EXPLORATION LICENCES: EL22295-EL22298, EL22300, EL22302 and EL23126

"COX PROJECT"

JOINT ANNUAL REPORT

FOR THE PERIOD

24 APRIL 2002 TO 4 AUGUST 2004

BY

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Astro Mining NL., Melbourne
TENEMENT REPORT INDEX

OPERATOR: Astro Mining NL

PROJECT: Cox

TENEMENTS: Exploration Licences: EL22295-EL22298, EL22300, EL22302, EL23126

JOINT REPORT PERIOD: 24 April 2002 to 4 August 2004

DUE DATE:

AUTHOR: C. A. Washburn

STATE: Northern Territory

LATITUDE: S15°06’ – S16°40’

LONGITUDE: E134°01’ – E135°25’

MGA

mN: 81500000 - 8325300

mE: 400000 - 5500000

1 : 250,000 SHEET: SD53-14 Hodgson Downs, SD53-15 Mount Young SE53-02 Tanumbirini, SE53-03 Bauhinia Downs

1 : 100,000 SHEET: 5767 Hodgson, 5867 St Vidgeon, 5967 Towns, 5766 Nutwood, 5866 Cox, 5966 Mantungula, 5865 Tanumbirini, 5965 Bauhinia Downs, 5864 October, 5964 O T Downs

MINERAL FIELD:

COMMODITY: Diamonds

KEYWORDS: Diamonds, aeromagnetic survey, Landsat Interpretation, data review, geology, surface sampling
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1 SUMMARY OF EXPLORATION ACTIVITIES

Exploration carried out over the Cox Project during the reporting period included the acquisition of geological, topographic and geophysical data, GIS compilations and data reviews, compilation of openfile data.

2 TENEMENT STATUS

Astro Mining NL is manager of the Cox Project, the project consists of seven tenements covering an area of 8,676.9km².

<table>
<thead>
<tr>
<th>Tenement</th>
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<th>Area (km²)</th>
<th>Holder</th>
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3 LOCATION AND ACCESS

Figure 1

The Cox Project covers approximately 8,676.9 square kilometers west of the Merlin diamond field. The Cox Project is located between Roper Bar and Cape Crawford, on the north western part of the Bauhinia Downs (SE53-03), eastern half of the Hodgson Downs (SD53-14), the north eastern corner of the Tanumbirini (SE53-02) and the western parts of the Mount Young (SD53-15) 1:250 000 map sheets. The northern area is accessed via the Roper Highway and station roads to Hodgson River, Nutwood Downs and Cox River, and the southern area is accessed via the Carpentaria Highway towards Cape Crawford.

4 GEOLOGY

Figure 2

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 million years (Ma) during the Barramundi Orogeny by the amalgamation of Archaean and early Proterozoic rocks which now form the basement rocks of the NAC. Proterozoic (1820-1600 Ma) platform cover sediments, Palaeozoic volcanics and sediments, and Mesozoic sediments cover these basement rocks. The Palaeozoic volcanics comprise the Lower Cambrian Antrim Plateau Volcanics (about 550 Ma in age) and its equivalents. The only volcanic activity that has occurred on the NAC for the past 500 Ma has been the intrusion of diamondiferous kimberlite at 367 Ma (the Devonian age Merlin kimberlite field), 179 Ma (Jurassic age Timber Creek kimberlite field), and the 25 Ma (Tertiary age) lamproite field in the Ellendale (West Kimberley) area.

The large time span for the intrusion of diamondiferous rocks makes the NAC very prospective.
for diamond exploration and indicates diamonds have been preserved in the lithosphere below the NAC and that eruption of diamond-bearing volcanic rocks can occur at any time during the last 500 Ma. 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 north west and north east 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 intrusives.

4.1 LOCAL GEOLOGY

The Project area is located in the central western area of the Proterozoic McArthur Basin. In the west of the Project area, the Mesozoic Dunmarra Basin overlies the McArthur Basin. The majority of the area is underlain by Mesoproterozoic Roper Group sediments and minor volcanics. In the west of the Project area, Lower Cambrian mafic volcanics and sediments overlie the Proterozoic rocks. The mafic volcanics are the Nutwood Downs Volcanics and are equivalent to the Antrim Plateau Volcanics in the western part of the NT. Flat-lying Cretaceous sediments unconformably overlie the Proterozoic and Palaeozoic rocks. Dolerite sills intrude the Roper Group rocks.

5 EXPLORATION

5.1 DATA REVIEW

The areas selected for exploration are based on a regional diamond prospectivity review carried out by Astro (Wright 2000), and in areas of moderate to high prospectivity, available open ground was covered by exploration licence applications. Open file exploration data were obtained from the Northern Territory Geological Survey (NTGS), a division of the NT Department of Business, Industry and Resource Development (DBIRD), formerly the NT Department of Mines and Energy (DME).

Available exploration data comprised open file reports of past exploration activity, NTGS and company open file airborne geophysical survey data and Landsat 7 thematic mapper (TM) data. The data was available on CD-ROM by request to the NTGS.

Open file exploration reports were examined and diamond exploration sampling data entered into Excel and a GIS database. Topographic and geological maps at a scale of 1:250 000 were acquired in raster format as a base for the plotting of the data (Figure 3).

The NTGS supplied the available geophysical data as located data files and processed grid images. Astro has acquired approximately 1 million line kilometers of geophysical over the Northern Territory. Stacked magnetic profiles of the first vertical derivative of the residual magnetics were processed from the located data and imported into the GIS. Images of total magnetic intensity and vertical derivatives were supplied by the NTGS. The stacked profiles were used to select pipe-like targets that may represent kimberlite or lamproite intrusives (Figure 4).

Geophysical processing was conducted in-house and a number of anomalies defined. The examination of stacked profiles is 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
Magnetic targets were numbered using the abbreviated 1:100 000 map sheet name and a sequential number (Figure 5). 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 the field.

Landsat TM data was processed in-house using ERMapper and RGB colour images were produced comprising channels 321, 531, 741 and principle components (PC) 123. Thirty-three Landsat scenes have been acquired from the NTGS over the Northern Territory, covering all of the tenement areas.

5.2 PREVIOUS WORK

Ashton and Rio Tinto have explored the area in the 1980’s and numerous microdiamonds and 3 macrodiamond have been recovered (figure 8). Ashton collected two bulk samples from the Broadmere area and recovered one macrodiamond. Ashton recovered numerous chromite, but these were considered to be “spurious” (?contamination) and not repeatable. Ashton also carried out grid loaming and drilling in an attempt to find the source of these chromites. Magnetic anomalies from Rio Tinto’s Broadmere survey were followed up at the time, but the effectiveness of the follow up will require review.

5.3 GEOPHYSICS

The northern part of the area is covered by the 1994 NTGS Urapunga survey and part of the southern area is covered by the Broadmere survey flown by Rio Tinto in 1983. The remainder of the area has not been flown with aeromagnetics since the 1970’s when it was flown at a line spacing of 3 km, at flying height of 150 m and a sampling interval of 60 m.

<table>
<thead>
<tr>
<th>Survey</th>
<th>Direction (degrees)</th>
<th>Line Spacing (m)</th>
<th>Height AGL (m)</th>
<th>Sample Interval (m)</th>
<th>Resolution (nT)</th>
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<td>80</td>
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<tr>
<td>Urapunga</td>
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<td>500</td>
<td>100</td>
<td>6.5</td>
<td>0.001</td>
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</tbody>
</table>

5.4 LANDSAT7 TM

Landsat TM data was processed in-house using ERMapper and RGB colour images were produced comprising channels 321, 531, 741 and principle components (PC) 123. Thirty-three Landsat scenes have been acquired from the NTGS over the Northern Territory, covering all of the tenement areas.

5.5 PROPOSED EXPLORATION

Exploration will initially be targeted on the Broadmere area on EL’s 22296 and 22297. Numerous microdiamonds and three macrodiamonds have been recovered from the area. Further targets will be generated as more open file data is examined and collated. It is proposed to collect about 20 mini-bulk samples to test the drainages for macrodiamonds.
6 BIBLIOGRAPHY

