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EL 8688
2000/01 ANNUAL REPORT

18/07/00 to 17/07/01

Mount Bundey (8/6-III) 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 8688 is located approximately 85 kilometres southeast of Darwin on the Mount Bundey (8/6-III) 1:50,000 scale map sheet.

Dominion Gold Operations Pty. Ltd. conducted LAG sampling over EL 8688 as part of a larger program over the Rustlers Roost Project area. An anomalous result of 840 ppb Au was returned in the south of the tenement. Northern Gold N.L. completed digital data studies over the licence, from 1995 to 1997. Between 1997 and 2000, Northern Gold N.L. carried out an evaluation of the uranium mineralisation potential within the Mount Bundey area, in addition to rock chip and soil sampling programs. The rock chip sampling returned a peak result of 110 ppb Au, with a repeat analysis of 119 ppb Au, while the soil sampling programs returned results up to 7.5 ppb Au.

EL 8688, originally comprising 4 blocks, 13 square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 18th of July, 1994, for a period of four years. The tenement was 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 licence on the 2nd of October, 1996, enabling 4 blocks to be retained until the 18th of July, 1997. Due to compulsory relinquishment, EL 8688 was reduced to 2 blocks, 6 square kilometres in area, on the 19th of January, 1998. The licence was subsequently renewed for periods expiring on the 17th of July, 2002.

During the 2000/01 exploration season, Northern Gold N.L. contracted Arnhem Exploration Services to complete an infill soil sampling program over EL 8688. Samples were collected at 50 metre intervals along five, 200 metre spaced lines, within the northern block of EL 8688, and along two lines in the southern block of the licence. A total of 71, B-horizon, soil samples, including duplicates, were submitted to North Australia Laboratories, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn. 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 low-grade gold soil anomaly.

The covenant for the 2000/01 year of tenure was $6,500, and the expenditure totalled $7,910.

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1.0 INTRODUCTION

EL 8688 is located approximately 85 kilometres southeast of Darwin and 70 kilometres northeast of Adelaide River, on the Mount Bundey 1:50,000 scale (8/6-III) map sheet. The licence consists of 2 graticular blocks, 6 square kilometres in area, lying between latitudes 12°50' south and 12°52' south and longitudes 131°31' east and 131°32' east (Figure 1). EL 8688 is situated on Perpetual Pastoral Lease No. 1144, Mount Bundey Station, held by Barry Coulter and Lawnhold Pty. Ltd.

The licence is situated 1.5 kilometres south of the Arnhem Highway and 13 kilometres northwest of the Mary River Crossing. The area is accessed via the Arnhem Highway to Mount Bundey Homestead, and then via tracks southwards from the highway.

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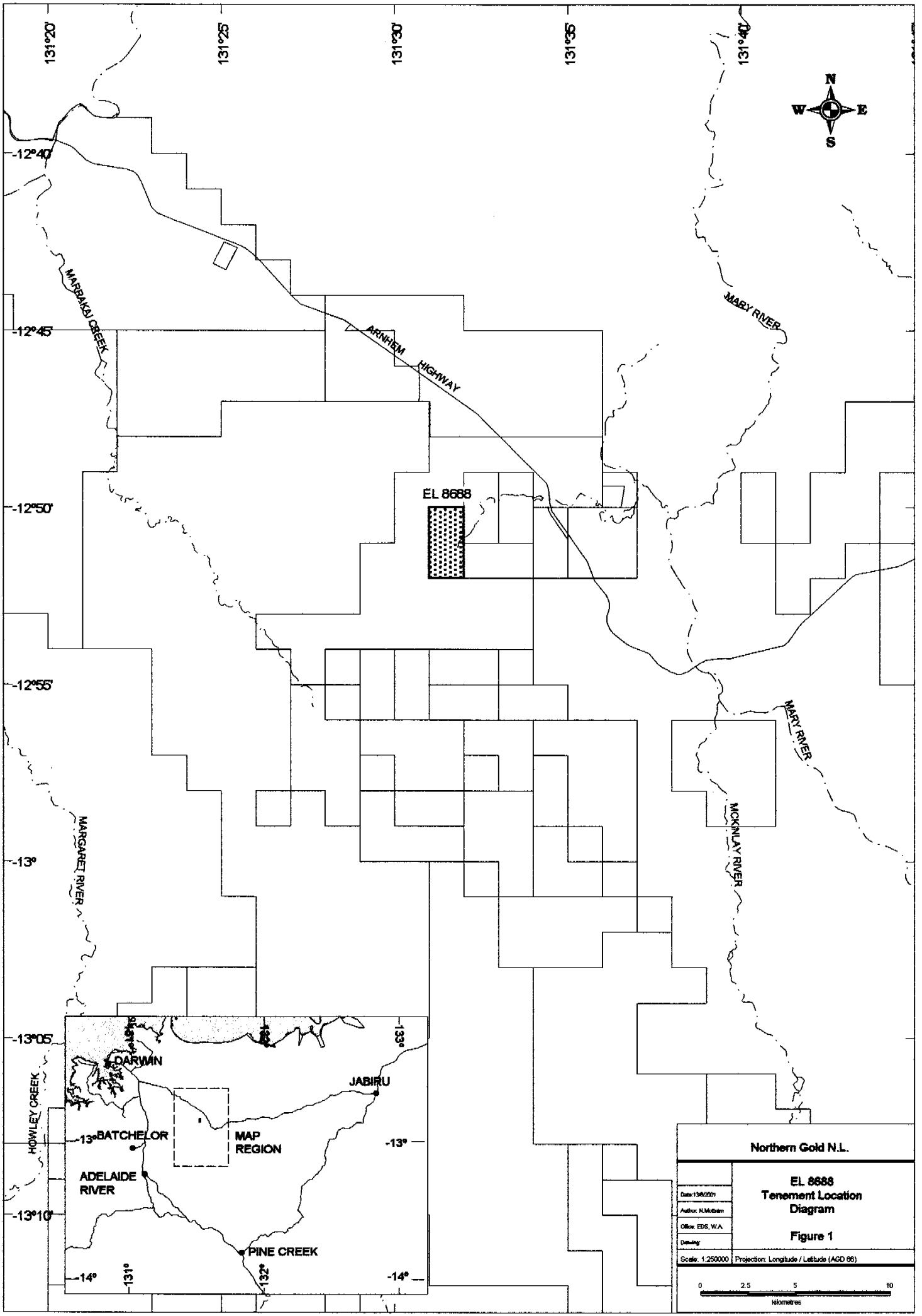

131°20'
131°25'
131°30'
131°35'
131°40'
N
W
E
S
-12°40'
-12°45'
-12°50'
-12°55'
-13°
-13°05'
-13°10'
-14°
MARRAKAI CREEK
ARNHEM HIGHWAY
MARY RIVER
EL 8688
MARGARET RIVER
MCKINLAY RIVER
HOWLEY CREEK
DARWIN
JABIRU
BATCHELOR
MAP REGION
ADELAIDE RIVER
PINE CREEK
131°
132°
133°
Northern Gold N.L.
EL 8688
Tenement Location Diagram
Figure 1
Date: 13/6/2001
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 8688 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 (Socic, 1997).

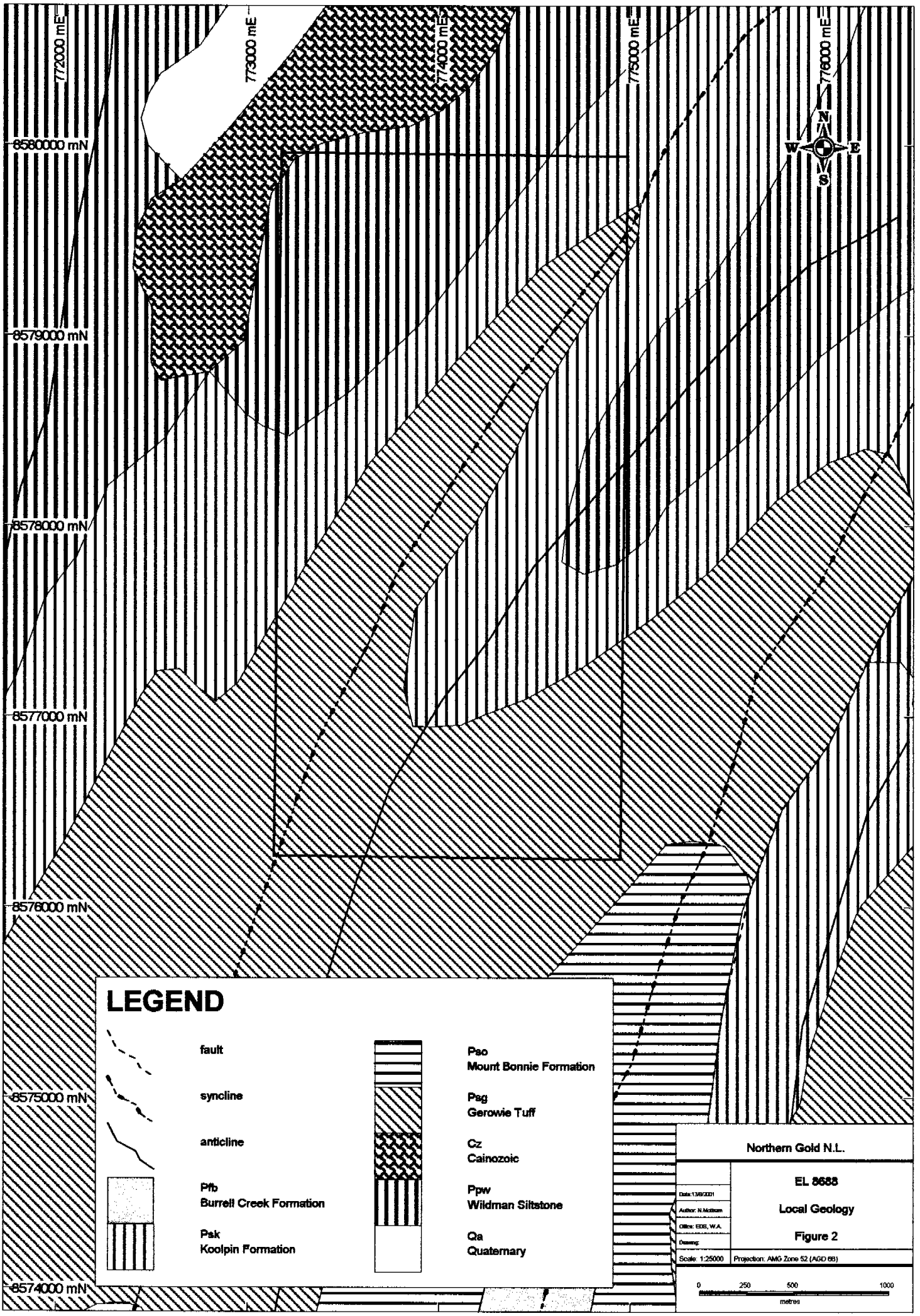
The sequence has been intruded by pre-orogenic dolerite sills of the Zamu Dolerite and a large number of late syn-orogenic to post-orogenic Proterozoic granitoids. Largely undeformed Middle and Late Proterozoic, Palaeozoic and Mesozoic strata, as well as Cainozoic sediments and laterites, overly the Pine Creek Geosyncline (Socic, 1997).

2.2 Local Geology

The stratigraphy within EL 8688 consists of the Mount Partridge Group Wildman Siltstone overlain by the Koolpin Formation and Gerowie Tuff of the South Alligator Group. A geology map is presented as Figure 2.

Folding trends northeast to southwest, and plunges to the southwest with an anticline trending through the middle of the tenement.

Toms Gully Gold Mine is located to the east of EL 8688. Gold mineralisation at Toms Gully is hosted by Wildman Siltstone. The tenement covers extensions of the structures hosting this mineralisation. The Rustlers Roost Project area lies to the south (Fawcett, 1995).


772000 mE
773000 mE
774000 mE
775000 mE
776000 mE
8580000 mN
8579000 mN
8578000 mN
8577000 mN
8576000 mN
8575000 mN
8574000 mN
N
W
E
S
LEGEND
fault
syncline
anticline
Pfb
Burrell Creek Formation
Psk
Koolpin Formation
Pso
Mount Bonnie Formation
Psg
Gerowie Tuff
Cz
Cainozoic
Ppw
Wildman Siltstone
Qa
Quaternary
Northern Gold N.L.
EL 8688
Local Geology
Figure 2
Date: 13/8/2001
Author: N.Mottram
Office: EDS, W.A.
Drawing:
Scale: 1:25000
Projection: AMG Zone 52 (AGD 66)
0
250
500
1000
metres

3.0 PREVIOUS EXPLORATION

Dominion Gold Operations Pty. Ltd. conducted LAG sampling over EL 8688 as part of a larger program over the Rustlers Roost Project area. Samples were collected on a general grid pattern of 800 metres by 200 metres. A sample size of -2 millimetre to +8 millimetre size fraction was collected at each site, resulting in 63 samples. All samples were submitted to Amdel, Darwin for analysis of Au, Cu, Pb, Zn, As, Ag, Bi, Mn and Fe. Gold results were generally less than detection (<1ppb Au). An anomalous result of 840 ppb Au was returned in the south (Fawcett, 1995).

Northern Gold N.L. completed digital data studies from 1995 to 1997. Landsat Imagery, SPOT Imagery, orthographic satellite imagery and AGSO mapping were obtained and used in conjunction with aerial mapping to determine the best method of gold exploration to be used on the licence. GIS and satellite imagery were used to log soil types, evaluate the topography of the area and to interpret the structural geology of the region. A contour map was compiled using this imagery, showing the slope vectors of the terrain, indicating possible dispersion directions of mobile elements (Socic, 1996, 1997).

During the 1997/98 field season, Northern Gold N.L. carried out a rock chip sampling program and a comprehensive literature review (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. 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).

The rock chip sampling program was completed over the southern block of the licence. A total of 14 rock chips were collected and submitted to Assaycorp, in Pine Creek, for analysis of Au, Ag, As, Cu, Pb and Zn (Mottram, 1998). The peak result returned was 110 ppb Au, with a repeat analysis of 119 ppb Au, associated with a north-south trending, fault related structure, with a visible strike extent of 400 metres (Mottram, 1999).

Northern Gold N.L. completed regional soil sampling over EL 8688, during the 1998/99 year of tenure. Samples were collected at 50 metre intervals and composited to 200 metres, along five, 800 metre spaced lines. A total of 50 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), from selected samples, was re-assayed to check for potential instrument error and laboratory contamination (Mottram, 1999).

The regional soil sampling program returned peak results of 6.2 ppb Au, from the southern block, and 6 ppb Au, from the northern block. The re-assaying confirmed the reliability of the assaying procedure (Mottram, 1999).

During the 1999/2000 field season, Northern Gold N.L. contracted Arnhem Exploration Services to complete further regional soil sampling over the licence area, targeting two northeast trending soil anomalies identified during 1998/99 (Mottram, 2000).

Samples, consisting of approximately 2 kilograms of soil, sieved to a -5 millimetre size fraction, were collected at 50 metre intervals and composited to 200 metres along three, 800 metre spaced lines, within the central region of EL 8688. A total of 30, 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 soil sampling returned peak results of 7.5 ppb Au (Sample No. 182314, 8577048N : 773454E), from within the southern block, and 5.9 ppb Au (Sample No. 182307, 8578642N : 774070E), from the within northern block (Mottram, 2000).

4.0 2000/01 EXPLORATION

During the 2000/01 exploration season, Northern Gold N.L. completed infill soil sampling over EL 8688.

4.1 Infill Soil Sampling Program

Northern Gold N.L. contracted Arnhem Exploration Services to complete an infill soil sampling program over EL 8688, during the 2000/01 field season, targeting previously identified low-grade soil anomalies.

Samples, consisting of approximately 2 kilograms of soil, sieved to a -5 millimetre size fraction, were collected at 50 metre intervals along five, 200 metre spaced lines, within the northern block of EL 8688, and along two lines in the southern block of the licence. A total of 71, B-horizon, soil samples (Sample Nos. 201158 - 201228), 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.

773000 mE
773500 mE
774000 mE
774500 mE
775000 mE
775500 mE

8580000 mN
8579500 mN
8579000 mN
8578500 mN
8578000 mN
8577500 mN
8577000 mN
8576500 mN

N
W
E
S

201158 201159 201160 201161 201162 201163/164 201165 201166

201167 201168 201169 201170 201171/172 201173 201174 201175

201176 201177 201178 201179 201180 201181 201182/183 201184 201185 201186

201187 201188 201189 201190 201191 201192 201193/194 201195 201196 201197

201198 201199 201200 201201 201202 201203 201204/205 201206 201207 201208

201209 201210 201211/212 201213 201214 201215 201216 201217 201218

201219 201220 201221 201222 201223 201224 201225/226 201227 201228

Northern Gold N.L.

EL 8688
2000/01 Infill Soil Sampling
Program Location Plan

Figure 3

Date:10/8/2001
Author: N.McWilliam
Office: BDS, W.A.
Drawing:
Scale: 1:10000
Projection: AMG Zone 52 (AGD 66)

0 100 200 400
metres

5.0 2000/01 EXPENDITURE

Expenditure, over EL 8688, during the 2000/01 year of tenure totalled $7,910. Details of this expenditure are listed below as Table 2.

Table 2 **EL 8688 2000/01 Expenditure**

COSTS	AMOUNT
Report Compilation	195
Data Review	100
Tenement Management	210
Assaying	1,065
Accommodation, Field, Travel Expenses	265
Consumables	95
Geological Contractors	1,020
Motor Vehicle Expenses and Fuel	395
Casual Wages	2,670
Salaries	575
Subtotal	**6,590**
Administration @ 20%	1,320
TOTAL	**$7,910**

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 both blocks of the licence, targeting the peak results from the soil sampling, to better define the source, size and continuity of the identified low-grade gold soil anomaly.

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

Table 3 **EL 8688 2001/02 Proposed Work Program**

COSTS	AMOUNT
Soil Sampling	1,000
RAB Drilling	2,300
Assaying	2,700
Reporting, Salaries and On costs	2,500
TOTAL	**$8,500**

7.0 REFERENCES

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MOTTRAM, N., (1999). EL 8688, 1998/99 Annual Report, 18/07/98 to 17/07/99. Unpublished report on behalf of Northern Gold N.L. for the Northern Territory Department of Mines and Energy.

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SOCIC, N., (1996). EL 8688, 1996 Annual Report, 18/07/95 - 17/07/96. 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
201158	8579250	774050	23.8	29.2	33	20.9	0.33
201159	8579250	774100	18.1	25.4	27.7	34.3	0.28
201160	8579250	774150	22.1	24.3	23	37.3	0.24
201161	8579250	774200	12.7	18.2	17.1	21.1	0.28
201162	8579250	774250	55.4	45.8	37	11.9	0.25
201163	8579250	774300	27.8	55.3	35.2	12	0.38
201164	8579250	774300	28.3	55.9	34.7	11.8	0.35
201165	8579250	774350	100.2	37	64.7	8.2	0.42
201166	8579250	774400	90.3	31.5	87.1	5.7	0.39
201167	8579050	774050	12.9	27.6	23.1	16.4	0.31
201168	8579050	774100	33.6	99.7	67.7	16.8	0.67
201169	8579050	774150	54.7	65.8	78.9	19.2	0.74
201170	8579050	774200	97.5	34.4	116.6	6.5	0.67
201171	8579050	774250	125	38.6	99.2	9.7	0.66
201172	8579050	774250	105.7	36	89.4	11.1	0.7
201173	8579050	774300	37	43.8	75.1	9.6	1.46
201174	8579050	774350	33.8	37.9	74.8	11.4	1.06
201175	8579050	774400	46.8	25	138.1	13.2	1.08
201176	8578850	773950	35.6	25.6	44.3	24.9	0.28
201177	8578850	774000	7.3	45.3	32.7	19.9	0.28
201178	8578850	774050	39.7	71.5	95.2	11.2	0.84
201179	8578850	774100	72.1	60.1	116.7	9.4	1.27
201180	8578850	774150	32.2	94.9	119.7	21.3	1.67
201181	8578850	774200	22.7	65.4	67.7	23.2	1.02
201182	8578850	774250	47.2	80.6	48.5	15.6	0.9
201183	8578850	774250	49.1	81.9	48.9	22.4	0.94
201184	8578850	774300	10.9	30.6	26	12.3	0.54
201185	8578850	774350	9.6	36.7	15.4	28	0.24
201186	8578850	774400	15.5	18.5	20.5	19.7	0.28
201187	8578650	773950	88.4	87.3	69.9	16.8	0.71
201188	8578650	774000	111.5	39.2	93.3	9.1	0.84
201189	8578650	774050	41.4	72.1	40.5	12.8	0.82
201190	8578650	774100	39.9	32.2	65.5	7.4	0.84
201191	8578650	774150	26.1	47.2	57.3	14.2	1.08
201192	8578650	774200	20.7	33.7	21.5	27.4	0.22
201193	8578650	774250	89.1	59.5	53.8	33.9	0.48
201194	8578650	774250	81.6	58.5	52.6	35.9	0.46
201195	8578650	774300	42.9	74.2	75.6	55.7	0.28
201196	8578650	774350	25.5	103.7	100.8	64.4	0.32
201197	8578650	774400	5.7	47.2	31.8	16.8	0.56
201198	8578450	773950	166.5	37.2	44.4	9.3	0.44
201199	8578450	774000	76.1	34.4	32.6	7.6	0.57
201200	8578450	774050	49	56.2	66.3	50.6	0.42
201201	8578450	774100	20.7	32.3	32.6	21.4	0.26
201202	8578450	774150	122.5	48.6	53.9	41.8	0.33
201203	8578450	774200	62.8	41.8	52.6	41.5	0.37
201204	8578450	774250	60.5	56.5	96.6	29.9	0.53
201205	8578450	774250	61.7	55.5	88.6	50.5	0.45
201206	8578450	774300	5.4	34.7	35.7	17.4	0.28
201207	8578450	774350	37.4	120.9	130.7	156.1	0.23
201208	8578450	774400	58.9	47.8	111	78	0.31
201209	8577450	774150	8.3	24.1	25.7	22.1	0.17
201210	8577450	774205	8.1	24.9	28.7	28	0.19
201211	8577450	774250	10.8	39.7	32.2	25.1	0.22
201212	8577450	774250	8	37.6	27.5	20.3	0.19

Sample No.	AMG52 North	AMG52 East	As ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
201213	8577450	774300	33.8	59.7	54	15.7	0.3
201214	8577450	774350	143.1	59	123.2	17.4	0.47
201215	8577450	774400	166.7	40.7	77.9	17	0.54
201216	8577450	774450	162.4	49.2	120.1	12.3	0.7
201217	8577450	774500	94.7	48.3	116.6	9.4	0.5
201218	8577450	774550	11.4	18.3	22.3	14	0.27
201219	8577050	773150	32.1	43.8	70.8	44.2	0.2
201220	8577050	773200	14.1	28.9	42.1	47.7	0.22
201221	8577050	773250	44.5	58.2	140	38.3	0.27
201222	8577050	773300	63.5	35.1	52.2	20.4	0.23
201223	8577050	773350	83.8	121.1	114.6	62.6	0.4
201224	8577050	773400	83.8	82.2	169.1	17.3	0.23
201225	8577050	773450	90.9	90.5	125	26.4	0.3
201226	8577050	773450	85.6	94.4	123.7	27	0.27
201227	8577050	773500	119.8	165.9	118.2	18.5	0.55
201228	8577050	773550	141.7	93.9	92.4	37.1	0.26