

GBS GOLD AUSTRALIA PTY LTD

ANNUAL REPORT

ON

EXPLORATION LICENCE, EL 23172

AuQuest Project Area

Period Beginning 6 May 2008 To Period Ending 5 May 2009

Darwin: 1:250000 Noonamah: 1:100 000

Distribution:-

- 1. DPIFM Darwin NT
- 2. GBS Gold Australia Perth
- 3. Burnside Operations P/L Brocks Creek
- 4. Union Reefs, Pine Creek

Report Number: DA/TG/09-09

Zia U. Bajwah June 2009

SUMMARY

EL 23172 is located about 90 km east of Darwin and 8 km form Toms Gully Gold Mine. It was granted to Renison Consolidated Mines on 6 May 2003 for a period of 6 years. On 9 March 2009, it was renewed for another 2 years term and now will expire on 5 May 2011. On 25 July 2007, GBS Gold Australia Pty Ltd acquired all tenements and Toms Gully gold mine held by Renison Consolidated Mines NL, including EL 23172.

The tenement is situated in the north-western part the Pine Creek Orogen, which has been interpreted as an intra-cratonic basin lying on an Archaean basement. It comprises 14 km thick sequence of Palaeoproterozoic sediments, accompanied by lesser volcanics, granitic plutons and dolerite intrusions. The Northern portion of the project area contains the oldest sediment of the Mount Partridge Group that is unconformably overlain by the South Alligator Group. The southern portion of the Project area is comprised of Burrell Creek Formation, 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".

During the reporting period, a detailed technical review of the project area was undertaken, which identified gold and uranium potential of the EL. TMI image of the project area shows that it is characterised by the presence two deep seated structure, first is the NW trending probably fault which contains some gold prospects on its margin. The second feature is probably a doleritic dyke which also contains some gold occurrences. Although radiometric response is subdue due to thick recent alluvial cover but the project area still might have some potential for uranium mineralisation. In the following year, it is anticipated that selected areas will be mapped in detail, and a program of soil/rock chips sampling will be undertaken. This will lead to Air Core drilling campaign and samples collected will be assayed for gold, uranium and other related elements.

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1.0 INTRODUCTION

EL 23172 is a part of a tenement package which has been acquired by GBS Gold Australia Pty Ltd from Renison Consolidated Mines Limited in 2007. EL 23172 and other tenements in the package have been explored for gold and base meals. In this report, exploration activity carried out during 2007-08 is present.

2.0 LOCATION AND ACCESS

EL 23172 is located about 90 km east of Darwin (Figure 1) and 8 km form Toms Gully Gold Mine. The tenement is located within Darwin (1:250 000) and Noonamah (1: 100 000) sheets. Access to the northern part of the tenement is via the Marrakai Road; the central and southern area is via the Rustlers Roost/Bandicoot Mine track. Existing station tracks and fence lines provide good interior access to most of the license. Access to the southern sector is some what hampered by a major drainage line with standing water. This sector can be accessed via an east-west track from the McKinlay area during the dry season.

3.0 Tenement Details

This Tenement was applied for in 1999 and has been held up in Native Title for sometime. It was granted to Renison Consolidated Mines on 6 May 2003 for a period of 6 years. On 9 March 2009, it was renewed for another 2 years terms and now will expire on 5 May 2011. The tenement comprises 65 blocks covering 117 km² west of Tom's Gully Mine Site. Cadastre in the northern part of the tenement is held by Crown Lease in Perpetuity and PPL 143. On 25 July 2007, GBS Gold Australia Pty Ltd acquired all tenements and Toms Gully gold mine held by Renison Consolidated Mines NL including EL 23172 in the Toms Gully area, Northern Territory.

Figure 1: Tenement Location Map



4.0 **REGIONAL GEOLOGY**

EL 23172 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 Proterozoic sediments, accompanied by lesser volcanics, granitic plutons and dolerite intrusions. The Northern portions of the project area contain the oldest sediments of the Mount Partridge Group (Figure 2) that is unconformably overlain by the South Alligator Group. The southern portion of the Project area is comprised of the 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 Bundey 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.

4.1 The Mount Partridge Group

Wildman Siltstone

The Mount Partridge Group is represented by the Wildman Siltstone, which is interpreted to be up to 1500m thick. In the Mount Bundey 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.

4.2 The 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



Figure 2: Geology with soil/rock geochemistry of the project area

quartz-veined siltstone and shale. Minor components of dolomite can also occur. The Koolpin is one of the most prospective units in the Mount Bundey Region for hosting 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.

4.3 Finniss River Group

Burrell Creek Formation

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).

4.4 Intrusives

Zamu Dolerite

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.

Mount Bundey Granite & Mount Goyder Syenite

The sedimentary sequences and the Zamu Dolerite are intruded by the Proterozoic Mount Goyder Syenite and Mount Bundey Granite which form a co genetic complex which crops out over about an 80km area. This intrusion is believed to have been the heat and fluid source for the mineralisation, which occurs throughout the local region. Their mineralogy and geochemistry suggests they are both differentiated from a common magma, which intruded into the gently south plunging folded belt of sediments.

A thermal metamorphic overprint associated with the southern margin of the Mount Bundey Granite intrusive has resulted in the development of both cordierite and andalusite, and probably was the generator for the local gold mineralisation. Further to the south of the Mount Bundey and Mount Goyder intrusive is possibly a second deep-seated pluton as indicated by a roughly circular magnetic feature (Discussions with Williams Resources 1998).

4.5 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 Bundey Granite and Mount Goyder Syenite is a comparable cogenetic pluton dated at 1790 \pm 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.

5.0 PREVIOUS EXPLORATION

Very limited modern exploration has been completed within the tenement area. Geochemical data as it is found is being updated into GIS format work so far completed can be seen in Figure 2.

Current Tenement Holders in the Project Area include Northern Gold 1990 – present, Valdora – Rustlers Roost Mining - Williams Inc.- Valencia Ventures 1993 - present (now in Joint Venture and Renison Consolidated Mines NL 1997 – present.

During 2005-07 Renison Consolidated Mines NL undertook a reconnaissance exploration programme over accessible areas of EL 23172. It covers ground over one of the significant northwest trending basement structure, which has been dislocated by later deformation events. There appears to be a close association between these dislocated structures and gold mineralisation, as evidenced by the Bandicoot Mines and several other prospects to the northwest along the basement trend.

Previously, enhanced Landsat Thematic Mapper Imagery and 1:20 000 scale topographic maps were purchased to assist in office and field interpretation of the tenement. Existing geological maps at 1:50,000 scale and 1:250 000 scale were also used in interpretation of rock types and structural trends. The 1:50 000 scale Marrakai topographic sheet was also extensively consulted.

The area surrounding the Bandicoot Au Mine was the main target location for this year's field campaign, with 10 rock chip samples being collected, geological mapping and aerial photography interpretation also being conducted. A prominent drainage line with standing water prevented access to the southern sector.

The rock chip samples were collected from outcropping highly ferruginous quartz veins, with the highest Au value at 0.75ppm. Interpretation of TM Imagery indicates that the structural grain is NW-SE in the south east and swings around to be N-S in the north of the tenement. A significant topographic ridge of elevation 59m (aligned north-south) was visited in the northern sector, and several ferruginous quartz veins along its flank were sampled; however

Au values were 0.01ppm or less. This structural trend remains prospective, as the Merlin Station Dam, Marrakai and Stop 16 gold occurrences are also in alignment several kilometres to the south; to the north-east the trend curves around to become the Steve's Hill gold trend.

6.0 CURRENT EXPLORATION

In the reporting year ending on 5 May 2009, a detailed technical review of the project area was undertaken, which identified gold and uranium potential of the EL.

The bed rock in the project area is dominated by the Palaeoproterozoic Burrell Creek Formation, which has been deformed into NW-trending folds, offset by numerous faults. Further north-west, stratigraphic sequence has been intruded by the Mt Bundy Granite and Mt Goyder Syenite, where Toms Gully and various other gold prospects are located. A number of gold prospects are also located within the tenement and immediately east of EL 23172 (Figure 3), covered by third party tenements.

Figure 3 shows the TMI image of the project area which shows prominent deep-seated structures which intersect the stratigraphy. NW-trending deep-seated feature is probably a fault which has been intersected at a number of places, and contains a number of gold prospects, located on the margins. Another NNW-trending narrow feature is probably a doleritic dyke which intersects the fault at a steep angle and also shows presence of number of gold prospects which are associated with this dyke. It may be noted that project area is covered with a thick layer of recent alluvium which hampers direct access to the bed rock geology. Geophysical data have revealed concealed structures which will help to guide the exploration efforts better. Figure 3 also shows a number of subtle magnetic anomalies which may have subdue response due to alluvial cover, and could be important gold targets.

Geological setting is also fertile for the localisation of small to medium size uranium deposit. EL 23172 is located in the vicinity of world-class Alligator River Uranium Field which contains uranium deposits such as Ranger, Jabiluka and Koongarra. Further north-east, Archaean Woolner Granite is overlain by Palaeoproterozoic strata with possible unconformity, and that is a typical feature of unconformity-related uranium deposits in the Orogen.



Figure 3: TMI image of the project area

Figure 4 shows the radiometric image of the of the project area which appears to be flat and shows no significant uranium anomalies. Again the problem may be due to thick alluvial cover which might have subdued any radiometric response. It may also be noted that much of the project area is covered by the concealed Burrell Creek which contains only small size quart-vein uranium deposits. In general magnetic and radiometric data have shown that subsurface geology is fertile for gold and to some extent uranium mineralisation.

During the reporting year other exploration activities included:

- Data base compilation
- Reconnaissance visit
- Tenement administration
- Report writing

This exploration program costed \$14370.00 and details are given in Appendix 1.

7.0 PROPOSED EXPLORATION PROGRAM YEAR ENDING 5 MAY 2010

A detailed technical review of the project area has shown that EL 23172 is prospective for gold and uranium mineralisation. However, due to recent alluvial cover, access to the bed rock geology is limited. This requires a comprehensive drilling campaign to gain access to the bed rock geology. In the following year, it is anticipated that selected areas will be mapped in detail, and a program of soil/rock chips sampling will be undertaken. This will lead to Air Core drilling campaign and samples collected will be assayed for gold, uranium and other related elements. This program is costed at least \$31000.00 for 2009/10 reporting year.





8.0 **REFERENCES**

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