



**ENTERPRISE MINING PTY LTD**

**AUSTRALIS MINERALS PTY LTD**

**EL29589 MT HODGSON**

**ANNUAL REPORT**

**For the period 22 July 2014 to 21 July 2015**

A handwritten signature in black ink, appearing to read 'P. Kimber', is centered on a light-colored rectangular background.

**P. Kimber**  
**Reynard Australia Pty Ltd**

***Disclaimer***

*Reynard has prepared this report based upon information believed to be accurate at the time of completion, but which is not guaranteed. Reynard makes no representation or warranty as to the accuracy, reliability or completeness of the information contained in this report and will not accept liability to any person for any errors or omissions or for losses or damages claimed as a result, directly or indirectly, of items discussed, opinions rendered or recommendations made in this report, except for statutory liability which may not be excluded.*

*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.*

**Copyright Statement**

This document and its content are the copyright of Australis Minerals Pty Ltd, a wholly owned subsidiary of Enterprise Mining Pty Ltd. The document has been written for submission to the Northern Territory Department of Mines and Energy as part of the tenement reporting requirements as per the Mineral Titles Act (NT). Any information included in the report that originates from historical reports or other sources is listed in the "References" section at the end of the document. All relevant authorisations and consents have been obtained.

Australis Minerals Pty Ltd authorises the department to copy and distribute the report and associated data.



## **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**
- 6: DISCUSSION**
- 7: PROPOSED WORK YEAR 3**
- 9: REFERENCES**

## **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: Units to be relinquished.**

## **TABLES**

- 1: Enterprise Tenements**
- 2: Reduction EL29589**



## **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.

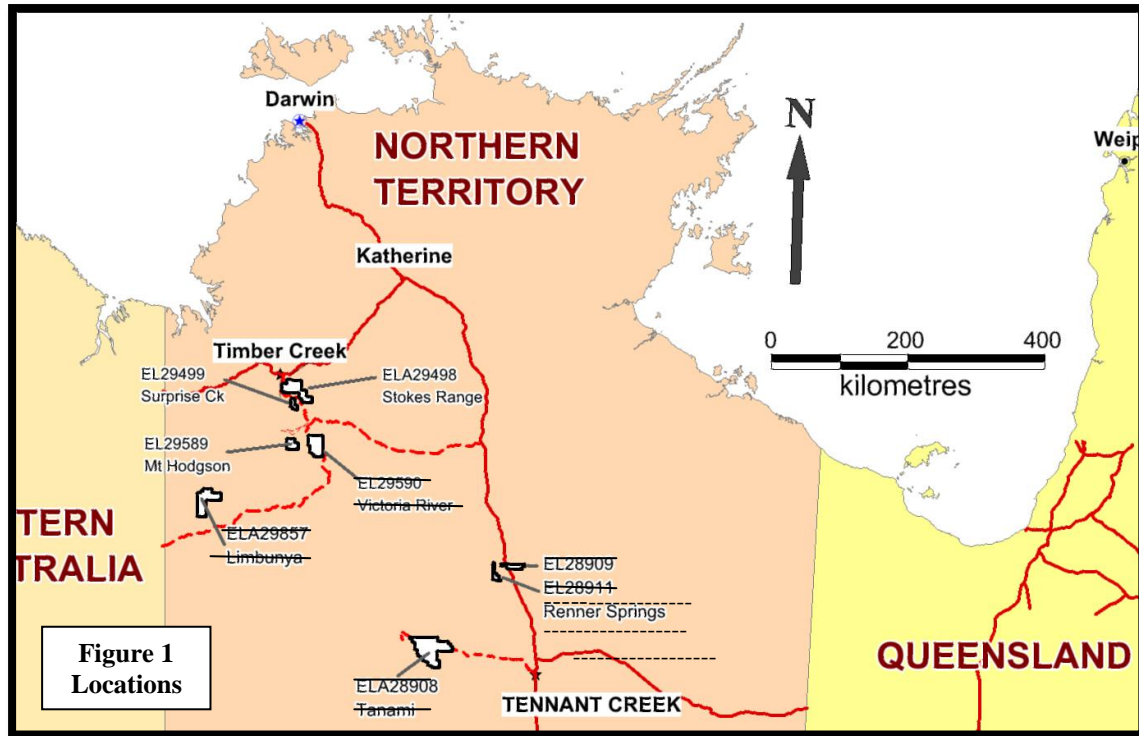
A review of the known linears within Australia demonstrates a strong correlation between Proterozoic or earlier mineralisation with major NNW trending linears, including the Cloncurry linear (Mount Isa- Cobar-Lake Cargelligo), the Kalgoorlie linear (Norseman-Kalgoorlie-Coolgardie-Menzies-Wiluna- Pilbara) 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**

Tenement Location	Registered Holder/ Applicant	Status	Grant date/ Application Date	Area	Licence Number	Minerals
Stokes Range Northern Territory	*AUR	Application	19-May-12	717km <sup>2</sup>	ELA29498	Gold, Copper, Base Metals
Surprise Creek Northern Territory	*AUR	Granted	20-Feb-13	122km <sup>2</sup>	EL29499	Gold, Copper, Base Metals
Victoria River Northern Territory	*AUR	Granted	10-Apr-13	609km <sup>2</sup>	ELA29590	Gold, Copper, Base Metals
Mt Hodgson Northern Territory	*AUR	Granted	22-Jul-13	234km <sup>2</sup>	ELA29589	Gold, Copper, Base Metals

\*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**

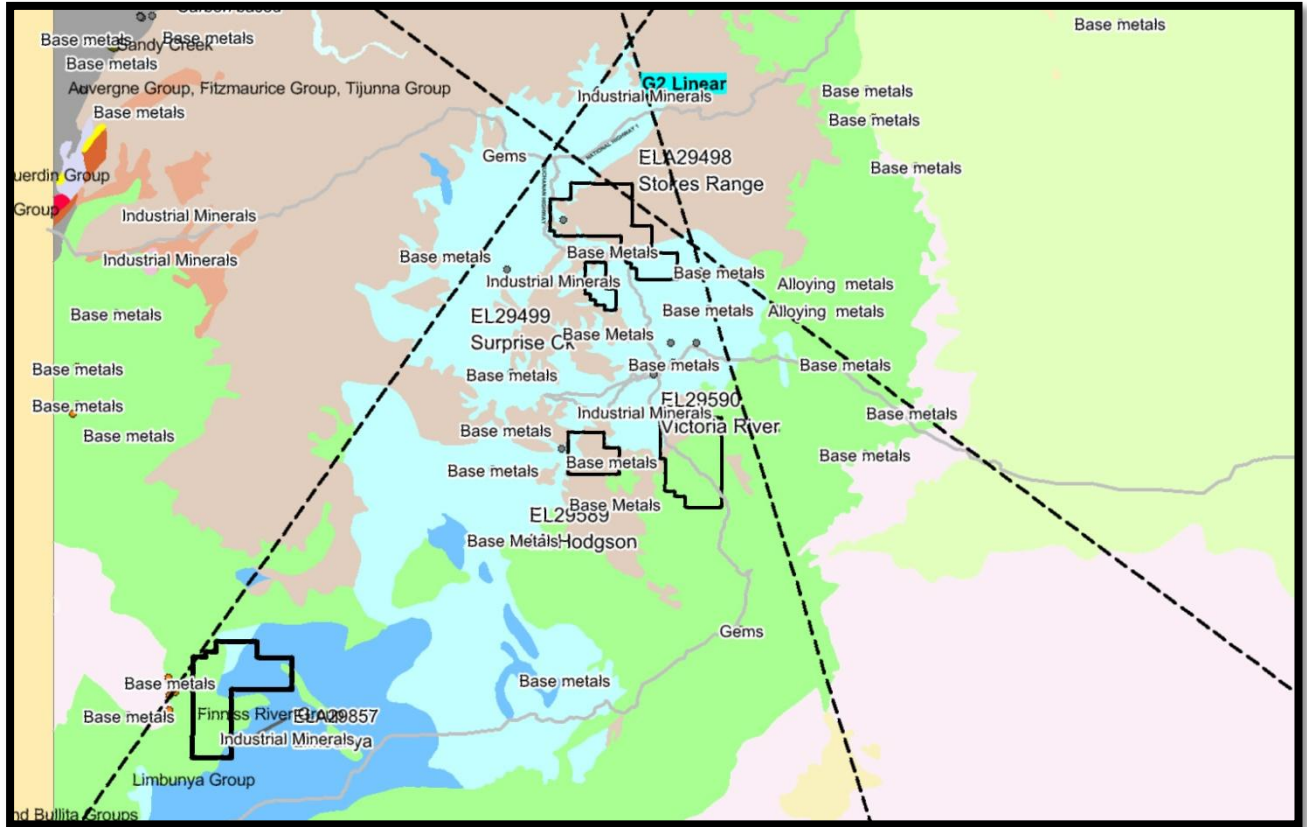
Within each of the prospective locations selected by Dr Rutter exploration licenses were applied for utilising geophysical and geological information available from the NT Department of Resources. The data available included;

- 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 Birrindudu 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 mgl 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 Birrindudu 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 Birrindudu Basin.



The Inverway barium mine within the application area has a quoted resource of 38000 t of 99% BaSO<sub>4</sub> (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 mg/l 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.

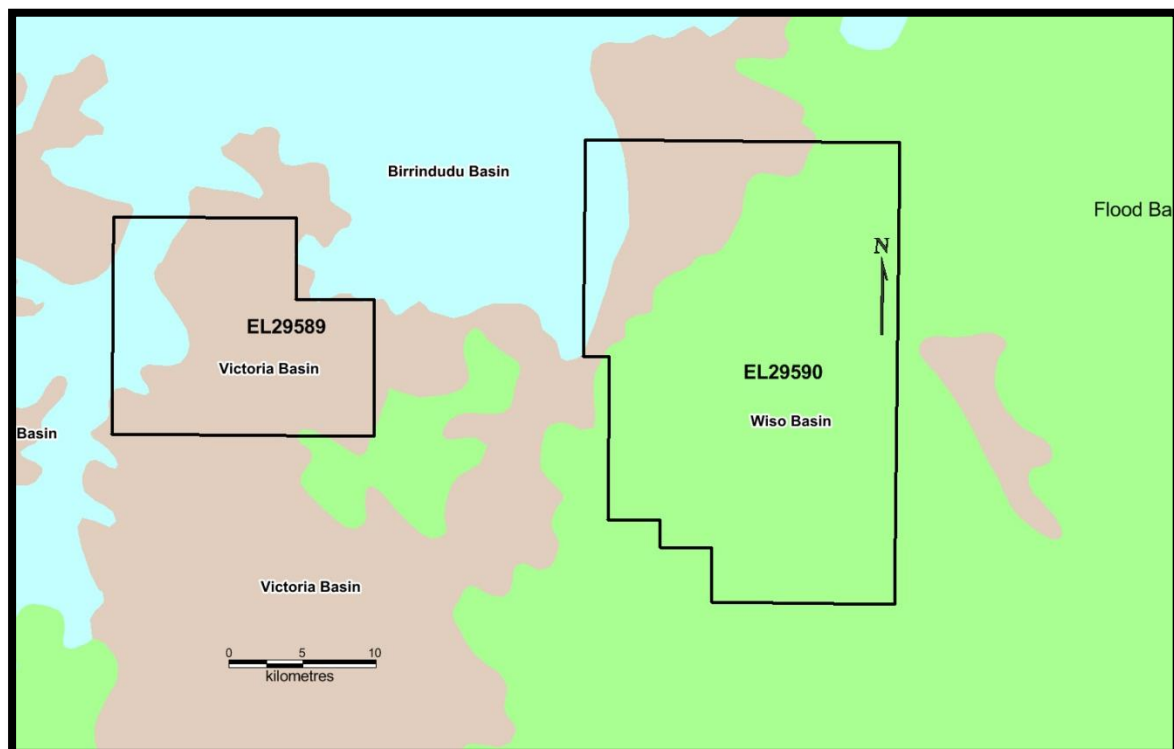
**Wiso Basin:** Unmetamorphosed Devonian to Cambrian intracratonic basin forming part of the Central Australian Platform Cover. Faulted against Palaeoproterozoic metamorphic rocks of the Aileron Province to the south. Unconformably overlies Palaeoproterozoic rocks of the Tanami Region to the west, Tenannt 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.**



## 5. WORK COMPLETED

Much of the period was spent in negotiations with prospective Joint Venture partners with the aim of raising additional funding to enable the aerial geophysics on all of the Company's licenses to be completed at the same time. To this end The Directors of Australis Minerals have been involved in intense negotiations with the OFC Tianjin Mining Co. of China for much of the current reporting year aimed at securing funding to carry out the proposed exploration program and future exploration on EL29499 as well as the Company's other licenses in the same area.

These negotiations are well advanced and a commercial agreement between Australis Minerals and the OFC Tianjin Mining Co. is expected in the near 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 advice 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.

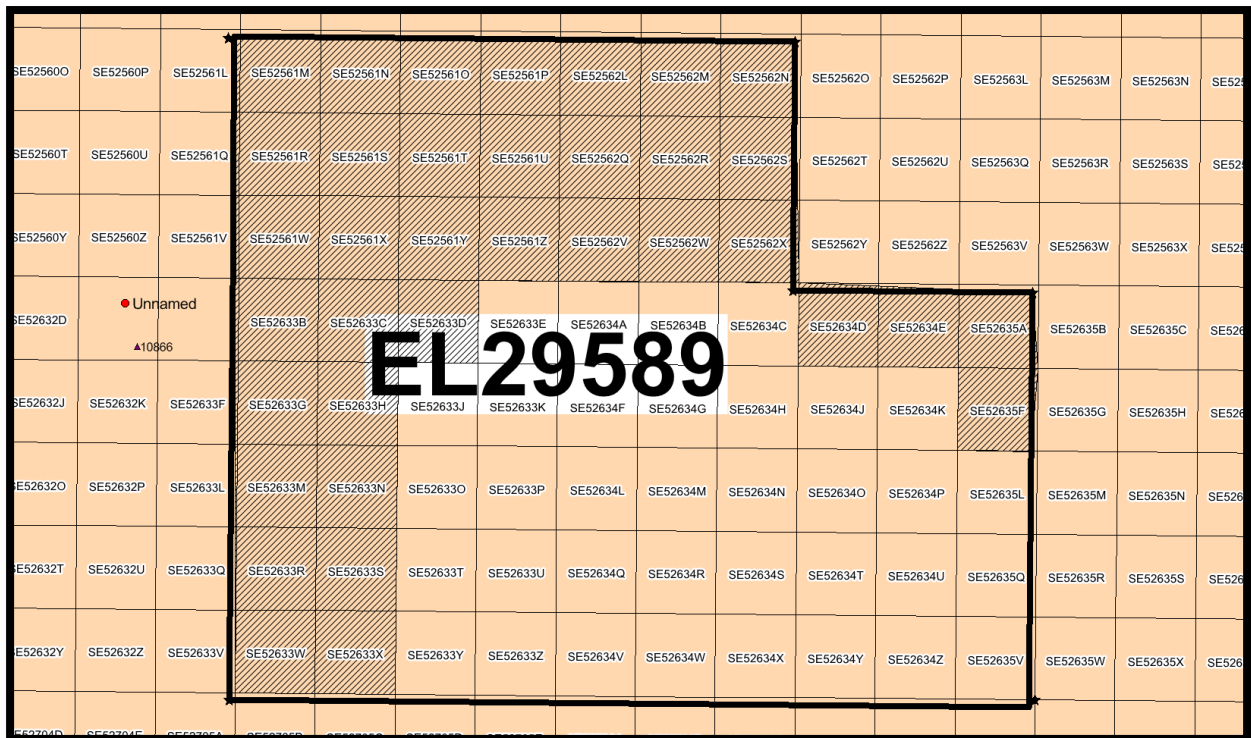
The Directors of Enterprise Mining are keen to continue exploration work and welcome interest and investment from other companies and individual investors.

## 7. REDUCTION

Australis wish to nominate the units listed in Table 2 and shown on Figure 4 to be relinquished as required at the end of the second year of this license;

**Table 2: Units to be relinquished**

BLOCK	UNITS	COUNT
SE52561	M,N,O,P,R,S,T,U,W,X,Y,Z	12
SE52562	L,M,N,Q,R,S,V,W,X	9
SE52633	B,C,D,G,H,M,N,R,S,W,X	11
SE52634	D,E	2
SE52635	A,F	2
		36



**Figure 4: Reduction EL29589.**

**8. PROPOSED WORK YEAR 3**  
**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.



## 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.

Abubeker M. 2013: Vic. River, Northern Territory TEMPEST Airborne Geophysical Survey Acquisition and Processing Report For MMG Management Pty Ltd. Fugro Airborne Surveys.