ANNUAL EXPLORATION REPORT

EL24405

FOR PERIOD ENDING 5 MAY 2010

‘YAM CREEK WEST’

BURNSIDE PROJECT NT

Pine Creek SD5208 1:250,000
Pine Creek 5270 1:100,000
McKinlay River 5271 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/10-17

Zia U. Bajwah
June 2010
SUMMARY

EL 24405 covers a strategic landholding, located about 170 km SE of Darwin in the central part of the Pine Creek Orogen. The region is known for containing world-class gold, uranium and base metal deposits, and has produced these commodities in the past. It is still a significant producer in uranium and gold. The tenement was granted to Buffalo Creek Mines Pty Ltd (50%) and Territory Goldfields NL (50%) which was part of the Burnside JV. In April 2006, GBS Gold Australia Pty Ltd acquired 100% of the Burnside JV. On 15 September 2008 GBS Gold Australia went into voluntary administration and Crocodile Gold Australia purchased all assets held by previous owner in the Northern Territory on 6 November 2009.

The tenement lies west of the Princess Louise gold deposit and Iron Blow base metal deposit near Yam Creek. There is poor outcrop within the tenement, but mapping by AGSO and NTGS shows the area being underlain by Burrell Creek Formation of the Finniss River Group. The strike of the Burrell Creek sediments within the tenement is unclear due to lack of outcrop, but may trend to the northeast. TMI imagery shows a strong NW component that may be NW-trending fracture sets that could control mineralisation.

During most of the reporting period, the tenement remained under administration. However, under the instructions from Several Administrators, a technical review, tenement ranking and valuation was undertaken. In addition, the area was flown by high resolution geophysical survey. According to this review, the tenement covers the area which appears to be hydrothermal fluid conduits that have been derived from Burnside Granite. Similar type of fluids conduits may have been responsible for gold mineralisation at Fountain Head and newly discovered Tally Ho deposits.

In 2010-11 reporting year, project area will be explored for gold, uranium and base metals mineralisation. For this purpose, targets 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

SUMMARY 2
1.0 INTRODUCTION 4
2.0 LOCATION AND ACCESS 4
3.0 TENEMENT STATUS OWNERSHIP 4
4.0 GEOLOGY 6
5.0 PREVIOUS EXPLORATION 6
6.0 EXPLORATION DURING CURRENT TENURE 9
7.0 PLANNED EXPLORATION FOR 2010-11 10
8.0 REFERENCES 11

List of Figures
Figure 1: Tenement Location Map
Figure 2: Geology of the project area
Figure 3: TMI image of the project area

List of Appendix
Appendix 1: Expenditure Statement for EL 24405
1.0 INTRODUCTION
EL 24405 is located in the central part of the resource-rich Pine Creek Orogen which has produced significant quantities of gold, uranium and base metals in the past. Recent discovery of uranium mineralisation south of the project area further highlights the potential of the EL. In this report, exploration activity conducted during the reporting period is presented.

2.0 LOCATION AND ACCESS
EL 24405 is located west of the ‘Priscilla line’ of mineralisation, which contains company’s Princess Louise and North Point deposits (Figure 1). The tenement is located approximately 170km SE of Darwin via road. Access is via the Stuart Highway, then left (north) along Fountainhead Road for 23km, then along NE along Grove Hill Road, then south towards the tenement.

3.0 TENEMENT STATUS AND OWNERSHIP
EL 24405 consists of 2 blocks (4.09sq km) although the northern block is truncated to less than a half block size by the pre-existing EL 23536. The tenement was granted on 6 May 2005 and expires on 5 May 2011.

The tenement was granted to the Burnside JV, which comprised 50% Northern Gold (through subsidiary Territory Goldfields) and 50% Harmony Gold (through subsidiary Buffalo Creek Mines). 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 had 100% of the Burnside Project as of 1st April 2006. On 15 September 2008, GBS Gold Australia went into voluntary administration and all 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 all statutory and regulatory requirements, these assets including EL 24405 were transferred to new owner.

Underlying cadastre is NT Portion 2683 (Pastoral Lease 903) held by Branir Pty Ltd.
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 Geosyncline, a folded sequence of Lower Proterozoic pelitic and psammitic sediments, with interlayered cherty tuff units. Mafic sills of the Zamu Dolerite (~1.87Ga) intruded lower formations of the South Alligator Group.

The tenement lies west of the Princess Louise gold deposit and Iron Blow base metal deposit near Yam Creek. There is poor outcrop within the tenement, but mapping by AGSO and NTGS shows the area being underlain by Burrell Creek Formation (Figure 2) of the Finniss River Group. The strike of the Burrell Creek sediments within the tenement is unclear due to lack of outcrop, but may trend to the northeast. TMI imagery shows a strong NW component that may be NW-trending fracture sets that could control mineralisation. On a regional scale, it appears that the stratigraphy in this area has an arcuate flexure which may be important for mineralisation. In addition, the area is bracketed to the east by the major Hayes Creek Fault system. It appears likely that the area of interest may be cut by splay faults off this important structure. There are no recorded MODAT occurrences within the tenement.

5.0 PREVIOUS EXPLORATION
AP1681 covered a large area west of EL24405 and only covered a small wedge within EL24405. The area was explored for Cu, Pb, Zn and Mo mineralisation with ‘no economic mineralisation found’.

Similarly, AP1959 also covered a very large area to the north and across EL24405. Exploration focussed on prospects outside of EL24405, such as Woolwonga, Lady
Figure 2: Geology of the project area
Josephine, Mount Ringwood, Grove Hill etc. Central Pacific Minerals explored AP1959 in JV with Magellan Petroleum in the late 1960’s and early 1970’s, focussing on Cu, Pb, Zn, with lesser focus on U, Au, Ag, Co, Fe and Mn. No specific work is mentioned within EL24405.

EL 615 is also a large tenement area, covering all of the Golden Dyke/Yam Creek area, plus areas to the north, and south towards Pine Creek. The only work reported concentrated on Mount Bonnie and Grove Hill (outside the tenement area).

EL 4415 covers the small ‘sliver block’ of EL24405, plus another 24 blocks to the north. Ken Day Pty Ltd explored the alluvial/colluvial gold potential around the old Yam Creek / Margaret River diggings, with hardrock gold mineralisation as a secondary target. Work included:

- 1:25,000 photogeology map (that showed EL24405 covered by colluvium and alluvium)
- 1:66,666 interpretative geological map, which showed an interpreted arcuate syncline (arc curved to east) within EL24405
- aeromagnetic survey on 250m spacings on EW lines covering the tenement (conducted by Geoterrex in 1985)
- excavating pits to assess the alluvials at North Point to Margaret Plains
- pan silt samples and rock chip samples (location on schematic diagrams; but probably outside of EL24405)
- geoflite remote sensing survey (outside EL24405 area)

Dominion bought the property in 1989, and work conducted was outside the EL24405 area.

EL7539 covered the whole of EL24405, plus areas covered by MCN’s at Yam Creek/Princess Louise to the east. EL7539 was only held for one year before being incorporated as part of SEL7895 (along with EL 7478). No results were reported during the EL7539 tenure. Work done during SEL7895 by Dominion (and then Northern Gold) included soil sampling of the Priscilla line, vacuum drilling west of Grove Hill and scout RC drilling.

During 2006-07, a desktop study was undertaken (Elliston, 2007) which identified mineral potential of the area. The geophysical interpretation suggested that the tenement sits between two hydrothermal fluid conduits which are sourced from the Burnside
Figure 3: TMI image of the project area
Granite. One of these conduits is the same fluid path that is responsible for the formation of the Fountain Head and the newly discovered Tally Ho deposits (Figure 3)

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 recommence 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.

Technical review carried out during the reporting period supported the contention of favourable structural site for gold mineralisation present in the project area. According to this interpretation, the tenement covers the area which appears to be hydrothermal fluid conduits that have been derived from the Burnside Granite. Similar type of fluids conduits may have been responsible for gold mineralisation at Fountain Head and newly discovered Tally Ho deposits. During 2009, high resolution aerial magnetic and radiometric survey of the project area was also obtained and that has already been provided to Dept of Resources (Bajwah and Mees 2009). Initial interpretation supports the contention that area is suitable for gold, uranium and base metals mineralisation. Furthermore, discovery of uranium mineralisation (Thunderball) highlights the potential for uranium mineralisation.
Other exploration activities conducted are:

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

This activity costed $11900.00 and details are given in Appendix 1.

7.0 PLANNED EXPLORATION FOR 2010-11

Crocodile Gold Australia regards the tenement highly due to its strategic location and mineral potential for gold, uranium and base metals mineralisation.

During 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, then RAB/RC drilling may also take place. A minimum budget of $12500.00 is proposed for EL 24405 and details are given in Appendix 1.

8 REFERENCES


