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EL 8702
2000/01 ANNUAL REPORT

27/07/00 to 26/07/01

Marrakai (8/5-II) 1:50,000 scale map sheet

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

August 2001

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 8702 is located approximately 90 kilometres southeast of Darwin on the Marrakai 1:50,000 scale (8/5-II) map sheet.

Dominion Gold Operations Pty. Ltd. carried out a program of LAG sampling and RAB drilling over EL 8702. The LAG sampling identified an anomalous zone in the northeast corner of the tenement, returning gold results ranging from 3 to 50 ppb Au. RAB drilling resulted in 72 holes being drilled for 313 metres. The highest gold result obtained from this drilling was 7 ppb Au, located in the northeast corner, corresponding with the anomalous values obtained from the LAG sampling program. Northern Gold N.L. completed digital data studies, literature reviews, regional and infill soil sampling, and rock chip sampling over EL 8702. The peak results returned were 310 ppb Au, from soil sampling, and 270 ppb Au from the rock chip sampling.

The licence, originally consisting of 14 blocks, 45 square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 27th of July, 1994, for a period of 6 years. The tenement was subsequently acquired by Territory Goldfields N.L., which is managed by Northern Gold N.L., in May 1995. A waiver of reduction was granted over the tenement in October, 1996, allowing 14 blocks to be retained until the 27th of July, 1997. Due to compulsory relinquishment, the tenement was reduced to 7 blocks, 23 square kilometres in area, in June, 1997. A further waiver of reduction was granted over the tenement in July, 1998, enabling 7 blocks to be retained until the 27th of July, 1999. An application for a waiver of reduction was submitted in July, 1999. The licence was subsequently renewed for a period expiring on the 26th of July, 2002.

Northern Gold N.L. contracted Arnhem Exploration Services to complete an infill soil sampling program over EL 8702, during the 2000/01 field season. Samples were collected at 100 metre intervals along three, 400 metre spaced lines, within the central west of EL 8702. A total of 21, B-horizon, soil samples, including duplicates, were submitted to North Australia Laboratories, in Pine Creek, for analysis of Au, using low level fire assay technique, and Ag, As, Cu, Pb and Zn by G400M method. The soil sampling program failed to return anomalous results for Ag, As, Cu, Pb and Zn.

The gold results from the infill soil sampling program are pending and will be presented in the 2001/02 Annual Report.

Further work will include soil sampling, RAB drilling and assaying, to better define the source, size and continuity of the outlined soil gold anomaly.

The covenant for the 2000/01 year of tenure was $6,300 while the expenditure totalled $6,480.

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1.0 INTRODUCTION

EL 8702 is located approximately 90 kilometres southeast of Darwin on the Marrakai 1:50,000 scale (8/5-II) map sheet. The licence, which consists of 7 graticular blocks, 23 square kilometres in area, lies between latitudes 12°55' south and 12°59' south and longitudes 131°26' east and 131°29' east (Figure 1). EL 8702 is situated on Perpetual Pastoral Lease No. 1144, Mount Bundey, held by Barry Coulter and Lawnhold Pty. Ltd., and NT Portions 3224 and 4195, held by T. R. and K. V. Halse.

The area is accessed via the Arnhem Highway to Mount Bundey then southwards via station tracks.

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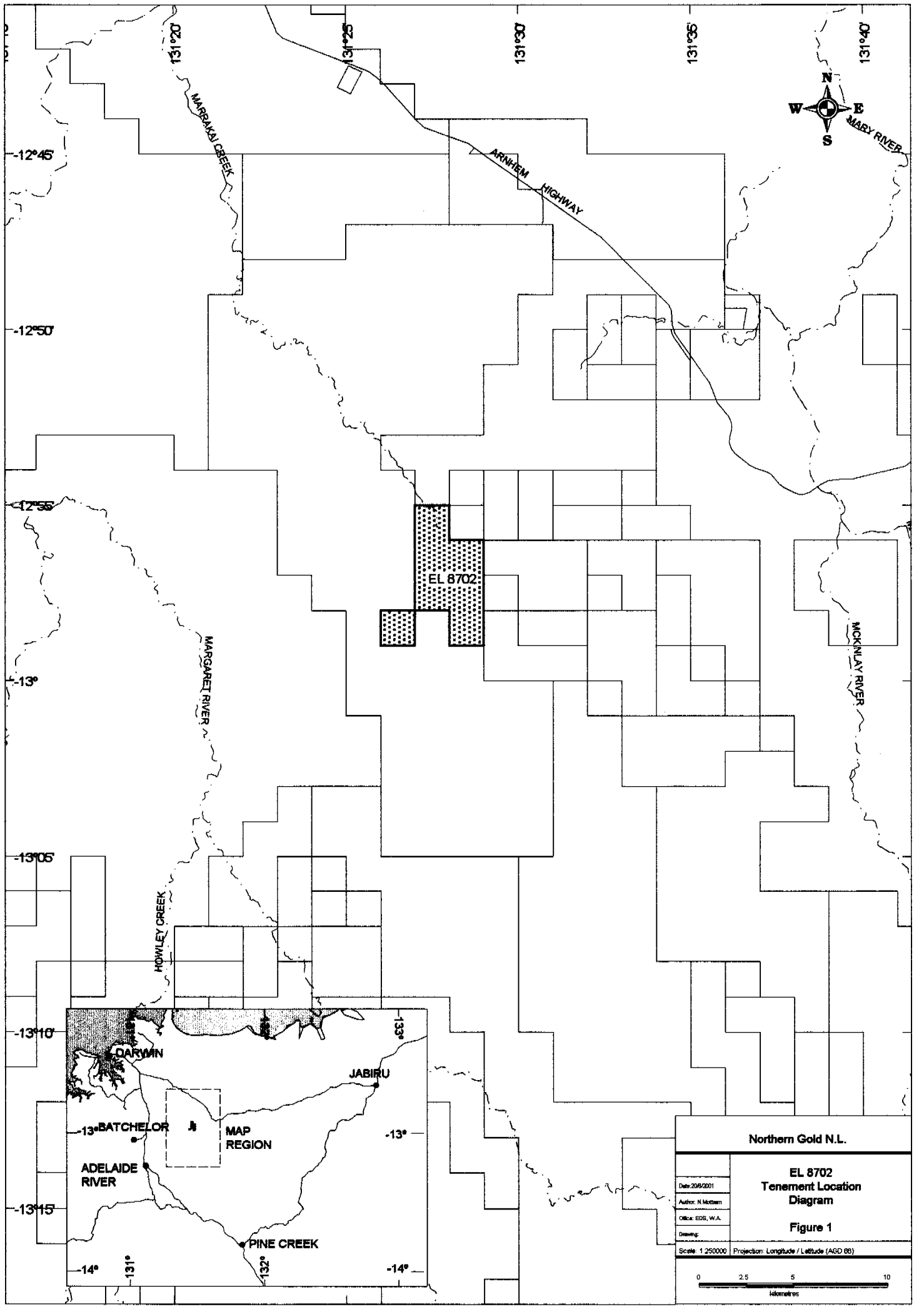
The covenant for the 2000/01 year of tenure was $6,300 while the expenditure totalled $6,480.


131°20'
131°25'
131°30'
131°35'
131°40'
N
W
E
S
MARY RIVER
MARRAKAI CREEK
ARNHEM HIGHWAY
-12°45'
-12°50'
-12°55'
EL 8702
MARGARET RIVER
MCKINLAY RIVER
-13°
-13°05'
HOWLEY CREEK
-13°10'
DARWIN
JABIRU
-13°
BATCHELOR
MAP REGION
ADELAIDE RIVER
-13°15'
PINE CREEK
-14°
131°
132°
133°
-14°
Northern Gold N.L.
EL 8702
Tenement Location Diagram
Figure 1
Date: 20/6/2001
Author: N.Mottram
Office: EDS, W.A.
Drawing:
Scale: 1:250000
Projection: Longitude / Latitude (AGD 66)
0
2.5
5
10
kilometres

2.0 GEOLOGY

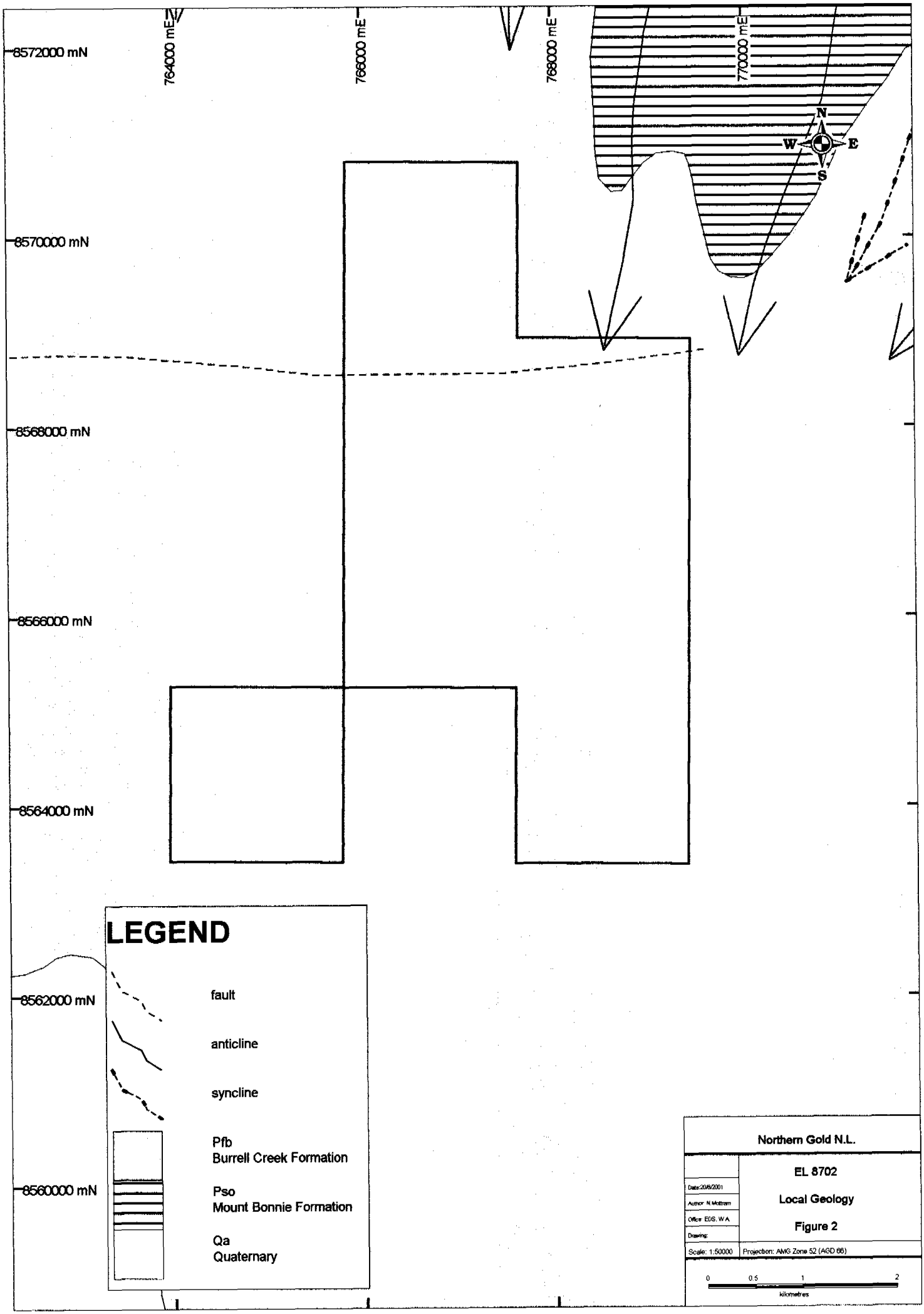
2.1 Regional Geology

EL 8702 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 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

EL 8702 is dominated by sediments of the Burrell Creek Formation. To the northeast of the tenement folded sequences of Mount Bonnie Formation sediments subcrop (Figure 2). An east-west trending fault passes through the tenement in the northern blocks (Socic, 1997).


764000 mE
766000 mE
768000 mE
770000 mE
8572000 mN
8570000 mN
8568000 mN
8566000 mN
8564000 mN
8562000 mN
8560000 mN
N
W
E
S
LEGEND
fault
anticline
syncline
Pfb
Burrell Creek Formation
Pso
Mount Bonnie Formation
Qa
Quaternary
Northern Gold N.L.
EL 8702
Local Geology
Figure 2
Date: 20/6/2001
Author: N.Mottram
Office: EDS, W.A.
Drawing:
Scale: 1:50000
Projection: AMG Zone 52 (AGD 66)
0
0.5
1
2
kilometres

3.0 PREVIOUS EXPLORATION

Dominion Gold Operations Pty. Ltd. carried out a program of LAG sampling and RAB drilling over EL 8702.

LAG sampling was carried out on a 200 metre by 800 metre pattern. This resulted in the collection of 230 samples of +2 millimetre to -8 millimetre size material. Samples were submitted to Amdel, in Darwin, for analysis of Au, Cu, Pb, Zn, Ag, As, Fe, Mn and Bi. A zone in the north - east corner of the tenement returned gold results ranging from 3 to 50 ppb Au (Fawcett, 1995).

The RAB drilling program resulted in 72 holes being drilled for 313 metres. Samples were collected from the lower 1 to 2 metres of each hole. Holes were drilled to depths of up to 9 metres to test weathered bedrock under alluvial cover. The highest gold result obtained from this drilling was 7 ppb Au, located in the north - east corner, corresponding with the anomalous values obtained from the LAG sampling program (Fawcett, 1995).

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation, during the 1995/96 year of tenure. Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping to determine the best method of exploration to be used on the licence. GIS and satellite imagery were used to log soil types, indicating that the region comprises mainly lateritised lower saprolite with minor black soil trending northeast to southwest through the southern blocks (Socic, 1996).

During the 1996/97 year of tenure, Northern Gold N.L. completed a regional soil sampling program over two separate areas of EL 8702, targeting southern extensions of gold mineralisation from the Rustlers Roost Mine, and anticlinal structures in the west. The soil sampling program consisted of ten 400 metre spaced lines, varying in length from 1,800 metres to 3,000 metres, over the western blocks of the tenement and nine 400 metre spaced lines, varying in length from 1,600 metres to 3,400 metres, over the eastern blocks of the tenement. Samples were collected at 25 metre intervals and composited to 100 metres. A total of 494 samples, including duplicates, were collected and submitted to Assaycorp, in Pine Creek, for Au, As, Cu, Zn, and Pb analysis (Socic, 1997).

The regional soil sampling program over the eastern blocks of EL 8702 returned a spot anomalous gold value of 28 ppb Au (Sample No. 147192, 8566708N : 768312E). Field mapping around this spot anomaly identified southeast trending stockwork quartz veining, continuous over a strike length of 800 metres, within greywacke and siltstone of the Burrell Creek Formation. This structure is truncated by numerous alluvial flood plain channels, and these are considered to

mask the true extent of this anomaly (Socic, 1997). The results from the soil sampling completed in the western area of EL 8702 returned low order soil geochemical values. A maximum spot anomalous gold value of 9.8 ppb Au (Sample No. 147567, 8565619N : 764654E) was returned from the southern area and is associated with quartz veining in the Burrell Creek Formation. No anomalous results for arsenic or base metals were returned (Socic, 1997).

Northern Gold N.L. completed a comprehensive literature review, digital data studies, rock chip sampling and an infill soil sampling program over EL 8702, during the 1997/98 exploration season.

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. The review covered the known uranium deposits, depositional models within the Pine Creek Geosyncline, and previous exploration within the project areas, with the aim of farming out the ground to potential explorers (Mottram, 1998).

Northern Gold N.L. also completed a work program involving orthographic satellite image acquisition and manipulation, and digital terrain modeling. The data was obtained and used in conjunction with aerial mapping, site visits and previous digital data interpretations to evaluate the topography of the Mount Bundey region (Mottram, 1998).

The infill soil sampling program consisted of two 200 metre spaced lines, varying in length from 340 metres to 500 metres. Samples were collected at 20 metre intervals and composited to 40 metres. A total of 24 samples, including duplicates, were collected and submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn (Mottram, 1998, 1999). The peak result returned was 310 ppb Au (Sample No. 189544, 8566568.4N : 768300.0E).

A total of 28 rock chips were collected and submitted to Assaycorp, in Pine Creek, for Au analysis by FALL method, and Ag, As, Cu, Pb and Zn analysis by G400M method (Mottram, 1998, 1999). The peak result returned was 270 ppb Au (Sample No. 189501, 8566860N : 768785E).

During the 1998/99 field season, Northern Gold N.L. completed regional soil sampling over EL 8702. Samples were collected over the northern and western blocks of the licence at 50 metre intervals and composited to 200 metres, along six, 800 metre spaced lines. A total of 62, B-horizon, samples, including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn. The residual BLEG liquor (Au RE) and residual sample (Au RA and Ag RA), from selected samples, were re-assayed to check for potential instrument error and laboratory contamination (Mottram, 1999).

Initial assay results from the program returned anomalous values of 64.6 ppb Au (Sample No. 192889, 8569122N : 767632E) and 15.9 ppb Au (Sample No. 192881, 8568328N : 767028E). The lack of correlation between duplicate samples 192888 (0.5 ppb Au) and 192889 (64.6 ppb Au) instigated a re-analysis program of liquors (Au (RE) ppb), and a re-analysis of selected residual samples (Au (RA) ppb and Ag (RA) ppb). These results identified instrument error in the analysis of the original assay values, and potential sample contamination. The re-analysis work cast doubt on the validity of all BLEG sample results from this tenement (Mottram, 1999).

Northern Gold N.L. contracted Arnhem Exploration Services to complete a regional soil sampling program over EL 8702, during the 1999/2000 year of tenure (Mottram, 2000).

Samples were collected at 200 metre intervals along four, 800 metre spaced lines, within the northern central region of EL 8702. A total of 32, B-horizon, soil samples, including duplicates, were submitted to Assaycorp, in Pine Creek, for analysis of Au and Ag, by BLEG method, and As, Cu, Pb and Zn by G400M method (Mottram, 2000).

The regional soil sampling program returned a peak result of 13.2 ppb Au (Sample No. 182350, 8567928N : 767028E), from within the central region of the licence (Mottram, 2000).

4.0 2000/01 EXPLORATION

During the 2000/01 exploration season, Northern Gold N.L. completed infill soil sampling over EL 8702.

4.1 Infill Soil Sampling Program

Northern Gold N.L. contracted Arnhem Exploration Services to complete an infill soil sampling program over EL 8702, during the 2000/01 field season.

Samples, consisting of approximately 2 kilograms of soil, sieved to a -5 millimetre size fraction, were collected at 100 metre intervals along three, 400 metre spaced lines, within the central west of EL 8702. A total of 21, B-horizon, soil samples (Sample Nos. 201001 - 201021), including duplicates, were submitted to North Australia Laboratories, in Pine Creek, for analysis of Au, using low level fire assay technique, and Ag, As, Cu, Pb and Zn by G400M method. The analytical methods and detection limits are listed below in Table 1. The infill soil sample locations are shown on plan in Figure 3 and presented in Appendix 1.

Table 1 **2000/01 Infill Soil Sampling Program Analytical Methods and Detection Limits**

Element	Analytical Method	Digest	Technique	Detection Limit	Data Units
Au	FALL	FA	AAS	1	ppb
Au(R)	FALL	FA	AAS	1	ppb
Ag	G400M	MA4	ICP-MS	0.05	ppm
As	G400M	MA4	ICP-MS	0.5	ppm
Cu	G400M	MA4	ICP-MS	0.2	ppm
Pb	G400M	MA4	ICP-MS	0.2	ppm
Zn	G400M	MA4	ICP-MS	0.5	ppm

4.1.1 Infill Soil Sampling Program Results

The soil sampling program failed to return anomalous results for Ag, As, Cu, Pb and Zn. The gold results from the infill soil sampling program are pending and will be presented in the 2001/02 Annual Report.

The Ag, As, Cu, Pb, Zn results from the soil sampling program are presented in Appendix 1.

765500 mE
766000 mE
766500 mE
767000 mE
767500 mE
768000 mE
768500 mE
769000 mE

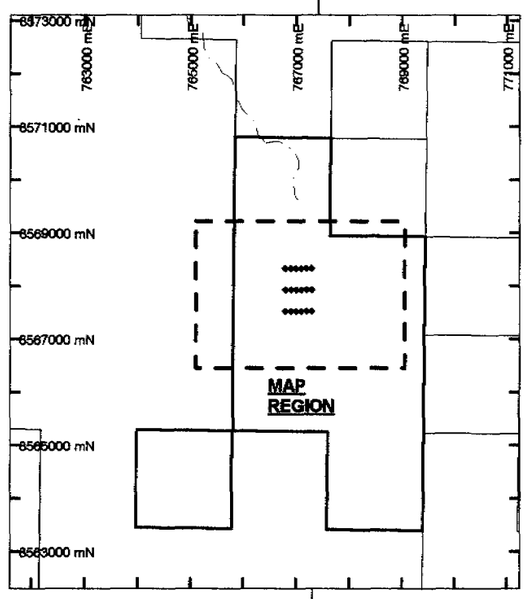
8569000 mN
8568500 mN
8568000 mN
8567500 mN
8567000 mN
8566500 mN

N
W
E
S

201021 201020 201018/019 201017 201016 201015

201008 201009 201010/011 201012 201013 201014

201007 201006 201004/005 201003 201002 201001



Northern Gold N.L.

EL 8702
2000/01 Infill Soil Sampling
Program Location Plan

Figure 3

Date:20/6/2001
Author: N.Mottram
Office: EDS, W.A.
Drawing:
Scale: 1:10000
Projection: AMG Zone 52 (AGD 66)

0 100 200 400
metres

5.0 2000/01 EXPENDITURE

The expenditure over EL 8702, during the 2000/01 year of tenure, totalled $6,480. Details of this expenditure are listed below as Table 2.

Table 2 **EL 8702 2000/01 Expenditure**

COSTS	AMOUNT
Report Compilation and Plan Preparation	245
Data Review	100
Tenement Management	180
Accommodation, Field, Travel Expenses	265
Assays	315
Consumables	170
Geological Contractors	705
Motor Vehicle Expenses and Fuel	255
Casual Wages	2,590
Salaries	575
Subtotal	**5,400**
Administration @ 20%	1,080
TOTAL	**$6,480**

6.0 2001/02 PROPOSED WORK PROGRAM

The proposed work program for the 2001/02 year of tenure will include soil sampling, RAB drilling and assaying.

The programs will be completed over the northern and central regions of the licence, targeting the peak results from the regional soil sampling, to better define the source, size and continuity of the identified soil gold anomaly.

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

Table 3 **EL 8702 2001/02 Proposed Work Program**

COSTS	AMOUNT
Soil Sampling	1,000
RAB Drilling	2,000
Assaying	2,500
Reporting, Salaries and On costs	2,500
TOTAL	**$8,000**

7.0 REFERENCES

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SOCIC, N., (1996). EL 8702 1995/96 Annual Report, 27/07/95 to 26/07/96. Unpublished report by Northern Gold N.L. for the Northern Territory Department of Mines and Energy.

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APPENDIX 1

2000/01 Infill Soil Sampling Program
Locations and Assay Results

Sample No.	AMG52 North	AMG52 East	As ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
201001	8567520	767300	13.4	17.9	12	13.2	0.09
201002	8567520	767200	6.7	10.9	6.7	6	-0.05
201003	8567520	767100	15.9	13.7	10.8	11.1	0.09
201004	8567520	767000	10.7	13.2	11.1	16.3	0.05
201005	8567520	767000	10.6	13.9	11.2	14.1	0.06
201006	8567520	766900	9	13	10.7	8.8	-0.05
201007	8567520	766800	6.2	12.6	11.2	12.5	-0.05
201008	8567920	766800	3.8	8.6	5.2	8.8	0.05
201009	8567920	766900	32.8	13.6	12.9	11.2	0.06
201010	8567920	767000	14.7	12.3	8.5	9.7	-0.05
201011	8567920	767000	6.6	12.2	8.1	9.8	-0.05
201012	8567920	767100	11.5	17.9	13.6	11.7	-0.05
201013	8567920	767200	136.4	20.4	20.4	15.5	0.1
201014	8567920	767300	18.8	19.2	17.9	19.2	0.07
201015	8568320	767300	73	12.8	15.5	17.4	0.11
201016	8568320	767200	48.7	14.6	11.9	14.7	0.08
201017	8568320	767100	32.5	12.2	10.4	8	0.09
201018	8568320	767000	39.9	19.8	17.6	14.3	0.05
201019	8568320	767000	25	18	14.2	10.5	0.06
201020	8568320	766900	82.5	15.4	24.7	11.7	0.07
201021	8568320	766800	68.6	12.8	19.4	8.3	0.06