2011

Annual Report
EL 26054

Period: 5/09/2010 to 4/09/2011

Barkly Region, Northern Territory

Fertoz Pty Ltd
40 Balgowlah St
Wakerley
QLD 4154

Barkly Project

1:100 000 Mapsheets: 6158 Wonarah, 6258 Ranken
1:250 000 Mapsheets: SE6315 Alroy, SE6315 Ranken, SF5303 Frew River, SF5304 Avon Downs
Commodity: Phosphate

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1. EXECUTIVE SUMMARY

In the latter part of October 2010 EL 26054 was purchased by Fertoz Pty Ltd from the previous titleholders FSL World Holdings Pty Ltd. The exploration licence consists of 326 graticular blocks, (1,076 km^2) located in the Barkly Region of the Northern Territory.
The new titleholders consider the licence area to be favourable for the discovery of phosphate deposits of a similar nature to that to the north of the EL (Alroy, 14Mt @ 20% P_2O_5, and Alexandria 15Mt @ 10% P_2O_5), and to the south of the EL, (Wonarah and Arruwurra 1258Mt @ 12% P_2O_5).
Previous exploration (IMC and Rio), has demonstrated the presence of phosphorite within the licence. The exploration during the current year was to have consisted of a RC drilling program but due to delays in the approval process this was not undertaken during the 3rd year of tenure.

2. CONTACT DETAILS:

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3. INTRODUCTION

EL 26054 was granted on the 5th of October 2008 for a period of 6 years and this annual report covers work done in the third licence year (2010-2011).
Work undertaken during the year consisted of identification and reappraisal of previous historical work done in the area, documentation of current exploration thinking for the exploration of phosphate deposits in the Georgina Basin and generation of exploration targets for further investigation. On the ground access around the licence was determined and the proposed drilling program was pegged out in the field.

Figure 1. EL 26054 Location Map

4. TENURE

a. Mining

Exploration Licence 26054 was granted to FSL World Holdings on 5th of September 2008 for a period of 6 years, expiring on 4th September 2014.
Fertoz Pty Ltd purchased the licence in late October 2010.
The exploration licence consists of 326 graticular blocks (1,076km^2) and is located within the Alroy and Ranken 1:250 000 Mapsheets.

b. Real Property

The licence is located within PPL 914 "West Ranken Station" which is owned by the North Australian Pastoral Company Pty Ltd, (c/ Alexandria Station, Barkly Tableland District, NT) and PPL988 "Dalmore Downs Station" which is owned by the Baldy Bay Pty Ltd as trustee for the Long Yard Trust, (PMB 15 Halls Creek, WA).

c. Other Stakeholders

Other stakeholders in the licence area consist of the Wunara peoples who are the identified traditional owners of this area. They are located to the south of EL 26054 on a large freehold landholding.

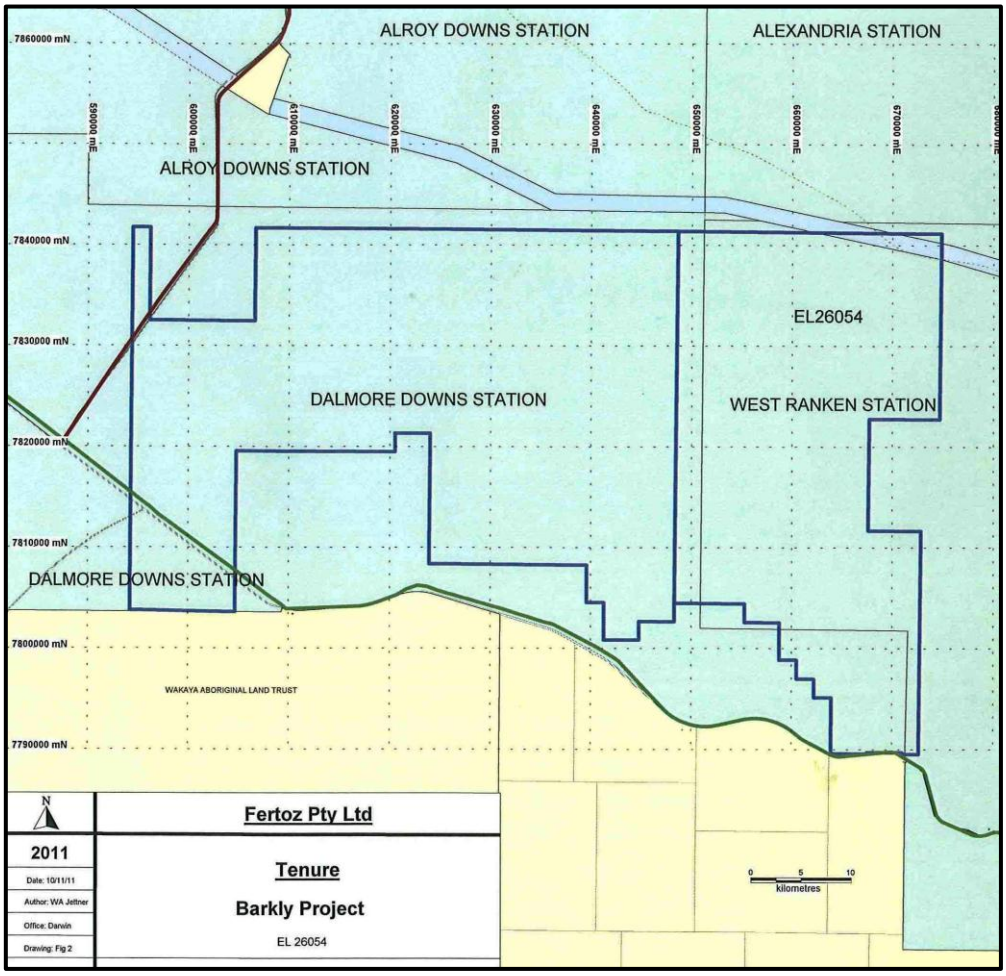

Figure 2. Tenure

5. LOCATION AND ACCESS

EL 26054 is located adjacent and to the north of the sealed Barkly Highway, the main road access from the Northern Territory to the east coast of Australia. Rail access is north-south along the Darwin to Adelaide railway, located some 280km to the west near Tennant Creek, or to the east coast via the Mt Isa to Townsville railway which is located approximately 400km to the east at Mt Isa, Queensland.

The licence 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 70km to the west of EL 26054.

Access throughout the licence is via station fences and access roads, usually connecting bores. As the licence covers portions of 2 adjacent stations the infrastructure is generally not connected between the 2 properties.

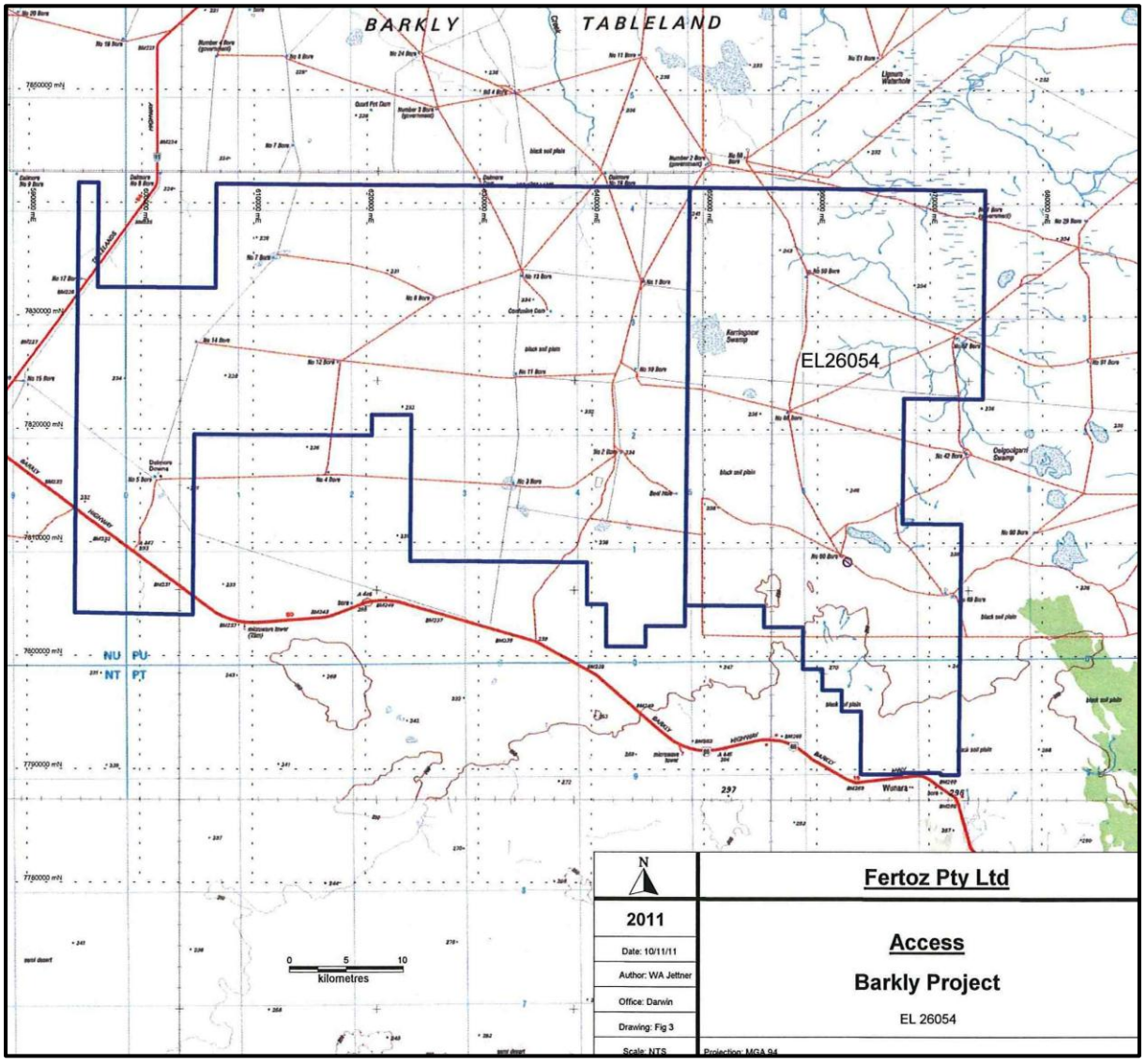

Figure 3. EL 26054 Access

6. REGIONAL GEOLOGY

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 subgroups. 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 correlate with the basal Wonarah Formation. The Wonarah Formation is overlain by the Camooweal Dolostone as it dives below the surface in the Undilla sub-basin.

CAMBRIAN				
Arrinthrunga Formation (Cua) 975 m	Dolostone, limestone; minor quartz sandstone, siltstone, shale	Peritidal, restricted shallow subtidal marine	Conformable on Cmd, Cma	Stromatolites, thrombolites, nodular evaporites, gypsum crystals, fenestrae
Camooweal Dolostone (Cmd) 167+ m, ?300 m	Dolostone; minor marl and quartz sandstone; basal intraclast, ooid and oncoid dolostone and quartz sandstone	Basal high-energy peritidal to shallow subtidal barrier, passing upward into restricted to epeiric back-barrier	Conformable on Cmk, Cmw, Currant Bush Limestone	Spheroidal chert concretions, cross-beds, flat-pebble conglomerate, planar to crinkly or wavy microbial lamination, stromatolites
Ranken Limestone (Cmk) 74+ m	Bioclast, bioclast-ooid and bioclast-intraclast rudstone, bioclast wacke/floatstone; minor calcimudstone	Marine ramp seaward of high-energy shallow subtidal barrier	Conformable on Cmw	Red-brown silicification, abundant fossils
Wonarah Formation (Cmw) 191+ m	Silty dolostone, calci/ dolomudstone and siliciclastic mudstone interbeds, micaceous siltstone; minor intraclast and bioclast wacke- to grainstone; basal carbonaceous marly laminite	Subtidal marine	Disconformable on Cmt; unconformable on Clh, Ps	Planar to wavy siliciclastic laminations, siliceous chert concretions, phosphorite, evaporites, disseminated pyrite, fossils; minor detrital glauconite and biogenic phosclasts
Arthur Creek Formation (Cma) 457 m	Upper: dolostone, limestone; lower: foetid pyritic-carbonaceous black shale, laminated dolostone	Upper: open to restricted subtidal marine; lower: deeper anoxic marine	Disconformable on Cmt; unconformable on Ps	Nodular evaporite, shredded to brecciated texture, fossils, disseminated pyrite
Thorntonia Limestone (Cmt) 121 m	Dolosparstone; minor bioclast and oncoid dolosparstone and intraclast dolowackestone to dolograinstone; basal dolomitic quartz sandstone and conglomerate	Subtidal marine	Unconformable on Ps	Pervasive recrystallisation, carbonate concretions, nodular evaporite, silicified interbeds, disseminated pyrite, hydrocarbons
Helen Springs Volcanics (Clh) 34 m	Basalt, trachyte, microdolerite; minor dolerite; basal pebbly mudstone, sandstone and conglomerate	Extrusive volcanic	Unconformable on Ps	Alteration, amygdales
CALYMMIAN				
Mittiebah Sandstone (Psi) 2200+ m	Quartzose to sublithic sandstone; minor siltstone and conglomerate	Marine	Disconformable on Crow Formation	Medium to thick bedding, quartz granules and pebbles, ripples, mudclasts, crossbeds

Table 1. Lithostratigraphy of the southern Georgina Basin

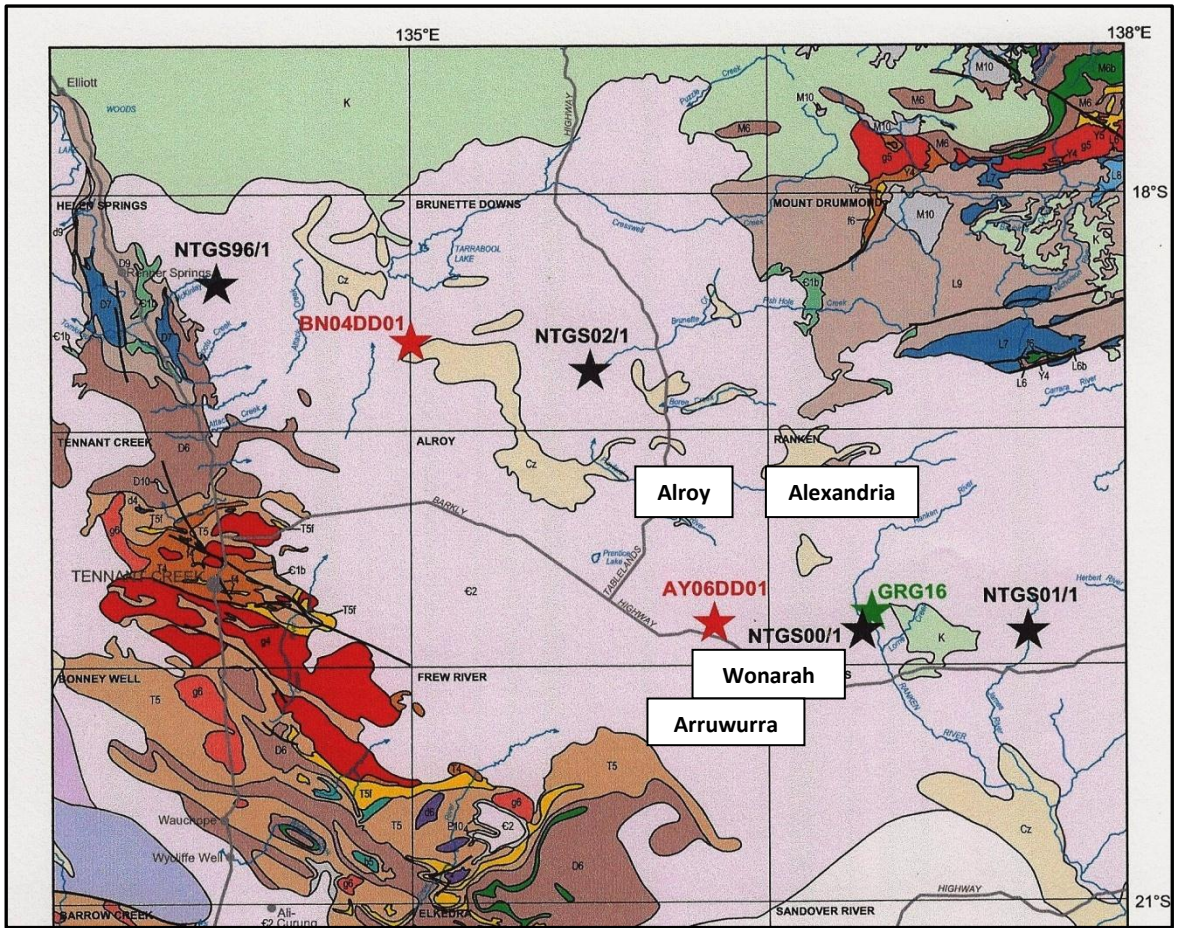

Figure 4. Regional Geology

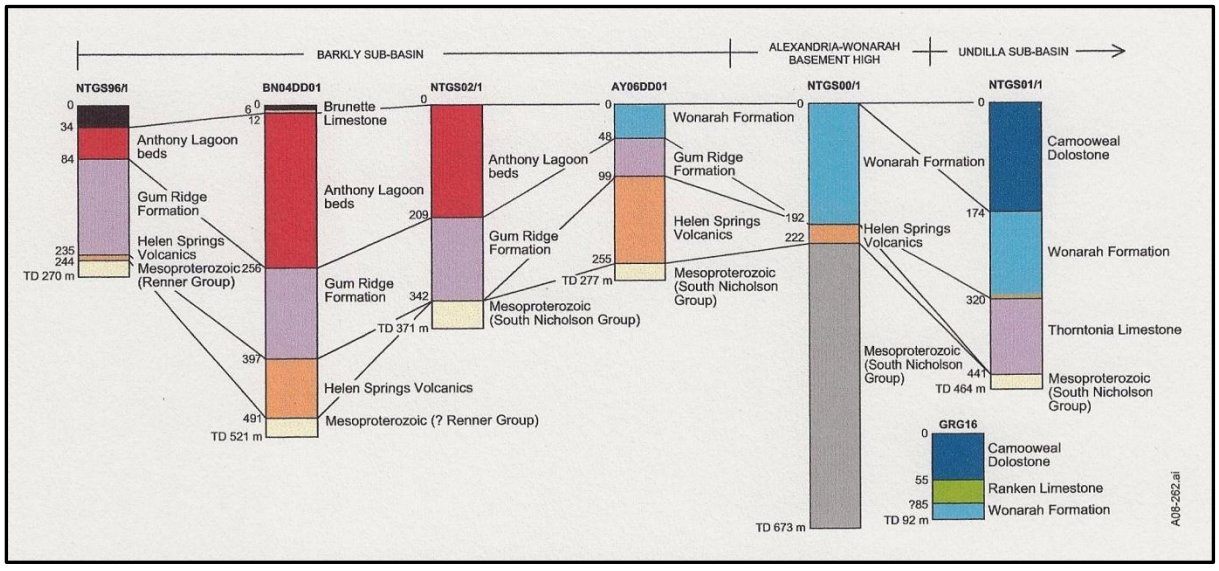

Figure 5. Regional Stratigraphy (Kruse PD and Radke BM)

7. 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.

The licence and its sister licence 26055 are located at the eastern edge of the Georgina Basin and examination of figure 8 shows that deposits in general occur on the eastern and north-eastern margins in the component sub-basins of the Georgina Basin.

To the north of ELs 260054 and 26055, two phosphate deposits, Alroy (14Mt @ 20%P_2O_5) and Alexandria (15Mt @ 10%P_2O_5) in EL 25600, owned by Phosphate Australia, occur and to the south of the licence, Wonarah and Arruwurra (1258Mt @ 12%P_2O_5), SELs 26451, 26452 and ML27244, owned by Minemakers Ltd occurs.
Also to the north a gypsum deposit, 6 mile waterhole, (1Mm^3 of gypsum, MCCs 205-208 and MCCs 983-990), owned by Northern Cement occurs.

This would indicate that a shallow marine environment prevailed in the Cambrian that was conducive to the formation of both types of deposit. This was mainly due to glacial/interglacial periods where eustatic sea level change would dictate precipitation of phosphate rich substrates. These glacial periods brought about a reduction in sea level change making these intra-continental seas shallower and encouraging the settling of phosphate rich substances out of solution. With this in mind a secondary target will be gypsum deposits of the type located at 6 mile waterhole.

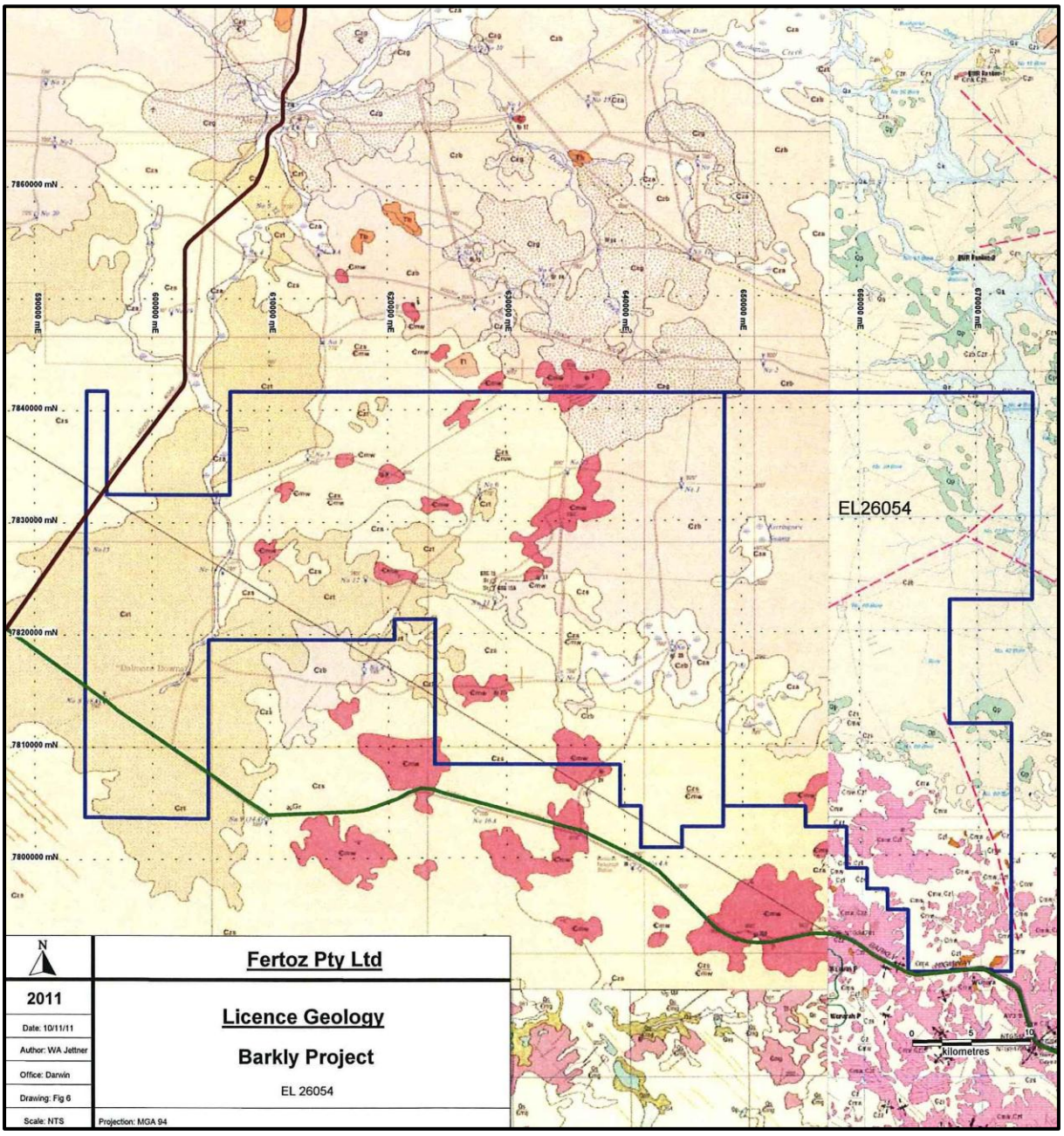

Figure 6. Outcrop Geology

8. PREVIOUS EXPLORATION

Historical exploration in this area has been sparse. In recent years this area, as with large parts of the Northern Territory has had renewed exploration interest for bulk commodities due to the construction of the Darwin to Adelaide railway. The rail link with its ability to go both north and south has made a number of these deposits viable, including Wonarah Phosphate, Bootu Creek Manganese, Francis Creek Iron Ore and Nolans Bore Rare Earths.

The Wonarah Phosphate deposit was found By IMC Development Corporation in the late 1960s. The deposit was identified by regional mapping, geophysics and open hole drilling, which located ore grade phosphorite between 12 and 50m depth in 1967. This drilling program consisted of 294 no-cored holes, totalling 11,660m. Howard (1989) characterised the deposit as two successive phosphorite beds comprising phosphatic mudstone, silty mudstone and grainstone (of reworked mudstone clasts). Six partially cored holes were drilled in 1968 by BMR to elucidate the stratigraphic context of the deposits.

CRA flew a low level (80m) aeromagnetic survey over the area in 1983-84 aimed at defining the volcanic basement to the Wonarah phosphorite, this survey highlighted the potential of the then identified deposit. CRA terminated exploration activities due to low world phosphate prices and a lack of local infrastructure.

A RioTinto - AKD Limited joint venture explored for large tonnage phosphorite in the Wonarah area between 1999 and 2003, employing photo interpretation, geological mapping, rock chip sampling ground gravity surveys and also drilled 136 holes. An ore-grade (>15% P_2O_5) 'phosphorite horizon' was delineated almost directly overlying the Helen Springs Volcanics. Rio Tinto withdrew from the joint venture in late 2002, following a negative internal economic evaluation.

Cored drillholes NTGS00/1 and NTGS01/1 were included in a larger phosphate survey centred around the exposed Tennant Creek Region.

Stratigraphic drillholes were also drilled by the NTGS on both sides of EL 26054 and indicated that the Wonarah Formation outcrops in the licence area.

Minemakers Ltd acquired title to the Wonarah deposit in 2006. This deposit is currently in preproduction and is planned to commence full production in 2013. (Kruse PD and Radke BM)

EL 26054

Licence No	Tenure Period	Open File Company Reports	Company
AP 1802	14/08/67 – 13/08/68	CR1968-0030	IMC Development
AP 2161	12/12/68 - ?	CR1968-0032	IMC Development
		CR1969-0022	IMC Development
		CR1970-0036	IMC Development
		CR1970-0038	IMC Development
		CR1970-0040	IMC Development
EL 1084	6/05/76 – 5/05/82	No reports	?
EL 22168	4/08/00 – 27/09/07	CR2003-0389	AKD Limited
EL 22979	18/09/02 – 21/07/03	CR2004-0044	De Beers Aust. Exploration
EL 22981	18/09/02 – 21/07/03	CR2004-0044	De Beers Aust. Exploration

Table 2. Historical Exploration Reports

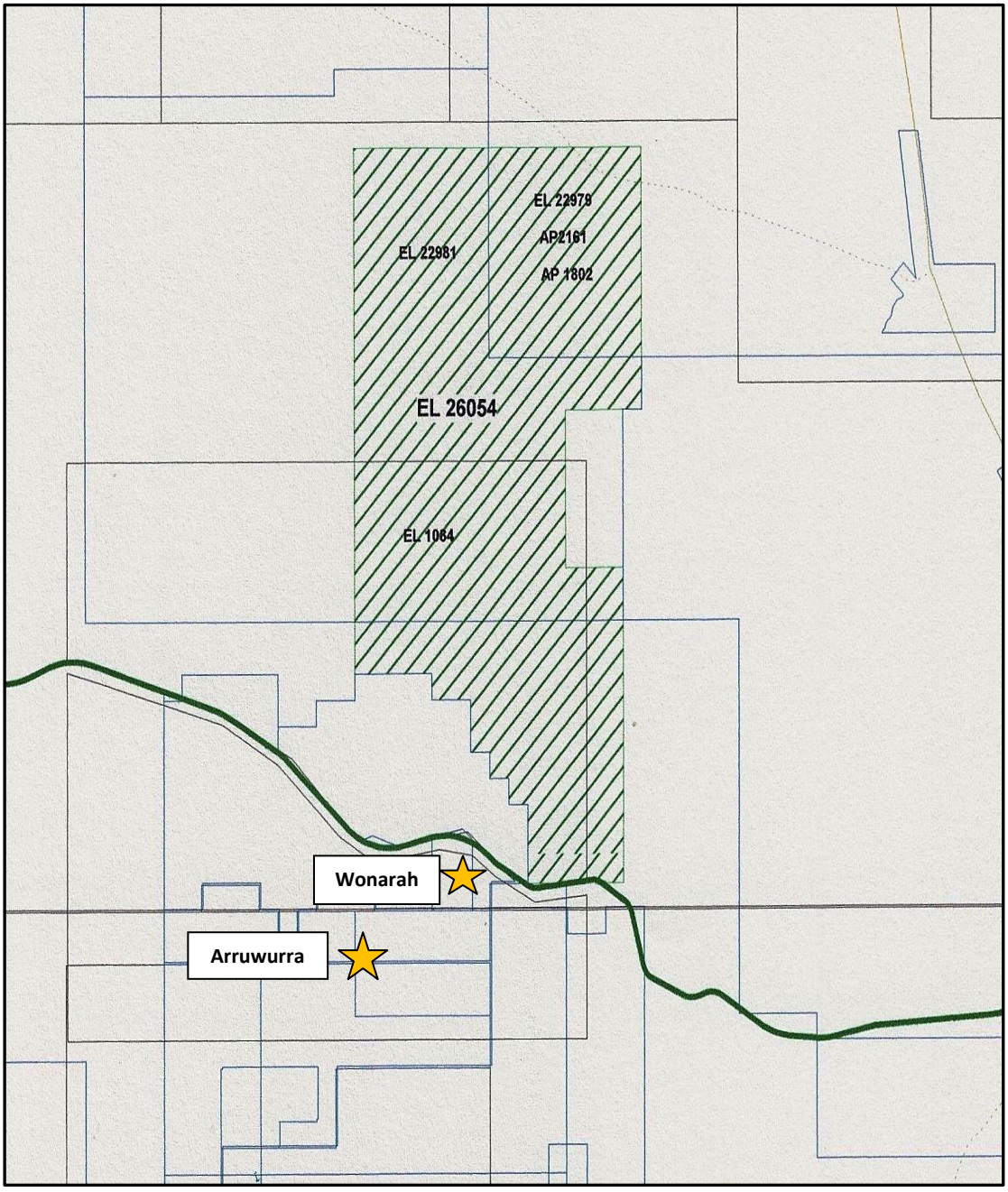

Figure 7. Historical Exploration Licences

9. WORK DONE IN YEAR 3(2010 – 2011)

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 26055 which is located immediately to the west 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 26054 is accessed through the adjacent EL 26055 and within the eastern part of this licence there exists a large swamp that must be traversed to gain access to EL 26054. 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.

c. Exploration Targeting

Exploration models target organic-rich carbonate rocks on depositional basin margins and areas of onlap onto basement highs where upwelling and favourable palaeogeography would have bought cold phosphate-rich waters onto the shelf. These shallow eustatically low seas brought about a rise in Ph and a concentration of organics onto a shelf environment; facies that indicate such a progression shall be the key focus of the future search. 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).

The southern portion of the Georgina Basin contains several loci prospective for phosphorite deposition. Historical exploration work indicates that there are prospective targets within the Fertoz licences to the north of the Wonarah deposit. These are being targeted during the current phase of exploration here.

d. Prospect Generation

Target generation immediately to the north of the Minemakers drilling would be priority 1, probably drilling an east-west section to elucidate the geology to basement. This work would continue to the north in the forth year with the plan of locating continuations and repetitions of the Wonarah deposit.

Generally speaking the two exploration licences owned by Fertoz are highly prospective for phosphate development, being located between 3 phosphate deposits in a geological and structural environment that is conducive to phosphorite development.

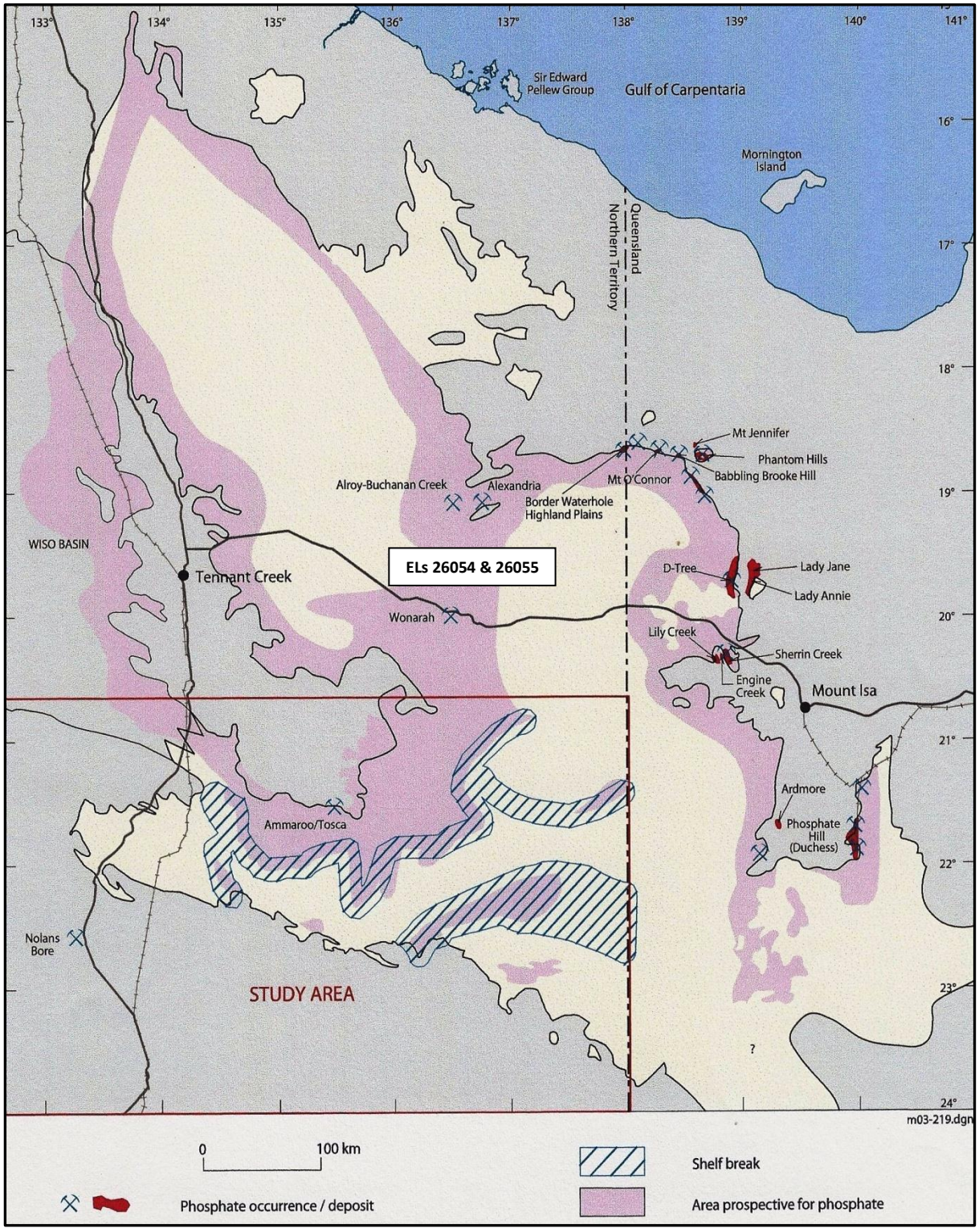

Figure 8. Georgina Basin phosphate prospectivity (Dunster JN ,Kruse PD, *et al*.)

10. PROPOSED WORK PROGRAM FOR YEAR 4 (2010 – 2011)

The proposed work program for the fourth 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. As well as the creation of specific GIS maps for tenement areas. These areas of interest were determined through field work and research in year 3.

Field work: The field work planned for the fourth year is to conduct the drilling that was originally planned to be done in 2011. There is also a continuation of this program planned to recover the lost time due to the non-completion of the planned work in 2011.
The first pass drilling program is designed to add information to two of the original IMC drill sections, The first being a Fertoz north-south section which crosses and extends the IMC section containing hole numbers: W96 to W126 further to the north. The second part of this program is an east-west section which bisects the IMC regional section containing hole numbers: W27, W97 and W21 and occurs to the northeast of the 2011 drilling done by Minemakers in 2011. Both of these sections are aligned along existing station tracks to minimise environmental disturbance.

The second pass drilling program is planned to extend the north-south Fertoz section further to the north to join up with an east-west section coming through from one on EL 26055 to the west. There are also additional sections parallel and to the north of the initial east-west section should the initial drilling prove favourable.

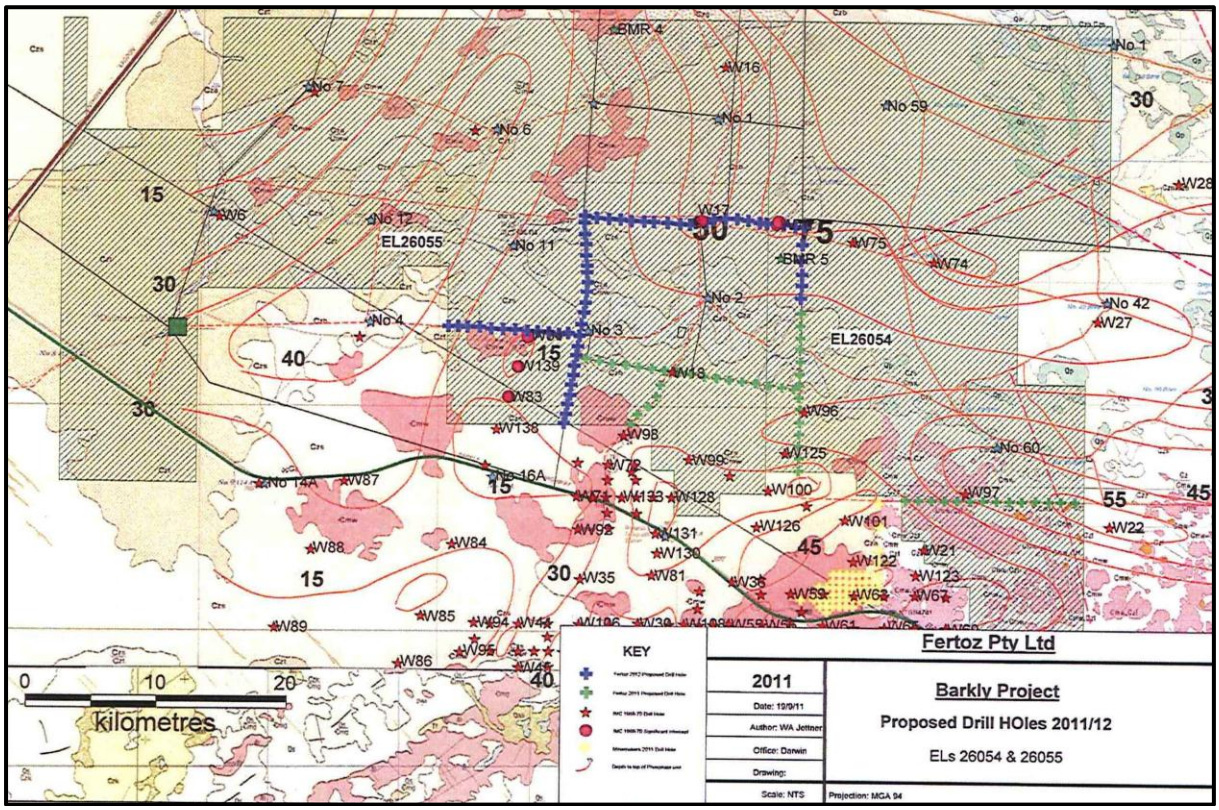

Figure 9. 2011-12 Proposed Drilling

11. EXPENDITURE COVENANTS

a. Expenditure Report for Year 3 (2010 – 2011)

The expenditure report for Year 3 (2010 – 2011) is included as Appendix 1 to this annual report

b. Proposed Expenditure for Year 4 (2011 – 2012)

The proposed expenditure for Year 4 is as follows:

Site orientation visit	$ 11,000
First pass drilling program	$100,000
Exploration reporting	$ 3,500
Second pass drilling program	$135,000
Exploration reporting	$ 4,500
Annual report preparation	$ 6,000
Total Proposed Expenditure	**$260,000**

12. REFERENCES

Open File Company Reports

Anderson B. (2003), Surrender Report for EL 22981 and others, De Beers Australia Exploration, unpublished company reportCR2004-0044

IMC Development, (1970), Annual Report Wonarah,IMC Development, unpublished company report, CR1970-0040

IMC Development, (1969), Annual Report Wonarah 12/68 – 12/69,IMC Development, unpublished company report, CR1970-0036

IMC Development, (1968), Annual Report Wonarah 8/67 – 12/68,IMC Development, unpublished company report, CR1968-0032

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

Perrino FA. (1970), Progress Report on Alexandria and Wonarah Phosphate, IMC Development, unpublished company report,CR1970-0038

Perrino FA. (1969), Progress Report on APs 1776,2159,2160,2161 in the Alexandria Region, IMC Development , unpublished company report,CR1969-0022

Published Reports

Dunster JN, Kruse PD, *et al,* (2007), Geology and Resource Potential of the southern Georgina Basin

Khan M, Ferenczi PA, *et al*, (2007), Phosphate testing of waterbores and diamond drillcore in the Georgina, Wiso and Daly basins, Northern Territory

Kruse PD, (2008), Georgina Basin Stratigraphic Drilling 2002-2006 and Petrography 2000-2007

Robertson IDM, Graig MA, et al, (2006), Atlas of Regolith Materials of the Northern Territory

Kruse PD and Radke BM, (2009), Ranken - Avon Downs 1:250 000 map series Explanatory Notes

Company Reports

Jettner WA, (2011), Annual Report EL 26054, Period 5/09/09 to 4/09/10, Minesite Services Australia Technical Report