ENIGMA MINING LTD

MOUNT PEAKE PROJECT

ANNUAL REPORT

13/08/09 to 12/08/10

EL 27069

Tenement/s  EL 27069
Holder        Enigma Mining Ltd
Name          Mount Peake (SE5305)
1:250 000 Sheet
Name          Anningie (5554)
1:100 000 Sheet
Datum         GDA94-52
Manager       Tennant Creek Gold (NT) Pty Ltd
Operator      Enigma Mining Ltd
Commodity     V, Ti, Fe, Ni, Cu, PGE
Elements Analysed N/A
Keywords      Literature Review, Geophysical review, anomalies
Authors       C. Wetherley (Geologist)
Approved      P.E. Burton (Director & CEO)
Report Date   September 2010
Distribution  TNG Limited
              Department of Resources – Minerals & Energy (1)
              (1)
Executive Summary

Exploration Licence 27069 was granted to Enigma Mining Limited (Enigma) on the 13/08/2009. Enigma is a wholly owned subsidiary of TNG Ltd. The licence forms part of TNG’s “Mount Peake” Project area together with EL 23074, EL 23271, EL 27070, EL 27706, EL 27787 and ELA 27941 and covers a total area of 245.9km$^2$.

Exploration carried out on EL 27069 during the reporting year has mainly been of a regional nature. A full literature review was carried out on the historical data and reviews of the current geophysical data were undertaken.

Review of the regional magnetic data revealed three principle magnetic domains being selected for more detailed work. The eastern domain lies almost entirely within EL 27069 and drilling has been recommended in the area.

Thirteen late-time, intermediate to strong conductive features were identified from a review of the available GEOTEM data by Planetary Geophysics, and five of these features fall within EL 27069. Each of these features will require review on the basis of known geology, geochemistry, regolith and drilling.

Southern Geoscience Consultants have also identified 35 targets from the GEOTEM and other geophysical data. Nine of these targets fall within EL 27069. All of these targets are recommended for follow-up with a moving-loop EM survey.

The geophysical review work carried out in the 2009-2010 season has provided targets for follow-up work generated from both the regional magnetic and GEOTEM data. Ground geophysical surveys, particularly moving loop EM surveys will be used to delineate targets for drill testing.
# TABLE OF CONTENTS

1. **INTRODUCTION** ................................................................. 5
2. **LOCATION AND ACCESS** .................................................. 5
3. **TENURE** ............................................................................. 6
4. **REGIONAL GEOLOGY** .......................................................... 6
5. **PREVIOUS EXPLORATION** ................................................... 7
6. **EXPLORATION COMPLETED 2009-2010** ............................... 9
   6.1 Geophysics ........................................................................ 9
      6.1.1 Regional Magnetics ..................................................... 9
      6.6.2 Review of Airborne GEOTEM .................................... 11
7. **EXPENDITURE** ................................................................... 14
8. **PROPOSED 2011 PROGRAM** ................................................. 14
   8.1 Proposed Expenditure: ....................................................... 14
**REFERENCES** ......................................................................... 15
FIGURES

Figure 1: Location of Mount Peake project area. ........................................................ 5
Figure 2: Regional geological setting of the Mount Peake (SF53-05) mapsheet, showing approximate location of the project area. ................................. 6
Figure 3: 1VD aeromagnetics with EM picks within project area, the colored areas show gridded Geotem data channel Bz12..................................................... 8
Figure 4: The three magnetic complexes selected for more detailed modelling. ............ 9
Figure 5: Proposed E1, E2 & E3 drillhole location on magnetics. .................................10
Figure 6: 3D model showing proposed holes into semi-transparent magnetic susceptibility shells. ..................................................................................10
Figure 7: z-component EM response with potential targets annotated and tenements outlined. ..................................................................................11
Figure 8: Outline of GEOTEM survey showing original Discovery Nickel targets, thirteen anomalies identified by Sexton, 2010, and the 35 areas of interest identified as part of the SGC study. ..................................................... 13

TABLES

Table 1: EL 27069 tenement details ................................................................. 6
Table 2: Details of proposed drillholes E1, E2 & E3. .............................................. 9
Table 3: Summary of Targets generated by review of GEOTEM data as inferred by Planetary Geophysics ................................................................. 12
Table 4: Summaries of GEOTEM anomalies falling within EL 27069 as interpreted by SGC ......................................................................................... 13
Table 5: Expenditure for the period 13/08/09 - 12/08/10 ................................. 14
Table 6: Proposed Expenditure ........................................................................ 14

APPENDICES

Appendix 1 – Montana GIS Mt Peake Regional Magnetics Part A & B
Appendix 2 – Planetary Geophysics – GEOTEM Review
Appendix 3 – SGC Mt Peake Geophysical Review
1. INTRODUCTION

Exploration Licence 27069 was granted to Enigma Mining Limited (Enigma) on the 13/08/2009. Enigma is a wholly owned subsidiary of TNG Ltd. The licence forms part of TNG’s “Mount Peake” Project area together with EL 23074, EL 23271, EL 27070, EL 27706, EL 27787 and ELA 27941 (Figure 1).

All reference to work carried out by TNG Ltd or its subsidiaries will be referenced ‘TNG’ in this report.

Exploration carried out on EL 27069 during the reporting year has mainly been of a regional nature. A review of historical exploration was undertaken along with a review of existing geophysical data. The geophysical review has resulted in the identification of a number of targets within EL 27069 which require follow-up in the coming year.

2. LOCATION AND ACCESS

EL 27069, part of the Mount Peake project, is located approximately 280km NE of Alice Springs, and 50km west of the sealed Stuart Highway to Darwin (Figure 1) and covers the south-eastern portions of the Mount Peake (SF53-05), 1:250,000 mapsheet. It lies within the Stirling Perpetual Pastoral Lease and is subject to Native Title. Access in the licence area is good with well maintained station and previous exploration tracks.

The new LNG gas pipeline runs 20 km east of the project area and the Darwin to Adelaide railway 70km to the east.

Figure 1: Location of Mount Peake project area.
3. TENURE

Exploration Licence 27069 is part of the “Mount Peake” Project and covers a total area of 245.9km$^2$. It is 100% held by Enigma Mining Limited, a wholly owned subsidiary of TNG Limited. Tenure details for EL 27069 are summarised in Table 1.

<table>
<thead>
<tr>
<th>TITLE</th>
<th>PROSPECT</th>
<th>AREA (blocks)</th>
<th>GRANT DATE</th>
<th>EXPIRY DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 27069</td>
<td>Mount Peake</td>
<td>77</td>
<td>13/08/2009</td>
<td>12/08/2015</td>
</tr>
</tbody>
</table>

4. REGIONAL GEOLOGY

The Mount Peake project area lies within the Aileron Province in the north-central part of the Paleoproterozoic Arunta Region (Donnellan, 2008). Neoproterozoic to Paleozoic rocks of the western edge of the Georgina Basin also occur in the area. The project area lies in the south-eastern portion of the MOUNT PEAKE (SF 53-05) 1:250,000 mapsheet (Figure 2).

Figure 2: Regional geological setting of the MOUNT PEAKE (SF53-05) mapsheet, showing approximate location of the project area.
The Aileron Province includes at least five depositional packages that were deposited in the interval 1860-1740Ma (Scrimgeour, 2003), and has been affected by multiple tectonic events (Scrimgeour, 2006). The outcropping Paleoproterozoic geology of MOUNT PEAKE includes a succession of metapsammitic and metapelitic rocks of the Lander Rock Formation (Plr), which have been variably metamorphosed from greenschist to granulite facies (Donnellan, 2008). Stratiform amphibolites and retrogressed amphibolites outcrop locally. The Lander Rock Formation is intruded by a series of ‘early’ (ca 1820-1770Ma) and ‘late’ (post-1770Ma) granites. The dominant tectonic and thermal event in MOUNT PEAKE was the Stafford Event at 1805-1790Ma.

The Georgina Basin is a widespread Neoproterozoic to Paleozoic intracratonic basin that was initiated as part of the Centralian Superbasin (Donnellan, 2008). The dominant lithologies are dolostone, limestone, shales, sandstone and siltstone. These rocks unconformably overlie rocks of the Aileron Province in south-eastern MOUNT PEAKE.

The only outcrop of Paleoproterozoic rocks within the tenement area are several small outcrops of undifferentiated granites (Pg2). Neoproterozoic rocks of the Amesbury Quartzite, part of the Plenty Group (Pam) in the Georgina Basin, crop out within EL 27069. The Amesbury Quartzite comprises predominantly well sorted and well rounded, coarse-grained quartz arenite (Donnellan, 2008). The majority of the tenement is overlain by Cainozoic and Quarternary cover sequences.

5. PREVIOUS EXPLORATION

The Mount Peake region has been partially explored for a variety of commodities including uranium, gold, copper, iron ore, bauxite and diamonds. Recent activities in the Mount Peake area have largely been directed towards U, Au and Ni (Donnellan, 2008). A brief summary of exploration within the area is summarized below.

- In the late 1970’s and early 1980’s CRA undertook an exploration programme on EL 1881 in the Mt Peake area. This was predominantly for uranium and the programme included detailed airborne magnetic and radiometric surveys, follow-up on ground surveys, geochemical sampling and limited drilling (DD82MC1; Harvey, 1982). No significant results were returned and EL 1881 was relinquished in 1982.

- In June 1988 Stockdale Prospecting were granted a series of EL’s in the Mt Peake area as part of a regional diamond exploration programme. 18 of these samples were taken within EL27069. The only results of the programme were non-kimberlitic garnets and spinels and therefore no further work was warranted. The tenements were subsequently relinquished (Smith, 1989).

- Western Mining Pty Ltd undertook exploration in the Mt Peake area from 1991 until 1998, the latter years (from 1997) being as part of a JV with Aberfoyle Resources. The exploration focus was Tanami-style gold mineralization and base metals associated with iron-rich rocks (Norris, 1993). While there was a significant amount of exploration undertaken, their main prospect areas were well west and south of EL 27069.

- During the mid-1990’s Aberfoyle Resources took up land over many of the tenement areas relinquished by Western Mining. A RAB Drilling programme was undertaken on EL 8764 and nine holes fell within the current day EL 27069 boundary (Drown, 1996). Best results were as follows:
  
  R0030083 14-20m@79-178ppm Zn
  14-20m@125-155ppm Ni
  R0030084 11-28m@125-190ppm Cu
  R0030079 11-23m@130-170ppm Ni
Adelaide Resources were granted tenements in the Mt Peake area in 1994. They were exploring for ‘granites-style’ and ‘Tanami-style’ gold deposits. Drilling was designed to test magnetic targets defined by ground magnetic surveys. The ground magnetic targets were identified from aeromagnetic data released by the NT Government. ‘North Sapper’ was a prospect that fell on a major NW-trending structural boundary between (magnetic) granite to the northeast and possible sediments to the southwest. A low-order magnetic high within the sediments was inferred to represent possible magnetite-bearing alteration within the rocks. RAB drilling did not reveal any sediments, and no significant assay results were received (Howard et al., 1997).

Adelaide Resources conducted a 244 hole vacuum drilling programme in 1997 in order to provide a clearer outline of the geochemistry of the project area. Hole numbers MPVC0035-37 and MPVC0092-95 fell within the EL 27069 boundaries but no significant results were returned (Howard, 1998). Adelaide Resources relinquished their licences after this programme.

Falconbridge (Australia) Pty Limited was granted EL 23392 on 17/02/2003 and ownership was transferred to Discovery Nickel Limited (DNL) pursuant to a Heads of Agreement dated 15th October 2003 (Johnstone, 2005). Fugro Airborne Surveys Pty Ltd flew a 3814 line km GEOTEM airborne electromagnetic/magnetic survey for Falconbridge in early 2003. The results highlighted several targets recommended for follow-up work (Figure 3).

Following reprocessing and interpretation of the GEOTEM data by DNL a number of bedrock conductors were identified and ranked. A selection (B-1, B-2, B-3, B-6, B-12, B-14, B-16) of these conductors were followed up with more detailed moving loop ground EM surveying (SMARTEM) in April 2004. None of these conductors fall within EL 27069.

EL 23392 was transferred to Proto Resources and Investments Pty Ltd on the 29th October 2006 (Turnbull, 2008) and a full review of the existing geophysical data was undertaken. Additional exploration was undertaken on the western side of the licence and no work was done within EL 27069. The licence was surrendered in 2007.
6. EXPLORATION COMPLETED 2009-2010

Exploration Licence 27069 was granted to Enigma Mining Limited (Enigma) on the 13/08/2009. Exploration carried out on EL 27069 during the reporting year has mainly been of a regional nature. A full literature review was carried out on the historical data available and reviews of existing geophysical data have resulted in the identification of a number of targets within EL 27069 which require additional work.

6.1 Geophysics

6.1.1 Regional Magnetics

The regional magnetic data over the Mount Peake project area covers the entire area of EL 27069. The data was remodelled by Montana GIS in February 2010. The full reports are included in Appendix 1.

The data displays a complex magnetic high-zone enveloping several magnetic anomalies of greater than 3000 nano-Tesla. Most of the modelling has been done using a merge of the NTGS data with the magnetic component of the GEOTEM survey completed by Fugro Airborne Surveys in January 2003.

The first pass interpretation of the regional magnetic data and resulting model identified three principle magnetic domains which were selected for more detailed work (Figure 4). The eastern domain (area to the right in Figure 4) lies almost entirely within EL 27069.

![Figure 4: The three magnetic complexes selected for more detailed modelling.](image)

Three drill holes are proposed for the eastern area (Table 2; Figure 5 & 6). As the magnetic anomalism and susceptibilities are not as significant in this area as the western and northern areas the holes are rated as priority 2 (E1) and 3 (E2 & E3) drill holes.

<table>
<thead>
<tr>
<th>Hole_ID</th>
<th>Priority</th>
<th>East</th>
<th>North</th>
<th>RL</th>
<th>Depth</th>
<th>Dip</th>
<th>Azimuth</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>2</td>
<td>328125</td>
<td>7605750</td>
<td>495</td>
<td>500</td>
<td>70</td>
<td>50</td>
</tr>
<tr>
<td>E2</td>
<td>3</td>
<td>329625</td>
<td>7608075</td>
<td>490</td>
<td>350</td>
<td>60</td>
<td>35</td>
</tr>
<tr>
<td>E3</td>
<td>3</td>
<td>330950</td>
<td>7611800</td>
<td>495</td>
<td>350</td>
<td>60</td>
<td>210</td>
</tr>
</tbody>
</table>

Table 2: Details of proposed drillholes E1, E2 & E3.
Figure 5: Proposed E1, E2 & E3 drillhole location on magnetics.

Figure 6: 3D model showing proposed holes into semi-transparent magnetic susceptibility shells.
6.6.2 Review of Airborne GEOTEM

Planetary Geophysics

A review of the airborne GEOTEM, flown by Fugro Airborne Surveys in 2003, was carried out by Mike Sexton of Planetary Geophysics Pty Ltd in March 2010. A full report is attached in Appendix 2.

Thirteen late-time, intermediate to strong conductive features were identified in the GEOTEM data. Five of these features fall within EL 27069 (Table 3; Figure 7). These features may be reflecting variations in weathering or cover conductivity and/or depth, alteration, or the presence of massive sulphides.

![Figure 7: z-component EM response with potential targets annotated and tenements outlined.](image-url)
Table 3: Summary of Targets generated by review of GEOTEM data as inferred by Planetary Geophysics.

<table>
<thead>
<tr>
<th>Name</th>
<th>Anomaly Tenor</th>
<th>Ass. Magnetics</th>
<th>Positives</th>
<th>Negatives&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Ranking&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEM 6</td>
<td>Mid-late time moderate conductor. Responses on x and z components.</td>
<td>Parallel to and partly coincident with magnetic high.</td>
<td>Possible bedrock conductor. Magnetic association.</td>
<td>Early-time association.</td>
<td>1</td>
</tr>
<tr>
<td>AEM 9</td>
<td>Strong late-time conductor.</td>
<td>Coincident with magnetic low.</td>
<td>Discrete from early to late time. Associated magnetics.</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>AEM 10</td>
<td>Strong late-time conductor.</td>
<td>Coincident with magnetic low.</td>
<td>Discrete from early to late time. Associated magnetics.</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>AEM 11</td>
<td>Strong late-time conductor.</td>
<td>Coincident with magnetic high.</td>
<td>Discrete from early to late time. Magnetic high and its change of character.</td>
<td>Near survey boundary.</td>
<td>1</td>
</tr>
<tr>
<td>AEM 12</td>
<td>Moderate late time conductor.</td>
<td>Partly coincident with bullseye magnetic high.</td>
<td>Magnetic high association.</td>
<td>Early time association.</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>1</sup> Early time association refers to broad early-time features that are possibly indicative of surficial conductive material. The later response may be indicative of deeper or more conductive weathering or cover.

<sup>2</sup> Targets are ranked 1(best) to 3 (not so good) on the basis of character through time, magnetic association and shape.

Each of these features will require review on the basis of known geology, geochemistry, regolith and drilling. It is recommended that features that cannot be accounted for, be surveyed by IP to ascertain whether or not there are any associated sulphides.

Southern Geoscience Consultants

The historical geophysical datasets (focussing on the 2003 GEOTEM survey) of the Mount Peake Project have been reviewed by Ben Jones of Southern Geoscience Consultants, for the purpose of identifying any new targets overlooked from previous work and assessing the potential of the area for nickel-copper mineralisation as well as other base-metal targets.

35 targets were identified from the review. Nine of these targets fall within EL 27069 (Table 4; Figure 8). All of these targets are recommended for follow-up with a moving-loop EM survey. Target G34 is of high priority, and the rest classified as moderate (Table 4). A full report can be found in Appendix 3.
Figure 8: Outline of GEOTEM survey showing original Discovery Nickel targets, thirteen AEM anomalies identified by Sexton and the 35 areas of interest identified as part of the SGC study.

Table 4: Summaries of GEOTEM anomalies falling within EL 27069 as interpreted by SGC.

<table>
<thead>
<tr>
<th>Target ID</th>
<th>AMGE</th>
<th>AMGN</th>
<th>Comments</th>
<th>Priority</th>
<th>Further Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>G25</td>
<td>334200</td>
<td>760975</td>
<td>Mid-time Geotem anomaly possibly detached from broader conductive trend. Coincident with Mike Sexton's AEM11 target. No obvious direct mag signature. Unusual patterns in Google Earth. Historical MLEM too far north to be effective.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G26</td>
<td>333550</td>
<td>7608500</td>
<td>Mid-time Geotem anomaly possibly detached from broader conductive trend. Coincident with Mike Sexton's AEM12 target. No obvious direct mag signature.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G27</td>
<td>332400</td>
<td>7607700</td>
<td>Mid-time Geotem anomaly possibly detached from broader conductive trend, but most likely slightly more conductive part of same trend. No obvious direct mag signature.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G28</td>
<td>330100</td>
<td>7607575</td>
<td>Mid-time Geotem anomaly possibly detached from broader conductive trend. No obvious direct mag signature.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G29</td>
<td>332200</td>
<td>7605425</td>
<td>Small, weak, mid-late time Geotem anomaly but also discrete early-time feature. Response is only on one line (FL 11300) and within noise limit. Possible mag signature. Historical ground EM line in area. Nothing significant, target downgraded.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G30</td>
<td>329725</td>
<td>7604325</td>
<td>Mid-time Geotem anomaly possibly detached</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
</tbody>
</table>
from broader conductive trend. No obvious direct mag signature.  

<table>
<thead>
<tr>
<th>Site</th>
<th>X Coord</th>
<th>Y Coord</th>
<th>Description</th>
<th>Significance</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>G31</td>
<td>330850</td>
<td>7602400</td>
<td>Mid-time Geotem anomaly possibly detached from broader conductive trend. Possible mag signature.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G32</td>
<td>329575</td>
<td>7599275</td>
<td>Mid-time Geotem anomaly possibly detached from broader conductive trend. Possible mag signature.</td>
<td>Moderate</td>
<td>MLEM</td>
</tr>
<tr>
<td>G34</td>
<td>317550</td>
<td>7599725</td>
<td>Discrete, moderately strong, mid-late time Geotem anomaly. No mag signature.</td>
<td>High</td>
<td>MLEM</td>
</tr>
</tbody>
</table>

7. EXPENDITURE

Expenditure for this reporting period is $25,240.26 as shown in Table 5.

Table 5: Expenditure for the period 13/08/09 - 12/08/10.

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors/Consultants – Geological</td>
<td>$1,070.00</td>
</tr>
<tr>
<td>Contractors/Consultants – Metallurgical</td>
<td>$2,198.00</td>
</tr>
<tr>
<td>Contractors/Consultants - Geophysical</td>
<td>$3,818.74</td>
</tr>
<tr>
<td>Administration and Management</td>
<td>$14,038.89</td>
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<tr>
<td>Vehicle Costs</td>
<td>$1,666.87</td>
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<tr>
<td>Travel/Accommodation/Food</td>
<td>$2,447.76</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$25,240.26</strong></td>
</tr>
</tbody>
</table>

8. PROPOSED 2011 PROGRAM

The geophysical review work carried out in the 2009-2010 season has provided targets for follow-up work generated from both the regional magnetic and GEOTEM data. Ground geophysical surveys, particularly moving loop EM surveys will be used to delineate targets for drill testing.

8.1 Proposed Expenditure:

The proposed expenditure for the next reporting year is shown in Table 6.

Table 6: Proposed Expenditure.

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geophysical Survey</td>
<td>$9,000</td>
</tr>
<tr>
<td>Geophysical Interpretation</td>
<td>$1,050</td>
</tr>
<tr>
<td>Drilling</td>
<td>$36,600</td>
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<tr>
<td>Assaying</td>
<td>$5,000</td>
</tr>
<tr>
<td>Travel and Accommodation</td>
<td>$3,700</td>
</tr>
<tr>
<td>Vehicle Costs</td>
<td>$750.00</td>
</tr>
<tr>
<td>Administration and Management</td>
<td>$5,900</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$62,000</strong></td>
</tr>
</tbody>
</table>
REFERENCES


APPENDIX 1

Montana GIS Mt Peake Regional Magnetics
Part A & B
APPENDIX 2

Planetary Geophysics_GEOTEM Review
APPENDIX 3

SGC_Mt Peake_Geophysical_Review