ANNUAL EXPLORATION REPORT ON SEL 25748

“Burnside”

YEAR ENDING 30 SEPTEMBER 2010

Pine Creek SD5208 1:250,000
Pine Creek 5270 1:100,000
McKinlay River 5271 1:100,000
Batchelor 5171 1:100,000
Tippery 5170 1:100,000

Distribution:-

1. DRDPIFR Darwin
2. Crocodile Gold Australia Humpty Doo
3. Burnside Operations P/L Brocks Creek

Report Number: PC/BJV/10-39

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November 2010
SUMMARY

SEL (Substitute Exploration Licence) 25748 covers strategic land-holding which is located in the central part of the Burnside project area. It replaced SEL 24352 and vacant ground covered by expired EL 9080. SEL contains extension to known gold mineralisation and also hosts significant number of uranium prospects.

In the project area, gold deposits are hosted by the Brocks Creek-Zapopan shear zone, the Hayes Creek Fault system, and the Pine Creek Shear Zone. The project area contains rocks of the Burrell Creek Formation, Koolpin Formation, Gerowie Tuff, Mount Bonnie Formation and Zamu Dolerite. This package is intruded by the Palaeoproterozoic Burnside and Margret Granites.

Previous owner, GBS Gold Australia was declared under receivership on 15 September 2008, and as a result of that all exploration and mining projects were placed under ‘Care and Maintenance’. After taking the control of SEL 25748, Crocodile Gold Australia commenced due diligence of the project area. Appraisal of previous exploration data and technical review of SEL 25748 ranked it very highly for having significant potential for gold, uranium and base metal mineralisation. In 2008-09, TEMPEST survey of the project area was flown by JV partner Thundelarra Exploration Pty Ltd in partnership with Geoscience Australia. It was expected that data will be processed and interpreted during the year under review. However due to other commitments of consultant geophysicist, the outcome of the exercise has been delayed. Crocodile Gold Australia has requested the vendor to process and interpret the TEMPEST data as soon as possible, so GDF-formatted data could be provided to the statutory authority.

In the next reporting period, targets/anomalies defined by the high resolution geophysical data will be field tested. A program of soil/rock chip sampling will be undertaken. It is expected that this program will identity additional targets for gold and uranium mineralisation, which may lead to RC/RAB drilling.
TABLE OF CONTENTS

SUMMARY
1.0 INTRODUCTION 4
2.0 TENEMENT DETAILS 4
3.0 LOCATION AND ACCESS 5
4.0 GEOLOGICAL SETTING 5
5.0 PREVIOUS EXPLORATION ACTIVITY 8
   5.1 Gold Mineralisation and Potential of the Project area 12
6.0 EXPLORATION PROGRAM YEAR ENDING 30 SEPTEMBER 2010 20
7.0 PROPOSED EXPLORATION FOR YEAR ENDING 30 SEPTEMBER 2011 21
8.0 REFERENCES 21

LIST OF FIGURES

Figure 1: SEL 25748 Tenement Location Map
Figure 2: SEL 25748 Geology
Figure 3: Anomalies of SEL 25748
Figure 4: TMI image of the project area

LIST OF APPENDICES

APPENDIX 1: Exploration Expenditure for Mineral tenement SEL 25748
1.0 INTRODUCTION

SEL 25748 is a strategic land-holding which is located about 150 km SE of Darwin, NT. This report covers the status of the tenement during the year ended 30 September 2010. The tenement envelopes several gold fields and has the best potential in locating new areas of gold, uranium and base metal mineralisation.

2.0 TENEMENT DETAILS

SEL 25748 was applied for to cover SEL 24352 and vacant ground by expired EL 9080 and was granted on 1 October 2007 to Buffalo Creek Mines (50%) and Territory Goldfields NL (50%). It has been granted for four years and will expire on 30 September 2011. SEL comprises 197 blocks totaling around 642.5 km\(^2\). GBS Gold Australia Pty Ltd acquired 100% control of the tenement by a friendly take over of tenement holding entities in 2005 and it became the part of the Burnside Joint venture controlled by Burnside Operations Pty Ltd. GBS Gold Australia underwent voluntary receivership on 15 September 2008 and all assets were liquidated. In April 2009, Crocodile Gold Australia announced to purchase all assets including SEL 25748. After meeting all statutory and regulatory requirements, Crocodile Gold Australia took over the control of all assets on 6 November 2009.

Underlying cadastre is dominantly by Pepetual Pastoral Lease No. 1111 Ban Ban Springs (held by Ban Ban Springs Station Pty Ltd), which covers just over 100 blocks, north of the railway, and most of the eastern side of the tenement. To the west PPL 1183 (Ringwood) held by Donald Aaron White covers approximately 26 blocks, and PPL 903 (Branir Pty Ltd, previously Tovehead) covers approximately 47 blocks. The NT Land Corporation covers approximately 4 blocks north and between the Brocks Creek and Fountainhead railway sidings. Crown Lease 1905 (railway corridor) held by Austral Asia Railway Corporation truncates the western blocks, and some of the southeastern blocks. One northern block (SD521073Y) is held by Markus Anthony Rathsmann (Pastoral Lease 1182).
3.0 LOCATION AND ACCESS

SEL 25748 is centered on the Burnside Granite, approximately 150km SE of Darwin. It spans an irregular area between -13°14’ / 131°17’ to -13°35’ / 131°36’, excluding the central portion of the Burnside Granite.

The Stuart Highway transgresses the central western portion of the Licence, and access to other parts of the Licence is possible via station tracks, the Old Stuart Highway, and Fountainhead Road (Figure 1). Access to some off road areas is restricted to four wheel drive vehicles, and may be limited or impassable during the wet season. Other areas include steep sided hills, black soil plains and rugged outcrop.

4.0 GEOLOGICAL SETTING

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. Mafic sills of the Zamu Dolerite (~1.87Ga) intruded lower formations of the South Alligator Group. In addition Palaeoproterozoic Burnside and Margret Granites intrude the package at various stratigraphic horizons. The Burnside Granite is the geometric centre of SEL 25748 and has had a substantial impact on local structure (Figure 2). The Burnside Granite is a part of north-east trending intrusions of the Cullen Batholith, linked at depth and imparted a thermal aureole and concentric outcrop pattern on the sequence and warped pre-existing fold structures. It also appears to have been a buttress against which late stage directed stresses from the SW and SE were refracted.

The largest gold deposits in the area are located on the Howley Anticline. This major fold hosts the Cosmopolitan Howley (Cosmo Deeps), the Chinese Howley group and Big Howley mines as well as smaller deposits at Bridge Creek, Western Arm, Ios and Santorini. Significant deposits are also hosted by the Brocks Creek-Zapopan shear zone, the Hayes Creek Fault system and the Pine Creek Tectonic corridor.
Figure 1: SEL 25748 Tenement Location Map
Figure 2: SEL 25748 Geology
Field observations indicate that gold deposits occur within or just outside the contact metamorphic haloes of the younger granites, such as the Burnside Granite. Regional structures, particularly anticlines associated with duplex thrust fault systems, appear to be favoured sites for mineralisation. On a regional scale, gold, and to some extent base metal mineralisation, has a heterogeneous distribution, and is concentrated in elongate zones associated with regional folds and shear zones, suggesting that the dominant control on mineralisation is structural rather than lithological.

5.0 PREVIOUS EXPLORATION ACTIVITY

In the following a cursory review of historic tenure in MapInfo shows 198 expired exploration licences within SEL25748 is presented. This does not include tenements that may have a centroid plotting outside SEL 24352 (so may not show on a MapInfo query), and does not include tenements (old MLN’s and MCN’s) that may be plotted on historic mining tenure maps. A complete review of historic tenure was not carried out. Instead, a selective review of previous work was carried out, with the focus on mineral occurrences and anomalous values/targets identified from report abstracts, and from previous work on SEL 9591 (Shaw, 2004). Figure 3 shows the locations of anomalies/targets specified by MGA Zone 52 coordinates from previous exploration. EL 4415 covered 25 blocks, of which 20 blocks cover a SE portion of SEL24352 (north of and surrounding the Princess Louise tenements). Geo-flite multispectral remote sensing in 1987 over EL 4415 was used to identify possible mineralized zones by detecting associated mineralization and weathering zones. Dominant fracture direction defined by the survey is NW-SE, parallel to the major structural orientation of the area. Some minor NE-SW trending cross fractures are also indicated. The ‘potentially mineralised’ target is in the general vicinity of the anticlinal fold axis interpreted from the aeromagnetic map, which has also been identified as a target by GBS (‘ST007’; MGA 52 773800E / 8514900N). The area just south of this (‘Site 6’ approx MGA52 774000E / 8514600N) was considered most prospective, with anomalous Au in all rock chip samples; visible Au in 3 soil samples, and ‘significant visible gold panned from the creek downslope from Site 6’. Dominion bought the property in 1989, and conducted;
• aerial photography (1:10,000 and 1:25,000 scale)
• Geophysical surveys (acquired Aerodata 1988 survey) on 200m spacings in EW direction
• Geological mapping at 1:10,000 scale
• 336 soil samples
• 21 rock chip samples
• 172 RAB holes totalling 3366m

Soil sampling showed 2 anomalous trends;

Western trend (with maximum 324ppb Au) west of the anticline axis and trends 125°M
Eastern trend (with maximum 132ppb Au) east of the anticline and trends 146°M. RAB drilling indicated the soil anomalies are colluvial without hard rock potential, but the results from RAB drilling across the inferred anticline axis (Site 6) were ‘patchy’.

EL 5490 – covered the whole of the Burnside Granite. Carpentaria Gold conducted stream sediment sampling and rock chip sampling of outcrops, with notable results of 1.05g/t Au and 3 samples of >1% Pb in the northern blocks (MGA52 760820E / 8522 520N). The anomalous area outlined in 1989 was repeat sampled in 1990, and confirmed an anomalous area to the north in an area mapped as folded Koolpin Fm close to the Burnside Granite. Originally, this was called the ‘Northern Gold anomaly’ by Carpentaria Gold. Channel sampling showed sporadic gold mineralisation hosted by variably developed quartz veins 0.2m – 3m wide, trending NE, hosted in Koolpin Formation and Zamu Dolerite. This area requires further work. Zapopan / Pegasus explored tenements held by Oceania Exploration and Mining on the northern boundary of SEL24352 in 1990. The Mount Bundey Project consisted of EL’s 5298, 5311, 5313, 5355, 5514 and MCN’s 3720 – 3736. A new technique ‘called ‘Stress Mapping Technology’ was used to identify areas of minimum stress (maximum dilation) by applying computer simulated stress analysis techniques to solid geology interpretations of lithology and structure. Within SEL 24352, a zone centred on MGA52 756500E / 8535600N (‘5th Goodall Stress Anomaly’) was identified as an anomalous area (lowest stress with high strain) which is possibly the southern extension of the Goodall anticline. EL 6187 – BP Australia started with literature research, including acquiring Landsat, regional geological data and aerial photography. Ground work included a rock chip sampling programme, and soil sampling. A siliceous ridge located approximately 2.2km north of the Mt Wells Burrundie Siding road returned a 60m section
averaging 0.45ppm Au, and a second section of 150m had an average assay of 0.15ppm. Soil samples had sporadic highs between 30ppb Au and 81ppb Au defining the silicified ridge tops. Dominion conducted infill soil sampling on EL7231 (below) and outlined the ‘Grove Hill anomaly’ (see below). EL 7231 - Dominion Gold Operations Pty. Ltd. completed a literature review of previous exploration, aerial photographic and airborne magnetic interpretation, a ground magnetic survey, geological mapping, gridding, soil sampling and vacuum drilling. Vacuum drilling focused on the SW corner of the tenement, with 45 vacuum holes completed. Maximum downhole value assayed was 8ppb Au. 926 soil samples on 400m x 100m spacings, with local infill on 200m x 50m spacings outlined two anomalies. Anomaly “Grove Hill” (MGA52: 779720E / 8507280N) follows the NS faulted contact between Mt Bonnie Formation with Zamu Dolerite (Wallace et. al., 1981). Anomaly “ST003” (MGA52: 780981E / 8512101N) has patchy anomalous soil values with maximum value of 43ppb Au. Structurally, the anomaly “ST003” is close to a flexure point of the Great Dyke on the Woolwonga trend, as noted on the regional TMI.

EL 7372 – consisted of one graticular block. Dominion carried out stream sediment sampling, with weakly anomalous values of 12ppb Au. Dominion followed this with 6 aircore holes for 15.5m, which gave a maximum value of 52ppb Au and anomalous As up to 200ppm (MGA52 772760E / 8522150N; Drillhole 93AAAC047). EL 7492 - Northern Gold N.L. completed regional soil sampling during the 1994 field season. A total of 95 samples, including duplicates, were collected along 5 soil lines. Highly anomalous results were returned, following the contact between the Zamu Dolerite and ironstone-rich Koolpin Formation, which has been mapped as an overturned anticline (Crick, 1980). This anomaly ‘Paqualin’ has returned patchy anomalous Au in soil sampling and RAB drilling, and is an exploration target. This area has also been referred to as the ‘F17’ anticline (by WMC on EL4066; now called ‘Santorini’).

EL 7561 was located north of Lady Josephine, and is NNW of the Yam Creek- Princess Louise-North Point trend. Dominion Gold (followed by Northern Gold) carried out soil sampling and vacuum drilling. Anomalous results are now covered by MCN tenure, and the area within SEL24352 is only weakly anomalous. EL 7601 was explored by Dominion in 1994-95. Exploration consisted of stream sediment, rock chip and soil sampling. Stream sediment sampling produced peak responses of 250 ppb Au, 350 ppm As, 358 ppm Cu, 20 ppm Pb and 58 ppm Zn. Soil sampling returned peak values of 193 ppb Au, 87 ppm Cu, 170 ppm As, 28 ppm Mo and
2,110 ppm Mn. The ‘Fenton’ soil anomaly (MGA52 760900E / 8498000N) which outlined quartz veining in Wildman Siltstone is considered low priority after follow-up vacuum drilling returned 0.2g/t Au.

EL 7623 was explored by Dominion in 1994. Dominion carried out a program of gridding, soil sampling, vacuum drilling and RAB drilling. Values to 180ppb Au were returned from the soil sampling, and 50ppb Au was returned from a vacuum hole. An isolated high value of 390ppb Au, from a RAB sample, was also recorded in the NE corner of the Licence. There is a NS-trending +20ppb Au anomaly (BT001; MGA52 777310E / 8503660N) following the mapped Mt Bonnie/Gerowie Tuff contact. EL 7701 covers only one SW block of SEL 24352 (SD521361W). An RC hole drilled by Dominion in 1995 targetted a regional magnetic bullseye anomaly with disappointing results, and only sediments logged. No other work appears to have been carried out. Mapped geology (Crick, 1980) shows faulted outcrops of Gerowie Tuff, Koolpin Formation and Zamu Dolerite. This area needs ground-checking and reconnaissance sampling, as well as closer checking of original drill results to fully assess its potential. EL 7738 covered over 9 blocks in the area between the Paqualin/Bridge Creek line of mineralisation, and the western side of the Burnside Granite. In 1995, Solomon Pacific Resources provided a re-evaluation and presentation of soil and rock chip results from the previous years work over EL 7738. Exploration completed by Northern Gold N.L. included digital data processing and interpretation.

A regional RAB drilling program and a reconnaissance soil sampling program were completed. RAB drilling consisted of 369 holes for 1,802m. Results returned coincident anomalous values up to 780 ppb Au and 1,300 ppm As. An examination of results show that anomalous RAB results (ie; >0.4g/t Au max value downhole) did not show a coincident anomaly with the soil sampling, which outlined anomalism on the eastern side of mapped Zamu Dolerite.

EL 7786 consisted of 20 blocks in an area NW of the Burnside Granite, covering mainly Burrell Creek Formation sediments. From 1992 – 1995 Northern Gold conducted reconnaissance stream sediment sampling, geological mapping, structural interpretations, soil sampling. In 1996 Northern Gold drilled 347 RAB holes to test anomalies from the previous years’ work. Drilling on the southern anomaly identified a coincident N-trending gold and arsenic mineralized zone, which is also in a structurally complex setting. The anomaly is not strong, but requires some investigation. EL 7866
covered 4 blocks east of Brittania mine, and east of the Burnside Granite. In 1993 Dominion completed 156 vacuum drillholes for 631m. Results were disappointing, with a maximum result of 5ppb Au.

EL 7769 consisted of 22 blocks covering the N-S Paqualin trend. Northern Gold N.L. conducted soil sampling programs, RAB drilling, aircore drilling, RC drilling, diamond drilling, GIS and remote sensing studies, and resource evaluations. Exploration programs were directed toward prospect areas originally identified by Western Mining Corporation (W.M.C.), prior to Northern Gold N.L.’s acquisition of the tenement area. These areas were renamed by Northern Gold N.L.

- Kazi Gold Prospect (W.M.C. Quest 150)
- Rhodes Gold Prospect (W.M.C. Quest 155)
- Santorini Gold Prospect (W.M.C. F17 Stockwork Prospect)
- Ithaca Gold Prospect (W.M.C. 9000 North Prospect)

Bons Rush prospect was also within EL 7769, but is now covered by ML23617 (granted 15th June 2006). Rhodes Prospect is held under MLN’s 414 – 418. The Inferred Resource at Kazi is 676,000t @ 2.9g/t Au for 63,200oz (McKenzie et al. 2005).

EL 7926 covered less than one block on the eastern side of the Burnside Granite, on the southern boundary of the Fountainhead tenements. The Chinese conducted alluvial mining at Klondyke, which is in the central part of the block. Dominion completed soil sampling (39 samples) and vacuum drilling 29 holes for 101m). Best results of 150ppb Au came from the soil sampling, and 57ppb Au, 280ppb As and 91ppm Cu came from the vacuum drilling. The maximum vacuum result (at 5m depth) coincided with the anomalous soil sample values at MGA52 772330E / 8508560N. This may be part of a NW trend identified from a stronger soil anomaly at BT004 (MGA52 772910E / 8507910N).

EL 8003 covered 8 blocks of Zamu Dolerite and Koolpin Formation sediments on the eastern side of the Burnside Granite, approximately 6km NW of Woolwonga. It is within 2km of the mapped Burnside Granite boundary. Work by Dominion included 318 soil samples, 33 rock chip samples, 10 BLEG stream sediment samples, 51 aircore holes and 3 RC holes. Two soil anomalies were identified; one was downgraded after aircore drilling; the other (‘Ellison Anomaly’) is a 600m x 100m soil anomaly of +50ppb Au at MGA52 771260E / 8520940N, with noted Bi mineralisation (in Zamu Dolerite) is still an
exploration target that requires further work. **EL 8049** comprised 4 blocks on the western boundary of the Burnside Granite, comprising mapped outcrops of Zamu Dolerite in contact with iron-rich and siltstonerich facies of Koolpin Formation (Crick, 1980). Dominion collected 155 soil samples returning a maximum value of 45ppb Au, with patchy anomalism noted in the ironrich Koolpin Formation in the SW corner of the Licence. Follow-up vacuum drilling yielded a maximum result of 11ppb Au. **EL 8053** consisted of 5 blocks north of the Burnside Granite, covering Mt Bonnie, Gerowie Tuff sediments and Zamu Dolerite. A strong NW-trending soil anomaly was outlined in the area between the Burnside Granite to the southwest, and the Margaret Granite to the east. Soil sampling returned values to 1200ppb Au (in NGNL database; needs verification), with two anomalies; one within Gerowie Tuff at **MGA52 768900E / 8527 510N (McCallum 1)**; and the other following a quartz-veined Zamu Dolerite contact with Gerowie Tuff at **MGA52 769600E / 8528080N (McCallum 2)**. Aircore/vacuum drilling gave a best result of 0.28g/t Au at 769180E / 8527 550N. RC drilling gave 5 holes (out of 33 holes) which had intercepts >1g/t Au, with 4 holes coincident with the McCallum 2 anomaly. The McCallum 2 anomaly remains an exploration target requiring further drilling, and is part of an anomalous trend that was identified in EL24351 further north. Regional mapping (Crick, 1980) interpreted this area to have close-spaced anticlinal structures due to compression between Margaret and Burnside Granites. Ground-checking and mapping required to determine the prospect-scale structures in the area.

**EL 8082** covered 2 blocks immediately south of the Cosmo Howley mine. Mapped geology (Crick 1980) shows strata younging to the west, with Wildman Siltstone within the eastern block, and sequences of Koolpin Formation, Gerowie Tuff and Mt Bonnie Formation sediments mapped to the west. There is also Zamu Dolerite mapped in contact with both Wildman Siltstone and Koolpin Formation to the south. Soil sampling was completed over EL 8082. A total of 340 samples were collected and analysed for Au, As and base metals. The program produced two highly anomalous zones, with values up to 520 ppb. One zone appears to be the SW extension of the Liberator prospect (‘Liberator Extended; MGA52 758100E / 8500 500N). The other zone (‘**EL 8082** MGA52 756730E / 8499730N) snakes roughly NS through Koolpin and Mt Bonnie sediments. An infill soil sampling program resulted in the collection of 414 samples that reconfirmed the anomalies, returning gold values up to 1,650 ppb and arsenic values up to 860 ppm. No drilling was found from the initial review of data. **EL 8128** consisted of 2
blocks immediately east of the Cosmo Howley mine, with one block covering ERL95. Northern Gold N.L. completed a scout RC drill program to locate the source of the Au soil anomaly, highlighted by previous soil sampling, on ERL 95. A total of 11 scout RC drill holes were drilled. The best intersections returned were 3m @ 23.67 g/t Au from 20m in AC11 and 8m @ 3.41 g/t Au from 42m in AC06. Resource RC drilling consisted of a total of 35 infill resource holes drilled for a total of 2,048m. The best intercepts were 3m @ 2.44 g/t Au from 70m in LB24, 15m @ 1.60 g/t Au from 51m in LB07 and 2m @ 8.60 g/t Au from 27m in LB20 and 2m @ 2.28 g/t Au from 6m in LB35. The Liberator anomaly (MGA52 758200E / 8501 230N) is along strike from Cosmo Howley, and is an exploration target.

EL 8129 covered 7 blocks along a north-plunging syncline parallel and to the west of the Howley anticline. In the 1994/95 Northern Gold N.L. completed a soil sampling program. A total of 176 samples were collected and submitted for analysis of Au, As, Cu, Pb, Zn, and Ag. A 500m x 100m soil anomaly (at +40ppb Au) was defined over a Burrell Creek Formation sediments (‘Beacon Hill’). The Beacon Hill anomaly (MGA52 749750E / 8506600N) does not appear to have been drill-tested. Only 3 of the 9 blocks of EL 8139 are within SEL 24352; the other 6 blocks are within EL23516 (also GBS-controlled tenement). Mapped geology indicates a northtrending syncline within Burrell Creek Formation sediments in the centre of the tenement. Dominion noted a bullseye magnetic anomaly with a signature similar to Goodall at 760430E / 8532300N (MGA Zone 52). LAG sampling and RAB drilling by Dominion identified only weakly anomalous zones within the Burrell Creek sediments, with a maximum RAB value of 14ppb Au. EL 8444 comprised 3 EW blocks, NE of Fountainhead tenements, and directly north of the Princess Louise line of mineralisation in the Margaret River area. Exploration to date has been unsuccessful due to heavy clays and gravels from the Margaret River system. Only a few RAB, vacuum and aircore holes were completed by
Figure 3: Prospects and Anomalies of SEL 25748
Dominion in 1994.

Northern Gold explored **EL 8521** by carrying out a BLEG soil programme in 1996. A weak +5ppb Au anomaly was outlined (**EL 8521 anomaly; MGA52 748750E / 8522 350N**). They also completed 60 RAB drill holes for 623m. Ten samples had anomalous results, over 40 ppb Au).

**EL 8529** consisted of 5 blocks covering dominantly Gerowie Tuff and Mt Bonnie sediments north of the Burnside Granite (adjacent to Northern Gold’s EL7786). The regional soil sampling produced a northerly, trending Au and As anomaly with assay values to 63 ppb Au and 83 ppm As. This north-trending anomaly seems most developed to the west on EL7786, where it was tested by RC drilling, which returned values of <0.5g/t Au.

**EL 8550** (1 block) is now covered by MLN(A) 1152 as well as SEL24352, and covers the northern part of Mt Paqualin, which is mapped as an overturned anticline of Koolpin Fm sediments with Zamu Dolerite to the east. Soil sampling (LLFA) followed by RAB drilling defined a coincident Au and As anomaly along the length of the area drilled, with best results of 14m @ 1.17g/t Au from 5m, and 2m @ 1.38g/t Au from 3m (**EL 8550 Anomaly; MGA52 751550E / 8522 390N**). A further 26 RC drill holes were completed for 1,443m. Best results were returned from holes PQ17 and PQ18, recording 4m @ 3.41 g/t Au from 2m, 4m @ 3.72 g/t Au from 29m, and 4m @ 3.87 g/t Au from 43m.

**EL 8579** occupied 1 block east of Mt Bonnie tenements, on the eastern side of the Burnside Granite. A total of 120 soil samples were collected returning Au results ranging up to 250 ppb gold with a corresponding As value of 480 ppm (Anomaly “BT003” at **MGA52 777320E / 8501 420N**). The soil anomaly averages around 110ppb Au, and appears to be in an interpreted flexure position on an anticline, on a contact between Zamu Dolerite and Koolpin Formation sediments. **EL 8683** comprised 4 EW blocks immediately north of the Burnside Granite. Exploration consisted of soil sampling, vacuum and aircore drilling. The soil sampling comprised 174 samples, which were assayed for Au, As, Bi, Pb and Cu. Results of up to 58 ppb Au were returned in the SE of the tenement (soil sampling consisted of one line only). Anomaly ‘**EL 8683**’ (**MGA52 768000E / 8525150N**) requires further infill soil sampling and field checking. Mapped geology shows an interpreted contact between Zamu Dolerite and Gerowie Tuff. Metana Minerals conducted alluvial mining on
EL 8835, and Northern Gold completed geochemical sampling over EL4435 / EL 8835, with only patchy anomalism.

EL 8886 covered 3 blocks west of the Howley anticline, and east of the Shoobridge Fault, south of EL8129. A total of 103 RAB holes were completed for 333m. Anomalous Au and As values were returned over a 2,000m NW trending zone, with a maximum value of 1.14g/t Au in hole KH58. Further north along this trend is the ‘Beacon Hill’ anomaly (of EL 8129) and further south is the ‘Golden Wall’ soil anomaly (MGA52 750830E / 8503 320N); both of which do not appear to have been drill-tested. The Golden Wall soil anomaly is a +40ppb Au NW-trending anomaly over a 500m x 100m extent.

EL 8898 consisted of 2 blocks NW of Woolwonga, covering the NW extent of the Woolwonga trend (east of Burnside granite). Two northwest trending, low order, gold soil anomalies were identified by a soil sampling program, returning Au values up to 41 ppb. The soil anomaly is 300m – 500m on or near Koolpin Frm outcrop along the Woolwonga trend. Weakly anomalous values for As, Cu, Zn and Pb were also returned, with maximum values of 101 ppm As, 85 ppm Cu, 115 ppm Zn and 143 ppm Pb. Drilling by Dominion at ‘Scrapper’ anomaly (MGA52 773500E / 8518 350N) intersected a maximum value of 4.68g/t Au (in WN48), and is considered an exploration target needing further work.

EL 8927 covered 3 blocks; one block immediately south of the Rhodes tenements (along the Howley anticline), and 2 blocks further west. A regional soil sampling program for Au-As was completed comprising 319 samples. Results for both Au and As identified the area around the Howley Ridge as highly anomalous, with values up to 315 ppb Au and 240 ppm As. EL 9484 consisted of 15 blocks on the NW side of the Burnside Granite; covering most of the same area previously covered by EL7786. Best result from RAB drilling was 1m @ 2.24g/t Au. SEL 9591 was held by Northern Gold, and amalgamated 53 exploration licences. Work done under SEL9591 that is significant for SEL24352 includes;

a) Advancement of Kazi, Western Arm and Bridge Creek from prospect to Inferred Resource status; applications for MLN’s to cover Kazi and Western Arm; and preparation of a Public Environment Report (PER) to cover possible mining operations at these projects:

b) Further definition of anomalies at Bons Rush, Big Red Blob, Santorini East, Santorini South, 8550 East and Big Howley West by infill soil sampling

c) Rock chip sampling, mapping and trenching to define F16 prospect
d) RC drilling at Liberator anomaly

e) Geological mapping and geophysical surveys in various locations

f) Regional soil sampling targeting the extension of the Howley anticline

g) Several drilling campaigns (RAB, 2 lots of RC, diamond drilling) at Bons Rush, which intersected mineralisation and increased understanding of the geological controls at Bons Rush, with intercepts of 20m @ 3.02g/t Au from 44m. ML23617 now covers Bons Rush.

h) RAB drilling defined a 1400m x 500m N-trending bedrock Au-As anomaly at Quest Far South interpreted to be associated with a N-trending moderate magnetic anomaly

i) Targetting of exploration from remote sensing work; Midway Anomaly (Shaw 2004); this may be Dominion’s Fenton anomaly(?)

5.1 Gold Mineralisation and Potential of the Project area

An in-depth technical review of the SEL 25748 was undertaken in order to assess the mineral potential of the area. This review identified that SEL 25748 is the most significant asset GBS Gold has to advance the strategic goal of the company. It is mainly due to prospectivity of the tenement and close proximity to the Union Reefs mill for ore treatment.

SEL 25748 surrounds the most significant gold deposits and prospects in the region and underlies the most prospective geological setting to host gold mineralisation. The project area contains rocks of the Burrell Creek Formation, Koolpin Formation, Gerowie Tuff, Mount Bonnie Formation and Zamu Dolerite. This package is intruded by the Palaeoproterozoic Burnside Granite which is an I-type fractionated and oxidised pluton. This type of granite body in the region is known to have generated hydrothermal systems responsible for gold mineralisation in the Pine Creek Orogen (Bajwah 1994). Perhaps, the Burnside Granite is the only member of the Cullen Batholith which has provided over 1.0 g/t Au from rock samples assayed during exploration program (please see below). Figure 4 shows the TMI image of the Project area where it shows rotation of granite body during emplacement. During rotation, the granite body has imposed compressive and dilational stresses to the enclosing rocks, generating brittle as well as ductile deformation. These
Figure 4: TMI image of the project area
prepared structural sites are known to have a number of significant gold deposits/prospects in the region. However, much of the area is covered by a thick layer of Quaternary sediment.

A review of the previous exploration activities further highlights the gold potential of the area. A number of investigations have identified that NW-SE anticlinal structures are likely to host gold mineralisation. In addition, NE-SW trending cross fracture systems are also fertile to containing gold mineralisation. This observation is supported by the presence of wide spread gold anomalism in the area, identified during previous exploration programs.

Work done over the last a few years in the Burnside Project area shows that SEL 25748 and exploration tenements located in the south have good potential for uranium mineralisation. Recent discovery of uranium mineralisation in EL 23431 attest to this notion (Bajwah 2008). Much of the project area is located within two granite bodies and appears to be structurally complex. Uranium mineralisation discovered so far within EL 23431 (Thunderball prospect) appears to confine in a shear zone related to Hayes Creek Fault. Current thinking is that uranium mineralisation feeder is lying deeper in the earth crust and Hayes Creek Fault along with subsidiary faults allowed channeling of metaliferous fluids in the upper part of the geological horizon, where carbonaceous horizon helped uranium deposition. Similarly structurally complex horizons are significant feature within SEL 25748 where important uranium anomalies such as Anomaly 136, Ugly Sister and been identified (Bajwah and Mees, 2008). Dedicated exploration program can lead to identify areas of significant uranium mineralisation in the project area.

6.0  EXPLORATION YEAR ENDING 30 SEPTEMBER 2010

In the year under review, Crocodile Gold Australia took over the control of SEL 25748 and other assets held by GBS Gold Australia (liquidated), and commenced mining, processing and exploration activities in the region. So far, over 160 M have been spent on acquisition, mining, processing and exploration activities in the region.

After taking the control of SEL 25748, Crocodile Gold Australia commenced due diligence of the project area. Appraisal of previous exploration data and technical review of SEL 25748 ranked it very highly for having significant potential for gold, uranium and base metal mineralisation. In 2008-09, TEMPEST survey of the project area was flown by JV partner Thundelarra Exploration Pty Ltd in partnership with Geoscience Australia. It was expected that data will be processed and interpreted during the year under review.
However due to other commitments of consultant geophysicist, the outcome of the exercise has been delayed. Crocodile Gold Australia has requested the vendor to process and interpret the TEMPEST data as soon as possible, so GDF-formatted data could be provided to the statutory authority.

Other activities during the reporting period include ground truthing, report writing and tenement administration. This program costed $28670.00 and details are given in Appendix 1.

7.0 PROPOSED EXPLORATION PROGRAMME FOR YEAR ENDING 30 SEPTEMBER 2011

Appraisal of data has established significant mineral potential of the project area and, therefore, SEL 25748 is one of the important assets under company’s portfolio, which has significant potential for gold, uranium and base metals mineralisation. In the next reporting targets/anomalies defined by the high resolution geophysical data will be field tested. A program of soil/rock chip sampling will be undertaken. It is expected that this program will identity additional targets for gold and uranium mineralisation, which may lead to RC/RAB drilling. A minimum budget of $45000.00 is proposed for this program.

8.0 REFERENCES


Crick, I., 1980. Geology of the Batchelor Hayes Creek Region, BMR 1:100,000 Geological Special.


