

# **Northern Gold NL**

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## **EL 8579 FINAL REPORT**

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

**Pine Creek 1:100,000 Map Sheet**

**Title Holder:- Territory Goldfields N.L.**

**Managed by:- Northern Gold N.L.**

March 1997

Author:- N.Socic

NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office

## SUMMARY

EL 8579 is located approximately 200 kilometres south - east of Darwin on the Burrundie (14/6-IV) 1:50,000 scale map sheet.

The stratigraphy within EL 8579 includes rocks from the Mt. Bonnie Formation, Gerowie Tuff, Zamu Dolerite and Koolpin Formation.

The licence, consisting of 1 graticular block, 3 square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 27<sup>th</sup> of May 1994 for a period of two years. EL 8579, was renewed by Territory Goldfields N.L., which is managed by Northern Gold N.L., on the 1<sup>st</sup> of April 1996 for a period of two years, expiring on the 26<sup>th</sup> of May 1998. 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 8579, by Northern Gold N.L., between May 1996 and October 1996. The work that has commenced will be completed under SEL 9591.

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## 1.0 INTRODUCTION

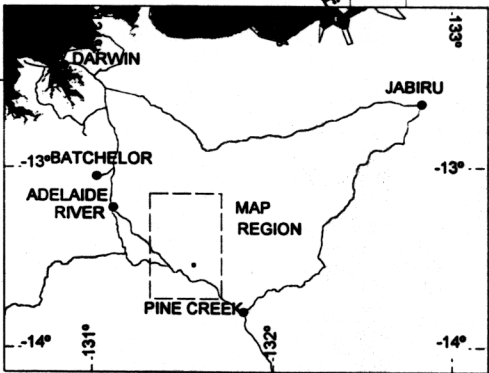
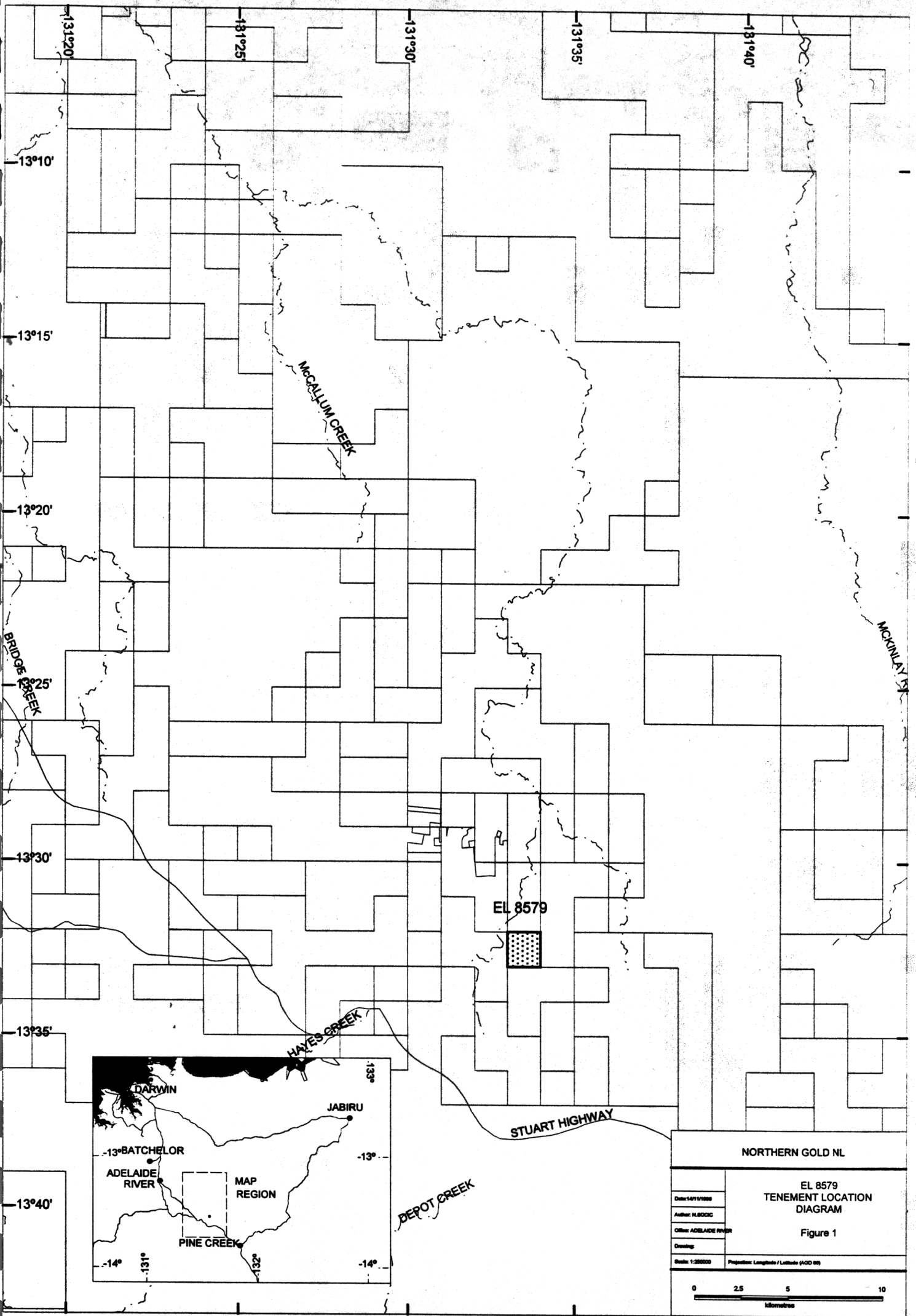
EL 8579 is located approximately 200 kilometres south-east of Darwin, on the Burrundie 1:50,000 (14/6-IV) map sheet. The tenement, consisting of one graticular block, 3 square kilometres in area, lies between latitudes 13°32' south and 13°33' south and longitudes 131°33' east and 131°34' east (Figure 1). EL 8579 is situated within Pastoral Lease No. 903, Douglas, held by Tovehead Pty. Ltd.

Access is via the Stuart Highway and then by the Mount Bonnie Mine Road, approximately 10 kilometres south of Hayes Creek.

The licence was granted to Dominion Gold Operations Pty. Ltd. on the 27<sup>th</sup> of May 1994 for a period of two years. EL 8579, was renewed by Territory Goldfields N.L., which is managed by Northern Gold N.L., on the 1<sup>st</sup> of April 1996 for a period of two years, expiring on the 26<sup>th</sup> of May 1998.

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 8579 TENEMENT LOCATION DIAGRAM	
Figure 1	
Date: 14/11/1988	
Author: H.B.O.C.	
Client: ADELAIDE RIVER	
Drawing:	
Scale: 1:25000	Projection: Longitude / Latitude (AGD 84)
<div style="text-align: center;">0 2.5 5 10 Kilometres</div>	

## **2.0 GEOLOGY**

### **2.1 Regional Geology**

EL 8579 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 stratigraphy within EL 8579 includes rocks from the Mount Bonnie Formation, Gerowie Tuff, Zamu Dolerite and Koolpin Formation (Socic, 1996).

### 3.0 PREVIOUS EXPLORATION

Detailed work by Geopeko focused strongly on the Mount Bonnie/Iron Blow deposits to the west and north of EL 8579.

Zapopan commissioned an aeromagnetic survey over the Pine Creek Inlier region in 1987. Intense magnetic anomalies were outlined for Mt. Bonnie and Iron Blow and several other highs in the area (Fawcett, 1995).

Dundas Gold completed a stream sediment program in 1988 focusing on gold using bulk cyanide leach (BCL) sampling methods. A number of anomalous values were recorded in drainages from Mount Bonnie and Iron Blow. Other elevated values were recorded in drainages flowing north-north-east away from the tenement (Fawcett, 1995).

In 1993 Zapopan carried out a geological mapping program throughout the area.

Exploration on EL 8579 by Dominion Mining Operations Ltd. consisted of gridding soil sampling and RAB drilling to test for Au, As, Cu, Pb and Bi (Fawcett, 1995).

Gridding was undertaken to control the soil sampling and RAB drilling program. The grid was established as part of a larger grid covering EL 7623 to the north of EL 8579.

Soil sampling was carried out in areas of outcrop and subcrop and sieved to -2 millimetre size fraction. Samples were collected on a 400 metre x 50 metre grid pattern and submitted to Amdel Laboratories, Darwin for analysis. A total of 120 samples were collected. An anomalous region was found in the south-east quadrant of the tenement, returning Au results ranging from 24 ppb to 100 ppb. The corresponding As values range from 90 ppm to 200 ppm (Fawcett, 1995). The results from the anomalous area are given in the table below:-

<u>SAMPLE NO.</u>	<u>NORTHING</u>	<u>EASTING</u>	<u>AU PPB</u>	<u>AS PPM</u>
E24605	6600	10150	100	200
E24606	6600	10200	4	10
E24607	6600	10250	100	110
E24608	6600	10300	13	90
E24609	6600	10350	24	120

**Table 1**

A spot high Au value of 250 ppb with a corresponding As value of 480 ppm was obtained in the south-west quadrant of EL 8579 (Fawcett, 1995), from sample number E24621 (6200N : 9400E).

RAB drilling was undertaken where alluvial gravels and subsurface water made the use of vacuum drilling difficult. A total of 27 holes for 171 metres were drilled in the north-east corner of EL 8579 (Fawcett, 1995). The results obtained gave a peak response of 12 ppb Au and 330 ppm As from drill hole number:- 94MBVR060 (Sample No.: -F96392, 7400N : 10550E).

No work was completed over EL 8579 between May 1996 and October 1996. The work that has commenced will be completed under SEL 9591.



## **4.0 REFERENCES**

FAWCETT, C. (1995). EL 8579 - Mt. Bonnie, Annual Report - Year One of Tenure, 27.5.94 - 26.5.95. Unpublished report by Territory Goldfields N.L. for the NTDME.

SOCIC, N., (1996). EL 8579, 1995/96 Annual Report, 27.05.95 to 26.05.96. Unpublished report by Northern Gold N.L. for the NTDME.