EXPLORATION LICENCES
EL22297, EL23771, EL23772, EL25859, EL26514, EL26515, EL7970

COX PROJECT

COMBINED ANNUAL REPORT
FOR THE PERIOD

5 AUGUST 2009 TO 4 AUGUST 2010

BY
J. Abello

PRIVATE AND CONFIDENTIAL
NOT TO BE COPIED OR DISTRIBUTED

Level 8, 580 St Kilda Road, Melbourne, Victoria, 3004, Australia
Telephone: +61 3 8532 2810  Facsimile: +61 3 8532 2805

DISTRIBUTION:
Department of Business, Industry & Resource Development, Darwin
TENEMENT REPORT INDEX

TENEMENT HOLDER: Legend International Holdings Inc.
TENEMENT MANAGER: Legend International Holdings Inc.
PROJECT: COX PROJECT
COMBINED REPORTING GROUP: GR-138/09
TENEMENTS: EL22297, EL23771, EL23772, EL25859, EL26514, EL26515, EL7970
JOINT REPORT PERIOD: 5 AUGUST 2009 TO 4 AUGUST 2010
DUE DATE: 4 September 2010
AUTHOR: J. Abello
STATE: Northern Territory
LATITUDE: 15° 25'00"S to 16° 18'00"S
LONGITUDE: 134° 18'00"E to 135° 12'30"E
MGA (easting): 427,400mE - 523,400mE
MGA (northing): 8199400mN - 8295500mN
1:250,000 SHEET: SE53-03 Bauhinia Downs, SD53-15 Mount Young, SD53 -14 Hodgson Downs
1:100,000 SHEET: D5314 Cox, D5315 Mantungula, E5303 Bauhinia Downs
COMMODITY: Diamonds
KEYWORDS: Diamonds, data review, target generation, heavy mineral sampling
Contents
TENEMENT REPORT INDEX................................................................................................................................. ii
Contents .................................................................................................................................................................. iii
List of Figures ......................................................................................................................................................... iii
List of Tables ......................................................................................................................................................... iv
SUMMARY OF EXPLORATION ACTIVITIES........................................................................................................... 1
TENEMENT STATUS ........................................................................................................................................ 1
LOCATION AND ACCESS ..................................................................................................................................... 4
GEOLOGY ................................................................................................................................................................. 6
  REGIONAL GEOLOGY ......................................................................................................................................... 6
  STRATIGRAPHY ................................................................................................................................................. 7
  Middle Proterozoic .......................................................................................................................................... 7
LOCAL GEOLOGY ................................................................................................................................................. 9
  Tawallah Group .............................................................................................................................................. 9
  McArthur Group .......................................................................................................................................... 9
  Roper Group .............................................................................................................................................. 10
  Cambrian .................................................................................................................................................... 11
EXPLORATION .................................................................................................................................................... 12
  Previous Exploration ................................................................................................................................... 12
  2009-2010 Exploration ................................................................................................................................. 15
SAMPLING.......................................................................................................................................................... 16
  Cox Stream and Loam HMA Sampling ........................................................................................................... 16
  Detailed Heavy Mineral Probe Analysis – By Wayne Taylor ......................................................................... 17
DISCUSSION & FUTURE WORK PROGRAM ..................................................................................................... 20
BIBLIOGRAPHY .................................................................................................................................................... 21

List of Figures
Figure 1: Exploration Index ............................................................................................................................... 3
Figure 2: Location Plan ......................................................................................................................................... 5
Figure 3: Regional Geology .................................................................................................................................. 8
Figure 4: Cox HMA Stream Sample Locations ............................................................................................. 19
List of Tables

Table 1: Summary of significant historic work completed ................................................................. 13

Table 2: Summary of work completed for the reporting period 2009-2010 ...................................... 15

Table 3: EL22297 HMA sample locations ......................................................................................... 16

Table 4: EL25859 HMA sample locations ......................................................................................... 17
SUMMARY OF EXPLORATION ACTIVITIES

This group report describes exploration activities conducted over tenements EL22297, EL23771, EL23772, EL25859, EL26514, EL26515 and EL7970 during 5 August 2009 to 4 August 2010. Tenements EL22297, EL23771, EL23772, EL25859, EL26514, EL26515 and EL7970 are part of Legend’s Abner Project and approved by the NT Government for Group Technical Reporting (CR-39 dr). During the reporting period, field based activities included reconnaissance survey of some of tenements but majority of the work included collating and assessment of open file data and target generation. The acquisition of Gravity Capital Limited ("Gravity Diamonds") tenements in 2009 instigated a comprehensive data compilation exercise during which data received from Gravity Diamonds was incorporated into Legend’s database. The aim was to prioritize current targets and generating new exploration targets for the forthcoming field season.

Delays in finalizing the sales contract with Gravity Diamonds and the joint venture owner, Rio Tinto Pty Ltd ("Rio Tinto") resulted in significant cut down of planned fieldwork on tenements EL7970, EL23771, EL23772, and EL25859 prior the onset of 2009 rainy season. Furthermore, a prolonged wet season over 2009-2010 did not allow for ground access until July. Nevertheless, several helicopter reconnaissance trips were conducted to the southern part of the Project as highlighted in Figure 1.

The EL22279 and EL7970 are two tenements among the Cox Project, which are on advance stages of exploration. Work program on these tenements focused on their diamond prospectivity. On EL22297, a helicopter assisted sampling program was conducted. Subsequently, followed-up sampling was carried out once laboratory results were received and land access was possible.

Work planned on EL7970 is the continuation of existing program structured by the Gravity Diamonds. This includes a ground gravity survey and possible drilling over two discrete heavy mineral anomaly targets. Several helicopter reconnaissance trips to the tenement were carried out to ascertain accessibility. It was concluded that the ground is unapproachable by land and major repair will be required to restore the track that was previously established by Gravity Diamonds during 2007 field season. The tenement was also in its tenth year of tenure and discussions with the NT Department of Regional Development, Primary Industry, Fisheries and Resources ("Department") were instigated to allow continued management of EL7970.

TENEMENT STATUS

All tenements listed in this report are currently held and managed by the Legend International Holdings Inc ("Legend"). Several tenements including EL7970, EL23771, EL23772 and EL25859, were acquired from Gravity Diamonds in 2009. The finalization of the contract agreement was delayed due to the third party joint venture owner (Rio Tinto) failing to handover data and contracts in a timely manner. Legend also has various applications in the adjacent region as shown in Figure 1.

The history of each tenement within the Cox Reporting group is outlined below.
EL 22297: was granted on the 5 August 2003. At the third anniversary in 2005, a reduction deferral was granted on the 7 July 2005 and a compulsory reduction was completed in 2006. A second waiver of reduction was granted in 2007, and the tenement was compulsorily reduced the following year. In June 2009, a renewal application was lodged for Exploration Licence 22297, which was granted on the 5 August 2009 to provide additional time for adequate exploration in the area.

EL 26514: was granted on the 18 July 2008.

EL 26515: was granted on the 18 July 2008.

EL 23771: was granted on the 19 August 2003 to Gravity Diamonds and sold to Legend in 2009 during its eighth year of tenure. At the third anniversary in 2005, a reduction deferral was granted and a compulsory reduction was completed in 2006. The tenement was compulsorily reduced in 2007 and 2008. In June 2009, a renewal application was lodged for Exploration Licence 22771, which was granted on the 16 September 2009 to provide additional time for adequate exploration in the area. The title currently holds 2 blocks.

EL 23772: was granted on the 19 August 2003 to Gravity Diamonds, and sold to Legend in 2009 during its eighth year of tenure. At the third anniversary in 2005, a reduction deferral was granted and a compulsory reduction was completed in 2006. The tenement was compulsorily reduced in 2007 and 2008. In June 2009, a renewal application was lodged for Exploration Licence 22772, which was granted on the 16 September 2009 to provide additional time for adequate exploration in the area. The title currently holds 2 blocks.

EL 25859: was granted on the 20 September 2007 to Gravity, and sold to Legend in 2009 during its second year of tenure. A waiver of reduction has been lodged in its third year (2010), to provide additional time for adequate exploration in the area.

EL 7970: was granted on the 23 July 2000. Several applications for renewal were completed and granted over the title, which highlights the significant interest in the diamond potential of this tenement. The tenement expired on 23 July 2010 after the full 10-year licence capacity. The Department has placed a Reserve from Occupation over the area in EL7970 and invited Legend to lodge an application over that ground, which Legend has since completed and submitted.
Figure 1: Exploration Index

GR-138/09_A_2010_01
LOCATION AND ACCESS

The Cox Project is situated approximately six hundred kilometres southeast of Darwin, and one hundred and thirty kilometres west of Borroloola. The project area can be reached from Darwin along the Stuart Highway to Daly Waters, then along the Carpentaria Highway to the Broadmere Station turn off. Dirt roads and station tracks service the project area.

The Cox Group tenements lie in the south west portion of the Nathan River Pastoral Lease, managed by NT Parks and Wildlife, and the Broadmere Pastoral Lease. The project area is now accessible following rehabilitation of station tracks from the adjoining Broadmere Station (Figure 2).

The southernmost tenement, EL22297, can be accessed by four-wheel drive vehicles using dirt roads and station tracks. Sand cover increases to the north as do the number of creek crossings and vegetation regrowth on the existing tracks; vehicular access is difficult at best. In 2007, Gravity Diamonds re-established an old station track in the northern tenements. This track has since revegetated and been severely washed out at creek crossings. Helicopter supported operations are recommended for this area.

The project area is remote; if travelling by vehicle, sufficient fuel and supplies should be carried while operating in this region.
Figure 2: Location Plan

GR-138/09_A_2010_01
GEOLOGY

REGIONAL GEOLOGY
All the known economic diamond deposits and other significantly diamondiferous occurrences in Australia are located within the North Australian Craton (NAC), which also hosts some of the largest ore deposits of base metal, gold and uranium. The NAC covers the Kimberley region of northern WA, the northern two thirds of the NT and the northwestern part of Queensland.

The NAC is surrounded in the south and southwest by the Musgrave and Paterson Orogens, and its eastern boundary is marked by the Tasman Line separating it from the Terra Australis Orogen. The NAC formed about 1850Ma ago during the Barramundi Orogeny by the amalgamation of Archean and early Paleoproterozoic rocks. The younger Late Paleoproterozoic to Phanerozoic igneous and sedimentary rocks conceal large parts of the NAC; as such the Archean rocks of the NAC are scarcely exposed and are limited to the Rum Jungle and Nanumbu Complexes of Pine Creek Orogen and Billabong Complex of the Tanami Region.

The McArthur Basin is one of many basins developed above the NAC between 1800-1500Ma. The sediments of the basin consist of unmetamorphosed and mildly deformed rocks of carbonate, siliciclastic and interbedded volcanics deposited in a shallow intracratonic setting. The sedimentary sequences of the southern McArthur Basin has been divided into four groups, from oldest to youngest, the Tawallah, McArthur, Nathan and Roper Groups. The boundaries of these groups are punctuated 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 along drainage systems.

The major structural elements of the basin include the north-trending Batten Fault Zone and its northern equivalent the Walker Fault Zone separated by the east-trending Urapunga Fault Zone (Pietsch, Rawlings, Creaser, Kruse, Ahmad, Ferenczi, and Findhammer 1991). The spatial association between the major structures and basemetal deposits in the McArthur Basin suggests that these fault zones provided an important control on mineralization. The McArthur Basin hosts large lead-zinc-silver and copper deposits and several occurrences of small uranium and base metal mineralization. A number of varying size economical and sub-economical diamond bearing kimberlite pipes has been discovered in the basin. They are part of the sporadic volcanic activity occurring in the post-Cambrian period in the NAC.

The large time span for the intrusion of diamondiferous rocks, 367 Ma (Devonian age) for the Merlin kimberlite field, 179 Ma (Jurassic age) for the Timber Creek kimberlite field, and the 22 Ma (Miocene age) lamproite field in the Ellendale (West Kimberley) area, makes the NAC very prospective for diamond exploration. It is expected that kimberlites would occur in the central parts of the NAC and lamproites would be favored in the marginal areas and in cross cutting Proterozoic mobile zones. 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 kilometres. These structures GR-138/09_A_2010_01
are interpreted to be fundamental fractures in the NAC and are potential channel ways for diamondiferous intrusives.

The Cox Project lies in the Proterozoic McArthur Basin. The Roper Group succession represents Proterozoic section of the Project’s geology. Resting unconformably above the Proterozoic succession are flat lying units of Cambrian Bukalara and Cox Formations and Cretaceous sediments of Dunmarra Basin.

The north-south trending Cox Fault marks the northeastern boundary of the EL25859. However, the Mantungula Fault which is parallel to the Cox Fault and is located to its east just touches the south-eastern boundary of the EL 25859. It is expected that the Cox and Mantungula Faults extends further to the south and are likely concealed under the widespread outcropping Cambrian Bukalara and Cox Formations.

STRATIGRAPHY

Middle Proterozoic

McArthur Basin Four groups, namely the Tawallah, McArthur, Nathan and Roper Groups, make up the sedimentary succession in the McArthur Basin. The following stratigraphic descriptions of the member formations in each group has been derived from Pietsch, et.al. (1991).

Tawallah Group The stratigraphic units assigned to the Tawallah Group are the oldest in the McArthur Basin succession and are predominantly ridge–forming sandstones, with bimodal igneous intrusions and lavas, lutite, conglomerate, and dolostone. The succession in the Tawallah Group is up to five kilometres thick of which four kilometres of section belongs to the two basal sandstone units- Yiyintyi Sandstone and Sly Creek Sandstone.

McArthur Group The stratigraphic units of the McArthur Group are restricted to the Batten Trough and form an interbedded sequence of carbonates, shale, siltstone and less common arenites. The McArthur Group has been subdivided in two subgroups: the Umbolloga Subgroup and the overlying Batten Subgroup.

Nathan Group Lying unconformably above the McArthur Group sequence are the units of the Nathan Group. The Nathan Group comprises an interbedded sequence of carbonates and clastic rocks.

Roper Group The Roper Group is a distinctly different assemblage of sediments compared to its precursor McArthur and Nathan Groups. It is almost entirely siliciclastic and hosts cyclic sequences of resistant quartz sandstone and recessive mudstone and siltstone that have accumulated in a shallow intracratonic basin.
Figure 3: Regional Geology
GR-138/09_A_2010_01
LOCAL GEOLOGY

Rock types in the Cox Project Group area are predominantly sandstones and minor siltstones of the Roper Group, Cambrian Bukalara Sandstone and Cox Formation and Lower Cretaceous sediments. Bedrock units are commonly covered by laterite, lateritic soils and Quaternary deposits (Figure 3). The area is of low relief, being drained by the Cox River and exposure is relatively poor.

Several north trending, pre-Cretaceous faults transect the eastern parts of the tenement area. Sediments are only gently folded, with bed dips rarely exceeding 15 degrees.

Not all of the units contained within the McArthur Basin are described here; only those units that are significant within the Cox Project are listed below (Figure 3). For a full description of the geology of the McArthur Basin, see Peitsch et al (1991).

Tawallah Group

**Wununmantyala Sandstone** This unit is a red to mauve-grey, locally feldspathic sandstone, mainly medium-grained that is moderately to well sorted. The sandstone contains thin- to medium-bedding with laminations, planar cross-beds, ripples and abundant shale clasts. Thin red, generally recessive shale interbeds with sandstone conglomerate and pebbly sandstone common near the base. The sandstone was most likely deposited within subtidal marine to paralic conditions.

**Woollogorang Formation** The Woollogorang Formation is a thinly bedded dololutite with rare columnar stromatolites, weathered to a dark grey colour. The dololutite is commonly pyritic and contains characteristic ovoid nodules. The formation also consists of coarse dololutite breccia or shale. Evaporite mineral casts may occur near the base of the formation. Also present in the formation is a ferruginous, cross bedded sandstone, white quartzarenite and pebble conglomerate units that are dolomitic in places. Carbonate units in the formation have been deposited within lacustrine to fluvial conditions, while the sandstones were formed in a shallow marine environment.

**Tanumbirini Rhyolite** The Tanumbirini Rhyolite is a subaerial porphyritic lava containing phenocrysts of quartz and feldspar.

McArthur Group

**Masterton Sandstone** The Masterton Sandstone is a ridge forming, pink, brown and buff, fine to medium grained, moderately sorted quartzarenite. The sandstone is thin to thickly bedded, with planar and trough cross beds and extensively rippled. Very fine grained sandstones and siltstones form generally recessive minor units. A distinctly ferruginous mottled sandstone with halite and gypsum casts and pseudomorphs are predominately found in the uppermost beds and a basal sandstone conglomerate is common. The basal units were deposited within an alluvial environment and the remainder of the sandstone was deposited under shallow marine and intertidal to supratidal conditions.

**Smythe Sandstone** The Smythe Sandstone is a massive, coarse polymict conglomerate, and pebbly lithic (chert) sandstone. The unit is typically poorly sorted and prominently cross-bedded, and was most likely deposited in fluvial environment.
**Balbirini Dolomite** The Balbirini Dolomite comprises dololutite, stromatolitic dololutite, doloarenite, dolomitic siltstone and shale, and silty dololutite. The doloarenite within the unit is commonly cross stratified and rippled. The silty dololutite is more common within the lower part of the unit and frequently contains evaporite pseudomorphs and in places cauliflower cherts. Conical, large columnar, stratiform and domal stromatolites are also present. Ooid dolostone beds are diagnostic. Thin sandstone beds are rare within the unit. The depositional environment is believed to be emergent continental playa and marginal marine conditions.

**Roper Group**
The Roper Group stratigraphic sequence is known to contain low grade, stratabound, sedimentary iron occurrences however base metal occurrences are rare. The small, low grade, diamondiferous Packsaddle and Blackjack kimberlite dykes which occur in the general area have intruded and are hosted by the Roper Group sediments.

**Limmen Sandstone** The Limmen Sandstone is a fine grained quartzarenite interbedded with grey micaceous siltstone, very fine grained sandstone and poorly sorted pebbly sandstones. The quartzarenite exhibits clay clast imprints, minor ripples and cross beds. The Limmen Sandstone contains planar and trough cross beds, flame and load structures and tool marks. The unit was deposited under fluvial conditions.

**Mainoru Formation** The Mainoru Formation is a red-brown, micaceous siltstone to very fine grained sandstone. Minor units include thin beds of dolomitic siltstone and light purple mudstone, a uniformly laminated light green to light purple micaceous siltstone to muddy siltstone and a glauconitic, fine grained sandstone and siltstone. The lower part of the formation represents a non-marine (red bed facies) environment that grades upwards into marine conditions.

**Crawford Formation** The Crawford Formation is a red-brown, fine grained, micaceous sandstone and siltstone with minor mudstone beds, glauconitic sandstone and feldspathic sandstones. Planar, trough and hummocky cross beds are common, and the unit exhibits mudstone intraclasts, clast imprints, mudcracks and convolute beds. The formation was deposited within shallow marine or paralic conditions.

**Abner Sandstone** The Abner Sandstone consists of three members; the Arnold Sandstone, Jalboi and Hodgson Sandstone Members. The Arnold and Hodgson Sandstone Members are lithologically very similar and are separated by the thin Jalboi Member. **Arnold Sandstone Member**: The Arnold Sandstone Member is a pseudokarstically weathered, strongly jointed quartzarenite. The unit is medium-grained and well sorted, with thin to medium planar cross bed sets. Sedimentation occurred under sub to inter-tidal conditions. **Jalboi Member**: The Jalboi Member consists of interbedded red mudstone and ferruginous quartz sandstone. The presence of a thin unit of poorly sorted quartz granule conglomerate suggests reworking and rapid deposition of the sediments. The Jalboi Member also contains cross bedded quartzarenites and very fine grained micaceous quartzarenites with hummocky cross bedding and synaeresis cracks. **Hodgson Sandstone Member**: The Hodgson Sandstone Member is a ridge forming, pseudokarstically weathered and strongly jointed quartzarenite with rare, thin quartz granule beds. The quartzarenite is medium to thick bedded, extensively planar with occasional trough cross bedding.
Corcoran Formation The Corcoran Formation unconformably overlies the Abner Sandstone, and is predominately interbedded mudstones, siltstones and quartzarenites. The mudstones are characteristically pale purple to pale green bleached appearance, and are micaceous, sub-fissile and slightly arenaceous in places. Light grey to brown micaceous siltstones are thinly interbedded with the mudstones. The paucity of desiccation features and wave induced structures suggests that deposition took place in a moderate energy environment such as upper marine shelf to intertidal zone where wave activity is present.

Bessie Creek Formation Ridge-forming pseudokarstically weathered, strongly jointed quartzarenite, feldspathic and ferruginous in places; planar cross-beds, ripple marks. The Bessie Creek Formation was deposited in intertidal and subtidal environments.

Maiwok Subgroup The Maiwok Subgroup is a sequence of mainly fine grained flaggy micaceous sandstone, shale and siltstone, and is composed of the Velkerri and McMinn Formations.

Velkerri Formation The Velkerri Formation is a recessive unit of red-purple shale, slightly silty mudstone and ferruginous red-brown, finely laminated and fissile micaceous siltstone with minor thin interbeds of fine grained ferruginous sandstone. Deposition is likely to have occurred in outer shelf, deeper marine environments.

McMinn Formation The McMinn Formation, comprising the Moroak Sandstone and Kyalla Members, is a fine to coarse grained quartzarenite interbedded with siltstone and shale, conformably overlying the Velkerri Formation. Moroak Sandstone Member The Moroak Sandstone Member has a sharp and conformable contact with the underlying Velkerri Formation. Rocks of the Moroak Sandstone Member are predominately pseudokarstically weathered quartzarenites that are medium grained, thin to thick bedded and exhibit thick cross bedding, mud clast imprints and mudcracks. Sedimentation is interpreted to have occurred in a very shallow marine to intertidal environment where periodic subaerial exposure was common. Kyalla Member The Kyalla Member is the uppermost unit of the Roper Group, comprising interbedded mudstone, claystone and siltstone with thin sandstone interbeds. The unit is believed to be comprise storm derived material that has been deposited onto a muddy inner shelf.

Cambrian

Bukalara Sandstone The Cambrian Bukalara Sandstone is a red-brown, thin to thick bedded, fine to coarse grained feldspathic quartz sandstone. Cross bedding is ubiquitous, commonly between two and three metres thick, commonly accentuated by maroon shale pebbles or ripples.

Cox Formation The Early Cambrian Cox Formation rests conformably above the Bukalara Sandstone. Its lower part comprises fine-grained, usually micaceous sandstone with thinly interbedded siltstone and shale. However, its upper part predominantly consists of laminated siltstone, and red and green shale.
EXPLORATION

Previous Exploration
Two small, low grade kimberlitic dykes (Packsaddle and Blackjack) were discovered by Stockdale during the late 1980’s in a region north of the current tenement holding. These small dykes contain diamonds with low grades and shed kimberlitic chromite into adjoining drainage.

Surface sampling by CRAE and Ashton was completed over majority of the project area during the 1980’s with some follow-up infill sampling during the 1990’s. This sampling identified widespread macrodiamonds, microdiamonds and indicator minerals, mainly chromite grains. The geochemistry of the chromite suggested that they are derived from both kimberlitic and non-kimberlitic sources. Following two areas have been focus of exploration by CRAE/RTE and Ashton:

- Mantangula Creek, a drainage within a nearby tenement to the east of EL7970 returned microdiamonds and abundant kimberlitic chromite. Ashton carried out a bulk sampling program on the southern portions of this creek.

- A region located along the eastern margin of the Arnold River tenement block (EL 7970) containing kimberlitic chromite. CRAE followed up 15 airborne magnetic anomalies in the area in the 1980’s but ground magnetic traverses concluded that all anomalies had source within the regolith. No source rock has been identified to explain presence of indicator minerals.

No kimberlites were discovered by Rio Tinto or Ashton in the Cox Group region, and the source of the anomalous indicator mineral grains remained unknown.

In 2003, A Falcon® airborne gravity gradiometer survey was flown over a large part of the Cox group tenements. The survey was flown on east-west oriented lines, 100m apart at a mean terrain clearance of 80m. Detailed interpretation, anomaly ranking and exploration targeting from the Falcon survey by Gravity Diamonds was completed. The region rated highly with the possibility of occurrence of kimberlitic pipes or alluvial diamonds.

The Falcon™ airborne gravity gradiometer survey covered the entire EL7970 tenement (approximately 21 km²) with gravity, aeromagnetics and DEM. Several 2nd order targets were identified but limited access to the tenement saw only reconnaissance exploration carried out via helicopter. An access track by rehabilitating old station tracks on Broadmere Station was constructed during 2007 and allowed vehicular access to the eastern portion of the tenement area and a single track was constructed into the western portions of the tenement following consultation with the Alawa Aboriginal Trust and the NLC.

Helicopter-supported heavy mineral sampling was carried out focusing on priority Falcon® target areas that also included field reconnaissance survey.

Reprocessing of the original Falcon™ gravity data was carried out by BHPB Falcon operation with updated noise suppression algorithms that lowered the noise in the original data set from approximately 10 Eotvos to 3
Eotvos. Small kimberlites discovered by Gravity Diamond at Abner Range had a negative gravity response of 22 Eotvos.

Several small second order anomalies were deemed suitable for standard geochemical sampling and a grid of samples was taken utilising station tracks.

Follow-up of the original geophysical survey has upgraded the potential of the EL7970 and the surrounding area. Gravity Diamonds fully intended to follow-up these encouraging results with an initial round of drilling in year 9 however; efforts were severely curtailed due to the impact of the global financial crises on the company’s resources.

In early 2009, Gravity Diamonds signed a sales contract with Legend International Holdings Inc for the sale of all of its Australian based properties and rights to tenements held by third parties such as EL 7970. Although the contract was binding, its completion was subject to a particular condition precedent involving the owners of the tenement that unexpectedly held up its completion limiting planning for the field season.

Summary of Historical Work

Table 1: Summary of significant historic work completed

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Previous Work Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL22297</td>
<td>HMA lag grid and Stream sampling, RAB drilling that produced 2 microdiamonds. Several historical sites report non-kimberlitic chromites often in large numbers.</td>
</tr>
<tr>
<td>EL23771</td>
<td>Soil geochemistry grid (2007). Several samples display reasonably anomalous Nb assays however corresponding results for other “typical” kimberlitic elements (Ce, La, Ti, and REE) are only weakly anomalous.</td>
</tr>
<tr>
<td>EL23772</td>
<td>Several 2nd order targets were identified, 1 HMA stream sample in 2007 with a single ambiguous chromite grain recovered. Further mineral assessment has downgraded the value of this grain. A small grid of standard soil geochemical samples was undertaken on top of an identified Falcon gravity anomaly.</td>
</tr>
<tr>
<td>EL26514</td>
<td>Open File review, field reconnaissance for access</td>
</tr>
<tr>
<td>EL26515</td>
<td>Open File review, field reconnaissance for access</td>
</tr>
</tbody>
</table>
| EL7970   | Extensive HMA Sampling, the latest done by Gravity Diamonds in 2007 a total of 37 gravel samples of approximately 40-50 kg of sieved, -1.6 mm material. Of the samples collected, 16 reported chromite, with one of the chromite positive samples also reporting a macrodiamond. This recovery of chromites within EL7970 by DMA, continues to be at odds with historic
| EL25859 | Extensive HMA sampling both lag and stream in the central part of the tenement. Various samples with positive chromite numbers and minor microdiamonds, no samples taken in the northern portion of the tenement. Three (3) gravel samples were collected by Gravity Diamonds in the central portion of the tenement in 2008. Initial sampling failed to locate kimberlitic indicator minerals. |

EL22297:
The Northern portion historically encompassed an HMA lag grid and stream sampling. RAB drilling produced 2 microdiamonds.
The Southern and larger portion encompasses 2 historical HMA lag sampling grids producing 1 microdiamond. Another 4 microdiamond sites in Cat Creek drainage just outside the tenement boundary is largely drained from the present tenement. Several historical sites report non-kimberlitic chromites often in large numbers.

EL23771:
A soil geochemistry grid was undertaken in 2007 in the northern corner of the tenement. Several samples display reasonably anomalous Nb assays however corresponding results for other “typical” kimberlitic elements (Ce, La, Ti, and REE) are only weakly anomalous. No historic Heavy Mineral sampling identified.

EL23772:
Several 2nd order targets were identified but limited access to the tenement saw mostly reconnaissance exploration carried out via helicopter. One (1) sample was collected in 2007 however from a stream drainage. The results were equivocal with a single chromite grain recovered. Further mineral assessment has downgraded the value of this grain.

A small grid of standard soil geochemical samples was undertaken (2007) on top of an identified Falcon gravity anomaly. Results need to be re-evaluated.

EL26514:
The principal Cox River bisects this tenement where very little historic HMA sampling (3 samples) has been conducted. Access to this ground has been significantly hampered by high water flow in this region in the past.

EL26515:
A few historic HMA samples were taken on this tenement the highest result being 1 macrodiamond found with a ~4mm heavy mineral stream sample. At the very least an attempt will be made to replicate this result.
This tenement remains a priority in the Cox Group tenements. Legend and other previous companies that held this tenement confirmed the potential for diamondiferous kimberlites to be located within the Cox-Arnold River tenement block. Legend carried out evaluation of available geophysical and indicator mineral sample data. Gravity Diamonds flew the FALCON® airborne gravity gradiometer survey during September 2003. The FALCON® data has been previously lodged with DPIFM.

Sampling consisted primarily of indicator mineral loams and stream gravels, and was carried out either on or downstream of targets. All sampling carried out during the 2005 and 2006 field seasons was helicopter supported as access to the tenement is extremely limited. These sampling programs identified a number of clusters of anomalous indicator mineral samples associated with moderate amplitude gravity anomalies. Results from these sampling programs are detailed in previous annual reports completed by Gravity Diamonds.

Recovered indicator mineral grains were probed by Dr Greg Pooley at the University of Western Australia using a JEOL 6400 SEM fitted with link EDS detection and digital pulse processor.

Of the 37 samples collected, 16 reported chromite, with one of the chromite positive samples also returned a macrodiamond. Several samples returned large numbers of chromite grains, which may indicate some proximity to source. The distribution of the positive results suggests at least two discrete source locations in both the Cox002 and Cox022 areas.

2009-2010 Exploration

During the period between 5th of August 2009 to 4th of August 2010, a comprehensive open file review, of the entire Cox Project was conducted as part of a target generation exercise and to better understand the regional mineralisation trends. Data acquired from Gravity Diamonds was also incorporated into this review process. Field reconnaissance survey and collection of Heavy Mineral Samples were carried out on those tenements that were accessible.

Table 2: Summary of work completed for the reporting period 2009-2010

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Work Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL22297</td>
<td>Data Review, target generation, Helicopter and ground-based field HMA Sampling. Nine (9) HMA Samples collected. Detailed Heavy mineral probe analysis – Wayne Taylor</td>
</tr>
<tr>
<td>EL23771</td>
<td>Data Review, target generation, no field based work completed</td>
</tr>
<tr>
<td>EL23772</td>
<td>Data Review, target generation, no field based work completed. Detailed Heavy mineral probe analysis – Wayne Taylor</td>
</tr>
<tr>
<td>EL26514</td>
<td>Data Review, target generation, no field based work completed</td>
</tr>
</tbody>
</table>

GR-138/09_A_2010_01
EL26515 | Data Review, target generation, Helicopter Field Reconnaissance

EL7970 | Helicopter Field Reconnaissance, Planned drilling postponed due to wet season accessibility problems, Planned ground gravity survey cancelled for the same reason. MMP report preparation. Detailed Heavy mineral probe analysis – Wayne Taylor

EL25859 | Helicopter and ground-based field reconnaissance, HMA Sampling of photogeologic anomalies. Three (3) samples taken – results pending. Detailed Heavy mineral probe analysis – Wayne Taylor

---

**SAMPLING**

**Cox Stream and Loam HMA Sampling**

EL22297: Seven (7) HMA stream sediment samples were submitted for analysis during October 2009, with one sample returning a positive chromite result. The samples targeted the main drainages that had previous recorded diamond occurrences. All sample locations and results are shown below in Table 3 and Figure 4.

Follow up sampling was conducted in July 2010, upstream of the unresolved sample, COH000005, by collecting further two (2) samples. The results are pending for these samples. Follow up sampling was conducted following the recommendation supported by detailed mineralogical analysis (see section below).

**Table 3: EL22297 HMA sample locations**

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>TENEMENT</th>
<th>EASTING</th>
<th>NORTHING</th>
<th>SAMPLE_ID</th>
<th>LAB_ASSESMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>515665</td>
<td>8206006</td>
<td>COH000001</td>
<td>negative</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>515973</td>
<td>8208229</td>
<td>COH000002</td>
<td>negative</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>518571</td>
<td>8211028</td>
<td>COH000003</td>
<td>positive</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>518296</td>
<td>8207277</td>
<td>COH000004</td>
<td>unresolved</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>519983</td>
<td>8207878</td>
<td>COH000005</td>
<td>unresolved</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>520310</td>
<td>8211930</td>
<td>COH000006</td>
<td>negative</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>511077</td>
<td>8224561</td>
<td>COH000007</td>
<td>negative</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>519438</td>
<td>8208723</td>
<td>COH000008</td>
<td>Result pending</td>
</tr>
<tr>
<td>COX</td>
<td>EL22297</td>
<td>518720</td>
<td>8208928</td>
<td>COH000009</td>
<td>Result pending</td>
</tr>
</tbody>
</table>
EL25859: Three (3) loam samples were collected on EL25859. Further loam sampling was restricted by the late wet season which made access difficult to the northern part of the Cox tenements.

Table 4: EL25859 HMA sample locations

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>TENEMENT</th>
<th>EASTING</th>
<th>NORTHING</th>
<th>SAMPLE_ID</th>
<th>LAB_ASSESMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COX</td>
<td>EL25859</td>
<td>517478</td>
<td>8235734</td>
<td>COH000010</td>
<td>Result pending</td>
</tr>
<tr>
<td>COX</td>
<td>EL25859</td>
<td>517386</td>
<td>8235703</td>
<td>COH000011</td>
<td>Result pending</td>
</tr>
<tr>
<td>COX</td>
<td>EL25859</td>
<td>516906</td>
<td>8234853</td>
<td>COH000012</td>
<td>Result pending</td>
</tr>
</tbody>
</table>

Sample sizes varied according to the trap site and sampling method but most were collected between 40-50kg of 1.6mm or 1.0mm sieved material. Samples were sent to Diatech Laboratories in Perth for processing using a wifley table and recovery of kimberlite indicator minerals from the -0.5mm +0.2mm fraction of the concentrate.

Results are depicted in Tables 3 and 4 above.

**Detailed Heavy Mineral Probe Analysis – By Wayne Taylor**

A detailed analysis of the positive chromite occurrences was carried out by Mineralogical Consultant, Wayne Taylor. Initially the work covered only the Legend samples but subsequently it included analysis of all the Gravity Diamonds data. The following report was finalized on the 2nd of August 2010.

From the initial analysis of Legend samples, only one sample COH000005 was identified as worthy of follow-up presenting a possible low-score indicator, all other samples were identified as crustal magmatic origin with metamorphic overprint.

Historical indicator mineral data provided by Gravity Diamonds for their northern Australia prospects for the years 2004-2007, was supplied to Wayne for evaluation of diamond potential. The data amounted to 1,233 SEM analyses of Cr-Spinel, 35 electron microprobe/laser ICPMS analyses of Cr-Spinel, and two laser ICPMS analyses of pyrope garnet. For the purpose of interpretation, fourteen “project areas” were assigned on the basis of location and/or catchment area.

Mixed Cr-spinel populations are present in the Cox area and only a few grains have compositions consistent with being high-scoring indicators. The observing laboratory reported some grains with ‘basaltic’ morphologies and some with ‘kimberlitic’ external morphologies. There are substantial numbers (25) of MAC (magnesian aluminous chromite) and MC (magnesiochromite) grains, and a few TMAC (titaniferous magnesiochromite) grains, that appear to be derived from mostly shallow-mantle (SPL) sources but extending into the GNT facies; most of these grains have been classified as having ‘kimberlitic’ (reaction rim?) or ‘uncertain’ external morphologies (96%) and a few (6 %) are zincian in composition.

GR-138/09_A_2010_01
Several different populations may be involved but the majority of Cr-Spinel seems to reflect shallow-mantle sampling that does not extend into the diamond stability field with the source most likely being a lamprophyre or alkali basalt of post-McArthur age. There are substantial numbers (nearly 20%) of zinc-overprinted grains both of apparent diamond indicator origin and crustal magmatic origin. It is therefore possible that an old, Proterozoic kimberlite source is contributing indicators. The indicator trails trace upstream to a Cainozoic lateritic plateau developed mostly on Cretaceous and Cambrian sediments.

A subset of the DIAMAUS historical grains were analysed by high-precision electron microprobe and laser-ablation ICPMS methods for minor and trace elements (ANU, Canberra). The Cr-V plot above was constructed from that data. The results show Cr-Spinel from the Cox projects mostly plot within the ‘Magmatic Array’ with a few grains overlapping the ‘Mantle Array’. Even though high-Cr Cr-spinel is present at Cox, their diamond indicator potential appears to be low as suggested above.
Figure 4: Cox HMA Stream Sample Locations
GR-138/09_A_2010_01
DISCUSSION & FUTURE WORK PROGRAM

Exploration Licences 22297, 26514 and 26515 remain an important part of the exploration program being conducted by Legend International Holdings within the Northern Territory. With the addition of Gravity Diamonds tenements EL 7970, 25859, 23771 and 23772, the Cox Group presents a significant exploration package, highly prospective for commercial sources of diamonds. Anomalous kimberlitic indicator mineral results, including both macro and micro-diamonds have been recovered in this region.

Considering the results of the mineralogical/geochemical assessment, it would be easy to dismiss the prospectivity of the Cox Group region, however, it should be regarded as indicative of where to focus exploration rather than a dismissal of the potential for finding the kimberlite/diamond source. The continued evaluation of the sample results from the previous work still highlights areas as prospective for kimberlite. Detailed sampling has narrowed the potential target area and detailed geochemical or ground geophysical programs are considered to be required to highlight further targets in the area prior to drilling.

Listed below are the recommended work programs to comprehensively explore the Cox Group.

EL7970: Re-assessment of the drill targets is recommended prior to drilling which will include re-validating some HMA samples at the two main targets Cox 2 and Cox 22. Ground geophysics work originally planned for the past field season to be carried over into the coming year. A large number of samples (up to 22 samples) have been planned within the EL area.

EL22297: Aimed at validating some of the relevant samples from historical sampling in the light of our current processing of samples down to +0.2mm, bearing in mind that kimberlitic chromites are more fragile than non kimberlitic chromites and that previous processing was at best down to +0.3mm and more generally down to +0.4mm. Also 2 RAB drill site areas will be termite mound sampled if possible. Some un-sampled sites are proposed that are significant in terms of their position in relation to structural features.

EL25859: Additional desktop investigation is required to plan sampling within EL25859. This tenement has not been sampled in the northern half previously. A comprehensive open file report and geophysical analysis is required to further identify targets. The tenement does contain some major drainage channels and limited sampling has been completed within this tenement by Legend or previous explorers. Targets will be developed through the year focusing on the positive indicators in the central area and on the vegetation and photogeological anomalies in the southeast.

EL23771: Review of geochemistry and field reconnaissance.

EL23772: HMA sampling on un-sampled creeks.

EL26514 and EL26515: Review of existing samples and HMA sampling of un-sampled creeks.
BIBLIOGRAPHY

APPENDIX 1:
Cox Stream and Loam HMA Sampling: Locations and Geochemical Assays
## Sample locations

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Sample Number</th>
<th>Easting</th>
<th>Northing</th>
<th>Sample Collected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL22297</td>
<td>COH000001</td>
<td>515665</td>
<td>8206006</td>
<td>16/10/2009</td>
<td>Negative</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000002</td>
<td>515973</td>
<td>8208229</td>
<td>16/10/2009</td>
<td>Negative</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000003</td>
<td>518571</td>
<td>8211028</td>
<td>16/10/2009</td>
<td>Positive</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000004</td>
<td>518296</td>
<td>8207277</td>
<td>16/10/2009</td>
<td>Unresolved</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000005</td>
<td>519983</td>
<td>8207878</td>
<td>16/10/2009</td>
<td>Unresolved</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000006</td>
<td>520310</td>
<td>8211930</td>
<td>17/10/2009</td>
<td>Negative</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000007</td>
<td>511077</td>
<td>8224561</td>
<td>17/10/2009</td>
<td>Negative</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000008</td>
<td>519438</td>
<td>8208723</td>
<td>15/07/2010</td>
<td>Result pending</td>
</tr>
<tr>
<td>EL22297</td>
<td>COH000009</td>
<td>518720</td>
<td>8208928</td>
<td>15/07/2010</td>
<td>Result pending</td>
</tr>
<tr>
<td>EL25859</td>
<td>COH000010</td>
<td>517478</td>
<td>8235734</td>
<td>16/07/2010</td>
<td>Result pending</td>
</tr>
<tr>
<td>EL25859</td>
<td>COH000011</td>
<td>517386</td>
<td>8235703</td>
<td>16/07/2010</td>
<td>Result pending</td>
</tr>
<tr>
<td>EL25859</td>
<td>COH000012</td>
<td>516906</td>
<td>8234853</td>
<td>16/07/2010</td>
<td>Result pending</td>
</tr>
</tbody>
</table>