EXPLORATION LICENCE 22251

"SELBY PROJECT"

FINAL REPORT

FOR THE PERIOD

24 April 2003 TO 15 January 2010

DUE DATE: 15 APRIL 2010

BY

A. Raza
TENEMENT REPORT INDEX

OPERATOR: Legend International Holdings

PROJECT: Selby

TENEMENT: Exploration Licence 22251

REPORT PERIOD: 24 April 2003 to 15 January 2010

DUE DATE: 15 April 2010

AUTHOR: A. Raza

STATE: Northern Territory

LATITUDE: 16°55'00"S to 17°03'00"S

LONGITUDE: 137°45'00"E to 137°80'00"E

MGA (easting): 761,000mE to 798,000mE

MGA (northing): 8,168,500mN to 8,114,500mN

1:250,000 SHEET: SE53-04 Robinson River,

1:100,000 SHEET: 5297 Pungalina

MINERAL FIELD:

COMMODITY: Diamonds, Base Metals, Phosphate

KEYWORDS: diamonds, phosphate, data review, drilling, soil sampling, geochemical data, electromagnetic survey, gravity survey
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1 SUMMARY OF EXPLORATION ACTIVITIES

This report documents technical work completed under Exploration Licence 22251 – Selby (Figure 1) from 24th of April, 2003, when the EL was granted, to 15 January, 2010, when the tenement was finally surrendered. The tenement area is located around 150 km southeast of the township of Borroloola in the Northern Territory. The target sought varied over time and consisted of diamondiferous kimberlitic pipes, phosphate prospects within the basal sandstone unit of Karns Dolomite and breccia pipe hosted base metal mineralisation similar to the Redbank deposit.

Tenement work completed during the report period included detailed appraisal of the geology of the area and previous exploration results, which led to recognition of a significant untested target areas, rock and loam sampling, stream sediment sampling for heavy mineral analysis (HMA), airborne EM and ground gravity geophysical surveys, reverse circulation and diamond drilling and assaying.

2 TENEMENT STATUS

Exploration Licence 22251 was granted to Astro Diamond Mines N.L. on 24 April, 2003. Four reduction deferrals were granted during the life of the tenement (Table 1).

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Status</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL22251</td>
<td>Granted</td>
<td>24/04/03</td>
</tr>
<tr>
<td></td>
<td>Reduction Deferral</td>
<td>23/03/05</td>
</tr>
<tr>
<td></td>
<td>Reduction Deferral</td>
<td>20/03/06</td>
</tr>
<tr>
<td></td>
<td>Reduction Deferral</td>
<td>20/03/07</td>
</tr>
<tr>
<td></td>
<td>Licence transfer</td>
<td>30/07/07</td>
</tr>
<tr>
<td></td>
<td>Reduction Deferral</td>
<td>10/04/08</td>
</tr>
<tr>
<td></td>
<td>Partial surrender/renewal</td>
<td>23/04/09</td>
</tr>
<tr>
<td></td>
<td>Final surrender</td>
<td>15/01/10</td>
</tr>
</tbody>
</table>

Table 1: Tenement Status
The licence was transferred from Astro Diamond Mines N.L. to Legend International Holdings Inc. on the 30th of July, 2007. On the 23rd of April, 2009, a partial renewal was granted for the tenement, a renewal of licence was not sought for the ground covered by the conservation reserve, and was subsequently surrendered. The title was finally surrendered to the department on 15 January 2010.

3 LOCATION AND ACCESS
The tenement EL22251 is located approximately 150 kilometres southeast of Borroloola, NT. Borroloola is accessible by air from Darwin, or by road heading south along the Stuart Highway to Daly Waters and then east along the Carpentaria Highway. Approach to the tenement from Borroloola is via the Borroloola-Calvert Hills Road and Seven Emu-Pungalina Road.

The area falls within the Robinson River 1:250,000 map sheet (SD53-04) and the Pungalina 1:100,000 map sheet (5297). Access throughout the area provided by station tracks when dry, but impossible during the wet season.

4 GEOLOGY
4.1 REGIONAL GEOLOGY
All the economic diamond deposits and other significantly diamondiferous occurrences in Australia occur on the North Australian Craton (NAC). The NAC underlies the Kimberley region of northern WA, the northern two thirds of the NT and the north western part of Queensland. It is also host to many significant base metal, gold and uranium deposits. The NAC was formed at about 1850 Ma ago during the Barramundi Orogeny by the amalgamation of Archaean and early Proterozoic rocks which now form the basement rocks to the younger sequence - Proterozoic (1820-1600 Ma) platform cover sediments, Palaeozoic volcanics and sediments, and Mesozoic sediments.

The McArthur Basin is one such platform cover which developed above the NAC during 1800-1500 Ma. Its sedimentary package consists of unmetamorphose and less intensely
Figure 1: Location map
deformed rocks of carbonate, siliciclasite and interbedded volcanics deposited in shallow intracratonic basin. This sedimentary sequence has been divided into four groups. These are the Tawallah, McArthur, Nathan and Roper Groups separated by regional unconformities.

The McArthur Basin is overlain by the remnants of the Cambrian Bukalara Sandstone and the Cretaceous sediments of the Dunmarra Basin. There is a widespread distribution of Cainozoic sandy soil, laterite and alluvium cover.

The major tectonic elements of the basin include two north-trending Batten Fault Zone and its northern equivalent the Walker Fault Zone separated by the east-trending Urapunga Fault Zone. The close association of base metal deposits and major structures in the McArthur Basin suggests that these fault zones provided an important control on mineralization.

The McArthur Basin hosts world class lead-zinc-silver and copper deposits and several occurrences of smaller uranium and base metal deposits. Number of varying size economical and sub-economical diamond bearing kimberlite pipes has been discovered in the basin. They are part of sporadically occurring post Cambrian extrusive volcanic activity on the NAC.

The large time span for the extrusion of diamondiferous rocks, 367 Ma (Devonian age) for Merlin kimberlite field, 179 Ma (Jurassic age) for Timber Creek kimberlite field, and 25 Ma (Tertiary age) lamproite field in the Ellendale (West Kimberley) area, makes the NAC very prospective for diamond exploration.

The kimberlites and lamproites of the NAC tend to occur along major northwest and northeast trending structures. These structures can be seen in the gravity data crossing the NAC and have a strike length of many hundreds of kilometers. These structures are interpreted to be fundamental fractures in the NAC and are potential channel ways for diamondiferous extrusive.

Overlying above the McArthur Basin are rocks of the Cambrian Bukalara Sandstone and Cretaceous sediments of the Dunmarra Basin. There is a widespread distribution of Cainozoic sandy soil, laterite and alluvium cover in the region.
4.2 LOCAL GEOLOGY

The two dominant component of the McArthur Basin that widely exposed within the Selby tenements are the rocks of the Tawallah Group and the Karns Dolomite, equivalent to the Nathan Group sequence. The region is characterised by Cu and U occurrences. Deposits include the cluster of breccia pipe Cu deposits in the Redbank district and uranium at the Westmoreland.

In places, Cambrian and Cretaceous sediments overlie the McArthur Basin. Terrestrial conditions have prevailed since the Cretaceous and deep chemical wreathing has produced some lateritic soils and some silcrete and calcrete deposits. Quaternary alluvium and residual soils are pervasive in the terrane and often contain micro diamonds.

Tawallah Group:

The Tawallah Group forms the basal part of the McArthur Basin and its sequence comprises dominantly of ridge-forming sandstones alternating with considerable thinner units of volcanics and fine-grained clastics. The Gold Creek Volcanics, Pungalina Member, Echo Sandstone and Hobblechain Rhyolite crop out in the project area.

Gold Creek Volcanics: It comprised of dominantly fine-grained massive and amygdaloidal basalt and rare coarse-grained olivine-clinopyroxene-bearing dolerite. Plagiclase laths are commonly altered but in the dolerites display a prominent subophitic to intergranular relationship with pyroxene and chlorite. Intermingled with igneous rocks are fine to medium grained, poorly sorted feldspathic to lithic micaceous sandstones, mudstone and unusual volcanic breccia.

Pungalina Member: Lower part consists of pebble to boulder conglomerate with rhyolitic poverance and the upper part comprises of dolomitic siltstone and fine grained sandstone.

Upper Pungalina Member: It comprises of dolomitic siltstone and fine grained sandstone.

Lowe Pungalina Member: It consists of pink medium grained lithic sandstone with large planer cross-beds.

Echo Sandstone: It comprises pink, medium grained locally pebbly, lithic to quartzose sandstone and minor siltstone with conglomerate units common in the lower part and medium to coarse grained, commonly ferruginous mottled sandstone dominant closer to the top. The sandstone contains large trough and planar cross beds.

Hobblechain Rhyolite: Pink, porphyritic, massive to spherulitic rhyolite lava with phenocrysts of quartz and feldspar.
Figure 1: Geology Plan
**Karns Dolomite:** It consists of stromatolitic, evaporitic, intraclastic and ooidal dolostone, minor siltstone and sandstone.

The basal part of the unit is quite variable in lithology, comprising mainly of conglomerate, grit and quartz sandstone (with angular chert fragments), dolarenite and minor shale. Quartz sandstones and dolarenite containing stromatolites and evaporate features overlie the basal arenites and are in turn overlain by stromatolitic dololutite, ooid dolarenite and intraclastic beds. Disseminated fine grained galena and coarser grained galena in veins and vugs are common.

The Karns Dolomite unconformably rests above the Echo Sandstone and is overlain by the Roper Group.

## 5 EXPLORATION

The EL lies in the Northern Australian ‘Microdiamond Field’ and more locally within the McArthur Basin, which hosts the HYC zinc-lead and Redbank copper deposits. Previous diamond exploration by Ashton and CRAE have identified occurrence of diamond and kimberlitic indicator minerals in the region. These findings suggest presence of possible primary source rocks in the area.

Historical record shows tenement was explored for ‘Redbank-style” cuperiferous trachytic breccia mineralisation. Weak to moderate ranging base metal mineralisation was detected but discovery for the economical deposits remained unsuccessful. Past exploration indicates occurrence of phosphate mineralisation of possible resource grade in the tenement area. However it is associated with uranium enrichment. Radioactivity at 10 to 100 times background is commonly associated within the phosphate mineralisation.

Based on earlier exploration results, the tenement was considered highly prospective for diamonds and moderately prospective for phosphate and base metals.

### 5.1 SUMMARY

From 2003 to mid of 2007 the EL was part of the Calvert Hill project consisting of 18 tenements therefore any exploration programmes were designed along a project, rather than tenement basis. During this period exploration activities were principally focused to find diamond bearing kimberlitic pipes thought to be present in the project area. This assertion was supported by the historical finding of microdiamond and indicator minerals in the area.
From mid 2007 to the surrender, El22251 was part of the Selby project. During this period there was change in focus and exploration was aimed at locating phosphate deposits, stratiform sediment-hosted Cu-Co mineralization and large Redbank-style Cu hosting volcanic pipes. Following is the description of technical work carried out on yearly basis during the life of the tenement.

5.2 2003-2004

Exploration work during the 2003-2004 included the acquisition of geological, topographic and geophysical data, GIS compilations and data reviews and compilation of open file data (see Washburn, 2004).

Open file exploration data was acquired from the Northern Territory Geological Survey (NTGS). It consisted open file reports of past exploration activity, NTGS and company open file airborne geophysical surveys and Landsat 7 thematic mapper (TM) data. The data was available on CD-ROM by request to the NTGS.

The NTGS supplied the geophysical data as located data files and processed grid images. Astro acquired approximately 1 million line kilometers of geophysical data over the NT. Stacked magnetic profiles of the first vertical derivative of the residual magnetics were processed from the located data and imported into the GIS. The stacked profiles were used to select pipe-like targets that may represent kimberlite or lamproite intrusive.

Geophysical processing was conducted in-house and a number of anomalies defined. The examination of stacked profiles was considered essential in searching for pipe-like targets as the gridding routines used to prepare images, smooth the data and hence hide small targets. A pipe response may only occur on one line when using regional data and would be missed if only images are used.

Magnetic targets were numbered using the abbreviated 1:100,000 map sheet name and a sequential number (Figure3). The line spacing of these regional surveys ranges from 300 to 500 m, and has been used to detect pipe-like responses on one or more lines. The aim is to detect a pipe field by finding at least one pipe with the regional data, and then to acquire more detailed geophysics to identify other pipes in that field.

Landsat TM data was processed in-house too using ERMapper and RGB colour images were produced comprising channels 321, 531, 741 and principle components (PC) 123.
Figure 3: Identified geophysical targets in Calvert Hills Project including EL22251.

Thirty-three Landsat scenes have been acquired from the NTGS over the Northern Territory, covering all of the Calvert Hill project area.

Open file exploration reports were examined and several targets were selected for field follow-up and surface loam sampling for indicator minerals.

5.3 2004-2005

A further review of openfile exploration data previously obtained from the Northern Territory Geological Survey (NTGS) was carried out during the reporting period. This included appraisal of geology and structure, and of the results of drainage sampling by earlier explorers. Previously generated stacked magnetic profiles were also examined (see Bowyer & Washburn 2005)

Targets were identified for follow up by field visits, and considered for on-ground and airborne exploration.

The data review highlighted several targets areas that warrant further follow-up. The targets were assessed on the basis of the amount and distribution of diamonds from the
results of previous drainage sampling, and the coexisting presence and abundance of indicator minerals. It was concluded that these diamonds and indicators are shedding from discreet areas which could be further assessed by airborne electromagnetic survey for possible occurrence of kimberlite pipe.

5.4 2005-2006

5.4.1 Geochemical work:

Diamond and indicator targets identified in Calvert Hills Project during the last year review process were followed by field visits. 4 samples were collected from the Selby’s EL22251 for geochemical and heavy mineral analysis (Table 2 & Figure 4). 3 samples SMA-1G (soil), SIM-3G (soil) and SIM-4R (rock) were assayed for multi-element geochemical suite. One bulk stream sediment sample SMA-1 was processed for recovery of microdiamonds and indicator minerals. Sample localities were selected from analysis of existing open-file data (particularly existing heavy mineral anomalies revealed in the NTGS DIM/DIC database), geophysical and photo-interpretation (see Ceplecha & Bowyer, 2006).

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>TENEMENT</th>
<th>SAMPLE NO</th>
<th>AMG-53K Easting</th>
<th>AMG-53K Northing</th>
<th>SAMPLE TYPE</th>
<th>DATE COLLECTED</th>
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<tr>
<td>Calvert Hills</td>
<td>22251</td>
<td>SMA-1</td>
<td>790241</td>
<td>8133431</td>
<td>stream</td>
<td>18/06/2005</td>
</tr>
<tr>
<td>(Selby)</td>
<td></td>
<td>SMA-1G</td>
<td>790241</td>
<td>8133431</td>
<td>soil</td>
<td>18/06/2005</td>
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<tr>
<td></td>
<td></td>
<td>SIM-3G</td>
<td>790155</td>
<td>8135211</td>
<td>soil</td>
<td>18/06/2005</td>
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<tr>
<td></td>
<td></td>
<td>SIM-4R</td>
<td>789454</td>
<td>8130177</td>
<td>rock</td>
<td>18/06/2005</td>
</tr>
</tbody>
</table>

Table-2: Sample location data

Assay results for SMA-1G, SIM-3G and SIM-4R were supplied in Table 3 of Ceplecha & Bowyer, 2006. The geochemical data was not deemed to be anomalous for diagnostic kimberlitic elements. Similarly processing of SMA-1 for heavy minerals did not yield positive result.

5.4.2 EM Survey:

During mid 2005 some 1,392 line kilometres were flown over EL22251 by Fugro Airborne Surveys Pty Ltd. Processing and interpretation of high resolution EM data identified 9 geophysical anomalies SEMG-1, 2, 3, 4, 5-6, 7, 8-9 for further field investigation (Figure 4).
Figure 4: EM and ground gravity surveys, drill holes and sample locations.
5.5  2006-2007

5.5.1 Ground Gravity Survey

In May 2006, 9 EM anomalies SEMG-1, 2, 3, 4, 5-6, 7, 8-9 were followed up with ground gravity surveys. Figure 4 shows the location of these surveys. The gravity data was acquired by Daishsat Pty Ltd using a Scintrex CG5 digital gravity meter. Position and level data were obtained using Leica System 1200 units to produce precise-real-time-kinematic GPS locations. All data were acquired using Daishsat foot-borne methods.

Gravity data were reduced using standard reductions on the ISOGAL84 gravity network. GPS data was transformed to MGA coordinates with levels expressed as metres above the Australian Height Datum. Survey grids were 50mx50m cell size, centred on the airborne EM anomaly.

For further gravity survey details see Debbington & Bowyer 2007.

2 CD-ROMS containing the digital information for EM and ground gravity surveys was provided to the Department in June 2006.

5.5.2 Diamond Drilling

In August-September 2006, higher priority EM/ground gravity targets were tested by 4 drill holes (SGD01, SGD02, SGD02-1 and SGD04) with a helicopter-borne diamond drill rig. The drill collars are shown in Figure 4 and listed in Table 3. The drill logs are provided in Appendix 6 of Debbington & Bowyer 2007. None of the drill holes intersected kimberlite.

<table>
<thead>
<tr>
<th>Hole No</th>
<th>MGA53 easting</th>
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<th>Azimuth</th>
<th>Dip</th>
<th>Drill Type</th>
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<td>SGD01</td>
<td>789310</td>
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<td>82.10</td>
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<td>Diamond</td>
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<td>SGD02</td>
<td>789610</td>
<td>8136155</td>
<td>158.20</td>
<td>0</td>
<td>90</td>
<td>Diamond</td>
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<td>SGD02-1</td>
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<td>8138340</td>
<td>96.10</td>
<td>0</td>
<td>90</td>
<td>Diamond</td>
</tr>
<tr>
<td>SGD04</td>
<td>788915</td>
<td>8139100</td>
<td>65.20</td>
<td>0</td>
<td>90</td>
<td>Diamond</td>
</tr>
</tbody>
</table>

Table 3: Drill collars for diamond drill holes

It was concluded that the EM/gravity anomalies were caused by infill of the Cretaceous/Tertiary sediments, commonly clay rich, in depressions in the Cambrian bedrock. However, the source of the indicator mineral anomaly remains enigmatic.
5.5.3 Heavy Mineral Sampling

A stream sediment sample SGD-07 was collected from upper reaches of a creek located along the northeastern border of the EL where historical sampling data has reported recovery of a macro-diamond. The idea was to validate previous results and if confirmed then the catchment to this creek was a potential target. Sample location is shown in Figure 4 and co-ordinates are given in Table 4. Processing of the sample by DIATECH yielded negative result.

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>TENEMENT</th>
<th>SAMPLE NO</th>
<th>MGA-53 Easting</th>
<th>MGA-53 Northing</th>
<th>SAMPLE TYPE</th>
<th>DATE COLLECTED</th>
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<td>22251</td>
<td>SGD-07</td>
<td>793327</td>
<td>8139041</td>
<td>stream</td>
<td>2006</td>
</tr>
</tbody>
</table>

Table 4: Sample location data

5.6 2007-2008

Examination of open file data, BMR airborne radiometric and follow-up ground-based geophysical data identified potential resource of Proterozoic uranium rich phosphate within the Selby-EL 22251. The basal sandstone unit of the Karns Dolomite which overlies unconformably immediately above the Echo Sandstone is associated with the phosphate beds and phosphatic stromatolites in the region. Discovery of these deposits in 1980’s was made by an explorer searching for uranium mineralization.

Legend commissioned an independent consultant to map and surface sample phosphate bearing outcrops. Following their recommendation, the potential prospective parts of the tenement were subsequently drilled. Core and cuttings recovered from these holes were assayed.

In the Selby Region, historical sampling results for copper, lead and zinc from stream draining the Karns Dolomite identified it as a potential lithological target for base metal mineralisation. Several fault structures had been identified both regionally on the Robinson River 1:250,000 Map Sheet and through Company’s reconnaissance surveys. A comprehensive rock-chip and loam sampling program was conducted over a region of outcropping Karns Dolomite in neighbouring EL 22247 (now relinquished), stretching into EL 22251 (see McGoldrick & Farrell, 2008).

5.6.1 Rock-Chip and Loam Sampling

Reconnaissance rock-chip sampling was carried out in the Selby region on EL 22251 to confirm presence of phosphate mineralization. 16 samples were collected (SELR1-SELR16) and sent for assaying.
IMC, a consulting firm, was commissioned to undertake reconnaissance geological mapping of mainly two known potential prospective localities with outcropping phosphatic sandstone nick named as “Camp” and “Eastern” prospects. The aim was to identify stratigraphic drill targets in order to enhance geological knowledge of phosphate mineralisation. During this exercise they collected 7 rock chip samples (IMC1-IMC7) for chemical analysis.

Combined assay data for 23 samples is provided in Appendix 2 of McGoldrick & Farrell, 2008. Initial results from this reconnaissance selective sampling programme returned phosphate value of up to 32% P₂O₅ and were considered very encouraging (Table 5).

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Type</th>
<th>Project</th>
<th>Tenement</th>
<th>P2O5 % (ME-XRF12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELR3</td>
<td>Rock</td>
<td>Selby</td>
<td>EL22251</td>
<td>32.10</td>
</tr>
<tr>
<td>SELR4</td>
<td>Rock</td>
<td>Selby</td>
<td>EL22251</td>
<td>32.20</td>
</tr>
<tr>
<td>SELR5</td>
<td>Rock</td>
<td>Selby</td>
<td>EL22251</td>
<td>22.80</td>
</tr>
<tr>
<td>SELR6</td>
<td>Rock</td>
<td>Selby</td>
<td>EL22251</td>
<td>22.40</td>
</tr>
<tr>
<td>SELR7</td>
<td>Rock</td>
<td>Selby</td>
<td>EL22251</td>
<td>17.15</td>
</tr>
<tr>
<td>SELR8</td>
<td>Rock</td>
<td>Selby</td>
<td>EL22251</td>
<td>21.60</td>
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</tbody>
</table>

Table 5: Phosphate results for selective rock chip samples

In response to these positive results, a comprehensive rock-chip and loam sampling program was developed. An independent consultant was commissioned to conduct this extensive sampling program across the Karns Dolomite stretching over EL22247 (now relinquished) and EL22251. 22 of the 50 rock-chip samples (81411-81418, 81439-81453 and 81457-81458) and 86 of the 168 stream samples (1001-1003, 1049-1055, 1108-1123, 1126-1145; 1152-1189; 1192-1193) were collected from EL 22251 and sent to the ALS laboratory for multi-element geochemistry.

Stream sample consisting of 500g to 1000g of sediment collected at approximately 15 to 30 cm depth from surface; sieved to -2mm and were packed in calico bags for shipment to ALS laboratories in Brisbane and Perth. Samples were analysed by XRF for phosphate as P₂O₅ and by ICPMS for U, Cu, Pb, Zn and Ag using total acid digest technique.

Assay results for surface samples have been received and are provided in Appendix 3 of McGoldrick & Farrell, 2008.

5.6.2 Reverse Circulation Drilling

The drilling program was focussed on EL22251. The program consisted of 97 RC holes (SELRC01-SELRC97) drilled for 4710 meters with associated sampling, surface and
downhole surveying, logging and assaying. The drill collars were provided in Appendix 6A of McGoldrick & Farrell, 2008.

Drilling targeted the “Camp” and “Eastern” prospects. Vertical drill holes (-90 degree dip) completed to blade refusal, until the intersection of the underlying Echo Sandstone or, in the case of SELRC58-SELRC84, until phosphate was intersected. Drill material was collected every metre in a bucket and dumped on the ground in rows of 10. The drill-hole identification number was painted on a dumpy peg and placed at the start of the first row.

One diamond drill-hole SELDD02 was completed at ~4.5 km to the southwest of the “Camp” and “Eastern” outcrops. The drill spot was chosen to collar higher stratigraphic section than the outcropping phosphate and to test the lateral extent of the basal phosphate-bearing unit. It was drilled to the contact of the Echo Sandstone terminating at 22.5 m depth.

A total of 3334 samples were collected from 97 RC drill holes for assaying (SED0100-SED3477). In some cases four consecutive samples in a hole are labelled with the same sample number but with different suffix (i.e. A-D letters). These samples are: SED0100A-D; SED101A-D; SED132A-D; SED133A-D; SED162A-D; SED163A-D; SED164A-D & SED165A-D.

Samples were frequently assayed at one metre interval for near surface section in many holes and also for those parts of the hole where intercepted lithology was visibly phosphatic to ensure capturing of maximum information particularly length of the mineralised zone and its grade. For all other depths, four meter riffle split composites were collected for geochemistry. Samples were analysed by XRF for phosphate as P$_2$O$_5$ and ICPMS for U, Cu, Pb, Zn and Ag using total acid digest method.

Assay results for 3334 samples are given in Appendix 6b of McGoldrick & Farrell, 2008. Only 15 samples returned phosphate values >5% P$_2$O$_5$ with a maximum value of 15.85% P$_2$O$_5$ but the great majority of samples yielded less than 1% P$_2$O$_5$. Where higher P$_2$O$_5$ values are recorded they were from near surface samples suggesting that phosphate occurs as thin discontinuous band that does not extend more than 2 metre below the surface. In each band there is significant drop in grade downward, therefore highest values encountered are near or at the surface. The phosphate rich horizon are low in F$_2$O$_3$, Al$_2$O$_3$, Na$_2$O, K$_2$O, BaO, MnO, MgO generally within commercially acceptable limits but tends to contain slightly higher CaO and U content. Sr and Ba values are consistently higher for all assayed samples with returned maximum values of 1565 ppm and 3000 ppm respectively.
5.7  2008-2010

No exploration work was carried out since 2008 to the surrender of the tenement.

6  CONCLUSION

Technical work has confirmed occurrences of high grade phosphate material within the basal sandstone unit of Karns Dolomite. Selective sampling of rich phosphatic material have indicated presence of commercial grades but drilling programme failed to confirm vertical or lateral extent of this deposit.

Six years of exploration programme consisting of geological mapping, sampling, geophysical surveys and drilling did not yield desired outcome for occurrence of kimberlite or phosphate in the EL.

7  BIBLIOGRAPHY


