ANNUAL EXPLORATION REPORT ON

MLNs 281-284, 337-339, 369-370, 372-373

AuQuest Project Area

YEAR ENDING 31 DECEMBER 2009

Pine Creek SD5208 1:250,000
Noonamah 5172 1:100,000

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

CGA Report No: DA/TG/10-07

Zia U. Bajwah
March 2010
SUMMARY

The Tenement Group (MLNs 281-284, MLNs 337 – 339, MLNs 369-370, MLNs 372 – 373) is located some 110 kilometers south-east of Darwin. These tenements were granted from 1973 to 1976 respectively. On 25 July 2007, by virtue of an agreement, GBS Gold Australia Pty Ltd acquired all mining and exploration assets, located in the Toms Gully Region, including tenement group discussed in this report. Crocodile Gold Australia secured the project area along with other tenements after GBS Gold Australia went into voluntary administration.

Most of the project tenements fall in an area covered by the Koolpin Formation and surrounded by Gerowie Tuff. The Mount Bundy Granite intrudes the rock formation towards north. Within the project area, Quest 30 gold prospect is located which contains significant auriferous quartz vein system.

During most of the reporting period, the project area remained under voluntary administration. Under the instructions of Several Administrator, a technical review, tenement ranking and evaluation was undertaken in order to prepare assets for sale. JV partner, Rum Jungle uranium conducted Heli-VTEMP survey and rock chip sampling program.

Crocodile Gold regards the project area highly which will play an important role in sustained mining and processing operation in the near future. It is proposed that magnetic anomalies identified should be thoroughly checked, and project area should be mapped in detail. It should follow soil/rock sampling, and if warranted, then lead to Air Core or RC drilling program.
TABLE OF CONTENTS

SUMMARY ..............................................................................................................2
1.0 INTRODUCTION .................................................................................................4
2.0 TENEMENT DETAILS ............................................................................................4
3.0 LOCATION AND ACCESS ......................................................................................4
4.0 GEOLOGICAL SETTING .........................................................................................6
5.0 PREVIOUS EXPLORATION ACTIVITY .................................................................10
6.0 EXPLORATION year ending 31 December 2009. Error! Bookmark not defined. 15
7.0 PROPOSED EXPLORATION PROGRAM FOR ..................................................15
8.0 REFERENCES ......................................................................................................15

LIST OF FIGURES

Figure 1: Tenement Location Map
Figure 2: Geology of the Project Area
Figure 3: Heli-VTEM flight lines over magnetic image
Figure 4: TMI Image of the Project Area

LIST OF TABLES

Table 1: Tenements details
Table 2: Expenditure details for the tenements
1.0 INTRODUCTION
The tenement group is located about 8.5 km south of the Mt Bundy and comprises 11 tenements which were granted to Geopeko Ltd in the 1970’s, and later acquired by Renison Consolidated Mines Limited and Toms Gully Gold Mines Limited. Now under an agreement, this group of tenements and other exploration and mining assets has been acquired by Crocodile Gold Australia Pty Ltd.

2.0 TENEMENT DETAILS
The group of tenements was originally granted to Geopeko in the 1973 and underwent sporadic exploration. In 1990’s MIM/Carpentaria Gold Exploration Pty Ltd acquired the tenements in the area and began intensive exploration program in the area. In 1994 Carpentaria Gold sold the tenements to Kakadu Resources who explored the group for a few years and eventually selling them to Renison Consolidated Mines.

On 25 July 2007, by virtue of an agreement GBS Gold Australia acquired all mining and exploration assets including the tenement group discussed in this report. However, GBS Gold Australia went into voluntary administration on 15 September 2009, and all assets were placed under care and maintenance. Crocodile Gold Australia purchased these assets held by GBS Gold Australia (liquidated) in Northern Territory, and after meeting regulatory and statutory requirements secured the control of these assets on 6 November 2009.

3.0 LOCATION AND ACCESS
The tenement group is located about 110 km SE of Darwin and about 8.5 km SE of Toms Gully Gold mine (Figure 1). Access from Darwin is via the Arnhem Highway to the Rustlers Roost turn-off, then via the Rustlers Roost Mine road for 9 km, and along unsealed station tracks for further 9 km. The project area mainly contains the alluvial
Figure 1: Tenements Location Map
plains of the McKinlay River which makes access impassable during wet season. Within the tenements access is only possible by Four Wheel drive vehicles.

Table 1: Details of tenements

<table>
<thead>
<tr>
<th>Tenement No</th>
<th>Date of Grant</th>
<th>Expiry Date</th>
<th>Area (Hect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLN 281</td>
<td>29/09/1973</td>
<td>31/12/2013</td>
<td>16</td>
</tr>
<tr>
<td>MLN 282</td>
<td>29/09/1973</td>
<td>31/12/2013</td>
<td>16</td>
</tr>
<tr>
<td>MLN 283</td>
<td>29/09/1973</td>
<td>31/12/2013</td>
<td>16</td>
</tr>
<tr>
<td>MLN 284</td>
<td>29/09/1973</td>
<td>31/12/2013</td>
<td>16</td>
</tr>
<tr>
<td>MLN 337</td>
<td>28/03/1976</td>
<td>31/12/2016</td>
<td>15</td>
</tr>
<tr>
<td>MLN 338</td>
<td>28/03/1976</td>
<td>31/12/2016</td>
<td>15</td>
</tr>
<tr>
<td>MLN 339</td>
<td>28/03/1976</td>
<td>31/12/2016</td>
<td>15</td>
</tr>
<tr>
<td>MLN 369</td>
<td>28/07/1977</td>
<td>31/12/2017</td>
<td>15</td>
</tr>
<tr>
<td>MLN 370</td>
<td>28/07/1977</td>
<td>31/12/2017</td>
<td>15</td>
</tr>
<tr>
<td>MLN 372</td>
<td>28/07/1977</td>
<td>31/12/2017</td>
<td>15</td>
</tr>
<tr>
<td>MLN 373</td>
<td>28/07/1977</td>
<td>31/12/2017</td>
<td>15</td>
</tr>
</tbody>
</table>

4.0 GEOLOGICAL SETTING

Regional geology is outlined in many publications, notably Pietsch and Stuart-Smith., Stuart-Smith et al., (1984), and Needham et al., (1988). The tenement is within the Pine Creek Orogen, a folded sequence of Palaeoproterozoic pelitic and psammitic sediments, with interlayered cherty tuff units. Mafic sills of the Zamu Dolerite (~1.87Ga) intruded the lower formations of the South Alligator Group. During the Top End Orogeny (Nimbuwah Event ~1.87-1.85Ga) the sequence was tightly folded, faulted and pervasively altered with metamorphic grade averaging greenschist facies with phyllite in sheared zones.

The Mount Bundy Granite introduced a suite of fractionated calc-alkaline granitic batholiths into the sequence in the period ~1.80-1.78Ga. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet)
amphibolite facies, and created regionally extensive biotite and andalusite hornfels facies. Less deformed Middle and Late Proterozoic clastic rocks and volcanics have an unconformable relationship to the older sequences. Flat lying Palaeozoic and Mesozoic strata along with Cainozoic sediments and proto-laterite cementation overlie parts of the Pine Creek Orogen lithologies. Recent scree deposits sometimes with proto-laterite cement occupy the lower hill slopes while fluviatile sands, gravels and black soil deposits mask the river/creek flats areas.

Geology of the project area is shown in Figure 2. All most all of the tenements underlie the Koolpin Formation of the South Alligator Group, which is underlain by the rocks of the Mount Partridge Group. In turn rocks of the South Alligator overlie the Finniss River Group unconformably. This rock sequence has been intruded by the Mount Bundy Granite, causing contact aureole which generally contains gold mineralisation. A small part of MLN 337 covers the Mount Bundy Granite (Figure 2). Tertiary and Quaternary Soils and Gravel’s unconformably overlie all the lower lying portions of the tenement areas, generally referred to as “Black Soils Regions”. All of the Palaeoproterozoic sediments and volcanics in the Mount Bundy area were folded in a major deformation event dated around 1800 million years. The fold axes trend north-northeast, and generally plunging gently to the south with crosscutting magnetic features. A brief description of these rocks exposed in the project area and surroundings is given below.

**South Alligator Group**

The Koolpin Formation, Gerowie Tuff and the Mount Bonnie Formation represent the South Alligator Group. The rocks of the South Alligator Group are considered to be prospective for either large tonnage, low grade gold deposits (such as that at the nearby Rustler’s Roost gold mine) or small tonnage, high grade deposits.

**Koolpin Formation**

The Koolpin Formation comprises ferruginous siltstone and shale, which is commonly carbonaceous and pyritic. Chert bands and nodular horizons are common and lenses of ironstone occur occasionally, as haematitic breccias throughout the sequence into undisturbed quartz-veined siltstone and shale. Minor components of dolomite can also occur. The Koolpin Formation is one of the most prospective units in the Mount Bundey
Figure 2: Geology of the Project Area
Region for hosting gold mineralisation (West Koolpin, Taipan, BHS and North Koolpin Open Pits at Quest 29 are all within Koolpin sediments)

**Gerowie Tuff**
The Gerowie Tuff conformably overlies the Koolpin and has similar characteristics of siltstones and shales but is not as iron rich. Within the Mount Bundey Region it is dominated by graded beds of siliceous tuffaceous mudstones grading to greywacke and arenite, diagenetically altered, up to 600m thick, and generally poorly mineralised. The highly siliceous component of the tuffs and arenites make them resistant to erosion, and they tend to form areas of high relief.

**Mount Bonnie Formation**
The Mount Bonnie Formation conformable overlies the Gerowie Tuff and is dominated by a shallow marine sequence of interbedded and graded siltstone, chert and greywacke with occasional BIF’s. The unit can be up to 600m thick and is generally iron rich and may be siliceous in places. The Mount Bonnie Formation hosts the Rustler’s Roost deposit.

**Deformation and Regional Metamorphism**
Regional deformation with north-northeast folding plunging gently south occurred around 1800 My, based on a rubidium-strontium analysis, causing metamorphism to greenschist, and sometimes higher to amphibolite facies. This event also resulted in the intrusion of thin sills of Zamu Dolerite, and the post – tectonic emplacement of the Mount Bundey Granite and Mount Goyder Syenite is a comparable cogenetic pluton dated at 1790 + 110 My in the region. Structural deformation of the meta-sediments is complex.

The major folding episode resulted in tight folds whose axes plunge southwest. However within these major folds the more incompetent beds, i.e. carbonaceous shales, have been deformed into localised complex structures. The granitic emplacement has also influenced the fold structures as can be seen on the regional geological map. Metamorphism to greenschist facies through dynamic compression associated with intense folding is common. The granitic emplacement and the associated structural
deformation and generation of hydrothermal fluids are thought to have been responsible for most of the gold enrichment throughout the Pine Creek Orogen e.g. Cosmo Howley, Rustlers Roost, Toms Gully, Moline, Mt Todd and Quest 29 (Bajwah, 1994).

5.0 PREVIOUS EXPLORATION

Geological mapping was undertaken in 1983 and 1984 under the auspices of Bureau of Mineral Geology and Geophysics (Stuart-Smith et al. 19984). Geological setting of the area was established and lithologies with southern areas of the Pine Creek Orogen were correlated.

The earliest record of ground exploration conducted in the area is in the 1980’s when field investigations were carried out under the auspices of Kakadu Resources and Geopeko/Carpentaria Gold Pty Ltd. During this program, field mapping was carried out and areas of interest were sampled.

In 1990, Geopeko and Carpentaria Gold Pty Ltd join venture explored the project area for gold and base metal mineralisation (Kettlewell and Simpson, 1993). Work was concentrated on MLNs 337, 339 and adjoining tenements. Here, a program of soil and rock chip sampling and ground magnetics was undertaken. It led to delineation of gold and base metal anomalies. In the same year, MLN 337 was explored where 10 RC holes were drilled for 480 m.

In 1990-91, Geopeko located gold mineralisation associated with lenses of pegmatite within MLN 339. Six costeans and one diamond hole was drilled to test the mineralisation. Reconnaissance rock sampling and mapping confirmed the southern end of the line of costeans to have the greatest potential. Eleven RC holes totalling 622 m were drilled. During this program 394 samples were retrieved for assay. Gold grades as high as 41.0 g/t over 1 metre width was encountered.

A Joint Venture of Carpentaria Gold and Geopeko carried out a program of soil geochemistry, costeaneing and drilling in the eastern group of tenements in 1992-93.
Earlier Carpentaria Gold drilled seven RC holes for 356 m into the lead target. A total of 201 samples were taken and analysed for Au, As, Ag, Cu, Pb and Zn. In drill hole QPB4 grade as high as 1.0 g/t was encountered.

535 Soil samples were collected at 25 m x 100 m and assaying of samples showed gold peak value of 721 ppb with background values of 10 ppb. In the southern-most part of the area (MLN 337) an open ended 40 m x 150 m gold anomaly trends parallel to grid. During the same program, four costeans were dug at 50 m intervals across the gold geochemical anomaly. A total of 242 samples were collected from these costeans. Twelve sections returned gold grades over 0.5 g/t. Highest intersection of gold mineralisation of 160 g/t was returned from BHS2 (Medd, 1993).

During 1994, a campaign of geological mapping and drilling was carried out to test the gold mineralisation at Quest 29 prospect (Smith, 1994). Geological mapping was carried out on part of the area on 50m x 50m grid and in places it was closed up 25m x 25m. Mapping outlined the dolerite and anticline in the Koolpin Formation. Diamond drilling was followed by two phases of RC drilling. This program identified extensive low grade of gold resources.

6.0 WORK COMPLETED FOR PERIOD ENDED ON 31 DECEMBER 2009

During most of the reporting period, GBS Gold Australia remained under voluntary administration. Under the instructions of Several Administrators, tenements within the project area were reviewed, ranked and evaluated in order to prepare assets for sale. Crocodile Gold Australia purchased all assets held by GBS Gold Australia (liquidated) located in the Northern Territory and after meeting regulatory and statutory requirements, assets were transferred to Crocodile Gold Australia on 6 November 2009. Since then, new owner has embarked on an ambitious program of mining, processing and exploration in the region.
During the reporting period, a high resolution Heli-VTEMP survey was flown by JV partner – Rum Jungle Uranium Limited. The survey comprised 33 lines flown north-south at 200m line spacing for a total of 131 line-km (Figure 3). Profiles for each flight line were received in late July 2009. GDF formatted data have already been lodged as part of EL 24288 annual report (Bajwah, 2010). Profiles were analysed and some priority conductors within the project area resulted from the VTEM survey. When conductors were tested elsewhere around Mount Bundy, thick graphitic siltstone was intersected in the drill holes which belong to the Koolpin Formation, explaining the conductive anomaly; however, the holes were generally barren of mineralisation.

Rock chip sampling program undertaken in 2009-10, reported as part of EL 24288 annual report (Bajwah, 2010), highlighted gold potential of the project area. The best sample was Q09028 which returned values of 2.34 g/t Au, 25 g/t Ag, 3500 ppm As, 1100 ppm Cu and 8.95% Pb. Sample Q 09020 returned values of 125 g/t Ag and 5.57% Pb.
This project represents an important group of tenements for the Toms Gully gold mining and processing operation in the long run, for having a significant resource at Quest 30 and quest 29 which are present in the adjacent tenement (MLN 371).

A technical review of the area shows that geological setting is fertile for localisation of small to medium size gold deposit. The Koolpin Formation together with the Mount Bonnie and the Gerowie Tuff with ‘anticlinal structures’ are the most significant setting for hosting gold mineralisation in the region. Figure 4 shows TMI image of the project.

**Figure 4: TMI Image of the Project Area**
area which is marked by pronounced magnetic anomalies/ridges, particularly areas covered by MLNs 281-284. These strong magnetic ridges are ideal locations for hosting gold and base metal mineralisation in the Pine Creek Orogen. In addition, subtle magnetic anomalies covered by MLN 337 and other tenements in the project area could also contain significant gold mineralisation.

Other activities during the reporting period included tenement management, report writing and a reconnaissance visit. This exploration activity costed $10450.00 and Details are given in Table 2 below.

Table 2: Expenditure details for the tenements

<table>
<thead>
<tr>
<th>Tenement No</th>
<th>Expenditure ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLN 281</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 282</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 283</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 284</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 337</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 338</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 339</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 369</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 370</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 372</td>
<td>950.00</td>
</tr>
<tr>
<td>MLN 373</td>
<td>950.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10450.00</strong></td>
</tr>
</tbody>
</table>
7.0 PROPOSED EXPLORATION PROGRAM FOR PERIOD ENDING ON 31 DECEMBER 2010

Crocodile Gold regards the project area highly and will play an important in sustained mining and processing operation in the near future. In-depth technical review of the project area has established significant potential for gold mineralisation. It is proposed that magnetic anomalies identified should be thoroughly checked, and project area mapped in detail. It should follow soil/rock sampling, and if warranted, lead to Air Core or RC drilling program. A minimum budget of $8000.00 is proposed for this program.

8.0 REFERENCES


