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MCN 4479 - 4481
1999 FINAL REPORT

Burnside (14/2-II) 1:50,000 scale map sheet

12th October 1993 to 31st May 1999

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

June 1999
Author:- N. Mottram

NTDME
Northern Gold N.L., Adelaide River
Northern Gold N.L., Perth Office
SUMMARY

MCNs 4479 - 4481 are located approximately 10 kilometres north - west of Hayes Creek on the Burnside (14/2-II) 1:50,000 scale map sheet.

Previous exploration within the mineral claims was completed by Dominion Gold Operations Pty. Ltd. over EL 7044.

MCNs 4479 - 4481 were granted to Dominion Gold Operations Pty. Ltd. on the 12th of October, 1993, for a period expiring on the 31st of December, 1997. The mineral claims were subsequently acquired by Territory Goldfields N.L., which is managed by Northern Gold N.L. MCNs 4479 - 4481 were renewed on the 30th of January, 1998, for a period expiring on the 31st of December, 2002. The mineral claims were surrendered on the 31st of May, 1999.

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation over EL 9463, which included the area held as MCNs 4479 - 4481. 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 gold exploration to be used on the licence.

Northern Gold N.L.'s expenditure over the mineral claims totalled $1,070.
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1.0 INTRODUCTION

MCNs 4479 - 4481 are located approximately 10 kilometres north-west of Hayes Creek on the Burnside (14/2-II) 1:50,000 scale map sheet. The mineral claims, which cover an area 111 hectares in size, lie between latitudes 13°29'30" south and 13°30' south and longitudes 131°25' east and 131°26' east (Figure 1). MCNs 4479 - 4481 are situated within Pastoral Lease No. 903, Douglas, held by Tovehead Pty. Ltd.

Access is via the Stuart Highway, and then along station tracks.

MCNs 4479 - 4481 were granted to Dominion Gold Operations Pty. Ltd. on the 12th of October, 1993, for a period expiring on the 31st of December, 1997. The mineral claims were subsequently acquired by Territory Goldfields N.L., which is managed by Northern Gold N.L. MCNs 4479 - 4481 were renewed on the 30th of January, 1998, for a period expiring on the 31st of December, 2002. The mineral claims were surrendered on the 31st of May, 1999.

Northern Gold N.L.’s expenditure over the mineral claims totalled $1,070.
2.0 GEOLOGY

2.1 Regional Geology
MCNs 4479 - 4481 are 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
AGSO mapping indicates that mineral claim area is dominated by Quaternary alluvial sediments caused by depositional creek systems.

Sedimentary units of the Burrell Creek Formation subcrop in MCN 4481 (Figure 2).
3.0 PREVIOUS EXPLORATION

Previous exploration within the region currently held as MCNs 4479 - 4481 was completed by Dominion Gold Operations Pty. Ltd. over EL 7044.

EL 7044 was granted to Dominion Gold Operations Pty. Ltd. on the 14th of November 1990, and expired on the 13th of November 1992. During this time, Dominion Gold Operations Pty. Ltd. completed airphoto interpretations, airborne geophysical interpretations, geological mapping at 1:25,000 scale with compilation at 1:10,000 scale, stream sediment sampling and rock chip sampling (Pooley, 1993).

Geological mapping and air photo interpretation highlighted outcrops of east-west trending Mount Bonnie Formation sediments, with similarly orientated photo linears (Pooley, 1993).

Stream sediment sampling in the region highlighted values of 88 ppb and 6 ppb Au in fines which drain the Zapopan workings. Gold anomalism was evident 2 kilometres from the source. Most results were in the range of <1 - 3 ppb Au in fines, with pan concentrates in the range of 4 - 110 ppb Au. Except for the samples draining workings, results reflected background values. This was also evident for As, Mn, Fe, Cu, Pb and Zn (Pooley, 1993).

Rock chip sampling concentrated on quartz occurrences within drainages and outcrop. A maximum result of 0.09 ppm Au was obtained (Pooley, 1993).
4.0 EXPLORATION COMPLETED

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation over EL 9463, which included the area held as MCNs 4479 - 4481 (Socić, 1997). 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 lateritised lower saprolite.

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

Interpretation of the GIS and remote sensing imagery indicates that Quaternary sediments dominate MCN 4479. The Burrell Creek Formation subcrops within MCN 4481.

5.0 EXPENDITURE

Northern Gold N.L. expenditure over MCN's 4479 - 4481 totalled $1,070. Details of this expenditure are listed below as Table 1.

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<td><strong>TOTAL</strong></td>
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6.0 REFERENCES

