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Table 1.1 Wuhua Mining Corporation Pty Ltd Tenement EL 29576 Schedule.

Table 2.1 Summary of Historical Tenements in and near the EL 29576 Area.
SUMMARY

Pacific Exploration Pty Ltd ("Pacific") acquired LIGNUM mineral tenement (EL 29576) in central eastern Northern Territory for exploring mineral resources, such as phosphate, uranium, gold, copper, and other metal minerals. The EL 29576 was granted on 19 February 2013. The historical exploration tenements in this area were granted to explore for not only phosphate but diamond and base metals and other commodities. The transfer (D93491) to Wuhua Mining Corporation Pty Ltd ("Wuhua") (100%) from Pacific Exploration Pty Ltd has been approved in June 2013.

The regional geology comprises Georgina Basin sediments (~3.7 km in thickness) and underlain basement rocks. The tenement (EL 29576) is largely unexplored as a greenfield area. The Georgina Basin comprising unmetamorphosed rocks with petology ages in the range 355 Ma – 855 Ma. It is geologically continuous with the oil-bearing regions from NT to the eastern Qld. This area has the potential to host not only phosphate, uranium, but also conventional and unconventional energy resources, and other metal mineralisation developed in the basement rocks rocks.

Historical exploration in the Lignum region has focussed on the potential of the basinal rocks to host sedimentary mineralised units containing phosphate, diamond, uranium, and conventional and unconventional energy resources.

Exploration during the reporting period comprises the desktop study for the mineral exploration. The desktop study of EL 29576 for mineral exploration has been focused the overview and technical proposal of the geological, geophysical and tectonic setting. Although the study provides fundamental data for increasing knowledge of geological processes and landscape evolution within this region, the area of EL 29576 has had no significant work carried out, as in house studies and field examinations indicated low prospectivity and all efforts have been concentrated within "Wuhua" other exploration project (e.g., Yambah area, EL 29556 and EL 29575) where the company has a high priority area of exploration for uranium deposits.
1. INTRODUCTION

1.1 Background

Wuhua Mining Corporation Pty Ltd ("Wuhua") acquired a mineral exploration tenement in central eastern Northern Territory (EL 29576) and is developing the Lignum Exploration Project (Figure 1.1). The license was granted on 19 February 2013 for a period of 6 years. The EL 29576 consists of 250 graticular blocks and forms a total area of 778.9 km² (Figure 1.2). Geologically, this tenement is located within the Georgina Basin. The schedule of rent and expenditure for the tenement EL 29576 is summarised in Table 1.1.

Figure 1.1 Regional Location Map showing “Wuhua” JINKA (southwest) and LIGNUM exploration project ELs. Lignum project (EL 29576) is located in the central part of the map.
Figure 1.2 Plan of EL 29576 (250 Blocks, 778.9 km²).

Table 1.1 Wuhua Mining Corporation Pty Ltd Tenement EL 29576 Schedule.

<table>
<thead>
<tr>
<th>Tenement ID</th>
<th>Tenement ID</th>
<th>Expires</th>
<th>1ˢᵗ Year Rent</th>
<th>1ˢᵗ Year Expenditure</th>
<th>2ⁿᵈ Year Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 29576</td>
<td>19/02/2013</td>
<td>18/02/2019</td>
<td>$8000.00</td>
<td>$48,000</td>
<td>$73,000</td>
</tr>
</tbody>
</table>

Very little regolith-related work has been done in the region, with the only major study of the whole of the area dating back to the late 1940s (Christian et al., 1951). A desktop study compiled by Pacific Exploration Pty Ltd aims to investigate mineral potentials. Recommendations for the comprehensive prospectivity and exploration techniques have been provided. The interpretation of the remote sensing, magnetic, gravity and morphology, based on the current data, thus formed a basis for mineral exploration in the Lignum exploration project area, and further investigation into the geomorphology, geology geochemistry and geophysics of the project area and associated mineralization is necessary.

1.2 Location, Access And Logistics
EL 29576 is located approximately 285 kilometres northwset of Mount Isa, Queensland by the Barkley Highway and 875 kilometres northeast of Alice Springs by the Stuart Highway - Barkley Highway in the central eastern part of the Northern Territory of Australia (Figure 1.1). The area is closed to the Soudan along the Barkley Highway (Figure 1.3). Access to areas of interest is from the Barkley Highway via the network of station roads (e.g., Ranken Road) and tracks linking the water bore.

Alice Springs (pop. 27,000) is well serviced by road transport and interstate bus services, because of its location mid-way between Adelaide and Darwin. The Stuart Highway and Adelaide-Darwin transcontinental railway corridor, passing through Alice Springs, bisect the area. Alice Springs is also serviced daily by jet aircraft from several Australian capital cities (Sydney, Adelaide, Perth and Darwin) and less regularly from Brisbane, Cairns and Broome.
Mount Isa is a close services centre, ~285 km by road via the Barkley Highway. The nearest station homesteads are Soudan in the south of the EL 29576 on the Barkley Highway.

1.3 Climate and Vegetation

The region has a semi-arid continental climate, characterised by long hot summers when temperatures regularly exceed 40°C, and short mild winters (Stewart, 1982). Rainfall is monsoon-influenced and ranges from 400 to 600 mm per year, increasing northwards across the region. Seasonal rainfall variability is moderate and decreases northwards.

The majority of the tenement is covered by various thicknesses of regolith cover and acacia trees and bush / grass undergrowth (Figure 1.3).

Vegetation throughout most of the area consists of Mitchell grass and flinders grasses on cracking clay plains. Remnant lateritic plains are dominated by turpentine (Acacia lysophloia) and spinifex (dominantly Triodia pungens), with mallee eucalyptus and soft spinifex sometimes dominating the upper storey where the surface is sandy. Swamps and lakes are dominated by Queensland bluebush (Chenopodium auricomum) and coolibah (Eucalyptus microtheca).

1.4 Topography and Drainage

The region (Barkly Tableland) is a vast terrain of flat to very gently undulating plains in which the variation in elevation from the maximum plain level (~240 m) to the drainage minimum is less than 50 m (Figures 1.3 and 1.4). The drainage is endorheic and flows to several large, shallow lakes in the centre of the region. On the northern margin of the tableland, topographic definition increases northwards toward the drainage divide with the Gulf Fall and its northerly flowing drainage. The tableland’s southern margin is encroached upon by extensive aeolian sand plains.
Figure 1.4 Landsat ETM7 realistic imagery showing relationships of landscapes, roads, drainages, and locality and “Wuhua” Lignum exploration project EL 29576.
2. PREVIOUS EXPLORATION

Previous exploration in the Lignum region has focussed on the potential of the basin rocks to host Phosphates and Diamonds, Cambrian laterites mineralisation (Table 2.1 and Figure 2.1).

A review of the historical exploration conducted over and near EL 29576 was completed by identifying the historical tenement that overlapped with the current tenement (Table 2.1).

Table 2.1 Summary of Historical Tenements in and near the EL 29576 Area

<table>
<thead>
<tr>
<th>Historical Tenement</th>
<th>Company</th>
<th>Granted</th>
<th>Activity</th>
<th>Overlaps/nearby</th>
<th>Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 4586</td>
<td>CRA Exploration</td>
<td>1984</td>
<td>Airborne magnetic &amp; radiometric surveys, stream sediment sampling, drilling.</td>
<td>EL 29576</td>
<td>Diamonds, Cambrian laterites</td>
</tr>
<tr>
<td>EL 26304</td>
<td>Australia Exploration</td>
<td>2008</td>
<td>Data compilation Reviews</td>
<td>EL 29576</td>
<td>Phosphates, Uranium</td>
</tr>
<tr>
<td>EL 22980</td>
<td>De Beers Australia</td>
<td>2002</td>
<td>Aerial geophysical surveys, geophysical interpretation, sampling drilling, diamond drilling.</td>
<td>EL 29576</td>
<td>Diamonds</td>
</tr>
<tr>
<td>AP 2199</td>
<td>IMC Development</td>
<td>1969</td>
<td>Ground reconnaissance combined with rockchip sampling, drilling.</td>
<td>EL 29576</td>
<td>Phosphates</td>
</tr>
<tr>
<td>AP 2161</td>
<td>IMC Development</td>
<td>1968</td>
<td>Ground reconnaissance combined with rockchip sampling, gamma logs, drilling.</td>
<td>EL 29576</td>
<td>Phosphates</td>
</tr>
</tbody>
</table>
Figure 2.1 Historical tenements in and near the EL 29576 Area.
3. GEOLOGY

3.1 Regional Geology

EL 29576 is located in the Barkly Tableland that coincides closely with the north-central and northern parts of the Georgina Basin (named after the Georgina River which drains part of the basin) (Figures 1.1 and 3.1). The Georgina Basin is a large (ca. 330,000 km²) intracratonic sedimentary basin in central and northern Australia, lying mostly within the Northern Territory and partly within Queensland. The Georgina Basin is a widespread Neoproterozoic (Cryogenian, 855 Ma) to Palaeozoic (Devonian, 355 Ma) intracratonic basin that was initiated as part of the Centralian Superbasin and extends east into Queensland. Exposures of the basinal sediments in the area are rare, but where present are typically composed of weakly deformed middle Cambrian (c. 520 Ma) carbonate sedimentary rocks (Smith, 1972). Locally overlying the Palaeozoic rocks are thin deposits of flat lying late Palaeogene (c. 25 Ma) limestone. Thin deposits of Cretaceous marine sediments also locally occur in the northern margin of the Barkly Tableland.
The Georgina Basin unconformably overlies the Aileron Province, Tennant Region, Murphy Inlier, McArthur and South Nicholson Basins and Lawn Hill Platform, interpreted to be contiguous at depth with Wiso and Daly Basins; and conformably overlies Kalkarindji Province; and unconformably overlain by Carpentaria Basin (Figure 3.1). The basin deepens towards the south along the margin with the Arunta Region. Deposition of locally up to ca. 4 km of marine and non-marine sedimentary rocks, mostly composed of dolostone, limestone, shale, sandstone, siltstone, took place from the Neoproterozoic to the late Paleozoic (ca. 850-350 Ma). Along with other nearby sedimentary basins of similar age (Amadeus Basin, Officer Basin), the Georgina Basin is believed to have once been part of the hypothetical Centralian Superbasin, that was fragmented during episodes of tectonic activity.

The Georgina Basin has a maximum sediment thickness of up to 5,000 m in the south (Toko and Dulcie Synclines) and east (Burke River Belt), with a much thinner succession in the central and northern parts of the basin (Barkly and Undilla Sub-basins). Presumed thermal relaxation and subsidence following rifting associated with an extensional event caused by the breakup of Rodinia, initiated sedimentation of marine siliciclastics and carbonates. This marine succession is probably terminated by an erosional surface and is overlain by marine, fluvial and glacigene sediments associated with the Sturtian and Marinoan glaciations. Subsequent marine siliciclastic and minor carbonate sedimentation extended into the latest Proterozoic. The Petermann Ranges Orogeny, with extensive uplift of the Musgrave Block fed deposition of widespread fluvial and marine siliciclastics during the latest Proterozoic-Early Cambrian. This was followed by deposition of a succession of marine siliciclastics and carbonates with minor evaporites for most of the remainder of the Cambrian Deposition ceased in the northern part of the basin late in the Middle Cambrian. In the latest Cambrian, the Delamerian Orogeny caused a change to predominantly marine siliciclastic deposition in the southwest, with carbonate deposition continuing in the southeast. This pattern persisted until deposition ceased during the Middle Ordovician. In the Early to Late Devonian, the Arunta Block was uplifted during a phase of the Alice Springs Orogeny and fluvial siliciclastics deposited along the southern margin of the basin.

Despite extensive potential source rocks in the early Middle Cambrian of the southern part of the basin, numerous oil shows, and an uneconomic gas flow in Ethabuka 1, little exploration has been undertaken. Seismic coverage is very poor and only 20+ exploration wells have been drilled. Plays include anticlinal closures (none of which have been validly tested), fault-induced rollovers (tested by Ethabuka 1) and stratigraphic plays (untested).

### 3.2 Local Geology

The geology is illustrated by the RANKEN and AVON DOWNS 1:250,000 geological mapsheets (Figure 3.2).

The southern NT forms a ‘basin and range’ province with Proterozoic and Palaeozoic rocks forming prominent ranges separated by broad valleys (Figures 3.1 and 3.2). Cainozoic sedimentary basins are widespread and well-developed within these intervening topographic depressions with at least twenty major basins known (Senior et al., 1995).
Due to a lack of outcrop and strong weathering overprints, the paucity of drillholes and a lack of attention paid to the ‘cover’ overlying crystalline basement, the stratigraphy of the intermontane Cainozoic basins of the southern NT region is generally poorly known.

Figure 3.2 Regional geology (RANKEN and AVON DOWNS 1:250,000 geological mapsheets) showing relationships of geology, landscape and “Wuhua” EL 29576.

Regolith Landforms

Regolith in the region is dominated by *in situ* (eluvial) material and can be subdivided into the following three regolith–landform units.

Ferruginous plains form the highest part of the landscape and occur as large continuous areas, and scattered remnants on the cracking clay plains. The ferruginous plains are dominantly underlain by kaolinitic clay profiles with abundant gravel lags of ferruginous nodules and fragments, and chert fragments. Very little duricrust material is
present. At shallow depth (~ 2 m), a pallid zone may be present. Drainage is dominantly by sheet flow, with only rare channelised drainage. Slopes are generally 0.5 to 1%, with areas of greatest slope being marginal to the cracking clay plains. Ferruginous kaolinitic regolith typical of the ferruginous plains is pale red in colour and dominated by clay loam to light clay in surface horizons and light to medium clay in lower horizons. Where the lateritic surface persists, a deep profile of pisolithic and nodular gravel is present. The clay is dominantly slightly acidic. Pit excavations reveal a pale saprolitic or pallid zone layer at a depth of approximately 2–2.5 m over middle Cambrian substrate.

**Cracking clay plains**, also known as ‘downs’, are the most widespread and characteristic feature of the region. They form smectite-dominated medium to heavy clay profiles, with common chert and ferruginous fragments and rare tiny lenses of sand. The cracking clay plains are traversed by very shallow, open drainages and are commonly mantled by scree of chert and lesser ferruginous fragments. The smectite-dominated material (‘downs’ and gilgai) is grey to grey-brown and dominantly medium clay in surface horizons and medium–heavy and sometimes heavy clay in lower horizons. The material is neutral to slightly alkaline, and the soils are dominantly non-calcareous except where the substrate is Tertiary limestone. Pit excavations indicate a pale saprolitic or pallid zone layer at a depth of about 2–2.5 m, developed on the middle Cambrian substrate.

**Alluvial plains** are confined to drainage and swamp systems. It consists largely of light to medium clay surface material and deeper profiles. These are smectite-dominated and comprise material largely derived from the “downs”. Alluvial material is dominantly brown-grey and varies from light clay to medium and medium–heavy clay. The clay is generally neutral to weakly alkaline in drainage lines, but may become strongly alkaline in swamps and lake floors. Soils may be calcareous where they contain abundant nodules of late Palaeogene limestone.

**Regolith Evolution**

The Palaeogene–Neogene history of the area appears to have had the greatest influence on the development of regolith, although the region has been inherently stable for a very long time. During the Palaeogene–Neogene, widespread peneplanation of an already subdued landscape coincided with ferruginisation and the development of lateritic profiles (including pallid zones at shallow depth) probably within both transported and residual materials. At about 25 Ma broad, very shallow valleys developed brackish to fresh-water lakes, which accumulated thin deposits of limestone. The present day endorheic drainage largely mimics these deposits, indicating the topographic configuration of this landscape has not greatly changed. The climatic conditions prevailing at this time produced a chemical environment that favoured the development of kaolinitic clays in the regolith.

Minor rejuvenation of the landscape has resulted in very weak incision of drainage allied to stripping of extensive areas of the lateritic plains, and localised exposure of Palaeogene limestone. The cracking clay plains have been described as Palaeogene to Neogene swamp deposits formed concurrently with the lateritic plains (Christian *et al.*, 1951; Randal and Nicholls, 1963), or eluvial material derived directly from the middle Cambrian substrate after stripping of the lateritic surfaces (Randal, 1966; Grant, 1989). However, several factors suggest that the cracking clay plains have evolved through the stripping of the lateritic plains, with the prevailing drier and seasonal climatic conditions favouring the development of smectite through
pedogenesis. Conversion of kaolinite-dominated soils to smectite-dominated soils has been described in southeast Queensland by Veen (1972).

The development of gilgai is interpreted to be an integral part of this process, through both the generation of smectite clay profiles, and their strongly landscape controlled distribution i.e. areas of greatest slope in the marginal zones of the lateritic plains and the cracking clay plains. In addition, abundant small remnants of the lateritic surfaces, usually gilgaied, are present across large areas of the cracking clay plains.

More recent alluvial material associated with drainage and low lying areas is largely overprinted by pedogenic processes, a result of the maturity and comparatively low energy of the present day landscape processes.
4. **MINERALISATION**

4.1 **Source Rocks of Minerals**

Previous reconnaissance prospecting has recognised numerous deposits of sedimentary phosphate including the Wonarah phosphate deposit. The prospective stratigraphy comprises sediments deposited at shallow depth along a topographic high within the Georgina Basin and along the northern basin margin. Modelling suggests potential for a thickening of Phosphate deposition down dip from areas of near surface sediment deposition along the basin margin.

It is currently a sparsely explored greenfield areas, including the Georgina Basin. During the Cambrian era, the Central Australian plate was on the subtropical waters on the fringes of the Rodinia supercontinent. In this period, the organic-rich Arthur Creek black marine shales were deposited. The Arthur Creek shales are the Thorntonia and Hagen Formations, both of which have been shown by previous drilling to show good reservoir properties and anhydrite seals. The Georgina Basin therefore has all the attributes of a productive hydrocarbon province. This prospectivity has been enhanced by oil shows in a number of wells, and gas flows to surface in the Ethabuka-1 and the Discovery Creek water bore.

4.2 **Potential Mineralisation**

In the Georgina basin, major exploration target is for sedimentary phosphate. Also, other interests are the exploration for base metals, uranium, diamonds, manganese, oil and gas. Locally forms shallow cover over prospective basement. These areas are considered prospective for the precipitation of phosphate. Several lead-zinc occurrences are located along the southern margin. Frequent oil shows throughout the basin.

“Wuhua” holds a large exploration tenement in the Georgina Basin considered prospective for phosphate and uranium (Figure 3.1). The tenement is located in the Barkly Region of the Northern Territory approximately 1500 km south of Darwin and 450 km east of Tennant Creek (Figure 1.1).

Potentially, the Georgina Basin is a region of proven oil potential and represents one of the few remaining virtually unexplored, hydrocarbon, and onshore sedimentary basins in the world. The southern Georgina Basin, onshore Australia, hosts high quality source beds and potential conventional and unconventional reservoir rocks. It is believed that this basin is one of the most prospective onshore basins in Australia with potential for both very large conventional and unconventional oil and gas deposits. The basin covers more than 100,000 square kilometers (24.7 million acres) in the NT and western part of Queensland. Baraka's two Exploration Permits are situated over what is believed to be a prospective part of the basin" (Source: Ryder Scott). *The Ryder Scott Report can be found on the Reports and Presentations page of website.
5. INTERPRETATION AND MINERAL PROSPECTIVITY

An assessment of the LIGNUM project for sedimentary phosphate, uranium and other mineral deposits was to undertake a compilation of geological, geophysical, topographical and historical open file data over the tenement areas and provide initial recommendations for ongoing exploration.

The current interpretation and discussion are mainly based on the associated public domain geophysical and geological data including aeromagnetics, gravity, landsat and and DEM images, surface and solid geologies for the project area was acquired from the NTGS. Reprocessing of the digital data has enhanced all of the geophysical and geological signatures and has also outlined a number of other subtle features.

5.1 Methodology

Topography (digital elevation models) and Landsat images, magnetic, gravity, and methods are integrated into this phase on the basis of GIS for an attempt to correlate the features observed from geological maps. This interpreted result derived from the integrated datasets will be tested and improved by application of new drillholes.

All coordinates listed in this report are in map projection MGA94, Zone 53 (GDA94). The targeting process was undertaken as follows:

- Import of the above into ArcGis and sub-setting into different sample types and grade ranges for presentation and analysis.
- Examination of fact geology and surface geology and to provide geological information for targeting.
- Identification of available airborne geophysical and remote sensing data.
- Review of all data mentioned above to identify mineral targets.
- Identification targets with the potential to contain significant mineralisation.
- Recommendation of effective methods for exploring mineral deposits in the project area [some useful methods (e.g., for mapping palaeoallesys) is recommended].

**Topography – Digital Elevation Model (DEM)**

Topography over the tenement EL 29576 is relatively low and flat and occurs higher towards the north, with two main creek systems (Figure 5.1). Some faults occur mainly in the central part of the exploration licence EL 29576 (Figure 5.1).
Figure 5.1 Digital Elevation Model (DEM) over regional geology.

Generally, DEM is very effective in the recognition of young (e.g., Cenozoic and/or Mesozoic) potential palaeochannel areas, as the lower topographic zones can reflect areas where some of the softer sediments have been eroded away. Therefore, DEMs can be used as surrogates for mapping the palaeochannels and related features when the modern and palaeo- geomorphologies are related spatially and genetically. This scenario should be confirmed by combining other methods, such as night-time thermal imagery, AEM/TEM and drilling. If the presence of potential palaeochannels can be determined, some segments of the palaeochannels here should be favourable for exploring sandstone-hosted and/or calcrete style uranium deposits.

*Landsat TM*
Landsat TM image is useful in defining spectrally anomalous zones or regions when appropriately draped over DEM to enhance terrain visualisations (Figure 5.2). In the hard-rock outcropped area, this can be used to figure out the relationship between the U-source rocks and in-situ uranium or U/Th anomalies, which is helpful in exploring for uranium mineralisation.

**Total Magnetic Intensity (TMI)**

Magnetic high features in the northeasterern and southeastern parts of the EL 29576 are interpreted as Fe-bearing metamorphic basement images (Figures 5.3). The interpretation of The basement features need to be tested by drilling (Figures 5.3).
Mesozoic and/or Cainozoic paleovalleys (hosted uranium) are not usually visible on regional magnetic data (Figure 5.3), as they are relatively shallow features, but the magnetic high features in the EL 29576 indicate potentials of hard rock mineralisation, such as copper, gold, diamond, which need detailed surveys assist in locating relative deposits.

**Gravity**

No obvious high and low gravity features occur in the EL 29576 area where shows a relative moderate gravity feature. Because of normally small scales of palaeovalleys and low density contrast between the (Georgina) basin and palaeochannel sediments, gravity
method is not suitable for using it in exploration of palaeovelly hosted uranium (Figure 5.4).

Figure 5.4 Gravity of the EL 29576 area.

5.2 Mineral Prospectivity

Major exploration target in the Georgina Basin is for sedimentary phosphate. There are numerous deposits of sedimentary phosphate in this region of the Georgina Basin, including the Wonarah phosphate deposit. Examination of photographs of drill core derived from the Wonarah deposit suggests it belongs in the second category. The Highland Plains deposit is described by Phosphate Australia as an unconsolidated sand and phosphorite occurrence which implies the third mechanism of up-grading. An exploration model for discovery of commercially viable quantities of phosphorite has been advanced from knowledge of the mode of formation of known regional deposits, and by placing
these deposits into a geological and geophysical framework. The Primary Marine style depositional model of phosphate is being used. All marine sediments, especially limestone, contain some phosphate. Deposits of this type are generally extremely large and relatively low grade and to form commercial concentrations of phosphorite a secondary enrichment process is required. Three enrichment processes are recognised; re-precipitation of phosphorite leached from higher in the sediment pile, selective leaching or replacement of the limestone in the phosphatic horizon and mechanical up-grading to concentrate phosphate where phosphorite concentration has occurred.

The chemical nature of phosphate, the description of the primary marine deposit style and the methods of secondary enrichment lend themselves to the development of distinct exploration criteria, all of which are coincident in the tenements:

- Shallow, restricted marine basins enhance formation
- Presence of limestone and known phosphorite deposits
- Location of restricted sediment input and favourable chemical conditions
- Limestone removal/replacement can be an important mechanism

Also, exploration here is for base metals, diamonds, manganese, oil and gas. Locally forms shallow cover over prospective basement. Several lead-zinc occurrences are located along the southern margin. Frequent oil shows throughout the basin.
6. CONCLUSIONS AND RECOMMENDATIONS

The desktop study indicates that the EL 29576 remains poorly prospective for phosphorite in basin sediments and uranium in palaeochannels. Ground magnetic and gravity, shallow seismic, TEM, and test drilling, where necessary, may be important media that can be used in subsurface structure delineation. The detector and orbital configuration of NOAA-AVHRR (1.1 km pixel) and ASTER (90 m pixel) night time data could make it a very useful remote-sensing method in that it detects temperature variations in palaeochannel sediments related to the elevated moisture content of the channel.

It is recommended that the exploration program in the next step should be designed to test the tenements for the mineral targets described above. In summary, the following conclusions can be made regarding the geophysical and geological methods for locating potential mineralisation sites:

- Acquires and interprets detailed night-time thermal image image (first), AEM/TEM or shallow seismic data over the project area for exploring palaeovalley hosted uranium.
- An airborne electromagnetic survey (AEM) is recommended second as results may define smaller target areas and aid in orientating traverse lines correctly.
- If necessary, carries out ground magnetic traverses over the magnetic anomalies with the generation of geology maps.
- Compiles a detailed structural map and analysis of all priority magnetic and anomalies to determine the controls and disposition of any mineral mineralisation potential.
- Look for signs of channels and intrusives at depth or zones of high physical contrasts along shear zones and or contacts that might mark high redox potential.
- To determine survey line orientation, lithology strike and dip needs to be determined for the palaeovalley and underlying basement.
- Test drilling should traverse across or along the interpreted signatures, and particularly high priority zones selected. When these predictions prove wrong, the information should be used to revise and update the 3D models.
- Conduct a small RAB/RC/diamond drill program targeted at down dip and down plunge extensions to the any mineralisation intersected and to test the source of the uranium conductors located by geophysical survey.
- Sample water from aquifers intercepted by station bores to map U distribution.

The area of EL 29576 has had no further work carried out, as in house studies and field examinations indicated low prospectivity and all efforts have been concentrated within the Yambah exploration project retained area (i.e., EL 29556 and EL 29575) where the company has a high priority area of exploration for uranium deposits.
KEY REFERENCES


APPENDIX 1 – EXPENDITURE REPORT