Northern Gold NL

ACN: 009 620 937
Lot 128 Finlay Rd, ADELAIDE RIVER, N.T. 0846
Phone: 08 89767023 Fax: 08 89767025

EL 7786
FINAL REPORT

to 31st October 1996

Burnside 14/2-II, 1:50,000 Scale Map Sheet
and Margaret River 14/2-I, 1:50,000 Scale Map Sheet

Title Holder:- Northern Gold N.L. and Camelot Northern Territory Ltd.

Managed by:- Northern Gold N.L.

February 1997

Author:- N.Socic

NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office

Camelot Northern Territory Ltd

SUMMARY

EL 7786 is located approximately 8 kilometres north - east of Bridge Creek, and 2 kilometres south of the abandoned Goodall Gold Mine, on the Burnside 1:50,000 scale (14/2-II) map sheet and Margaret River 1:50,000 scale (14/2-I) map sheet.

The tenement contains lithologies belonging to the Gerowie Tuff, Mt. Bonnie Formation and Burrell Creek Formation and covers three interpreted north plunging antiforms. The western boundary of the tenement covers the continuation of the Howley Anticline. The central and eastern part of the tenement covers the continuation of a structure, which can be traced south - east to the mineralisation within the Brocks Creek area.

The exploration licence, originally consisting of twenty blocks, was granted to Northern Gold N.L. (50%) and Camelot Northern Territory Ltd. (50%) on the 11th of August 1992 for a period of six years. Due to compulsory relinquishment, EL 7786 was reduced to the current seven blocks in July 1995. 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 31st of October 1996, for a period of four years.

No work has been completed over EL 7786, by Northern Gold N.L., since the 1996 anniversary. The work that has commenced will be completed under SEL 9591.

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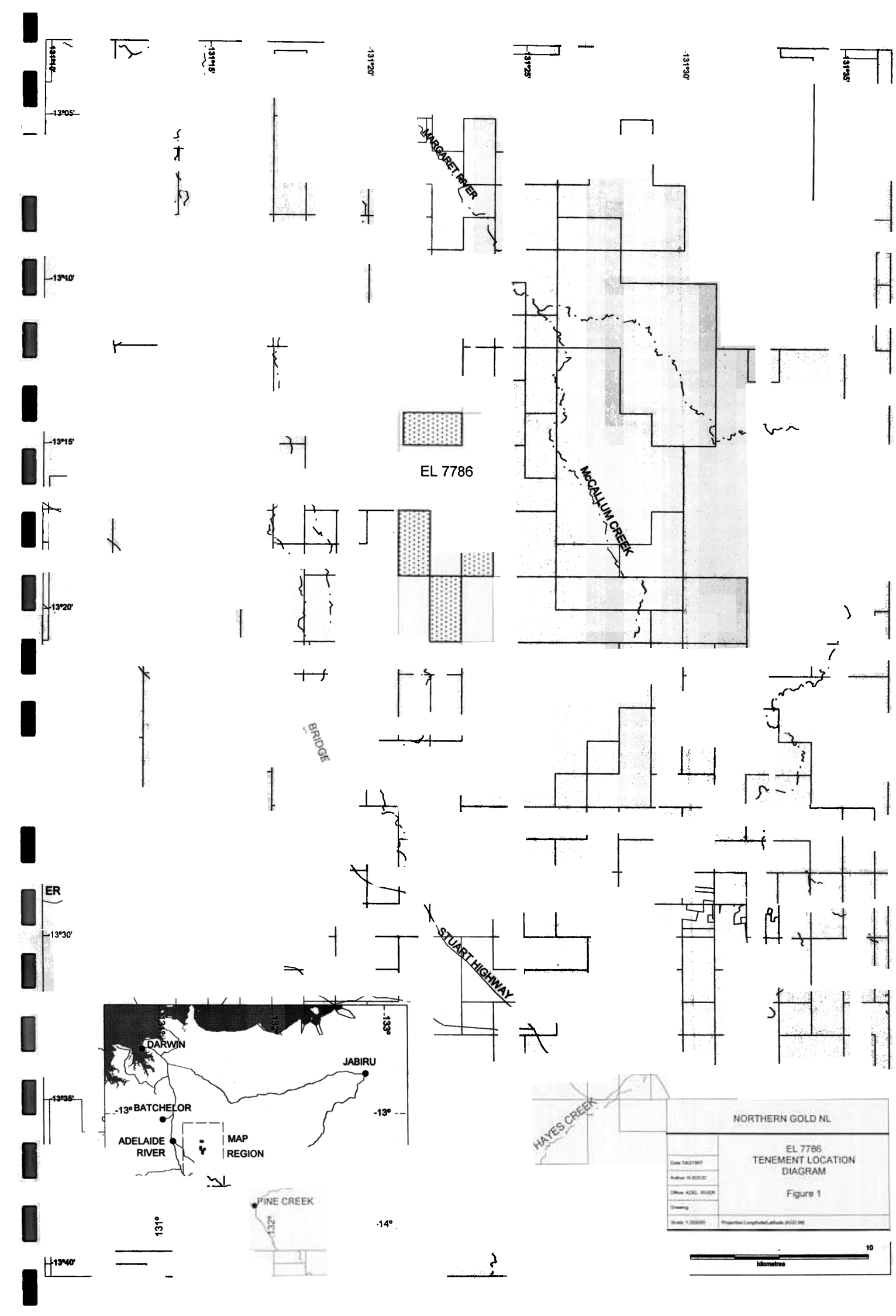
1.0 INTRODUCTION

EL 7786 is located approximately 8 kilometres north - east of Bridge Creek, and 2 kilometres south of the abandoned Goodall Gold Mine, on the Burnside 1:50,000 scale (14/2-II) map sheet and Margaret River 1:50,000 scale (14/2-I) map sheet. The tenement, which consists of 7 graticular blocks, 22 square kilometres in area, lies between latitudes 13°14' south and 13°21' south and longitudes 131°21' east and 131°24' east (Figure 1). EL 7786 is situated on Perpetual Pastoral Lease No. 1111, Ban Ban Springs, held by Ban Ban Springs Station Pty. Ltd. and Pastoral Lease No. 718, Mount Ringwood, held by Mr. W. Moon and Mr. M. Rathsmann.

Access to the tenement is via a track north from the Bridge Creek crossing, or south from Goodall, and is restricted to four wheel drive vehicles due to the rugged nature of the terrain.

The exploration licence, originally consisting of twenty blocks, lying between latitudes 13°14' south and 13°22' south and longitudes 131°21' east and 131°24' east, was granted to Northern Gold N.L. (50%) and Camelot Northern Territory Ltd. (50%) on the 11th of August 1992 for a period of six years. Due to compulsory relinquishment, EL 7786 was reduced to the current seven blocks in July 1995. 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 31st of October 1996, for a period of four years.


131°10'
131°15'
131°20'
131°25'
131°30'
131°35'
13°05'
13°10'
13°15'
13°20'
13°30'
13°35'
13°40'
MARGARET RIVER
EL 7786
McCALLUM CREEK
BRIDGE
STUART HIGHWAY
HAYES CREEK
DARWIN
JABIRU
BATCHELOR
ADELAIDE RIVER
MAP REGION
PINE CREEK
131°
132°
133°
-13°
-14°
NORTHERN GOLD NL
EL 7786
TENEMENT LOCATION
DIAGRAM
Figure 1
10
kilometres

2.0 GEOLOGY

2.1 Regional Geology

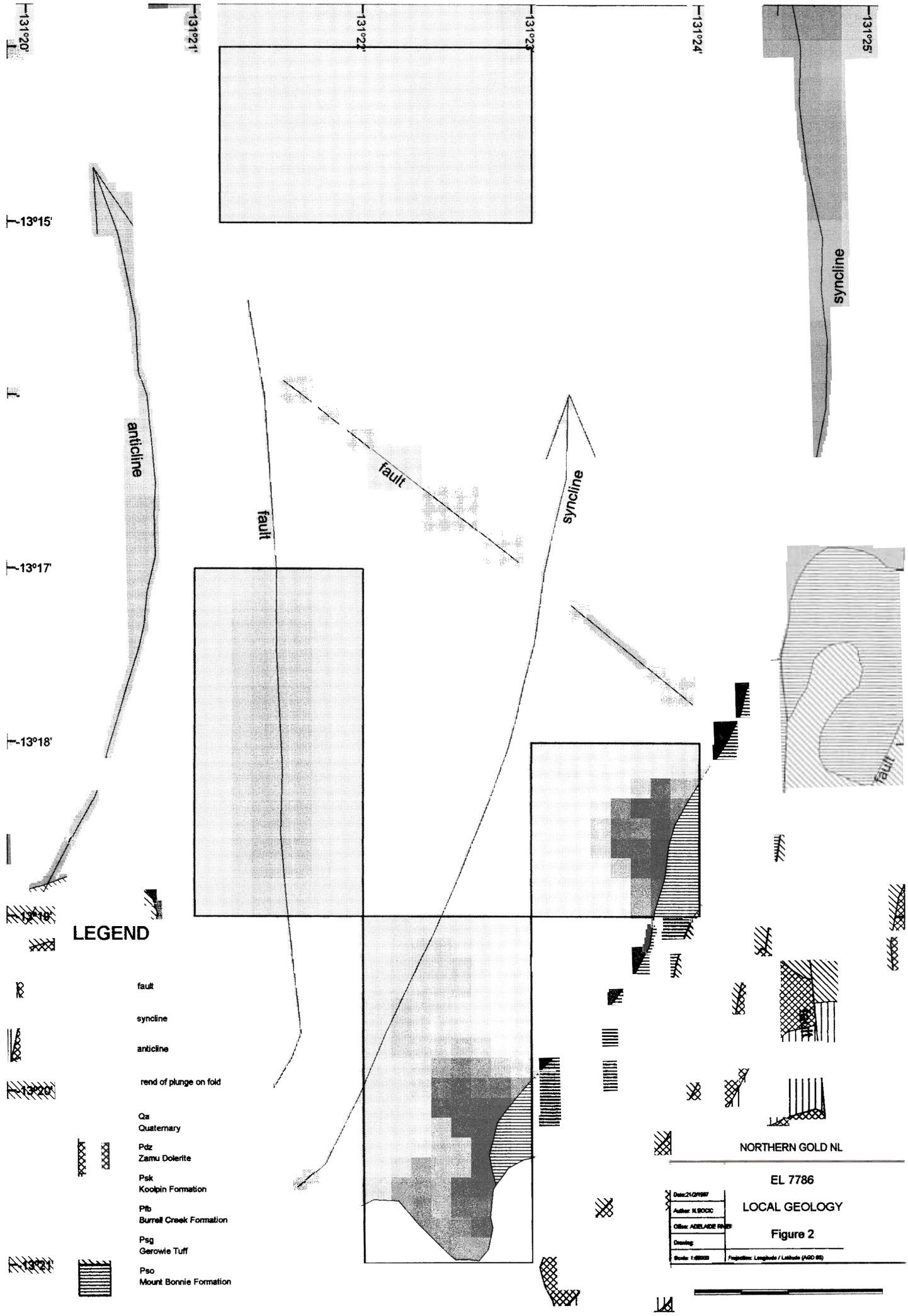
EL 7786 is situated within the Pine Creek Geosyncline, a tightly to isoclinally folded sequence of mainly pelitic and psammitic Lower Proterozoic sediments with interlayered tuff units. All the lithologies in the area have been metamorphosed to low, and in places medium grade, metamorphic assemblages. For the purposes of this report the prefix meta is implied, but omitted, from rock names and descriptions.

The sequence has been intruded by pre-orogenic dolerite sills of the Zamu Dolerite and a 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 laterite overlie the Pine Creek Geosyncline lithologies.

2.2 Local Geology

The tenement consists of broad flat black-soil covered plains along Howley Creek, which runs through the south of the tenement, and rugged hills with deeply incised creeks in the north of the tenement. Outcrop within the tenement is good in the north and poor in the south. Regional mapping of the area indicates that the tenement contains lithologies belonging to the Mt. Bonnie Formation and Burrell Creek Formation, with a minor presence of Gerowie Tuff overlain by Quaternary alluvials in the south - east of the tenement (Figure 2).

Regional mapping and aeromagnetic interpretation, completed in previous investigations of the area, also suggests that the tenement covers at least three north plunging antiforms and associated thrust faulting. The western boundary of the tenement covers the continuation of the Howley Anticline and anomalous mineralisation has been identified in EL 7769 adjacent to EL 7786 (Partington, 1994). The central and eastern part of the tenement covers the continuation of a structure, which can be traced to the south east to the Brocks Creek area, that contains mineralisation in MLNs 414-418 and EL 7769.


131°20'
131°21'
131°22'
131°23'
131°24'
131°25'
13°15'
13°17'
13°18'
13°19'
13°20'
13°21'
anticline
fault
fault
syncline
syncline
fault
LEGEND
fault
syncline
anticline
rend of plunge on fold
Qa
Quaternary
Pdz
Zamu Dolerite
Psk
Kootpin Formation
Pfb
Burrell Creek Formation
Psg
Gerowie Tuff
Pso
Mount Bonnie Formation
NORTHERN GOLD NL
EL 7786
LOCAL GEOLOGY
Figure 2

3.0 EXPLORATION COMPLETED

The tenement was previously held by Golden Plateau as EL 5313 and EL 5489, and by Western Mining Corporation (WMC) as ELs 4066 and 5319. No extensive modern exploration was carried out prior to this. Previous work by both Golden Plateau and WMC is reported in open file company reports at the Department of Mines. This work was extensive in places, but little work was carried out in the area now covered by EL 7786 due to the rugged nature of the terrain in the north of the tenement and the extensive alluvial flood plains, which cover Howley Creek in the south. However, regional reconnaissance soil sampling by both WMC and Golden Plateau identified areas anomalous in gold. These areas have had little follow-up exploration, and these were the focus of the work in 1994 (Partington, 1993).

During the 1992/93 field season, Northern Gold N.L. commenced a reconnaissance stream sediment sampling program to test the tenement for gold mineralisation with the aid of enhanced geophysical data and mapping. The data was used to identify regional target areas. Emphasis was placed on the northern continuation of the Howley Anticline south of Goodall, where little work has been carried out (Partington, 1993).

An aerial photographic survey was carried out over the Howley, Paqualin, Gunn Creek and Western Arm areas at 1:10,000 scale in 1993. This survey covered all of EL 7786 and was used for regional and detailed geological mapping and structural interpretation (Partington, 1993).

The stream sediment sampling results identified several anomalous soil values, which appear to be related to the southern continuation of the Howley Anticline, south of the Goodall Gold Mine (Partington, 1993).

In 1994, Northern Gold N.L. completed a reconnaissance exploration program composed of geological mapping, structural interpretation and soil sampling in the southern and eastern part of EL 7786. The soil sampling identified several areas of anomalous soil values ranging from 5 ppb to 26 ppb Au and coincident As anomalies of 10 ppm to 110 ppm. Three anomalous zones were identified with the western anomaly related to the northern continuation of the Howley Anticline and the eastern anomaly related to a north east trending structure parallel to the northern margin of the Burnside Batholith. This eastern anomaly has a strike length of over 6 kilometres, and is thought to be restricted to ironstone units of the Upper Mt. Bonnie Formation (Partington, 1994).

The aim of the 1994/95 exploration program was to infill regional soil gold anomalies identified in the 1993/94 field season using a combination of regional Landsat and AGSO digital images with local SPOT panchromatic images. The

introduction and incorporation of remotely sensed data with locally acquired data was assessed to test the usefulness of such combinations in targeting and identifying prospective areas of gold mineralisation (Hardy, 1995).

Infill soil sampling was completed in two areas of EL 7786. Samples were collected from two areas of the tenement every 10 metres and composited to 40 metres along 100 metre spaced lines. A total of 402 samples were collected using the -6 millimetre sieve fraction and submitted to Assaycorp for 50 gram, quartz flush low level fire assay Au and As analysis (Hardy, 1995).

The infill soil sampling reconfirmed the soil anomalies identified by the previous regional soil sampling program. Infill sampling in the southern area identified two elongate, north - east trending and broadly coincident Au and As anomalies with a strike length of 450 metres and width of 100 metres, and assays up to 490 ppb Au and 650 ppm As. Results from infill soil sampling the northern area returned anomalous values between 20-40 ppb Au over a north - east trending area of 800 metres by 400 metres with spot highs of up to 104 ppb Au. The As results record two 400 metre by 200 metre north - east trending anomalies with maximum values to 250 ppm As, and these are coincident with the spot Au values for the area (Hardy, 1995).

During the 1995/96 field season, Northern Gold N.L. completed a RAB drilling program over soil anomalies identified by the regional and infill soil sampling carried out in 1994/95. A total of 347 holes were drilled at 20 metre intervals in two areas of the tenement, referred to as the 'northern' and 'southern' anomalies. Five lines at 200 metre spacing, were drilled over the northern anomaly and eleven lines at 200 metre spacing were drilled over the southern anomaly. A total of 2,559 metres were drilled with an average depth per hole of 7.3 metres. All holes were drilled vertically into impenetrable bedrock, depending on hole conditions, and a standard two metre composite sample was collected. A total of 1,314 samples were submitted to Assaycorp for 50 gram, quartz flush low level fire assay Au and As analysis (Socic, 1996).

The RAB drilling of the northern anomaly identified three north - northeast trending gold and arsenic bedrock anomalies up to 500 metres in strike length and 80 metres width. Drilling on the southern anomaly identified a coincident north trending gold and arsenic mineralised zone with a strike length of 1,400 metres, and up to 100 metres in width. At least two other separate anomalous zones, with the same trend, lie to the immediate west (Socic, 1996).

No work has been completed over EL 7786 since the 1996 anniversary. The work that has commenced will be completed under SEL 9591.

4.0 REFERENCES

HARDY, A. (1995). EL 7786, Annual Exploration Report to 10 August 1995. Unpublished report by Northern Gold N.L. for the NTDME.

PARTINGTON, G. (1993). EL 7786, Annual Exploration Report to 10 August 1993. Unpublished report by Northern Gold N.L. for the NTDME.

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