Northern Gold NL

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EL 8744

1999/2000 ANNUAL REPORT

08/09/99 to 07/09/00

Mount Bundey (8/6-III) 1:50,000 scale map sheet

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

September 2000

Distribution

NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office

Compiled by:-

N. Mottram

Essential Data Services, W.A.

SUMMARY

EL 8744 is located approximately 60 kilometres northeast of Adelaide River on the Mary River 1:100,000 scale map sheet and the Mount Bundey (8/6-III) 1:50,000 scale map sheet.

The area is dominated by Lower Proterozoic metasediments of the Burrell Creek and Mount Bonnie Formations.

In 1994, Dominion Gold Operations Pty. Ltd. carried out a program of RAB drilling to test weathered bedrock. Fifteen holes were drilled to depths of up to 7 metres for a total of 59 metres. Northern Gold N.L. completed work programs involving a comprehensive literature review, digital data acquisition and manipulation, stream sediment sampling, rock chip sampling and soil sampling, from 1995 to 1999.

The licence, consisting of two blocks, six square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 8th of September, 1994, for a period of three years. Territory Goldfields N.L., which is managed by Northern Gold N.L., acquired the tenement in May, 1995. A waiver of reduction was granted over EL 8744 on the 13th of November, 1996, enabling two blocks to be retained until the 7th of September, 1997. The licence was renewed in January, 2000, for a period expiring on the 7th September, 2001

During the 1999/2000 field season, Northern Gold N.L. completed soil sampling over EL 8744. Samples were collected at 40, 80 and 100 metre intervals along eight lines. A total of 133, B-horizon, soil samples, including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn.

The peak results returned were 194 ppb Au (Sample No. 195439, 8570342.8N : 774094E) and 179 ppb Au (Repeat Analysis, Sample No. 195449, 8569548.8N : 773406E), from the western portion of the licence.

Further soil sampling, rock chip sampling, RAB drilling, geological mapping and modelling of aeromagnetic data is required over the western portion of the licence, to better define the source of the gold anomalism.

The covenant for the 1999/2000 year of tenure was $14,000 and the expenditure totalled $17,795.

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1.0 INTRODUCTION

EL 8744 is located approximately 60 kilometres northeast of Adelaide River on the Mary River 1:100,000 scale map sheet and the Mount Bundey (8/6-III) 1:50,000 scale map sheet. The licence consists of two graticular blocks, 6 square kilometres in area, lying between latitudes 12°55' south and 12°56' south and longitudes 131°31' east and 131°33' east (Figure 1). EL 8744 is situated within Perpetual Pastoral Lease 1144, Mount Bundey Station, held by B. F. Coulter and Lawnhold Pty. Ltd.

Access is via the Arnhem Highway to Mary River Roadhouse, then via pastoral tracks to the area.

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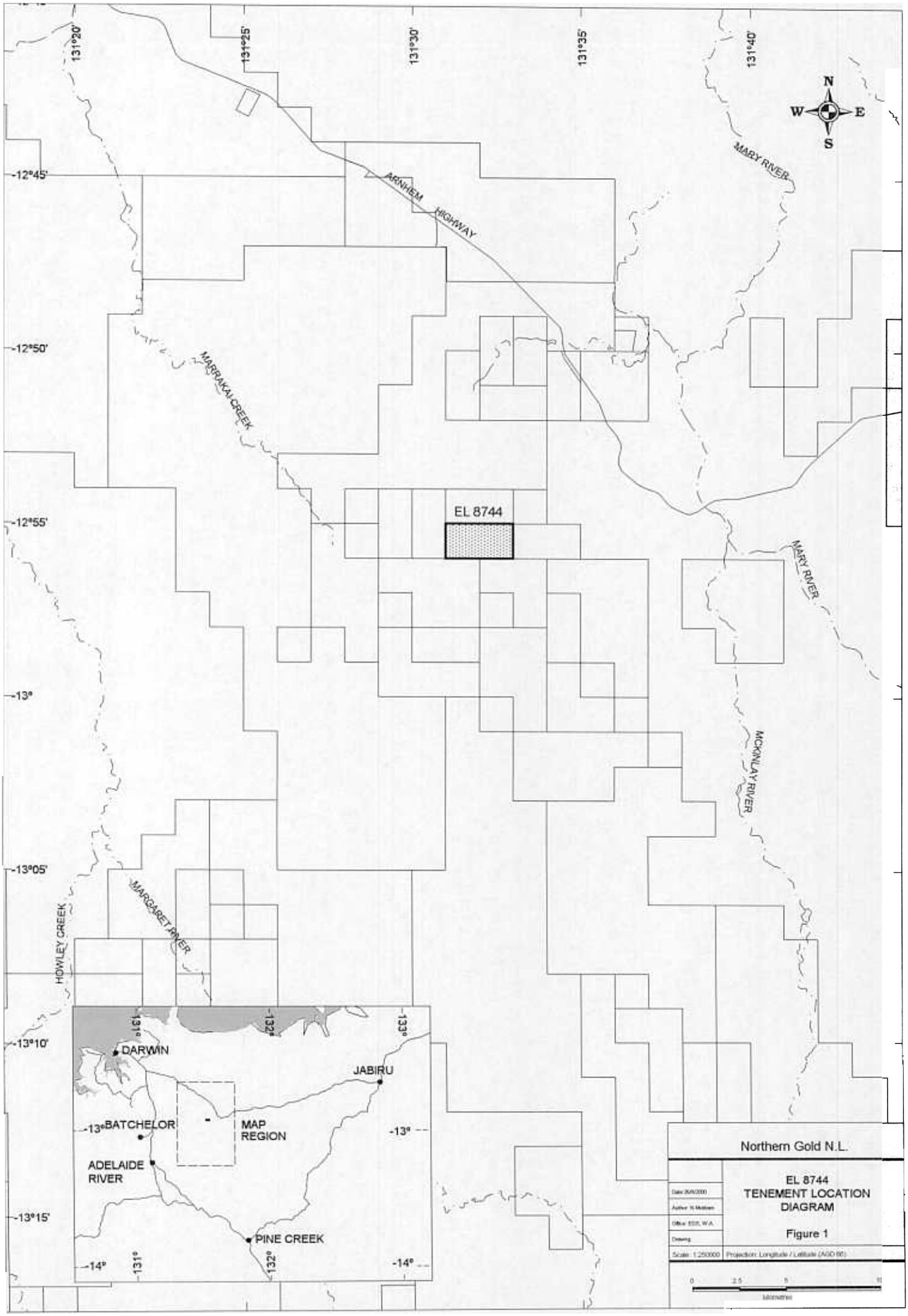

131°20'
131°25'
131°30'
131°35'
131°40'
N
W
E
S
-12°45'
-12°50'
-12°55'
-13°
-13°05'
-13°10'
-13°15'
ARNHEM HIGHWAY
MARY RIVER
MARRAKAI CREEK
EL 8744
MARY RIVER
MCKINLAY RIVER
MARGARET RIVER
HOWLEY CREEK
131°
132°
133°
DARWIN
JABIRU
-13°
BATCHELOR
MAP REGION
ADELAIDE RIVER
PINE CREEK
-14°
131°
132°
-14°
Northern Gold N.L.
EL 8744
TENEMENT LOCATION DIAGRAM
Figure 1
Date: 30/6/2000
Author: N.Mottram
Office: EDP, W.A.
Drawing:
Scale: 1:250000
Projection: Longitude / Latitude (AGD 66)
0
2.5
5
10
kilometres

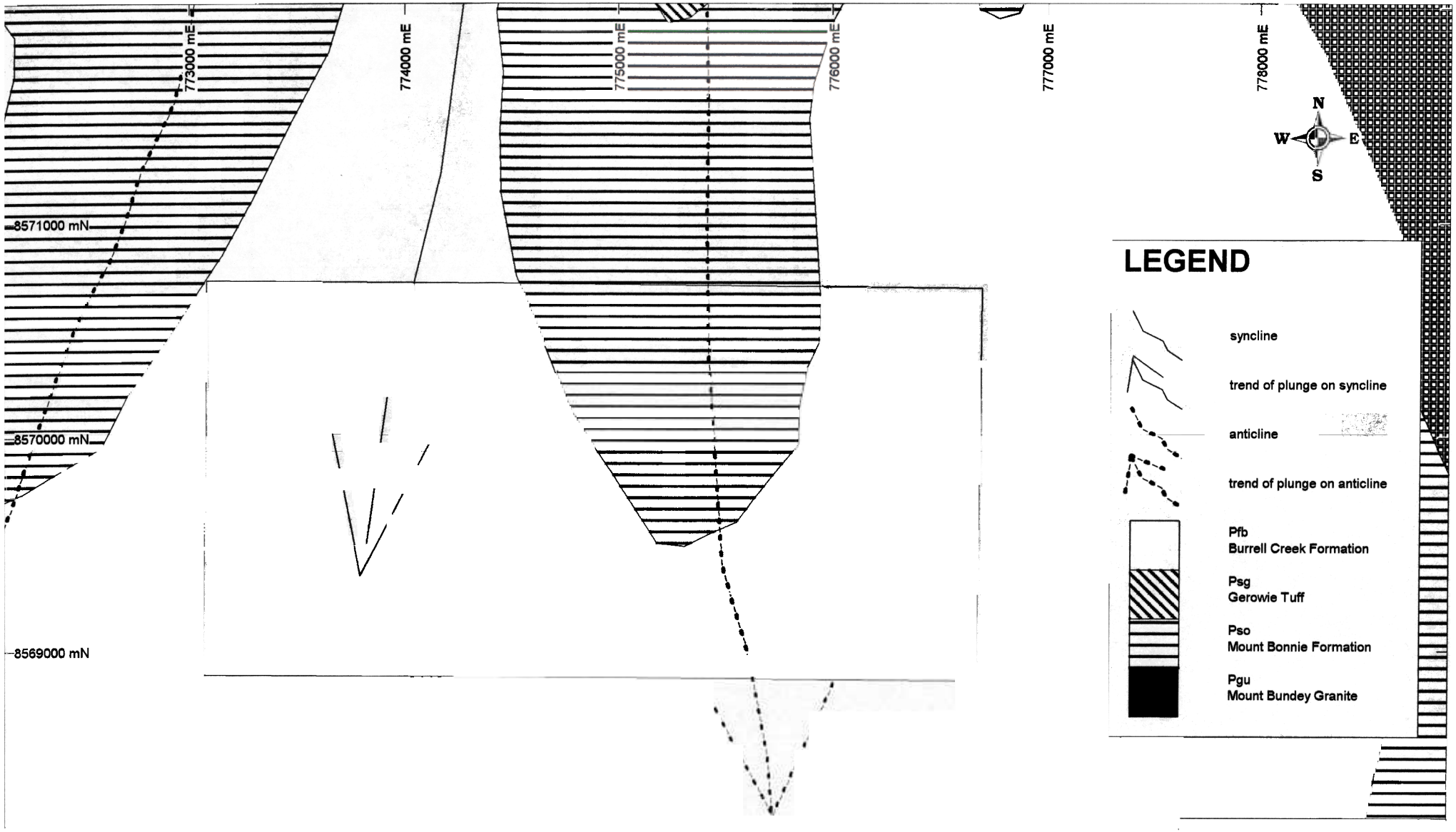
2.0 GEOLOGY

2.1 Regional Geology

EL 8744 is 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 purposes of this report the prefix meta is implied, but omitted, from rock names and descriptions. The sequence has been intruded by pre-orogenic dolerite sills of the Zamu Dolerite and a 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 laterite overlie the Pine Creek Geosyncline lithologies (Socic, 1997).

2.2 Local Geology

EL 8744 is dominated by greywacke and siltstone of the Burrell Creek Formation (Socic, 1997). Mount Bonnie Formation sediments outcrop along a north - south trending anticlinal fold structure within the eastern block of the tenement (Figure 2).



Northern Gold N.L.

	EL 8744
Date:25/9/2000	LOCAL GEOLOGY
Author: N.Mottram	
Office: EDS, W.A.	Figure 2
Drawing:	
Scale: 1:25000	Projection: AMG Zone 52 (AGD 66)

0 250 500 1000
metres

3.0 PREVIOUS EXPLORATION

In 1994, Dominion Gold Operations Pty. Ltd. carried out a program of RAB drilling to test weathered bedrock. Fifteen holes were drilled to depths of up to 7 metres for a total of 59 metres. Samples were collected from the lower 1-2 metres of each hole and submitted to Amdel, Darwin for analysis of Au, Cu, Pb, Zn, Ag, As, Bi, Fe, and Mn (Fawcett, 1995). The results obtained were disappointing, with the highest result returned being 7 ppb Au from hole number 94RRVR426, sample number G40529 (8576780N : 774800E).

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation during the 1995/96 exploration season. 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 on the licence. GIS and satellite imagery were used to log soil types and to interpret the structural geology of the region (Socic, 1996).

During the 1996/97 field season, Northern Gold N.L. completed a regional soil sampling program and an infill MMI geochemical soil sampling program over EL 8744 (Socic, 1997).

A regional soil sampling program was completed over both blocks of EL 8744, targeting south striking, regional anticlinal fold structures. Approximately 2 kilograms of soil, sieved to a -6 millimetre size fraction, was collected at 25 metre intervals and composited to 100 metres along five lines, 3,600 metres in length and spaced 400 metres apart. A total of 189 samples, including duplicates, were collected and submitted to Assaycorp, in Pine Creek, for Au, As, Cu, Zn, and Pb analysis. The regional soil sampling identified elevated soil gold values ranging from 3 to 19 ppb Au over a distance of 1,200 metres and width 1,000 metres. No base metal anomalism was returned from the soil sampling (Socic, 1997).

A comprehensive infill MMI soil sampling program was completed over the regional gold soil anomaly. Approximately 500 grams of soil, sieved to a -6 millimetre size fraction, was collected every 20 metres along seven 200 metre spaced lines. A total of 429 samples, including duplicates, were collected and submitted to Amdel Laboratories, in Adelaide, for WAMTECH partial digest A (Cu, Pb, Zn and Cd), and WAMTECH partial digest B (Au, Ag, Co, Ni and Pd) analysis. The infill sampling reproduced the south - west to north - east trending gold anomaly outlined by the regional soil sampling program. The MMI program also outlined coincident base metal anomalism (Socic, 1997).

During the 1997/98 exploration season, Northern Gold N.L. completed a comprehensive literature review, infill soil sampling, MMI geochemical soil

sampling, stream sediment sampling and rock chip sampling over EL 8744 (Mottram, 1998).

A comprehensive literature review, aimed at evaluating the uranium mineralisation potential within project areas held and managed by Northern Gold N.L., was completed at the Northern Territory Department of Mines and Energy, during the 1997/98 exploration season (Mottram, 1998).

The infill soil sampling program was carried out over the western block of the licence. Samples were collected from a depth of approximately 0.5 metres at 80 metre intervals, along three 600 metre spaced lines. A total of 29 samples were submitted to Assaycorp, in Pine Creek, for analysis of Au, using FALL method, and Ag, As, Cu, Pb and Zn, using G400M method. The program returned values of 110 ppb Au (Sample No. 189234, 8570540.0N : 774096E) and 139 ppb Au (Sample No. 189301, 8569947N : 773470E). This work is reported in Mottram 1998.

The MMI geochemical soil sampling program was carried out in conjunction with the infill soil program. Samples were collected from a depth of approximately 0.5 metres at 80 metre intervals, along three 600 metre spaced lines. A total of 25 samples were submitted to Amdel, in Adelaide, for WAM B Au, Ag, As, Ni, Co and Pd MMI analysis. The results from the MMI geochemical soil sampling program were generally disappointing, with a peak result of 1.9 ppb Au (Sample No. 189275, 8569942.6N : 773910E) being returned (Mottram, 1998).

A total of 12 stream sediment samples were collected. Six regional stream sediment samples were submitted to Assaycorp, in Pine Creek, for analysis of Au and Ag, using BLEG technique, and As, Cu, Pb and Zn, using G300I method, and six samples were submitted to Amdel, in Adelaide, for WAM B Au, Ag, Ni, Co and Pd MMI analysis. The peak results returned from the regional stream sediment samples were 536 ppb Au (Sample No. 189255, 8569300N : 773120E) and 236 ppb Au (Sample No. 189256, 8569180N : 773230E). The highest results returned from the samples analysed using MMI analysis were 29.6 ppb Au (Sample No. 189287, 8569300N : 773120E) and 15.2 ppb Au (Sample No. 189286, 8569950N : 774070E). This work is reported in Mottram, 1998.

Ten rock chip samples were collected from outcrop within the western block of the licence and submitted to Assaycorp, in Pine Creek, for analysis of Au, using FALL method, and Ag, As, Zn, Cu and Pb, using G400M technique. The highest results returned were 44 ppb Au (Repeat analysis, Sample No. 189292, 8569917N : 773930E) and 19 ppb Au (Repeat analysis, Sample No. 189294, 8569180N : 773230E). This work is reported in Mottram, 1998.

Northern Gold N.L. conducted an infill soil sampling program over EL 8744, targeting areas to the west of the previously defined Rustlers East anomaly, during the 1998/99 exploration season. Samples were collected at 40 metre intervals along five 200 metre spaced lines in the west, and at 50 metre intervals along a single traverse in the east of the tenement. A total of 107, 'B' horizon samples, including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn (Mottram, 1999).

The results outlined two north trending gold soil anomalies in the west of the tenement. The peak results obtained were 290 ppb Au, with a repeat analysis of 400 ppb Au (Sample No. 192506, 8570543.6N : 773816E), and 495 ppb Au, with a repeat analysis of 130 ppb Au (Sample No. 192546, 8570148N : 773372E). The highest result returned from the eastern soil sampling traverse was 42 ppb Au (Sample No. 192597, 8570525.1N : 775666E). This work is reported in Mottram, 1999.

4.0 1999/2000 EXPLORATION COMPLETED

4.1 Infill Soil Sampling Program

During the 1999/2000 field season, Northern Gold N.L. contracted Arnhem Exploration Services to complete soil sampling over EL 8744, to test the low tenor soil anomalies outlined during previous exploration programs.

Samples, consisting of approximately 2 kilograms of soil, sieved to a -5 millimetre size fraction, were collected at 40, 80 and 100 metre intervals along eight lines. A total of 133, B-horizon, soil samples (Sample Nos. 177001 - 177050, 182091 - 182100, 182201 - 182230, 195417 - 195459), including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn. The analytical methods and detection limits are listed below in Table 1. The soil sample locations are shown on plan in Figure 3 and presented in Appendix 1.

Table 1 **1999/2000 Soil Sampling Program Analytical Methods and Detection Limits**

Element	Method	Digest	Technique	Detection Limit	Data Units
Au(1)	BLEG	-	2Kg	0.1	ppb
Au(2)	FALL	FA	AAS	1	ppb
Au(3)	FALL	FA	AAS	1	ppb
Ag(1)	BLEG	-	2Kg	0.05	ppm
Ag(2)	G300I	MA3	ICP-OES	0.05	ppm
Ag(3)	G400M	MA4	ICP-MS	0.05	ppm
As(1)	G300I	MA3	ICP-OES	0.5	ppm
As(2)	G400M	MA4	ICP-MS	0.05	ppm
Cu(1)	G300I	MA3	ICP-OES	0.2	ppm
Cu(2)	G400M	MA4	ICP-MS	0.2	ppm
Pb(1)	G300I	MA3	ICP-OES	0.2	ppm
Pb(2)	G400M	MA4	ICP-MS	0.2	ppm
Zn(1)	G300I	MA3	ICP-OES	0.5	ppm
Zn(2)	G400M	MA4	ICP-MS	0.5	ppm

773000 mE
773500 mE
774000 mE
774500 mE
775000 mE
775500 mE
776000 mE
776500 mE

N
W E
S

177050 177049 177048 177047 177046 177045 177044 177043 177042 177041 177040 177039 177038 177037 177036 177035 177001 177002 177003 177004 177005 177006/007 177008 177009 177010 177011 177012 177013 177014/015 177016 177017 177018 177019 177020 177021 177022 177023 177024 177025 177026 177027 177028 177029

195417 195418 195419 195420 195421 195422 195423 195424 195425 195426 195427/428

8570500 mN

195429 195430/431 195432 195433 195434 195435 195436 195437 195438 195439 195440 195441

182091 182092 182093 182094 182095 182096 182097/098 182099 182100 182201 182202 182207 182208 182209 182210 182211 182212/213 182214

8570000 mN

195456 195457 195458 195459

182203 182204 182205/206 182230 182229 182228 182227 182226 182225 182224 182223 182222 182221 182220 182219 182218 182216/217 182215

195442 195443 195444/445 195446 195447 195448 195449 195450 195451 195452 195453 195454 195455

8569500 mN

177030 177031 177032 177033 177034

8569000 mN

8568500 mN

Northern Gold N.L.

Date:27/9/2000	EL 8744 1999/2000 SOIL SAMPLING PROGRAM LOCATION PLAN Figure 3
Author: N.Mottram	
Office: EDS, W.A.	
Drawing:	
Scale: 1:10000	Projection: AMG Zone 52 (AGD 66)

0 100 200 400
metres

4.1.1 Soil Sampling Program Results

The peak results from the sampling in the east of the licence were 2.4 ppb Au (Sample No. 182201, 8570321N : 775818E) and 3.4 ppb Au (Sample No. 182214, 8570313N : 776618E).

The soil sampling completed over the western portion of the licence returned peak results of 194 ppb Au (Sample No. 195439, 8570342.8N : 774094E) and 179 ppb Au (Repeat Analysis, Sample No. 195449, 8569548.8N : 773406E), successfully identifying northeasterly and southwesterly extentions to the previously defined Rustlers' East Anomaly.

The assay results from the soil sampling programs are presented in Appendix 1.

5.0 1999/2000 EXPENDITURE

Expenditure over EL 8744, during the 1999/2000 year of tenure, totalled $17,795. Details of this expenditure are listed below as Table 2.

Table 2 **EL 8744 1999/2000 Expenditure**

COSTS	**AMOUNT**
Report Compilation	205
Data Review	180
Tenement Management	160
Accommodation, Field, Travel Expenses	145
Consumables	265
Assays	3,580
Motor Vehicle Expenses and Fuel	340
Geological Contractors	2,670
Casual Wages	1,790
Salaries	5,495
Subtotal	**14,830**
Administration @ 20%	2,965
TOTAL	**$17,795**

6.0 2000/01 PROPOSED WORK PROGRAM

Exploration programs for the 2000/01 year of tenure will include soil sampling, rock chip sampling, RAB drilling, geological mapping and modelling of aeromagnetic data, to enable a better definition of the source of the gold/arsenic anomalism.

An estimation of the cost of these programs is given below in Table 3.

Table 3 EL 8744 2000/01 Proposed Work Program

COSTS	AMOUNT
Soil Sampling	1,000
Rock Chip Sampling	500
RAB Drilling and Assaying	5,000
Geological Contractors	3,000
Geological Mapping	1,500
Aeromagnetic Data Modelling	1,000
Reporting, Salaries and on costs	5,000
TOTAL	**$17,000**

7.0 REFERENCES

FAWCETT, C., (1995). EL 8744 - Old Mount Bundey, Annual Report, Year One, 08.09.94 to 07.09.95. Unpublished report by Territory Goldfields N.L. for the NTDME.

MOTTRAM, N., (1998). EL 8744 1997/98 Annual Report, 08/09/97 to 07/09/98. Unpublished report by Northern Gold N.L. for the NTDME.

MOTTRAM, N., (1999). EL 8744 1998/99 Annual Report, 08/09/98 to 07/09/99. Unpublished report, on behalf of Northern Gold N.L., for the NTDME.

SOCIC, N., (1996). EL 8744 1995/96 Annual Report, 08/09/95 to 07/09/96. Unpublished report by Northern Gold N.L. for the NTDME.

SOCIC, N., (1997). EL 8744 1996/97 Annual Report, 08/09/96 to 07/09/97. Unpublished report by Northern Gold N.L. for the NTDME.

APPENDIX 1

1999/2000 Soil Sampling Program Locations and Assay Results

EL 8744
1999/2000 Annual Report

3.5” Disk

Files

8744ar00.doc

8744Soil00.txt