Relinquishment Report    EL 26055
Barkly Region, Northern Territory

Fertoz Ltd
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QLD 4154

Barkly Project
1:100 000 Mapsheets: 6158 Wonarah, 6058 Dalmore
1:250 000 Mapsheets: SE5315 Alroy
Commodity: Phosphate

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1. **EXECUTIVE SUMMARY**

This report covers that portion of EL 26055 that was relinquished at the end of the fourth licence year (5/09/2012). The licence underwent a mandatory 50% reduction. The exploration work done to date has not successfully explored EL 26055 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 using Reverse Circulation methods. A detailed study has identified six areas prospective for phosphate, of which three are considered high priority. None of these are contained in the relinquished area.

2. **INTRODUCTION**

At the date of grant EL 26055 had an area of 499 graticular sub-blocks (1,590 km$^2$). A waiver was obtained at the end of the second year and with the end of the fourth licence year a mandatory reduction in area of 50% was undertaken leaving the licence with a new area of 244 graticular sub-blocks (778 km$^2$).

EL 26055 is part of the Barkly Project, a number of contiguous exploration licences (including ELs 27076, 26054, 29193 - 8) having a total area of 2,439 km$^2$ (after reductions) and located to east of Tennant Creek in the Northern Territory. The licences have been applied for to search for phosphate in the Georgina Basin. They are very close to the significant phosphate discoveries by Minemakers in the area at Arruwurra and Wonarah.
3. Tenure

Exploration Licence 26055 was granted to FSL World Holdings on 5th of September 2009 for a period of 6 years, expiring on 4th of September 2015. Fertoz Ltd purchased the licence in late October 2010.

The exploration licence consists of 499 graticular blocks (1,590 km²) and is located within the Alroy 1:250 000 Mapsheet.

After reduction the licence now consists of 244 graticular blocks (778 km²) as illustrated by Figure 2.
4. **ACCESS**

EL 26055 is located 290km east of Tennant Creek along the Barkly Highway. The closest roadhouse/accommodation/fuel depot is the Barkly Homestead, a substantial roadhouse located some 65 km to the west of EL 26055. Access throughout the licence area is via well developed station tracks and fence lines which make traversing the area relatively easy.
5. **Regional Geological Setting**

The South Nicholson Group is the oldest exposed unit in the region and constitutes the regional basement for the Georgina Basin. It is correlated with the Roper Group of the MacArthur Basin. Rawlins, *et al* subdivided this group into the Wild Cow and overlying Accident sub-groups. The Accident subgroup consists of the Mittiebah Sandstone and can be either conformable or disconformable with the Wild Cow subgroup and has an uncertain but probably lateral relationship.
with the Constance Sandstone and is possibly conformably overlain by the Mullera Formation, these latter two units are also constituents of the Accident subgroup.

On the Alexandria-Wonarah basement high the basement is represented by the Helen springs Volcanics, an extrusive volcanic of basaltic affinity. In this location the absence of the Thorntonia Limestone and overlying Arthur Creek Formation has the basal unit of the Wonarah Formation, (which contains the phosphorite) resting directly on the volcanic basement, (Helen Springs Volcanics).

To the west into the Barkly sub-basin the Wonarah Formation laterally correlates with the Anthony Lagoon Beds. From the basement high to the west the Gum Ridge Formation may well correlate with the basal Wonarah Formation. To the east of the basement high the Wonarah Formation is overlain by the Camooweal Dolostone as it dives below the surface in the Undilla sub-basin.
6. **Licence Geology**

The geology of EL 26054 consists of the sediments of the South Georgina Basin that are overlain by Cainozoic soils derived from the underlying geology.

The licence area covers the Alexandria-Wonarah Basement High, which separates the Undilla Sub-basin which extends to the east into Queensland from the Barkly Sub-basin to the west. The presence of this basement high is extremely important as it represents a basin edge where the prospective Wonarah Formation outcrops. Structural highs are important during phospho-genesis as they possibly represent a shelf environment within a Cambrian sea; it is believed cold phosphate rich waters up-welled against the basin margin and hence deposited on this shelf surface. The proximity to the sealed Barkly Highway also adds to the prospectivity of the licence area.

The licence is located between NTGS Hole No AY06DD01 and NTGS00/1 and these holes provide an excellent stratigraphic section through the underlying geology.

This work indicates that the Cainozoic soils are 3-4m thick and overly the prospective Wonarah Formation in the licence area. The Wonarah deposit has been defined by previous explorers drilling to the southern boundary of ELs 26054 and 26055 and so provides immediate targets to the north of this drilling.

In the licence area the Wonarah Formation overlies the Gum Ridge Formation which overlies the Helen Springs Volcanics. The Gum Ridge Formation pinches out between the above mentioned drill holes and by drill hole No NTGS00/1 the Wonarah Formation overlies the Helen Springs Volcanics. The Wonarah Formation outcrops directly to the south of the licence area and dives under the soil in the licence area. The depth of the horizon will be determined once a drilling program is undertaken.
Figure 6. EL 26055 Outcrop Geology - relinquished area
7. **Work Done in Year 1 and 2 (2008 – 2010)**

a. **Field Work**
There was no field work done on the licence in the first two years of tenure. Fertoz acquired the tenure in the second year.

b. **Desktop Surveys**
Office work in the second year of tenure consisted of desktop surveys examining historical exploration in the area and cross-referencing this where possible with the current thinking on phosphate deposition in the Georgina Basin to generate valid exploration targets for follow up in the third year of tenure.


a. **Field Work**
Field work conducted in the third year consisted of a number of abandoned reconnaissance trips to the licence and its sister licence EL 26054 which is located immediately to the east of this licence. These field trips were abandoned due to the exceptional wet season as we went to site only to find the ground still waterlogged making access around the licence impossible. EL 26055 is accessed along a station access road to No 2 bore and within the southern part of this licence there exists a large swamp that must be traversed to gain access to the eastern part of the licence. During the year this swamp stopped access until mid August to the eastern part of EL 26055 and the southern portion of EL 26054. Attempts to circumvent this swamp generally proved unsuccessful. As the rock units of interest were not exposed on this EL, no rock chip or soil samples were taken. During the visits to the licence, the proposed drill holes for the 2011 drilling campaign were pegged out in anticipation for forthcoming MMP approval.

b. **Desktop Surveys**
During the year any available information that we could find was collected, this included the water bore logs, (where available), and the drilling by previous explorers.


a. **Field Work**
There was no field work done on the licence in the fourth year of tenure. Fertoz acquired the tenure in the second year.

b. **Desktop Surveys**
Fertoz Pty Ltd commissioned Terra Search to conduct an advanced desktop study including a review of open file geophysical datasets (i.e. radiometrics, magnetics), review of GIS data (historic phosphate occurrences) with the aim of identifying prospective stratigraphy and structural elements that may be favourable for accumulation of phosphate.

There were four aspects to Terra Search’s work program:

- Review of water bore data and chemical analysis on relevant drill chips.
Incorporate historical exploration drill holes, water bore geological and chemical data into a review of stratigraphy within the Wonarah Group of tenements and production of lithostratigraphic cross-sections over the area, particularly identifying phosphatic horizons.

Assessment and reprocessing and reimaging of geophysical data sets over Barkly project area, particularly aeromagnetics, radiometrics and gravity. Determining whether phosphatic enriched areas can be recognized by a unique or combination of unique geophysical signatures.

Generation of drill targets using the new data sets. Design of drill program to expedite chances of intersecting phosphate mineralisation in Fertoz’s first program of drilling.

Terra Search developed a drill programme targeting six priority areas in EL 26054 and EL26055 for exploration in 2014.

The area relinquished was considered unlikely to contain near surface (< 50m depth) phosphate.

10. **CONCLUSIONS AND RECOMMENDATIONS**

The exploration work done to date has not successfully explored EL 26055 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 using Reverse Circulation methods. A detailed study has identified four areas prospective for phosphate. Those areas not planned for drilling will be relinquished.
11. **REFERENCES**

**Open File Company Reports**


Lindsay-Park K. (2009), Annual Report Exploration Licence 26054, FSL World Holdings Pty Ltd, unpublished company report,


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