along the southern margin of the North Australian Craton. It contains metamorphosed clastic sediments, meta volcanic rocks, calc-silicate rocks, dolerite, mafic rocks and granites. It is unconformably overlain by the Ngalia, Amadeus, Murraba, Georgina and Eromanga basins. It has a largely faulted relationship with the Warumpi and Irindina Provinces and represents a transitional relationship with the Tanami Region. The Aileron Province hosts a variety of economic commodities including metamorphosed VMS and carbonate replacement Pb-Zn-Cu, iron-oxide Cu-Au, orogenic Au, W, Sn, Ta, mafic hosted Ni-Cu, hypothermal U and is a major exploration target for base metals, Ni-Cu, uranium, mafic-hosted vanadiferous magnetite and remains largely unexplored, (Scrimgeour 2003).
ii. **Licence Geology**

EL 26975 consists predominantly of granites with the greywackes, siltstone, shales, schists and gneiss', of the Lander Rock Beds occurring between outcrops of granite. These rocks are part of the Aileron Province, which is a poly-deformed and metamorphosed basement terrain along the southern margin of the North Australian Craton.

In the southern part of the licence there are outcrops of the Palaeozoic Arumbera Sandstone and other lithic sediments.

The area of interest occurs within and adjacent to the boundary of the Georgina Basin. The Arthur Creek Formation is the target rock unit in this locality as it represents the calcareous unit deposited in the Cambrian. This Formation has a lower anaerobic limestone and an upper aerobic limestone which represents near shore conditions. This aerobic limestone unit is fossiliferous with phosphatic occurrences throughout the region. The presence of high grade igneous and metamorphic rocks in this area of the Aileron Province which have given rise to pegmatite intrusions make the area prospective for Rare Earth Elements (REE).
6. **EXPLORATION AND MINING HISTORY**

**Exploration**

Previous exploration in the regional area has located a large number of pegmatites, leading to the name the Barrow Creek Mineral Field. There have also been a number of companies exploring for base metals concentrating on the Paleoproterozoic Bullion and Ledan Schists. As the Bullion Schist hosts the mineralisation at the nearby Home of Bullion Mine, the largest producer of copper in the area, it has been investigated by several explorers for both copper and gold. Exploration has been hampered by coverings of large areas by Cainozoic sediments, predominantly uncemented aeolian sands and dunes.

The diamond explorers have also examined the area in the last decade without success. The area has been prospective for base metals and igneous associated tin, tantalite, and wolfram deposits for a long time as evidenced by the list of exploration titles below. The gold values obtained at the nearby Home of Bullion mine have led to a systematic search for gold in this area.
### Table 1: Historical ELs and Open File Reports

<table>
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There are no Department of Resources recorded historical mines or prospects within the licence.
7. **EXPLORATION RATIONALE**

Barrow Creek Project comprises of 5 tenements (EL27036, EL26975, EL26977, EL26974, EL26915) is located in the Barrow Creek area on the edge of the Georgina and Wiso Basins 300km North of Alice Springs. Numerous phosphate deposits have been found along the basin margins (Lucy Creek, Ammaroo) where Middle Cambrian sediments occur at shallow depths.

Tenements are positioned in locations at the edge of the Georgina and Wiso basins which are highly prospective for phosphate occurring at shallow depths.

250k Geological maps of the area show Middle Cambrian units outcropping in some areas within tenements or beneath shallow cover. Regional structures cut the area and may uplift sections of Middle Cambrian sediments.

Tenements are easily accessed from the Stuart highway with a number of station tracks outlined on the 250 Topography allow access to a number of areas.

The presence of high grade igneous and metamorphic rocks in this area of the Aileron Province which have given rise to pegmatite intrusions make the area prospective for Rare Earth Elements (REE).

8. **EXPLORATION INDEX MAP**

No exploration index map has been constructed for EL26975.

9. **GEOLOGICAL ACTIVITIES**

**Office Studies**
During the year a broad scale literature survey was conducted on the whole of the Barrow Creek Project area (5 ELs), which consisted of examining previous explorers data as submitted to the Department of Resources as well as current thinking on phosphate mineralising systems in the Region. The conclusion was that priority should be given to exploring EL 26915 due to its proximity to recent phosphate discoveries by Rum Jungle Resources (ASX Announcement 27 June 2011) and NUPower Resources (ASX Announcement 3 and 24 July 2012).

**Field Studies**
No field work was done during the year.

10. **REMOTE SENSING**

There were no remote sensing surveys done during the year. Included below is an image taken from the Department of Resources Strike dataset, LANDSAT 741.
11. **GEOPHYSICAL ACTIVITIES**

There were no geophysical activities conducted on EL 27036 during the year.

**Radiometrics**
There have been no radiometric surveys conducted during the year.
Included below is an image taken from the Department of Resources Strike dataset, Ternary Radiometrics.
Figure 9. Radiometrics

**Magnetics**

There were no Magnetic surveys done during the year. Included below is an image taken from the Department of Resources Strike dataset, Magnetics TMI. Red on the image illustrates basement or magnetic highs.
12. SURFACE GEOCHEMISTRY

There were 128 surface geological samples taken in 2011. The locations and sample results are included with this technical report as Appendix 2. Figure 11 below shows the sample locations within EL 26975 while Figures 12 to 14 show the results for Neodymium, Tin, Tantalum and Nobium respectively.

High Neodymium values were returned over a variety of locations within the EL. Interestingly the large pegmatite located to the southeast of the Neutral Junction homestead indicated a wide range of REE values, some of which were anomalous. These values may be considered to be indicative of Rare Earth Element anomalism.

There were a number of interesting tin values returned from the rock chip sampling. Anomalous results were returned from several of the areas sampled and warrant follow-up work in the future.

There were anomalous tantalum results returned from one of the pegmatites sampled. Tantalum comes in two forms a tantalum-rich type, called tantalite and a niobium-rich type, called columbite. The map above indicates one tantalite pegmatite to follow-up on in the next year.
Figure 11. Sample locations
Figure 12. Neodymium Values
Figure 13. Tin Values
Figure 14. Tantalum Values
The map above indicates that the pegmatite showing anomalous tantalite also contains anomalous columbite. Minor indications of columbite are also present at the large pegmatite body to the south-east of the Neutral Junction Homestead.
13. **DRILLING**

There were no drilling activities undertaken during the year for any of the tenements comprising the Barrow Creek Project (EL 26915, EL 27036, EL26974, EL26975, EL26977).

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

Drilling activities were initially planned for EL 26915 and then subsequently deferred due to the onset of the wet season. The Mine Management Plan for the Barrow Creek Project was approved by the Northern Territory in December and a bank guarantee (Ref: 0657-01) of $47,222 was lodged with the Minister of Primary Industry, Fisheries and Resources in early February.

On 8th February Fertoz signed a Heads of Agreement with NuPower Resources Ltd to allow NuPower Resources Ltd to enter into a Farm-in and Joint Venture Agreement for Exploration Licence EL26915. As part of the Agreement NuPower Resources Ltd has committed to meet the Northern Territory Covenant expenditure requirements once the Farm-in and Joint Venture Agreement contract is signed. This occurred on 3rd May 2012.

Fertoz has withdrawn the Mine Management Plan and decided not to drill EL 27036.

14. **GEOTECHNICAL STUDIES**

Geotechnical studies conducted during the year consisted of a literature survey and data collection study covering the whole of the Barrow Creek Project area.

15. **RESOURCE AND RESERVE ESTIMATION**

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

16. **CONCLUSIONS AND RECOMMENDATIONS**

The exploration work done to date has not successfully explored EL 26975 for the presence of phosphate mineralisation. What limited work that has been done has proved that the transported soils effectively are geochemically blanketing the underlying rocks.

The only effective way to examine the underlying strata is by drilling, firstly using either Aircore (recommended) or Reverse Circulation methods.

Fertoz does not have the funds to carry out drilling in the next twelve months. It has given priority in the Barrow Creek project to EL 26915 which it has entered into a joint venture with NuPower Resources. While the tenement shows potential for Rare Earth Elements, it is not a focus for Fertoz. Consequently Fertoz has decided to relinquish EL 26975 and carry out no further exploration.
17. REFERENCES

Open File Company Reports


RB Mining, (1981), Barrow Creek Ta, Sn, W Project, Barrow Creek, RB Mining unpublished company report, CR1981-0327.


Published Reports


**Company Reports**


Draper JM (2011), Annual Report EL 27036, Period 23/07/10 to 22/7/11, Minesite Services Australia Technical Report