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**OPEN FILE**

**EL 7330**

**ANNUAL REPORT**

To 10th March 1992

Pine Creek Sheet SD 52.08  Burrundie 14/6-IV, 5270.4

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**EL 7330**

*Open file*  LMH 7/12/92

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**Compiled by**

Michelle Stokes
and Greg Partington
April 1992
SUMMARY

A literature study, initial geological reconnaissance, and geophysical interpretation were carried out on EL 7330 to evaluate the area for Au and base metal mineralization.

Negotiations were entered into with R. M. Biddlecombe to include the licence area in a Farm-in and joint venture. As a result, the licence was transferred to R.M. Biddlecombe in March 1992, and included in the application for an SEL, since granted as SEL 7707.
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1 INTRODUCTION

1.1 Title and location

EL 7330 was granted on 11th March 1991 to Northern Gold NL for a period of three years. The licence covers two graticular blocks and had an expenditure covenant of $6,000 for the first year of tenure.

EL 7330 is located approximately 24 kilometers northwest of Pine Creek (Fig. 1) within the Cullen Mineral Field. Access to the tenement is via The Stuart Highway and station tracks. Four wheel drive vehicles must be used due to the rugged nature of the terrain.

1.2 Previous Work

The area covered by EL 7330 was previously held as EL 5126 by Dale Page. Exploration was conducted by Enterprise Gold Mines N.L. under an option agreement in 1988/89. Extensive soil, stream sediment and rock chip sampling was conducted, but failed to yield sufficiently encouraging results (Enterprise, 1989). Enterprise Gold Mines N. L. withdrew from the option agreement in late 1989.
Figure 1. Location Diagram
2 GEOLOGY

2.1 Regional Geology

EL 7330 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 Cenozoic sediments and laterite overlie the Pine Creek Geosyncline lithologies.

2.2 Local Geology

Initial Geological reconnaissance was carried out over EL 7330. EL 7330 comprises low relief areas of pelitic sediments, believed to belong to the Lower Proterozoic Burrel Creek Formation. In the north east of the tenement, sediments of the Mt Bonnie formation form higher relief ridges and hills. A poorly exposed McMinns Bluff granite is present in the southwest of the licence area.
4 EXPLORATION COMPLETED

Northern Gold completed a first-pass exploration program designed to test the area for gold and base metal mineralization. Geological reconnaissance, geophysics interpretation and a literature study in the Department of Mines were undertaken.

4.1 Geological Reconnaissance

Initial geological reconnaissance was carried out on the area to assess the viability of potential exploration programs. The terrain is suitable for stream and soil sample programs, and requires detailed geological mapping.

4.2 Geophysics

Northern Gold purchased aerial geophysics of the Pine Creek area from Aerodata. Magnetic, uranium and Potassium data was received. EL 7330 lies within the area covered by the geophysics. The survey had the following specifications:

- Aircraft: Rockwell Shrike Commander 500S
- Magnetometer: Scintrex V201 Split Beam Cesium Vapour
  - Resolution: 0.04 nanoTesla
  - Cycle Rate: 0.2 second
  - Sample Interval: 14 meters
- Spectrometer: 256 Channel Geometrics Exploramum GR800B
  - Processed Channels:
    - Total Count 0.4 - 3.01 MeV
    - K40 1.37 - 1.56 MeV
    - Bi214 1.67 - 1.86 MeV
    - Ti208 3.02 - 6.00
    - Cosmic 3.02 - 6.00
  - Volume: 33.56 litres
Cycle Rate: 1.0 second
Sample Interval: 70 meters
Data Acquisition  Hewlett Packard 9000 Series Computer Aerodata Digital Data Acquisition System
Flight Line Spacing  Traverse Lines: 200 meters
                        Tie Lines 5000 meters
Flight Line Direction  Traverse Lines: 090-270 degrees
                        Tie Lines: 180-360 degrees
Survey Height  70 meters - mean terrain clearance
Navigation Syledis UHF positioning system.

Results of the geophysics were used primarily as imaged processed data for regional interpretation of exploration concepts. These images are not suitable to submit in a individual Licence report as the information affects many other areas and possible future targets. However, a copy of the Total field magnetic intensity contour map of the licence is included as Figure 2.
5 CONCLUSIONS

After negotiations, the tenement was transferred to R. M. Biddlecombe in March 1992 and included in the application for SEL 7707. Work on the area will be carried out by Northern Gold NL under a farm-in agreement in 1992.
6 REFERENCES

7 EXPENDITURE

Expenditure on EL 7330 during the anniversary year totalled $6,465. Details of this expenditure are listed below as Table 1.

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<tr>
<th>Item</th>
<th>Amount</th>
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<tr>
<td>Field Expenses</td>
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<tr>
<td>Geophysical survey</td>
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<tr>
<td>Joint Venture Costs</td>
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<td>Legal Fees to Date</td>
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<td>Literature search</td>
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<td>Report Preparation</td>
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<td>Motor Vehicle Costs</td>
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<td><strong>Wages and Salaries</strong></td>
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<td><strong>SUBTOTAL</strong></td>
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<td><strong>10% N.T. Administration</strong></td>
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<td><strong>15% Head Office Administration</strong></td>
<td><strong>$776</strong></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$6,465</strong></td>
</tr>
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Table 1.
8 PROPOSED WORK PROGRAM

EL 7330 has been transferred to R.M. Biddlecombe, and included in a farm-in and Joint Venture agreement to be signed in 1992. Work will be completed on the new current SEL 7707 covering the area.