



Northern Gold NL

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**MLNs 4, 206, 1020 and 1034, MCNs 1172 and
MCN 4785**

1998/99 Annual Report

to 28th February 1999

**Burnside (14/2-II) 1:50,000 scale and
Ban Ban (14/3-III) 1:50,000 scale map sheets**

**Title Holder:- Territory Goldfields N.L.
Managed by:- Northern Gold N.L.**

CR 99 / 134

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NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office

SUMMARY

MLN's 4, 206, 1020, 1034 and MCNs 1172 and 4785 are located approximately 20 kilometres north - east of the Burnside plant site, on the Ban Ban (14/3-III) 1:50,000 scale and Burnside (14/2-II) 1:50,000 scale map sheets.

The gold mineralisation at Fountain Head occurs within units of the Mount Bonnie Formation of the South Alligator Group. The gold mineralisation occurs as a quartz-pyrite-arsenopyrite vein infill in dilatant zones in the apex of small scale anticlinal folds associated with the Fountain Head Anticline.

Exploration in recent years has consisted of trenching, RAB drilling, RC drilling, diamond drilling, resource calculations and trial mining.

No field work was completed over the Fountain Head tenements during the 1998 exploration season. All data has been reviewed and discussions are currently under way with a prospective joint venture partner.

Further RC drilling is required within the Fountain Head tenements to increase the resource potential.

The expenditure during the 1998 field season totalled \$1,810.

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1.0 INTRODUCTION

MLN's 4, 206, 1020, 1034 and MCNs 1172 and 4785 are located approximately 20 kilometres north - east of the Burnside plant site, on the Ban Ban (14/3-III) 1:50,000 scale and Burnside (14/2-II) 1:50,000 scale map sheets. The mineral claims lie between latitudes 13°26' south and 13°29' south and longitudes 131°29' east and 131°32' east (Figure 1). The tenements are situated within Perpetual Pastoral Lease No. 1111, Ban Ban Springs, held by Ban Ban Springs Station Pty. Ltd.

Access is via the Fountain Head/Grove Hill road, and the old Cosmo Howley haul road.

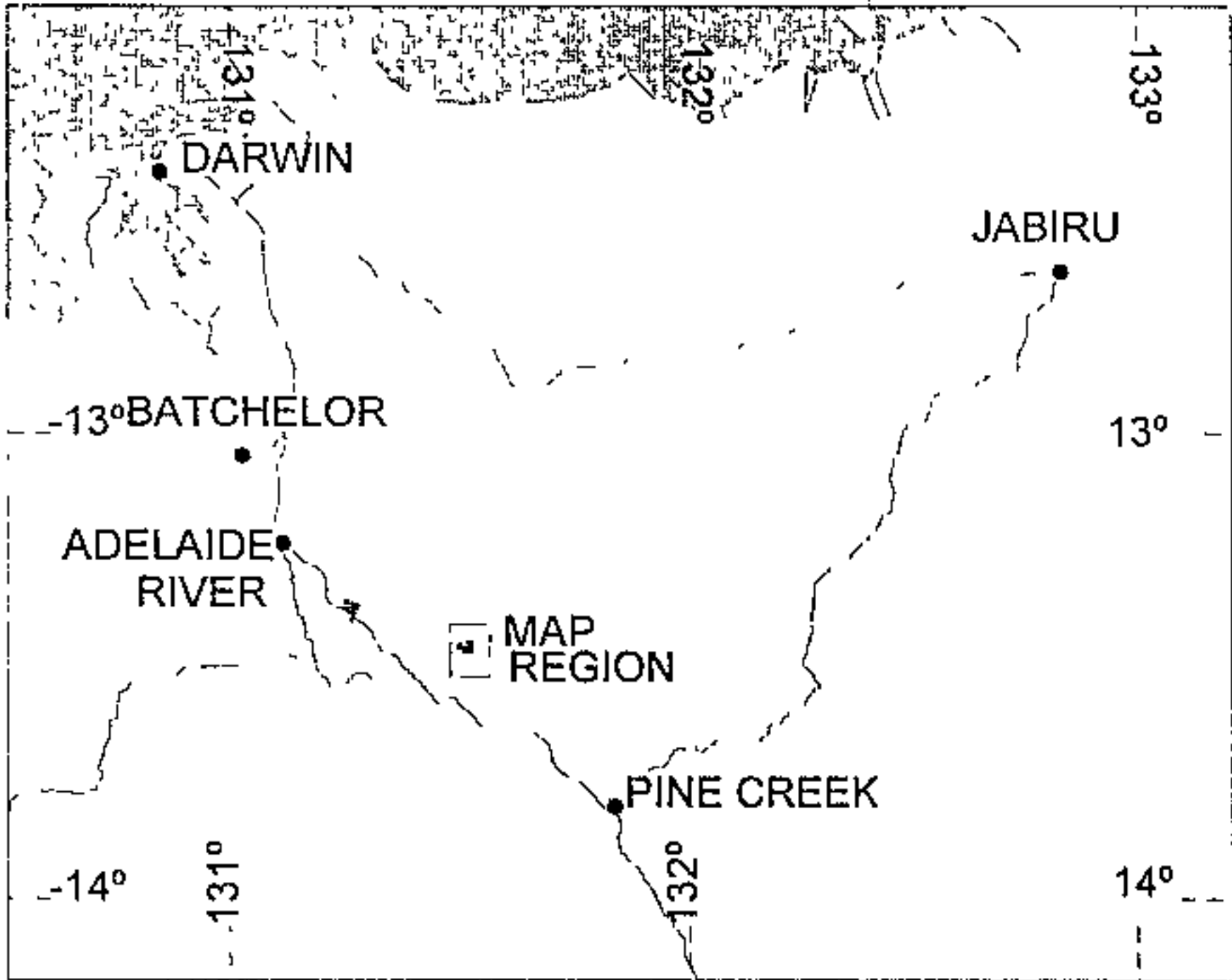
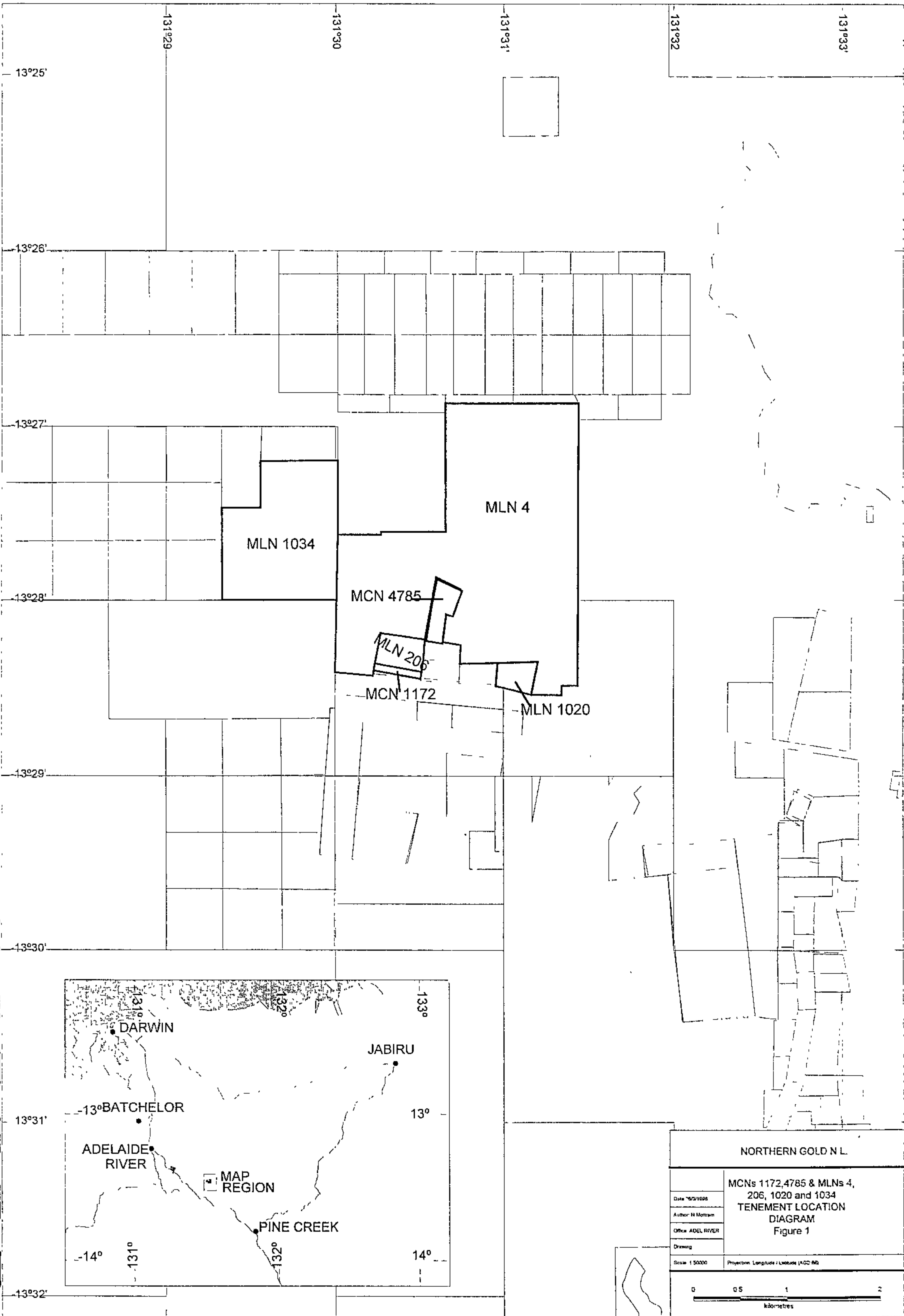
The mineral claim and lease details are listed below in Table 1. The tenements are held by Territory Goldfields N.L. and managed by Northern Gold N.L.

Table 1 Mineral Claim and Lease Details

Tenement	Granted	Expiry	Renewal Application
MLN 4	03/05/89	02/05/2014	-
MLN 206	18/05/71	31/12/97	26/09/97
MLN 1020	15/10/90	02/05/2014	-
MLN 1034	01/12/88	30/11/2013	-
MCN 1172	28/02/89	31/12/97	26/09/97
MCN 4785	17/03/95	31/12/2000	-

Discussions are currently under way with a prospective joint venture partner.

The expenditure during the 1998 field season totalled \$1,810.



NORTHERN GOLD N L	
Date 16/5/1006	MCNs 1172, 4785 & MLNs 4, 206, 1020 and 1034 TENEMENT LOCATION DIAGRAM Figure 1
Author: N. Morrison	
Office: ADEL RIVER	
Drawing	
Scale: 1:50000	Projection: Longitude / Latitude (AGC 60)

2.0 GEOLOGY

2.1 Regional Geology

The mineral claims and leases are situated within the Pine Creek Geosyncline, a tightly to isoclinally folded sequence of mainly pelitic and psammitic Lower Proterozoic sediments with interlayered tuff units. All the lithologies in the area have been metamorphosed to low, and in places, medium grade, metamorphic assemblages. For the purpose of this report, the prefix meta- is implied, but omitted from the rock names and descriptions.

The sequence has been intruded by pre-orogenic dolerite sills of the Zamu Dolerite and a large number of late syn-orogenic to post-orogenic Proterozoic granitoids. Largely undeformed Middle and Late Proterozoic, Palaeozoic and Mesozoic strata, as well as Cainozoic sediments and laterites, overly the Pine Creek Geosyncline.

2.2 Local Geology

The mineralisation at Fountain Head occurs within units of the Mount Bonnie Formation of the South Alligator Group. Gold mineralisation occurs within the north-western and south-eastern limbs of the north north - west trending Fountain Head Anticline. The area of mineralisation has been drilled on a local grid orientated north - west to south - east. The north-western limb as seen on a regional scale is the north limb on the local grid.

The deposit occurs within a complex structurally controlled system of mineralised quartz veins, which appears largely restricted to the southern limb and hinge zone of the anticline. There is little or no dissemination of the mineralisation into the host rock. A correlation exists between quartz veining and gold grade on the drill hole sections for which lithological data is available.

The gold mineralisation occurs as a quartz-pyrite-arsenopyrite vein infill in dilatant zones in the apex of small scale anticlinal folds associated with the Fountain Head Anticline.

3.0 PREVIOUS EXPLORATION

Discovery of a gold bearing quartz reef in 1886 was followed by production of 9,870 ounces of gold from mostly alluvial sources up until 1936. Zapopan carried out an alluvial operation between 1985 and 1989, producing 10,104 ounces of gold from 825,187 cubic metres (Russell, 1990).

Exploration in recent years has consisted of 1,650 m of trenching, 14,000 m of RAB, RC and diamond drilling. This activity covered 1,200 m of strike of the mineralisation, and drill hole frequency reached 20m strike spacing, and down to 7.5m across strike. The deposit occurs within a complex structurally controlled system of mineralised quartz veins, which appears largely restricted to the southern limb and hinge zone of the anticline. There is little or no dissemination of the mineralisation into the host rock. A correlation between quartz veining and gold grade may be seen on the drill hole sections for which lithological data is available (Glassock, 1997).

Dominion Mining Limited carried out a trial mining exercise at Fountain Head in 1995 (Van den Oever, 1995).

A RAB drilling program was completed over MLN 4 and MLN 1034, during 1996, in order to identify areas of bedrock mineralisation away from the existing pits and showing anomalous soil results. A total of 311 RAB drill holes were completed for 2,855 metres. 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 (Glassock, 1997).

During the 1996 field season, Northern Gold N.L. completed an RC drilling program over MLN's 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 were sent to Amtec in Perth for Metallurgical Test work (Glassock, 1997).

Resource calculations were conducted using Gemcom Software (Glassock, 1997).

4.0 1998 EXPLORATION COMPLETED

No field work was completed over the Fountain Head tenements during the 1998 exploration season. All data has been reviewed and discussions are currently under way with a prospective joint venture partner.

5.0 1998 EXPENDITURE

The expenditure over MLN 4, MLN 206, MLN 1020, MLN 1034, MCN 1172 and MCN 4785 during the 1998 year of tenure totalled \$1,810. Details of this expenditure are listed below in Table 2.

Table 2 1998 Fountain Head Mineral Claim and Lease Expenditure

<u>COSTS</u>	<u>AMOUNT</u>
Report Compilation	195
Tenement Management	290
Data Review	310
Stationary & Office Expenses	20
Computing	25
Motor Vehicle Expenses and Fuel	80
Salaries and Wages	590
Subtotal	1,510
Administration @ 20%	300
TOTAL	<u>\$1,810</u>

6.0 1999 PROPOSED WORK PROGRAM

The proposed work program for the 1999 year of tenure will comprise RC drilling programs within the project area.

An estimation of the cost of these programs is \$6,000.

7.0 REFERENCES

GLASSOCK, M., (1997). MLN 4 & MLN 1034, Fountain Head, 1996 Annual Report to 28th February 1997. Unpublished report by Northern Gold N.L. for the NTDME.

RUSSELL, R., (1990). Howley Alluvial Mining Project. Geological Background and Exploration History 1986 to 1990. Metana Minerals N.L.

VAN DEN OEVER, P., (1995). Fountain Head Trial Pit Report May 1995. Unpublished Dominion Gold Operations Pty. Ltd. internal report.