Annual Report
EL 26995
Katherine Region, Northern Territory

Fertoz Pty Ltd
19 Livingston Ave.
Baulkam Hills
NSW 2153

Katherine Project

1:100 000 Mapsheets: 5368 Manbullo, 5468 Maranboy, 5467 Elsey, 5367 Dry River
1:250 000 Mapsheets: SD5309 Katherine, SD5313 Larrimah
Commodity: Phosphate

WA Jettner B.Sc (Geol.)
Minesite Services Australia
November 2010
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1. **EXECUTIVE SUMMARY**

In the latter part of October 2010 EL 26995 was purchased by Fertoz Pty Ltd from the previous titleholders FSL World Holdings Pty Ltd. The EL consists of 491 graticular blocks, (1620km²) located in the Katherine Region of the Northern Territory. The area of interest occurs within the postulated boundary of the Daly Basin and the new titleholders consider the licence area to be favourable for the discovery of phosphate deposits of a similar nature to that found in the Georgina Basin to the south-east of this locality.

Fertoz Pty Ltd has commissioned Minesite Services Australia to report on this and other licences purchased as part of the newly purchased tenement package which consists of 17 granted ELs and 12 EL applications.

2. **CONTACT DETAILS:**

**Tenement Holder:**
**Fertoz Pty Ltd**
19 Livingston Ave
Baulkham Hills
NSW 2153
Contact: Mr James Chisholm
Email: chisholmj@bigpond.com

**Tenement Manager:**
**Complete Tenement Management**
PO Box 2515
Darwin NT 0801
Contact: Mrs Wendy Jettner
Tel: 08 8981 1880
Email: contact@completetenement.com.au

**Geological Consultant:**
**Minesite Services Australia**
19 Flametree Cct
Rosebery NT 0832
Contact: Mr Andrew Jettner
Email: andrewjettner@yahoo.com.au
3. **INTRODUCTION**

EL 26995 was granted on the 3rd of October 2009 for a period of 6 years and this annual report covers work done in the first licence year (2009-2010). During this period there was effectively no field work done on the licence. Fertoz Pty Ltd has commissioned the author to do the desktop study that forms the basis of this technical report. The licence consists of 491 graticular blocks and is located some 20km south east of Katherine NT. This exploration licence along with ELs 26997 and 27008 form a total area of 4,118 km² for the Katherine Project Area. The licence area is located to the south of Katherine in the Daly Basin, which is host to the Cambrian Tindal limestone. It is this unit that has the greatest potential in the area to host an economic phosphorite deposit.

![Location Map](image)

*Figure 1. EL 26995 Location Map*
4. **Tenure**

a. **Mining**

Exploration Licence 26995 was granted to FSL World Holdings on 3rd of September 2009 for a period of 6 years, expiring on 2nd September 2015. Fertoz Pty Ltd purchased the licence in late October 2010. The exploration licence consists of 491 graticular blocks (1620km²) and is located within the Katherine and Larrimah 1:250 000 mapsheets.

b. **Real Property**

The licence is located within PL 525 “Manbulloo Station” which is owned by the Consolidated Pastoral Company Pty Ltd (Level 3, 54-58 Park St, Sydney NSW 2000), and PL 943 “Lakefield Station” which is owned by ME and GL Riggs (PO Box 220 Katherine, NT 0851).

c. **Other Stakeholders**

Other stakeholders in the licence area consist of the Jaywon peoples who are the identified traditional owners of this area. They are located to the east of EL 26995 on a large freehold landholding.

![Real Property Tenure](image.png)

*Figure 2. Real Property Tenure*
5. **LOCATION AND ACCESS**

EL 26995 is located some 20km to the south of Katherine, lying between the Stuart Highway to the east and the Victoria Highway to the west. Access to the licence area is south from Katherine along the Stuart Highway thence by Lakefield Station tracks and fence lines around the eastern part of the licence area. Alternate access is via the Victoria Highway thence on Manbulloo Station tracks throughout the western part of the licence. Access is restricted by the deeply incised King River, whose drainage system divides the Manbulloo Station into a number of discrete areas with limited choices of crossing the system.

![Map of EL 26995 Access](image)

**Figure 3. EL 26995 Access**
6. **REGIONAL GEOLOGY**

Exploration Licence 26995 is located to the south of Katherine in the Daly Basin, a Cambro-Ordovician sedimentary basin resting unconformable on Lower Proterozoic basement and consisting of the stratigraphy listed below.

**CAINozoic Quaternary**

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alluvium</td>
<td>Sands, silts and clays that occur in drainage channels</td>
</tr>
<tr>
<td>Unconsolidated Sands</td>
<td>Sands and silts occurring in major river channels</td>
</tr>
<tr>
<td>Colluvium</td>
<td>Sheet wash deposits in the head waters of drainage systems</td>
</tr>
</tbody>
</table>

**Tertiary-Quaternary**

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regolith</td>
<td>Skeletal soils developed in non active erosion and drainage areas</td>
</tr>
<tr>
<td>Laterite</td>
<td>Remnant laterised cretaceous sediments</td>
</tr>
</tbody>
</table>

**MESOZOIC**

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cretaceous</td>
<td></td>
</tr>
<tr>
<td><strong>MULLAMEN BEDS</strong></td>
<td></td>
</tr>
<tr>
<td>Sandy claystone, siltstone, sandstone covers large areas of EL 26995, forms an upland with incised windows caused by the King River in this area.</td>
<td></td>
</tr>
</tbody>
</table>

**REGIONAL UNCONFORMITY**

**CAMBRIAN - ORDIVICIAN**

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daly River Group</td>
<td></td>
</tr>
<tr>
<td>Ooloo Dolostone</td>
<td>Ooid and stromatolitic dolostone, dolomitic sandstone</td>
</tr>
<tr>
<td>Jinduckin Formation</td>
<td>Dolomitic-siliciclastic siltstone, dolostone, dolomitic quartz sandstone</td>
</tr>
<tr>
<td>Tindal Limestone</td>
<td>Bioclastic, onkoid and stromatolitic limestone, minor mudstone, basla maroon siltstone</td>
</tr>
<tr>
<td>Antrim Plateau Volcanics</td>
<td>Massive basalt valley fill flows which pinch out against basement highs</td>
</tr>
</tbody>
</table>

**REGIONAL UNCONFORMITY**

**MIDDLE PROTERozoic**

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katherine River Group</td>
<td></td>
</tr>
<tr>
<td>Komblogie Formation</td>
<td>Medium to coarse grained arenites containing rare interbeds of siltstone and the two Volcanic Members below</td>
</tr>
<tr>
<td>McAddens Creek Volcanic Member</td>
<td>Chloritised andesite and basalt, minor tuff</td>
</tr>
<tr>
<td>Henwood Creek Volcanic Member</td>
<td>Amblygoidal andesite and basalt.</td>
</tr>
</tbody>
</table>
As can be seen from the map below the postulated south eastern margin of the Daly basin, as defined by the eastern-most extent of the Tindal limestone occurs much further east than is implied by the map. This is because the Elsey Lime quarry is to be found in the Tindal Limestone to the east of EL 26995 near where the MacArthur Basin outcrops. In this locality the limestone is exceptionally pure indicating a different sedimentation cycle than for the rest of the basin. An area well worth pursuing in the future.

Figure 4. Regional Geology
7. **Licence Geology**

EL 26995 covers the easternmost extents of the Daly Basin in the area south of Katherine. The soils of the EL are underlain by sediments of the Mullamen Beds which consist of siltstone, sandstone and conglomerate and represent shallow marine fluvial and terrestrial conditions in the Cretaceous. These unconformably overlie the Cambrian Daly River Group. This sequence forms the majority of the Cambrian sediments in the Daly River Basin. The Daly River Group consists of the Cambro-Ordovician Jinduckin Formation which conformably overlies the Cambrian Tindal Limestones which in turn overlies the Early Cambrian Antrim Plateau Volcanics which unconformably overlies the Middle Proterozoic Katherine River Group. The Jinduckin Formation outcrops in the banks of the King River which flows through the exploration licence and incises the overlying Cretaceous sediments.

The Jinduckin Formation consists of maroon-green dolomitic-siliciclastic siltstone containing dolomitic sandstone-siltstone interbeds, dolostone and dolomitic quartz sandstone, probably representing a peritidal depositional environment.

The target formation in this area is the Tindal Limestone which is a massive grey crystalline limestone, containing minor flaggy chert and banded limonitic fine limestone containing fossiliferous intervals.

The Tindal Limestone in the Daly Basin is slightly phosphatic (generally less than 1% P$_2$O$_5$) but may contain up to 2%+ P$_2$O$_5$; the successful conclusion to this exploration program will be the location of a site where conditions were suitable for the concentration of this phosphorite into an economic accumulation.

The Tindal Limestone forms the basal unit of the Daly Basin and is the target unit for phosphate mineralisation. The current exploration model uses all of the components of the successful 1960-70s models and combines them with data generated by a variety of workers since that time.

Nowhere in this licence does the Tindal limestone outcrop. Tindal Limestone has been mapped to the east of this licence, where it can be observed in incised drainage lines of the easterly flowing Elsey Creek. In this area very pure Tindal limestone is mined for the production of quicklime and agricultural lime by Northern Cement and this area may in fact represent the eastern boundary of the Daly Basin.
Figure 5. EL 26995 Outcrop Geology
8. Previous Exploration

Previous phosphate exploration in the licence area has been conducted by the Continental Oil Company of Australia’s Plant Foods Exploration division in 1967 to 1968. During this period the Daly Basin was examined at a number of localities in the area south of Katherine and in the Daly River-Ooloo area.

The MD Campbell, who was conducting investigations, concluded that although the Tindal Limestone was the most likely host for a phosphate deposit, the area that they were investigating was not in their opinion conducive to the formation of such a deposit. Their work showed that there were appreciable accumulations (up to 2% P$_2$O$_5$) to be found in the Tindal Limestone. This author sees the Tindal Limestone as an indicator of the presence of phosphorite in the system and hence as a pathfinder towards the potential location of an economic accumulation of phosphorite in the Daly Basin.

There is also much more information available on the geology of the Daly Basin and much better access to larger areas than there were 40+ years ago.

The area has had all of the major players in the Australia-wide diamond search examine the area as part of each of their respective strategies, BHP (1984-86), Stockdale Prospecting (1988-94), CRA Exploration (1994), and De Beers Exploration (2002-03), all with no success.

Normandy Exploration conducted a search for base metals in the area from 1995 to 1996 based around the Middle Velkerri black shale of the Roper Group and the Mallapunyah Fault. There was no real exploration conducted on EL 8462, which underlay the current EL 26995, their main thrust was to the south east of this area. Normandy relinquished their EL 8462 in 1996.

**EL 26995**

<table>
<thead>
<tr>
<th>Licence No</th>
<th>Tenure Period</th>
<th>Open File Company Reports</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>CR1967-0012</td>
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<td></td>
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<td>CR1968-0017</td>
<td></td>
</tr>
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<td>EL 4447</td>
<td>20/01/84 – 19/01/86</td>
<td>CR1985-0079</td>
<td>BHP Ltd</td>
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<td></td>
<td>CR1985-0083</td>
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<tr>
<td></td>
<td></td>
<td>CR1986-0154</td>
<td>BHP Ltd</td>
</tr>
<tr>
<td>EL 4448</td>
<td>20/01/84 - 25/06/84</td>
<td>CR1984-0185</td>
<td>BHP Ltd</td>
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<td>EL 5361</td>
<td>25/03/88 - 24/03/94</td>
<td>CR1989-0235</td>
<td>Stockdale Prospecting Ltd</td>
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<td>CR1990-0270</td>
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<td>CR1990-0324</td>
<td>Stockdale Prospecting Ltd</td>
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<td>EL 8153</td>
<td>- 5/09/94</td>
<td>CR1994-0882</td>
<td>CRA Exploration Pty Ltd</td>
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<tr>
<td>EL 8449</td>
<td>25/08/95 - 24/08/96</td>
<td>CR1995-0922</td>
<td>Normandy Exploration</td>
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<td></td>
<td>CR1996-0819</td>
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<td>CR1995-0922</td>
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<td>CR2003-0423</td>
<td>DeBeers Exploration Aust</td>
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<td>EL 23066</td>
<td>10/10/02 – 01/09/03</td>
<td>CR2003-0423</td>
<td>DeBeers Exploration Aust</td>
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</tbody>
</table>

Table 1. Historical Exploration Reports
Figure 6. Historical Exploration Licences

a. **Field Work**
There was no field work done on the licence in the first year of tenure.

b. **Desktop Surveys**
Office work in the first year of tenure consisted of desktop surveys covering the various topics outlined in this technical report. Primarily they consisted in examining historical exploration in the area and cross-referencing this where possible with the current thinking on phosphate deposition in Australia to generate valid exploration targets for follow up in the second year of tenure.

c. **Exploration Targeting**
Exploration models target organic-rich carbonate rocks on depositional basin margins where upwelling and favourable palaeogeography would have bought cold phosphate-rich waters onto the shelf. Francolite formation takes place close to the sediment-water interface during times of low overall sedimentation and is intimately connected with the dynamics of diagenetic redox fronts, (Dunster, Kruse et al 2007).

d. **Prospect Generation**
Prospect generation would be dependant on the location of the basin margins (probably using aeromagnetics) in the project area with the next step being examination of radiometrics for the location of subtle signatures that may indicate the presence of uranium associated with the phosphate due to substitution for Ca in the phosphorite crystal lattice. Follow up work on prospects generated by this model would be direct examination by drilling.

The proposed work program for the second year of tenure (2010-2011) will consist of the following:

Desktop surveys: acquisition of aeromagnetics and radiometrics for the licence area, generation of prospects by examination of these.

Site Orientation Visit: introduction and familiarisation to the property owners, exploration licence examination, preliminary examination of desktop targets, - 4 men, 2 vehicles, 3 days

First pass exploration program: rockchip survey, mapping activities, (incl assays) - 4 men, 2 vehicles, 5 days

Exploration Reporting – 1 man, 3 days

Second pass exploration program: follow up rock chip survey, drill program, (incl assays) – 4 men, 2 vehicles, 10 days

Exploration reporting – 1 man, 3 days

Preparation of the second annual report – 1 man, 3 days
11. **Expenditure Covenants**


The expenditure report for Year 1 (2009 – 2010) is included as Appendix 1 to this annual report.


The proposed expenditure for Year 2 is as follows:

- Site orientation visit $8,000
- First pass exploration program $25,000
- Exploration reporting $3,500
- Second pass exploration program $35,000
- Exploration reporting $4,500
- Annual report preparation $6,000

**Total Proposed Expenditure** $80,000
12. **REFERENCES**

Open File Company Reports


**Published Reports**

