ENTERPRISE MINING PTY LTD

AUSTRALIS MINERALS PTY LTD

EL29589 MT HODGSON

ANNUAL REPORT

For the period 22 July 2013 to 21 July 2014

P. Kimber
Reynard Australia Pty Ltd

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This annual was prepared by Mr. Phillip Kimber, a professional geologist with 34 years industry and consulting experience in hard rock gold, tin, gypsum and other minerals as well as alluvial tin and tantalite, gold and sapphires. This experience has included exploration, mine geology and mine management. Mr. Kimber is a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Kimber is an employee of Reynard Australia Pty Ltd.

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CONTENTS

1: INTRODUCTION
2: THE ENTERPRISE MINING GROUND SELECTION STRATEGY
3: AREAS SELECTED
4: EL29590 VICTORIA RIVER, EL29589 MT HODGSON
   4.1. Geology
5: WORK COMPLETED
   5.1 Lineament Study
   5.2 Other Factors Affecting the Discovery of Mineralisation
   5.3 Tempest Survey Interpretation
   5.4 Conclusions
   5.5 Recommendations
6: DISCUSSION
7: PROPOSED WORK YEAR 2
8: EXPENDITURE - YEAR 1
9: REFERENCES

APPENDICES
1: Locations considered prospective for Cu/Au/U mineralisation of the style found at Olympic Dam. Dr Hugh Rutter
2: A Report on the Applicability of Airborne Electromagnetic Data, TEMPEST, for mineral exploration in the Northern Territory, Australia, for Enterprise Mining Pty. Ltd. Dr Hugh Rutter

FIGURES
1: Locations
2: Relationship between EL29498, EL29499, EL29589, EL29590 and EL29857, the G2 linear and NE trending and NW trending linears in the NW of the Northern Territory.
3: Major geological units within EL29589 and EL29590.
4: Lineaments and mineralisation
5: Major basins
6: The "test area" survey location.
7: DTM of survey area showing variations in surface topography
8: TMI plot of the survey area showing the anomaly within EL29590
9: CDI (Conductivity Depth Image) plots of each of the traverses.
10: CDI plots located against the traverse locations.
11: Hugh Rutter's initial interpretation of the bedrock conductivity (CDI) data

TABLES
1: Enterprise Tenements
1. INTRODUCTION

Enterprise Mining hold 6 exploration licenses within the Northern Territory (figure 1). These licenses fall along the G2 linear and/or associated linears within target areas identified by Dr Hugh Rutter. Dr Rutter was part of the WMC team that discovered the Olympic Dam deposit in South Australia. The Olympic Dam deposit also falls along the G2 linear.

A review of the known linears within Australia demonstrates a strong correlation between Proterozoic or earlier mineralisation with major NNW trending linears, including the Cloncurry linear (Mount Isa-Cobar-Lake Cargelligo), the Kalgoorlie linear (Norseman-Kalgoorlie-Coolgardie-Menzies-Wiluna-Pilbara) and the G2 linear (Olympic Dam-McDills-Alcoota-Wave Hill-Victoria River-Delamere). Other linear sets trend NW and NE. These can be associated with other major centres of mineralisation including Broken Hill, McArthur River, Pine Creek, Mt Magnet/Meekatharra, Tennant Creek and others. The linears are thought to be deep seated structural features which may form conduits for mineralising fluids. The G2 linear is thought to be around 1600 Ma old.

Dr Rutter considered the G2 linear to be under explored and identified some 11 prospective areas along the G2 linear. Enterprise Mining then examined each of these areas to select sites with suitable geology, geophysics and ground availability. Of the 11 sites, 7 were discounted because of a lack of ground availability. Within the remainder a total of 8 exploration licenses were applied for of which 2 have been relinquished because the available ground did not include the most favorable geological units.

The Enterprise licenses cover targets along the G2 linear that have seen very little recent exploration for metallic minerals and for which there is a distinct lack of existing ground based data. They are based on a combination of prospective geology and anomalous geophysical features. Initial exploration is expected to include more detailed geophysics to generate targets which may warrant further investigation.

2. THE ENTERPRISE MINING GROUND SELECTION STRATEGY
(Australis Minerals and Kingsland Resources)

The ground selection was instigated by Dr Hugh Rutter on the basis that the NNW trending G2 linear was underexplored North of the Olympic Dam deposit. A number of areas were selected on the basis that they were near to the G2 linear and in areas with favorable geology and geophysics. Each of these areas was examined in detail for ground availability and 8 exploration licenses applied for (figure 1 and table 1). Two of these have since been discarded as the available ground did not cover the most favorable rock units.
Table 1: Enterprise Tenements

<table>
<thead>
<tr>
<th>Tenement Location</th>
<th>Registered Holder/ Applicant</th>
<th>Status</th>
<th>Grant date/ Application Date</th>
<th>Area</th>
<th>Licence Number</th>
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<td>Tanami Northern Territory</td>
<td>*KIR Application</td>
<td>Application</td>
<td>26-Jul-11</td>
<td>1549km²</td>
<td>ELA28908</td>
<td>Gold, Copper, base, potash</td>
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<td>Limbunya Northern Territory</td>
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<td></td>
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<td>ELA29857</td>
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<td>*AUR Application</td>
<td></td>
<td>19-May-12</td>
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<td>ELA29498</td>
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<td>*AUR Granted</td>
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<td>20-Feb-13</td>
<td>122km²</td>
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<td>Victoria River Northern Territory</td>
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<td>Mt Hodgson Northern territory</td>
<td>*AUR Granted</td>
<td></td>
<td>22-Jul-13</td>
<td>234km²</td>
<td>EL29589</td>
<td>Gold, Copper, Base, Metals</td>
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</tbody>
</table>

*KIR=Kingsland Resources Pty Ltd, *AUR=Australis Minerals Pty Ltd
The Olympic Dam Deposit - Discovery WMC 1970's

In South Australia there was evidence of copper mineralization extending from Moonta in the south, then northwards through Andamooka and onwards to the coast in the Northern territory. Many of these mineral occurrences were old time mines and “diggings”.

Dr Hugh Rutter compiled the regional geophysics of South Australia, particularly the gravity and magnetic data, and analysed this for buried rock type and structure. An extensive linear feature was recognized, which is now known as the G2 Linear. It extends from the Moonta area of South Australia to the northern coast of Australia, west of Darwin (Figure 2).

A detailed interpretation of the geophysical data, integrated with any geological and mineral information led to the recognition of a prospective area on the Roxby Downs pastoral station. There was no evidence of mineralization on the surface. Detailed magnetic and gravity data suggested a target at between 300m and 400m. A detailed seismic survey which confirmed a target depth of 335m.

Dr Rutter located a site for the first drill hole RD1 which intersected a brecciated granitic rock at 335m, which contained 3.5% copper plus uranium. Olympic Dam had been discovered. Western Mining concentrated on this area and other explorers investigated the surrounding areas.

The fact that the major G2 linear feature extended northwards to the west of Darwin was forgotten.

Area Selection Criteria
Within each of the prospective locations selected by Dr Rutter exploration licenses were applied for utilising geophysical and geological information available from the NT Department of Resources. The data available included:

- Topographic maps composite
- Geological maps composite
- Gravity image
- Total magnetic intensity image
- Ternary radiometrics image
- Magnetic worms image
- Landsat 741 image
- Landsat 742 image.
- Mineral deposit, rock chip, whole rock, soil sampling and drill information.
- Ground availability.

Of the 11 sites selected by Dr Rutter, 7 were discarded due to a lack of ground availability either because of existing exploration licenses or State/Territory/National reserves of some type. Licenses were taken up at the Green Swamp Well, Delamere, Victoria River Downs and Limbunya sites.

Four licenses are located in the Northern Territory South of Timber Creek (EL29498, EL29499, EL29589 and EL29590). These licenses cover magnetic and gravity features within the Birrundudu Group and are thought to be prospective for sediment hosted base metal mineralisation. These licenses fall close to the intersection of the G2 linear with a NE trending and NW trending linears.
EL29857 at Limbunya also falls on the same NE trending linear that extends from Arnhem Land through Pine Creek, Timber Creek and on to the Lamboo area of Western Australia. It covers the contact between the Finnis River Group and the Wattie and Bullita Group.

Figure 2. Relationship between EL29498, EL29499, EL29589, EL29590 and EL29857, the G2 linear and NE trending and NW trending linears in the NW of the Northern Territory.

The licenses are in areas which have seen little exploration and the emphasis should be on generating drill targets using a combination of modern remote sensing techniques with the expectation of finding significant mineralisation of one or more of the license areas. Several prominent structural features are evident on the aeromagnetic image and these may be associated with mineralisation.

3. AREAS SELECTED

**EL29590 Victoria River Area, EL29589 Mt Hodgson**

- These licenses are adjacent to the G2 linear within the Victoria Basin
- exhibit a 15 mg/l gravity anomaly as well as magnetic anomalies
- outcrop showing structural doming
- evidence of carbonate base metal mineralisation in the area.

Exploration is targeting gold, base metals and diamonds.
**ELA29498 Stokes Range:**
- The licence is within the G2 linear and adjacent to other linears within the Victoria Basin and Birrindudu Basins.
- 15 mgl gravity anomaly as well as magnetic anomalies in northern and southern parts of block.
- Evidence of carbonate base metal mineralisation in the area. A kimberlite pipe occurs north west of the licenses.
- 15 mgl gravity anomaly within the G2 linear
- Magnetic anomalies
- Adelaidean outcrop
- Some evidence of mineralization

Exploration is targeting gold, base metals and diamonds.

**EL29499 Surprise Creek:**
- The licence is within the G2 linear and adjacent to other linears within part of the Birrindudu Basin.
- 15 mgl gravity anomaly as well as a magnetic anomaly.
- Evidence of carbonate base metal mineralisation in the area. A kimberlite pipe occurs north west of the licenses.

Reinterpretation of the magnetic data by Dr Rutter has identified several features within the magnetic anomaly. These appear to correspond to faults previously mapped by the NT Geological Survey and may represent sites for mineralisation.

The existing Cu-Pb-Zn and Mn mineralisation in the area strike in similar direction to the faulting and are at least partly structurally controlled. The faulting highlighted by the magnetic data represent potential exploration targets and warrant further investigation.

**Limbunya: (ELA 29859)**
- The license covers a 20 mgl gravity anomaly west of the G2 linear
- coincident magnetic anomalies
- complex north-west to south-east structures
- located on the junction of the Victoria River Basin, Ord Basin and Birrundudu Basin.

The ground prospective for disseminated strata bound copper and barium mineralisation within rocks of the Ord Basin. Copper mineralisation forms on the contact between top basaltic flows and the underlying Headleys Limestone of the Negri group. The license covers a 20 mgl gravity anomaly west of the G2 linear with coincident magnetic anomalies and complex north-west to south-east structures and is located on the junction of the Victoria River Basin, Ord Basin and Birrundudu Basin.
The Inverway barium mine within the application area has a quoted resource of 38000 t of 99% BaSO4 (Mendum 1972), with 6 veins to 1.5 m width exposed in open cuts.

Mineralised manganiferous black limestone possibly of fumarolic origin forms a circular feature about 50 m diameter at the Caves Mine to the west of the ELA.

**Tanami - ELA 28908**

The exploration license at the Tanami prospect consists of 460 sub-blocks or about 1549 sq km. The area was selected on the basis of recommendations from Hugh Rutter along with a review of the geophysical and geological information available from the NT Department of Resources. Hugh Rutter's review identified the following features which may be related to mineralisation within the application area:

- 15 mgl gravity anomaly within the G2 linear
- minor magnetic anomalies
- north-west to south-east structures
- no relevant outcrop
- Wiso Basin, north west of Tennant Creek

Exploration initially targeted ironstone-hosted gold-copper mineralisation of the Tennant Creek style. The hosting ironstone bodies are contained within a basement inlier of Proterozoic Warramunga Group, the same sequence that hosts the Tennant Creek deposits.

The area is also considered to have potential for potash deposits. The NTGS have an ongoing program of testing of water bores for phosphates and have identified some sites within the Wiso Basin which have phosphate potential including the Montejinni Limestone, the Hooker Creek Formation and brines within salt lakes.

EP92 and EP160 for oil and gas held by Merlin Energy Pty Ltd wholly overlay ELA28908, pointing to a petroleum potential for the area.

4. **EL29590 VICTORIA RIVER, EL29589 MT HODGSON**

4.1. Geology

EL29589 covers rocks of the Birrindudu Basin, Victoria Basin and Wiso Basin.

**Birrindudu Basin**: Mesoproterozoic to Palaeoproterozoic marine sedimentary rocks including sublithic arenite, quartz arenite, siltstone, shale, conglomerate, stromatolitic chert, limestone, glauconitic sandstone. Little deformed and unmetamorphosed sedimentary succession correlated with McArthur Basin. Unconformably overlies Palaeoproterozoic Pine Creek Orogen to the north. Unconformably overlain by Palaeozoic Wiso and Daly basins to the east; by Ord Basin to southwest; by Neoproterozoic Wolfe Creek Basin to west and Neoproterozoic Victoria Basin to the north; and in places, by Cambrian Kalkarindji Province and patchy sedimentary rocks of basin-margin Mesozoic sandstone. Towards south, underlain by Palaeoproterozoic metasediments and granites of Tanami Region. In northwest, in faulted
contact with Palaeozoic–Mesozoic Bonaparte Basin and Palaeoproterozoic rocks of Halls Creek Orogen.

Hosts diamond deposits at Timber Creek and minor Pb-Ag occurrences. Insufficient exploration. Potential for diamonds, base metal deposits and petroleum.

**Wiso Basin:** Unmetamorphosed Devonian to Cambrian intracratonic basin forming part of the Central Australian Platform Cover. Faulted against Palaeoproterozoic metamorphic rocks of the Aileron Province to the south. Unconformably overlies Palaeoproterozoic rocks of the Tanami Region to the west, Tenannt Region to the east, and the Proterozoic Victoria–Birrindudu Basin to the northwest. Cretaceous rocks of the Dunmarra Basin cover its northern margin. The basin deepens toward the south (Lander Trough) along the margin with the Arunta Region.

Rare oil shows in stratigraphic holes. Gas shows in waterbores. No petroleum wells have been drilled. Virtually unexplored. Potential for petroleum, base metals and phosphate. Currently explored for diamonds.

**Victoria Basin:** An unmetamorphosed Neoproterozoic sedimentary basin that formed part of the Centralian Superbasin, and extends into Western Australia. Unconformably overlies the Pine Creek Orogen and Birrindudu Basin. Unconformably overlain by the Wiso, Daly and Wolfe basins and the Kalkarinji Province.

No major mineral occurrences. Potential for sediment hosted base metal deposits and uranium.

*(NT Geological Survey)*

![Figure 3: Major geological units within EL29589 and EL29590.](image-url)
5. WORK COMPLETED

5.1. Lineament Study

A desktop study was undertaken to investigate the relationship between mineralisation and the various lineaments that have been identified within Australia. In this study, the mineral deposit databases from each State or Territory were used to identify areas of known mineralisation.

The databases used are available on line from the Mines Department of each State or Territory:

**Northern Territory:**  NT_Mines.tab  
NTCommodities.tab

**South Australia:**  Mindep.tab  
Mindep_2.tab  
Mindep_3.tab

**New South Wales:**  Metindex_metallic_mineral_site.tab

**Western Australia:**  WABMINES.tab

**Queensland:**  Qmin_all.tab

Each of these was loaded into MapInfo and edited to exclude mineralisation unlikely to be influenced by the presence of lineaments on the basis that the lineaments represent deep seated structural features and are of Precambrian age.

The deposit types excluded include: Sand and gravel, coal, oil, alluvials, phosphates, pegmatitic minerals, uranium and thorium, as well as various other deposits that were considered unlikely.

Figure 4 shows the main lineaments within Australia along with the locations of historical mines and the major metalliferous mining centres. This map clearly illustrates a strong correlation between the lineaments and mineralisation, at least in Proterozoic and Paleozoic rock units.
Four main lineament trends are evident;

**NNW TRENDING SET:**

These appear to have a very strong influence on mineralisation, and include;

1. **The Cloncurry Lineament.** This influences the Mount Isa mineralisation, and extends southward through the Cobar district mineralisation, the Lake Cargelligo deposit and onwards.
2. **The Kalgoorlie Lineament.** This influences the Major Norseman, Kalgoorlie, Coolgardie, Menzies, Wiluna mineralisation in Western Australia and extends Northward through the Pilbara area, including the Telfer, numerous smaller gold mines as well as the major Ta/Sn mine at Wodgina.
3. **The G2 Lineament.** This extends from near Adelaide in South Australia and extends through to West of Darwin and influences the major Olympic Dam deposit in South Australia, Alcoota and Pine Creek in the NT as well as numerous smaller deposits.
4. **The Perth Lineament.** This influences the Greenbushes Sn/Ta deposit, the Boddington gold mine as well as numerous smaller deposits.
NE TRENDING SET:

These appear to have a moderate to strong influence on mineralisation and include:

1. Broken Hill - Crackow
2. McArthur River - Tennant Creek
3. Boddington - Mt Magnet - Meekatharra - Wiluna
4. Halls Creek - Pine Creek

NW TRENDING SET: (This may be two sets, with one set at about 040° and another at about 060°).

These appear to have a moderate to strong influence on mineralisation and include;

1. Pine Creek - McArthur River - Mt Isa - Crackow
2. Halls Creek - Callie - Rover - Cobar
3. Pilbara - Olympic Dam - Broken Hill - Lake Cargelligo
4. Southern Cross - Norseman

5.2. OTHER FACTORS AFFECTING THE DISCOVERY OF MINERALISATION

There are a number of factors which will affect whether mineralisation has been discovered. These include;

1. Cover by later sedimentary basins; Figure 3 illustrates the major sedimentary basins in Australia in relation to the lineaments and known metalliferous deposits. Sedimentary basins from the Neoproterozoic and younger effectively mask mineralisation, and the explorer is reliant on geophysical methods in particular to target areas.
For the G2 linear, the Warburton, Amadeus and Wiso Basins have clearly masked mineralisation, with discovered deposits mainly grouped in the areas where basement rocks are exposed between these basins. The Olympic Dam and Rover deposits for example are under thick cover and were discovered by detailed geophysics followed by drilling.

2. **Favorable Geology**: Some rock units on the group or formation level are more highly mineralised than others and this is an important factor in area selection.

3. **Ground Availability**: Ground may already be under license, or may be within various reserves and be generally unavailable.

4. **Remoteness**: Some areas are remote from access and are underexplored for this reason. With the move towards remote sensing techniques for exploration, this factor is becoming less relevant, but may explain a lack of discoveries in the past.

5.3. **Tempest Survey Interpretation**

Between the 5th and the 7th June 2013, Fugro Airborne Surveys Pty. Ltd. (FAS) undertook an airborne TEMPEST electromagnetic survey for MMG Management Pty Ltd, over the Vic River Project areas in the Northern Territory. The survey consisted of three areas: A Northern and Southern Vic River areas as well as a test area.

The "test area" consisted of three traverses and partially overlaps EL29590 held by Australis Minerals Pty Ltd. The data for the "test area" was made available to Australis by MMG as the area tested overlaps ground held by Australis.

No expenditure is claimed for this data in section 8, except for the interpretation work carried out by Dr Rutter on behalf of Enterprise Mining Pty Ltd. This expenditure is split evenly between EL29589, EL29499, EL29590 and 29857.

The results from the "test area" were reinterpreted by Dr Rutter with the aim of assessing the method for future work on EL29589 and others held by Enterprise Mining in the area.

TEMPEST is a broad bandwidth square wave time-domain EM system operated from a fixed-wing aircraft. TEMPEST was designed to acquire high resolution, fully calibrated TEM data that could be used in a quantitative fashion for both conductivity mapping applications and conductive target detection.

TEMPEST’s broad bandwidth makes it capable of resolving subtle variations in conductivity from the near surface to many hundreds of metres deep, making it ideally suited to a wide range of exploration targets.

This work relates to exploration on EL29589 in that it demonstrates a geophysical technique used over nearby areas with similar geology which may successfully identify targets for further more detailed exploration if used over EL29589.

**The "test area" TEMPEST SURVEY**

Figure 8 shows the location of the three traverses in relation to EL29589 and EL29590 (Australis). The Easternmost 2 km of each traverse overlaps EL29590. Figure 8 shows the CDI plots for each of the traverses and Figure 9 these plots in place over EL29590.
The Digital Terrain Model is standard information collected during most airborne geophysical surveys. It is essential to incorporate this data when interpreting the other geophysical data.

In this situation the variation in elevation is not great. The general surface is 90m above sea level and some of the higher areas rise to 130m, an increase of 40m. The higher area of 150m at the western end of the central line appears to be in error and should not be taken meaningful. (Rutter 2013)
Total Magnetic Intensity

![TMI plot of the survey area showing the anomaly within EL29589 (Hugh Rutter 2013).](image)

The Total Magnetic Intensity data is used to locate and interpret different geological rock types and geological structure. In this example the gradual increase in magnetic intensity from west to east, suggests a deep seated rock unit which contains magnetic minerals.

More importantly there is significant magnetic anomaly, with an amplitude of 40 nanoTeslas at the eastern end of the test survey area. It is also coincident with an increase in elevation. An interpretation of the airborne magnetic data is the first step in the complete data analysis. *(Rutter 2013)*

Bedrock Conductivity

The TEMPEST survey aims to identify areas of increased conductivity at various depths with the premise that high conductivity may represent sites of mineralisation through the presence of sulphides and other conductive minerals.

The calculated bedrock conductivity is usually the most appropriate parameter to be considered at the start of the interpretation process for this data set. It defines the areas with higher conductivity which may be indicating sulphide mineralization in the bedrock. But to determine this requires further analysis of the full data set and the conductivity decay curves.

From Figures 10 and 11 it appears that there are numerous areas of higher conductivity across the whole of each traverse, but that these features in general do not reach the surface either as a result of weathering destroying the sulphides, or the features narrow down or do not reach the surface.

The overall impression if of a number of narrow (?) vertical features perhaps representing vein mineralisation. This is perhaps consistent with the known mineralisation in the area where a number of small copper and barite occurrences are recorded. Strikes of these are often NE or sometimes WNW, as are many of the known faults in the area.
Hugh Rutter's initial interpretation of the data is shown in figure 10 with a number of apparent anomalies present at the eastern end of the survey lines within both the Australis EL29589 and MMG's EL25422.

Figure 9: CDI (Conductivity Depth Image) plots of each of the traverses.

Figure 10: CDI plots located against the traverse locations.
5.4. CONCLUSIONS

The TEMPEST survey carried out by MMG has identified numerous (perhaps 20) deeply located narrow bands of increased conductivity. These appear to die out within 25-100 metres of the surface, possibly due to the effects of weathering. They may represent vertical or subvertical vein mineralisation striking NE similar in style to that found on the surface. In some areas the conductive area is quite intense and these may represent areas of increase mineralisation and perhaps an exploration target.

There is a clear magnetic anomaly within Enterprises ground at the eastern end of the survey, but this is not directly supported by the conductivity data, although there is a conductivity high a few hundred metres north. I'm not sure what this means at this stage. (EL29590 is east of the 712,000E line). There are several conductivity highs immediately west of EL29590, but there is no magnetic anomaly associated with these either. Perhaps the two relate to different things. In any case, there is a fair bit of "activity" within or near EL29590 which looks interesting.

5.5. RECOMMENDATIONS.

Hugh's report supports the use of Tempest surveys (with accompanying magnetic, dtm etc) over EL29589/EL29499/EL29590 etc as a method that will generate drill targets quickly and at a reasonable cost. The report also highlights that proper interpretation of the results is an essential part of the process.

Geological mapping each of the flight paths on the ground with accompanying rock chip sampling may go some way towards identifying the source of the increased conductivity.

From this data it appears that the TEMPEST survey method is a viable tool for further exploration on EL29589 and EL29590 in the future.
6. DISCUSSION

Enterprise Mining Pty Ltd through its subsidiaries, Australis Minerals Pty Ltd and Kingsland Resources Pty Ltd has accumulated a total of 6 licenses in the Northern Territory based on the concept that the G2 linear has a strong influence on mineralisation along its length as evidenced by the discovery of the Olympic Dam deposit by Western Mining in the late 1970's. Dr Hugh Rutter was a leading member of the discovery team for Olympic Dam, and has provided considerable advise to Enterprise on target areas, leading to the exploration license applications.

The mineralising concept provided by Dr Rutter appears sound and may lead to a number of significant discoveries within the Enterprise licenses. These target areas recommended by Dr Rutter appear to have been previously ignored or underexplored and warrant the application of modern exploration techniques.

Exploration on all licenses is at the concept stage. Initial exploration will be aimed at identifying and ranking specific targets within the licenses for further exploration. A comprehensive exploration program involving aircraft based geophysics, geological mapping and sampling, ground based geophysics, and eventually RC and diamond drilling is planned.

The Directors of Enterprise Mining are keen to continue exploration work and welcome interest and investment from other companies and individual investors.

7. PROPOSED WORK YEAR 2
HIGH RESOLUTION AERO GEOPHYSICAL SURVEY

High resolution aero geophysical surveys including magnetics and gravity and radiometrics will be flown over any anomalies identified during Phase 1 with the aim of more closely defining the extent and location of target areas within the licence. This survey will either use a light aircraft or helicopter.

A budget quote was obtained from CGC with the quoted cost for flying HeliTEM over a single area of about 1000 line km in the NT about $230/km plus a mob of between $30,000-50,000 depending on whether it could be shared.

The expected cost for a HeliTEM survey over EL29589 is about $65,000. This is planned to be completed in year 2 of the licence in conjunction with surveys over other licences held in the same area (EL29589, EL29499). Coupled with expenditure for general geology, reporting and administration the commitment of $100,000 for year 2 of EL29589 is expected to be exceeded.
8. EXPENDITURE - YEAR 1

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<td>Accomodation and Travel</td>
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<tr>
<td><strong>Total</strong></td>
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9. REFERENCES

Rutter H. 2013: A Report on the Applicability of Airborne Electromagnetic Data, TEMPEST, for mineral exploration in the Northern Territory, Australia, for Enterprise Mining Pty. Ltd. Flagstaff GeoConsultants Pty. Ltd.

APPENDICES
APPENDIX 1
Locations considered prospective for Cu/Au/U mineralisation of the style found at Olympic Dam
Dr Hugh Rutter
13/07/2011

The study is base upon the 1: 5m map series including the gravity, magnetic, metallogenic and structural maps, with reference to the 1: 250,000 geology where available “in-house”.

For each of the areas selected, the next stage is to obtain the latest 1: 250,000 scale information including:

- Gravity
- Magnetics
- Geology
- All open file data from previous explorers
- Current land tenure.

This data will be compiled to refine the model and each prospect re-assessed.

Brief notes on each prospective area are as follows. The areas are indicated on an overlay to the 1: 5m map series.

1. McDills
   - 15 mgl gravity anomaly within the G2 linear
   - coincident magnetic anomaly
   - north-western edge of the Pedirka Basin
   - seismic data probably available, plus some stratigraphic well information
   - very little helpful outcrop geology

2. Alcoota
   - 20 mgl gravity anomaly within the G2 linear
   - minor magnetic anomalies
   - east-central part of the Arunta Block
   - mixed granites and Proterozoic rocks
   - minor mineralization
   - NW-SE structures

3. Barrow Creek
   - 20mgl gravity anomaly adjacent to the G2 linear
   - magnetic anomalies, both shallow and deep sources
   - strong NW-SE structure superimposed on the G2 linear
   - North eastern edge of the Arunta Block
   - copper mineralization recorded

4. Green Swamp Well
   - 15 mgl gravity anomaly within the G2 linear
   - minor magnetic anomalies
   - north-west to south-east structures
   - no relevant outcrop
   - Wiso Basin, north west of Tennant Creek
5. **Wave Hill**
   - 15 mgl gravity anomaly within the G2 linear
   - minor magnetic anomalies
   - no geological information

6. **Victoria River Downs**
   - 15 mgl gravity anomaly within the G2 linear
   - magnetic anomalies
   - Adelaidean outcrop showing structural doming
   - no current evidence of mineralization

7. **Delamere**
   - 15 mgl gravity anomaly within the G2 linear
   - magnetic anomalies
   - Adelaidean outcrop
   - no current evidence of mineralization

8. **Limbunya**
   - 20 mgl gravity anomaly, west of the G2 linear
   - magnetic anomalies
   - north-west to south-east structures – very complex
   - junction of Victoria River Basin and Ord Basin
   - barium mineralization and possible copper mineralization
   - Lower Proterozoic rocks – red brown schists

9. **Maiwok**
   - 15 mgl gravity anomaly
   - minor magnetic response
   - junction of NW-SE and NE-SW structures
   - edge of Arnhem Shelf and Maiwok Sub-basin
   - mineralization includes W, Sn, Au, Cu, Bi, U.

10. **Huckitta**
    - 10 mgl gravity anomaly
    - magnetic anomalies with NNW – SSE structures
    - Archaean outcrop – mainly gneiss
    - abundant copper mineralization
    - south-west of Jervois Ranges

11. **Ooldea/Barton/Nullabor/Fowler**
    - complex structures
    - 25 mgl gravity anomalies
    - complex magnetic anomalies
    - no relevant outcrop
APPENDIX 2

A Report on the Applicability of Airborne Electromagnetic Data, TEMPEST, for mineral exploration in the Northern Territory, Australia, for Enterprise Mining Pty. Ltd.

Hugh Rutter
Flagstaff GeoConsultants Pty. Ltd.
October 2013

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Contents
1. Introduction.
2. Survey Results
   2.1. Digital Terrain Model
   2.2. Total Magnetic Intensity
   2.3. Bedrock Conductivity
       Interpretation
   Decay Curve Analysis
1. Introduction.
The TEMPEST airborne geophysical survey was flown by Fugro Airborne Surveys in June 2013. Three lines of data were delivered to Enterprise Mining Pty. Ltd. as an example of what the data could provide to the exploration programme in the Northern Territory.
TEMPEST is primarily a helicopter borne time-domain electromagnetic data collecting system. Additional data is often collected, including digital elevation and airborne magnetics. The survey in its completeness is shown in the diagram below.
The three lines of data provided are those in the south east of the survey area; the lines are 500m apart. A conventional exploration survey is likely to have a line spacing of 50m or 100m depending on the degree of detail required.
The various aspects of the data collected along these three lines are considered below.

2. Survey Results.
2.1. Digital Terrain Model
The Digital Terrain Model is standard information collected during most airborne geophysical surveys. It is essential to incorporate this data when interpreting the other geophysical data. In this situation the variation in elevation is not great. The general surface is 90m above sea level and some of the higher areas rise to 130m, an increase of 40m.
The higher area of 150m at the western end of the central line appears to be in error and should not be taken meaningful.

2.2. Total Magnetic Intensity
The Total Magnetic Intensity data is used to locate and interpret different geological rock types and geological structure. In this example the gradual increase in magnetic intensity from west to east, suggests a deep seated rock unit which contains magnetic minerals.

More importantly there is significant magnetic anomaly, with an amplitude of 40 nanoTelsas at the eastern end of the test survey area. It is also coincident with an increase in elevation.
An interpretation of the airborne magnetic data is the first step in the complete data analysis.

2.3. Bedrock Conductivity
The calculated bedrock conductivity is usually the most appropriate parameter to be considered at the start of the interpretation process for this data set. It defines the areas with higher conductivity which may be indicating sulphide mineralization in the bedrock. But to determine this requires further analysis of the full data set and the conductivity decay curves. This can be achieved in various ways.

Interpretation
The interpretation of TEM data can be from data in the form of:

• Voltage data (microVolts/amp, nanoVolts/amp.metre²).
• Apparent resistivity (ohm.metres calculated from the voltage)
• Calculation into a layered earth with depth and layer resistivity
• 2D and 3D earth models calculated from the voltage data

In addition, a single point of data, the decay curve, (multiple time data) may be used to provide information regarding the bedrock (half-space), the weathered layer (horizontal layer), or the presence of a mineralized conductor (time constant analysis).
Decay curve analysis.
An analysis of the decay curve from an individual reading position using the in-loop array can provide information about the overburden, the host rock and the conductive target.

1. The response from a thin horizontal layer (overburden) has a decay curve which follows a negative power law. A power law curve is a straight line when the two parameters, response and time, are plotted on log-log scales.

Response, \( E(t)/I = At^{-b} \)

‘E’ is the response at a particular time, ‘t’, normalized to the current, ‘I’.
‘A’ is a constant.
‘t’ is a particular time.
‘b’ is the power law index
If ‘b’ has a value of -5/2 this is indicative of a half-space response.
If ‘b’ has a value of -4 this is indicative of a thin horizontal layer response.

2. The response from a confined conductor, i.e. an ore zone, has a decay in the form of a negative exponential curve. An exponential curve is a straight line when the two parameters, response and time are plotted on log-linear scales; i.e. response amplitude in a logarithmic scale and time in a linear scale.

Response, \( E(t)/I = Ae^{-t/\tau} \)

In this case \( \tau \) is the time constant. The time constant provides information about the conductivity of the orebody. A value of 3msecs is low, a value of 4msecs is average and a value of 7msecs or greater is a high conductivity. Some examples of the time constant for simple geometric shapes are as follows:

Sphere: \( \sigma a^2 = (\pi^2.\tau)/\mu_0 \) \( a = \) radius

Horizontal cylinder: \( \sigma a^2 = (\pi^2.\tau)/1.8\mu_0 \) \( a = \) radius

Inclined (>45°) semi infinite \( Sl = (\pi^2.\tau)/4\mu_0 S = \) conductivity.thickness (siemens) plate within a loop of side 2L \( L = ½ \) loop side length (metres).

Inclined (>45°) plate of \( Sm = (\pi^2.\tau)/2\mu_0 w = \) thickness of the plate thickness \( w, and length m = ½ depth extent of the plate 2m>>w, down dip.

Horizontal plate or \( Sm = (\pi^2.\tau)/1.8\mu_0 \)
elongated conductor of thickness \( w \) and width \( 2m>>w. \)

\( \mu_0 = \) permeability of free space, \( 4\pi x 10^{-7} \) henries/metre, Hm-1
\( \sigma = \) conductivity, siemens/metre, Sm-1
These procedures are available as digitized interpretation processes and can easily be applied to the TEMPEST data. The objective is to discriminate between conductive features which originate within the overburden or are bedrock rock types.

The identification of bedrock conductors which could be caused by mineralized zones is achievable.

This means that exploration drilling is targeted at the most likely sources of economic mineralization which highlights the chance of success in the total exploration process.

When exploration proceeds with the licenses held by Enterprise Mining Pty. Ltd., TEMPEST airborne electromagnetic surveys will be recommended. This will optimize the chance of success and keep effective drilling costs to a minimum.

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Geophysicist and Mineral Explorer
APPENDIX 3

ANOTHER OLYMPIC DAM ??

Exploration licenses acquired by Enterprise Mining Pty. Ltd are all in the Northern Territory. They were taken up because they all have the potential to contain mineralization similar to that recorded in the Olympic Dam Mine located in South Australia. The Olympic Dam discovery was made using the available regional airborne magnetic data, ground gravity data and linear studies based upon gravity, magnetic and photo-linear features. The current value of the Olympic Dam Mine is estimated to be in the order of Aus$1,650 billion. This is based predominantly upon the value of contained gold, copper, uranium, rare-earth minerals, but there are other economic minerals in the mix as well. Upon the discovery of Olympic Dam, the discovery company, Western Mining Corporation, did not disclose the reasons for drilling at the chosen location. Therefore, other companies that followed assumed an association with the Gawler Craton and explored and drilled accordingly.

The importance of the G2 Linear was not appreciated.

The exploration licenses acquired by Enterprise Mining were taken up with the full knowledge of the exploration parameters used to discover Olympic Dam. The Olympic Dam discovery hole, RD1 intersected 38m of 1.05% copper at a depth in excess of 335m below the surface. This was highly significant, but an economic deposit requires both grade and tonnage. It was not until RD10 that both these parameters had been satisfied and an economic deposit defined. Similar exploration processes will be applied to the Enterprise Mining areas within the Victoria River Downs, 1: 250,000 scale sheet. Indeed, Enterprise Mining may have an exploration advantage in that there is a secondary major linear which heads north-north-west from Western Australia which intersects the G2 Linear in the area of both these exploration licenses.

The mineral potential may even be greater than that recorded at Olympic Dam.

The importance of major linear features is that they indicate the presence of significant breaks in the crustal formations which provides the potential for mineralizing fluids to flow upwards from the planetary mantle. Mineralisation potentially locatable at these exploration license areas could be more significant than that found at Olympic Dam. Minerals containing other valuable elements may be present; the potential is perhaps greater than just copper, gold, uranium and rare-earth elements. Also the grades and tonnage could be much greater than those recorded at Olympic Dam. The exploration processes have been established. Drilling and hopefully significant discovery will follow.

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August 2013