BURNSIDE OPERATIONS P/L

ANNUAL EXPLORATION REPORT
EL 9588
“Golden Wall”

YEAR ENDING 8TH DECEMBER 2005

Fenton (14/5-I) 1:50,000

Title Holders:- Northern Gold N.L. 50%
Buffalo Creek Mines P/L 50%

Distribution:

DBIRD Darwin
Northern Gold NL Perth Office
Burnside Operations P/L Brocks Creek NT
Burnside Operations P/L Perth Office.

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**SUMMARY**

EL 9588 is located approximately 130km SSE of Darwin and 4km west of the Cosmopolitan Howley mine.

The tenement was granted in December 1996 to Northern Gold N.L. The company carried out digital data studies and several geochemical rock chip sampling and soil sampling programs. Only low level anomalies were obtained over what is interpreted as schistose quartz-greywackes of the Burrell Creek Formation and Mt Bonnie Formation. This result was considered to have downgraded the gold potential of the tenement.

In April 2002, the tenement was included in a wider joint venture agreement between Territory Goldfields NL and Buffalo Creek Mines P/L. The data review that followed the agreement confirmed its low gold potential.

The joint venture focused its exploration expenditure on diamond and RC drilling the Cosmo Howley open pit and underground resource, where the most recent company announcements have reported a global resource exceeding 1 million ounces. RC programs were also completed at Chinese South Extension and Mottrams just east of the EL9588. This work outlined potentially economic open pit gold resources. Other drilling has been completed at Yam Creek-North Point, Fountain Head and Woolwonga in the search for economic open pit ores. Underground development in readiness for production was also installed at the Zapopan gold mine near Brocks Creek.

The purchase of the Union Reefs mill and underlying tenements in August 2004 together with the consolidation of the JV equity in September 2005 stands to accelerate the development of all resources in the Pine Creek and Burnside Regions.

During 2005 work was confined to reporting and reviewing structural controls of the tenement through remote sensing interpretation. This work cost $1,050.00.

In 2006 the new owners of the Burnside tenements (GBS Gold) are expected to address their assets in terms of their relative merits and holding costs. As a low-rank tenement EL9588 is initially unlikely to attract strong exploration interest compared to other gold assets in the region. Nevertheless it remains part of the regional tenement asset base subject to later corporate decisions. Work on a 2006 technical review by GBS Gold is costed at $1,500.
1. INTRODUCTION

The licence is situated just west of the Cosmopolitan Howley Mine. Previous exploration work established the presence of weak gold anomalism in foliated clastic rocks and the tenement has a low relative ranking.

This report covers the data review and status of the tenement during the year ended 8th December 2005.

2. TENURE DETAILS

EL 9588 comprises 2 blocks totalling 6.66 sq km and was granted to Northern Gold N.L. on the 10th December 1996 for an initial period of six years. Compulsory reductions were waived in November 1998, December 1999, November 2000 and November 2001, enabling 2 blocks to be retained until the 9th December, 2002. A request for a further renewal was successful with present expiry on 9th December 2006. The annual expenditure covenant for the year ending 8th December 2005 was $500.00.

2.1 ACCESS DETAILS

EL 9588 is located approximately 130km SSE of Darwin on the Fenton 1:50,000 map sheet and lies between latitudes 13 degrees 31' S and 13 degrees 32' S and longitudes 131 degrees 19'E and 131 degrees 21'E (Figure 1).

Access is via the Old Stuart Highway (Dorat Road), which passes along the southern boundary of the licence. The terrain is dissected by a system of vegetated ephemeral creeks that drain towards the NW into Bridge Creek.

It is situated within Pastoral Lease No. 903, Douglas, held by Tovehead Pty. Ltd.

3. GEOLOGICAL SETTING

3.1 Regional Geology

EL9588 is situated within the Pine Creek Geosyncline, 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 minor interlayered tuff units. Pre-orogenic mafic sills of the Zamu Dolerite event (~1.87Ga) intruded the lower formations of the South Alligator Group.

During the Top End Orogeny (Nimbuwah Event ~1.87-1.85Ga) the sequence was tightly folded and pervasively altered with metamorphic grade averaging greenschist
facies to phyllite. The Cullen intrusive event introduced a suite of fractionated calc-alkaline granitic batholiths into the sequence in the period ~1.84-1.80Ga. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet) amphibolite facies, and created more extensive biotite and andalusite hornfels facies.

Open-folded Middle and Late Proterozoic clastic rocks and volcanics have an unconformable relationship to the older sequences. Flat lying Cambro-Ordovician sandstone and limestone of the Daly River Basin along with hill-cappings of Mesozoic arenites overlie the folded basement.

Cainozoic sediments and proto-laterite overlie parts of the Pine Creek Geosyncline lithologies. Recent scree deposits occupy the lower hill slopes while fluviatile sands, gravels and black soil deposits mask the river flood plain areas.

3.2 Local Geology

EL 9588 straddles a sheared synclinal structure within Burrell Creek Formation clastic rocks, the lowermost formation of the Finniss River Group. The Group is conformable with the underlying Mt Bonnie Formation of the South Alligator Group.

The sequence strikes north westerly parallel to the Howley Anticline that lies to the east.

The central zone of the tenement is obscured by creek alluvium deposited by drainages that flow to the north west. On the flanks, of the drainage system are low rubbly ridges that predominantly comprise a sequence of alternating schist and quartz rich sediment. The schist is comprised of sericite and quartz with minor garnet and andalusite, considered to represent the thermal aureole of the Cullen Granite suite that may lie at no great depth in this area. The precursors are thought to be sandstone, siltstone and greywacke with minor chert and shale.

These lithologies are interpreted to be the basal sequence of the Burrell Creek Formation. Mount Bonnie Formation sediments represented by siltstones and minor greywacke have been reported in the east and western parts of the tenement.

A magnetic horizon has been interpreted as occupying the north-central sector of the tenement and losing definition south eastwards. This lies in the poorly exposed area within the creek systems and extends for some distance to the north. It shows evidence of being offset by faulting, possibly by N-E fractures. The composition of this unit is not known.
3.3 Gold Mineralisation

Recent studies (Sener 2003) show that the Pine Creek-Burnside gold mineralising event was superimposed post folding and post granitoid at around 1740Ga (SHRIMP analysis of monazites) and is related to plate cratonising and subduction events that affected southern Australia at that time.

Sener demonstrated that gold mineralisation in the Burnside and Pine Creek region was best developed in the biotite hornfels metamorphic aureole of the Cullen suite. The association is apparently due to optimal rock qualities acquired from Cullen contact thermal influence.

In view of the post orogenic and post granite age of the Burnside gold event, the well documented association of gold with anticlinal structures in the region is likely to be due to the presence of more favourable structural preparation criteria. The coincidence of older brittle quartz veins, reverse and radial faults and solution-ponding effects focused in anticlines would contribute. The late orogenic Shoobridge fold event stress from SE/NW probably played a part by inducing axial plunge reversals on to the earlier Nimbuwah Event axial planes. In addition, anomalous radial dips and fold axes had been generated by the late stage Burnside Batholith creating locally special structural sites.

The structural setting of EL9588, being grossly synclinal, plus the high metamorphic grade, downgrades the potential of the ground but in view of the soil cover, does not exclude the presence of other more favourable structural settings being present.

4. PREVIOUS EXPLORATION

In 1991 Dominion Gold Operations Pty. Ltd. held the eastern block of EL 9588 as EL 7355. They completed air photo mapping, geophysics and stream sediment sampling.

During April 1991, Airesearch Mapping of Darwin flew the Shoobridge and Fenton tenements for Dominion and produced sets of 1:25,000 scale colour air photographs (Burn, 1993). The photo run that covered EL 7355 was AM521 Run 7, (No. 099 - 101).

The company acquired Aerodata multiclient airborne magnetic data in late 1988. The interpretation of this data was used to identify favourable lithological/structural settings for gold mineralisation.

In 1992 Dominion commissioned an Aerodata airborne magnetic/radiometric survey covering the area south and south west of Cosmo Howley.
They also conducted stream sediment sampling within EL 7355. Stream sediment samples were collected from selected sites within catchments averaging 4sq km. Two sample sizes, -20# silt fraction and a pan concentrate, were collected from each site. A total of four samples were collected from within the tenement and submitted for Au, Cu, Pb, Zn, Mn, Fe, As, Ni, U and Th analysis.

Results from the stream sediment sampling returned peak values of 6 ppb Au, 110 ppm As, 70 ppm Cu, 16 ppm Pb and 65 ppm Zn.

**Northern Gold NL EL9588**

During 1996/97 Northern Gold N.L. completed a regional soil sampling program, based on digital data interpretation, over EL 9588.

In addition, digital data comprising Landsat Imagery, SPOT Imagery and AGSO mapping was used in conjunction with aerial photo interpretation to determine the best method of exploration to be used on the licence.

GIS and satellite imagery were used to log soil types and to interpret the structural geology of the region.

The company also completed a regional soil sampling program, targeting major structural discontinuities along strike from known mineralised locations.

Reconnaissance soil sampling was completed over four, 400m spaced lines, with samples collected every 25m and composited to 100m. A total of 96 soil samples, including duplicates, were collected and submitted to Assaycorp, in Pine Creek, for Au, Ag and As analysis.

The results from the sampling program were disappointing, with peak values of 3.0 and 2.7 ppb gold, over yellow sandy and red soils.

During the 1997/98 season further soil sampling and rock chip sampling was completed.

The soil samples were collected at 50m intervals and composited to 100m, along four lines. Three spot samples were collected from the north-eastern corner of the licence.

The program comprised a total of 33, -5#, B-horizon, soil samples, including duplicates. They were submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn. The peak results returned were 13 ppb Au (Sample No. 190644, 8504300N, 754300E) and 6.4 ppb Au (Sample No. 190660, 8503100N : 750900E). This work is reported in Mottram, 1998.
A total of 41x 2kg rock chip samples were collected from outcrop within the licence and submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn. The results were disappointing, with a peak result of 0.11 ppm Au (Sample No. 190635, 8504300N : 754300E).

During 1998/99, Northern Gold N.L. contracted Arnhem Exploration Services to complete a follow up soil sampling program over EL 9588, targeting extensions to previously identified low grade BLEG Au anomalies.

Samples were collected at 100m intervals, along two, 400m spaced lines in the east, and two, 800m spaced lines in the west. A total of 48, B-horizon, soil samples, including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au and Ag, using BLEG method, and As, Cu, Zn, and Pb, using G400I method (Mottram, 1999).

Results from the soil sampling were again disappointing, failing to increase the length, width or tenor of the previously defined soil anomalies. The peak results returned were 2.7 ppb Au (Sample No. 191425, 8504105N : 753800E), from the east of the tenement, and 2.1 ppb Au (Sample No. 191405, 8503507N : 751000E), from the western area.

During 1999/2000 Arnhem Exploration Services completed an infill BLEG soil sampling program over both blocks of EL 9588,

Samples, consisting of approximately 4kg of soil, sieved to a -5 millimetre size fraction, were collected at 25m intervals and composited to 100m along three, 400m spaced lines, within the western block, and four, 200m spaced lines in the east. A total of 71, B-horizon, soil samples, including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au and Ag, using BLEG method, and Ag, As, Cu, Zn, and Pb, using G400M method.

The soil sampling program outlined a low tenor gold anomaly within the eastern block of the licence. The peak results returned were 6.7 ppb Au (Sample No. 182362, 8503286N : 754096E), and 4 ppb Au (Sample No. 182375, 8503087N : 754194E).

During 2000/01 Northern Gold N.L. conducted rock chip sampling and infill soil sampling programs over EL 9588.

Rock chip samples were collected from outcrop within the southwest of the licence. A total of 25, 2kg to 4kg samples (Sample Nos. GWR001 - GWR025) were submitted to North Australian Laboratories Pty. Ltd., in Pine Creek, for analysis of Au and As.
The results from the rock chip sampling program were generally disappointing, with a peak value of 0.65 ppm Au (Sample No. GWR004, 8503097N : 751075E).

The infill soil sampling program was completed within the west and southwest of the licence, targeting previously defined gold anomalism. This comprised a total of 25 BLEG samples from B horizon, comprising 4 kg of sieved soil, collected within the western block of the licence.

The peak results returned were 24 ppb Au (Sample No. GWSL025, 8502916N : 751149E), 28 ppb Au (Sample No. GWSL024, 8502960N : 750692E) and 38 ppb Au (Sample No. GWSL021, 8502965N : 750908E)

During 2001-2002 no field work was carried out. Work by Burnside Operations P/L focused on developing the Zapopan gold mine, located in MLN1139. There was extensive RC drilling at Mottrams and Chinese South prospects that lie on the Howley Anticline just east of EL9588.

During 2003 and 2004 the tenement was subjected to a remote sensing structural review.

5. **Exploration year ended December 8th 2005**

*Remote Sensing and Interpretation*

The main interpretation was carried out in 2004 and the 2005 update did not add much of interest apart from the recognition of a circular Landsat feature in the north west sector of the tenement. The relevance of this feature to gold mineralisation is not known. It may merely reflect the presence at depth of a blind granitic apophysis. See Fig. 2 (tenement setting). The update including reporting amounted to $1,050.00 for the year.

6. **Proposed Work Program 2006**

EL9588 is ranked low in the Burnside JV prospect list. It is at a relatively mature stage of exploration that has been unsuccessful in locating even moderate to strong gold anomalism. It is proposed that ground investigations including rock chip sampling be carried out in the north of the tenement and the circular feature be explained if possible. Following such a reconnaissance, it may be possible to reach a decision to either proceed with further exploration or to recommend a surrender of the ground.

A ground reconnaissance and review is costed at $1,500.00.
7. REFERENCES


