Legend International Holdings
ACN 82 120 855 352

Exploration Licence 23126

FINAL REPORT

FOR THE PERIOD

5 AUGUST 2003 TO 1 DECEMBER 2008

DUE DATE: 27 February 2009
BY
B. WHITE & A. RAZA
TENEMENT REPORT INDEX

OPERATOR: Legend International Holdings

PROJECT: Cox

TENEMENTS: EL23126

REPORT PERIOD: 3 March 2003 to 1 December 2008

DUE DATE: 27 February 2008

AUTHOR: B. White & A. Raza

STATE: Northern Territory

LATITUDE: 15°21'00"S to 15°25'0"S

LONGITUDE: 134°45'0"E to 134°58'0"

MGA (easting): 473,100mE to 496,400mE

MGA (northing): 8,295,600mN to 8,303,000mN

1:250,000 SHEET: SD5314, Hodgson Downs

1:100,000 SHEET: 5867, St Vidgeon

MINERAL FIELD: Diamonds

COMMODITY: Diamonds

KEYWORDS: Diamonds, data review, target areas
TABLE OF CONTENTS

1 SUMMARY OF EXPLORATION ACTIVITIES 1
2 TENEMENT STATUS 1
3 LOCATION AND ACCESS 1
4 GEOLOGY 4
   4.1 REGIONAL GEOLOGY 4
   4.2 LOCAL GEOLOGY 5
5 EXPLORATION 7
6 CONCLUSIONS 7
7 BIBLIOGRAPHY 8

LIST OF FIGURES

Figure 1: Exploration Index 2
Figure 2: Location Plan 3
Figure 3: Geology 6

LIST OF TABLES

Table 1: Tenement Status 1
1 SUMMARY OF EXPLORATION ACTIVITIES
This report describes the exploration activities conducted over tenement EL23126 between the 5th of August, 2003, and the 1st of December, 2008 (Figure 1). Literature reviews, data compilations and target generation was conducted as part of an exploration programme for the Calvert Hills Project. No on ground exploration work was conducted across the tenement.

2 TENEMENT STATUS
EL 23126 was granted to Astro Mining N.L. on the 5th of August, 2003. A compulsory 50% reduction was completed for Exploration Licence 23126 on the 5th of August, 2006. Under Dealing D92370, control of EL23126 was transferred from Astro Mining N.L. to Legend International Holdings Inc (“Legend”) on the 30th of July, 2007. A waiver of reduction was granted for Exploration Licence 23126 on the 10th of September, 2007. Legend International Holdings Inc surrendered its interest in the EL23126 on the 1st of December, 2008.

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<th>Tenement</th>
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Table 1: Tenement Status

3 LOCATION AND ACCESS
Tenement EL23126 is located approximately one hundred and seventy (170) kilometres north west of Borroloola and eighty (80) kilometres north of Tanumbirini. The tenement is serviced from Borroloola along the Carpentaria Highway (Figure 2). Access to the tenement is via Tanumbirini, which itself is accessed from tracks branching from the Carpentaria Highway. Unsealed roads and station tracks provide access to sample sites across each of the tenements.
4 GEOLOGY

4.1 Regional Geology

All of 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 1850Ma during the Barramundi Orogeny by the amalgamation of Archaean and early Proterozoic rocks which now form the basement rocks to the younger sequence. Proterozoic (1820-1600Ma) platform cover sediments, Palaeozoic volcanics and sediments, and Mesozoic sediments cover these basement rocks.

The McArthur Basin is one such platform cover which developed above the NAC between 1800-1500Ma. Its sedimentary package consists of unmetamorphosed and less intensely deformed rocks of carbonate, siliciclastic and interbedded volcanics deposited in a shallow intracratonic basin. This sedimentary sequence has been divided into four groups, the Tawallah, McArthur, Nathan and Roper Groups that are 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 the 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. A number of varying economic and sub-economic diamond-bearing kimberlite pipes of varying size have been discovered in the basin. They are part of sporadically occurring post-Cambrian volcanic activity on the NAC.

The large time span for the intrusion of diamondiferous rocks, 367Ma (Devonian age) for Merlin kimberlite field, 179Ma (Jurassic age) for Timber Creek kimberlite field, and 25Ma (Tertiary 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.

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 kilometres. These structures are interpreted to be fundamental fractures in the NAC and are potential channel ways for diamondiferous intrusives.

4.2 Local Geology

The following description of local geology has been adapted from Dunn (1963) and Pietsch et al, 1991.

Exploration Licence 23126 is situated within the McArthur Basin, and the geology of the tenement is dominated by rocks of the Roper Group, although extensive Cainozoic sediments cover the underlying geology (Figure 3). The Roper Group is a sandstone-siltstone sequence with interbedded shales and minor carbonate rocks of Proterozoic age.

The Abner Sandstone forms the basement unit of the tenement geology although the unit outcrops only sparsely across the tenement. The Abner Sandstone forms four essentially arenaceous members, the Arnold Sandstone and Hodgson Sandstone Members and the Jalboi and Munyi Members.

The Arnold Sandstone Member is the lowest unit, and like the Hodgson Sandstone, forms prominent ridges of rough jointed sandstone. It consists of generally white to dirty white quartzarenite. The quartz grains in the sandstone are medium, subrounded to subangular and moderately well sorted with minor silty clay matrix in places. It is friable but weathering has silicified and hardened the exposed surface. The member can be up to two hundred and ninety (290) metres thick. Cross bedding and ripple marks are commonly present.

The Jalboi Member lies between the two sandstone members, and contains less resistant beds of micaceous sandstone, siltstone, and quartz sandstone. It consists of a fining upward cycle of interbedded conglomerate, sandstone, siltstone and mudstone. Where exposed, the member can be up to fifteen (15) metres thick. The Jalboi Member was deposited during periods of both alluvial outwash and flood plain deposition and subsequent shallow marine transgression.

The Hodgson Sandstone Member consists of white to dirty white, and in places, iron oxide stained quartzarenite. The quartz grains in the quartzarenite are mainly medium, subrounded to subangular and reaches granule- to pebble-size in bands that are scattered commonly throughout the member. The Hodgson Sandstone Member is a shallow platform sequence deposited in an intertidal to subtidal environment.

The Munyi Member is the upper most unit of the Abner Sandstone, comprised of ferruginous sandstone and siltstone and commonly appears as a dark capping on the dip slopes of the Hodgson Sandstone Member.

The Munyi Formation of the Abner Sandstone is overlain by the Corcoran Formation, comprising shale, siltstone, fine micaceous sandstone and blocky sandstone. The Corcoran Formation generally outcrops poorly as the unit is soft and fine grained.
Legend:
- **Czs**: Sand, soil, travertine, rubble
- **Kl**: Porcellanite, claystone, ferruginous and calcareous sandstone, massive white friable sandstone. Plant and marine fossils.
- **Qa**: Alluvium

**Comp.**: Legend International Holdings, Inc.  
**Date**: 05/02/09  
**File**: EL23126_Geo_050209  
**Loc.**: Melbourne  
**Plot**: Geology  
**Figure**: 3

EL23126  
Geology

**Legend**
- **Czs**: Sand, soil, travertine, rubble
- **Kl**: Porcellanite, claystone, ferruginous and calcareous sandstone, massive white friable sandstone. Plant and marine fossils.
- **Qa**: Alluvium

**Major Structures**

**Calvert Hills tenements**
- **gd5314opg**: Fine to coarse friable sandstone
- **Prh**: Medium to coarse friable quartz sandstone
- **Prm**: Blocky quartz sandstone, siltstone, micaceous sandstone with slump structures
- **Pro**: Ferruginous sandstone and siltstone
- **Prk**: Blocky friable sandstone, with interbedded siltstone
- **Prj**: Blocky friable sandstone and siltstone
- **Pry**: Coarse to medium friable quartz sandstone
- **Prr**: Blocky pink and buff quartz greywacke. Contains glauconite
- **Pry**: Flaggy micaceous siltstone and fine sandstone, blocky silicified sandstone.
- **Prr**: Blocky quartz sandstone and siltstone.
- **Prm**: Blocky pink and buff quartz greywacke. Contains glauconite
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- **Pry**: Flaggy micaceous siltstone and fine sandstone, blocky silicified sandstone.
The Bessie Creek Formation overlies the Corcoran Formation, and is a jointed sandstone similar to that of the Abner Sandstone, although the Bessie Creek Formation generally has finer banding and bedding, a closer joint system and is more friable than the Abner Sandstone members.

The majority of the tenement is covered by Cainozoic sediments, including sand, laterite, soil, rubble, travertine, freshwater limestone and alluvium. The lateritic units are often overlain by sand, covering much of the local area. Thin sequences of flat-lying Cretaceous conglomerate, sandstone, siltstone and mudstone of marine and non-marine origin are widespread in the area. The Cretaceous sediments rarely exceed twenty (20) metres thickness and form cappings on mesas, ridges and plateau or valley infill.

5  EXPLORATION
The tenements described in this report are part of the Cox Project, and any exploration programmes were designed along a project, rather than tenement basis.

A thorough review of published literature and open file company reports was completed following the acquisition of the Calvert Hills Project in an effort to identify likely exploration targets. While the area has been identified as prospective for diamonds and base metal mineralisation, the historical reports did not indicate any potential for the tenement to host diamondiferous kimberlites or economic mineralisation.

Multi client airborne geophysical data and Landsat imagery was purchased as an aid to identifying pipe like anomalies across the project area. Targets were identified and although proposals were submitted to test these targets with surface loam sampling, the work was given a low priority and was not conducted in favour of targets with higher prospectivity.

No on ground exploration was conducted over EL23126.

6  CONCLUSIONS
The Cox Project remains a major focus of exploration for Legend International Holdings to locate and develop diamond resources in the Northern Territory. Detailed literature reviews and stream sampling indicated that EL23126 displayed little potential to host diamond bearing rocks. The region remains prospective and exploration in the Cox Project is now focused on those tenements with a higher potential to host diamonds.

As the focus of exploration in the area has shifted from EL23126, the tenement was recommended for surrender and was subsequently relinquished on the 1st of December, 2008.
7  BIBLIOGRAPHY

