



# Northern Gold NL

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## EL 8511 FINAL REPORT

to 31<sup>st</sup> October 1996

1:50,000 Scale Map Sheet

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

CR 97 / 206

March 1997

Author:- N. Socic

NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office

## SUMMARY

EL 8511 is located approximately 130 kilometres south - east of Darwin on the Burnside (14/2-II) 1:50,000 scale map sheet.

The licence area consists of moderately to steeply dipping sediments of the Burrell Creek Formation of the Lower Proterozoic Pine Creek Geosyncline and covers the northern extension of the Carruthers Fault structure.

Previous exploration in the area was carried out by W. R. Grace, R. Biddlecombe, Northern Gold N.L. and Dominion Gold Operations Pty. Ltd. over EL 4350, EL 5038, EL 6819, MCNs 3477 - 82 and SEL 7507. The work included geological mapping, aerial photography, airborne magnetic interpretation, stream sediment sampling, soil sampling, rock chip sampling and RC drilling.

The licence, consisting of three graticular blocks, was granted to Dominion Gold Operations Pty. Ltd. on the 20<sup>th</sup> of April 1994 for a period of four years. The tenement is now held by Territory Goldfields N.L., and managed by Northern Gold N.L.

The licence has been included with other Northern Gold N.L. controlled tenements in the Yam Creek area under SEL 9591. Substitute Exploration Licence 9591 was granted on the 31<sup>st</sup> of October 1996, for a period of four years.

No work has been completed over EL 8511, by Northern Gold N.L. between April 1996 and October 1996.

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## 1.0 INTRODUCTION

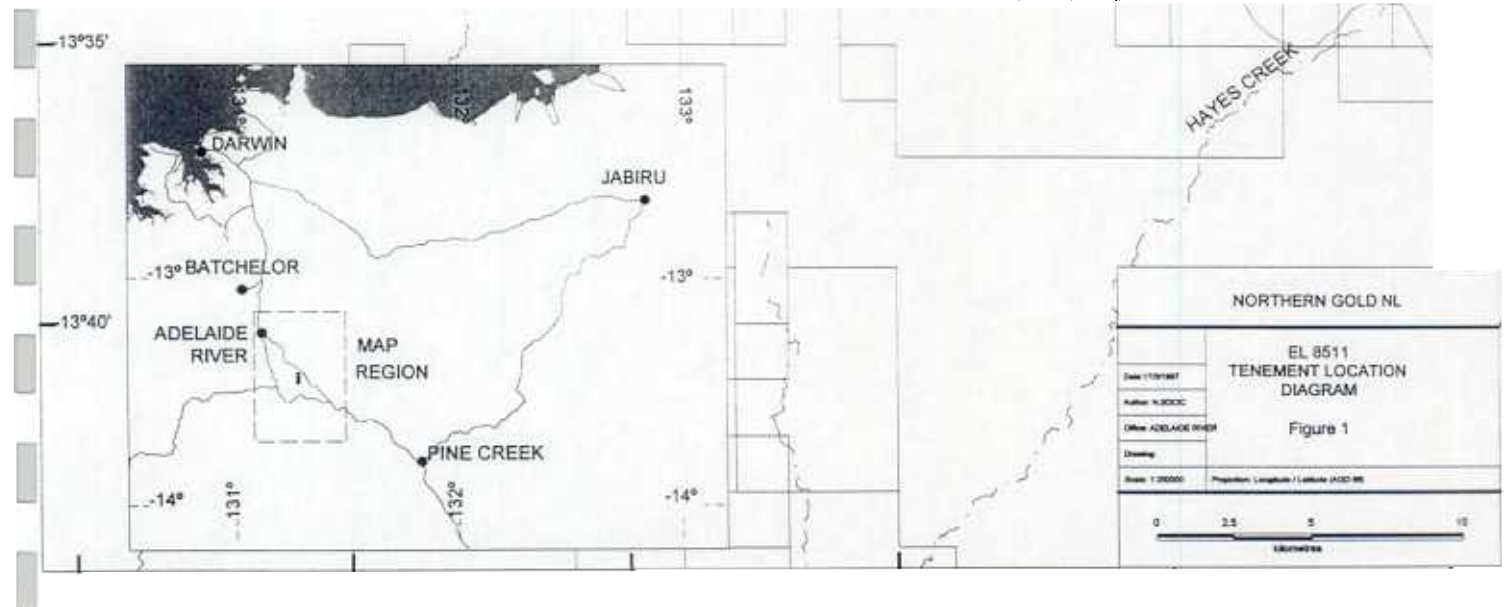
EL 8511 is located approximately 130 kilometres south - east of Darwin on the Burnside (14/2-II) 1:50,000 scale map sheet. The tenement, which consists of three blocks, 10 square kilometres in area, lies between the latitudes 13°25' south and 13°28' south and longitudes 131°16' east and 131°17' east (Figure 1). EL 8511 is situated within Pastoral Lease No. 903, Douglas, held by Tovehead Pty. Ltd.

Access is via tracks from the Stuart Highway to the north.

EL 8511 was granted to Dominion Gold Operations Pty. Ltd. on the 20<sup>th</sup> of April 1994 for a period of four years. The tenement is now held by Territory Goldfields N.L., and managed by Northern Gold N.L.

The licence has been included with other Northern Gold N.L. controlled tenements in the Yam Creek area under SEL 9591.

Substitute Exploration Licence 9591 was granted on the 31<sup>st</sup> of October 1996, for a period of four years.



NORTHERN GOLD NL	
EL 8511 TENEMENT LOCATION DIAGRAM	
Date: 11/01/97	Figure 1
Author: N.G.O.C.	
Office: ADELAIDE RIVER	
Drawing:	
Scale: 1:25000	Projection: Longitude / Latitude (GDA 96)
<div>0 2.5 5 10</div> <div>Kilometres</div>	

## **2.0 GEOLOGY**

### **2.1 Regional Geology**

EL 8511 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**

The licence area consists of moderately to steeply dipping sediments of the Burrell Creek Formation of the Lower Proterozoic Pine Creek Geosyncline. The majority of the area appears to consist of massive feldspathic lithic greywacke (Socic, 1996).

The exploration licence covers the northern extension of the Carruthers Fault structure. This structure is largely under alluvial cover (Socic, 1996).

### 3.0 EXPLORATION COMPLETED

Previous exploration in the area was carried out by W. R. Grace, R. Biddlecombe, Northern Gold N.L. and Dominion Gold Operations Pty. Ltd. over EL 4350, EL 5038, EL 6819, MCNs 3477 - 82 and SEL 7507.

No significant modern gold or base metal exploration had been carried out over the licence area prior to work conducted by W. R. Grace on EL 4350 (Stokes, 1989).

Rock chip sampling programs carried out by R. Biddlecombe in 1988, over EL 5038, identified a zone of anomalous quartz veins, assaying up to 17.2 g/t Au (Biddlecombe, 1988).

Northern Gold N.L. completed rock chip sampling in 1989, producing values up to 12.1 g/t Au and 1.01% Pb. Further rock chip sampling by Northern Gold N.L. produced values up to 0.18 g/t Au, 1,800 ppm Pb, 50 ppm Cu and 11,000 ppm As (Stokes, 1989).

Work completed by Northern Gold N.L. during 1990, concentrated on assessing the soil and scree anomalies within MCNs 3477 - 82, with minor geological mapping and reconnaissance over EL 6819.

A reverse circulation drilling program was carried out during July 1990, with six holes for 360 metres being drilled. No significant mineralisation was encountered, with a best result of 1 metre @ 0.54 ppm Au (Burn, 1991).

Rock chip sampling was also carried out by Northern Gold N.L. over the area now held as EL 8511. A total of 35 rock chip samples were collected. Only two rock chip samples returned anomalous Au values (Burn, 1991).

During 1991, Dominion Gold Operations Pty. Ltd. completed a work program over SEL 7507 which included aerial photography, re-interpretation of NTGS and Aerodata airborne geophysical data, reconnaissance mapping at 1:25,000 scale, stream sediment sampling, soil sampling and rock chip sampling (Burn, 1992).

The results from the stream sediment included values of 15 ppb Au and 10 ppb Au from creeks draining the north - south trending Mount Shoobridge Fault Zone (Burn, 1992).

Soil sampling was completed over two quartz vein/stockwork zones defined by reconnaissance mapping. No significant results were returned, with a maximum of 2 ppb Au (Burn, 1992).

A total of five rock chip samples were collected from a late stage recrystallised quartz vein and assayed for Au, As, Cu, Pb, Zn, Mn and Fe by Analabs Darwin. Peak responses of 4 ppb Au, 437 ppm Cu, 7,585 ppm Pb, 888 ppm Zn, 19.8% Fe, 2,040 ppm Mn and 145 ppm As were returned (Burn, 1992).

No work has been completed over EL 8511 between April 1996 and October 1996.

## **4.0 REFERENCES**

- BIDDLECOMBE, R. M., (1988). Exploration Licence 5038, Mount Shoobridge, Annual Report 1988. Unpublished report for the NTDME.
- BURN, N. R., (1991). EL 6819, Pine Creek District, N. T., Annual Report to 8 May 1991, Year One of Tenure. Unpublished report by Dominion Gold Operations Pty. Ltd. for the NTDME.
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- STOKES, M., (1989). EL 6819 Annual Report to 13<sup>th</sup> August 1989. Unpublished report by Northern Gold N.L. for the NTDME.