EXPLORATION LICENCE 23390

BARROW CREEK PROJECT

ANNUAL EXPLORATION REPORT

FOR THE PERIOD

22 APRIL 2004 TO 21 APRIL 2005

BY

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TENEMENT REPORT INDEX

OPERATOR: Astro Diamond Mines NL
PROJECT: Barrow Creek
TENEMENTS: Exploration Licence 23390
JOINT REPORT PERIOD: 22 April 2004 to 21 April 2005
DUE DATE: 21 May 2005
AUTHOR: L Bowyer & K Washburn
STATE: Northern Territory
LATITUDE: S22o 05’ – S22o 25’
LONGITUDE: E134o 52’ – E135o 23’
MGA (easting): 7520400 - 7557600
MGA (northing): 488000 - 538200
1:250,000 SHEET: SF53-10 Alcoota, SF53-11 Huckitta
1:100,000 SHEET: 5853 Utopia, 5953 McDonald Downs
MINERAL FIELD:
COMMODITY: Diamonds
KEYWORDS: Diamonds, data review, target areas
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1 SUMMARY OF EXPLORATION ACTIVITIES
Exploration carried out over the EL23390 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 applied for EL23390 on 2nd of October 2001, the tenement was granted on 22nd of April 2003 covering an area of 1,048km².

3 LOCATION AND ACCESS
Figure 1
Exploration Licence 23390 covers the Alcoota and Huckitta 1:250,000 map sheets. Access to the area is via the Sandover Highway, which turns off the Stuart Highway 80 km north of Alice Springs, and runs to the north of EL23390.

4 GEOLOGY
Figure 2
The oldest units in the area are comprised of metamorphic and igneous rocks of the Arunta Inlier of Early-Middle Proterozoic age. Late Proterozoic sediments are essentially flat-lying except near faults where they may be upturned.

The southwestern extremities of the Late Proterozoic to Paleozoic Georgina Basin are exposed in the eastern portion of the Barrow Creek 1: 250,000 geological map. The basin is one of several sedimentary basins that developed over older Proterozoic basement in central Australia.

Block faulting along major northwest trending faults in the basement controlled the deposition of the basin in this area. Paleocurrent directions in the basal units indicate consistent flow from the west and northwest.

Deposition of the Dulcie Sandstone followed in the Devonian. The fault influence has persisted with northwest trending contacts and axes of shallow folds. The youngest sediments are restricted to silcretes, ferricretes, and colluvium of Cainozoic age.

4.1 LOCAL GEOLOGY
The tenement covers dominantly Paleozoic basin sediments. Proterozoic sediments, gneiss and granite are exposed in the southwest corner. The Proterozoic basement gneiss is overlain by Adlaidian Grant Bluff Formation sediments. The Paleozoic sediments represented are the Cambrian Tomahawk beds followed by Dulcie
sandstone. The contact between the Proterozoic and younger sediments is thought to be a major fault.

The Tomahawk beds consist of medium to coarse grained, cross-bedded quartzarenite with thin interbeds of micaceous siltstone, shale and minor quartz-rich dolostone in the north. There is increasing dolostone and limestone in the south of the Dulcie Range. These outcrops consist of medium to thick beds of limestone or dolostone, commonly with poorly sorted quartz sand, accessory glauconite and traces of tourmaline.

The Dulcie Sandstone consists of prominently cross-bedded, medium to very thick-bedded quartz arenite, with rare beds of orthoconglomerate and calcareous silty quartz sandstone.

The sandstone forms a shallow dipping syncline with a northwest orientation. The axial plane of the basin is considered to be faulted and is possibly the continuation of a regional lineament termed the “Trans-Tanami” lineament to the northwest. This trend may be of interest as there are old workings marked on topographic maps further northeast.

An Ordovician unit called the Nora Formation occurs locally between the Tomahawk Beds and the Dulcie Sandstone to the southeast. It contains beds of oolitic ironstone.

Significant portions of the northwest part of the tenement are covered by aeolian sand plains and dunes, also trending to the northwest. Numerous discreet round outcrops and subcrops are preserved above the sand along these trends.

5 EXPLORATION

5.1 DATA REVIEW

EL 23390 is one of several tenements held by Astro covering the central Dulcie Ranges, some of which are not yet granted. The review has covered all of these units. It is apparent further northwest in EL23383 that there may be potential for the presence of diamond-bearing pipes with a spacial relationship to the axial fault. Geomorphic features such as small playa lakes more the size of an ultramafic pipe may be of interest.

5.2 TARGET GENERATION

The proposed northwest trending structure through the central portion of El 23390 will be the focus for exploration during the next field season. There are local occurrences of small playa lakes along the trend of this fault. Old workings are mapped along this trend to the northwest.

Another target may be unmapped occurrences of Nora Formation which may contain iron-rich units of oolitic ironstone.
5.3 **PROPOSED EXPLORATION**

Radiometric data packages will be acquired and enhanced in order to help pick further targets. The presence of high levels of potassium may indicate hydrothermal alteration. The presence of uranium may also be of interest.

The exploration will necessarily be helicopter supported as there are few tracks in the areas of interest. Initial reconnaissance will include rock chip sampling and assay for major and trace elements. Stream sediment or loam sampling will be carried out over areas of interest. The stream samples will be observed for kimberlite indicator minerals.
6 BIBLIOGRAPHY
