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EL 8704

1999 RELINQUISHMENT REPORT

Mount Bundey (8/6-III) 1:50,000 scale map sheet

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

January 2000

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

Compiled by:-
N. Mottram
Essential Data Services, W.A.
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SUMMARY

EL 8704 is located approximately 95 kilometres south-east of Darwin on the Mount Bundey (8/6-III) 1:50,000 scale map sheet.

The licence is situated in the Pine Creek Geosyncline and comprises Mount Bundey Granite in the east and Burrell Creek Formation in the west.

The exploration licence, originally consisting of 3 blocks, ten square kilometres in area, was originally granted to Dominion Gold Operations Pty. Ltd. on the 18th of July, 1994, for a period of three years. Territory Goldfields N.L., which is managed by Northern Gold N.L., acquired the tenement in May, 1995. A waiver of reduction was granted over the tenement on the 3rd of October, 1996, enabling 3 blocks to be retained until the 18th of July, 1997. Renewal applications were submitted in July, 1997, and April, 1999.

In February, 1999, Northern Gold N.L. voluntarily relinquished 2 of the 3 blocks. The blocks retained and relinquished are listed in Table 1.

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<th>Table 1</th>
<th>EL 8704 Retained and Relinquished Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map Sheet (1:50,000 scale)</td>
<td>Retained</td>
</tr>
<tr>
<td>Mount Bundey (8/6-III)</td>
<td>65/14</td>
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<td></td>
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</table>

From the grant date to the reduction date, Northern Gold N.L. completed digital data studies and regional soil sampling over the relinquished blocks of EL 8704.

During the 1995/96 field season Northern Gold N.L. completed a work program based on digital data acquisition and manipulation. Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping to determine the best method of exploration to be used on the licence.

GIS and satellite imagery were used to log soil types and to interpret the structural geology of the region.

Northern Gold N.L. completed a regional soil sampling program over EL 8704 during the 1996/97 year of tenure. A total of 76 samples, including duplicates were collected and submitted to Assaycorp, in Pine Creek, for analysis of Au, As, Cu, Zn, and Pb. Of the 76 samples, two (Sample Nos. 147509, 147510) were collected from within the relinquished blocks of the licence. The results from these two samples were disappointing.
During the 1997/98 exploration season, Northern Gold N.L. acquired orthographic satellite imagery to evaluate the topography of the Mount Bundooy region. A contour map was compiled using this imagery.

The expenditure over the relinquished blocks, from the grant of the title to the reduction date, totalled $7,085.
1.0 INTRODUCTION

EL 8704 is located approximately 95 kilometres south-east of Darwin on the Mount Bundey (8/6-III) 1:50,000 scale map sheet. The licence consisted of three graticular blocks, 10 square kilometres in area, lying between latitudes 12°53' south and 12°55' south and longitudes 131°33' east and 131°35' east (Figure 1). On the 24th of February, 1999, 2 blocks were voluntarily relinquished from the tenement, reducing EL 8704 to 1 block, approximately 3 square kilometres in area, lying between latitudes 12°54' south and 12°55' south and longitudes 131°33' east and 131°34' east (Figure 2). EL 8704 is situated within Perpetual Pastoral Lease No. 1144, Mount Bundey Station, held by Barry Coulter and Lawnhold Pty. Ltd.

The area is accessed by pastoral tracks leading off the Arnhem Highway near the Mary River, or via the Rustlers Roost Gold Project.

The exploration licence, originally consisting of 3 blocks, ten square kilometres in area, was granted to Dominion Gold Operations Pty. Ltd. on the 18th of July, 1994, for a period of three years. Territory Goldfields N.L., which is managed by Northern Gold N.L., acquired the tenement in May 1995. A waiver of reduction was granted over the tenement on the 3rd of October, 1996, enabling 3 blocks to be retained until the 18th of July, 1997. Renewal applications were submitted in July, 1997, and April, 1999. In February, 1999, Northern Gold N.L. voluntarily relinquished 2 of the 3 blocks. The blocks retained and relinquished are listed in Table 1.

Northern Gold N.L. completed digital data studies and regional soil sampling over the relinquished blocks of EL 8704.

The expenditure over the relinquished blocks, from the grant of the title to the reduction date, totalled $7,085.
2.0 GEOLOGY

2.1 Regional Geology
EL 8704 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 (Socić, 1997).

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 (Socić, 1997).

2.2 Local Geology
The licence area consists predominantly of Mount Bundey Granite, which occupies the eastern and northern blocks of the tenement. Burrell Creek Formation occupies the western part of the licence area where outcrop is generally poor (Socić, 1997).

The Mount Bundey Granite is a medium to pale - pink granite and minor adamellite. It is well jointed in three predominant directions: 340-350°, 50-60° and 80-90° (Socić, 1997).

The Burrell Creek Formation crops out as low rubbly rises. It consists of an interbedded sequence of shale, siltstone, phyllite and greywacke (Socić, 1997).
3.0 EXPLORATION OVER RELINQUISHED BLOCKS

From the grant date to the reduction date, Northern Gold N.L. completed digital data studies and regional soil sampling over the relinquished blocks of EL 8704.

3.1 1995/96 EXPLORATION COMPLETED

During the 1995/96 field season Northern Gold N.L. completed a work program based on digital data acquisition and manipulation. Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping to determine the best method of exploration to be used on the licence (Socic, 1996).

GIS and satellite imagery were used to log soil types, indicating that the region comprises mainly lateritised lower saprolite (Socic, 1996).

Satellite imagery was also used to interpret the structural geology of the region (Figure 4).

Interpretation of the GIS and remote sensing imagery shows that the tenement consists predominantly of Mt. Bundey Granite, which intrudes the strata in the eastern and northern section of the tenement (Socic, 1996). Burrell Creek Formation occupies the western part of the licence area where sub-crop is present (Socic, 1996).

3.2 1996/97 EXPLORATION COMPLETED

Northern Gold N.L. completed a regional soil sampling program over EL 8704 during the 1996/97 year of tenure, targeting skarn-type gold mineralisation associated with a south trending anticlinal structure to the west of the Mount Bundey Granite contact (Socic, 1997).

The soil sampling program consisted of four 400 metre spaced lines, varying in length from 1,700 metres to 2,000 metres. Samples, consisting of approximately 2 kilograms of soil, sieved to a -6 millimetre size fraction, were collected at 25 metre intervals and composited to 100 metres. A total of 76 samples (Sample Nos. 147453 - 147528), including duplicates were collected and submitted to Assaycorp, in Pine Creek, for analysis of Au, using BLEG method, and analysis of As, Cu, Zn, and Pb, using G300i method (Socic, 1997). Of the 76 samples, two (Sample Nos. 147509, 147510) were collected from within the relinquished blocks of the licence.

The soil sample locations and results are listed in Table 2, and shown on plan in Figure 5.
Table 2 1996/97 Regional Soil Samples within the Relinquished Area

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>AMG Coordinates</th>
<th>Au ppb</th>
<th>As ppm</th>
<th>Cu ppm</th>
<th>Pb ppm</th>
<th>Zn ppm</th>
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<tr>
<td>147509</td>
<td>8571732N 778608E</td>
<td>0.1</td>
<td>16</td>
<td>5</td>
<td>9</td>
<td>18</td>
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<tr>
<td>147510</td>
<td>8571731N 778708E</td>
<td>&lt;0.1</td>
<td>14</td>
<td>5</td>
<td>7</td>
<td>23</td>
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3.3 1997/98 EXPLORATION COMPLETED

During the 1997/98 exploration season, Northern Gold N.L. completed a work program involving digital data acquisition and manipulation, and digital terrain modelling. The data was obtained and used in conjunction with aerial mapping, site visits and previous digital data interpretations (Mottram, 1998).

Northern Gold N.L. acquired orthographic satellite imagery to evaluate the topography of the Mount Bundey region (Figure 6). A contour map was compiled using this imagery, showing the slope vectors of the terrain, indicating possible dispersion directions of mobile elements (Figure 7). This work is reported in Mottram, 1998.
4.0 EXPENDITURE OVER RELINQUISHED BLOCKS

The expenditure over the relinquished blocks of EL 8704, from the grant date to the relinquishment date, totalled $7,085. Details of this expenditure are listed in Table 3.

<table>
<thead>
<tr>
<th>COSTS</th>
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<td>Report Compilation</td>
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<td>Data Review</td>
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<td>Tenement Management</td>
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<tr>
<td>Accommodation, Field, Travel Expenses</td>
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<td>Assays</td>
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<tr>
<td>Consumables</td>
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<td>Motor Vehicle Expenses and Fuel</td>
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<td>Stationary and Office Expenses</td>
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<td><strong>TOTAL</strong></td>
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5.0 REFERENCES

