

# **CLOSED REPORT: CONFIDENTIAL**

# Box Hole Base Metal Project Annual Report for period ending July 15, 2008

Tenement: EL22537 Dulcie

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#### **DIGITAL DATA FILES**

Data Description	Digital Data File Name		
VTEM Survey	EL22537_2008_A_02_VTEM.zip		
Ground Gravity Survey	EL22537_2008_A_03_GroundGrav.zip		
IP Survey	EL22537_2008_A_04_IP.zip		
XRF Field Geochem Mapping	EL22537_2008_A_05_SurfaceGeochemNiton.txt		
Vegetation Geochem Survey	EL22537_2008_A_06_SurfaceGeochemVeg.txt		
Drill Collars	EL22537_2008_A_07_DrillCollars.txt		
Drilhole Lithology	EL22537_2008_A_08_Lithologs.txt		

#### SUMMARY

This report details exploration work carried out by Uramet Minerals Ltd (Uramet) within the Box Hole tenement in the Northern Territory for the 2007-2008 field season.

In June 2007, Uramet was divested from Elkedra, with the aim of exploring Elkedra tenements for minerals other than diamond. Work in the Box Hole area during the year to 15 July 2008 was concentrated on base metal exploration around the galena/barite deposit formerly mined at King's workings.

This work consisted of mapping, soil and rock chip sampling, VTEM, IP and gravity surveys, vegetation geochemistry, and drilling.

The various geophysical and geochemical methods led to target generation, and those targets with an expected depth of less than 75m were drilled in the recent RAB program. We are currently awaiting assay results to determine the grade of base metals encountered in the more successful target holes.

#### **1 TENEMENT STATUS**

No change to this tenement was made during the reporting period.

#### Table 1: Tenement Summary

<b>Tenement</b> No	Tenement Name	Date Granted	No of Blocks
EL22537	Dulcie	16/07/2001	34

### 2 LOCATION AND ACCESS

The Box Hole tenement is located approximately 250km east-northeast of Alice Springs in the Northern Territory, 5 km east of Arapunya Station (Figure 1). The project area falls within the Huckitta (SF53-11) 1:250,000 sheet.

Physiography ranges from nodule-paved plains in the south and east to gentle carbonate hills in the northwest. There are two sizable seasonal creeks, and karst features are present in the carbonate areas. The vegetation ranges from savanna woodland near the creeks to annual grasslands to gidgee and acacia scrub. The vegetation is consistent with a continental desert.

Access to the tenement areas is via the Plenty Highway and station tracks.



## **3** GEOLOGICAL SETTING

#### 3.1 Regional Geology

The Box Hole tenement is located within the southern Georgina Basin, which was the northern part of the Centralian Superbasin. Following the Peterman Orogeny, the area developed as a stable carbonate platform, with occasional clastic sedimentation. The subsequent Alice Springs Orogeny produced little metamorphism in the southern Georgina Basin, but is thought to be responsible for some mild heating and hydrothermal activity (Dunster at al. 2007).

### 3.2 Tenement Geology

This tenement lies entirely within the Arrinthrunga Formation of the Georgina Basin. This is a shale/carbonate sequence with some quartzitic sands that was deposited in an occasionally emergent, restricted shallow basin. Stromatolitic reefs are plentiful.

One of the Stromatolitic reefs in the upper Cambrian Arrinthrunga Formation hosts the King's workings deposit, which appears to be a MVT style barite-galena deposit formed during the Alice Springs Orogeny. The mineralized area is extensively silicified, and contains pyrite gossans and occasional sphalerite in addition to the galena and barite.

### 4 EXPLORATION COMPLETED DURING REPORTING PERIOD

Exploration activities undertaken during the reporting year include:

- 1) Gravity survey
- 2) Field mapping and sample collection
- 3) Examination of historical drill core
- 4) IP survey
- 5) Aerial electromagnetic (VTEM) survey (including magnetics)
- 6) Soil and rock chip geochemical survey
- 7) Vegetation survey
- 8) Drilling
- 9) Interpretaion of geophysical data by consultants

### 4.1 Gravity Survey

A gravity survey was performed by Daishsat Pty Ltd in August of 2007. This survey involved 1742 readings at 50 metre spacing over 39 lines on the Box Hole section of the tenement. Data was modelled by consultants Dr Duncan Cowan and Keith Jones. Some gravity anomalies were modelled as high density bodies at depth and targeted for drilling. A residual gravity picture is shown in Figure 2.



**Figure 2.** Residual gravity for the Box Hole tenement, as determined by a 50m spacing gravity survey.

# 4.2 Field Mapping

Three mapping expeditions were mounted in August 2007, March 2008 and April 2008. The purpose of the first trip was to establish the location of surface mineralization, investigate preliminary gravity targets, and look at archived drill core that was stored on site.

The March and April 2008 trips involved more detailed mapping of the surface mineralization and alteration. To assist with the mapping, 8 aerial photographs were purchased, covering both portions of the tenement. Soil, rock, and vegetation surveys were also completed. A geological map showing all locations visited by Uramet is provided in Figure 3.



### 4.3 Examination of Historical Drill Core

Approximately 800 meters of stratigraphic drill core is stored in a core-shed built on site by BHP in the 1970s. Much of this core was examined, and gravimetric measurements were done to determine the density differences between various lithologies for use in gravity data interpretation.

In addition, the DDH92 TC1 drill core, stored in the Alice Springs core library was examined in January 2008. A vein logged as barite was shown to contain neither barium nor sulphur, and a small single sphalerite grain was discovered about 1 cm from the bottom of the core. The lack of disseminated sphalerite around this grain suggests it is one of the isolated sphalerites previously reported from the lower Arrinthrunga by early stratigraphers (Draper 1976).

#### 4.4 IP Survey

An IP survey was completed in August through October, 2008. This entailed 17 lines at 100 or 50 meter spacing, along 28 line kilometres. Figure 5 shows location of lines. The IP data was inverted by consultant Graham Elliot, resulting in the generation of several targets ranging from 20 to 200 meters in depth. An example is shown in Figure 4.



Inverted chargeability and inverted resistivity over the IP lines is presented as figure 5.



Figure 5 IP Line Location showing Inverted Chargeability (Left) and Inverted Resistivity (right)

# 4.5 VTEM Survey

VTEM (Versatile Time-domain ElectroMagnetics) is the proprietary name for a helicopterborne electromagnetic surveying system. In October 2007, a 417 line kilometre VTEM survey was flown at Box Hole by Geotech Airborne Pty Ltd. The data showed a broad correlation between conductivity highs and gravity lows, presumably related to structure. Figure 6 shows a conductivity map based on channel 11, the 131 to 154 microsecond channel.

Magnetic data ("helimag") was recorded as part of the VTEM survey. No tie lines were flown but the data was levelled using regional aeromagnetics by consultant Dr Duncan Cowan.

Consultant Keith Jones demonstrated that the VTEM, helimag and gravity profiles correlated closely with stratigraphy, enabling geological units to be projected under cover. In the absence of outcrop, this method was used to extrapolate the bedrock type in some areas and construct the map shown in Figure 3.



#### 4.6 Soil and Rock Chip Sampling

In March and April 2008 a systematic effort was made to measure soil and rock chip base metal concentrations in the field using the Company's Niton portable XRF analyser. The initial study was run over the area of known surface mineralization. Other areas of interest from geophysical surveys were added in May and June, 2008, and soil measurements were obtained for the soil where trees used in the vegetation survey (section 4.7, below) were growing. In all, 458 rock chips and 541 soil samples were analysed. Figure 7 indicates the areal extent of the sampling.

Pb values in soil reached as high as 1330 ppm. The maximum Zn value in soil was 2093 ppm, figure 7 thematically maps the Zinc content of the soils. Rock chips yielded values up to 3% Zn and 1% Pb, excluding values from galena macrocrysts.



Figure 7. Sample Locations showing Zn content in soil, analysis by Niton portable XRF.

#### 4.7 Vegetation Biogeochemistry Survey

A vegetation geochemistry survey was conducted to determine if any anomalous enrichment in base metals or tracer elements was present. 116 samples were collected. Including repeats, 102 total analyses were made on 73 samples, measuring 64 elements location of samples is indicated in figure 8. Anomalies in Pb, Ag, Cd, and Zn were correlated with known shallow mineralization. In the southern area, vegetation over the down dip extension of the surface mineralization also showed elevated base metal contents refer to figure 9. One drill target was added based on these results.





**Figure 9.** Anomalous Ag concentrations in Acacia ligulata suggest a downdip extension to the surface mineralization in the southern zone of mineralization. Red line is surface mineralization, stratigraphy dips SW, ground slopes to the east.

# 4.8 RAB Drilling

Between 24 June and 6 July 2008, 94 RAB (rotary air blast) holes were drilled on the Box Hole tenement (EL22537) to test base metal (Pb and Zn) targets. Drilling was carried out by Bullion Drilling Pty Ltd, and totalled 4,155 metres. Individual holes varied from 1 to 88 metres in depth, locations are shown in figure 10. Every metre drilled was examined on-site and logged according to lithology, with any visible mineralization or alteration noted. Based on initial inspection, 1,070 metres were chip-trayed for later inspection, while 374 metres were sampled for laboratory assay. Laboratory assays had not been completed at the end of this reporting period.



# 4.9 Consultant Reports

Numerous geophysical consultants were engaged to interpret the various geophysical data. Reports by Dr Duncan Cowan, Keith Jones, and Graham Elliot have been appended to this report as appendices 1 - 7. These reports were used to generate targets for the RAB drill program. Those geophysical targets deeper than 75 meters were not targeted in the RAB program.

# **5** CONCLUSIONS AND RECOMMENDATIONS

As the drill assays are pending, no firm conclusions can be made at this time.

# 6 **REFERENCES**

Draper JJ, 1976. Progress report on Georgina Basin geochemistry. Results of the 1974 field season. Bureau of Mineral Resources, Geology and Geophysics, Australia, Record 1976/57

Dunster JN, Kruse PD, Duffett ML and Ambrose GJ. 2007 Geology and resource potential of the southern Georgina Basin. *Northern Territory Geological Survey, Digital Information Package* DIP007