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MCCs 803, 810 - 813

2000/01 ANNUAL REPORT

to 25th March 2001

Tennant Creek (52/5) 1:100,000 scale map sheet

Title Holder:- Normandy Tennant Creek Pty. Ltd. and PacMin Mining N.L.
Managed by:- Northern Gold N.L

April 2001

Distribution
NTDME
Northern Gold N.L., Adelaide River
PacMin Mining N.L., Perth
Normandy Tennant Creek Pty. Ltd.

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

MCCs 803 and 810 - 813 are located approximately 14 kilometres north-west of Tennant Creek, on the Tennant Creek (52/5) 1:100,000 scale map sheet.

The area is dominated by outcropping ridges of deeply weathered Warramunga Formation metasedimentary rocks, hosting mineralised ironstones in east north-east trending axial plane structures.

The tenements have been explored for gold and copper mineralisation by both Geopeko Ltd. and North Flinders Mines Ltd. The exploration completed over the area included regional airborne and ground magnetic surveys, gravity surveys, MMI geochemical surveys, vacuum drilling, RAB drilling and diamond drilling.

The tenements were originally granted to Geopeko Ltd., a subsidiary of Peko Wallsend Operations Ltd., in 1988. Geopeko Ltd. entered into a joint venture agreement with North Flinders Mines Ltd. in 1991, allowing North Flinders Mines Ltd. to earn an interest in the tenements by sole funding of exploration. The mineral claims are now held by Normandy Tennant Creek Pty. Ltd. and PacMin Mining N.L., formerly Tennant Creek Holdings N.L., under a joint venture agreement, with Northern Gold N.L. nominated, in May 1999, as manager of the licences.

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation. Landsat Imagery, Digital Terrain Imagery, airborne geophysics and AGSO mapping were obtained and used in conjunction with aerial mapping to determine the best method of gold exploration to be used on the licences.

The program proposed for the 2001/02 year of tenure will include the acquisition and compilation of all historical geophysical, geochemical and geological exploration data into a standardised digital database. Following a review of this data, on ground exploration will be carried out.

The expenditure over the Tennant Creek Central J.V. 1 mineral claims, during the 2000/01 year of tenure, totalled $6,905.
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1.0 INTRODUCTION

MCCs 803 and 810 - 813 are located approximately 14 kilometres north-west of Tennant Creek, on the Tennant Creek (52/5) 1:100,000 scale map sheet. The mineral claims cover an area totaling 100 hectares, lying between latitudes 19°33' south and 19°35' south and longitudes 134°03' east and 134°07' east (Figure 1). Access to these mineral claims is via Warrego Road and then along station tracks.

The tenements were originally granted to Geopeko Ltd., a subsidiary of Peko Wallsend Operations Ltd., in 1988. Geopeko Ltd. entered into a joint venture agreement with North Flinders Mines Ltd. in 1991, allowing North Flinders Mines Ltd. to earn an interest in the tenements by sole funding of exploration.

The mineral claims are now held by Normandy Tennant Creek Pty. Ltd. and PacMin Mining N.L., formerly Tennant Creek Holdings N.L., under a joint venture agreement, with Northern Gold N.L. nominated, in May 1999, as manager of the licences. Details of the titles are listed in Table 1.

Table 1  Tennant Creek Central J.V. 1 Mineral Claim Details

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Grant Date</th>
<th>Expiry Date</th>
<th>Renewal Application</th>
<th>Size (Ha)</th>
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<td>MCC 803</td>
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<td>MCC 810</td>
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<td>31/12/00</td>
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<td>MCC 811</td>
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<td>31/12/00</td>
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<td>MCC 812</td>
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<td>MCC 813</td>
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<td>31/12/00</td>
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</table>

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation. Landsat Imagery, Digital Terrain Imagery, airborne geophysics and AGSO mapping were obtained and used in conjunction with aerial mapping to determine the best method of gold exploration to be used on the licences.

The expenditure over the Tennant Creek Central J.V. 1 mineral claims, during the 2000/01 year of tenure, totalled $6,905.
2.0 GEOLOGY

2.1 Regional Geology

The mineral claims are situated within the Palaeoproterozoic Tennant Creek Inlier. This inlier is characterised by a sequence of flysch sediments and volcanics, accumulated in an intracratonic transtensional basin, which was deformed, metamorphosed and intruded by syn-orogenic I-type granitoids during the Barramundi Orogeny. Fluvial to shallow marine sediments, accompanied by felsic volcanism and subvolcanic intrusive activity, were deposited unconformably over the early rift sequence, and followed by two episodes of mild deformation which folded and faulted the sequence to produce basin and dome structures. Biotite-muscovite granites subsequently intruded these structures (Ferenczi and Ahmad, 1998).

The Tennant Creek Inlier comprises three distinct provinces. From north to south these are the Ashburton Province, the Central Province and the Davenport Province. The Inlier is flanked to the east and west by the Palaeozoic Georgina and Wiso Basins (Ferenczi and Ahmad, 1998).

2.2 Local Geology

The tenement area is dominated by outcropping ridges of deeply weathered Warramunga Formation metasedimentary rocks, hosting mineralised ironstones in east north-east trending axial plane structures. Aeolian sand plains conceal weathered Warramunga Formation rocks adjacent to areas of outcrop (Clifford and Stott, 1997).
3.0 PREVIOUS EXPLORATION

The tenements have been explored for gold and copper mineralisation by both Geopeko Ltd. and North Flinders Mines Ltd.

Geopeko Ltd. conducted regional airborne and ground magnetic surveys, gravity surveys and follow up diamond drilling over the mineral claims, up until 1991 (Clifford and Stott, 1997).

Three diamond drill holes were completed within MCCs 810 and 811, known as Explorer 17, which was renamed the Colombard Prospect by North Flinders Mines Ltd., and two diamond holes were drilled within MCC 813, known as Explorer 37 (Clifford and Stott, 1997).

In 1991, North Flinders Mines Ltd. entered into a joint venture agreement with Geopeko Ltd. and conducted an aggressive program including ground magnetic and gravity surveys, vacuum drilling, RAB drilling and an MMI geochemical survey over the area (Clifford, 1997, Ward, 1997a, 1997b).

During the 1999/2000 year of tenure, Northern Gold N.L., as managers of the mineral claims, completed evaluation studies and data compilation of the Tennant Creek region (Mottlam, 2000).
4.0 2000/01 EXPLORATION COMPLETED

During the 2000/01 year of tenure, Northern Gold N.L., as managers of the mineral claims, completed digital data acquisition, evaluation studies and data compilation of the Tennant Creek region.

4.1 GIS and Remote Sensing Studies

Northern Gold N.L. completed a work program based on digital data acquisition and manipulation. Landsat Imagery, Digital Terrain 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 licences. GIS and satellite imagery were used to log soil types and also to interpret the structural geology of the region.

4.2 Geophysics

Northern Gold N.L. purchased multiclient aerial geophysics from Southern Geoscience Consultants. The data covers areas not previously held by Northern Gold N.L. It is presented as a north sun shaded residual plot in Figure 2.

The Tennant Creek mineral claims lie within the area covered by the survey.

The results of the geophysics were used primarily as imaged processed data for regional interpretation of exploration concepts.
5.0 2000/01 EXPENDITURE

The expenditure over the Tennant Creek Central J.V. 1 mineral claims, during the 2000/01 year of tenure, totalled $6,905. Details of this expenditure are listed below in Table 2.

<table>
<thead>
<tr>
<th>COSTS</th>
<th>AMOUNT</th>
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<tr>
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<tr>
<td>Tenement Management</td>
<td>200</td>
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<tr>
<td>Data Review</td>
<td>215</td>
</tr>
<tr>
<td>Drafting and Computing</td>
<td>245</td>
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<tr>
<td>AGSO Mapping</td>
<td>870</td>
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<tr>
<td>Geophysics</td>
<td>2,165</td>
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<tr>
<td>Satellite Imagery and Manipulation</td>
<td>440</td>
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<tr>
<td>GIS and DTM Manipulation</td>
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<td>Salaries and Wages</td>
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<td><strong>Subtotal</strong></td>
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<td>Administration @ 20%</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$6,905</strong></td>
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6.0 2001/02 PROPOSED WORK PROGRAM

The program proposed for the 2001/02 year of tenure will include the acquisition and compilation of all historical geophysical, geochemical and geological exploration data into a standardised digital database. Following a review of this data, on ground exploration will be carried out.

An estimate of the expenditure required to complete the data review is given below in Table 3.

<table>
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<td>Drafting and Computing</td>
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<tr>
<td>Site Reconnaissance</td>
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<td>TOTAL</td>
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7.0 REFERENCES


