BRIDGING REPORT

On EXPLORATION LICENCE 24150

Mt Bundy Project

25 JANUARY 2010 TO 15 DECEMBER 2010

Title Holder: Crocodile Gold Australia Pty Ltd

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1 EXECUTIVE SUMMARY

Exploration License (EL) 24150 is situated about 80 km east of Darwin and 28 km northwest of the Toms Gully Gold Mine. It is an important tenement within Crocodile Gold Australia's portfolio. The EL is part of tenement package which the company acquired by purchasing liquidated assets of GBS Gold Australia. It was granted on 25 January 2005 for a period of 6 years. The tenement comprises 22 blocks and covers 47.7 km².

EL 24150 is located within the Pine Creek Orogen, which has been interpreted as an intra-cratonic basin lying on an Archaean basement, and containing a 14 km thick sequence of Palaeoproterozoic sediments, accompanied by lesser volcanics, granitic plutons and dolerite intrusions. Predominant rocks exposed in the project area belong to the Wildman Siltstone, Koolpin Formation and Burrell Creek Formation. In places sills of the Zamu Dolerite may also be present. Much of the bed rock geology is obscured by thick black soil cover.

A review of previous work, with the use of mapping and field observations, TMI images and other geophysical data has identified a deep-seated structure which could be an important feature for gold mineralisation. A number of uranium anomalies have also been identified from radiometric data which require further field testing.

There was no exploration activities complete during this January to December reporting period.

During the 2011 reporting period, exploration activities for EL24150 will include ground-truthing of the project area with the aim of investigating the gold and uranium anomalies identified from geophysical data. This may lead to a program of soil & rock chip sampling and will include detailed mapping of selected areas. If results are encouraging, an RC drilling program may be conducted.
2 INTRODUCTION

Exploration Licence (EL) 24150 is situated about 80 km east of Darwin and 28 km northwest of the Toms Gully Gold Mine. The EL is a part of tenement package which Crocodile Gold Australia acquired by purchasing assets held by GBS Gold Australia Pty Ltd (liquidated) in 2009.

Crocodile Gold Australia applied for group technical reporting status on the group of tenements comprising the Mt Bundy project area. This was approved by Department of Resources in December 2010 and the Mt Bundy project area was given the group reporting number GR-184/11. This report has been written to bridge the gap between the previous annual report ending 25 January 2010 and the new group Technical Reporting Anniversary of 16 December 2010.

This report documents the exploration activity completed between 25 January 2010 and 15 December 2010.

3 LOCATION AND ACCESS

The tenement is located on the southern side of the Arnhem Highway (Figure 1) about 80 km from Darwin. EL 24150 can be reached by Arnhem Highway East of Darwin and then by station tracks. It mainly covers the flood plains of Adelaide River which makes the access challenging during the wet season. Access to the north of the tenement is via the Arnhem Highway, along station fence-lines, whereas eastern areas of the tenement can be accessed by bush tracks leading from Leaning Tree Lagoon. The southern parts of the licence were accessed from a fence-line track extending north from Adelaide River station. These tracks provide good access for 4WD vehicles during the dry season, however these tracks become impassable after heavy rain, and therefore no access during the wet season.

4 TENEMENT DETAILS

This Tenement was granted to Renison Consolidated Mines in January 2005 for a period of 6 years. The tenement comprises 22 blocks covering 47.7 km2. Underlying cadastre belongs to Sunhardy Pty Ltd (Crown Lease in Perpetuity No. 143).

In July 2007, Renison Consolidated Mines sold all exploration and mining tenements in the Toms Gully area, including EL 24150 to GBS Gold Australia. On 15 September 2008, GBS Gold Australia went into voluntary administration and all assets were liquidated. Crocodile Gold Australia purchased all assets including EL 24150 in November 2009.
Figure 1: EL24150 Tenement Location
5 GEOLOGICAL SETTING

5.1 REGIONAL GEOLOGY

EL 24150 is located within the Pine Creek Orogen, which has been interpreted as an intracratonic basin lying on an Archaean basement, and containing a 14 km thick sequence of Palaeoproterozoic sediments, accompanied by lesser volcanics, granitic plutons and dolerite intrusions. The northern part of the project area contains the oldest sediments such as the Mount Partridge Group that is unconformably overlain by the South Alligator Group and comprises most of the tenement areas. The southern and western portion of the Project area is comprised of Burrell Creek Formation (Figure 2), which conformably overlies the South Alligator Group. 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 plunge gently to the south.

Figure 2: EL24150 Regional Geology
5.2 Local Geology

The Mount Partridge Group is represented by the Wildman Siltstone, which is interpreted to be up to 1500m thick. In the Mount Bundy Region the Wildman Siltstone consists of laminated and banded shale, carbonaceous and often pyritic siltstone inter-bedded with undifferentiated volcanics in up to 100m interbeds, minor dolomitic sediments may also be present. The sediments near the granite intrusion may also be hornfelsed. The Wildman Siltstone is interpreted to be prospective for large tonnage, low-grade gold deposits and small tonnage, high-grade deposits. Wildman Siltstone hosts the Tom’s Gully gold deposit.

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.

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 is one of the most prospective units in the Mount Bundy Region for hosting mineralisation (West Koolpin, Taipan, BHS and North Koolpin Open Pits at Quest 29 area all within Koolpin sediments).

The Gerowie Tuff conformably overlies the Koolpin and has similar characteristics of siltstones and shales but is not as iron rich. Within the Mount Bundy 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.

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.

Conformably overlying the Mount Bonnie Formation is the Burrell Creek Formation interpreted as a flysch sequence of fine to coarse marine sediments and appears to be part of continuous sedimentation process. Due to the lack of marker horizons and poor exposure the width of the unit is unknown but is thought to be >1000m. This Formation is considered prospective for large low-grade gold deposits as typified by the Batman deposit of Mount Todd. The potential also exists for small high-grade deposits similar to Possum and Happy Valley with John Shields GIGIAC Theory (Gold in Greywacke in Anticlinal Crests). Also high-grade deposits such as Bandicoot, Marrakai and the Ringwood line which all lie on a major deep-seated magnetic trend (Hall, 2007).

The Zamu Dolerite occurs as small bodies that are poorly exposed, as a result of its weathering, some rubble boulders may be present at surface. It consists of altered quartz dolerite and gabbro and is generally narrow and broadly conformable to bedding.
as thin sills. The Zamu Dolerite is the only known suite of mafic intrusives that were emplaced prior to regional metamorphism and deformation. The Zamu Dolerite appears to have a controlling influence on the mineralisation at Quest 29 within the Koolpin sediments but this is not fully understood at this stage. Mineralisation is also hosted within this unit at Quest 29 and also at Chinese Howley.

5.3 DEFORMATION & 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 Bundy 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 Geosyncline. E.g. Cosmo Howley, Rustlers Roost, Toms Gully, Moline, Mt Todd and Quest 29.
6 PREVIOUS EXPLORATION

The earliest known record of exploration in this area of the Mount Bundy region was undertaken during the 1970’s by Geopeko and then by CRA Exploration. Geopeko used costeasing, rock chipping, soil sampling, drilling and core sampling, while CRA mainly used rock chipping.

During the early 1980’s Aquitaine Australian Minerals/ Pan D’Or Mining and Jimberlana Mining occupied EL1653, as well as Optimal Mining and ACA Howe Australia. Euralba Mining and Burmine (EL3298) completed gridding, minor drilling and rock chip sampling, while Inco Australia and Dominion Gold Operations held the tenements for EL 2240 and EL 6781 respectively.

During the late 1980’s to the early 1990’s Carpentaria Gold held the tenements for EL5290, in which they took rock chip, soil, and stream sediments samples as a means of searching for gold deposits. Normandy Exploration held the tenement EL8019, and conducted stream sediment sampling. Euralba Mining/Burmine and Carpentaria Gold (EL5941) undertook rock chip, stream sediment sampling, costeasing and drilling.

During the 1990’s Normandy Exploration (EL8019) and Poseidon Exploration held the tenements EL7583 and EL7568, collecting stream sediment samples, with the prior drilling some RAB holes and minor percussion drilling with diamond tails. Soil samples were taken within EL9154 by Northern Gold.

Literature reviews of previous work has been carried out and entered into GIS databases using all available Geodata and field observations, Geology maps, 1:20,000 colour aerial photography, Landsat imagery, reprocessed aeromagnetic and radiometric imagery, and detailed 1:20,000 topographic maps. Reprocessed aeromagnetic imagery displays a prominent NNW-SSE trending magnetic linear feature passing through the centre of the tenement just to the west and parallel with Marrakai Creek. Another NW-SE magnetic low linear enters the tenement further to the north from beneath the folded syncline. These structures are interpreted to be dolerites probably within major basement faults; they may be acting as conduits for gold mineralising fluids.

A recent technical review has identified the uranium and gold potential of the project area. An optional agreement with Rum Jungle Uranium Pty Ltd was also signed which gave the exclusive right of uranium exploration to Rum Jungle Uranium Pty Ltd.
7 EXPLORATION ACTIVITY 25 JANUARY 2010 TO 15 DECEMBER 2010

There was no further exploration work completed during the reporting period.

8 FORWARD PROGRAM YEAR ENDING 15 DECEMBER 2011

This tenement now forms part of the Mt Bundy Exploration project for both exploration activities and for group reporting. Exploration activities planned for this project for the coming year will include:

- Desk top review of all exploration activities conducted by Joint Venture partner Rum Jungle Resources, particularly looking at exploration for Gold and Base Metals
- Detailed review of all historic and recent geophysical data for the project
- Thorough review of all geochemical data for the project area, to be used in future target generation
- RC and diamond drilling with subsequent Mineral Resource estimation of advanced projects (such as Quest 29) in the Mt Bundy project area
- Review of targets using Satellite imagery in conjunction with regional geology mapping
- Field mapping of targets highlighted from these reviews
- RAB or RC drilling or highest ranked targets

Through these activities Crocodile Gold will target mainly Gold and Base Metal targets in the Mt Bundy Project area to add to the existing Mineral Resources at Mt Bundy (formally Rustlers Roost) and Tom’s Gully. By identifying additional deposits in this project area the economic viability of this project area can be assured.

During the 2011 reporting period, exploration activities for EL24150 will include ground-truthing of the project area with the aim of investigating the gold and uranium anomalies identified from geophysical data (Figure 3). This may lead to a program of soil & rock chip sampling and will include detailed mapping of selected areas. If results are encouraging, an RC drilling program may be conducted.

A minimum budget of $20,000 is proposed.
Figure 3: EL24150 anomalous targets
REFERENCES


NTDME, 1999. Rum Jungle Magnetics Survey

NTDME, 2000. Mary River Magnetics Survey

