EL25402

LIMBLA PROJECT

NORTHERN TERRITORY

ANNUAL & FINAL REPORT

For the period 2 March 2012 to 1 March 2013

Date: 11 April 2013
Period: 2 March 2012 to 1 March 2013
(Year 6 of Tenure)
Title Holder Red Desert Minerals Pty Ltd
Operator Western Desert Resources Limited
Report No.: Target commodity: Base Metals, Nickel, Uranium, Gold, REE
Authors: Chris Gaughan

Contact Details:
Level 1 / 26 Greenhill Road
Wayville
SA, 5034
Ph: 08 8177 8800

Email for further technical details: Chris.gaughan@wdrl.com.au
Email for expenditure: Chris.Gaughan@wdrl.com.au
Datum/Zone: GDA94 (Zone 53)
Map Sheets: 1:250,000 Illogwa Creek (SF5315)
1:100,000 Limbla (5950)
1:100,000 Quartz (5951)

Copies: Western Desert Resources Ltd (1)
NT Department of Mines and Energy(1)
SUMMARY

EL25402 is located approximately 120 km east of Alice Springs in the southern part of the Northern Territory. EL’s 25373 and 25554 were originally part of this tenement package but were surrendered in early 2010 and no longer form part of this reporting group. The project area is located over the contact between the Palaeoproterozoic Aileron Province of the Arunta Block to the north and the Neoproterozoic Amadeus Basin to the south. The project area has been previously explored for uranium, diamonds, base metals, gold and heavy minerals. The Tourmaline Gorge and Albarta Uranium prospects were the initial focus for Western Desert Resources Ltd in EL25402. Work in previous years has included ariel radiometrics and magnetics on selected portions of EL25402 and an Ariel EM survey covering the northern portion of the tenement, and subsequent ground follow up of both radiometric and AEM anomalies with rock sampling ground radioactivity testing. From that previous work no significant mineralisation or drill targets were identified. The Ariel EM processing identified 2nd and 3rd order anomalies but no Priority 1 anomalies were identified. During the 2011-2012 reporting period WDR and historical data were looked at again and a metallogenic map was produced which highlighted highly anomalous nickel, chrome and scandium values reporting from ultramafics. This desktop study, including interpretation of Google Earth satellite imagery, also highlighted the fact that ultramafics are likely to be more common across the northern part of the tenement than is indicated on available government maps. The work for the 2011-2012 reporting period also included the enlisting of an expert consultant (Bill Laing) to visit the area with WDR geologists, carry out a structural analysis of the entire EL, and then subsequently to produce a prospectivity map to guide WDR geologists in further exploration. This work highlighted three shear zones, the already identified Illogwa Shear Zone (corresponds to the Illogwa Schist zone), the Leaky Bore Shear Zone and the Albarta Shear Zone, as the most prospective areas to look for mineralisation. 36 rock samples were collected and assayed for multi-elements and gold during 2011-2012. A fairly extensive soil sampling program was planned but ultimately did not begin until January 2012. Work in the 2012-2013 reporting period focussed on the Illogwa Schist/Shear Zone and included the collection of 475 soil samples for Ionic Leach analysis and 156 rock samples for multi-element analysis. Sampling was primarily centred on existing AEM anomalies. Several gold anomalies were highlighted through the soil sampling, with each requiring further analysis of the associated multi-element data, and infill and extension sampling of the survey grids prior to the possibility of drill targeting. The tenement was surrendered at the end of the 2012-2013 reporting period because no drill targets had been defined and the company needed to be focussed elsewhere.

COPYRIGHT STATEMENTS

Chris Gaughan as author of this report owns the copyright to all of this report, apart from the report included in Appendix 1 by Bill Laing. Chris Gaughan authorises the Minister to publish information contained within this report.

Laing Exploration Pty Ltd owns the copyright to our Report "THE LIMBLA AREA: GEOLOGICAL SYNTHESIS, STRUCTURAL-METASOMATIC ARCHITECTURE, AND EXPLORATION TARGETS". I authorise Chris Gaughan and Western Desert Resources to use this Report in their Annual Report.
### LIST OF FILES INCLUDED WITH THIS REPORT

<table>
<thead>
<tr>
<th>File_name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL25402_2013_F_01_Reportbody.pdf</td>
<td>The body of the annual/final report.</td>
</tr>
<tr>
<td>EL25402_2013_F_02_SurfaceGeochemRock.txt</td>
<td>Rock location &amp; assay data</td>
</tr>
<tr>
<td>EL25402_2013_F_03_SurfaceGeochemSoil.txt</td>
<td>Ionic leach soil location &amp; assay data</td>
</tr>
<tr>
<td>EL25402_2013_F_04_SurfaceGeochemSoilResponseRatio.txt</td>
<td>Ionic leach soil location &amp; statistical Response Ratio values</td>
</tr>
<tr>
<td>EL25402_2013_F_05_OriginalLabAssayFiles.rar</td>
<td>Collection of original assay files from laboratory</td>
</tr>
<tr>
<td>EL25402_2013_F_06_Appendix3.pdf</td>
<td>Plots of Ionic Leach Ratio Response of various elements (Round 1 soil survey)</td>
</tr>
<tr>
<td>EL25402_2013_F_07_Appendix4.pdf</td>
<td>Contour maps of Ionic Leach Ratio Response of various elements (Round 2 soil survey)</td>
</tr>
<tr>
<td>EL25402_2013_5_08_FileListing.txt</td>
<td>File Verification Listing</td>
</tr>
</tbody>
</table>

Table 1. List of files included with this report.
## Contents

EL25402 .......................................................................................................................... 1
LIMBLA PROJECT .............................................................................................................. 1
NORTHERN TERRITORY .................................................................................................. 1
ANNUAL & FINAL REPORT .............................................................................................. 1
Summary ........................................................................................................................... i
List of Appendicies .......................................................................................................... iv
Introduction ....................................................................................................................... 1
  Location and Access ......................................................................................................... 1
  Climate .............................................................................................................................. 1
  Topography and Vegetation ........................................................................................... 2
Tenure ............................................................................................................................... 2
  Mining / Mineral Rights ................................................................................................. 2
  Land Tenure ................................................................................................................... 2
  Native Title ..................................................................................................................... 2
  Aboriginal Sacred Sites ................................................................................................. 2
Geology ............................................................................................................................. 2
  Regional Geology ........................................................................................................... 2
  Local Geology ................................................................................................................ 3
Previous Exploration ....................................................................................................... 6
  Exploration by Previous Companies ............................................................................. 6
    Esso Minerals Australia (1976-78) ............................................................................. 6
    AGIP Australia (1977-78) ........................................................................................ 6
    Stockdale Prospecting Ltd (1979-80) ................................................................. 6
    Esso Minerals Australia (1980) ............................................................................... 7
    Afmeco Pty Ltd (1980) ............................................................................................ 7
    BHP Minerals (1982-84) ....................................................................................... 7
    Pancontinental Mining (1990) ................................................................................. 7
    Roebuck Resources (1993) .................................................................................... 7
    Rio Tinto Exploration (1996-98) ........................................................................... 7
    Gutnick Resources (2001-2003) ........................................................................... 8
EXPLORATION BY WESTERN DESERT RESOURCES LTD ........................................ 8
  2007 – 2008 WORK ..................................................................................................... 8
  2008 – 2009 WORK ..................................................................................................... 8
  2009 – 2010 WORK ..................................................................................................... 8
    Electromagnetic Survey .......................................................................................... 9
    2010-2011 OUTCROP SAMPLING ......................................................................... 9
    2011-2012 WORK .................................................................................................. 10
Lithostratigraphic, structural and metasomatic analysis .................................................. 10
INTRODUCTION

EL25402 covers ground prospective for uranium, base metals, nickel, tungsten, REEs and gold mineralisation

**Location and Access**

The tenement is located about 120km east of Alice Springs in the southern part of the Northern Territory (Figure 1).

Access is by the sealed Ross Highway from Alice Springs to the Arltunga turnoff, and then by an unsealed road passed Claraville Station homestead. Access within the project area is by station tracks. Many parts of the area are inaccessible to vehicles.

**Figure 1:** Limbla Project Location – EL 25402 highlighted in blue (EL 25373 & EL 25554 surrendered in 2010 – in green)

**Climate**

The climate is arid, sub-tropical with cold winters and hot summers. The average annual rainfall is 230mm with most falls in the summer months.
Topography and Vegetation

The project area is located at the eastern end of the Folded Central Ranges geomorphologic division. The Simpson Desert borders the area to the south.

Steep quartzite ridges form topographic highs in the central part of the project area, and are separated by narrow alluvial valleys and grass plains. The hills and ridges are lightly to moderately wooded with stunted eucalypts, gidgee, mulga and acacia.

TENURE

Mining / Mineral Rights

EL25402 was granted to A W Mackie on 2nd March 2007. The licence was purchased by Red Desert Uranium Pty Ltd, a wholly owned subsidiary of Western Desert Resources Ltd, on May 2nd 2007. Red Desert Uranium Pty Ltd has subsequently been renamed to Red Desert Minerals Pty Ltd.

EL25331 and EL25332 which originally formed part of the tenement package were surrendered in 2010 and no longer form part of this reporting group.

Land Tenure

The tenement is located within the boundaries of Perpetual Pastoral Leases 995 (Loves Creek) and 1124 (Ambalindum). The majority of EL25402 falls within Loves Creek Station.

The Ruby Gorge Nature Park lies on the western boundary of the project area.

Native Title

The Limbla project does not currently fall within the area of a registered Native Title Claim. Part of the project area may be subject to an Aboriginal land claim under the Aboriginal Land Rights (NT) Act. Loves Creek Station (a PPL) was handed back to the Federal government in 2012. The present status of Loves Creek is unknown.

Aboriginal Sacred Sites

There are no known Registered or Recorded Sacred Sites within the project area.

GEOLOGY

Regional Geology

The project area is located over the contact between the Aileron Province of the Arunta Block of Palaeoproterozoic to Mesoproterozoic age to the north and the Amadeus Basin of Neoproterozoic age to the south, see Figure 2. The older rocks have been thrust over the younger rocks along a series of NW – SE trending thrust zones, of which the Oolera Fault Zone (Burt Plain-Albarta Shear Zone) is the most important.
Local Geology

For an overview of the local geology refer to Figure 4. The northern part of the project area is underlain by metamorphic rocks of the Aileron Province of the Palaeoproterozoic Arunta Block.

The Harts Range Group consists of the Bruna Gneiss of igneous origin and the Riddoch Amphibolite Member; parts of this group are now thought to be of Neoproterozoic to Cambrian in age. These rocks are separated from the Albarta Metamorphics to the south by the Illogwa Schist Zone.

The Illogwa Schist Zone (Illogwa SZ or ISZ) is a major structural zone (the Illogwa Shear Zone) and contains basement rocks which have been subject to retrograde metamorphism. The ISZ dips to the north and is a thrust structure. The Albarta Metamorphics are a sequence of metasediments, amphibolites and quartzo-feldspathic gneiss. The Albarta Metamorphics have been intruded by the Atneequa Granitic Complex, which includes the Tourmaline Gorge granite.

Recent analysis of the EL25402 area by Laing (2012, see Appendix 1 in the 2011-2012 Annual Report - EL25402 Limbla Project Northern Territory Annual Report For The
Period 2/03/2011-1/03/2012) has highlighted two more shear zones within EL25402. These are the Leaky Bore Shear Zone in the north-eastern part of the Albarta Metamorphics, and the Albarta Shear Zone (Albarta SZ or ASZ) which trends east-northeast across the southern part of EL25402 (see Figure 3). The Laing Albarta Shear Zone (not to be confused with the Burt Plain-Albarta Shear Zone, or Albarta Fault, see Figure 4) is 21 km long and separates the Albarta Metamorphics from the Atneequa Granite Complex, and is terminated in the east against the Illogwa SZ. Laing (2012) concludes that the Albarta SZ is directly related to the thrusting processes responsible for the Illogwa SZ, and that all known mineralisation occurrences are related to theses shear zones. These include the Hale River Au-Cu show west of EL25402, the Harding Springs Cu-Au show and a historical W-Cu show which all occur within the Illogwa SZ, while uranium anomalism of the Albarta and H41 prospects are associated with the Albarta SZ and northwest faults. Figure 3 shows Map 4 from Laing 2012, Major Lithostratigraphic and Structural Elements.

Figure 3. Major Lithostratigraphic & Structural Elements from Map 4 in Laing 2012.
Figure 4: Local Geology – outline of the original Limbla tenement package
Rocks of the Amadeus Basin crop out in the southern half of the project area. The northern boundary of the Basin is marked by the major Oolera Fault Zone (Burt Plain – Albarta Shear Zone) which contains fault blocks of the lower members of the Amadeus Basin and the underlying Arunta Block. The faulting within this zone is reverse or overthrust, and granitoid rocks that occur within the zone are the noses of small nappes preserved as klippen.

The lowest member of the Amadeus Basin is the Heavitree Quartzite which forms steep ridges in the central part of the project area. The Bitter Springs Formation overlies the Heavitree Quartzite and is a sequence of shales, sandstones and carbonates. The Areyonga and Aralka Formations are exposed in the Limbla Syncline, and consist of siltstones, sandstones and carbonates with minor diamictite of possibly glacial origin. The youngest members of the Amadeus Basin exposed in the area are the Gaylad Sandstone and the Pertatataka Formation which occur within a syncline northeast of Ringwood Station.

A Tertiary laterite capping has been preserved in some areas. Quaternary sediments occur within the Illogwa Creek drainage system.

PREVIOUS EXPLORATION

Exploration by Previous Companies

Esso Minerals Australia (1976-78)

Esso explored the area for uranium between 1976 and 1978. Two airborne radiometric surveys were flown and 56 radiometric anomalies were followed up. Four of these anomalies were found to be due to outcropping uranium mineralisation.

The Albarta prospect is related to a shear zone and with associated chlorite alteration. Secondary uranium minerals were observed in outcrop with rock chip assays recording up to 0.9% U₃O₈. Subsequent trenching of the mineralised shear zone gave results up to 260 ppm U₃O₈, and later drilling along the length of the radioactive zone gave results similar to those found in the trenches.

The H41 prospect is located to the north of the Albarta prospect. The anomaly is associated with a shear in leucogranite. Rock chip samples assayed up to 320 ppm U₃O₈, and one drill hole was completed.

The Tourmaline Gorge prospect is associated with poorly outcropping tourmaline granite in a steep sided valley. Secondary uranium minerals were reported in association with minor sulphide veins in the altered granite. No trenching or drilling was undertaken.

AGIP Australia (1977-78)

AGIP explored the Illogwa Creek catchment for channel uranium deposits with little encouragement.

Stockdale Prospecting Ltd (1979-80)
Stockdale explored the southern part of the project area for diamonds. No anomalous results were reported.

**Esso Minerals Australia (1980)**

Esso continued exploration on the Albarta prospect during 1980. No drilling was undertaken.

**Afmeo Pty Ltd (1980)**

Exploration for sandstone-type uranium was carried out in the Illogwa Creek area. Drilling did not intersect any uranium mineralisation.

**BHP Minerals (1982-84)**

Exploration for diamonds and base metals was carried out. Activities included geological mapping, stream sediment sampling, rock chip sampling and ground magnetic traverses. The results of the diamond exploration activities were negative for kimberlitic indicators. Some stratiform gossanous units were sampled and found to contain sporadic high Zn values (up to 5,500 ppm Zn). The gossanous units were thought to be originally quartz-magnetite-pyrite/pyrrhotite bands. BHP did not consider them to warrant further exploration.

**Pancontinental Mining (1990)**

The target for exploration was heavy minerals in the Hale River catchment. Surface sampling and widely spaced drilling failed to discover any economic concentrations.


Normandy explored the area for stratiform sediment-hosted base metal mineralisation within the Amadeus Basin succession. Exploration activities included stream sediment sampling, lag sampling, RAB, RC and diamond drilling. Geophysical techniques used included airborne magnetic, gravity and reconnaissance IP. Numerous anomalous samples were followed up but no economic base metal mineralisation was discovered.

**Roebuck Resources (1993)**

Exploration activities including stream sediment and rock chip sampling tested two magnetic anomalies for gold and base metals. Weak gold values (13 and 26 ppb Au) were found in -80# stream sediments draining the southern anomaly. Follow-up sampling was completed with negative results.

**Rio Tinto Exploration (1996-98)**

Rio Tinto targeted stratiform base metals, unconformity uranium and diamonds in their exploration of the area. The work was concentrated in the Amadeus Basin sediments. An airborne magnetic was flown over the area. Ground magnetic surveys were
conducted in follow-up of the airborne magnetic anomalies. Stream sediment and rock chip samples were collected.

Regional RAB drilling was undertaken to test the contact between the Heavitree Quartzite and the overlying Bitter Springs Formation. Some of the RAB holes returned anomalous base metal values. RC drilling was undertaken to test the best area of RAB drilling. Further anomalous base metal values were reported (best intersection: 4m at 1,500 ppm Cu), however Rio Tinto considered the continuity of the mineralisation to be poor.

**Gutnick Resources (2001-2003)**

Exploration was conducted for Witwatersrand gold mineralisation. Stream sediment samples were collected and analysed for BLEG gold. No anomalous values were found.

**EXPLORATION BY WESTERN DESERT RESOURCES LTD**

**2007 – 2008 WORK**

An airborne radiometric and magnetic survey was flown by UTS geophysics during November and December 2007. The survey covered two areas within the project tenements. Interpretation of the radiometric data indicated that a number of uranium anomalies required ground follow-up. The survey specifications, logistics and processing report and the survey data can be found in *Annual Report, Exploration Licences 25331, 25332, 25373, 25402 and 25554, Limbla Project For The Period 9/02/07 to 8/02/08, Year 1* with further analysis and images available in the annual report of the following year, *Annual Report, Exploration Licences 25373, 25402 and 25554, Limbla Project, For the Period 9/2/08 to 8/02/09, Year 2*.

**2008 – 2009 WORK**

In May 2008 a helicopter was used to visit a number of the radiometric anomalies delineated by the 2007 airborne survey. Sampling within the Tourmaline Gorge area returned anomalous REE, U and Th values.

**2009 – 2010 WORK**

In March 2009, Aerosystems P/L were contracted to complete an aeromagnetic and radiometric survey over several areas of the Limbla Project tenements. Within the Limbla project three surveys were conducted, over the Hale River Prospect, Albarta and Tourmaline Gorge. The airborne survey was conducted using a helicopter at an elevation of 25 metres with line spacing of 25 metres and a tie line spacing of 250 metres.

Helicopter-supported outcrop sampling was conducted at various sites within the project with sixteen samples collected. Assay results from the sampling returned some anomalous base metal and silver values at Sixpence prospect which is adjacent to Mithril’s Bob prospect to the east of EL25402. A grab sample from an airborne radiometric anomaly at the Albarta prospect returned 152.6 ppm U₃O₈.
Electromagnetic Survey

An airborne EM survey was flown by Geosolutions P/L using the RepTEM system, over the northern section of EL 25402 during February 2010, refer to Figure 5. A total of 788.7 line kilometres was completed at a line spacing of 200 metre with the survey traverse flown in a north south orientation. The survey specifications are provided in EL25402, Limbla Project Annual Report for the period 2 March 2010 to 1 March 2011, Appendix 1.

Appendix 1: Geosolutions RepTEM - Limbla Survey Specifications

![Figure 3: EL 25402 Airborne Electromagnetic Survey Location](image)

An interpretation of the AEM survey was commissioned to Montana G.I.S. who provided an interpretation report. The survey established that the area is quite resistive, with a significant amount of the signal reverting to noise within the first 0.32 msec, limiting the depth penetration of the signal to approximately 400 to 500 m. 37 conductors were identified within the area; however none of these are rated as a high priority for follow-up, and only nine were ranked as priority 2. The full interpretation report and list of conductors can be accessed in EL25402, Limbla Project Annual Report for the period 2 March 2010 to 1 March 2011, Appendix 2.

2010-2011 OUTCROP SAMPLING
Helicopter-supported outcrop sampling was conducted across the northern portion of the tenement as part of the electromagnetic survey ground follow up work. Sixteen rock chips were collected during the program. *EL25402, Limbla Project Annual Report for the period 2 March 2010 to 1 March 2011*, Appendix 3 tabulates the location of the outcrop samples. All samples were geochemically analysed at the ALS Global Laboratory in Alice Springs. The samples were analysed for a range of major and trace elements using ICP-MS methods. Assays of the rock chips returned a high chrome and nickel response associated with the samples ultramafics in samples LN001 and LN002. The remaining samples did not return any results above the expected background values.

**2011-2012 WORK**

**Lithostratigraphic, structural and metasomatic analysis**

Industry expert consultant Bill Laing was engaged to analyse the Limbla project area. This work involved a field trip to the project area with three WDR geologists, followed by a desktop study. Laing’s report is included as Appendix 1 in *EL25402 Limbla Project Northern Territory Annual Report For The Period 2 March 2011-1 March 2012*. This work highlighted three shear zones, the already known Illogwa Shear Zone (corresponds to the Illogwa Schist zone), the Leaky Bore Shear Zone and the Albarta Shear Zone, as the most prospective areas to look for mineralisation. This report also supported WDR’s view of placing some degree of focus on competent “host” rocks (i.e. the Heavitree Quartzite and Aremra Granite) adjacent to or within the Illogwa Shear Zone.

**Desktop metallogenic study**

During the 2011-2012 reporting period WDR and historical data were looked at again and a metallogenic map was produced which highlighted strongly anomalous nickel, chrome and scandium values reporting from ultramafics. This desktop study, including interpretation of Google Earth satellite imagery, also highlighted the fact that ultramafics are likely to be more common across the northern part of the tenement than is indicated on available government maps. Therefore, WDR included nickel and REE as target commodities. Of particular interest is an ultramafic body at location 505300E/7411500N(GDA94, Map Zone53) which coincides with a weak magnetic anomaly, a “noisy” low-order AEM anomaly and with anomalous historical geochemistry. The metallogenic map is reproduced here in Appendix1.

**Outcrop sampling**

During the reporting period 31 rock samples were collected and assayed for multi-elements and gold. ALS Global (ALS) carried out the analysis. All 31 samples were analysed by the ALS 48 element multi-element method ME_MS61u (4 acid near total digestion with ICP-MS and ICP-AES analysis). 31 samples were tested for gold by the ALS cyanide roll method with ICP-MS finish, AU_CN11. Four samples were tested for gold by ALS fire assay method Au-AA23 with an AAS finish.

Two copper values, though weak overall, were significantly above background at 154 ppm (sample 11LB025 from the northwest) and 386 ppm Cu. The 386 ppm Cu value coincides with anomalous U (161 ppm U) and Ce (58.9 ppm Ce) in sample 11LB020. This sample from the Tourmaline Gorge uranium prospect is of dark red hematitic quartz veining with an elevated radiometric count of 1750 cps relative to the surrounding granite which recorded 450 cps.
Sample 11LB023 from a large quartz vein at the Alberta Prospect returned weakly anomalous As (32.5 ppm), Bi (13.4 ppm) and Co (311 ppm) relative to background.

The anomalies discussed above were based on visual comparison of tabulated results. Duplicate samples of those analysed have not been taken or kept.

The elements analysed in the ALS multi-element method ME-MS61U are as follows:

<table>
<thead>
<tr>
<th>Ag</th>
<th>Al</th>
<th>As</th>
<th>Ba</th>
<th>Be</th>
<th>Bi</th>
<th>Ca</th>
<th>Cd</th>
<th>Ce</th>
<th>Co</th>
<th>Cr</th>
<th>Cs</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fe</td>
<td>Ga</td>
<td>Ge</td>
<td>Hf</td>
<td>In</td>
<td>K</td>
<td>La</td>
<td>Li</td>
<td>Mg</td>
<td>Mn</td>
<td>Mo</td>
<td>Na</td>
<td></td>
</tr>
<tr>
<td>Nb</td>
<td>Ni</td>
<td>P</td>
<td>Pb</td>
<td>Rb</td>
<td>Re</td>
<td>S</td>
<td>Sb</td>
<td>Sc</td>
<td>Se</td>
<td>Sn</td>
<td>Sr</td>
<td></td>
</tr>
<tr>
<td>Ta</td>
<td>Te</td>
<td>Th</td>
<td>Ti</td>
<td>Tl</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td>Y</td>
<td>Zn</td>
<td>Zr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extremely low level gold was recorded in many samples from Tourmaline Gorge area with two samples being an order of magnitude higher in gold content at 0.014 ppm Au and 0.012 ppm Au from samples 11LB013 (a hematitic cherty quartzite) and 11LB019 (a brecciated hematitic siliceous rock) respectively.

**Mobile Ion/Ionic Leach soil survey and analysis**

Focussing initially on the Illogwa Shear Zone an MMI/ionic leach soil sampling program was planned on widely spaced lines that coincided with 2nd and 3rd order AEM anomalies. Soil lines were also planned to coincide with the Harding Springs Cu-Au occurrence and an historical W-Cu show. The soil sampling work was scheduled to take place in November 2011 but was delayed principally due to rain, with further delays due to rain in the new year. The soil program finally commenced in late January 2012 but was again significantly delayed due to heavy rain in February. By the end of the 2011-2012 reporting period 195 soil samples (out of 400 planned samples) had been collected with no assay results available.

Appendix 1 contains various figures related to the text in this report. Figures 6-9 are repeated from the 2011-2012 Limbla Annual Report.

Figure 6 shows the Ariel EM anomalies, the planned soil traverses and those soil samples taken during the 2011-2012 reporting period. Figure 6 also provides the survey area names for future reference.

Figure 7 shows the locations of WDR rock samples taken during 2011-2012.

Figure 8 shows the location of all recorded rock samples taken in the area.

Figure 9 shows the metallogenic map compiled from previous company and WDR data, AND includes known and interpreted ultramafics within the Illogwa Schist/Shear Zone. All recorded gold occurrences, although extremely low to very low throughout, are also included on the metallogenic map.

**2012-2013 WORK**

**Summary**

Work during the 2012-2013 reporting period included two geological field programs and three soil sampling campaigns focussed on the investigation of areas chosen as potentially
prospective based on the above mentioned Ariel EM survey results, Laing’s (2012) lithostratigraphic and metosomatic study and WDR’s prospectivity analysis. The work was entirely within or adjacent to the Illogwa Schist/Shear Zone. The geological investigations were carried out after the first round of soil results had become available and so were able to look at some areas of anomalism highlighted by those results. Other areas looked at included the sites of the Ariel EM anomalies, the Aremra Granite (thought to be a competent unit within the Illogwa Schist/Shear Zone), various ultramafic outcrops, an historical copper and tungsten occurrence, the Harding Springs copper occurrence, and the area where the Illogwa Schist/Shear Zone changes trend direction from east-west to northwest-southeast (in plan view).

The originally planned regional-style of widely spaced soil sample lines aimed at defining anomalous areas was cut short due to management considerations, and instead the soil sampling effort was to be directed at defining drill targets prior to the end of the reporting period. With the need to define drill targets the soil sampling needed to be on a much tighter grid. Therefore, two areas, Hale River North and Aleetara (see Fig.6, Appendix 1) were chosen to be sampled on 50 x 50 m and 100 x 100 m grids. Hale River was chosen because of a coinciding Ariel EM anomaly (AEM anomaly at 502301E/7411880N), an iron oxide sampled from a quartz vein anomalous in multiple elements including 0.49% Cu (rock sample number LI11121: Ag 14 ppm, As 14 ppm, Bi 15 ppm, Co 546 ppm, Cu 4900 ppm, Fe 40%, Mo 35 ppm, Ni 469 ppm, Te 11 ppm, U 52 ppm, V 408 ppm), and an interpreted fault. The Hale River AEM anomaly is located to the west from and along strike from a topographically distinct east-west ridge of ultramafic rock, and is separated from that ultramafic ridge by a steep northerly valley thought to represent that fault mentioned above. The Aleetara area was chosen for close spaced soil sampling based on the presence of an Ariel EM anomaly (located at 521713E/7408084N) in a narrow and strongly sheared section of the Illogwa Schist/Shear Zone which includes tight folding and sheared folding in biotite schist with clots of coarse grained granite and mega-crystals of siderite in a fold hinge. The fold is tight with a vertical axial plane with the fold hinge plunging at 90° to 110°(T). Outcropping ultramafic pyroxenite occurs close to the AEM anomaly. The narrow section of Illogwa Schist/Shear Zone is bounded by granite (the Aremra Granodiorite, expected to be a competent unit) to the north and Heavitree Quartzite (a distinctly competent unit) to the south, and the Aleetara area falls near an apparent bend in the broader Illogwa Schist/Shear Zone where it changes from an east-west trend to a northwest-southeast trend. The bending of the shear zone may have created permeability.

Soil Geochemistry Work
Soil samples were taken according to the methods appropriate for Ionic Leach (ALS nomenclature) and Mobile Metal Ion (or MMI, nomenclature of Amdel Bureau Veritas) chemical assay methods. Samples of approximately 250 g were taken with non-contaminating equipment between the depths of 10 cm and 20 cm. Each sample was sealed in two clip-seal plastic bags. The sample pH was measured in the field at the time of sampling. An electronic pH sensor was used. The instrument was calibrated twice daily with solutions of known pH, with one of pH 4 and one of pH 7. Approximately 1 teaspoon of soil sample was placed on the sensor dish and dampened with one or two drops of de-ionised water. The results were recorded in the technician’s field notes alongside the sample number and site description. The ph meter sensor dish was flushed with de-ionised water between sample readings.
The soil sampling was carried out over two periods. Round 1 sampling was undertaken in Late January to February 2012 and included the regional-style of widely spaced sample traverses for 195 samples in total. Round 2 sampling was undertaken in June 2012 and focussed on two grids with tighter sample spacing, the Hale River North and Aleetara survey areas, for a total of 276 samples. Figure 10 shows the location of the soil samples.

The samples were delivered to the Australian Laboratory Services Pty Ltd (ALS) preparation facility in Alice Springs, who took charge of dispatching the samples to ALS in Perth for the Ionic Leach analysis. ALS subjected the entire undried and uncrushed soil samples to their proprietary weak alkaline leach method aimed at dissolving only the adsorbed ionic component of the available elements within each sample. ALS multi-element Inductively Couple Plasma-Mass Spectrometer (ICP-MS) method ME-MS23 was used to determine 60 elements (plus Pb206, Pb207, Pb208). ALS method pH-MS23 determined the pH of the leached solution.

The elements tested for and the lower detection limits are as follows:

<table>
<thead>
<tr>
<th>Element</th>
<th>Ag</th>
<th>As</th>
<th>Au</th>
<th>Ba</th>
<th>Be</th>
<th>Bi</th>
<th>Br</th>
<th>Ca</th>
<th>Cd</th>
<th>Ce</th>
<th>Co</th>
<th>Cr</th>
<th>Cs</th>
<th>Cu</th>
<th>Dy</th>
<th>Er</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppm</td>
<td>ppm</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
</tr>
<tr>
<td>Detection Limit</td>
<td>0.1</td>
<td>2</td>
<td>0.02</td>
<td>10</td>
<td>0.2</td>
<td>3</td>
<td>0.05</td>
<td>0.2</td>
<td>1</td>
<td>0.1</td>
<td>0.3</td>
<td>1</td>
<td>0.1</td>
<td>1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Eu</th>
<th>Fe</th>
<th>Ga</th>
<th>Gd</th>
<th>Ge</th>
<th>Hf</th>
<th>Hg</th>
<th>Ho</th>
<th>I</th>
<th>In</th>
<th>La</th>
<th>Li</th>
<th>Lu</th>
<th>Mg</th>
<th>Mn</th>
<th>Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>ppb</td>
<td>ppm</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppm</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppm</td>
<td>ppm</td>
<td>ppb</td>
</tr>
<tr>
<td>Detection Limit</td>
<td>0.1</td>
<td>0.1</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>0.01</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Nb</th>
<th>Nd</th>
<th>Ni</th>
<th>Pb</th>
<th>Pb 206</th>
<th>Pb 207</th>
<th>Pb 208</th>
<th>Pd</th>
<th>Pr</th>
<th>Pt</th>
<th>Rb</th>
<th>Re</th>
<th>Sb</th>
<th>Sc</th>
<th>Se</th>
<th>Sm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
</tr>
<tr>
<td>Detection Limit</td>
<td>0.1</td>
<td>0.1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Sn</th>
<th>Sr</th>
<th>Ta</th>
<th>Tb</th>
<th>Te</th>
<th>Th</th>
<th>Ti</th>
<th>Tl</th>
<th>Tm</th>
<th>U</th>
<th>W</th>
<th>Yb</th>
<th>Zn</th>
<th>Zr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
<td>ppb</td>
</tr>
<tr>
<td>Detection Limit</td>
<td>0.2</td>
<td>1</td>
<td>1</td>
<td>0.01</td>
<td>1</td>
<td>0.02</td>
<td>5</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>1</td>
<td>0.1</td>
<td>0.1</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Sample Numbers</th>
<th>MGA Zone</th>
<th>MGA East (m)</th>
<th>MGA North (m)</th>
<th>No. Of Samples</th>
<th>Peak Value Au (ppb)</th>
<th>Median Au (ppb)</th>
<th>Standard Deviation Au (ppb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Round 1</td>
<td>LB1003-LB1511</td>
<td>53</td>
<td>521800</td>
<td>7411100</td>
<td>195</td>
<td>8.05</td>
<td>0.30</td>
<td>0.74695</td>
</tr>
<tr>
<td>Soil Round 2</td>
<td>LB1101-LB1610</td>
<td>53</td>
<td>521600</td>
<td>7407950</td>
<td>276</td>
<td>2.26</td>
<td>0.13</td>
<td>0.31069</td>
</tr>
</tbody>
</table>

Summary of soil samples. Note that there are gaps in the sample numbers series. The coordinates are the locations of the respective peak value samples.
Soil Geochemistry Results
Figure 6 and Figure 11 (Appendix 1) show the location of the survey areas and soil samples. Data file EL25402_2013_F_03_SurfaceGeochemSoil.txt lists the results of the Ionic Leach analysis collated with location, laboratory job number, field pH and sample site description. Original laboratory assay certificate files are included in Appendix 2, while digital copies of certificates and data files are included with this report as folder EL25402_2013_F_05_OrigLabAssayFiles.rar.

The assay results were subjected to a Response Ratio calculation (as described below) to take into account the inherent natural variation in the concentration of, and in the retainment of the ionic species of elements in the subsurface. The Ratio Response was calculated for each element as follows:

1. Determine the first quartile value.
2. Determine the mean(average) of all values less than the first quartile value.
3. Determine the Ratio Response by dividing each assay result by the average of the values that were less than the first quartile value as obtained in Step 2 above.

Data file EL25402_2013_F_04_SurfaceGeochemSoilResponseRatio.txt lists the Response Ratio values.

Round 1 Ionic Leach soil anomalies
Figures 11 and 13 (Appendix 1) show colour coded plots of the Ratio Response for gold from Round 1 in the Aremra and Aleetara survey areas respectively. Figures 12 and 14 (Appendix 1) show the corresponding sample numbers. Apart from Figures 11-14 in Appendix 1, Appendix 3 includes a collection of figures showing the Response Ratio for several elements, sample numbers and field pH. The figures in Appendix 3 are incomplete as far as a map is concerned (i.e. the figures do not have legends, scale bars etc), but do have a grid and the data can be easily back-referenced via sample numbers and other maps. The said collection was compiled as part of a “quick-look” analysis for any stand-out anomalies, and is included with this report so as also to provide future investigators with a quick-look method prior to downloading and plotting the data.

Two stand-out gold anomalies can be recognised from the plotting of Round 1 Response Ratios (see Figures11 and 13, Appendix 1). One of these, at the Aremra 1 grid, correlates spatially with the Ariel EM anomaly on which the grid was centred. The other anomaly, at the south end of the Illogwa grid is a gold cluster over a length of 250 m which correlates with the apparent bend in the Illogwa Schist/Shear Zone. At Illogwa the highest gold correlates with the highest Cu and Ag values but overall there is not a recognisable correlation. Although no tungsten mineralisation was found, the recorded location of the historical tungsten and copper occurrence on which the Illogwa Tungsten survey was centred correlates with the highest tungsten Response Ratio on that grid. There are numerous other examples of spot (single point) anomalism, both in gold and in other elements. Many of these point anomalies are anomalously high in multiple elements. This is especially the case for uranium where approximately 15% of Response Ratio values are equal to or greater than 40 (i.e. 40 times background by the Response Ratio method used here). Further to this, in most cases the anomalous uranium is accompanied by strongly anomalous thorium and, and to varying degrees, anomalous Ce, Dy, Gd, Ge, Ho, La, Lu, Nd, Pr, Sm, Tb, Tm, Y and Yb. The uranium is also accompanied by weaker and more variable anomalism in Er, Eu, Pb, Pd.
and Mo. Anomalous gold also occasionally correlates with elevated uranium. The Aremra 1, Aremra 2, Illogwa and Aleetara survey grids are well represented with highly elevated single-point anomalism, with Aremra 2 showing the only case of U, Th etc clustering, though in this latter case the Response Ratio values are not as extreme as many of the afore mentioned single-point values. With the data coverage at hand no link can be made with lithology. The significance of the U, Th etc and any potential link to mineralisation is unknown and further investigation is required in order to make any assertions in that regard.

Round 2 Ionic Leach soil anomalies
Round 2 soil sampling focussed on the Hale River (or Hale River North) and the Aleetara areas. Sampling technique and analysis were as for Round 1 samples as described earlier in this report. Appendix 4 includes a collection of plots of Response Ratios for a selection of elements. The data has been contoured with a background of Histogram-Equalised Psuedocolour for visualisation of element distribution and concentration within the survey grids.

The gold plots show a multi-sample point gold anomaly in the southwest corner of both the Hale River and the Aleetara grids.

Hale River
The Hale River gold anomaly in the southwest corner of the grid warrants further investigation. Although of only weak responses, elevated iodine and copper overlap with the Hale Rive southwest gold anomaly. Elevated pH correlates with the southwest gold anomaly, although elevated pH also occurs in areas with no elevated gold.

Several sample sites (e.g. LB1115 and LB1172) show distinctly elevated U-Th-La along with variably elevated Mo (and most likely other elements that have not been looked at) and lower pH values. Sample LB1115 with coincidental elevated U-Th-La-Mo is spatially associated with an outcrop of quartz-phyric microgranite/felsic quartz porphyry. The field comments indicate that the sample location consisted of sand. The field record for sample LB1172 indicates a sandy clay soil composition. There is a second population of molybdenum that flanks the gold anomaly in the southwest of the grid that does not correspond with elevate U-Th. This Mo anomaly correlates with a pH trough and roughly correlates (at the scale of this analysis) with a regional northwest structure (i.e. the Albarta Fault as shown in Figures 2 and 4 above, and as drawn, but not annotated, on the sample number plot of the Hale River grid in Appendix 4).

Nickel, cobalt, copper and silver show a degree of coincidental to overlapping elevation in the central eastern part of the Hale River grid centred around sample number LB1182. This location corresponds to the western end of the afore mentioned ultramafic ridge. The location of the ultramafic ridge is outlined on the Hale River sample number plot in Appendix 4.

Cobalt shows a bullseye anomaly (centred on sample number LB1304) correlating with the Ariel EM anomaly and with overlapping weakly elevated arsenic. This location corresponds with a north-trending steep pH gradient and characterised by low responses in every other plotted element. Some of the plots show a vague ring-effect around the Ariel EM/cobalt anomaly (e.g. see plots for Cu, Ag, Ni, Th in Appendix 4).
**Aleetara**

The Aleetara survey grid shows three areas of gold anomalism. However, an extension of the grid in all directions along with infill sampling on the present grid to, for example, 25 m spacing (from the present 50 m grid), and lithological mapping would be required in order to interpret the significance of the anomalous areas. The three areas are roughly parallel to the local northwest-southeast geological trends. Of the three anomalous areas (i.e. southwest, central and north) the Aleetara southwest gold anomaly is probably the most significant due to the proximity of three Response Ratio values of between 29 and 44. Elevated silver and copper correlate with the elevated gold across the three anomalous areas. There is also partial correlation of elevated pH values with the elevated gold.

There is a distinct north-south trending mercury anomaly which transects the geological/lithological trend and links the northwest trending gold anomalies. There is some overlapping (partial correlation) of elevated arsenic with the elevated gold. Other elevated arsenic correlates with low gold. A plot for cesium was included as it appears to have a negative correlation with gold for the most part, with a distinct northwest trending elevation lying between the southwest and the central gold anomalies. There are however also some incidences of correlating single point elevations in gold and cesium.

**Field Investigation and Rock Geochemistry**

Geological field investigation and prospecting followed the Round 1 soil analysis. Overall the focus was on the Illogwa Schist/Shear Zone, with the areas focussed on being those originally chosen for the regional-style soil sampling, which in turn were mostly the sites of Ariel EM anomalies, but also included areas of competent rock within or adjacent to the shear zone, areas with metal anomalism from historical samples and ultramafic outcrops. Rock sampling was mostly indiscriminate. For example, there were multiple samples taken from individual ultramafic outcrops despite a lack of any visible mineralisation, and quartz veining was sampled regardless of texture or of barren appearance. Any altered rock (or apparently altered rock; e.g kaolinite alteration in ultramafic rock), intense or multidirectional veining (e.g. parallel sheet veining in granite or any outcrop with veining in two or more directions), and alteration associated with veining (e.g. epidote selvedge to quartz veining) were sampled. Rock samples for multi-element assay totalled 156.

The rock samples were delivered to ALS in Alice Springs who prepared the analysis sample and forwarded the sample pulps to ALS Perth for analysis. The first (of two) sample batch was analysed for 60 elements including the Rare Earth Elements suite by ALS method ME-MS61r. Gold was analysed by fire assay with a 50 gram charge, via ALS method Au-AA26. The second batch of samples had similar multi-element analysis but included analysis for gold, platinum and palladium by fire assay, ALS method PGM-ICP23.

Laboratory assay certificates and original data files can be found in Appendix 2, while collated assay results with location coordinates and Lab. Job numbers etc are in digital format in the data file `EL25402_2013_F_02_SurfaceGeochemRock.txt`.

**Rock assay results**

The Rock Sample Summary table below lists the most significant assay sample. Figure 15 (Appendix 1) shows the rock sample locations and Figure 16 (Appendix 1) annotates those samples with anomalous results. There were no significant gold results but as almost all gold
results are below detection, any detected gold is deemed to be somewhat anomalous and hence are shown in Figure 16. Silver is uniformly low with a mean of 0.06 ppm, a median of 0.04 ppm and a maximum value of 1.38 ppm, but is considered a good indicator element even at low concentrations, so a value of 0.1 ppm is considered to be anomalous in this data set. Overall there are numerous anomalisms throughout the rock assay data, including both single element and multi-element anomalies. Following is a brief discussion of some of the more obvious anomalies.

The most significant assay returned was 0.49% Cu from sample LI1121 taken near the Hale River North Ariel EM anomaly (see Figure 6, Appendix 1). The sampled material consisted of hard Fe-Oxide obtained from a quartz vein. Rock sample LI1121 was also anomalous in several other elements, with most values being well above background. Anomalous elements and values for sample LI1121 are as follows: Ag 14 ppm, As 14 ppm, Bi 15 ppm, Co 546 ppm, Cu 4900 ppm, Fe 40%, Mo 35 ppm, Ni 469 ppm, Te 11 ppm, U 52 ppm, V 408 ppm).

Sample number LI1187, a fine grained ultramafic float sample with disseminated orange limonite spots/pits recorded the second highest copper value at 1390 ppm Cu, along with weakly anomalous silver and bismuth.

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Sample Numbers</th>
<th>MGA Zone</th>
<th>MGA East (m)</th>
<th>MGA North (m)</th>
<th>No. Of Samples</th>
<th>Peak Value Cu (ppm)</th>
<th>Median Cu (ppm)</th>
<th>Standard Deviation Cu (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock</td>
<td>LI11001-LI11155</td>
<td>53</td>
<td>502357</td>
<td>7411871</td>
<td>156</td>
<td>4900</td>
<td>25.8</td>
<td>124</td>
</tr>
</tbody>
</table>

Rock Sample Summary Table. Note that two highly skewed (anomalous) Cu values of 4900 ppm and 1390 ppm were removed from the list used to calculate the standard deviation.

Gneissic sample LI1125 (Mixed felsic and mafic gneiss; dominantly mafic hornblende-quartz gneiss; fine grained with irregular patches of white fine grained granular quartz and feldspar) recorded 1190 ppm Cu, along with 0.023 ppm Au, anomalous silver (1.38 ppm Ag), strongly anomalous cadmium at 20.9 ppm Cd, 33.3% Fe, 7 ppm Mo, 0.3% S, 8 ppm Se and 1120 ppm Zn, all well above background levels.

Several samples of ultramafic rock contained chrome and nickel values of up to 2580 ppm Cr and 1460 ppm Ni respectively (from sample LI11026). These values are not unusual for fresh ultramafics. Elevated Cu values from ultramafics are of more interest with float sample LI11187 recording 1390 ppm Cu (mentioned above), and with outcrop samples recording values such as 648 ppm Cu (sample LI11151), 262 ppm Cu (LI11112 & LI 11087) and 499 ppm Cu (LI11004). There were no sulphides noted from various ultramafic outcrops investigated. Hill-forming ultramafic outcrop at 505300E/7411500N, which coincides with a low ranking Ariel EM anomaly and a weak elevation in magnetics showed minor layering as thin layers of dunite (e.g. sample LI11116, anomalous in cerium only at 122 ppm Ce; and dunite sample LI11113 with 0.018 ppm Pt) within a medium grained pyroxenite. Another example of pyroxenite is pegmatitic with mega-crystals of black pyroxene, and includes fine granular quartz.
Samples LI11084-LI11085 (Quartz tension veins in folded shear zone with black Mn staining and well developed epidote selvedge in schist wall rock) are anomalous in As, Bi, Sb, Sn and Zn (as well as Mn).

Two examples of kaolinite layers within ultramafic outcrops recorded high magnesium at 22% and 24% Mg. (samples LI11115 and LI11103). The second of these also recorded the highest palladium at 0.024 ppm Pd.

The highest platinum result of 0.018 ppm Pt occurs in sample LI11113, a dunite.

The highest gold value of 0.04 ppm Au came from a mafic hornblende quartz schist with minor quartz veining parallel to the local east-west foliation (Sample LI11078).

Sample LI11155, a fine grained ultramafic or quartz-pyroxene/hornblende rock with minor epidote or olivine, is strongly anomalous in arsenic at 155 ppm As, along with weakly elevated selenium at 4 ppm Se, and 503 ppm vanadium.

Sample LI11102 from a 1 m wide quartz vein with large Fe-oxide coated vugs was highly anomalous in molybdenum at 167 ppm Mo, along with elevated bismuth at 2.39 ppm Bi (Bi mean 0.2 ppm, median 0.09 ppm).

Apart from the anomalous samples mentioned above there are several examples of elevated copper values of between 203 ppm and 648 ppm Cu, often with associated elevated silver, from ultramafic and quartz vein samples.

CONCLUSION
The original group of Limbla tenements (EL25554, EL25373 and EL25402) were aimed at uranium exploration, in particular due to the previously identified Albarta/H41 and Tourmaline Gorge uranium anomalies. Initial work based on regional public domain radiometrics and detailed radiometrics flown by WDR, with follow-up ground investigation, failed to identify further strong prospectivity. The majority of the tenements were dropped over the years with EL25402 retained because it contained the two above mentioned uranium anomalies, and because the Illogwa Schist/Shear Zone (ISZ) in the north of that tenement was seen as the most prospective terrain to host a mineral deposit (as was subsequently supported by Laing’s (2012) work for WDR in 2011), and for other reasoning mentioned below. The Hale River gold-copper show and the Harding Springs copper show (both temporally associated with the Illogwa Schist/Shear Zone) had been highlighted by the NTGS in 2009 (Whelan et al 2009). Also, work by Korsch et al (2011) on the deep seismic reflection from the Georgina-Arunta seismic line showed that the Illogwa Schist/Shear Zone was directly linked to a deep crustal penetrating structure. The tenement area in general was perceived as having some degree of regional prospectivity for Ni-Cu sulphides associated with ultramafics due to the nearness (i.e. within a few hundred kilometres) to the borders of two cratons (the southern edge of North Australia Craton and the northern edge of the Gawler Craton to the south). Also, Mithril Resources had identified minor nickel sulphide (in thin section) from an ultramafic body which straddles the eastern border of EL25402, and which was adjacent to the Illogwa Schist/Shear Zone. It was noted that the Illogwa Schist/Shear Zone included a scattering of ultramafic outcrops and previous assaying by WDR from a few of these bodies had recorded chrome and nickel values of up to 0.26% and 0.13% respectively. Therefore, due to the above rationale and the need to focus exploration the 2011-2012-2013 work
periods concentrated firstly on the Illogwa Schist/Shear Zone, and then within that zone on
the investigation of ultramafics, of competent lithologies within or bordering the ISZ, of the
“bend” in the ISZ in the north east of EL25402 where the trend changes from east-west to
northwest-southeast, and the investigation of historical metal occurrences. The investigations
included desktop analysis of Google Earth images, magnetics and radiometrics, and available
geochemistry. Because of the need for points of focus the Ariel EM anomalies were given
significant credence in the choosing of areas to be investigated on the ground. The 2012-
2013 field work included the physical geological investigation and rock sampling of, and
geochemical Ionic Leach soil sampling of various areas based upon the above rationale.
From the geological investigation there was no mineralisation or sulphide noted. The rock
assays highlighted some scattered anomalous copper and rarely other elements such as
molybdenum, arsenic, cadmium, and zinc. There was varying low level anomalism in Ni, Cr
and Cu from ultramafics rock samples, which could be elevated background level, and no
sulphide mineralisation. There is a hint of layering as thin dunite layers within pyroxenite at
one location (505300E/7411500N). Further geophysical and systematic geochemical analysis
may be warranted. The Ionic Leach soil analysis highlighted four areas that are apparently
anomalous in gold, with varying degrees and styles of associated coincidental anomalism.
Infill and extension sampling of those anomalous areas would be required in order to define a
real and robust soil geochemical anomaly.

REFERENCES
Fabray, J., 2008, Annual Report, Exploration Licences 25331, 25332, 25373, 25402 and
25554, Limbla Project For The Period 9/02/07 to 8/2/08, Year 1.

Fabray, J., 2009, Annual Report, Exploration Licences 25373, 25402 and 25554, Limbla
Project, For the Period 9/2/08 to 8/02/09, Year 2.

Gaughan, C., 2012, EL25402 Limbla Project Northern Territory Annual Report For The
Period 2 March 2011-1 March 2012.

Korsch RJ, Blewett RS, Close DF, Scrimgeor IR, Huston D, Kositcin N, Whelan JA, Carr LK
and Duan J, 2011, Geological interpretation and geodynamic implications of the deep seismic
reflection and magnetotelluric line 09GA-GA1: Georgina Basin-Arunta Region, Northern
Territory, in Annual Geoscience Exploration Seminar (AGES) 2011 Record of Abstracts.
Northern Territory Geological Survey, Record 2011-003.

Laing, W., 2012, "THE LIMBLA AREA: GEOLOGICAL SYNTHESIS, STRUCTURAL-
METASOMATIC ARCHITECTURE, AND EXPLORATION TARGETS". Unpublished
internal report for WDR. (The report appears as Appendix 1 of EL25402 Limbla Project
Northern Territory Annual Report For The Period 2 March 2011-1 March 2012.)

Period 9/2/09 to 8/2/10, Year 3.

Roberts, S.M. and Otto, G., 2011, EL25402, Limbla Project, Northern Territory, Annual
Report, Period 2 March 2010 to 1 March 2011, Year Four of Tenure.
APPENDIX 1
FIGURES 6-16 (MAPS) TO ACCOMPANY THE TEXT.
Figure 6. EL25402 Limba Ariel EM anomalies and 2012 soil sampling plan on 1:250K geology. The grey polygon is the Illogwa Schist/Shear Zone.
Figure 7. EL25402 Limbla 2011 rock samples on 1:250K geology. The grey polygon is the Illogwa Schist/Shear Zone.
Figure 8. EL25402 Limba all recorded rock sample locations on 1:250K geology. The grey polygon is the Illogwa Schist/Shear Zone.
Figure 9. EL25402 Limbla metallogenic map on 1:250K geology. The grey polygon is the Illogwa Schist/Shear Zone.
Figure 10. EL25402 Limbla 2012 soil sample locations on 1:250K geology. The grey polygon is the Illogwa Schist/Shear Zone.
Figure 11. Ionic Leach soil analysis Response Ratio (see text) for gold in the Aremra survey areas.
Figure 12. Ionic Leach soil analysis sample numbers in the Aremra survey areas.
Figure 13. Ionic Leach soil analysis Response Ratio (see text) for gold in the Illogwa survey area.
Figure 14. Ionic Leach soil analysis sample numbers in the Illogwa survey area.
Figure 15. 2012 rock sample locations and sample numbers.
Figure 16. 2012 anomalous rock samples.
APPENDIX 2
ORIGINAL LABORATORY ASSAY CERTIFICATES
(for rock and soil samples)
APPENDIX 3
EL25402 LIMBLA 2012-2013 ROUND 1 IONIC LEACH SOIL
ANALYSIS RATIO RESPONSE PLOTS
APPENDIX 4
EL25402 LIMBLA 2012-2013 ROUND 2 IONIC LEACH SOIL
ANALYSIS RATIO RESPONSE COLOURED CONTOUR MAPS