GBS GOLD AUSTRALIA PTY LTD

ANNUAL REPORT ON
EXPLORATION LICENCE, EL 24150
AuQuest Project
For Period Ending 24 January 2008
DARWIN: 250 000
Noonamah: 100 000

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

GBS Report Number: DA/TG/08-01

Zia U. Bajwah
March 2008
SUMMARY

Exploration Licence (EL) is located about 80 km east of Darwin and 28 km northwest of the Toms Gully Gold Mine. The EL is part of tenement package which GBS Gold Australia Pty Ltd has acquired form the Renison Consolidated Mines Limited in 2007. It was granted on 25 January 2005 for a period of 6 years. The tenement comprises 22 blocks and covers 47.7km².

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.

In the reporting period, a technical review of the available data was undertaken. The tenement appears to be prospective for gold and uranium mineralisation. Geological setting of the area is ideal for medium size gold deposit, where prospective lithologies of the Wildman Siltstone, Koolpin Formation and Burrell Creek Formation are present. These formations have been folded in north-westerly trending folds which are characteristic feature of gold mineralised settings in the Pine Creek Orogen. Presence of northwest trending deep-seated fault structure lined with dolerite points toward possible conduit/source for mineralising fluid. In 2007, a high resolution magnetic, radiometric and EM was flown over the project area, however, data have not processed. In the next reporting period, geophysical data will be processed and interpreted which will help to select targets for gold, uranium and base metal mineralisation.
1.0 INTRODUCTION

Exploration Licence (EL) is located about 80 km east of Darwin and 28 km northwest of the Toms Gully Gold Mine. The EL is part of tenement package which GBS Gold Australia Pty Ltd acquired from the Renison Consolidated Mines Limited in 2007. It is expected that the EL will play a main role for the discovery of gold and uranium mineralisation during exploration programs.

2.0 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 fencelines, 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 fenceline 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 is possible throughout the wet season.

3.0 TENEMENT DETAILS

This Tenement was applied for in 1999 and has been held up in Native Title until recently. Eventually, it was granted to Renison Consolidated Mines in January 2005 for a period of 6 years. The tenement comprises 22 blocks covering 47.7km\(^2\). Underlying cadastre belongs to Sunhardy Pty Ltd (Crown Lease in Perpetuity No. 143).

In July 2007, by virtue of an agreement between GBS Gold Australia and Renison Consolidated Mines, the former acquired all exploration and mining tenements in the Toms Gully area including EL 24150. This tenement package is in the process of being registered in the name of GBS Gold Australia. During this transferring period, GBS Gold
Figure 1: Tenement Location Map
Australia also has the obligation of statutory reporting on these tenements. EL 24150 is also under an optional agreement between GBS Gold Australia Pty Ltd and Rum Jungle Pty Ltd which allows the later to explore for uranium mineralisation.

4.0 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 Bundey 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.

4.1 The Mount Partridge Group

The 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 interbedded with undifferentiated volcanics 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. The Wildman Siltstone hosts the Tom’s Gully gold deposit.
Figure 2: Geological Setting of the Project area
4.2 The South Alligator Group
The Koolpin Formation, Gerowie Tuff and 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
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 be present. The Koolpin Formation 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. It is 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
The Mount Bonnie Formation conformably 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. This formation is not exposed in the project area.
4.3 Finniss River Group

The 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.

4.4 INTRUSIVES

Zamu Dolerite
The Zamu Dolerite occurs as small bodies that are poorly exposed, as a result of its weathering, and in places, 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 Palaeoproterozoic Mount Goyder Syenite and Mount Bundey Granite, which form a co genetic complex cropping out over about an 80km² area. These intrusions are believed to have been the source for the mineralisation, which occurs throughout the local region (Bajwah, 1994). 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 responsible for the local gold mineralisation. Further to the south of the Mount Bundey and Mount Goyder Syenite 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 + 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 Orogen e.g. Cosmo Howley, Rustlers Roost, Toms Gully, Moline, Mt Todd and Quest 29 (Bajwah, 1994).

5.0 PREVIOUS EXPLORATION
The earliest known record of exploration in this area of the Mount Bundey region was undertaken during the 1970’s by Geopeko and then by CRA Exploration. Geopeko used costeaning, 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, costeening 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.

Current Tenement Holders in the Project area include Northern Gold 1990-present, Valdora -Rustler’s Roost Mining –Williams Inc. now called Valencia Ventures 1993-present, and Renison Consolidated Mines NL 1997-present. This work is currently being compiled into GIS format for target generation and to prevent repetition with follow up work.

During 2005-06 reporting period, literature reviews of previous work were carried out and entered into GIS databases. Interpretation of all available Geodata was carried out concurrently with field activities; Geology maps, 1:20,000 colour aerial photography, Landsat imagery, reprocessed aeromagnetic and radiometric imagery, and detailed 1:20,000 topographic maps were all extensively consulted.

Reprocessed aeromagnetic imagery displays a prominent NNW-SSE trending magnetic linear feature passing through the centre of the tenement (Figure 3), 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 to be channeled into overlying structures.
Figure 3: Regional Geology and Magnetics
Reconnaissance rockchip sampling was confined to an outcropping brecciated quartz vein in the south east corner, and the Banded iron formation on low rises east of Denny’s Hill. The brecciated quartz vein returned a value of 0.05 ppm Au and 0.07 ppm Au on the repeat assay. The Banded iron with laminated chert returned 0.03 ppm Au.

The two samples were analysed for Au by 50 gram Fire Assay.

Rockchip assay results and locations are displayed below.

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6.0 EXPLORATION PROGRAM FOR PERIOD ENDING 24 JANUARY 2008

Toms Gully Tenement package including EL 24150 is in the process of being transferred to GBS Gold Australia. Meantime, GBS Gold Australia has embarked on the technical review of the EL 24150 together with other tenements in the package. Technical review of the available data suggests that the tenement is very prospective for gold and uranium mineralisation. Geological setting of the area is ideal for medium size gold deposit, where prospective lithologies of the Wildman Siltstone, Koolpin Formation and Burrell Creek Formation are present. These formations have been folded in north-westerly trending folds which are characteristic feature of gold mineralised settings in the Pine Creek Orogen. Presence of northwest trending deep-seated fault structure lined with dolerite points toward possible conduit/source for mineralising fluid.

Geological setting is also fertile for the localisation of small to medium size uranium deposit. EL 24150 is located in the vicinity of world-class uranium deposits such as Ranger, Jabiluka and Koongarra. Further north, Archaean Woolner Granite is overlain by
Palaeoproterozoic strata with possible unconformity, which is a typical feature of unconformity-related uranium deposits in the Orogen. The Koolpin and Burrell Creek Formations also contain sizeable vein type uranium mineralisation in the Orogen. This observation points towards the uranium prospectivity of the project area.

During the reporting year, the area has been flown by closed spaced airborne radiometric, magnetic and EM survey. This data will be processed in 2008 and will be reported in the next annual report. This activity costed $12560.00 and details are given in Appendix 1.

7.0 PROPOSED EXPLORATION PROGRAM FOR PERIOD ENDING 24 JANUARY 2009

An in-depth technical review is underway to assess the full potential of Toms Gully Group of tenements including EL 24150. The main purpose of this program will to understand, geological and structural setting of the area to elucidate mineralising processes for gold, uranium, base metals and iron ore. A detail geophysical processing and interpretation of the area is also underway to provide assistance in targetting areas of possible mineralisation. It is anticipated that selected areas will also be mapped in detail. Much of the project area is overlain by a thick cover of black soil cover and will require air core drilling to obtain bed rock geochemical samples. For this program a minimum budget of $10000.00 is proposed.

8.0 REFERENCES


the Period Ending 31st December 2003. Renison Consolidated Mines NL. 

*Unpublished statutory report for Northern Territory Department of Mines and Energy.*


NTDME, 1999. Rum Jungle Magnetics Survey

NTDME, 2000. Mary River Magnetics Survey

