ANNUAL REPORT
EL 26915
PERIOD: 8/04/2011 TO 7/04/2012
BARROW CREEK REGION, NORTHERN TERRITORY

FERTOZ Pty Ltd
40 Blagowah St
Wakerley
QLD 4154

Barrow Creek Project
1:100 000 Mapsheets: 5855 Murray Downs, 5755 Taylor, 5854 Lurapulla
1:250 000 Mapsheets: SF5306 Barrow Creek
Commodities: Phosphate

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Minesite Services Australia
May 2012
Abstract:

EL 26915 forms part of Fertoz Pty Ltd’s Barrow Creek Project which consists of 5 granted exploration licences covering 2,890km$^2$ in the Murray Downs area of the Northern Territory, see figure 2. The area is considered to be prospective for phosphate mineralisation. Work conducted in the third year consisted of a number of orientation soil sampling lines throughout the EL. The results of this sampling were uniformly negative.

Early in 2012 the Mine Management Plan was approved and a bond of $47,222 lodged with the Government. Also a joint venture Agreement was completed with NuPower Resources. They are committed to undertaking a drill exploration programme in 2012.

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1. LOCATION

EL 26915 is located some 260km to the north of Alice Springs on Murray Downs and Ammaroo Stations. It is located within the 1:250K Mapsheet SF6306 Barrow Creek and the 1:100K Mapsheets 5855 Murray Downs, 5755 Taylor and 5854 Lurapulla and is located between 21° 18’S to 21° 36’S and 134° 28’E to 135°E.
2. TITLE HISTORY

Mineral Tenure
EL 26915 was granted on 8/04/2009 and this technical report is the Third Annual Report which covers activities in the period 8/04/2011 to 7/04/2012, being the third year of tenure. The licence has an area of 236 graticular blocks (744 km²). At the end of the second year an application of waiver of reduction was granted by the DoR and so the area remains at 236 blocks until the end of the fourth year when a mandatory reduction of 50% is due. EL 26915 forms part of the Barrow Creek Project which consists of 5 granted exploration licences covering a total area of 892 graticular blocks (2,890km²)
Real Property
EL 26915 is located on 2 separate real property parcels, these are:
PPL 1139 “Murray Downs Station” which is owned by L & S Nominees Pty Ltd (PO Box 2311 Alice Springs NT 0871), and PPL 1105 “Ammaroo Station” which is owned by Ammaroo Pty Ltd (PMB 39 Alice Springs NT 0872)

Other Stakeholders
There is a large area of Aboriginal freehold land “Utopia” located immediately to the south of the licence and this is owned by the Alyawarra Aboriginal Land Trust.
3. PHYSIOGRAPHY

i. Geomorphology
The geomorphology of the licence area is dominated by sand plains with rare low hills. There are no creeks located within the licence area but immediately to the south creeks appear as narrow shallowly incised stream beds.

ii. Biogeography
The vegetation in the licence area may be classified as a tall shrubland containing Triodia pungens (Soft Spinifex), Plectrachne schnizli (Curly Spinifex) hummock grassland with an Acacia tall shrubland overstorey.
Other species present in the overstorey are Acacia lysiphloia (Turpentine) and Acacia aneura (Mulga).

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 (turkeys nests) or to sealed tanks and dispensed to the cattle via regulated cattle troughs.
The ground water regime is described here:
The groundwater of the Murray Downs area consists of locally fractured rocks based around known shear zones. Bores drilled in this area generally give flow rates greater than 0.5L/s and below 5L/s and salinities greater than 1500mg/L.
4. ACCESS

Access to the EL from Alice Springs is 460km north via the Stuart Highway to the Ali Curung turnoff, then to the Murray Downs Homestead. From the homestead another 50km east to a north-south fenceline on the Murray Downs/Ammaroo Station boundary. Southwards along this fenceline for 24km lies the eastern portion of exploration licence 26915. The licence covers an irregular shape and consists of some 236 graticular blocks having an area of 800km\(^2\). Access around the licence area is slow with very few fence lines and station tracks. The licence is covered by sands and vegetation consists of gidgee, mulga, acacia with very few eucalypts. Groundcover is spinifex. The dense vegetation makes vehicular access extremely difficult and slow.
5. GEOLOGICAL SETTING

Exploration Licence 26915 lies on the southern flank of the Palaeoproterozoic to Mesoproterozoic Hatches Creek Group where it is overlain by the Palaeozoic Georgina Basin Sequence. The basin margin areas of the Georgina and Wiso Basins are seen as areas highly prospective for the development of phosphate ore.

The oldest rocks exposed in the licence are the Coulter's Sandstone member of the Wauchope Subgroup of the Hatches Creek Group. The Coulter's Sandstone is described by the Northern Territory Geological Survey (NTGS) as “quartz arenite, subordinate feldspathic, lithic, kaolinitic arenite and siltstone.

The outcropping Georgina Basin Sequence within the licence area is represented by the Middle to late Cambrian Chabalowe Formation. The NTGS describes the unit as: thinly bedded quartz arenite and dolomite. Dolostone and siltstone, stromatolitic in places. The surface exposures are most commonly ferruginous sandstones and cherty rubble.

Underlying the Chabalowe Formation but covered by transported sands and soils is the Arthur Creek Formation which is our target lithology. This Formation does not outcrop in the licence area but immediately to the east hosts the Barrow Creek 1 phosphate deposit of Rum Jungle Resources.
i. Regional Geology

EL 26915 is located primarily within the Georgina Basin. It was applied for to cover a section of the Georgina Basin margin to allow for exploration for phosphorite occurring in the middle Cambrian limestones of the Georgina Basin, specifically the Upper and Lower Arthur Creek Formation units.

The Arthur Creek Formation is present on the eastern side of the Dulcie Syncline, a major NW-SE trending trough but is thought to laterally tongue out to the west. Further work to track and elucidate its equivalents is required.

A small part of the licence area is located in the Davenport Province as shown by the figure below. This consists predominantly of undifferentiated Proterozoic metasediments and the Andegarra Formation.
ii. Licence Geology
The outcrop geology of EL 26915 consists predominantly of sands derived from the underlying Cambrian geology. Immediately to the northeast of the licence is a SE plunging syncline containing outcropping Chabalowe Formation at its core. This would tend to indicate that the area to the southeast of these outcrops would be a good place to explore for the Arthur Creek Formation under the sands.
In this area the Arthur Creek Formation consists of a Lower Unit which contains a foetid pyritic-carbonaceous black shale and laminated dolostone sequence overlain by a Upper unit containing an aerobic sequence containing dolostone and limestones. It is the contact between these two units that forms the target horizon for the current exploration program.
6. **EXPLORATION AND MINING HISTORY**

**Exploration**

<table>
<thead>
<tr>
<th>Licence No</th>
<th>Licence Holder</th>
<th>Tenure Period</th>
<th>Open File Company Reports</th>
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<tbody>
<tr>
<td>EL 23383</td>
<td>Astro Diamond Mines</td>
<td>22/04/2003 - 19/03/2009</td>
<td>CR2004-0333</td>
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</tbody>
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Exploration activities have been conducted in the licence area for a number of years by several exploration companies, a brief summary of each is presented here:

**AP 2192**
Vam Ltd explored their AP 2192 as part of a much bigger program involving 5 other Authorities in the Hatches Creek – Elkeda area. There was no field work done within the area of EL 26915.

**AP 2742**
In the early 1970s Kawanee Australia explored in the area as their Crawford Range and Taylor Well Authorities. Activities concentrated on the Prospect D which is located to the west of EL 26915. There is no mention of activities within the area of EL 26915.

**EL 6113**
CRA Exploration explored EL 6133 for diamonds in the period 1988 to 1991. Seven samples were taken by CRAE within EL 26915, all returned negative results for diamonds and indicator minerals.

**EL 23383**
Astro Diamonds, (part of the Gutnick Group of Companies) explored EL 23383 between 2003 and 2009 for diamonds. Limited work failed to locate any diamonds or diamondiferous rocks.
EL 24208
This licence was granted to J Benger and R Cleaver in 2004. They did limited field work due to the difficulties of access and surrendered the licence the following year.

**Table 2. Historical Mines and Prospects**

<table>
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<tr>
<th>Mine/Prospect Name</th>
<th>Modat Site Id</th>
<th>Mineral Field</th>
<th>Commodity</th>
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There are no DoR recorded historical mines or prospects within the licence area.
7. EXPLORATION RATIONALE

EL 26915 forms an integral part of the Barrow Creek Project which consists of 5 exploration licences having an aggregate area of 2,890km$^2$. This licence occurs as the most eastern portion of the Project and covers sediments of Proterozoic to Cambrian ages, including the Lower Cambrian Arthur Creek formation which is our target lithology in this region. In this area the Arthur Creek Formation consists of a Lower Unit which contains a foetid pyritic-carbonaceous black shale and laminated dolostone sequence overlain by a Upper unit containing an aerobic sequence containing dolostone and limestones. It is the contact between these two units that forms the actual target horizon for the current exploration program.

8. EXPLORATION INDEX MAP

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

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. EL 26915 is an integral part of this project area and is included in this ongoing study. Data as presented in these reports is in the process of being collated into a GIS database.

Field Studies

Field work on the licence during the year consisted of 2 site visits to the licence, the first being a recon visit to liaise with the landowner and gain an appreciation of the geology, vegetation and infrastructure of the licence area. The second was a geochemical sampling orientation survey, primarily to see if we could locate the edge of the cover sequence geochemically through the transported soils. Unfortunately this proved to be a failure as the transported soils proved to be opaque to this sampling methodology.
10. REMOTE SENSING

There were no remote sensing surveys done during the year.

Included below is an image taken from the DoR Strike dataset, LANDSAT 7. The tile is: Landsat 7, Run W2, Path 102, Row 75, Acquisition date 2000.
11. GEOPHYSICAL ACTIVITIES

There were no geophysical activities conducted on EL 26915 during the year.

Radiometrics
There have been no radiometric surveys conducted during the year. As can be seen from the following image obtained from the DoR STRIKE dataset, the radiometrics closely follow the modern drainage systems and the underlying geology.
Magnetics
As can be seen from the image below (taken from the DoR STRIKE dataset) the area encompassed by exploration licence contains a stippled hue which reflects the higher magnetic susceptibility of the basinal sediments extending under cover to the southwest. Thus from this the edge of the outcropping Cambrian sediments may be interpreted.
The target lithology is the Lower Cambrian Arthur Creek Formation which will occur under the cover sequence indicated by the magnetics.
12. SURFACE GEOCHEMISTRY

There were 102 surface geochemical samples taken during the year. The locations and sample results are included with this technical report as Appendix 2.

The following are recorded in the DoR STRIKE dataset for the licence area.

- 0 rock chip samples
- 0 soil samples
- 0 whole rock samples
- 0 stream sediment samples
- 7 diamond indicator mineral samples

These sample results are not included in this report.
13. DRILLING

There were no drilling activities undertaken during the year. There are no drill holes recorded on the DoR drill database for the licence area.

Drilling activities were initially planned and then subsequently deferred due to the onset of the wet season. The Mine Management Plan 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.

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. RESOURCES 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 26915 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.

The joint venture Agreement with NuPower Resources and the approval of the Mine Management Plan and lodgement of a $47,222 bond with the NT Govt will enable exploration to be undertaken in the second half of 2012.

It is the authors recommendation that such drilling activities occur as a matter of priority.
17. REFERENCES

OPEN FILE COMPANY REPORTS


PUBLISHED REPORTS


