BURNSIDE OPERATIONS P/L

ANNUAL EXPLORATION REPORT
YEAR ENDING 28th FEBRUARY 2005

FOUNTAIN HEAD

MLN 4, 206, 1020,1034

MCN 1172, 4785

Burnside (14/2-II) 1:50,000
Ban Ban (14/3-III) 1:50,000

Title Holder:- Territory Goldfields N.L.

Distribution

DBIRD Darwin NT

Northern Gold N.L Perth WA

Burnside Operations P/L Brocks Creek

Burnside Operations P/L Perth WA

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SUMMARY

The Fountain Head tenement group is centred 135km SE of Darwin, NT and 10km east of the Brocks Creek mine office, on the Ban Ban (14/3-III) and Burnside (14/2-II) 1:50,000 sheets.

Gold mineralisation is hosted by units of the Mount Bonnie Formation of the South Alligator Group and is associated with quartz-pyrite-arsenopyrite veins. These occur in dilatant zones in the axis of a major SE plunging asymmetric anticlinal fold.

Historically, an extended alluvial mining period was followed by trial open pit extraction under the management of Dominion Mining Limited in 1995. Modern exploration has consisted of trenching, RAB drilling, RC drilling, diamond drilling and resource estimates.

Following the formation of the Burnside Joint Venture on 4th April 2002, management was placed under Burnside Operations P/L. The Fountain Head deposits were subjected to a first pass review that allowed a relative ranking of its gold potential in the context of open pit resources close to Brocks Creek. It was recognised as being at the higher end of this ranking and that warranted further drill evaluation.

In the 2004 season a program of exploratory RC drilling was completed comprising 13 holes for an advance of 798m.

Expenditure on this drilling program, supplemented by database validation, reporting and modelling/interpretation was reported as $62,712.00

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1.0 INTRODUCTION

The Fountain Head Group tenements are part of the Burnside Joint Venture, formed in April 2002 between Territory Goldfields NL and Buffalo Creek Mines NL to explore for and treat gold deposits within a 30km radius of the Brocks Creek gold treatment plant. The Fountain Head mining centre has been the subject of historic alluvial and reef gold mining and was subjected to trial open pit mining in 1995. The main area of activity is held under MLN4.

This report deals with exploration activity reported for the year ended 28th February 2005. This work includes RC drilling and interpretation.

2.0 TENURE DETAILS

The Fountain Head tenement group comprises MLN4, 206, 1020, 1034, MCN 1172, and 4785. The total area covered is 879.67ha.

The tenements are registered in the name of Territory Goldfields N.L. and managed by Burnside Operations P/L on behalf of the Burnside Joint Venture. MCN1172 and MCN4785 are subject to applications for renewal.

Table 1 **Tenement Details**

Tenement	Granted	Expiry	Area (ha)
MLN 4	03/05/89	02/05/14	529.9
MLN 206	18/05/71	31/12/08	16.18
MLN 1020	15/10/90	02/05/14	12.04
MLN 1034	01/12/88	30/11/13	304.2
MCN 1172	28/02/89	31/12/03*	3.1
MCN 4785	17/03/95	31/12/04*	14.25

* Subject to renewal application.

3.0 LOCATION AND ACCESS

The tenement group is situated 135km SE of Darwin and 10km east of Brocks Creek. They lie on the Ban Ban (14/3-III) and Burnside (14/2-II) 1:50,000 sheets and are between latitudes 13°26’ south and 13°29’ south and longitudes 131°29’ east and 131°32’ east

The ground lies within Perpetual Pastoral Lease No. 1111, Ban Ban Springs, held by Ban Ban Springs Station Pty. Ltd.

Access is via the Stuart Highway to the Fountain Head/Grove Hill Road, and lies just north of the Darwin-Alice Springs railway reserve and the Brocks Creek access road. See Figures 1, 2.

4.0 GEOLOGY

4.1 Regional Geology

The Fountain Head mining centre 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 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 mineralisation at Fountain Head occurs within the upper units of the Mount Bonnie Formation, the uppermost division of the South Alligator Group. This comprises cyclic siltstone, mudstone and greywacke packages that have been metamorphosed to

greenschist facies. In the region of Fountain Head the stratigraphy is folded along axes that strike NW-SE and plunge to the SE at shallow angles.

Cottle in 1937 described the geology of the old Chinese workings in some detail. This work suggested to Dominion geologists a setting of a SSE striking anticline with variable limb dips and a faulted axis. Also that sheeted quartz vein stockworks occurred mainly in the axial zone with veins predominantly dipping northeast. They noted that the development of some saddle reefs occurs in the axial zone. It was reported that the Chinese miners preferentially worked thin, high grade veins in carbonaceous mudstones leaving the thicker, lower grade veins in greywacke.

Gold mineralisation is developed within the Fountain Head Anticline which is exposed in the face of a trial mining pit developed by Dominion in 1995. This fold is gently plunging, asymmetric and has a tight closure. It has a steeply dipping [~70 degrees] north east limb and a more gently dipping [50-65 degrees] south west limb. The hinge of the anticline plunges roughly 15 degrees towards 126 degrees at the pit, though regionally its plunges are 20 to 30 degrees SE.

In the local area of the defined resource, the fold axis plunges to both the NW and SE, with the mineralisation located at the culmination of a doubly plunging domal structure.

Mineralisation at Fountain Head is hosted by sub vertical shear related stockworks, fracture zones in greywackes and saddle reefs at lithological contacts. Most of the resource is in the hinge zone of the anticline with gold grade rapidly tapering off down dip on the limbs. Fracture zones within the hinge zone lie parallel to the axis of the fold and have acted as a locus for fluid channelling.

Broadly stratabound ore zones are the result of two styles of mineralisation. *Quartz stockworks* have formed only in competent greywacke units, where folding of the hinge zone and adjacent limbs has increased fracture permeability. *Saddle reefs* have commonly formed at the contact between greywacke and mudstone units, and are thickest in the hinge zone, tapering rapidly down the limbs.

The gold mineralisation is part of a quartz-pyrite-arsenopyrite mesothermal system that based on the SPOT image interpretation (Fig 3) the mineralised sector of the host anticline is structurally related to a NW striking fault system that is intersected by subtle NE striking fractures. The Glencoe mineralised system, 2,500m to the north of Fountain Head, lies on a parallel fault system also striking NW. Further NE again, the Woolwonga deposit is developed on a NW striking faulted anticlinal system.

5.0 PREVIOUS EXPLORATION

The discovery of a gold bearing quartz reef in **1883** was followed by intensive eluvial mining until 1886. Production in this period could have been up to 20,000oz. From **1886** small scale mining of individual quartz reefs and alluvial work was carried out for a total production of around 9,870oz up to 1936.

1985-1989 Zapopan NL carried out an alluvial/eluvial mining operation. Between July1987 and December 1989 they produced 10,104 ounces of gold from 825,187 loose cubic metres. In **1995** Dominion Mining Limited carried out trial open pit mining at Fountain Head (Potters Zone) to determine bulk performance at the Cosmo mill. (Van den Oever, 1995).

Modern exploration has consisted of 1,650m of trenching and 14,000m of RAB, RC and diamond drilling. This activity covered 1,200m strike of the mineralisation, and drill hole spacing locally attained 20m by 7.5m. Much of this early work was by Zapopan NL and Destiny Prospecting between 1982 and 1991, coincident with the alluvial mining period.

In **1993**, despite access to 14,000m of drilling data, Dominion, found the deposit to have a confusing complexity that was compounded by inconsistencies in the drilling database and azimuths. Their estimates of a mineable gold reserve was based on a gold price of $485/oz and totalled 149,691t @ 3.42g Au/t from a pit with a strip ratio of 13.1:1.

During **1996** Northern Gold NL completed a RAB drilling program over MLN 4 and MLN 1034, in order to identify areas of bedrock mineralisation associated with soil anomalism away from the historic producing areas. A total of 311 RAB drill holes were completed for 2,855m. The RAB drilling resulted in the collection of 1,428 samples, which were submitted to Assaycorp, in Pine Creek, for low level gold and arsenic analysis.

During the **1996** field season, Northern Gold N.L. completed an RC drilling program over MLNs 1034 and 4 for resource evaluation. Reverse circulation drilling was undertaken in order to determine the extent and style of bedrock mineralisation around the existing open cuts. A total of 49 RC drill holes were completed for a total of 4,850 metres. All drill hole locations were surveyed by Qasco Northern Surveys and Micro Survey on the local grid. The RC drilling program resulted in the collection of 4,850 samples, which were submitted to Assaycorp, in Pine Creek, for Fire Assay Au analysis. A total of 35 samples were re-split and sent to Amdel in Darwin (Glassock, 1997).

Four samples were composited from RC drill chips and where sent to Amtec in Perth for Metallurgical Test work.

Resource estimates were conducted using Gemcom software. The following is a report by M.Stokes.

Mineralised lenses were interpreted on each drill hole section, and located in 3D on relevant drill hole intersections. These intersections were connected to build a 3-D solid body within which most of the mineralisation is contained. This solid body was constructed to contain regions of geological similarity as well as continuity of mineralisation. Towards the west end of the deposit, the mineralisation occurs mostly as sub vertical veins. Towards the east the lode develops into a broad zone of mineralisation within the axial hinge zone of the Fountain Head Anticline.

Block modelling was carried out within the mineralised solid for measured and indicated resource categories. Blocks outside of the lode zones were interpolated as an inferred resource category. Estimation of the measured and indicated categories used only assay data from with the lode zone, whereas the inferred category used all assay data. Farrelly C, 1996 Report Northern Gold NL Ore Reserves Northern Gold NL Company report unpublished.

A top cut of 20 g/t Au was applied to all assays for modelling. Assay data has been collected from 1m intervals in all cases, except occasional samples collected near surface when collaring drill holes. A bulk density of 2.4 t/m^3 was used for material above 78.75 RL, and 2.65 below 78.75 RL. These values were used by Dominion Gold Mines Ltd when mining and treating ore from Fountain Head. Similarly, recovery data from Dominion has been used on face value, and is subject to independent verification.

A block model was defined using blocks 2.5m North by 5m East by 2.5m Vertical. The model was interpolated from 131.25 m RL to -38.75 m RL.

Grade estimation used ordinary kriging into the block model with varying searches for each category. Measured resources were defined within the lode zone by kriging with a search of 20m long strike, 3m across strike, and 20m vertical. Indicated resources used a search of 40m x 5m x 40m. Inferred resources used the same parameters as for inferred, but addressed those blocks outside the defined lode zone solid. The blocks comprising the model were divided into 36 separate domains prior to kriging. This division was based upon regions of similar dip and strike. Each domain was interpolated separately. The inferred resource material was interpolated by changing the target rock type field to that material outside the lodes zones. Results are as follows in Table 2.

Fountain Head Resource(Stokes 1996)

		Tonnes	g/t Au
Measured	>0.70 g/t	1,115,590	1.801
Indicated	>0.70 g/t	166,950	1.553
Inferred	>0.70 g/t	318,620	1.402
Resource Total		1,601,160	1.696
		Ounces =	87,294

In **1999-01** rehabilitation programs were carried out in compliance with the conditions of the Mining Act and the Mine Management Act. Drill holes within MLN 1034 were capped with concrete plugs and buried at a depth of 0.3 metres below surface level. No field work was reported during 2001.

In **2002-03** under the management of the Burnside JV, the gold resources were subjected to a technical review that ranked the Fountain Head leases relatively highly compared to others in the region known to contain gold resources.

The **2003-2004** year saw the area subjected to more detailed technical review and preliminary geological modelling to assist in resource definition drill planning. A semi-regional structural interpretation based on SPOT imagery was completed.

6.0 EXPLORATION Year Ending 28th February 2005

Following on from the modelling and planning in 2003-2004 an RC drilling program was budgeted and implemented in mid 2004. A total of 13 holes were completed for an advance of 798m.

The drilling, contracted to Tightline Drilling P/L, was designed to infill and extend the existing resource definition drill pattern beneath and along strike from the trial pit. It has added confidence to the design pit shells that have been optimised for the deposit during 2004. In addition, some outlying interceptss in the NW open up the possibility of expanding the resource base beyond the present designs.

The following table sets out the statistics of the year's RC program at Fountain Head.

Table 2 Fountain Head RC Program 2004

Hole ID	*Depth m*	*Local E*	*Local N*	*RL*	*Collar Dip*	*Azimuth (mag. N)*
FHR-9801	*78*	*9693.875*	*10003.88*	*1118.863*	*-55*	*215.0*
FHR-9802	*72*	*9789.661*	*10042.17*	*1106.854*	*-65.5*	*217.0*
FHR-9803	*114*	*9809.592*	*10069.96*	*1113.676*	*-57.5*	*212.0*
FHR-9804	*42*	*9809.807*	*9961.152*	*1109.252*	*-55*	*036.0*
FHR-9805	*72*	*9854.908*	*10020.90*	*1103.705*	*-59.3*	*214.5*
FHR-9806	*42*	*9854.991*	*9953.098*	*1108.346*	*-57.3*	*043.5*
FHR-9807	*66*	*9869.706*	*10001.62*	*1001.610*	*-58.5*	*216.0*
FHR-9808	*54*	*9889.716*	*9991.371*	*1103.021*	*-54*	*216.0*
FHR-9809	*36*	*9889.816*	*9932.081*	*1111.362*	*-64*	*034.5*
FHR-9810	*48*	*9969.974*	*9933.599*	*1111.348*	*-66.5*	*036.0*
FHR-9811	*42*	*9991.118*	*9975.368*	*1106.554*	*-65.5*	*218.0*
FHR-9813	*60*	*10009.96*	*9990.404*	*1103.082*	*-58*	*214.0*
FHR-9814	*72*	*10009.68*	*9957.396*	*1105.964*	*-61.3*	*211.0*
Total	*798*					

Correction on magnetic azimuth to grid N azimuth is deduct 35.5 from mag. value. Collar azimuth and dip taken at 10m, bottom of hole readings also taken.

Samples were riffle split single metres to 2.5kg in calico bags. Dried, crushed, pulverised and assayed at Pine Creek (NAL) by fire assay, AAS finish, on 50g catchweight, detection limit 0.01ppm Au. Other elements were not determined.

Check samples and repeats were inserted routinely. The full set of drill and assay logs may be seen in digital format using the enclosed CD-ROM. The samples were logged for lithology, vein, weathering, sulphide, alteration, down hole survey and collar.

Interpretation, modelling and pit shell optimisation were still in progress at the end of the report period. Optimisation takes into account the requirement to mine, haul and treat ores at the joint venture's Union Reef treatment facility. The latter was purchased in August 2004 and coincided with the sale of the smaller and older Brocks Creek plant to Tanami Gold NL.

7.0 EXPENDITURE STATEMENT YE FEBRUARY 28TH 2005

Exploration expenditure during the year ended February 28th 2005 was as follows:

Salaries and Wages	$13,650.00
Consultants, Contractors	$ 6,088.00
Assays	$10,374.00
RC Drilling	$32,600.00
Total	**$62,712.00**

8.0 PROPOSED EXPLORATION 2005-06

During 2005-2006 it is anticipated that mining studies will be completed on the known resource at Fountain Head.

Further exploratory and resource definition drilling is warranted to extend the potential size of future mining operations. It is expected that several holes will be completed in the period. The cost of mining studies and RC drilling is estimated at $20,000.

9.0 REFERENCES

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