Burnside Operations
Pty Ltd
ACN 097 922 444
As Manager and Agent for the
Burnside Joint Venture (Territory
Goldfields NL 50% and Buffalo

BURNSIDE OPERATIONS PTY LTD

BROCKS CREEK PROJECT
EXPLORATION REPORT

TWO YEAR PERIOD
ENDING JUNE 26TH 2002

MLN 1139, MLN176
MCN4689-4697, MCN4701-4703
MCN4863-4871, MCN4895-4899

1:250,000 Map Sheet SD5208 Pine Creek
1:100,000 Map Sheet 5172 Batchelor

Author: J.Shaw, BOPL September 2002

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BROCKS CREEK PROJECT REPORT PERIOD 2000-2002

SUMMARY

The Brocks Creek assets comprising the group tenements and mill were purchased from AngloGold (Brocks Creek) by Buffalo Creek Mines Pty Ltd in November 2001. No work apart from care and maintenance of the mill facility and office complex was done in the year ending 26th June 2001.

In April 2002 an agreement was finalised (Burnside Joint Venture) between Northern Gold NL and Buffalo Creek Mines P/L. The agreement merged certain assets within a 30km radius of the Brocks Creek mill under the management of Burnside Operations Pty Ltd.

The principal objective of the joint venture is to bring any economic gold resources in the merged tenement holdings into production and treat them at the Brocks Creek Mill.

Most of the annual expenditure incurred during the year ending 26th June 2002 comprised refurbishing the camp, mill and mine site facilities and conducting pre-mine engineering and resource studies on the Zapopan deposit. Environmental control monitoring and basic refurbishment in preparation for the new operation was carried out during the 2001-2002 wet season.

Since acquisition of the Brocks Creek tenements, Buffalo Creek Mines P/L and later Burnside Operations P/L have carried out resource reviews and modelling on the Rising Tide and Zapopan gold deposits.

Exploration targets have been identified along the Brocks Creek Shear Zone using airborne magnetic interpretation.

The small but high grade Zapopan underground gold resource is scheduled for production late in 2002 using new decline mine access from the existing open pit (site works commenced August 2002)

No exploratory drilling was carried out in the report period, though intensive RC programs have been under way since July 2002 testing resources in adjacent joint venture tenements. This activity will be the subject of separate reports.

All work reported was carried out in MLN 1139. No work was done in the remainder of the Brocks Creek tenement group.

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1.0 INTRODUCTION

The Brocks Creek Project area comprises a group of mining tenements centred 140km south east of Darwin, NT.

They have historically been the focus of alluvial and underground gold mining and more recently gold production from open pits. The Brocks Creek treatment plant was commissioned in April 1996 by Acacia Resources P/L to accommodate ore from several open pit gold deposits. The company was subsequently acquired by AngloGold Australia that continued open pit gold production until April 2000.

In November 2001 Buffalo Creek Mines P/L, a subsidiary of Hill 50 Limited purchased the Brocks Creek project from AngloGold Australia.

In April 2002 Buffalo Creek Mines P/L entered into a joint venture agreement (Burnside Joint Venture) with Northern Gold NL merging certain assets in the Brocks Creek region. The joint assets of the parties are presently managed through Burnside Operations Pty Ltd.

Since the joint venture was formed a large amount of effort and expenditure has been expended to prepare the Zapopan underground resource for production and refurbishing the mill and related infrastructure.

2.0 TENEMENT DETAILS

The granted tenement package was consolidated between 1987 and 1995 by Cyprus Gold Australia and Solomon Pacific-Acacia Resources Pty Ltd.

The principal tenement covering the majority of known deposits at Brocks Creek is MLN1139 of 3949 hectares. The remainder comprise one other MLN and 26 MCNs plus two HLDNs A freehold lot, No.10 at Brocks Creek townsite is also owned by the joint venture. See Table 1.

The Burnside Joint Venture further extends the tenement package up to 30km from the Brocks mill. These other tenements are subject to separate annual report groupings.

There was no annual report lodged for the year ending 26th June 2001. Permission has been granted to lodge a two-year report to offset this discrepancy.

3.0 LOCATION AND ACCESS

The tenement group is centred some 140km south east of Darwin, NT.

Access is presently gained by road 160km south from Darwin along the Stuart Highway, thence north-easterly along the Fountain Head road for 12km. A graded dirt road connects through to the gold operation.

The terrain within the project area is undulating with ridges and flats vegetated with tall and mixed open savannah woodland. Towards the north the terrain is more elevated. Southwards the gradient flattens to the Howley Creek alluvial plain.

The climate is hot with periodic monsoonal rains between November and May. For the remainder of the year it is warm to hot and largely dry.

4.0 ABORIGINAL AREA PROTECTION AUTHORITY

Certificates have been issued to allow exploration and extractive activity on the tenements. There are no registered sites of significance within the project.

5.0 GEOLOGICAL SETTING

The project area encloses a tract of Lower to Mid Proterozoic rocks of the Pine Creek Inlier. Members of the South Alligator Group and the Finiss River Group have been identified. Rocks comprising these Groups host most of the gold occurrences in the Pine Creek region, in particular the Koolpin Formation and Gerowie Tuff.

A tight WNW trending asymmetric fold structure termed the Brocks Creek-Zapopan (BKZ) anticline has been subject to axial plane failure and reverse fault movement. It hosts the bulk of gold mineralised occurrences in the project tenements.

The BKZ has formed within units of the Gerowie Tuff, and possibly Upper Koolpin Formation. The former comprises a silt-greywacke-arenite unit with cherty tuff horizons, while the Koolpin is typically dark mudstone-siltstone with rare iron formation and dolomitic horizons. The boundaries of the Formations within South Alligator Group are gradational while the upper and lower boundaries of the Group are unconformable. A semi-concordant quartz dolerite sill complex has intruded the Koolpin Formation. This is termed the Zamu Dolerite. Biotite-lamprophyre dykes cut the metasedimentary sequence.

Syn to Post-orogenic granitoid intrusives such as the Burnside Batholith to the north of the tenements have imparted a thermal metamorphic aureole on the project area. Biotite-garnet-cordierite-amphibolite and calc silicates are the end members of this event. The alteration minerals decrease in abundance further from the contact zone.

6.0 PREVIOUS EXPLORATION ACTIVITY

Since 1975 when alluvial gold mining again became profitable, there have been in excess of 100 different tenements within the area covered by this report. In view of this a summary of the main activity carried out will be given.

CRA Exploration P/L, Geopeko, Zapopan Consolidated P/L, Pacific Goldmines NL, CSR Ltd, and Cyprus Australia were among the first modern explorers to evaluate the primary gold sources that gave rise to the alluvials in the vicinity of Brocks Creek. Cyprus identified significant vein hosted resources at Faded Lily and Alligator. Their work included detailed drilling, geological mapping, geophysical traverses (IP), and soil sampling.

In **1992** Solomon Pacific acquired a 25% interest in a group of Cyprus tenements and purchased the balance in 1994. SolPac undertook a feasibility study of the Faded Lily and Alligator deposits.

In the year to June 26th 1996 Acacia-SolPac undertook gridding, hole surveying, IP surveys, gradient IP at Rising Tide, 1823.25m of HQ3 diamond core drilling, 14,737.5m of RC drilling, 130m of RAB drilling, 2657m of vacuum and auger geochemical drilling, geological mapping at John Bull and Alligator, plus feasibility studies at Faded Lily and Alligator.

The Brocks Creek treatment plant with capacity of 1Mt per annum was constructed and commissioned in April of this period using Faded Lily ore.

In the year to June 26th 1997 Acacia completed 48line/km of gradient IP, ground magnetic survey at Faded Lily pit, 151 RC holes for 12,779m, diamond core drilling 888m in 11 holes, 1262m of vacuum and 2099m of post hole RAB.

In the year to June 26th 1998 Acacia drilled extensively, comprising 27,342m of RC drilling, and 2184m of diamond core drilling at Rising Tide, Zapopan and Burgan, 4075m of vacuum drilling completed geochemical coverage, 38 rock chip and niche samples, 3096m of costeans at Howley Creek and Homeward Bound, Pit and surface geological mapping at Faded Lily, Alligator and Howley Creek, plus aeromagnetic, radiometric and gravity surveys.

In the year to June 26th 1999 Acacia drilled 40m of vacuum samples at John Bull, 4 costeans at Howley Creek for 1,004m, two costeans at John Bull for 446m, resource drilling at Britannia, Zapopan, John Bull/Crocodile, Alligator, and Burgan comprised 44 holes for 3,809m, 5 diamond core holes were drilled at Zapopan for 396m and 484m of precollars. A feasibility study was carried out at Rising Tide and 1592m of grade control drilling completed. Resource modelling was done by MRT.

In the year to June 26th 2000 work was limited to mining the remaining open pit resources at Zapopan and Burgan. Mining ceased in April 2000 after a total treatment of 4,834,287t @ 1.67g Au/t and 485,209t of low grade ore @ 0.71g Au/t. Fine ounces recovered totalled 254,741.

In the year to June 26th 2001 no field work was carried out apart from care and maintenance of the mill and surface infrastructure.

7.0 GOLD MINERALISATION

Gold was first discovered at Brocks Creek at the end of 1872 and alluvial mining, mainly carried out by Chinese immigrants, was intense until the turn of the century. Underground mining was also carried out at the Zapopan deposit.

In the period 1980 to 1995 alluvial mining was resumed by small operators.

Companies such as Cyprus carried out modern gold exploration and identified significant widths of gold mineralisation at Faded Lily and Alligator on the BKZ.

The BKZ structure has been traced by mapping and magnetic interpretation for over 8km and hosts a group of significant gold deposits over a strike length of 2km. These include the Faded Lily, Alligator, Zapopan, Burgan and Homeward Bound. Outlying prospects include John Bull and Rising Tide that are on peripheral or separate structures.

The deposits comprise either bedding-concordant quartz-pyrite/pyrrhotite bodies or steeper transgressive vein systems associated with the axial plane. The majority of the deposits have a steep to moderate southerly dip though some components lie on the northern limb of the BKZ. A moderate ESE plunge has been reported on the mineralisation at most of the open pits.

There is a minor base metal association in the higher grade sectors of the deposits including arsenopyrite, chalcopyrite, sphalerite and galena. Tourmaline is also commonly present with the quartz.

7.1 Zapopan Deposit

Geological Features

The Zapopan deposit is located on the BKZ east of the Faded Lily pit. In contrast with the other deposits that occurred on low rises or ridges, Zapopan occurs within a small creek drainage system of low relief.

Historically the deposit was mined from a series of shafts put down between discovery in 1888 and 1935. During this period gold production of 830kg from 41,000t of ore was reported. The average head grade of this ore was 20.0g Au/t. Mining was hindered by sulphide rich ore, flood-prone underground development and the presence of 2m thick “slides”, shear zones comprising incompetent schistose rock that offset the ore shoots.

Gold was mined from an number of separate reefs of which the most productive was Main Reef. This was a quartz vein structure striking 282 degrees and dipping 55-60 degrees south. Other gold shoots were reported as stratabound within pyritised haematitic iron formation and calc-silicate, or as south dipping bedding-concordant shears with vein quartz. More recent work attributes an overall plunge to the anticlinal controlling structure of 38

degrees towards 122 degrees magnetic with the axial plane dipping steeply south at 75-85 degrees.

The more northerly of the two main "slides" is also referred to as the Axial Planar Shear but strikes slightly oblique to the axis. A reverse movement has been measured from drag folding and it is up to 2m wide. The south "slide" shows a north block west relative horizontal movement but is more diffuse over a 5m-10m width. Both are sub parallel and offset the axial plane and mineralisation.

Open Pit Mining at Zapopan

Open pit mining of the deposit was carried out by Acacia and completed over a 12 month period ending in November 1999. A total of 121,281t @ 1.92g Au/t was milled as high grade feed. Low grade feed totalling 11,880t @ 0.8g Au/t was milled in the same period. A low grade stockpile remained at the end of the operation totalling approximately 54,000t @ 0.8g Au/t.

Technical Studies at Zapopan

Several resource estimates have been made at Zapopan, the most recent by Mining and Resource Technology for Acacia Resources P/L in June 1999.

MRT estimated that indicated resources below the level of the old workings in Main Lode totalled **169,000t @ 18.55g Au/t.** This applied no cut off grade nor mining dilution and no allowance for minimum mining width.

Other lodes within the deposit comprised inferred resources totalling **116,000t @ 6.32g Au/t** using the same parameters.

Underground development intended to access and extract this resource was designed and costed by R.Flanigan early in 2002. It presented a decline access from a portal in the northern wall of the existing open pit.

7.2 Rising Tide Deposit

Geological Features

The Rising Tide deposit is located 2.5km north of Faded Lily pit and comprises a well defined regional soil gold anomaly near the northern boundary of the tenement group. The mineralised structure comprises moderately south dipping reverse fault planes within Koolpin Formation that parallel the underlying contact with Zamu Dolerite.

The Koolpin host rocks comprise argillite, carbonaceous and pyritic/pyrrhotitic shale, chert bands, calc-silicates and possible iron formation. A prominent late stage, cross-cutting quartz vein on 330 degrees cuts the deposit.

Mineralisation is hosted by at least two thin sub parallel structures dipping at approximately 25 degrees to the south. These zones lie below and have the

same orientation as a bedding-parallel quartz-pyrite rich sheared fault zone, interpreted to be the main thrust plane that transposed the Koolpin sequence to the north over Zamu Dolerite.

The mineralised zones display quartz-limonite veining in schistose, sericitic and tourmaline-altered argillite (carbonaceous graphitic shale), pyrite-pyrrhotite veining in fine grained amphibolite with accessory garnet and fluorite, and quartz-pyrite pyrrhotite veining in garnetiferous amphibolite. The gold is thought to be supergene enriched and associated with structures leading to the Burnside Granite that carry accessory copper, lead and zinc.

Technical Studies at Rising Tide

A feasibility study was carried out by Acacia at Rising Tide in mid 1998. This included 1592m of grade control density drilling.

Resource modelling was carried out by Mining and Resource Technology later in the year. They estimated an inferred resource of 1.94Mt @ 1.72g Au/t using an 0.7g/t cut off grade and an upper cut of 10.0g/t.

The Burnside Joint Venture also conducted interpretation and modelling on the deposit in mid 2002 (Gillman A.J.) Using a 10g/t top cut he created a block model with a global 719,390t @ 1.64g Au/t. Whittle optimisation was carried out on this by C.Skelton.

8.0 EXPLORATION DURING YEAR ENDED 26th JUNE 2001

There was no field work carried out during the period. Work was limited to care and maintenance on the Brocks Creek mill and infrastructure within MLN1139.

9.0 EXPLORATION DURING YEAR ENDED 26th JUNE 2002

The Brocks Creek assets comprising the group tenements and mill were purchased from AngloGold (Brocks Creek) by Buffalo Creek Mines Pty Ltd in November 2001.

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Exploration targets have been identified along the Brocks Creek Shear Zone using airborne magnetic interpretation. **All exploration and mining work during the year was carried out in MLN1139.**

No exploratory drilling was carried out in the report period, though intensive RC programs have been under way since July 2002 testing resources in adjacent joint venture tenements. This activity will be the subject of separate reports

10.0 EXPENDITURE REPORT ENDING 26TH JUNE 2002

EXPLORATION/MINING SUPPORT COSTS

Salaries, wages, site administration	$204,353
Vehicles	$ 25,989
Power	$ 4,772
Water supply, potable and process	$ 42,262
Environmental controls	$ 1,008
Maintenance	$ 15,691
Safety/training	$ 18,323
Computer/IT	$ 446
Travel	$ 23,266
Stores/Freight	$ 9,996
Tenement Rent	$ 49,423
Tenement administration	$ 4,610
Contract geology	$ 1,440

TOTAL EXPLORATION/SUPPORT	$401,579

MINING COSTS

Mill and processing	$98,464
Mining services administration	$73,534
Engineering services	$ 2,550
Survey	$ 5,964
Mine geology	$ 2,295
Assay	$ 1,580

TOTAL MINING	$184,387

PROJECT TOTAL	**$585,966**

11.0 FORWARD PROGRAM 2002-2003

The dominant activity planned for the coming year is bringing the Zapopan underground resource within MLN1139 into full production. Ore will be fed through the Brocks Creek treatment plant that also lies within MLN1139.

In addition, open pit ores will be sought from further afield in joint venture tenements including Mt Paqualin, Yam Creek and the Cosmopolitan Howley areas.

Exploration expenditure within the Brocks Creek group tenements proper will be subordinate to that on adjacent tenements.

An exploration expenditure of $5000 is anticipated.

12.0 REFERENCES

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