

GBS GOLD AUSTRALIA PTY LTD

ANNUAL EXPLORATION REPORT, EL23540, FOR PERIOD ENDING 16 FEBRUARY 2008 'SAUNDERS CREEK' BURNSIDE PROJECT NT

Pine Creek SD5208 1:250,000 Pine Creek 5270 1:100,000

Titleholders: Buffalo Creek Mines Pty Ltd 50% Territory Goldfields NL 50%

Distribution: DPIFM Darwin Northern Gold NL Perth Office Burnside Operations P/L Brocks Creek NT Burnside Operations P/L Perth Office

GBS Report No: PC/BJV/08-03

Zia U. Bajwah March 2008

SUMMARY

Exploration Licence (EL) 23540 is located east of the Yam Creek tenement group, on the eastern side of the Burnside JV. The EL is dominated by the rocks of the Koolpin Formation along with Gerowie Tuff and intruded by dykes of the Zamu Dolerite. This sequence resemble to geological setting which contain Cosmo-style gold mineralisation.

In the previous exploration, mineral potential of the project area was assessed. It suggested that prospective geology and structural setting of the area indicate towards the presence of gold and base metals mineralisation. To test this hypothesis, a soil and rock chip sampling was undertaken in 2007. During this program, 94 soil and rock chip samples were retrieved and analysed for gold and base metal values.

Assay data show some interesting results from samples collected in 2007. Gold concentration varies form 1 ppm to 1330 with an average of 20 ppm. It may be noted that most of As is blow detection limit which is perhaps due to the composition of samples- it is mainly soil where As may has been leached during weathering. However, Samples EX00104 and EX00137 contains significant concentrations of As because they are mainly of oxidised ironstone gossanous rocks. These rocks probably belong to Koolpin Formation and Gerowie Tuff, which host several god deposits/prospects in the region. Base metal results have been rather disappointing where Cu values range -2 to 915 ppm with an average of 66 ppm. Similarly, Pb and Zn are also low.

During 2008, data integration in DataShed will continue together with geochemical sampling and assaying program. Much attention will be focused on in-filling soil/rock chips samplings to determine the full potential of the area along with geological mapping.

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1.0 INTRODUCTION

EL23540 (Saunders Creek) was applied for to cover vacant ground east of Yam Creek and Iron Blow mines, and lies on the west flank of the Burrundie Dome. The area was considered prospective for gold and base metals mineralisation, and possibility of repeat mineralisation like Yam Creek or Iron Blow type existed there. This report deals with exploration activity carried out during the year ending 16 February 2008.

2.0 LOCATION AND ACCESS

EL 23540 is situated 150km SE of Darwin and 5km SE of Grove Hill on the Darwin-Adelaide railway (Figure 1).

Access to the tenement is via the Stuart Highway, thence north via the Grove Hill unsealed road that passes west of the tenement. Access can be gained via bush tracks that peel off north from the Mt Bonnie access road, towards Iron Blow. Alternatively tracks lead into the tenement south from the railway line east of Grove Hill. The headwaters of the Margaret River and Saunders Creek pass through the tenement and flow northwards. The tenement falls on the Pine Creek 1:250,000 sheet and on the Burrundie 1:50,000 sheet. The tenement also is within the Douglas Pastoral Lease. Apart from the course of Saunders Creek that passes through the eastern half of the ground, outcrops occur through much of the tenement, comprising undulating hills and ridges of low to moderate relief. The western sector of the ground in particular host units of the Zamu Dolerite and Gerowie Tuff and is the most elevated and dissected. The eastern half of the tenement is more topographically subdued and is affected by Saunders Creek and its black soil alluvial deposits.



Figure 1: Tenement location of the project area

3.0 TENEMENT STATUS AND OWNERSHIP

EL23540 was granted on 17 February 2003 and expires on 16 February 2009. It comprises five blocks that cover approximately 16.1 sq. km (Figure 1). It forms part of the eastern boundary of tenement holdings comprising the Burnside Joint Venture and is registered in the names of Territory Goldfields NL and Buffalo Creek Mines NL in equal shares. It is unencumbered by third party tenements. The Burnside JV comprised 50% Northern Gold NL, and 50% Harmony Gold. GBS Gold Australia made a successful takeover of Northern Gold NL during 2005, and entered into an agreement to purchase Harmony Gold's 50% share of the JV. GBS Gold Australia now has 100% ownership of the Burnside Project.

4.0 GEOLOGICAL SETTING

4.1 Regional Geology

EL23540 is situated within the Pine Creek Orogen, a tightly folded sequence of Lower Proterozoic rocks, 10km to 14km 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 locally significant interlayered cherty tuff units. Pre-orogenic mafic sills of the Zamu Dolerite event (~1.87Ga) intruded the lower formations of the South Alligator Group (Ahmad et al 1993).

During the Top End Orogeny (Nimbuwah Event ~1.87-1.85Ga) the sequence was tightly folded, faulted and pervasively altered with metamorphic grade averaging greenschist facies with phyllite in sheared zones

The Cullen intrusive event introduced a suite of fractionated calc-alkaline granitic batholiths into the sequence in the period ~1.84-1.1.78Ga. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet) amphibolite facies, and created regionally extensive biotite and andalusite hornfels facies.

Less deformed Middle and Late Proterozoic clastic rocks and volcanics have an unconformable relationship to the older sequences. Flat lying Palaeozoic and Mesozoic strata along with Cainozoic sediments and proto-laterite cementation overlie parts of the Pine Creek Orogen lithologies. Recent scree deposits sometimes with proto-laterite cement occupy the lower hill slopes while fluviatile sands, gravels and black soil deposits mask the river/creek flats areas.

There is a tendency for gold mineralisation to be focused in anticlinal settings within strata of the South Alligator Group and lower parts of the Finniss River Group. This sequence evolved from initial low energy shallow basinal sedimentation to higher energy deeper water flysch facies.

4.2 Local Geology

The tenement encloses a sequence of South Alligator Group sediments that lie on the northern sector of the Burrundie Dome. The Margaret Syncline lies to the west and separates the Burrundie Dome from the Yam Creek sequence. To the east of the tenement, irregular and perhaps shallowly west-dipping Prices Creek Granite contact terminates the South Alligator strata. Within the tenement the South Alligator Group is represented by Koolpin Formation and Gerowie Tuff, both of which were extensively intruded and concordantly dilated by sills of Zamu Dolerite. All were tightly folded on NNW striking axes during the Barramundi Orogeny. The folds plunge shallowly to the NNW and locally in the centre of the tenement, and have undergone strike faulting perhaps as a result of axial failure.

5.0 PREVIOUS EXPLORATION

An unnamed copper occurrence is reported within the tenement (Kitto, 1969). The occurrence is vein-hosted and characterised by chalcopyrite and malachite in quartz veining within siltstones. Since then, a number of investigations were carried out covering part or whole of the EL 23540. First recorded exploration program was reported by Nicholson and Radford (1982) under EL 3138 held by Geopeko Limited. In this program, geological and structural interpretation of the area was undertaken and

economic potential was established. 1,917 geochemical samples were taken and analysed for Cu, Pb, Zn, As, Bi, Sb, Sn, Fe, Mn and Au. A number of anomalous zones were identified which were considered worthy of follow-up for gold and base metal mineralisation.

In 1983, Geopeko re-interpreted the geochemical data obtained during 1983 exploration program (Rolfe and Radford, 1983) and identified 6 anomalous areas. In one of anomalies, it was found that anomalous gold in soil samples was sourced by a breccia gossans and two BIF units in the Middle Koolpin Formation. Rock chip sampling of these units indicate that gold values are generally less than 0.1 g/t. Another sample of the gossan assayed 3.10 g/t Au and the upper BIF assayed 6.94 g/t Au. These results are although sporadic but warranted further evaluation. A radiometric appraisal part of the EL 23540 was undertaken by Total Mining Australia Pty Ltd to assess for the potential of uranium mineralisation (Kavanagh 1985). However, only one convincing anomaly was found in this survey. It was a quite weak and unlikely to represent a viable target. Under joint venture agreement, another campaign of geochemical sampling and magnetic survey was conducted by CSR in 1985 (Heyworth, 1986) which identified several zones of gold anomalism in the EL 3138.

Part of the current EL 23540 was explored under EL 4734 by CSR Limited. During 1985 a regional programme comprising bulk stream sediment sampling, airborne and ground geophysical surveys, rock chip sampling and geological mapping was undertaken. Thirty two bulk stream sediments and fifty four rock chip samples were collected. During this exercise, two drainage and five rock chip samples provided gold anomalous results (Hamilton 1986).

EL4817 covered the western 4 blocks of EL23540, but also extended further south. Cyrpus Gold explored EL4817 in the late 1980's, taking over from CSR who held the lease in its first year. CSR's exploration philosophy targetted gold in mafic intrusives (such as the Zamu Dolerite) and exploration included stream sediment sampling and rock chip sampling (Miller 1988). Cyprus believed that the sulphidic sediments of the South Alligator Group were ideal host units for gold mineralisation. Cyprus carried out interpretations of aeromagnetic data to map major rock units, and identify South Alligator

Group sediments. Rock chip sampling and mapping outlined gold and base metal anomalies related to axial zones of anticlines in an area outside EL 23540.

EL 6078 covered the 4 western blocks of EL 23540. NT Gold outlined 2 magnetic highs, and 'favourable structural elements' from aeromagnetic interpretations in the first year, but did no further work in the second year and relinquished the tenement. Soil sampling conducted on EL7913 outlined a soil anomaly outside EL 23540. The soil anomaly followed an area mapped as Zamu Dolerite, and Au-As values away from the dolerite were low. EL 9201 covered 3 western blocks of EL 25340, and was held by Bob Biddlecombe. Exploration during the life of the tenement was 'marginal', with some rock chip sampling and panning of samples. Some elevated assay values were obtained but further work was not carried out. None of the geochemical data is available in digital format.

Shaw (2005) summarised some of the exploration activity surrounding EL 23540 which was conducted by Euralba Mining, Geopeko, Dominion Mining Ltd and Zapopan NL.

5.1 Gold and Base Metals Potential

Information available so far highlights metallogenic potential, particularly gold and base metals of the area. The potential for gold and base metals mineralisation within EL 23540 is based on:

- Abundance of the Koolpin Formation comprising mudstone-siltstone-chert-BIF lithologies, interfolded with Zamu Dolerite has many similarities to host sequences at Golden Dyke-Langleys, Davies, Afgans Gully and Good Shepherd to the south west and at Cosmo Howley some 20 km to the west.
- Continuation along strike from the Pickfords Pb deposit, which is located in the axial zone of a faulted fold. Within the tenement area, the axial zone faulting coincides with a change in outcrop abundance, with poorer exposure to the east, in association with the Saunders Creek drainage system. In terms of localisation of mineralisation, the part played by subordinate late stage fracture sets striking WNW is thought to be relevant in this region. These can be traced on SPOT

• imagery (Figure 2) passing through the vicinity of Yam Creek MCN 828 and Iron Blow open pit and progressing ESE across the EL.



Figure 2: Fracture analyses of the project area using SPOT imagery.

As a working hypothesis, the intersection of these fractures, particularly the set marked in red (Figure 2), with favourable lithologies within the strike faulted zone, as well as their continuation under alluvial cover further to the east, could be areas to target for initial reconnaissance exploration for gold and base metals. In the region of the Saunders Creek valley in the eastern half of the tenement, it is inferred that the Prices Spring Granite may underlie the Koolpin Formation at no great depth. In this event it conceptually could have activated hydrothermal fluids along favoured fracture sets where they could have interacted with compatible lithological units.

6.0 EXPLORATION COMPLETED YEAR ENDING 16 FEBRUARY 2008

During the reporting period, a total of 94 rock chip and soil samples were taken form the project area and analysed for Au and base metals (in ppm) by SGS Laboratories Townsville. Compete list of results are given in Appendix 1 and salient features are discussed below (Table 1). Assaying and sampling procedures are given in Appendix1.

Sample No	Au	AS	Cu	Pb	Zn
EX00001	6	-50	302	-3	109
EX00008	10	-50	44	-3	57
EX00048	27	-50	44	-3	40
EX00063	21	-50	20	4	17
EX00104	17	90	60	3	87
EX00104	38	-50	43	30	11
EX00137	1330	1390	461	-3	35

Table 1: Significant result of Rock/soil samples from EL 23540.

Geochemical data in Appendix 1 show some interesting results of assays done on the samples collected in 2007. Gold concentration varies form 1 ppm to 1330 with an average of 20 ppm. It may be noted that most of the As is blow detection limit which is perhaps due to the composition of samples- it is mainly soil where As may have leached during weathering. However, Samples EX00104 and EX00137 contains significant concentrations of As because they are mainly from oxidised ironstone gossanous rocks. These rocks probably belong to Koolpin Formation and Gerowie Tuff, which host several god deposits/prospects in the region.

Base metal results have been rather disappointing where Cu values range -2 to 915 ppm with an average of 66 ppm. Similarly, Pb and Zn are also low.

In addition, geochemical data validation and data entry into DataShed were undertaken. Other duties included tenement administration, filed visits, report writing and acquiring the IKONIS imagery for future planning. This exploration activity costed \$13112.00 and details are given in Appendix 2.

7.0 PROPOSED EXPLORATION PROGRAM YEAR ENDING 16 FEBRUARY 2008

During 2007, geochemical sampling program discovered several gold anomalies with significant results. Although, overall base metals values were disappointing but it does not downgrade the tenement for base metals potential.

During 2008, data integration in DataShed will continue together with geochemical sampling and assaying program. Much attention will be focused on in-filling soil/rock chips samplings to determine the full potential of the area along with geological mapping. A minimum budget of \$15000.00 has been set a-side for this program.

8.0 REFERENCES

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- Shaw J, 2005. Annual Exploration Report, EL 23540 "Saunders Creek" YEAR ENDING 16th February 2005. Burnside Joint Venture annual report to the Department of Primary Industry, Fisheries and Mines (unpb).

Appendix 2

NORTHERN TERRITORY EXPLORATION EXPENDITURE FOR MINERAL TENEMENT

Section 1. Tenement type, number and operation name: (One licence only per form even if combined reporting has been approved)

Туре	Exploration Licence
Number	23540
Operation Name (optional)	Burnside Operations

Section 2. Period covered by this return:						
Twelve	month period:	If Final Report:				
From	15 February 2007	From				
То	16 February 2008	То				
Covenant for the reporting period:		\$12000.00				

Section 3. Give title of accompanying technical report:							
Title of Technical Report	ANNUAL EXPLORATION REPORT, EL23540, FOR PERIOD ENDING 16 FEBRUARY 2008 ' <i>SAUNDERS CREEK</i> ' BURNSIDE PROJECT NT						
Author	Zia U. Bajwah						

Section 4. Locality of operation:					
Geological Province Geographic Location	Pine Creek Orogen East of Mount Bonnie Mine				

Section 5. Work program for the next twelve months:						
Activities proposed (please mark with an "X"):	Drilling and/or costeaning X					
Literature review	Airborne geophysics					
Geological mapping	Ground geophysics					
Rock/soil/stream sediment sampling	Other:					
Estimated Cost:	\$15000.00					

Section 6. Summary of operations and expenditure:

Please include salaries, wages, consultants fees, field expenses, fuel and transport, administration and overheads under the appropriate headings below. Mark the work done for the appropriate subsections with an "X" or similar, except where indicated. Complete the right-hand columns to indicate the data supplied with the Technical Report.

D	Do not include the following as expenditure (if relevant, these may be discussed in Section 7):							
•	Insurance	•	Transfer costs	٠	Land Access Compensation			
•	Company Prospectus	•	Title Search	٠	Meetings with Land Councils			
•	Rent & DepartmentFees	•	Legal costs	•	Payments to Traditional Owners			
•	Bond	•	Advertising	•	Fines			

Exploration Work type	Work Done (mark with an "X" or	Expenditure	Data Su Tecl	a and Format oplied in the nnical Report
	provide details)		Digital	Hard copy
Office Studies				
Literature search				
Database compilation	2560.00			
Computer modelling				
Reprocessing of data				
General research	1000.00			

Exploration Work type	Work Done (mark with an "X" or		Expenditure		Data and Format Supplied in the Technical Report		
	provide details)			ľ	Digital	Hard copy	
Report preparation	1870.00						
Other (specify) Admin	672.0	0		-	Î		
	Subtotal			\$6082.00	Î		
Airborne Exploration Sur	veys (state	line	9				
Aeromagnetics		km	S		Ì		
Radiometrics		km	S		Ì		
Electromagnetics		km	S		Ì		
Gravity		km	S		Ì		
Digital terrain modelling		km	S	-	Î		
Other (specify)		km	S		Î		
	Subtotal			\$	Î		
Remote Sensina			_				
Aerial photography							
LANDSAT							
SPOT							
MSS							
Other (IKONIS)	1000.0)0			Ì		
	Subtotal			\$1000.00	Î		
Ground Exploration Surveys							
Geological Mapping							
Regional							
Reconnaissance	1530.	00			Ì		
Prospect				-			
Underground				-			
Costean				-			
Ground Geophysics							
Radiometrics				-			
Magnetics				-			
Gravity				-			
Digital terrain modelling				-			
Electromagnetics				-			
SP/AP/EP							
IP							
AMT/CSAMT							
Resistivity							
Complex resistivity							
Seismic reflection							

Exploration Work type	Work Done (mark with an "X" or	Expenditure	Data and Format Supplied in the Technical Report	
	provide details)		Digital	Hard copy
Seismic refraction				
Well logging				
Geophysical				
interpretation				
Petrophysics				
Other (specify)				

Geochemical Surveying a Geochronology	Ind			
(state number of samples)				
Drill (cuttings, core,				
etc.)				
Stream sediment				
Soil	X		4500.00	
Rock chip				
Laterite				
Water				
Biogeochemistry				
Isotope				
Whole rock				
Mineral analysis				
Laboratory analysis				
(type)				
Petrology				
Other (specify)				
Ground Ex Subtotal	ploration	703	30.00	
Drilling (state number o	f holes & m	netres)		
Diamond	holes	metres		
Reverse circulation (RC)	holes	metres		
Rotary air blast (RAB)	holes	metres		
Air-core	holes	metres		
Auger	holes	metres		
Other (specify)	holes	metres		
<u>· · · · · · · · · · · · · · · · · </u>	Subtotal		\$	
Other Operations				
Costeaning/Trenching				
Bulk sampling				
Mill process testing				
Ore reserve estimation				
Underground				
development (describe)				
Mineral processing				
Other (specify)				
	Subtotal		\$	
Access and				
Rehabilitation	1			1
Track maintenance				

Rehabilitation				
ivionitoring				
Other (specify)				
	Subtotal	\$		
TOTAL EXPENDITURE		\$13112.00		

Section 7. Comments on your exploration activities:

I certify that the information contained herein, is a true statement of the operations carried out and the monies expended on the above mentioned tenement during the period specified as required under the *Northern Territory Mining Act* and the Regulations thereunder.

x	x I have attached the Technical Report					
1.	Name:	Zia U. Bajwah	2. Name:			
	Position:	Geologist	Position:			
	Signature:		Signature:			
	Date:	27/03/2008	Date:			