ANNUAL EXPLORATION REPORT
MCN 4902 - 4905, MCN 4907

YEAR ENDING 7TH OCTOBER 2002

Ban Ban (14/3-III) 1:50,000
Burrundie (14/6-IV) 1:50,000

Title Holder:- R. M. Biddlecombe (80%) and Territory Goldfields N.L. (20%)

Compiled by John Shaw
October 2002

Distribution
1. Mines Department NT
2. Northern Gold N.L Perth WA
3. Burnside Operations P/L Brocks Creek
4. R. M. Biddlecombe
MCNs 4902 - 4905 and 4907 are located at the Yam Creek locality, 140 km SSE of Darwin, on the Ban Ban (14/3-III) and Burrundie (14/6-IV) 1:50,000 sheets.

Yam Creek was one of the earliest and most significant gold mining areas in the Northern Territory. The first bedrock discovery, the Priscilla Reef, was found in 1872. This was followed by a period of intense reef and alluvial mining activity, which continued until the early twentieth century.

MCNs 4902 - 4905 were originally granted to Dominion Gold Operations Pty. Ltd. on the 8th of October 1996. The tenements were transferred to R. M. Biddlecombe (80%) and Territory Goldfields N.L. (20%) on the 16th of October 1996.

MCN 4907 was granted to R. M. Biddlecombe on the 3rd of August 1995.

Territory Goldfields N.L. and R. M. Biddlecombe entered into an option agreement over MCNs 4902 - 4905 and 4907 on the 16th of October 1996.

Northern Gold N.L. carried out digital terrain modelling, airborne magnetic interpretation and ground geological reconnaissances to evaluate the prospectivity of the tenements.

During April 2002 the tenement holders and Northern Gold NL entered into a joint venture with Buffalo Creek Mines Pty Ltd that merged selected assets within a 30km radius of the Brocks Creek gold treatment plant. The objective of the agreement was to explore for gold resources and treat them at the Brocks Creek Mill. The Fountain Head South tenements were included in the joint venture.

MCNs 4902-4905 and 4907 have been subjected to part of the overall gold asset review of the merged joint venture project area. No field work has been carried out on the tenements in the current year, however underground mining is proceeding at the Zapopan gold deposit at Brocks Creek as the first step in re commissioning the Brocks Creek Mill. The gold prospectivity of the tenements will be ranked during the coming year under the management of Burnside Operations Pty Ltd.
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Figure 1  Tenement Location Diagram
1.0 INTRODUCTION

MCNs 4902 - 4905 and 4907 are located 140 km SSE of Darwin, on the Ban Ban (14/3-III) and Burrundie (14/6-IV) 1:50,000 sheets.

The tenements are situated within the historic Fountain Head and Sandy Creek gold mining areas adjacent to the Yam Creek centre and have a group reporting status.

The title holders entered into a joint venture agreement in April 2002 that places the tenements under the management of Burnside Operations P/L. The Burnside Joint Venture jointly owns the Brocks Creek gold treatment facility between 11km and 14km to the WNW.

The joint venturers plan to review the group tenements to establish their ranking within the overall joint venture ground that covers a radius of 30km from the mill.

2.0 TENEMENT DETAILS

MCNs 4902 - 4905 and 4907 cover an area totaling 107 hectares and lie between latitudes 13°29’ south and 13°33’ south and longitudes 131°30’30” east and 131°32’30” east (Figure 1).

They are enclosed by Pastoral Lease No. 903, Douglas, held by Tovehead Pty. Ltd.

Access to the mineral claims is well served via the Stuart Highway thence northwards on the Fountain Head or Grove Hill roads and along station tracks.

MCNs 4902 - 4905 were originally granted to Dominion Gold Operations Pty. Ltd. on the 8th of October 1996 for a period expiring on the 31st of December 2005. The mineral claims were subsequently transferred to R. M. Biddlecombe (80%) and Territory Goldfields N.L. (20%) on the 16th of October 1996.

MCN 4907 was granted to R. M. Biddlecombe on the 3rd of August 1995 for a period expiring on the 31st of December 1999. The licence was subsequently renewed for a period expiring on the 31st of December, 2003.

Territory Goldfields N.L. and R. M. Biddlecombe entered into an option agreement over MCNs 4902 - 4905 and 4907 on the 16th of October 1996. The tenements were included in the Burnside Joint Venture in April 2002 and presently are managed by Burnside Operations Pty Ltd.
3.0 GEOLOGICAL SETTING

The tenements are situated within the Pine Creek Geosyncline, a Lower Proterozoic basin comprising mainly pelitic and psammitic sediments with interlayered tuff and flow units. Sills of the Zamu Dolerite intruded the older formations and were folded with the sediments. The sequence is tightly folded along north westerly to north trending fold axes and major faults are on NW and NE trends.

All the lithologies in the area have been metamorphosed to greenschist, and in places, medium grade, biotite-amphibolite metamorphic assemblages under compression and the thermal effects of late syn to post-orogenic Proterozoic granitoids.

Younger, less deformed Middle to Upper Proterozoic clastic rocks and volcanics unconformably overlie the older Groups. Cambrian plateau basalt and sediments as well as Cretaceous sediments may onlap the older rocks. Cainozoic duricrusts and alluvial deposits in river drainages obscure bedrock in many areas.

Locally, within the mineral claims, sediments of the Koolpin Formation, Gerowie Tuff and Mount Bonnie Formations have been intruded by Zamu Dolerite. The Mt Bonnie Formation is overlain by flysch sedimentation of the Burrell Creek Formation. Faulting on north east to north trends has offset the sequence and generated a favourable structural setting for gold mineralisation. See Figure 1.

4.0 PREVIOUS EXPLORATION

The Yam Creek region was one of the most significant early bedrock and alluvial gold mining areas in the Northern Territory. The first significant reef gold discovery, the Priscilla Reef, was made in 1872. This was followed by a period of intense reef and alluvial mining activity, that continued until the early twentieth century and since then when gold prices have been favourable.

The district was famous for its gold nuggets, the largest being 700 ounces (22.5 kilograms). The alluvial deposits in the North Point area were worked by Chinese miners late last century.

<table>
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<th>Tenement ID</th>
<th>Grant date</th>
<th>Expiry date</th>
<th>Area hectares</th>
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<td>MCN 4907</td>
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<td>31-12-03</td>
<td>37</td>
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</table>
In the Sandy Creek region, it was discovered that the gold mineralisation occurs predominantly in ladder quartz veins and stockworks hosted by Zamu Dolerite.

**During 1996/97** Northern Gold N.L. completed a work program based on digital data acquisition and enhancement. Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping and site visits, to determine the best method of exploration to be used.

GIS software and satellite imagery were used to identify soil types, their distribution and to interpret the structural geology of the region.

**During 1997/98** Northern Gold N.L. completed a work program involving magnetic data interpretation, and digital terrain modelling. The data was used in conjunction with aerial mapping and previous digital data interpretations.

The results of the geophysics were used primarily as imaged processed data for regional interpretation of exploration concepts. A contour map, showing the slope vectors of the terrain, was also compiled.

No work was reported between 1998 and 2000, however during 2000 to 2001 the data was further reviewed as part of a target ranking generation exercise. A series of field inspections and reconnaissances were included.

**During 2001-2002** the Burnside Joint Venture took over management of the tenements as part of a comprehensive district coverage. The tenements were reviewed as part of the Yam Creek, Fountain Head and Sandy Creek-Golden Dyke groups of prospects.

Expenditure is estimated to total $1,200 for geological time, computer, travel and support services.

### 5.0 FORWARD EXPLORATION PROGRAM

Underground mining has commenced at the Zapopan deposit near Brocks Creek. The mill is being refurbished to treat Zapopan ores as well as open pit ores from the surrounding district. Drilling has been carried out in recent months at the Princess Louise prospect and North Point near Yam Creek as part of the resource development exercise. MCNs 4902-4905 and MCN 5907 will be included as part of the greater Yam Creek resource potential evaluation during 2002-2003.

Expenditure on the group of tenements is anticipated to be $2,200 for the year.

This will comprise geological reconnaissance, rock chip sampling and structural interpretation.
6.0 REFERENCES


