

Northern Gold NL

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EL 9122

1999/2000 ANNUAL REPORT

05/06/99 to 04/06/00

Margaret River (14/2-I) 1:50,000 scale map sheet

Title Holder:- Territory Goldfields N.L.

Managed by:- Northern Gold N.L.

June, 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 9122 is located approximately 100 kilometres southeast of Darwin and 40 kilometres east northeast of Adelaide River, on the Margaret River (14/2-I) 1:50,000 scale map sheet.

The licence is underlain by sediments of the Early Proterozoic Burrell Creek Formation. The sediments are tightly folded with fold axes generally trending north-west to south-east. The area is low lying with poor stream development and extensive areas of alluvium.

Previous work completed by Northern Gold N.L. included digital data acquisition and manipulation. Northern Gold N.L. also completed a regional soil sampling program over EL 9122.

EL 9122, originally consisting of 20 blocks, 64 square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 5th of June, 1995, for a period of six years. The tenement was acquired by Territory Goldfields N.L., which is managed by Northern Gold N.L. Due to compulsory relinquishment, the licence was reduced to 10 graticular blocks, 32 square kilometres in area, in May, 1997. Waivers of reduction were granted over the licence on the 30th of March, 1998, and on the 21st of April, 1999, enabling 10 blocks to be retained until the 4th of June, 2000.

During the 1999/2000 field season, Northern Gold N.L. contracted Arnhem Exploration Services to complete a regional soil sampling program over the southern region of EL 9122, targeting regional soil gold anomalies previously identified by Northern Gold N.L.

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 five, 800 metre spaced lines. A total of 66, 'B' horizon, soil samples (Sample Nos. 182001 - 182066), 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. The peak results returned were 3 ppb Au, 2.8 ppb Au and 2.6 ppb Au.

Further exploration over EL 9122 will include detailed regolith and geological mapping, infill soil sampling and assaying, to explore the potential for northern extensions to the low tenor gold anomalism.

The covenant for the 1999/2000 year of tenure was \$15,500 and the expenditure totalled \$12,230.

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1.0 INTRODUCTION

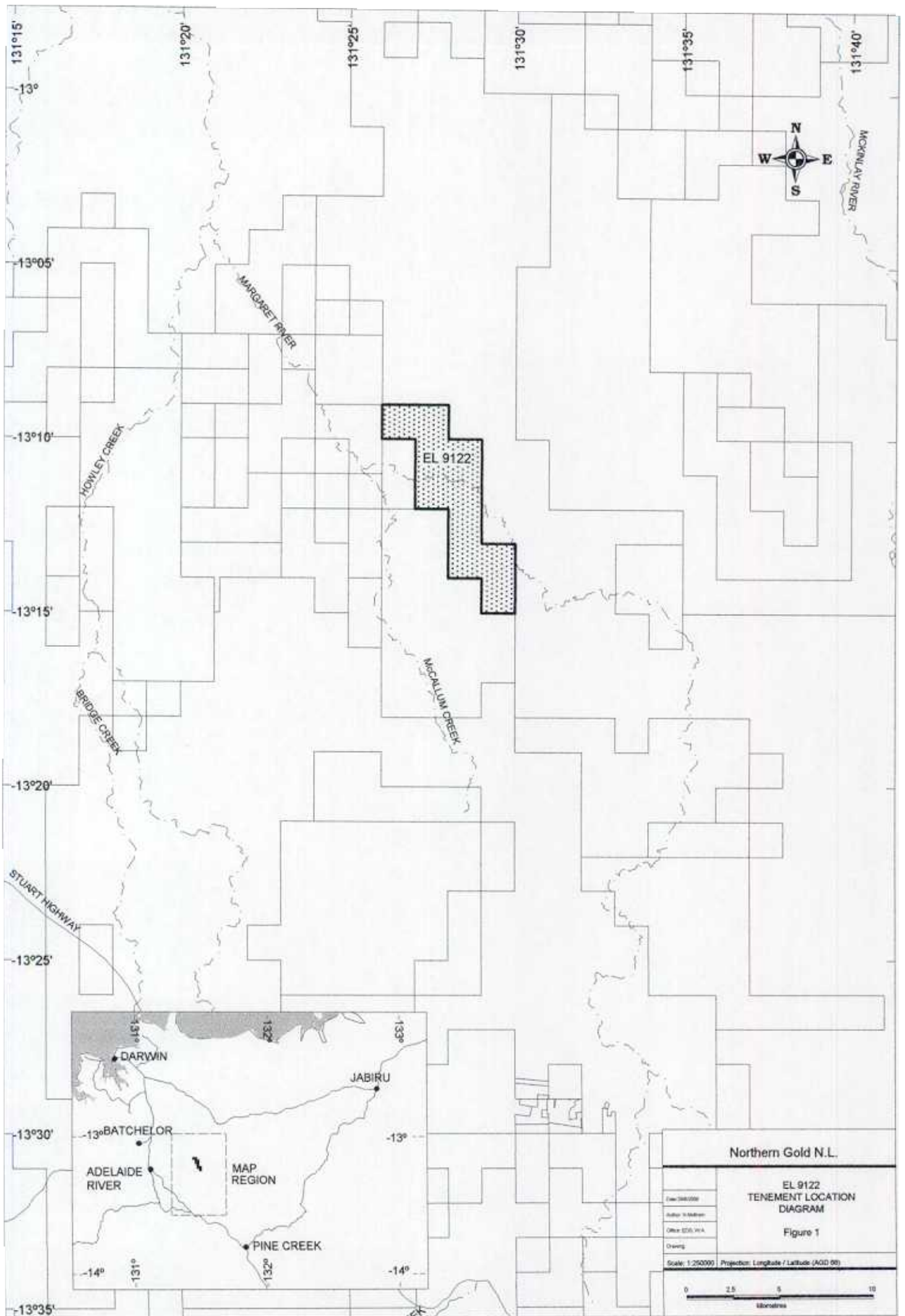
EL 9122 is located approximately 100 kilometres southeast of Darwin and 40 kilometres east northeast of Adelaide River on the Margaret River (14/2-I) 1:50,000 scale map sheet. The tenement, which consists of 10 blocks, 32 square kilometres in area, lies between latitudes 13°09' south and 13°15' south and longitudes 131°26' east and 131°30' east (Figure 1). EL 9122 is situated within Pastoral Lease No.718, Mount Ringwood, held by W. E. and V. J. Moon, and M. A. Rathsmann.

The tenement can be accessed via the Stuart Highway and along unsealed roads to Mount Ringwood Station and then via station tracks bearing east from the homestead across the Margaret River.

EL 9122, originally consisting of 20 blocks, 64 square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 5th of June, 1995, for a period of six years. The tenement was acquired by Territory Goldfields N.L., which is managed by Northern Gold N.L. Due to compulsory relinquishment, the licence was reduced to 10 graticular blocks, 32 square kilometres in area, in May, 1997. Waivers of reduction were granted over the licence on the 30th of March, 1998, and on the 21st of April, 1999, enabling 10 blocks to be retained until the 4th of June, 2000.

During the 1999/2000 field season, Northern Gold N.L. contracted Arnhem Exploration Services to complete a regional soil sampling program over the southern region of EL 9122. 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 five, 800 metre spaced lines. A total of 66, 'B' horizon, soil samples (Sample Nos. 182001 - 182066), 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.

The covenant for the 1999/2000 year of tenure was \$15,500 and the expenditure totalled \$12,230.



2.0 GEOLOGY

2.1 Regional Geology

EL 9122 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 pre-fix 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.

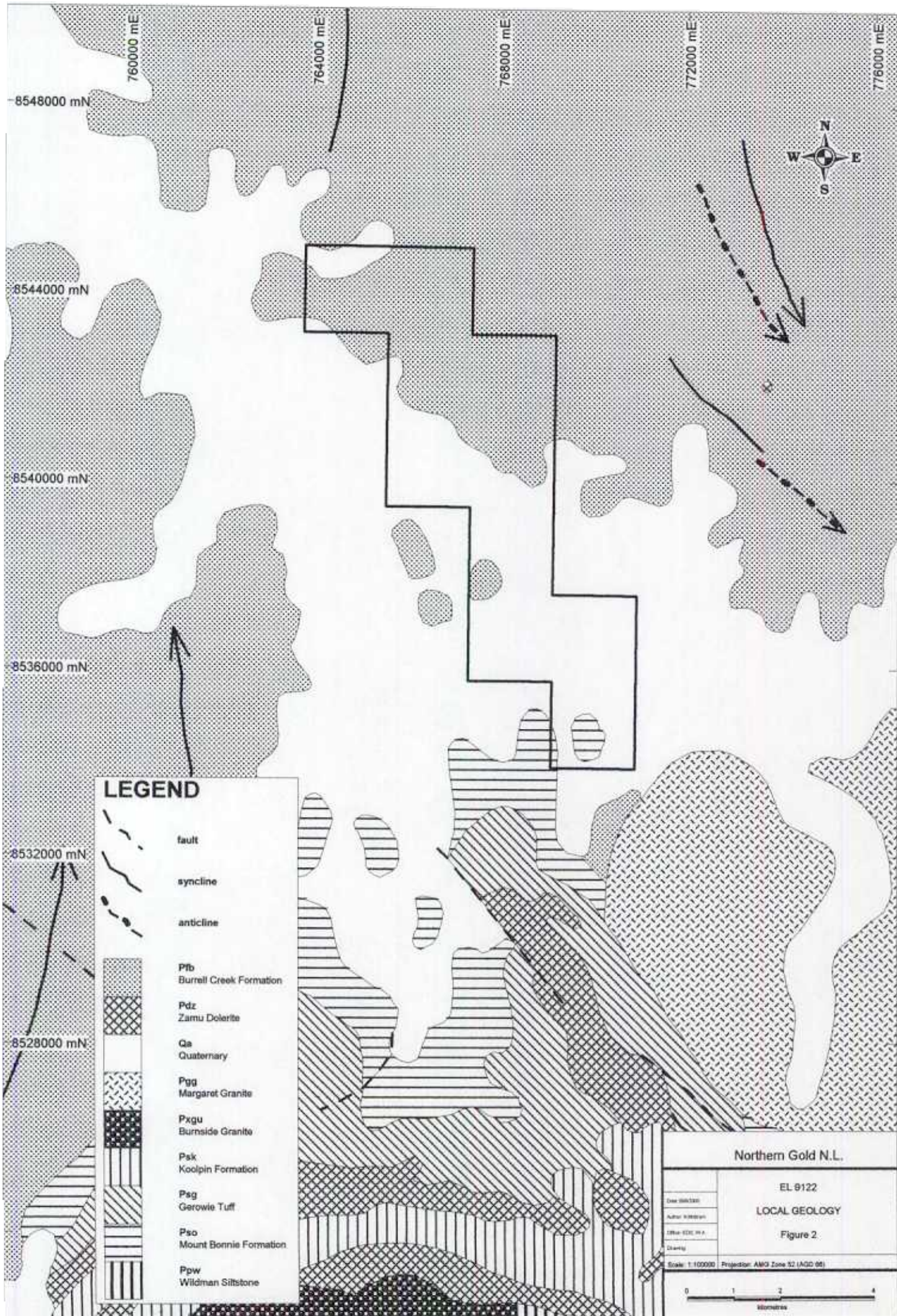
2.2 Local Geology

Sediments of the Early Proterozoic Burrell Creek Formation underlie the licence. The sediments are tightly folded with fold axes generally trending northwest to southeast. The area is low lying with poor stream development and extensive areas of alluvium (Socic, 1996).

The tenement is located in the northwest extension of the northwest to southeast trending Pine Creek Shear Zone, a major structure in which a number of mineralised zones have been identified (Socic, 1996).

In the south of the tenement the Mount Bonnie Formation underlies Quaternary alluvial cover. The Margaret Granite intrudes the surrounding sediments to the southeast of EL 9122 (Socic, 1996).

The local geology is presented on Figure 2.



LEGEND

- fault
- syncline
- anticline
- Pfb** Burrell Creek Formation
- Pdz** Zamu Dolerite
- Qa** Quaternary
- Pgg** Margaret Granite
- Pxgu** Burnside Granite
- Psk** Koolpin Formation
- Pag** Gerowie Tuff
- Pso** Mount Bonnie Formation
- Ppw** Wildman Siltstone

Northern Gold N.L.

EL 9122

LOCAL GEOLOGY

Figure 2

Scale: 1:10000 Projection: AMG Zone 52 (AGD 95)

0 1 2 4
Kilometres

3.0 PREVIOUS EXPLORATION

In the 1995/96 year of tenure, Northern Gold N.L. completed a work program involving digital data acquisition and manipulation. Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping to aid in the planning of exploration programs over the tenement (Socic, 1996).

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 exploration season, Northern Gold N.L. completed a work program involving magnetic data acquisition and manipulation, and digital terrain modelling. The data was obtained and used in conjunction with aerial mapping, site visits and previous digital data interpretations to determine the best method of exploration to be used on the licence (Socic, 1997a).

The results of the geophysics were used primarily as imaged processed data for regional interpretation of exploration concepts. The digital terrain mapping and slope vector analysis was used to indicate possible dispersion directions of mobile elements (Socic, 1997a).

A regional soil sampling program was completed over block number 52/37, just prior to the 1997 compulsory relinquishment. A total of 40, two kilogram soil samples, including duplicates, were collected at 25 metre intervals and composited to 100 metres from four 400 metre spaced lines. Samples were submitted to Assaycorp, in Pine Creek, for analysis of Au, As, Ag, Cu, Zn and Pb. The soil sampling returned a peak result of 3.4 ppb Au (Sample No. 117517, 8540998N : 765285E). This work is reported in Socic, 1997b.

During the 1997/98 exploration season, Northern Gold N.L. completed a regional soil sampling program over EL 9122. A total of 201, 2 kilogram soil samples, including duplicates, were collected at 25 metre intervals and composited to 100 metres, along twelve, 400 metre spaced lines. The samples were submitted to Assaycorp, in Pine Creek, for analysis of Au and Ag by BLEG method, As by G300H method, and Cu, Pb and Zn by G300I method. The regional soil sampling program was successful in identifying two north - west trending gold/base metal soil anomalies in an area with significant black soil and paper bark swamp cover. The maximum values returned were 8.8 ppb Au and 4.6 ppb Au (Mottram, 1998).

Northern Gold N.L. conducted regional soil sampling, infill soil sampling and MMI geochemical soil sampling programs over EL 9122, during the 1998/99 year of tenure.

The regional soil sampling program was completed over the central portion of the tenement, targeting previously defined regional soil gold anomalies. A total of 47, two kilogram soil samples, including duplicates, were collected at 25 metre intervals and composited to 100 metres, along five lines. The samples were submitted to Assaycorp, in Pine Creek, for analysis of Au and Ag by BLEG method, As by G300H method, and Cu, Pb and Zn by G300I method. The peak results returned from the regional soil sampling program were 36.3 ppb Au and 27.6 ppb Au (Mottram, 1999).

The infill soil sampling program was completed in the central west of the licence, targeting anomalous gold results returned from the regional soil sampling program. A total of 14, two kilogram soil samples, including duplicates, were collected at 25 metre intervals and composited to 50 metres, along one line. The samples were submitted to Assaycorp, in Pine Creek, for analysis of Au, by FALL method, As by G300H method, and Ag, As, Cu, Pb and Zn by G300I method. The sampling returned a peak result of 7 ppb Au (Mottram, 1999).

MMI geochemical soil sampling was carried out over the infill soil sampling line to test the anomalous gold results returned from the regional soil sampling program. Approximately 500 grams of soil, sieved to -6 millimetres, was collected every 50 metres along one line. A total of 14 samples, including duplicates, were collected and submitted to Amdel, in Darwin, for Au, Ag, Ni, Co, and Pd WAMBM analysis. The peak results returned from the MMI geochemical soil sampling program were 0.7 ppb Au and 0.85 ppb Au (Mottram, 1999).

4.0 1999/2000 EXPLORATION PROGRAM

4.1 Regional Soil Sampling Program

During the 1999/2000 field season, Northern Gold N.L. contracted Arnhem Exploration Services to complete a regional soil sampling program over the southern region of EL 9122, targeting regional soil gold anomalies previously identified by Northern Gold N.L.

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 five, 800 metre spaced lines. A total of 66, 'B' horizon, soil samples (Sample Nos. 182001 - 182066), 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. The analytical methods and detection limits are listed below in Table 1. The regional soil sample locations are shown on plan in Figure 3 and presented in Appendix 1.

Table 1 Regional Soil Sampling Program Detection Limits

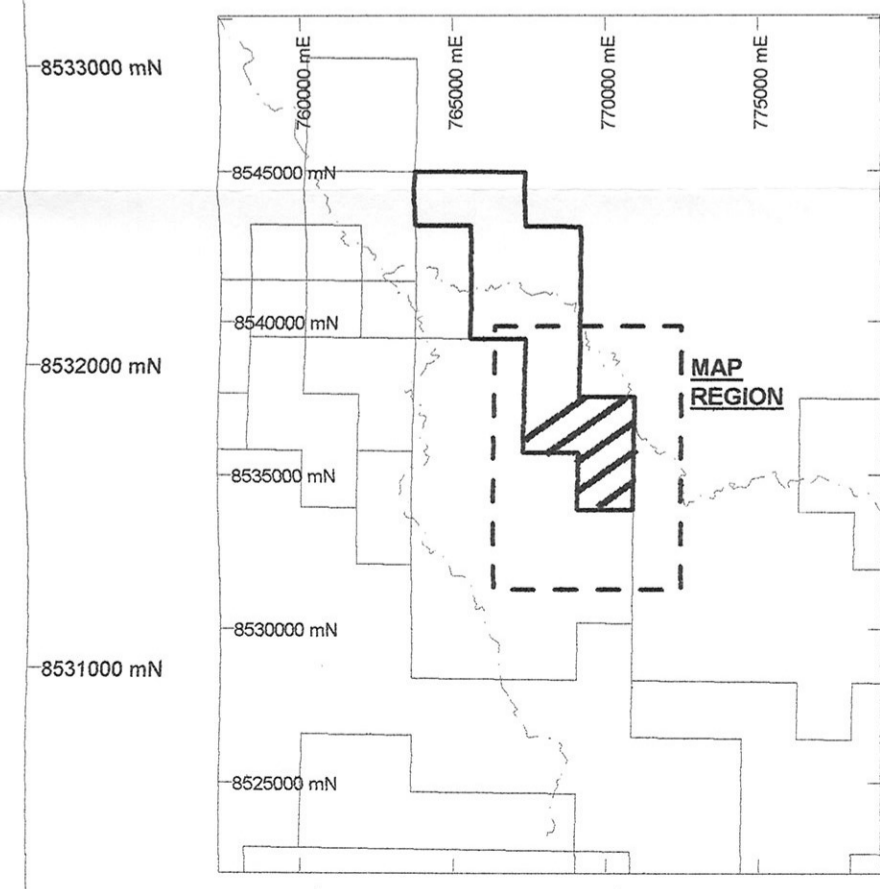
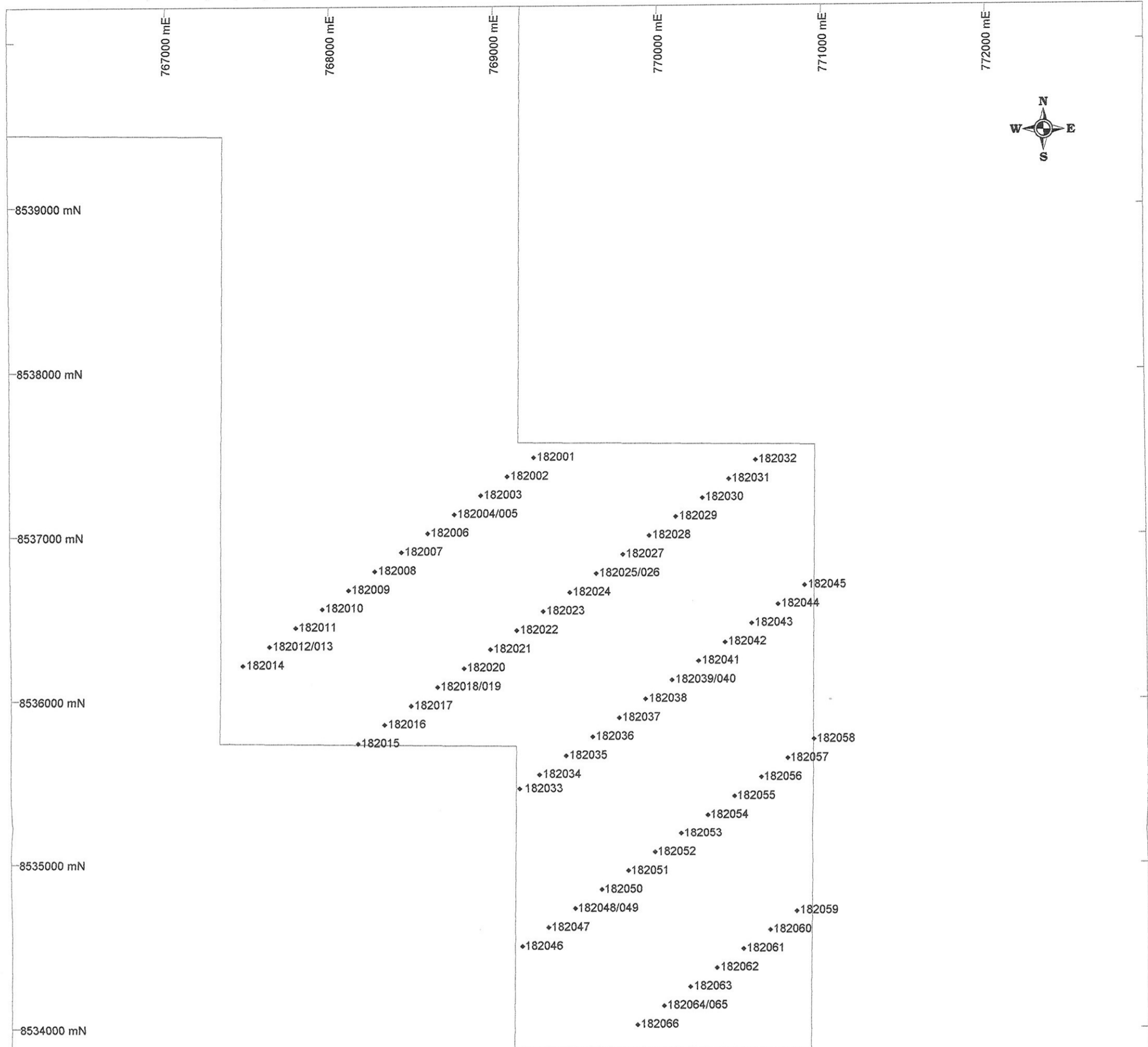
Element	Method	Digest	Technique	Detection Limit	Data Units
Au	BLEG	-	2Kg	0.1	ppb
Ag	BLEG	-	2Kg	0.1	ppb
As	G400M	MA4	ICP-MS	0.5	ppm
Cu	G400M	MA4	ICP-MS	0.2	ppm
Pb	G400M	MA4	ICP-MS	0.2	ppm
Zn	G400M	MA4	ICP-MS	0.5	ppm

4.1.1 Regional Soil Sampling Program Results

The regional soil sampling program was successful in extending the length of the previously outlined, northwest trending, low tenor gold soil anomaly. The anomalous zone has a strike length of 3,200 metres, with a maximum width of 800 metres. Approximately 90% of the anomaly lies within black soil alluvium, derived from the Margaret River drainage system.

The peak results returned were 3 ppb Au (Sample No. 182055, 8535414.50N : 770446.00E), 2.8 ppb Au (Sample No. 182058, 8535758.00N : 770932.00E and Sample No. 182045, 8536692.25N : 770879.00E), and 2.6 ppb Au (Sample No. 182025, 8536767.75N : 769611.00E).

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



Northern Gold N.L.	
Date: 26/5/2003	EL 9122 1999/2000 REGIONAL SOIL SAMPLING PROGRAM LOCATION PLAN Figure 3
Author: N.Madrum	
Office: EDS, WA	
Drawing:	
Scale: 1:25000	Projection: AMG Zone 52 (AGD 66)

5.0 1999/2000 EXPENDITURE

Expenditure over EL 9122, during the 1999/2000 year of tenure, totalled \$12,230. Details of this expenditure are listed below as Table 2.

Table 2 EL 9122 1999/2000 Expenditure

<u>COSTS</u>	<u>AMOUNT</u>
Data Review	205
Tenement Management	245
Assays	1,490
Consumables	290
Accommodation, Field, Travel Exp.	250
Geological Contractors	2,500
Drafting and Plan Preparation	660
Motor Vehicle Expenses and Fuel	1,005
Casual Wages	1,565
Salaries	1,980
Subtotal	10,190
Administration @ 20%	2,040
TOTAL	<u>\$12,230</u>

6.0 2000/01 PROPOSED WORK PROGRAM

The proposed work program for the 2000/01 year of tenure will include detailed regolith and geological mapping, infill soil sampling and assaying, to explore the potential for northern extensions to the low tenor gold anomalism.

An estimate of the costs of these programs is given below in Table 3.

Table 3 2000/01 Proposed Work Program

<u>COSTS</u>	<u>AMOUNT</u>
Infill Soil Sampling	2,000
Assays	3,200
Regolith and Geological Mapping	800
Salaries, Wages, and on costs	2,000
TOTAL	<u>\$8,000</u>

7.0 REFERENCES

MOTTRAM, N., (1998). EL 9122, 1997/98 Annual Report, 05/06/97 to 04/06/98.
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MOTTRAM, N., (1999). EL 9122, 1998/99 Annual Report, 05/06/98 to 04/06/99.
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Unpublished report by Northern Gold N.L. for the NTDME.

SOCIC, N., (1997a). EL 9122, 1996/97 Annual Report, 05/06/96 to 04/06/97.
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APPENDIX 1

1999/2000 Regional Soil Sampling Program Locations and Assay Results

EL 9122
1999/2000 Annual Report

3.5" Disk

Files

9122ar00.doc

9122sl00.txt