ANNUAL EXPLORATION REPORT
EL24409
FOR PERIOD ENDING 5 MAY 2010
‘BROCKS SOUTH WEST’
BURNSIDE PROJECT, NT

Pine Creek SD5208 1:250,000
Tipperary 5170 1:100,000
Batchelor 5171 1:100,000

Titleholders: Crocodile Gold Australia

Distribution:-

1. DOR Darwin, NT
2. Crocodile Gold Australia, Darwin
3. Crocodile Gold Australia, Brocks Creek

CGA Report No: PC/BJV/10-18

Zia U. Bajwah
June 2010
SUMMARY

Exploration License (EL) 24409 covers strategic landholding which is located SW of Brocks Creek gold mine. It was granted to Buffalo Creek Mines Pty Ltd (50%) and Territory Goldfields NL (50%), which were part of the Burnside JV. During 2005, GBS successfully made a takeover bid for the JV through Northern Gold NL. On 15 September 2009, GBS Gold Australia went into voluntary administration and as a result of that all exploration and mining assets were placed under care and maintenance. Crocodile Gold Australia purchased these assets on 6 November 2009 and commenced exploration, mining and processing activities in the region.

Most of the tenement overlies the Burrell Creek Formation of the Finniss River Group. The southern 2 blocks are mapped as Mt Bonnie Formation sediments of the South Alligator Group. These rock units crop out sparsely in the tenement. The area has been explored by a number of companies which led to the identification of a number of anomalous gold zones.

During the reporting period a technical review, tenement ranking and valuation was undertaken in order to prepare assets for sale. A close proximity of this tenement to Zapopan (Brocks Creek) gold mine, favourable geological setting and geophysical signature require that potential of this tenement should be tested with dedicated exploration program. Particular area of interest is magnetically recessive eye-shaped structure bounded by magnetically highs (ridges). This type of feature is associated with gold mineralisation at Fountain Head and Glencoe deposits. These areas are marked by significant Au anomalies as shown by the previous exploration programs. In addition, project area also has potential for uranium and base metals mineralisation.

In 2010-11 reporting year, project area will be explored for gold, uranium and base metals mineralisation. For this purpose, area identified during this review will undergo soil/rock chip sampling along with geological mapping. If encouraging results received, some RAB/RC drilling may also take place.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY</td>
<td>2</td>
</tr>
<tr>
<td>1.0 INTRODUCTION</td>
<td>4</td>
</tr>
<tr>
<td>2.0 LOCATION AND ACCESS</td>
<td>4</td>
</tr>
<tr>
<td>3.0 TENEMENT STATUS AND OWNERSHIP</td>
<td>4</td>
</tr>
<tr>
<td>4.0 GEOLOGICAL SETTING</td>
<td>6</td>
</tr>
<tr>
<td>5.0 PREVIOUS EXPLORATION</td>
<td>8</td>
</tr>
<tr>
<td>5.1 Gold Mineralisation and Potential</td>
<td>13</td>
</tr>
<tr>
<td>6.0 EXPLORATION DURING CURRENT TENURE</td>
<td>15</td>
</tr>
<tr>
<td>7.0 PLANNED EXPLORATION FOR 20010-11</td>
<td>16</td>
</tr>
<tr>
<td>8.0 REFERENCES</td>
<td>16</td>
</tr>
</tbody>
</table>

List of Figures

**Figure 1**: Tenement Location Map

**Figure 2**: Geological setting of the project area with geochemical gold anomalies

**Figure 3**: Geochemical anomalies and lineaments derived from previous exploration programs.

**Figure 4**: Regional TMI image of the area with EL 24409

List of Appendix

**Appendix 1**: Expenditure statement for EL 24409
1.0 INTRODUCTION

EL 24409 is located SW of the Brock’s Creek project area, an important gold field in the Pine Creek Orogen. GBS Gold Australia regards it a strategic asset with respect to gold mineralisation. In this report exploration activities during the reporting period are presented.

2.0 LOCATION AND ACCESS

EL 24409 is situated approximately 150km SE of Darwin NT. The Stuart Highway transects the tenement and the intersection of Fountainhead Road and the Stuart Highway is within the tenement. Topography is relatively flat, with low hills and creeks which can flood in heavy rains during the wet season. Access is relatively easy in the dry season.

3. TENEMENT STATUS AND OWNERSHIP

EL 24409 was granted on 6 May 2005 and expires on 5 May 2011. It comprises seven blocks that cover approximately 22.1 km$^2$ (Figure 1). It was granted in equal shares to Buffalo Creek Mines Pty Ltd (50%) and Territory Goldfields NL (50%), which were part of the Burnside JV. The Burnside JV was a JV between Harmony Gold (50%) and Northern Gold NL (50%). During 2005, GBS successfully made a takeover for Northern Gold NL, and has reached an agreement to purchase Harmony’s 50% share of the Burnside project. GBS Gold have 100% of the Burnside Project as of 1st April 2006. Underlying cadastre is NT Portion 2683 (Pastoral Lease 903) held by Branir Pty Ltd.

GBS Gold Australia went into voluntary administration on 15 September 2008, and as a result of that all exploration and mining assets were placed under care and maintenance. In June 2009, Crocodile Gold Australia announced to purchase all assets held by GBS Gold Australia (liquidated) in the Northern Territory. After meeting regulatory and statutory requirements, these assets were transferred to the new owner.
Figure 1: Tenement Location Map
4.0 GEOLOGY

Regional geology is outlined in many publications, notably Ahmad *et al.* (1994), and Needham and Needham and Stuart-Smith (1984), and Needham *et al.* (1988). The tenements are within the Pine Creek Orogen, a folded sequence of Palaeoproterozoic pelitic and psammitic sediments, with interlayered cherty tuff units. The sequence is intruded by the Burnside Granite towards north and probably McMinns Bluff Granite in the south. Mafic sills of the Zamu Dolerite (~1.87Ga) intruded lower formations of the South Alligator Group.

Most of the tenement overlies the Burrell Creek Formation of the Finnis River Group (Figure 2). The southern 2 blocks are mapped as Mt Bonnie Formation sediments from the South Alligator Group. Outcrop within the tenement is sparse. The BMR drilled a stratigraphic hole within the tenement (B21; Crick, 1976) which intersected feldspathic quartz arenite with locally interbedded siltstone and phyllite of the Burrell Creek Formation.

The area has undergone at least four phases of deformation which led to the development of open to tight folds, off-set by reverse faults. These structures generally host gold mineralisation. The project area is characterised by the presence of NW-SE lineament trend which appears to control gold mineralisation in the area.

In the region, much of the gold mineralisation appears to be related to the I-type members of Cullen Batholith. During emplacement, magma experienced differentiation and fractionation processes, which subsequently led to the emanation of hydrothermal fluids responsible for gold mineralisation in the adjacent meta-sediments (Bajwah, 1994).
Figure 2: Geological setting of the project area with geochemical gold anomalies
5.0 PREVIOUS EXPLORATION

During the reporting period, a review of exploration programs and data generated was undertaken to ascertain the significance of the EL 24409. A discussion on this work is presented below.

AP1506 covered a large area, including the Brocks Creek-Zapopan line, Howley line, Mt Shoobridge and further west. EL24409 is within the eastern side of AP1506. United Uranium explored for base metals, uranium, as well as Fe and Mn. Work concentrated on the Howley line and Mt Shoobridge. No work appears to have been carried out over EL24409. EL 1154 covered the 4 northern blocks of EL24409, as well as the Brocks Creek-Zapopan line of mineralisation further north. CRA explored for a year in 1977 by carrying out 1:25,000 scale mapping, ironstone sampling and soil sampling for base metals. The work failed to locate first order CRA size targets, and the ground was dropped.

EL 1636 consisted of 7 blocks, 3 of which covered the 3 southern blocks of EL24409. Geopeko explored for EL1636 contiguous with a much larger landholding for base metals in the late 1970’s. Work included photogeological interpretation, stratigraphic mapping (to delineate Mt Bonnie-Iron Blow style mineralisation) and some rock chip samples assayed for base metals (location unknown; description indicates area outside of EL24409). Later work concentrated in the southern blocks (just south of EL24409) which contained Koolpin sediments within the Howley anticline.

EL 1882 covered the same area as EL1154 (4 northern blocks of EL24409 and Brocks Creek-Zapopan line). Geopeko concentrated on evaluating the John Bull- Faded Lily prospects, and did not record exploration within EL24409. Zapopan NL held the same 8 blocks as Geopeko (EL1882) and CRA (EL1154) with

EL 2981. Work concentrated on the Zapopan line, with auger drilling and soil sampling, with no apparent work within EL24409. EL 3041 consisted of one block, which covers the SW block of EL24409. Talmina Trading drilled 18 auger holes for 82m (average 4.56m) mainly around old gold and copper diggings in ferruginous tuffaceous arenites and schists of the South Alligator Group. Samples from six small trenches dug into the sides of ridges ‘gave significant to minor colours of gold in pans’. The locations and results of the auger drilling were not supplied. Geological mapping showed the Mount Bonnie Formation sediments cut by N to NE-trending faults.
EL 4219 covered 26 blocks over Mt Osborne, and mainly to the east of EL24409. EL4219 covered only 2 blocks of EL24409; the SW and central blocks (SD521361E; and SD521361K).

The titleholder viewed the tenement as having potential for quartz-vein stockwork type gold mineralisation in Burrell Creek Formation sediments. A structural interpretation using photogeology was difficult because of steeply dipping structures, which often appear reversed, which gives the wrong sense to folds, and because of masking by recent sediments and laterites over outcrop. Photogeological mapping at 1:25,000 scale does not give much more detail than 1:100,000 geological mapping. Within the EL24409 an ‘old mine/alluvial’ is mapped at approximately MGA 760050E / 8504700N. Burrell Creek sediments are mapped as striking approximately 320° and dipping around 70° to the NE. No rock chip samples were taken within EL24409 at this time. Interpretation of Landsat imagery at 1:250,000 scale recorded NW-SE lineaments intersected by NE-trending structures. In the third year Grants Patch Mining entered into an agreement with the Titleholder (Bronte Douglass) and the work on EL4219 then focussed on the Zapopan anticline to the north (outside EL24409).

EL 4465 covered 4 blocks, 2 of which are the NW blocks of EL24409. Northern Gold acquired EL4465 (along with 17 other tenements) from Talmina Trading, and it became part of EL4737. No work was reported on EL 4465. EL 4736 straddled the Howley anticline (and areas further west) and totalled 16 blocks. The SW block EL24409 covers one of the easternmost blocks of EL4736. EL 4737 covered the area further north along the Howley anticline, and covered the 2 NE blocks of EL24409. Northern Gold held EL4736 and EL4737 as part of the Howley Project in the 1980’s. Northern Gold negotiated a production agreement with Metana Minerals for alluvial gold on EL 4736, and gold production from the alluvials commenced in September 1986. Northern Gold took approximately 11 stream sediment samples within

EL24409 on EL4736, and some soil sampling on the northern boundaries of EL24409 as part of exploration on EL4737. Oceania Mining and Exploration explored the 2 blocks of EL 5028 in the late 1980’s. Block SD521289Z of EL24409 was covered by EL5028. Results from geological reconnaissance mapping at 1:25,000 scale (with minor soil and rock chip sampling) produced a maximum value of 0.19g/t Au from soil sample 1119 (approximately MGA52 759310E / 8507070N) with a value of 0.05g/t Au adjacent to it. All other soil sample results were <0.01g/t Au. Highest rock chip sample assayed 0.03g/t Au (HC1; MGA52 759760E / 8508120N). An alluvial gold exploration programme was planned but not carried out due to the early onset of the monsoon, and the tenement expired.
**EL 5043** covered the central middle block of EL24409, and extended in an EW line of 7 blocks. Work in Year 1 comprised photogeological mapping, soil sampling and airborne magnetic and radiometric surveys. Anomalous Au assays for soil samples in EL24409 were reported at (approximate coordinates in MGA52):

- a) 759230E / 8506290N – 30ppb Au
- b) 761330E / 8506100N – 6ppb Au
- c) 760880E / 8505630N – 7ppb Au
- d) 760990E / 8505750N – centre of zone of anomalous Pb (over 100ppm)

**EL 5676** covered the NE block of EL24409. Driffield Mining sampled a quartz vein which assayed less than 0.008g/t Au. Six auger holes were drilled within EL24409, at 100 spacings from the SE corner of the block. No free alluvial gold was found in any samples, and no other assays from auger drilling was reported. Samples of wash from dumps were taken, which indicated there was gold mineralisation in wah horizons in tributaries draining from the old Zapopan mine. **EL 6244** consisted of 2 blocks, one of which covers EL24409 block SD521289Y. Work included rock chip sampling (one sample within EL24409; assaying below level of detection), and some alluvial sampling and trenching in the block outside EL24409.

**EL 6426** covered the SW block of EL24409 for 2 years around 1990. Northern Gold recorded a weak soil anomaly within the tenement, but later work concluded that this was due to being within a creek system that drained from the Howley mullock dumps. One anomaly at AMG 758610E / 8503016N recorded 18ppb Au (Figure 3) which was located on a flat with no obvious source for the anomaly.

**EL 6540** covered the same 2 blocks as EL 5028 for 3 years in the early 1990’s. Dominion Gold took 3 rock chip/scree samples within EL24409 with 0.008ppm Au max value at MGA52 761080E / 8506470N. Dominion also carried out 1:10,000 fact geology mapping.

**EL 6627** covered the middle central block of EL24409, plus another 3 blocks in an EW line from EL24409. Dominion Gold carried out soil sampling and Lag-scree sampling, plus interpretation of airborne geophysics and 1:10,000 fact geological mapping. Three anomalous results were returned for areas further east of EL24409.

**EL6942** covered the SE block of EL24409 (SD521361K) for a year in 1991. Dominion Gold collected 17 rock chip samples and 3 stream sediment samples with no anomalous results, so the ground was dropped.
**Figure 3:** Geochemical anomalies and lineaments derived from previous exploration programs.
**EL 7044** covered the NE block of EL24409 (SD521290V) for 2 years from 1990. Stream sediment sampling outlined an anomaly that was in an area that drained the old Zapopan mine. The other anomaly is just north on the truncated part of the block that forms MLN1139 (Figure 3).

**EL7972** ("Skull") covered one block of EL24409 (SD521289Z) for 6 years in the 1990’s. Solomon Pacific took soil auger samples, and conducted vacuum drilling as part of a larger programme over all its tenements. Vacuum drilling found that the depth of transported cover varied from 3-8m and is underlain by weathered bedrock of the Burrell Creek Formation. Maximum values occurred outside of EL24409. Interpretation of magnetic data indicated a zone of magnetite destruction in the SW corner of the licence, and a possible subsurface granite in the SE corner. **EL7933** covered 11 blocks in a NW-SE trend around the southern edge of the Brocks Creek mine. Some of the area covered by **EL7933** ended up becoming part of MLN1139. Cyprus Gold sold the tenement to Solomon Pacific, who conducted vacuum drilling over the northern parts of the tenement. Acacia Resources took over Solomon Pacific in 1996, and did a regional aeromagnetic/radiometric survey. **EL 8070** covered the same one block area as EL7044. Solomon Pacific held the tenement for nearly 2 years from 1993, the only report was the group MLN1139 report in 1993, which did not specify work on this tenement. **EL 8128** consisted of 2 blocks, and covered the SW block of EL24409. Work by Northern Gold consisted of a review of TEM satellite imagery which did not identify any geological structures amenable for targeting gold and base metals.

**EL 9463** covered the same one block as EL8070 and EL7044. Northern Gold held the tenement for 2 years from 1996, and conducted rock chip sampling, and produced a geological plan from satellite imagery and multiclient aeromagnetics. Rock chip samples were below detection for gold.

**EL 9658** covered the 2 southern blocks of EL24409 in the late 1990’s. Acacia Resources conducted soil sampling with a peak value of 161ppb Au at AMG84 Zone 52 759602E / 8503400N (Figure 3) as well as aeromagnetic and radiometric surveys. **EL22455** covered the whole of EL24409, plus another 4 blocks to the SE. No exploration work was carried out as a sacred site was found to cover the most prospective area, which is outside and east of EL24409.

A further check of scanned historic mining tenure maps indicated several MCN’s plus **ERL 83** within EL24409. No records of activity were found for **MCN’s 1087, 5096 and 5106**, which were all located in the southern block of EL24409. **MCN 1175** (in NW block of EL24409) contains a (non-JORC) probable alluvial source of an estimated 126000LCM’s at up to 0.4g/t Au.
(Stokes, 1993). **MCN’s 745 and 746** also contained alluvial gold which was mined between 1986 to 1990, and the MCN’s were subsequently relinquished. Northern Gold explored **MCN’s 4479-4481** in the late 1990’s as part of their exploration programme over EL 9463. Interpretation of Landsat imagery showed the area covered by Quaternary sediments with small windows of Burrell Creek sediments within MCN 4481. No fieldwork was completed. **MCN’s 4476-4478** are in the northern part of the NE block of EL24409 (SD521290V), and work consisted of soil sampling which returned anomalous values in the areas draining the old Zapopan mine. **ERL83** was within the NW block of EL24409 and hosted alluvial deposits within the ‘probable-possible’ category. Bulk samples returned 0.17-0.32g – LCM Au, with average grades throughout the deposits estimated at 0.3-0.6g-LCM Au. At that time, the deposit was uneconomic and the ground was relinquished.

### 5.1 Gold Mineralisation and Potential

The Brock’s Creek project area is the main production area where a number of gold mines are confined to magnetic ridges (Zapopan, Faded Lilly) as well as magnetically recessive valleys (Fountain Head and newly discovered Tally Ho) as shown in Figure 4. These features probably are related to compressive and dilatant zones in the regions. Similarly, Cosmo Howley group of mines are confined to the magnetic high. Figure 3 shows NW trending lineaments and gold anomalies derived from previous exploration programs. These anomalies are confined to a large eye-shaped magnetic recessive valley bounded by arcuate magnetic ridges in the north central part of the tenements (Figure 3). Another such large valley occurs in the southern part of the tenement which is bounded by NW trending magnetic ridge that contains Cosmo Howley group of mines. A significant gold anomaly of 18 ppb Au occurs within this valley (Figure 3).

The regional TMI image in the area shows a strong NW-SE trend (Figure 4), which follows the trend of the nearby Cosmo Howley line to the west. Structural interpretation by AGSO at 1:500,000 shows a WNW-ENE trending syncline-valley transecting the
Figure 4: Regional TMI image of the area with EL 24409
northern blocks of the tenement, in a similar orientation to the mineralisation along the Brock’s Creek line to the north. This study recognises the potential of NW-trending lineaments and reverse faulting, which could act as conduits for hydrothermal fluids for gold mineralisation within EL 24409. The NW-trending lineaments noted in regional geophysical data is a structural trend known to control gold mineralisation.

6.0 EXPLORATION DURING CURRENT TENURE

During most of the reporting period, the tenement remained under care and maintenance. However, under the instructions from Several Administrators, a technical review, tenement ranking and valuation was undertaken in order to prepare assets for sale. In June 2009, Crocodile Gold Australia announced to purchase all assets held by GBS Gold Australia (liquidated). After meeting all statutory and regulatory requirements, these assets included EL 24405 were transferred to new owner. Crocodile Gold Australia immediately commenced exploration, mining and processing activities in the region. Mining started from Brocks Creek underground and Chinese South (Extension) open pit; hauling ore to Union Reefs gold mill for treatment. Work is underway to re-commence mining and processing at Toms Gully gold project which is expected to come on-line in August 2010. So far, over $100.00 million has been spent of which approximately $15.0 million has been directed towards drilling in order to prove resource base, which is vital for mining and processing operations in the region.

A close proximity of EL 24409 to Zapopan (Brocks Creek) gold mine, favourable geological setting and geophysical signature require that potential of this tenement should be tested with dedicated exploration program. Particular area of interest is magnetically recessive eye-shaped structure bounded by magnetically highs (ridges) as show in Figure 4. This type of feature is associated with gold mineralisation at Fountain Head and Glencoe deposits. These areas are marked by significant Au anomalies (Figure 3) as shown by the previous exploration programs. In addition, project area also has potential for uranium and base metal mineralisation. Towards east, area of significant uranium mineralisation (Bajawah and Mees, 2009) has recently been discovered within EL 23431. Due to these characters, Crocodile Gold regards the tenement highly and intends to
explore it aggressively to find new areas of gold mineralisation to sustain its operations in the region.

- Reconnaissance field visit
- Technical review
- Report writing
- Administrative duties

This activity costed $9400.00 during the reporting period and breakdown is provided in Appendix 1.

7.0 PLANNED EXPLORATION FOR 2009-10
In 2010-11 reporting year, project area will be explored for gold, uranium and base metals mineralisation. For this purpose, area identified during this review will undergo soil/rock chip sampling along with geological mapping. If encouraging results received, some RAB/RC drilling may also take place. A minimum budget of $17000.00 is proposed for EL 24409 and details are given in Appendix 1.

8.0 REFERENCES