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EL 7120

ANNUAL REPORT to 12 August 1996

Pine Creek Sheet SD 52.08 Burnside 14/2-II, 5171-II

**Title Holders:- Northern Gold N.L. and Camelot
Northern Territory**

Managed by:- Northern Gold N.L.

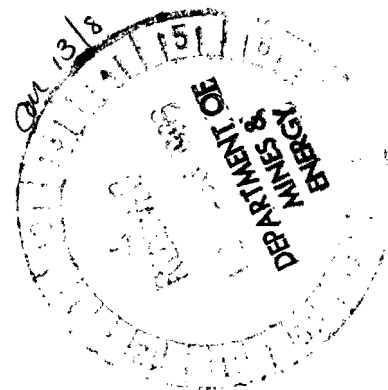
August 1996

Author:- N.Socic

NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office



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SUMMARY

EL 7120 is located within the Cullen Mineral Field, approximately 23 kilometres south east of Adelaide River and 8 kilometres north-west of the Mt. Paqualin trig.

The tenement covers the confluence of Howley Creek, Bridge Creek and Gunn Creek and consequently is 90% covered by soil and alluvium.

During the 1995\96 field season, 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 and site visits to determine the best method of exploration to be used on the licence.

The tenement had a covenant of \$20,000 for the 1995/96 year of tenure, while the expenditure totaled \$7,670.

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1.0 INTRODUCTION

1.1 Title and Location

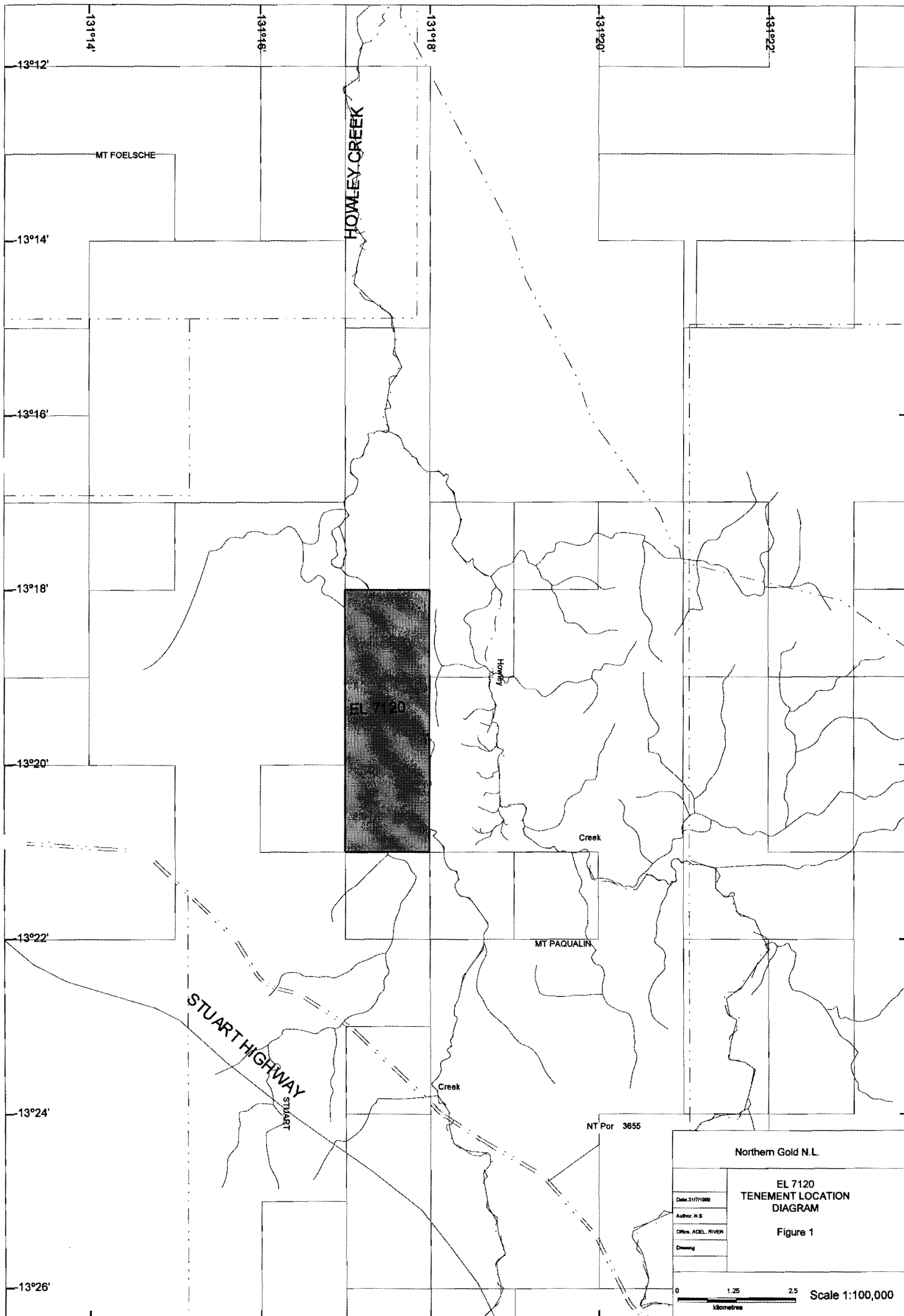
EL 7120 was granted on 15th of July 1991 to Northern Gold N.L. for a period of six years. The licence was originally covered by twelve blocks. By 1994 the tenement had been reduced to 6 graticular blocks. In 1995 the EL was further reduced by 3 graticular blocks. EL 7120 currently covers 3 graticular blocks, 10 square kilometres in area, lying between latitudes 13°18' south and 13°21' south and longitudes 131°17' east and 131°18' east, and is managed by Northern Gold N.L. for Northern Gold N.L. and Camelot Northern Territory Ltd. The tenement had a covenant of \$20,000 for the 1995/96 year of tenure, while the expenditure totaled \$7,670.

EL 7120 is located within the Cullen Mineral Field, approximately 23 kilometres south east of Adelaide River and 8 kilometres due north of the Mt. Paqualin trig (Figure 1). Access to the tenement is via a track north from the Bridge Creek alluvial mine and is restricted to four wheel drive vehicles, especially during the wet season.

1.2 Previous Work

Initial exploration on the area covered by EL 7120 was carried out by Geopeko when the area was held as EL 1123. This tenement was subsequently relinquished in 1978 with no significant anomalies identified. No work was carried out over the area covered by the tenement because of the alluvial cover. The area was then acquired by AAR Ltd. who concentrated on uranium exploration. Only limited rock-chip sampling was carried out and the area covered by EL 7120 was again overlooked. Western Mining and W.R. Grace picked-up the area as EL 4066 in 1983 and carried out substantial exploration to the south and east of the area covered by the tenement, but not within the tenement. Northern Gold NL conducted a soil sampling, mapping and rock chip sampling program on the tenement in 1992, and further soiling in 1993. Results are given in Partington 1992 and 1993.

The soil sampling identified a low level Au soil anomaly, which follows the trend of the Western Arm mineralisation. The significance of this anomaly is not clear as the area is covered by soil and alluvium. Follow-up RAB work in 1994 was designed to locate the source of the anomaly by sampling bedrock beneath the gold trend. No anomalous results were returned.



In the 1994/95 field season, Northern Gold N.L. completed a reconnaissance Aircore drilling program to locate the source of the gold anomaly highlighted by previous soil sampling (Partington, 1992 and 1993), thought to be associated with a northern extension of the Western Arm structure. Anomalous results were returned from this program, and was followed up by RAB testing in 1995 (Canaris, 1995).

A total of 48 Aircore drill holes were completed for 392 metres (TL 01 to 48), with three holes returning anomalous Au results over 40 ppb (Canaris, 1995). These areas were targeted for RAB testing. A total of 63 RAB drill holes were completed for 1086 metres, with an average depth of 17.2 metres. Twenty holes received anomalous results over 40 ppb Au (Canaris, 1995).

2.0 GEOLOGY

2.1 Regional Geology

EL 7120 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 covers the confluence of Howley Creek, Bridge Creek and Gunn Creek and consequently is 90% covered by soil and alluvium (Figure 2). EL 7120, however, lies to the north of the Howley, F17 and Western Arm anticlines and regional mapping and geophysical interpretation suggest that the F17 and Western Arm anticlines trend into the tenement. Both structures contain significant mineralisation to the south and the Western Arm anticline was initially targeted in the south of the tenement (Canaris, 1995).



Poor outcrop in the tenement suggest that EL 7120 comprises mainly lithologies of the Burrell Creek formation, consisting of shale and interbedded greywacke. This is supported by the occurrence of greywacke and siltstone beneath the alluvial cover, encountered during RAB and Aircore drilling. Interpretation of geophysical data (Partington 1992) suggests the continuation of the Western Arm anticline to the north is sub-parallel to Bridge Creek.

3.0 EXPLORATION COMPLETED

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 and site visits to determine the best method of exploration to be used on the licence.

GIS and satellite imagery were used to log soil types, indicating that the region comprises mainly black soil.

Satellite imagery was also used to interpret the structural geology of the region (Figure 3).

Interpretation of the GIS and remote sensing imagery shows that the tenement is covered predominantly by quaternary soils and alluvium. Minor subcrops of Burrell Creek Formation sediments are present in the west.



Northern Gold N.L.

EL 7120

SATELLITE IMAGE MAP

Figure 3

0 500 1000
metres Scale 1:50,000

4.0 1995/96 EXPENDITURE

Expenditure on EL 7120 during the 1995/96 year of tenure totaled \$7,670. Details of this expenditure are listed below as Table 1.

Table 1 EL 7120 1995/96 Expenditure

<u>COSTS</u>	<u>AMOUNT</u>
Report Compilation	415
Data Review	300
Tenement Management	530
Geological Fees	315
Motor Vehicle Charges and Fuel	505
Accomm., Field, Travel Expenses	85
Hire Charges	100
AGSO Mapping	425
Satellite Imagery & Manipulation	1,550
GIS Manipulation	780
Salaries and Wages	1,665
Subtotal	6,670
Administration @ 15%	1,000
TOTAL	<u>\$7,670</u>

5.0 1996/97 PROPOSED WORK PROGRAM

Exploration for the 1996/97 year of tenure will also include programs originally designated to the 1995/96 year of tenure.

R/C drilling and assaying will be completed to locate and confirm anomalous Au values returned, during previous exploration programs, from the southern end of the tenement area. An estimation of the cost of these programs is \$8,000.

The tenement will be re-evaluated by Northern Gold N.L. in the context of its other tenement holdings in the area, and has been included in the SEL 9591 application.

6.0 REFERENCES

CANARIS, J.P. (1995). EL 7120 Annual Exploration Report to 12 August 1995. Unpublished report by Northern Gold N.L. for the NTDME.

PARTINGTON,. G.A. 1992. EL 7120 Annual Exploration Report to July 1992. Northern Gold NL internal company report.

PARTINGTON,. G.A. 1993 EL 7120 Annual Exploration Report to July 1993 Northern Gold NL internal company report.