

# BRIDGING REPORT EXPLORATION LICENCE 24018

Burnside Project – Hayes Creek East

10 August 2010 to 15 January 2011

### Distribution:-

- 1. DOR Darwin, NT
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Report Number: EL24018 BR2010

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#### 1 **EXECUTIVE SUMMARY**

EL 24018 is a significant tenement within Crocodile Gold's portfolio and is located about 140 km SE of Darwin, Northern Territory. It was granted on 10 August 2004 and expires on 9 August 2012. The tenement comprises seven sub-blocks that cover approximately 2,331 hectares (23.37km2). The EL was originally granted to subsidiaries of GBS Gold Australia (Territory Goldfields NL and Buffalo Creek Mines NL in equal shares). GBS Gold Australia went into voluntary administration on 15 September 2008. Crocodile Gold Australia acquired EL 24018 and other assets held by GBS Gold Australia (liquidated) on 6 November 2009.

The tenement largely covers a tract of the McMinns Bluff Granite that has been unconformably overlain by Mesoproterozoic Tolmer Group sandstone, conglomeratic sandstone and subordinate dolomite. The more resistant Tolmer Group has formed an arcuate escarpment that faces north on the south side of the valley. Cretaceous sandstone overlie the granite to the east. To the north, rocks of the South Alligator and Finniss River groups are also present. An important feature is the presence of Hayes Creek Fault which transacts the area from NE to SW.

During the reporting period, Thundelarra Resources conducted reconnaissance mapping, SEM analysis and completed 614m of RC drilling.

During the next reporting period, Crocodile Gold will undertake regional mapping and conduct review of all geophysical and geochemical data for EL24018. Thundelarra Resources plans to drill another three RC hole over the Golden Eye prospect.

#### 2 INTRODUCTION

EL 24018 is a strategic landholding which is located south of Hays Creek, and was applied for to cover ground that fell vacant south of the Golden Dyke Dome. The project appears to have potential for gold, uranium and base metal mineralisation.

Crocodile Gold Australia applied for group technical reporting status on the group of tenements comprising the Burnside project area. This was approved by Department of Resources in December 2010 and the Burnside project area was given the group reporting number GR-185/11. This report has been written to bridge the gap between the previous annual report ending 9 August 2010 and the new group Technical Reporting Anniversary of 15 January 2011.

In this report, exploration activity conducted between 10 August 2010 and 15 January 2011 is documented.

#### 3 LOCATION AND ACCESS

EL 24018 is situated 140km SSE of Darwin NT and 4km east of Hayes Creek Inn on the Stuart Highway which passes diagonally through the centre of the tenement, from NW to SE. The junction of the Stuart Highway with the Mt Bonnie and the Grove Hill Pub road falls within the centre of the tenement. The tenement also covers the headwaters of the Margaret River. McMinns Bluff, formed from a scarp of Tolmer Group sandstone, lies south of the Stuart Highway.

The tenement falls on the Pine Creek 1:250,000 sheet and on the Burrundie 1:50,000 sheet. The tenement also falls within the Douglas and Mary River West Pastoral Leases.

The location of the EL24018 is shown in Figure 1.

#### 4 TENEMENT DETAILS

EL 24018 was granted on 10 August 2004 and expires on 9 August 2012. It comprises seven sub-blocks that cover approximately 2,331 hectares (23.37km²). The EL was originally granted to Territory Goldfields NL and Buffalo Creek Mines NL in equal shares; these were wholly owned subsidiaries of GBS Gold Australia Pty Ltd. On 15 September 2008, GBS Gold Australia went into voluntary administration and EL 24018 along with other 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 statuary and regulatory requirements, these assets including EL 24018 were transferred to new owner who commenced mining, processing and exploration activities in the region.

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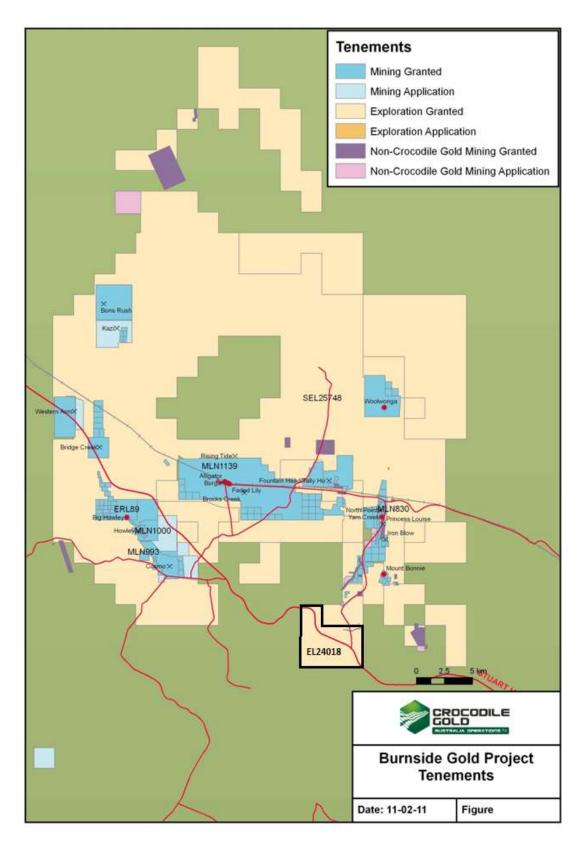


Figure 1: EL24018 Tenement Location

#### 5 GEOLOGICAL SETTING

#### 5.1 REGIONAL GEOLOGY

EL 24018 is situated within the Pine Creek Orogen, a tightly folded sequence of Palaeoproterozoic rocks, 10 to 14 km in thickness, laid down on a rifted granitic Archaean basement during the interval ~2.2-1.87Ga. The sequence is dominated by pelitic and psammitic (continental shelf shallow marine) sediments with minor interlayered tuffaceous units. Pre-orogenic mafic sills of the Zamu Dolerite event (~1.87Ga) intruded the lower formations of the South Alligator Group and part of the Mt Partridge Group.

During the Top End Orogeny (1.87-1.85Ga) the sequence was tightly folded and pervasively altered with metamorphic grade averaging greenschist facies to phyllite. The Cullen intrusive event introduced a suite of fractionated calc-alkaline granitic batholiths into the sequence in the period ~1.84-1.75Ga. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet) amphibolite facies, and created more extensive biotite and cordierite and andalusite hornfels facies.

Open-folded Meso- and Neoproterozoic clastic rocks and volcanics have an unconformable relationship to the older sequences. Flat lying Cambro-Ordovician sandstone and limestone of the Daly River Basin along with hill-cappings of Mesozoic arenites overlie the basement. Cainozoic sediments and proto-laterite overlie parts of the Pine Creek Orogen lithologies. Recent scree deposits occupy the lower hill slopes while fluviatile sands, gravels and red and black soil deposits mask the river flood plain areas.

Figure 2 illustrates the regional geology of the Burnside project.

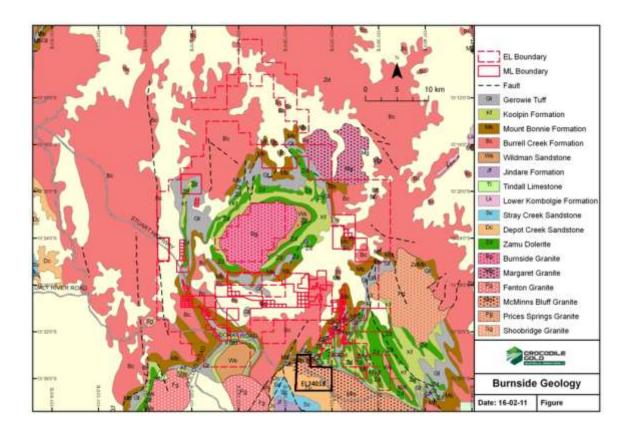


Figure 2: EL23536 Regional Geology

#### 5.2 LOCAL GEOLOGY

EL24018 largely covers a tract of the McMinns Bluff Granite that has been unconformably overlain by Mesoproterozoic Tolmer Group sandstone, conglomeratic sandstone and minor dolomite. The granite body is porphyritic pink and green and is exposed on the flanks of the valley of the Margaret River headwaters that in this region flow east-west. The more resistant Tolmer Group has formed an arcuate escarpment that faces north on the south side of the valley. Table-tops of Cretaceous sandstone overlie the granite to the east.

To the north, the granite has been sheared, close to east-west contact with the Palaeoproterozoic meta-sediments of the Pine Creek Orogen. The South Alligator Group rocks are represented by Gerowie Tuff and Mt Bonnie Formation. The Burrell Creek Formation of the Finniss River Group is also present at the granite meta-sediment contact. Just north of the contact the rocks have been folded into a broad domal structure called the Golden Dyke Dome.

The most northerly block of the tenement contains the contact zone of the granite with the Mt Bonnie Formation and Gerowie Tuff. In addition, part of the Hayes Creek Fault crosses the block from NE to SW.

#### 6 PREVIOUS EXPLORATION

The Golden Dyke region has long been associated with rich alluvial and lode gold deposits. The relatively thin colluvial cover was ideal for prospecting and for extracting alluvial gold at the surface. Early last century several well known quartz reefs and lode deposits were developed including Golden Dyke, Langleys, Davies No.1, Margaret diggings, Yam Creek and Mt Bonnie.

A historic soil sampling program has been recorded from the northernmost block. Three BLEG sample lines with an east-west orientation cross the whole block that straddles the Hayes Creek Fault system and the sheared contact with McMinn's Bluff Granite. None of the samples gave above background levels of gold, being less than 7ppb.

The Burnside Joint Venture acquired EL24018 and from August 2004 to 2008 conducted geological mapping and a remote sensing study based upon satellite SPOT imagery and supported by AGSO geological mapping. Work was minimal during 2005 to 2006 due to the acquisition of the Burnside Joint Venture by GBS Gold Australia Pty Ltd.

During 2006-07, an in-depth review of the tenement was undertaken which identified significant potential of the project area. This involved geochemical and geophysical assessment of the area together with reconnaissance visits. On 15 September 2008, GBS Gold Australia was declared under voluntary administration and all assets including EL 24018 were placed under care and maintenance. On the 6 November 2009, Crocodile Gold Australia acquired the tenement along with other assets from GBS Gold Australia and commenced exploration, mining and processing operations in the region. After securing the tenement, Crocodile Gold Australia commenced technical review, tenement and evaluation of the project area.

Initially, EL 24018 did not show much potential, however, high resolution geophysical survey flown in 2009, revealed a number of radiometric and magnetic anomalies in the project area and in the surrounding region. A drilling campaign in the surrounding region identified significant uranium mineralisation along the Hays Creek Fault which included prospects like Thunderball (EL 23431), Corkscrew and Bella Rose. EL 24018 is located towards SW of the Thunderball uranium prospect, and is intersected by Hays Creek Fault which appears to have control over uranium mineralisation.

A rock chip sample collected from the radiometric anomaly assayed 650 ppm uranium which encouraged drilling of anomalies in the project area. This anomaly was found to be associated with a zone of ferruginisation and quartz breccia which is interpreted to be the northern margin of the Hayes Creek Fault Zone. Two RC holes for a total of 254m were drilled and 18 composite (4 m spear) samples were retrieved. These samples were assayed for a total of 28 elements including gold, uranium, base metals and REE. Gold concentrations were low, ranging from 2 to 15 ppb with an average of 6 ppb. Similarly, uranium was also low with a value of 4.5 to 17 ppb with an average of 8 ppm. Base metals are generally low whereas some RREs have elevated values particularly La and Nd. Other activities included ground checking of anomalies and local scale mapping.

#### 7 EXPLORATION ACTIVITY 10 AUGUST 2010 TO 15 JANUARY 2011

During the reporting period, JV partner Thundelarra Resources completed reconnaissance mapping and conducted 614m of RC drilling. One RC hole TPCRC079 was drilled from EL24018 into the Corkscrew prospect on an adjacent tenement. Seven RC holes (TPCRC107 to TPCRC113) was drilled over the Golden Eye/Thundercloud uranium prospect within EL24018.

Uranium mineralisation was intercepted in TPCRC109 which includes 2m@3480ppmU within a 12m wide zone of elevated Au-Pt-Pd values between 24 to 36m (0.28ppmAu, 0.32ppmPt and 0.38ppmPd). This hole intercepted a narrow sub-vertical high-grade vein trending north/north-west.

Scanning electron microscopic (SEM) analysis was completed on two samples collected from the high grade vein.

Reconnaissance mapping to the south of the prospect identified extensive outcrops of metapelites with porphyroblastic textures present towards the McMinns Bluff Granite contact zone. Nodular hematitic blocks are also found over a large area. These metapelites display similar characteristics to those described around the Thunderbolt and Thunderball deposits.

A total of \$57,899 was spent on EL24018 during the reporting period.

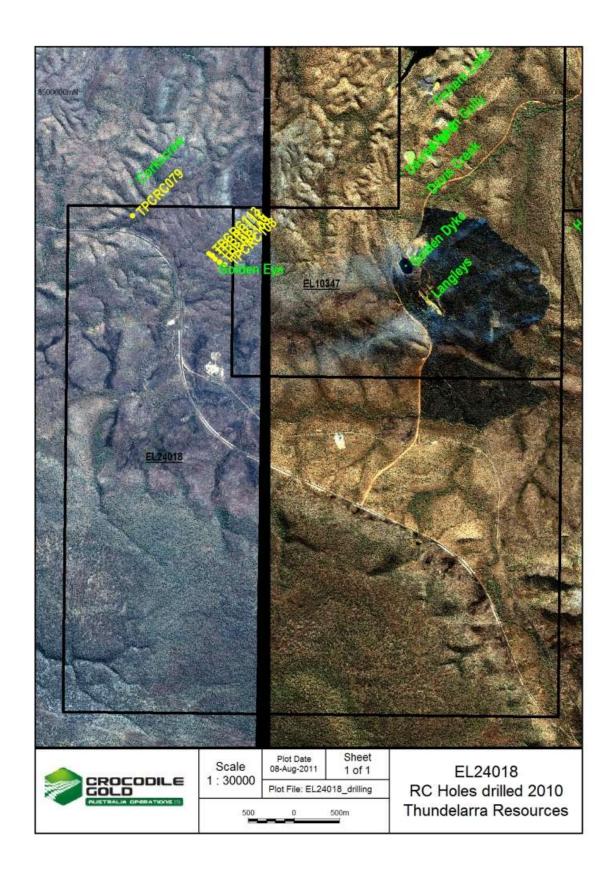


Figure 3: EL24018 RC holes drilled by Thundelarra Resources 2010

#### 8 FORWARD PROGRAM YEAR ENDING 15 JANUARY 2012

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

- Crocodile Gold is currently looking at a large scale regional exploration push during the 2011 and 2012 seasons, including a helicopter-borne VTEM survey, region geochemical sampling and mapping, this will include areas of the Burnside project.
- Desktop review of all exploration activities conducted by Joint Venture partner Thundelarra Exploration, particularly looking at exploration for gold and base metals.
- Detailed review of all historic and recent geophysical data for the project, with the aim of generating green field targets.
- Thorough review of all geochemical data for the project area, to be used in future target generation.
- Review of targets using satellite imagery in conjunction with regional geological mapping and the latest geophysical data
- Field mapping of targets highlighted from these reviews
- RAB and RC drilling of highest ranked targets
- A review of all historic deposits noted in the MoDAT database

Through these activities Crocodile Gold will target mainly gold and base metal targets in the Burnside Project area to add to existing mineral resources. By identifying additional deposits, the economic viability of this project area can be assured.

Crocodile Gold will undertake regional mapping and conduct review of all geophysical and geochemical data.

Thundelarra Resources plans to drill another three RC hole over the Golden Eye prospect.

A minimum budget of \$15,000 has been proposed for EL24018.

#### 9 **REFERENCES**

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