Annual Report
EL 26997

Katherine Region, Northern Territory

Fertoz Pty Ltd
19 Livingston Ave.
Baulkam Hills
NSW 2153

Katherine Project

1:100 000 Mapsheets: 5268 Bowman, 5267 Willeroo, 5367 Dry River, 5368 Manbulloo
1:250 000 Mapsheets: DS5216 Delamere, SD5212 Fergusson River, SD5313 Larrimah, SD5309 Katherine
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 26997 was purchased by Fertoz Pty Ltd from the previous titleholders FSL World Holdings Pty Ltd. The EL consists of 284 graticular blocks, (930km²) located in the Katherine Region of the Northern Territory. The area of interest occurs within the 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  
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Contact: Mrs Wendy Jettner  
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**Geological Consultant:**
Minesite Services Australia  
19 Flametree Cct  
Rosebery NT 0832  
Contact: Mr Andrew Jettner  
Email: andrewjettner@yahoo.com.au
3. **INTRODUCTION**

EL 26997 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 284 graticular blocks and is located some 20km south west of Katherine NT. This exploration licence along with ELs 26995 and 27008 form a total area of 4,118 km$^2$ for the Katherine Project Area.

![Figure 1. EL 26997 Location Map](image-url)
4. Tenure

a. Mining
Exploration Licence 26997 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 284 graticular blocks (930km²) 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), PPL 1037 “Scott Creek Station” and PPL 1038 “West Matheson Station” which are owned by Mr & Mrs McLoughlin (PO Box 696 Katherine NT), PPL 1039 “East Matheson Station” which is owned by the Townsend Grazing Company (PO Box 1121 Katherine NT, Dry River Station which is owned by H & M Townsend and H & J Graham (PO Box 39352 Winnellie NT 0820) and Nenan Station which is owned by N Kostowski (PO Box 2297 Katherine NT).

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

EL 26997 is located some 30km to the southwest of Katherine, lying astride the Victoria Highway and to the east of it.

Access is via the Victoria Highway thence on station tracks throughout the licence. On Scott Creek, East and West Matheson stations the tracks are generally well maintained with lesser numbers of tracks and fences on the Dry River and Nenan Stations.

![Figure 3. EL 26997 Access](image-url)
6. **REGIONAL GEOLOGY**

Exploration Licence 26997 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**

Alluvium  Sands, silts and clays that occur in drainage channels
Unconsolidated Sands  Sands and silts occurring in major river channels
Colluvium  Sheet wash deposits in the head waters of drainage systems

**TERTIARY-QUATERNARY**

Regolith  Skeletal soils developed in non active erosion and drainage areas
Laterite  Remnant laterised cretaceous sediments

**MESOZOIC**

**Cretaceous**

MULLAMEN BEDS
Sandy claystone, siltstone, sandstone covers large areas of EL 26995, forms an upland with incised windows caused by the King River in this area.

**REGIONAL UNCONFORMITY**

**CAMBRIAN - ORDIVICIAN**

Daly River Group
Ooloo Dolostone  Ooid and stromatolitic dolostone, dolomitic sandstone
Jinduckin Formation  Dolomitic-siliciclastic siltstone, dolostone, dolomitic quartz sandstone
Tindal Limestone  Bioclastic, onkoid and stromatolitic limestone, minor mudstone, basalt and maroon siltstone

Antrim Plateau Volcanics  Massive basalt valley fill flows which pinch out against basement highs

**REGIONAL UNCONFORMITY**

**MIDDLE PROTEROZOIC**

Katherine River Group
Komblogie Formation  Medium to coarse grained arenites containing rare interbeds of siltstone and the two Volcanic Members below

McAddens Creek Volcanic Member  Chloritised andesite and basalt, minor tuff
Henwood Creek Volcanic Member  Amblygoidal andesite and basalt.
As can be seen from the map below the licence covers some of the easternmost outcrops of Tindal Limestone in the Daly Basin. The overlying Cretaceous Mullaman Beds form an upland plateau that is covered by skeletal soils and large areas of laterised Tertiary soils. These soils are moderately wooded and so can pose some problems to gain access where there is no development. This cover can make the exploration of the underlying Tindal Limestone difficult due to the necessity to drill through the Cretaceous to gain access to the Cambrian.
7. **Licence Geology**

EL 26997 covers the southernmost 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 fluviatile 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 eastern end of 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. The Tindal Limestone outcrops in the western half of the licence area.

The favoured site to locate a basin edge is in the south western corner of the EL and this will be our starting area of interest. In this area it is also hoped that the Antrim Plateau volcanics will not be present and so mask the subtle radiometric anomaly that will be the signature of a significant phosphate accumulation.
Figure 5. EL 26997 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% P₂O₅) 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.

Northern Cement also conducted exploration in the West Matheson area in the 1970s as part of their regional search through the Tindal Limestone looking for a pure limestone source for the production of quicklime. They did not find it in this area but located a source of the required purity some 100km further east.

### EL 26997

<table>
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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, firstly seeking the basin margins, then working outwards in a series of regional reconnaissance traverses.

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:

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12. References

Open File Company Reports


Published Reports


