BURNSIDE OPERATIONS P/L

ANNUAL EXPLORATION REPORT
EL23541

“Howley East”

YEAR ENDING 16th February 2005

FENTON 1:50,000 SHEET

Distribution:-

1. DBIRD Darwin NT
2. Northern Gold NL Perth
3. Burnside Operations P/L Brocks Creek
4. Harmony Gold (Australia) Perth

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February 2005
SUMMARY

EL23541 is located 130km SE of Darwin, NT and 5km west of Brocks Creek siding on the Darwin-Adelaide railway.

The tenement is subject to the Burnside Joint Venture, managed by Burnside Operations P/L comprising Territory Goldfields NL and Buffalo Creek Mines NL. The latter are subsidiaries of Northern Gold NL and Harmony Gold (Australia) P/L respectively.

The licence encompasses a suite of metasedimentary rocks that are part of the Pine Creek Geosyncline sequence and lies between the gold mining centres of Brocks Creek and Cosmo Howley.

This is the second year following grant of the licence and the annual expenditure was set at $700.00.

The joint venture has been actively exploring the Burnside region since its formation on 4th April 2002. Work to date has been focused on establishing open pit resources through RC drilling at Princess Louise, North Point, (Yam Creek), Mottrams, Chinese South, , and Woolwonga.

Underground development and diamond drilling was carried out in 2003 at the Zapopan Mine. At Cosmo Howley the “Deeps” resource beneath the open pit was tested in 2004 by 12 diamond core holes followed by resource modelling that indicates a mineral resource containing 1 million ounces of gold is present.

Work on EL23541 has been subordinate to activity on other JV tenements as the emphasis has been on establishing gold resources at established mineralised prospects. The purchase of the Union Reefs mill in 2004 has given priority to the development of trucking ore with a view to possible start up in 2005. Expenditure on EL23541 during 2004 was related to geochemical database validation which is still in progress. Hard copy archive material at Brocks Creek office is being unpacked, sorted and shelved for review purposes. This work with reporting costs amounted to $850.00.

In terms of a forward program, work will continue on cleansing and validating the historic geochemical and drilling database covering the regional Burnside JV tenements. Work on EL23541 will comprise part of this objective and will enable a better understanding of the prospectivity of the ground using GIS software. This work is costed at $750.00.
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APPENDIX ONE Digital copy of this report and Figures.
1. INTRODUCTION

EL23541 (Howley East) was applied for to cover vacant ground east of the Cosmo Howley gold mineralised trend. The tenement comprising one graticular block has just completed its second anniversary.

The Burnside Joint Venturers comprising Buffalo Creek Mines NL and Territory Goldfields NL have joint ownership of several gold assets in the immediate area.

Since 4th April 2002 the joint venture has carried out extensive resource development drilling programs on joint venture tenements in the Burnside region and developed the Zapopan underground mine by decline in 2003. The Cosmo Deeps resource was drill tested in 2004.

This report deals with exploration activity carried out on EL23541 during the year ending 16th February 2005.

2. TENURE DETAILS

EL23541 was granted on 17th February 2003 and expires on 16th February 2009. It comprises one block that covers approximately 3.22sq. km.

It is registered in the names of Territory Goldfields NL and Buffalo Creek Mines NL in equal shares. It is unencumbered by third party tenements but is transected by the Stuart Highway. The area was previously explored as EL9658.

The expenditure covenant set for this second year was $700.00.

3. LOCATION AND ACCESS

EL23541 is situated 130km SE of Darwin NT and 5km SW of Brocks Creek siding on the Darwin-Alice Springs railway.

The Stuart Highway crosses the south west sector of the block and most areas of the tenement are thus easily accessible. The location may be seen on Figs. 1, 2, and 3.

The tenement falls on the Pine Creek 1:250,000 sheet and on the Fenton 1:50,000 sheet. It falls within Douglas pastoral lease.

Low subdued outcrops of siltstone and greywacke occur through much of the tenement which has good dry season access. The ephemeral headwaters of Howley Creek pass through the block.
4. GEOLOGICAL SETTING

4.1 Regional Geology

EL23540 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 locally significant inter-layered cherty 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, 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 ~1.84-1.80Ga. 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 Geosyncline 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. Dated at ~1740Ga (Sener 2004) the gold events post dated the Pine Creek Orogeny and Cullen intrusive events and has favoured suitable litho-structural sites in the biotite-hornfels contact facies.

4.2 Local Geology

The tenement encloses a sequence of South Alligator Group sediments that in broad terms lie on the north-eastern flank of the Howley Anticline, a regional upright arcuate fold with the eastern limb generally steeper than the western. Interpretations of airborne magnetics and SPOT imagery suggest that in the centre of the tenement a parasitic NW striking anticlinal axis is the site of a SW dipping? reverse fault.
Within the tenement the South Alligator Group is represented by low outcrops of Mt Bonnie Formation in the south west and Burrell Creek Formation in the north east. The contact between the two strikes about 40 degrees magnetic.

In addition to the interpreted grossly antiformal structure, further structural complexity is present in the form of strong NNW late stage accommodation faults that intersect 40 degree striking magnetic units.

The magnetic units appear to show the effects of crustal shortening with directed pressure from the SW creating imbricated SW dipping thrust slices of Mt Bonnie Fm and Burrell Creek Formation.

### 4.3 Mineralisation and Prospectivity

Data viewed to date suggest the tenement is poorly mineralised despite the presence of a favourable structural setting. At this point in time the author is not aware of mineralised occurrences within EL23541. The interpreted structural complexity with NNW faulting intersecting thrust slices of Mt Bonnie Formation and Burrell Creek Formation may be prospective. In addition, subtle NE striking cross fractures are believed to have been relevant in localising gold mineralisation at Cosmo Howley and Chinese South. Some of these fractures cross EL23541.

### 5. PREVIOUS EXPLORATION

Acacia Resources Ltd carried out reconnaissance mapping and soil sampling over the tenement (Highway Project) without locating significant anomalism.

The data held in the library at Brocks Creek office holds records relevant to the history of the tenement and acquired from Northern Gold NL and Dominion Mining Ltd records. Initial access to this data began in 2003.

Remote sensing reviews of airborne magnetic, radiometric and SPOT imagery led to a structural analysis that continued to be refined in 2004-05.

### 6. EXPLORATION DURING 2004

During 2003 and 2004 the regional focus of the Burnside joint venture was establishing and developing viable open pit and underground ores for the Brocks Creek mill through RC and diamond drilling programs. During August 2004 the JV acquired the Union Reef treatment facility and sold the Brocks Creek mill. Diamond drilling at the Cosmo Deeps resource in 2004, at a cost of $1.3 million, established a modelled mineral resource of over 1 million ounces of gold.

During the year work on EL23541 comprised geochemical database cleansing and validation which is still in progress. At Brocks Creek office regional hard copy archive
data is being unpacked, sorted and shelved. Together with report writing the cost of this work was $850.00.

7. **FORWARD PROGRAM 2005**

It is important to identify full details of previous exploration work in the tenement before embarking on significant new fieldwork. Completion of the regional geochemical database validation, supplemented by better access to archived material, will allow an advance in understanding of the property using appropriate GIS software. The relative merits of the tenement will then be established and exploration programs commensurate with this merit will be put forward. Geological traverses and rock chips are also recommended. The cost of this work is expected to be $750.00
8. REFERENCES
