



North  
Australian  
Diamonds  
Limited  
ABN 86 009 153 119

## **Annual Report – Year 6**

### **Exploration Licence 10189**

23<sup>rd</sup> July 2007 to 22<sup>nd</sup> July 2008  
Northern Territory, Australia

***Holder:*** Merlin Diamonds Pty Ltd  
***Operator:*** North Australian Diamonds Limited  
***Reporting Period:*** 23<sup>rd</sup> July 2007 to 22<sup>nd</sup> July 2008  
***Sheet Reference:*** Bauhinia Downs 1:250,000 (SE53-03)  
Walhallow 1:250,000 (SE53-07)  
Calvert Hills 1: 250,000 (SE53-08)  
***Due Date:*** 20<sup>th</sup> August 2008

Author: M S Kammermann  
Date: August 2008  
Report No: 08-032  
Copies To: Dept. Primary Industries, Fisheries and Mines - NT  
NADL

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## SUMMARY

*This annual report outlines exploration activities undertaken by North Australian Diamonds Limited on Exploration Licence 10189 between the 23<sup>rd</sup> July 2007 and the 22<sup>nd</sup> July 2008. This period represents year six of the licence.*

*Exploration Licence 10189 is situated on the Bauhinia Downs (SE53-03), Walhallow (SE53-07) and Calvert Hills (SE53-08) 1:250,000 mapsheets, and the Glyde, Lancewood and Surprise 1:100,000 topographic mapsheets in the Batten Region of the Northern Territory. It is located around 100 kilometres south of Borroloola and is accessed via existing unsealed tracks leading east from the Merlin Mine or north from Kiana Station.*

*Diamond exploration during the current reporting period included soil geochemical sampling, loam sampling, ground magnetic and ground electromagnetic surveying. The MAG03T anomaly was downgraded following the electromagnetic survey, however remains of interest due to the associated magnetic anomaly and diamonds recovered in loam samples and the kimberlitic chromites recovered in drainages emanating from the plateau that hosts the MAG03T anomaly.*

*On 18<sup>th</sup> September 2007 NADL granted Top End Uranium Limited (TEUL) the right of access to the land covered by the licence for the purpose of exploring for, mining and processing minerals other than diamonds. A desktop study completed by Jigsaw Geoscience in April 2008 identified four priority targets for potential uranium mineralization. The four targets identified by Jigsaw Geoscience as prospective for potential uranium mineralisation were field inspected by TEUL consulting geologist. The field activities were helicopter supported from Merlin Diamond Mine. A report from the consulting geologist on the findings of the investigation has not yet been received.*

*An Application for Exploration Licence Renewal was submitted to DPIFM. The licence renewal for a two year period was subsequently granted to Merlin Diamonds Pty Ltd on 31<sup>st</sup> July 2008.*

*A total of \$128,020 was expended against a covenant of \$160,000. A total cost of \$201,965 was attributed to the licence that includes \$73,945 rent.*

## 1.0 INTRODUCTION

This annual report outlines exploration activities undertaken by North Australian Diamonds Limited (NADL) on Exploration Licence 10189 between the 23<sup>rd</sup> July 2007 and the 22<sup>nd</sup> July 2008. This period represents year six of the licence.

## 2.0 LOCATION AND ACCESS

Exploration Licence 10189 is situated on the Bauhinia Downs (SE53-03), Walhallow (SE53-07) and Calvert Hills (SE53-08) 1:250,000 mapsheets, and the Glyde, Lancewood and Surprise 1:100,000 topographic mapsheets in the Batten Region of the Northern Territory. It is located around 100 kilometres south of Borroloola and is accessed via existing unsealed tracks leading east from the Merlin Mine or north from Kiana Station. A tenement location map is provided as Figure 1.

## 3.0 TENURE

EL 10189 consists of 231 blocks, and was granted to Ashton Mining Limited (now a wholly owned subsidiary of Rio Tinto Limited) on 23<sup>rd</sup> July 2002 for six years. North Australian Diamonds Limited acquired a 100% interest in EL 10189 and has transferred the tenure to wholly owned subsidiary company 'Bulgurri Diamonds Pty Ltd'. Bulgurri Diamonds subsequently changed name in February 2006 to Merlin Diamonds Pty Ltd. Licence details for EL 10189 are outlined in Table 1 below.

*Table 1: Licence details for EL10189.*

| Name    | Status | Effective Date | Grant Date | Expiry Date | Blocks | Holder                  | Percentage |
|---------|--------|----------------|------------|-------------|--------|-------------------------|------------|
| EL10189 | Grant  | 23/07/02       | 23/07/02   | 22/07/08    | 231    | Merlin Diamonds Pty Ltd | 100        |

## 4.0 GEOLOGY

EL10189 is located over the northeast margin of the Neoproterozoic Georgina Basin overlying the south east of the Mesoproterozoic McArthur Basin. It lies not far to the north east of the Cretaceous Dunmarra Basin. Neoproterozoic Bukalara Sandstone of the Georgina Basin outcrops over most of the EL. A narrow horst block of Mesoproterozoic Tawallah Group and Roper Group traverses the northeast margin of the EL. Cenozoic sands overlie Neoproterozoic sediments in the south. The Merlin kimberlite field is

located immediately to the north of the EL.

The NNW-SSE trending Emu Fault Zone is a broad, major fault zone that passes through the west of the EL 10189. Georgina Basin sediments preserved from erosion extends northwards as a broad belt around the fault zone. Numerous faults that parallel to sub parallel the Emu Fault Zone traverse the central and eastern portions of the EL. These faults define the margins of the horst block along the northeast margin of the EL.

The NW-SE trending Calvert Fault, which intersects the Emu Fault Zone proximal to the Merlin kimberlite field, passes just to the north of the EL 10189. A number of major and minor faults paralleling to the Calvert Fault pass through EL. One can be interpreted to extend out towards the Abner Range kimberlitic sandstone breccia pipes.

Some of the major rivers in the region have strong NE-SW trending linear course suggestive of an underlying structural control. A set of regional gravity lineaments in the region also trend NE-SW.

At the regional scale, the geology of EL 10189 is essentially the same as the area to the north that hosts the Merlin kimberlite field. Structures that traverse the Merlin kimberlite field traverse the EL. Within EL 10189, there is excellent potential for repetitions of the regional and local structural configurations that control the location of the Merlin kimberlites.

Regional gravity data shows that the Merlin kimberlite field and the Abner Range kimberlitic breccia pipes are located along either margin (gradient) of a regional north-south trending gravity ridge. The Merlin field is also located over a major NE-SW trending gravity lineament (gradient) that intersects the north-south trending gravity ridge. The regional gravity patterns associated with the Merlin kimberlite field are applicable to EL 10189 as well given the scale of the data. The gravity data is mainly mapping deep-seated Proterozoic basement domains and structure, however, the geological processes that influenced the gravity patterns also influenced the surface geology and geomorphology. It is noticeable that prominent NW-SE trending gravity lineaments broadly parallel the major fault-controlled drainage patterns in the region.

Regional magnetics data shows the Merlin kimberlite field to be located along the eastern

margin of the vast deep-seated magnetic high. The eastern margin of the magnetic high is terminated along the NNW-SSE trending Emu Fault Zone. A magnetic lineament associated with the Calvert Fault that intersects the Emu Fault Zone near the Merlin kimberlite field is also evident in the regional data. Traversing EL 10189 are a number of NNW-SSE trending magnetic lineaments that parallel the Emu Fault Zone. The patterns suggest potential for repetitions of the regional structural configuration evident for the Merlin kimberlite field.

Kimberlitic intrusions and diatremes in the McArthur Basin region are commonly located proximal to major geophysical domain contacts probably mapping major, deep-seated structures. EL 10189 contains much the same regional gravity and magnetic patterns and lineament trends that potentially represent favourable tectono-structural settings that control the locations of kimberlitic intrusions and diatreme breccia pipes in the McArthur Basin.

## **5.0 PREVIOUS EXPLORATION**

### **5.1 Pre 2002**

- In 2000, Ashton Mining collected a 50 ton bulk gravel sample that recovered 75 macrodiamonds and 142 chromites.
- In 2000, Ashton Mining completed an airborne magnetic/radiometric survey at 100m line spacing.
- In December 2000, Rio Tinto take-over of Ashton Mining.
- In 2001, RTE collected six 500kg gravel samples to follow up the 75 macrodiamond sample. No diamonds were recovered. 20 chromites at 75 macrodiamond sample and low numbers recovered elsewhere.
- RTE completed a Hummingbird electromagnetic survey, totaling 6,200 line kilometres at 100m line spacing and also reviewed year 2000 Ashton airborne magnetic data. Numerous anomalies including high priority target HUM07 were identified and followed up with loam and soil geochemical samples, and ground geophysics.

**5.2 Year One – 2002 to 2003**

- Licence granted to Ashton Mining on 23<sup>rd</sup> July 2002.
- Rio Tinto decide to close Merlin Diamond Mine and commencement negotiations to divest surrounding exploration licences.
- No field work completed by RTE due to divestment of licence.

**5.3 Year Two – 2003 to 2004**

- Signing of ‘Letter of Intent’ with Rio Tinto Limited subsidiary Ashton Mining.
- Licence transferred to North Australian Diamonds Limited subsidiary Bulgurri Diamonds.
- Heritage clearance undertaken and Mine Management Plan approved.

**5.4 Year Three – 2004 to 2005**

- Four RC drill holes (TND-001 to TND-004) and two diamond drill holes (TND-005 and TND-006) were completed for a total of 628 metres to test geophysical anomaly HUM07. No kimberlite was intersected and the anomaly was interpreted to be a sinkhole infilled with Cretaceous sediments.
- Seven drill spoil samples (04-038-001 to 04-038-007) were collected for mineralogical analysis and seven samples (04-038-008 to 04-038-014) were collected for geochemical analysis.
- A morphological assessment of the alluvial diamonds recovered by Ashton Mining in 2000 was undertaken to determine whether the diamonds may be shedding from a primary or secondary source. The report concluded that 62% of the alluvial diamonds are considered to be from a primary source of which 43% have not undergone significant travel.
- Nineteen samples were collected that returned 4 chromites (05-018-002), 4 microdiamonds (05-018-016), 1 microdiamond (05-018-020), and 1 microdiamond (05-018-024).

- The four microdiamond sample (05-018-016) was collected over an airborne magnetic anomaly MAG03T (also referred to as GTINHEM06) that RTE had previously recovered 1 chromite in a loam sample.
- Eighty-four soil geochemical samples were collected and analysed that returned no high priority anomalies.

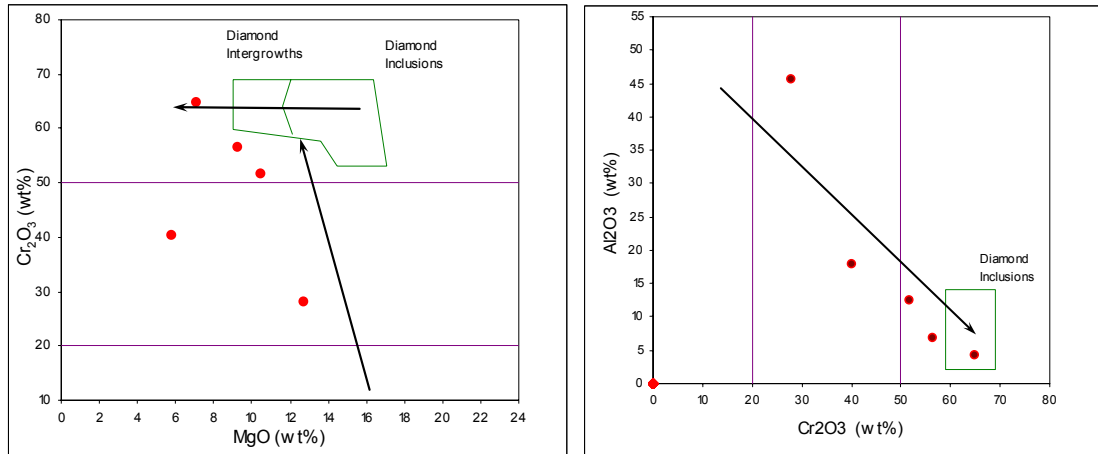
## **5.5 Year Four – 2005 to 2006**

- Four sampling programs were undertaken.
- Four stream samples (05-040-001 to 05-040-004) collected that returned one chromite (05-040-003) and a nb-rutile (05-040-001).
- Three additional stream samples (05-050-001 to 05-050-003) collected that returned a total of five chromites.
- Seven loam samples (05-051-001 to 05-051-007) that returned three microdiamonds (05-051-001) from a check sample at historic sample 05-018-016 that returned four microdiamonds.
- Fifteen stream gravel samples (06-002-001 to 096-002 -015) were collected in tributaries draining a plateau that recovered one chromite (06-002-008) and one microdiamond (06-002-014).

## **5.6 Year Five – 2006 to 2007**

- Mineral chemistry was obtained from recovered chromites that drain the plateau that is host to MAG03T. The figure below shows the mineral chemistry of one chromite collected in the Rio Tinto loam sample (6160780) over airborne magnetic anomaly MAG03T and of four chromites recovered in adjacent drainage samples (05050-002 and 05050-003). Two loam samples collected over this anomaly have also recovered a total of seven microdiamonds. The plot shows a mantle trend that could be indicative of a primary kimberlite source.





## 6.0 EXPLORATION COMPLETED DURING REPORTING PERIOD

### 6.1 Year Six – 2007 to 2008

- Soil geochemical traverse comprising eleven samples (07-005-001 to 07-005-011) and one fracture sample (07-005-012) was completed over anomaly MAG03T that identified anomalous geochemical response. Soil geochemical data and interpretation are included in Appendix 1.
- Ground magnetic survey completed over MAG03T that identified magnetic anomaly. Raw data and a survey image are included in Appendix 2.
- Ground electro-magnetic (EM34) survey completed over MAG03T that identified a small conductive anomaly associated with surficial sand cover. Raw data and a survey image are included in Appendix 3.
- Three loam samples (07-009-001 to 07-009-003) collected at MAG03T. Samples were processed and did not recover chromites or diamonds. Sample details are included in Appendix 4.
- Potential for uranium mineralization was assessed by internal staff and external consultants.
- On 18<sup>th</sup> September 2007 NADL granted Top End Uranium Limited (TEUL) the right of access to the land covered by the licence for the purpose of exploring for,

mining and processing minerals other than diamonds.

- Desktop study completed by Jigsaw Geoscience in April 2008 identified four priority targets for potential uranium mineralization. These targets occur within outcropping McArthur Basin sediments and are suitable for initial surface exploration methods. Target summary and location plan are included in Appendix 5.
- The four targets identified by Jigsaw Geoscience as prospective for potential uranium mineralisation were field inspected by TEUL consulting geologist. The field activities were helicopter supported from Merlin Diamond Mine. A report from the consulting geologist on the findings of the investigation has not yet been received.
- An Application for Exploration Licence Renewal was submitted to DPIFM on 30<sup>th</sup> April 2008. The licence renewal for a two year period was subsequently granted to Merlin Diamonds Pty Ltd on 31<sup>st</sup> July 2008.

## **7.0 EXPENDITURE STATEMENT**

The exploration expenditure attributed to EL10189 during the current reporting period is summarised below and included in attached expenditure statement.

A total of \$128,020 was expended against a covenant of \$160,000.

**A total cost of \$201,965** was attributed to the licence that includes \$73,945 rent.

## **8.0 PROPOSED WORK PROGRAM**

The proposed work program for the next reporting period is outlined below. Proposed exploration will focus on diamonds and uranium.

Activities for diamond exploration include drilling of geophysical anomaly MAG03T, bulk sampling of major drainages to narrow the source area for the diamonds recovered in previous bulk samples, and loam and stream sampling to define target areas for subsequent drill testing in Year 2.

Activities for uranium exploration may include additional field geological mapping, rock

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chip sampling and spectrometer surveying along traverse lines over target areas identified by Jigsaw Geoscience and the TEUL consulting geologist. Drilling of any identified uranium anomalies would occur in Year 2 in conjunction with drilling of any identified diamond anomalies.

Rehabilitation of drill sites would occur in Year 2 prior to expiration of licence.

#### Proposed Budget

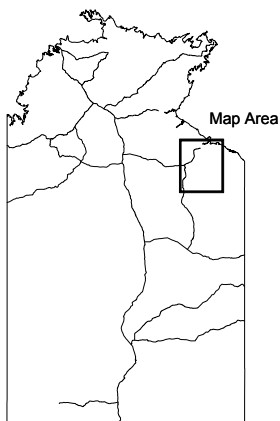
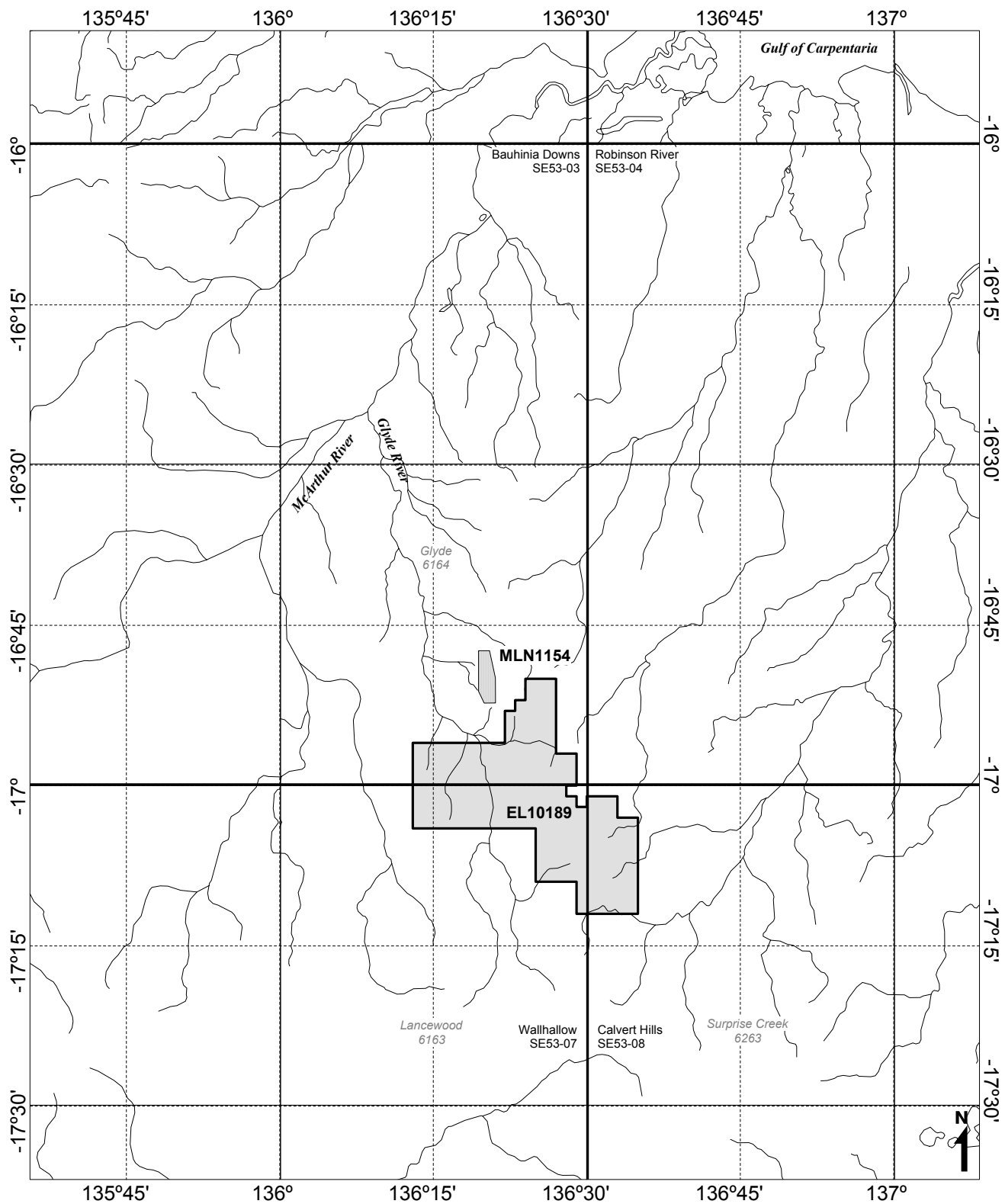
|   |           |
|---|-----------|
| Access track construction   | \$20,000  |
| Bulk sample collection and processing                                   | \$100,000 |
| Drilling  | \$30,000  |
| Loam and stream sampling  | \$50,000  |
| Field geological mapping, rock chip<br>sampling, spectrometer surveying | \$20,000  |
| Total   | \$220,000 |

## **9.0 REFERENCES**

Jigsaw Geoscience (2008). Targeting Review. McArthur South project, Northern Territory. Prepared by John Beeson. NADL Report Number 08-021.

Kammermann M.S. (2008). Application for Exploration Licence Renewal. Exploration Licence 10189. NADL Report Number 08-017. April 2008.

Kammermann M.S. (2007). Annual Report – Year 5. Exploration Licence 10189. 23<sup>rd</sup> July 2006 to 22<sup>nd</sup> July 2007. NADL Report Number 07-037. August 2007.



#### Legend

- Merlin Ming Lease - MLN1154
- 100k MapSheet
- 250k Mapsheet
- EL10189

| North Australian Diamonds                         |  |
|---|--|
| Date: 22/8/2006<br>Author:<br>Office:<br>Drawing: | <b>EL10189</b>   |
|   | <b>Figure One</b>  |
|   |  |
|   | Scale: 1:1000000      Projection: Longitude / Latitude (Australia GDA94) |
| <div style="text-align: center;"> </div>          |  |

## **APPENDIX 1**

### **Soil Geochemical Results**

""Enzyme Leach Job #: Thursday

Customer:

Geologist:

Customer's Job #:

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.

Values = 999999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY.

**Enhanced Package:**

**Oxidation Suite:**

| Sample ID:        | Coord. 1 | Coord. 2      | S.Q. Cl | Br  | I  | V    | As   | Se | Mo   | Sb    | Te   | W    | Re     |
|-------------------|----------|---------------|---------|-----|----|------|------|----|------|-------|------|------|--------|
| 07-005-01         | 638790   | 8120560       | -1000   | 18  | 3  | 6.9  | 0.5  | 3  | 0.1  | -0.01 | 0.5  | -0.1 | -0.005 |
| 07-005-02         | 638790   | 8120550       | -1000   | 24  | 3  | 8.6  | 0.9  | 2  | 0.2  | -0.01 | 2.4  | -0.1 | -0.005 |
| 07-005-03         | 638790   | 8120540       | -1000   | 36  | 3  | 8.5  | 0.4  | 1  | 0.3  | -0.01 | 1.7  | -0.1 | -0.005 |
| 07-005-04         | 638790   | 8120530       | -1000   | 28  | 1  | 6.2  | 0.6  | 3  | 0.2  | -0.01 | 1.5  | -0.1 | -0.005 |
| 07-005-05         | 638790   | 8120520       | -1000   | 27  | 1  | 7    | 0.6  | 3  | 0.1  | -0.01 | 1.6  | -0.1 | -0.005 |
| 07-005-06         | 638790   | 8120510       | -1000   | 24  | 1  | 8.3  | 0.5  | 2  | 0.2  | -0.01 | 0.6  | -0.1 | 0.008  |
| 07-005-07         | 638790   | 8120500       | -1000   | 24  | 7  | 8.1  | 0.6  | 2  | 0.1  | -0.01 | 0.8  | -0.1 | -0.005 |
| 07-005-08         | 638790   | 8120490       | -1000   | 68  | 2  | 40.1 | 0.9  | 2  | 11.2 | -0.01 | 0.5  | -0.1 | -0.005 |
| 07-005-09         | 638790   | 8120480       | -1000   | 37  | 3  | 41.6 | 0.8  | 2  | 7.5  | -0.01 | 0.7  | -0.1 | 0.007  |
| 07-005-10         | 638790   | 8120470       | -1000   | 32  | 3  | 9.9  | 0.8  | 2  | 0.3  | -0.01 | 1.2  | -0.1 | -0.005 |
| 07-005-11         | 638790   | 8120460       | -1000   | 55  | 4  | 10   | 1    | 2  | 0.2  | -0.01 | 0.5  | -0.1 | -0.005 |
| 07-005-012        |          | soil traverse | -1000   | 21  | 1  | 16   | 0.7  | 2  | 0.2  | 0.16  | -0.5 | -0.1 | -0.005 |
| Blank             |          |               | -1000   | -1  | -1 | -0.1 | -0.1 | -1 | -0.1 | -0.01 | -0.5 | -0.1 | -0.005 |
| *Rep 07-0005-0001 |          |               | -1000   | 20  | 3  | 7.4  | 0.2  | 3  | -0.1 | -0.01 | -0.5 | -0.1 | 0.005  |
| *Std ELS1         |          |               | 14500   | 207 | 7  | 77.8 | 5.4  | 7  | 5.6  | 0.04  | 1.1  | -0.1 | 0.011  |
| *Std ENZSTD       |          |               | 73900   | 178 | 12 | 76.1 | 9.8  | 4  | 5.4  | 0.17  | 2.5  | -0.1 | 0.009  |

""Enzyme Le

Trace element

Values = 9999

Enhanced Pa

| Sample ID:    | Base Metals: |         |       |       |      |       |      |      |      |      |      |       | Base Metal - Chalcophile Association Ind |  |  |  |
|---------------|--------------|---------|-------|-------|------|-------|------|------|------|------|------|-------|--|--|--|--|
|               | Au           | S.Q. Hg | Th    | U     | Co   | Co*10 | Ni   | Cu   | Zn   | Pb   | Ga   | Ge    | Ag                                       |  |  |  |
| 07-005-01     | -0.005       | -0.1    | 0.48  | 0.78  | 1    | 10    | 0.8  | 0.8  | -5   | 0.9  | -0.3 | -0.05 | -0.1                                     |  |  |  |
| 07-005-02     | -0.005       | -0.1    | 0.46  | 0.76  | 1.7  | 17    | 0.8  | 0.8  | 288  | 0.6  | -0.3 | -0.05 | -0.1                                     |  |  |  |
| 07-005-03     | -0.005       | -0.1    | 0.62  | 0.86  | 1.3  | 13    | 24.2 | 19   | -5   | 0.8  | 0.4  | -0.05 | -0.1                                     |  |  |  |
| 07-005-04     | -0.005       | -0.1    | 0.44  | 0.76  | 2.6  | 26    | 22.1 | 2.9  | -5   | 0.8  | 2.1  | 0.07  | -0.1                                     |  |  |  |
| 07-005-05     | -0.005       | -0.1    | 0.76  | 0.82  | 2    | 20    | 0.8  | 0.8  | -5   | 0.5  | -0.3 | -0.05 | -0.1                                     |  |  |  |
| 07-005-06     | -0.005       | -0.1    | 0.59  | 0.95  | 2    | 20    | 0.8  | 0.8  | -5   | 0.8  | 0.8  | 0.13  | -0.1                                     |  |  |  |
| 07-005-07     | -0.005       | -0.1    | 0.5   | 1.39  | 1.8  | 18    | 0.8  | 0.8  | 10   | 1    | -0.3 | 0.16  | -0.1                                     |  |  |  |
| 07-005-08     | -0.005       | -0.1    | 0.89  | 1.29  | 2.3  | 23    | 311  | 0.8  | -5   | 0.9  | 1.1  | 0.15  | -0.1                                     |  |  |  |
| 07-005-09     | -0.005       | -0.1    | 1.19  | 1.33  | 4.5  | 45    | 0.8  | 18.4 | -5   | 1.2  | -0.3 | 0.15  | -0.1                                     |  |  |  |
| 07-005-10     | -0.005       | -0.1    | 0.47  | 1.59  | 1.7  | 17    | 8.6  | 0.8  | -5   | 1.1  | -0.3 | 0.06  | -0.1                                     |  |  |  |
| 07-005-11     | -0.005       | -0.1    | 1.11  | 3.14  | 2.4  | 24    | 0.8  | 0.8  | -5   | 1.7  | -0.3 | 0.15  | -0.1                                     |  |  |  |
| 07-005-012    | -0.005       | -0.1    | 0.31  | 0.71  | 1.7  |       | 33.7 | -0.8 | 414  | 1.4  | -0.3 | 0.05  | -0.1                                     |  |  |  |
| Blank         | -0.005       | -0.1    | -0.01 | -0.01 | -0.2 |       | -0.8 | -0.8 | -5   | -0.1 | -0.3 | -0.05 | -0.1                                     |  |  |  |
| *Rep 07-0005- | -0.005       | -0.1    | 0.5   | 0.77  | 1.3  |       | -0.8 | -0.8 | -5   | 0.9  | -0.3 | -0.05 | -0.1                                     |  |  |  |
| *Std ELS1     | 0.021        | -0.1    | 1.23  | 1.18  | 36.2 |       | 6.5  | 14.4 | -5   | 3.8  | 0.8  | 0.06  | -0.1                                     |  |  |  |
| *Std ENZSTD   | -0.005       | 0.3     | 1.32  | 0.44  | 72   |       | 40.9 | 14.3 | 1080 | 3.9  | 2.1  | 0.3   | -0.1                                     |  |  |  |

""Enzyme Le

Trace element

Values = 9999

Enhanced Pacators:

High-Field Strength Elements:

| Sample ID:    | Cd   | In    | Sn   | Tl     | Bi   | S.Q. Ti | S.Q. Cr | Y     | Zr   | Zr*10 | Nb   | Hf    | Hf*100 |
|---------------|------|-------|------|--------|------|---------|---------|-------|------|-------|------|-------|--------|
| 07-005-01     | -0.1 | -0.01 | -0.2 | 0.039  | 1.3  | -10     | -3      | 10.4  | 5.4  | 54    | -0.1 | 0.15  | 15     |
| 07-005-02     | -0.1 | 0.01  | -0.2 | 0.135  | 2.5  | 18      | 21      | 11.1  | 4.9  | 49    | -0.1 | 0.14  | 14     |
| 07-005-03     | -0.1 | 0.02  | -0.2 | 0.074  | 2.5  | -10     | -3      | 13.2  | 7.6  | 76    | -0.1 | 0.2   | 20     |
| 07-005-04     | -0.1 | -0.01 | -0.2 | 0.124  | 2.7  | 29      | -3      | 11.9  | 5.9  | 59    | -0.1 | 0.17  | 17     |
| 07-005-05     | -0.1 | -0.01 | -0.2 | 0.271  | 2.6  | 18      | -3      | 18.4  | 6.9  | 69    | -0.1 | 0.2   | 20     |
| 07-005-06     | -0.1 | 0.01  | -0.2 | 0.134  | 1.8  | 10      | -3      | 28.1  | 4.2  | 42    | -0.1 | 0.13  | 13     |
| 07-005-07     | -0.1 | 0.02  | -0.2 | 0.317  | 1.9  | 18      | 13      | 24.9  | 5.9  | 59    | -0.1 | 0.68  | 68     |
| 07-005-08     | -0.1 | 0.03  | -0.2 | 0.084  | 2    | 36      | -3      | 11.7  | 14.7 | 147   | -0.1 | 0.36  | 36     |
| 07-005-09     | -0.1 | 0.02  | -0.2 | 0.135  | 1.8  | 70      | -3      | 11.5  | 12.2 | 122   | -0.1 | 0.32  | 32     |
| 07-005-10     | -0.1 | -0.01 | -0.2 | 0.068  | 1.5  | -10     | 4       | 31.7  | 9.4  | 94    | -0.1 | 0.16  | 16     |
| 07-005-11     | -0.1 | 0.03  | -0.2 | 0.203  | 2.5  | 65      | 12      | 22.3  | 13.4 | 134   | -0.1 | 0.31  | 31     |
| 07-005-012    | 3.4  | -0.01 | -0.2 | 0.14   | 1    | 60      | 56      | 6.48  | 2.4  |       | -0.1 | 0.05  |        |
| Blank         | -0.1 | -0.01 | -0.2 | -0.005 | -0.5 | -10     | -3      | -0.05 | -0.1 |       | -0.1 | -0.01 |        |
| *Rep 07-0005- | -0.1 | -0.01 | -0.2 | 0.037  | 1.2  | -10     | -3      | 10.3  | 5.4  |       | -0.1 | 0.18  |        |
| *Std ELS1     | -0.1 | 0.05  | 0.2  | 0.438  | 15.3 | 86      | 6       | 8.73  | 6.2  |       | -0.1 | 0.15  |        |
| *Std ENZSTD   | 0.7  | 0.01  | -0.2 | 0.594  | 4.7  | 115     | 193     | 0.96  | 1.2  |       | -0.1 | 0.1   |        |



""Enzyme Le

Trace element

Values = 9999

Enhanced Pa

Rare Earth Elements:

| Sample ID:    | Ta    | La    | Ce    | Pr    | Nd    | Sm    | Eu    | Gd    | Tb    | Dy    | Ho    | Er    | Tm    |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 07-005-01     | -0.02 | 4.43  | 11.7  | 1.43  | 6.11  | 1.46  | 0.34  | 1.81  | 0.27  | 1.45  | 0.34  | 1.17  | 0.13  |
| 07-005-02     | 0.11  | 3.9   | 11.9  | 1.52  | 7.45  | 1.69  | 0.42  | 1.87  | 0.33  | 1.95  | 0.41  | 1.24  | 0.18  |
| 07-005-03     | -0.02 | 3.88  | 11.5  | 1.58  | 7.89  | 1.89  | 0.47  | 2.03  | 0.31  | 2.06  | 0.45  | 1.4   | 0.19  |
| 07-005-04     | 0.02  | 3.34  | 9.88  | 1.29  | 6.13  | 1.31  | 0.34  | 1.84  | 0.3   | 1.86  | 0.4   | 1.3   | 0.17  |
| 07-005-05     | -0.02 | 3.72  | 11.7  | 2.45  | 7.53  | 1.6   | 0.46  | 2.33  | 0.43  | 2.61  | 0.57  | 1.88  | 0.3   |
| 07-005-06     | -0.02 | 6.09  | 16.4  | 2.03  | 9.09  | 2.23  | 0.61  | 3.2   | 0.54  | 3.45  | 0.85  | 2.74  | 0.38  |
| 07-005-07     | -0.02 | 6.27  | 20.4  | 2.47  | 10    | 2.66  | 0.69  | 3.29  | 0.56  | 3.29  | 0.83  | 2.54  | 0.33  |
| 07-005-08     | -0.02 | 2.46  | 7.16  | 0.97  | 4.26  | 1.27  | 0.33  | 1.47  | 0.25  | 1.57  | 0.39  | 1.14  | 0.13  |
| 07-005-09     | -0.02 | 1.97  | 5.84  | 0.72  | 3.17  | 0.86  | 0.28  | 1.16  | 0.24  | 1.44  | 0.31  | 1.05  | 0.1   |
| 07-005-10     | -0.02 | 6.2   | 18.2  | 2.32  | 10.4  | 2.57  | 0.69  | 3.47  | 0.65  | 3.96  | 0.95  | 2.82  | 0.33  |
| 07-005-11     | -0.02 | 3.76  | 11.5  | 1.61  | 6.85  | 1.72  | 0.5   | 2.7   | 0.45  | 3.18  | 0.75  | 2.31  | 0.26  |
| 07-005-012    | -0.02 | 1.79  | 4.97  | 0.72  | 3.92  | 0.77  | 0.23  | 0.88  | 0.13  | 0.86  | 0.22  | 0.61  | 0.08  |
| Blank         | -0.02 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| *Rep 07-0005- | -0.02 | 4.23  | 11.9  | 1.37  | 5.96  | 1.34  | 0.36  | 1.73  | 0.24  | 1.39  | 0.31  | 1.07  | 0.14  |
| *Std ELS1     | 0.07  | 9.86  | 14.9  | 3.04  | 13.8  | 2.63  | 0.63  | 2.32  | 0.31  | 1.77  | 0.33  | 0.9   | 0.11  |
| *Std ENZSTD   | 0.06  | 0.77  | 1.7   | 0.21  | 0.91  | 0.15  | 0.05  | 0.1   | 0.02  | 0.11  | 0.01  | 0.11  | -0.01 |

""Enzyme Le

Trace element

Values = 99999

Enhanced Pa

Lithophile Elements:

| Sample ID:     | Yb    | Lu    | Sum RE | S.Q. Li | Be   | S.Q. Sc | Mn   | Rb   | Sr   | Cs    | Cs*100 | Ba   | Ba/Eu       |
|----------------|-------|-------|--------|---------|------|---------|------|------|------|-------|--------|------|-------------|
| 07-005-01      | 1.07  | 0.16  | 31.87  | 39.5    | 0.4  | -10     | 59.7 | 58   | 51.5 | 0.29  | 29     | 111  | 326.4705882 |
| 07-005-02      | 1.18  | 0.16  | 34.2   | 53.9    | 0.4  | -10     | 62.7 | 63.5 | 64.5 | 0.35  | 35     | 115  | 273.8095238 |
| 07-005-03      | 1.54  | 0.24  | 35.43  | 40      | 1    | -10     | 177  | 69.1 | 89.4 | 0.33  | 33     | 152  | 323.4042553 |
| 07-005-04      | 1.14  | 0.12  | 29.42  | 118     | 0.4  | -10     | 98.4 | 73   | 69.7 | 0.29  | 29     | 159  | 467.6470588 |
| 07-005-05      | 1.82  | 0.25  | 37.65  | 72.1    | 1.1  | -10     | 55.8 | 82.2 | 61.4 | 0.49  | 49     | 238  | 517.3913043 |
| 07-005-06      | 2.34  | 0.43  | 50.38  | 128     | 1.3  | 10      | 69.6 | 73.7 | 23   | 0.44  | 44     | 135  | 221.3114754 |
| 07-005-07      | 2.16  | 0.37  | 55.86  | 47.1    | 1.2  | -10     | 31.7 | 89.4 | 22.1 | 0.61  | 61     | 255  | 369.5652174 |
| 07-005-08      | 0.95  | 0.1   | 22.45  | 11.7    | 0.4  | -10     | 118  | 43.8 | 29.7 | 0.5   | 50     | 91.5 | 277.2727273 |
| 07-005-09      | 0.88  | 0.04  | 18.06  | 4.8     | 0.9  | -10     | 131  | 52.6 | 39.9 | 0.46  | 46     | 279  | 996.4285714 |
| 07-005-10      | 2.31  | 0.34  | 55.21  | 59.8    | 2    | -10     | 51   | 66   | 92.2 | 0.29  | 29     | 303  | 439.1304348 |
| 07-005-11      | 1.87  | 0.26  | 37.72  | 17.4    | 1.8  | -10     | 201  | 56.9 | 111  | 0.46  | 46     | 414  | 828         |
| 07-005-012     | 0.84  | 0.05  | 16.07  | 21.2    | 1.1  | -10     | 39.5 | 84.5 | 16.1 | 0.37  | 37     | 335  |             |
| Blank          | -0.01 | -0.01 |        | -0.5    | -0.1 | -10     | -0.4 | -0.1 | -0.1 | -0.01 |        | -0.5 |             |
| *Rep 07-0005-1 | 0.95  | 0.16  |        | 42.7    | 0.5  | -10     | 64.6 | 60.3 | 53   | 0.29  |        | 111  |             |
| *Std ELS1      | 0.73  | 0.1   |        | 18      | 0.9  | -10     | 4250 | 78.1 | 163  | 0.38  |        | 516  |             |
| *Std ENZSTD    | 0.11  | -0.01 |        | 13.3    | 0.9  | -10     | 3800 | 43.1 | 178  | 0.21  |        | 106  |             |

""Enzyme Le

Trace element

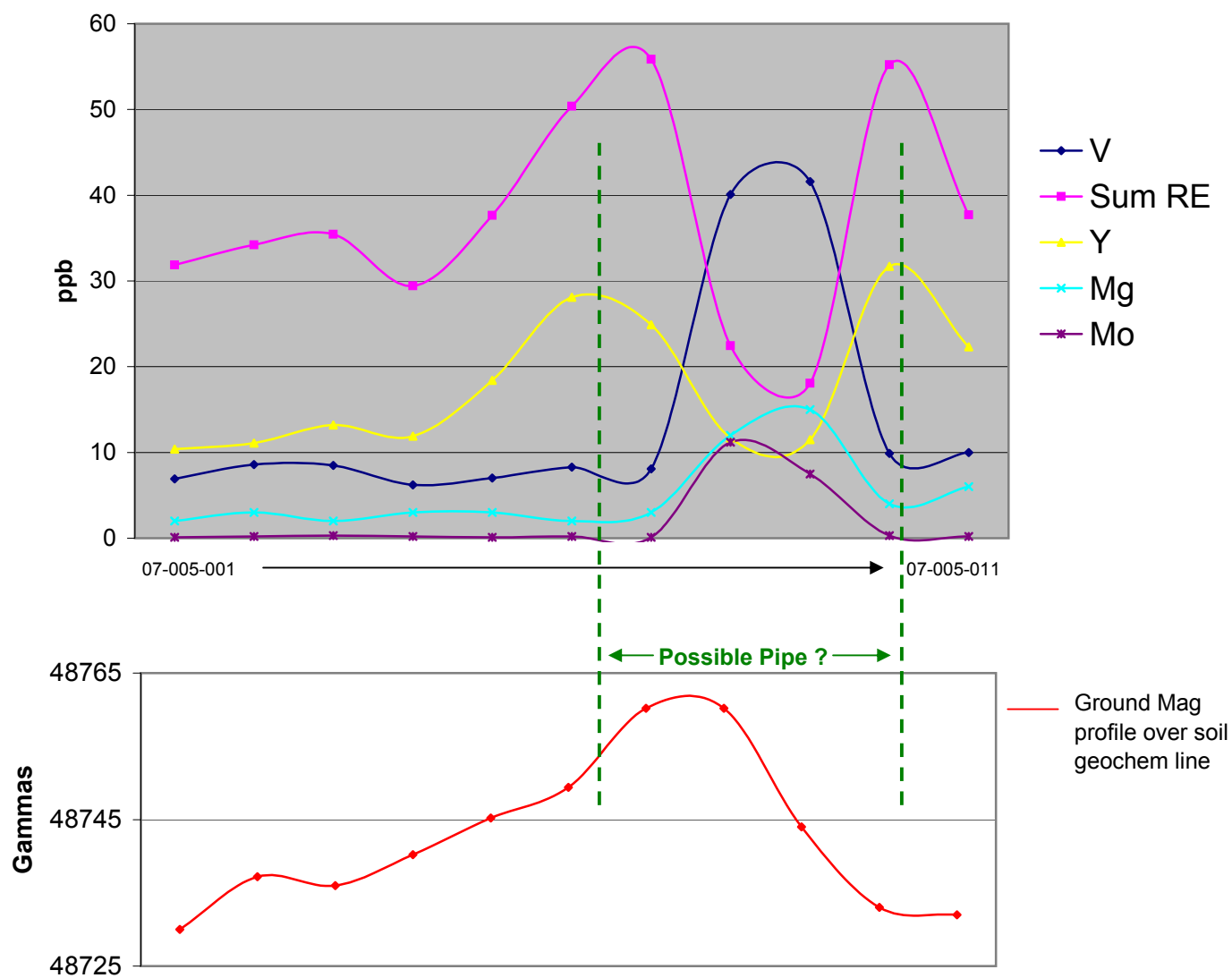
Values = 9999

Enhanced Pa [P.G.E.s:](#)

Majors and Sulfur (ppm):

| Sample ID:    | Ru   | Pd   | Os   | Pt   | Na | Mg | Al   | Al*4 | K  | Ca   | Fe | S   |
|---------------|------|------|------|------|----|----|------|------|----|------|----|-----|
| 07-005-01     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 2  | 5    | 20   | -5 | 10.6 | -1 | -10 |
| 07-005-02     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 3  | 4.2  | 16.8 | 7  | 20.5 | -1 | -10 |
| 07-005-03     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 2  | 3.5  | 14   | -5 | 83.7 | -1 | -10 |
| 07-005-04     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 3  | 3.4  | 13.6 | -5 | 46.6 | -1 | -10 |
| 07-005-05     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 3  | 3.5  | 14   | -5 | 43.5 | -1 | -10 |
| 07-005-06     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 2  | 3.6  | 14.4 | -5 | 62   | -1 | -10 |
| 07-005-07     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 3  | 3.4  | 13.6 | 8  | 12.6 | -1 | -10 |
| 07-005-08     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 12 | 5.2  | 20.8 | -5 | -0.5 | -1 | -10 |
| 07-005-09     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 15 | 4.7  | 18.8 | -5 | 21.1 | -1 | -10 |
| 07-005-10     | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 4  | 3.4  | 13.6 | -5 | 38   | -1 | -10 |
| 07-005-11     | -0.5 | -0.5 | -0.5 | -0.5 | 8  | 6  | 3.3  | 13.2 | -5 | 152  | 1  | -10 |
| 07-005-012    | -0.5 | -0.5 | -0.5 | -0.5 | -5 | 4  | 1.7  | 6.8  | -5 | 107  | -1 | -10 |
| Blank         | -0.5 | -0.5 | -0.5 | -0.5 | -5 | -2 | -0.5 |      | -5 | -0.5 | -1 | -10 |
| *Rep 07-0005- | -0.5 | -0.5 | -0.5 | -0.5 | -5 | -2 | 5.5  |      | -5 | 10.9 | -1 | -10 |
| *Std ELS1     | -0.5 | -0.5 | -0.5 | -0.5 | 10 | 30 | 2.9  |      | -5 | 322  | 2  | 22  |
| *Std ENZSTD   | -0.5 | -0.5 | -0.5 | -0.5 | 97 | 17 | 1.6  |      | 92 | 505  | -1 | 27  |

## Year Six soil geochemical traverse over anomaly MAG03T



## **APPENDIX 2**

### **Ground Magnetic Survey Results**

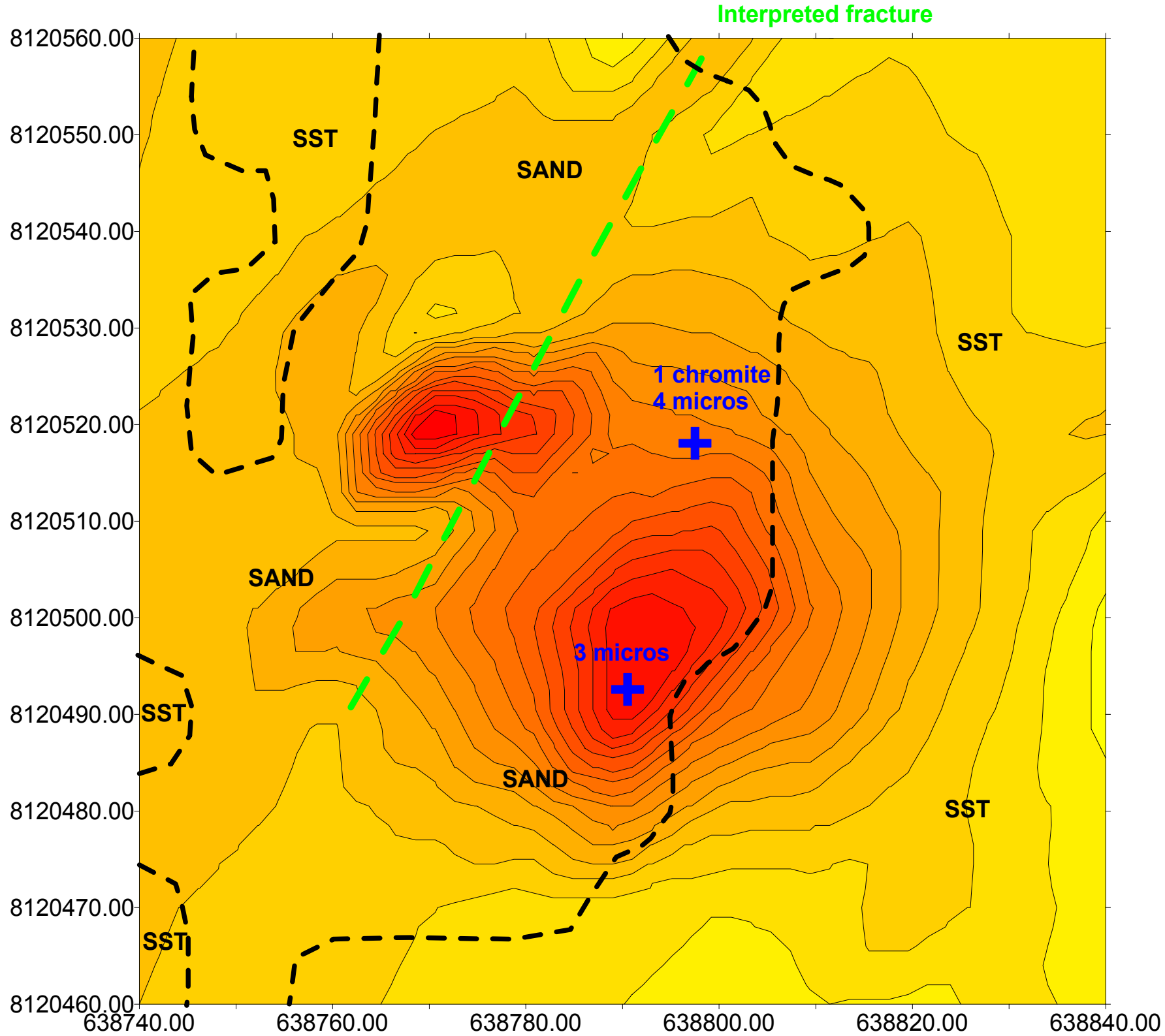
## Mag03T/Tin06 Ground Magnetic Survey 10m Grid

| Location | Easting | Northing | Magnetic | Geology | Line |
|----------|---------|----------|----------|---------|------|
| 1        | 638740  | 8120560  | 48737    | Sand    | 1    |
| 2        | 638740  | 8120550  | 48736.2  | Sand    |      |
| 3        | 638740  | 8120540  | 48735.6  | Sand    |      |
| 4        | 638740  | 8120530  | 48734.8  | Sand    |      |
| 5        | 638740  | 8120520  | 48736.2  | Sand    |      |
| 6        | 638740  | 8120510  | 48737.2  | Sand    |      |
| 7        | 638740  | 8120500  | 48736.8  | Sand    |      |
| 8        | 638740  | 8120490  | 48737.8  | SST     |      |
| 9        | 638740  | 8120480  | 48736.2  | Sand    |      |
| 10       | 638740  | 8120470  | 48736.4  | SST     |      |
| 11       | 638740  | 8120460  | 48736    | SST     | 2    |
| 12       | 638750  | 8120460  | 48735.6  | Sand    |      |
| 13       | 638750  | 8120470  | 48735.4  | Sand    |      |
| 14       | 638750  | 8120480  | 48736.4  | Sand    |      |
| 15       | 638750  | 8120490  | 48737    | Sand    |      |
| 16       | 638750  | 8120500  | 48737.6  | Sand    |      |
| 17       | 638750  | 8120510  | 48736.8  | Sand    |      |
| 18       | 638750  | 8120520  | 48736.8  | SST     |      |
| 19       | 638750  | 8120530  | 48736    | SST     |      |
| 20       | 638750  | 8120540  | 48735.4  | Sand    |      |
| 21       | 638750  | 8120550  | 48734.4  | SST     | 3    |
| 22       | 638750  | 8120560  | 48734.4  | SST     |      |
| 23       | 638760  | 8120560  | 48734.6  | SST     |      |
| 24       | 638760  | 8120550  | 48734.2  | SST     |      |
| 25       | 638760  | 8120540  | 48736.2  | SST     |      |
| 26       | 638760  | 8120530  | 48740    | Sand    |      |
| 27       | 638760  | 8120520  | 48738.8  | Sand    |      |
| 28       | 638760  | 8120510  | 48737    | Sand    |      |
| 29       | 638760  | 8120500  | 48741.8  | Sand    |      |
| 30       | 638760  | 8120490  | 48735.8  | Sand    |      |
| 31       | 638760  | 8120480  | 48735.4  | Sand    | 4    |
| 32       | 638760  | 8120470  | 48734.8  | Sand    |      |
| 33       | 638760  | 8120460  | 48734.2  | SST     |      |
| 34       | 638770  | 8120460  | 48733.8  | SST     |      |
| 35       | 638770  | 8120470  | 48734    | Sand    |      |
| 36       | 638770  | 8120480  | 48736.6  | Sand    |      |
| 37       | 638770  | 8120490  | 48740.2  | Sand    |      |
| 38       | 638770  | 8120500  | 48744    | Sand    |      |
| 39       | 638770  | 8120510  | 48737    | Sand    |      |
| 40       | 638770  | 8120520  | 48764.8  | Sand    |      |
| 41       | 638770  | 8120530  | 48733    | Sand    | 5    |
| 42       | 638770  | 8120540  | 48737.2  | Sand    |      |
| 43       | 638770  | 8120550  | 48736    | Sand    |      |
| 44       | 638770  | 8120560  | 48735    | Sand    |      |
| 45       | 638780  | 8120560  | 48735.2  | Sand    |      |
| 46       | 638780  | 8120550  | 48737    | Sand    |      |
| 47       | 638780  | 8120540  | 48736.8  | Sand    |      |
| 48       | 638780  | 8120530  | 48736.2  | Sand    |      |
| 49       | 638780  | 8120520  | 48756    | Sand    |      |
| 50       | 638780  | 8120510  | 48746.2  | Sand    |      |
| 51       | 638780  | 8120500  | 48749.4  | Sand    |      |
| 52       | 638780  | 8120490  | 48746.6  | Sand    |      |
| 53       | 638780  | 8120480  | 48738.8  | Sand    |      |

|     |        |         |              |    |
|-----|--------|---------|--------------|----|
| 54  | 638780 | 8120470 | 48732.6 Sand |    |
| 55  | 638780 | 8120460 | 48733.2 SST  |    |
| 56  | 638790 | 8120460 | 48732 SST    | 6  |
| 57  | 638790 | 8120470 | 48733 SST    |    |
| 58  | 638790 | 8120480 | 48744 Sand   |    |
| 59  | 638790 | 8120490 | 48760.2 Sand |    |
| 60  | 638790 | 8120500 | 48760.2 Sand |    |
| 61  | 638790 | 8120510 | 48749.4 Sand |    |
| 62  | 638790 | 8120520 | 48745.2 Sand |    |
| 63  | 638790 | 8120530 | 48740.2 Sand |    |
| 64  | 638790 | 8120540 | 48736 Sand   |    |
| 65  | 638790 | 8120550 | 48737.2 Sand |    |
| 66  | 638790 | 8120560 | 48730 Sand   |    |
| 67  | 638800 | 8120560 | 48738.4 SST  | 7  |
| 68  | 638800 | 8120550 | 48733.4 Sand |    |
| 69  | 638800 | 8120540 | 48736.6 Sand |    |
| 70  | 638800 | 8120530 | 48739.6 Sand |    |
| 71  | 638800 | 8120520 | 48744 Sand   |    |
| 72  | 638800 | 8120510 | 48751.8 Sand |    |
| 73  | 638800 | 8120500 | 48757.4 Sand |    |
| 74  | 638800 | 8120490 | 48747.2 SST  |    |
| 75  | 638800 | 8120480 | 48737.4 SST  |    |
| 76  | 638800 | 8120470 | 48732 SST    |    |
| 77  | 638800 | 8120460 | 48731.2 SST  |    |
| 78  | 638810 | 8120460 | 48732 SST    | 8  |
| 79  | 638810 | 8120470 | 48732.4 SST  |    |
| 80  | 638810 | 8120480 | 48736.8 SST  |    |
| 81  | 638810 | 8120490 | 48743.2 SST  |    |
| 82  | 638810 | 8120500 | 48745.8 SST  |    |
| 83  | 638810 | 8120510 | 48742.8 SST  |    |
| 84  | 638810 | 8120520 | 48740.2 SST  |    |
| 85  | 638810 | 8120530 | 48737.6 SST  |    |
| 86  | 638810 | 8120540 | 48735.2 Sand |    |
| 87  | 638810 | 8120550 | 48735.2 SST  |    |
| 88  | 638810 | 8120560 | 48731.6 SST  |    |
| 89  | 638820 | 8120560 | 48733.8 SST  | 9  |
| 90  | 638820 | 8120550 | 48734.4 SST  |    |
| 91  | 638820 | 8120540 | 48736.2 SST  |    |
| 92  | 638820 | 8120530 | 48736.6 SST  |    |
| 93  | 638820 | 8120520 | 48737.4 SST  |    |
| 94  | 638820 | 8120510 | 48739.2 SST  |    |
| 95  | 638820 | 8120500 | 48739.2 SST  |    |
| 96  | 638820 | 8120490 | 48737 Sand   |    |
| 97  | 638820 | 8120480 | 48735.2 SST  |    |
| 98  | 638820 | 8120470 | 48735.8 SST  |    |
| 99  | 638820 | 8120460 | 48731.6 SST  |    |
| 100 | 638830 | 8120460 | 48732.4 SST  | 10 |
| 101 | 638830 | 8120470 | 48732.8 SST  |    |
| 102 | 638830 | 8120480 | 48733 SST    |    |
| 103 | 638830 | 8120490 | 48733.4 SST  |    |
| 104 | 638830 | 8120500 | 48734.6 SST  |    |
| 105 | 638830 | 8120510 | 48734.8 SST  |    |
| 106 | 638830 | 8120520 | 48735.5 SST  |    |
| 107 | 638830 | 8120530 | 48734 SST    |    |
| 108 | 638830 | 8120540 | 48734 SST    |    |

|     |        |         |             |
|-----|--------|---------|-------------|
| 109 | 638830 | 8120550 | 48733.2 SST |
| 110 | 638830 | 8120560 | 48732.8 SST |
| 111 | 638840 | 8120560 | 48733.8 SST |
| 112 | 638840 | 8120550 | 48732.6 SST |
| 113 | 638840 | 8120540 | 48733 SST   |
| 114 | 638840 | 8120530 | 48733.6 SST |
| 115 | 638840 | 8120520 | 48736.4 SST |
| 116 | 638840 | 8120510 | 48731.6 SST |
| 117 | 638840 | 8120500 | 48729.4 SST |
| 118 | 638840 | 8120490 | 48729.4 SST |
| 119 | 638840 | 8120480 | 48730.8 SST |
| 120 | 638840 | 8120470 | 48731.2 SST |
| 121 | 638840 | 8120460 | 48731.6 SST |

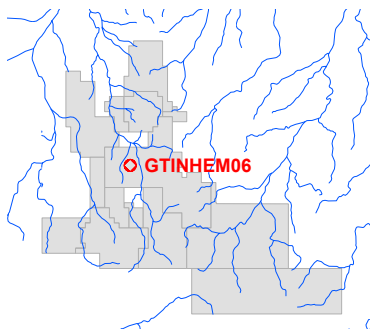
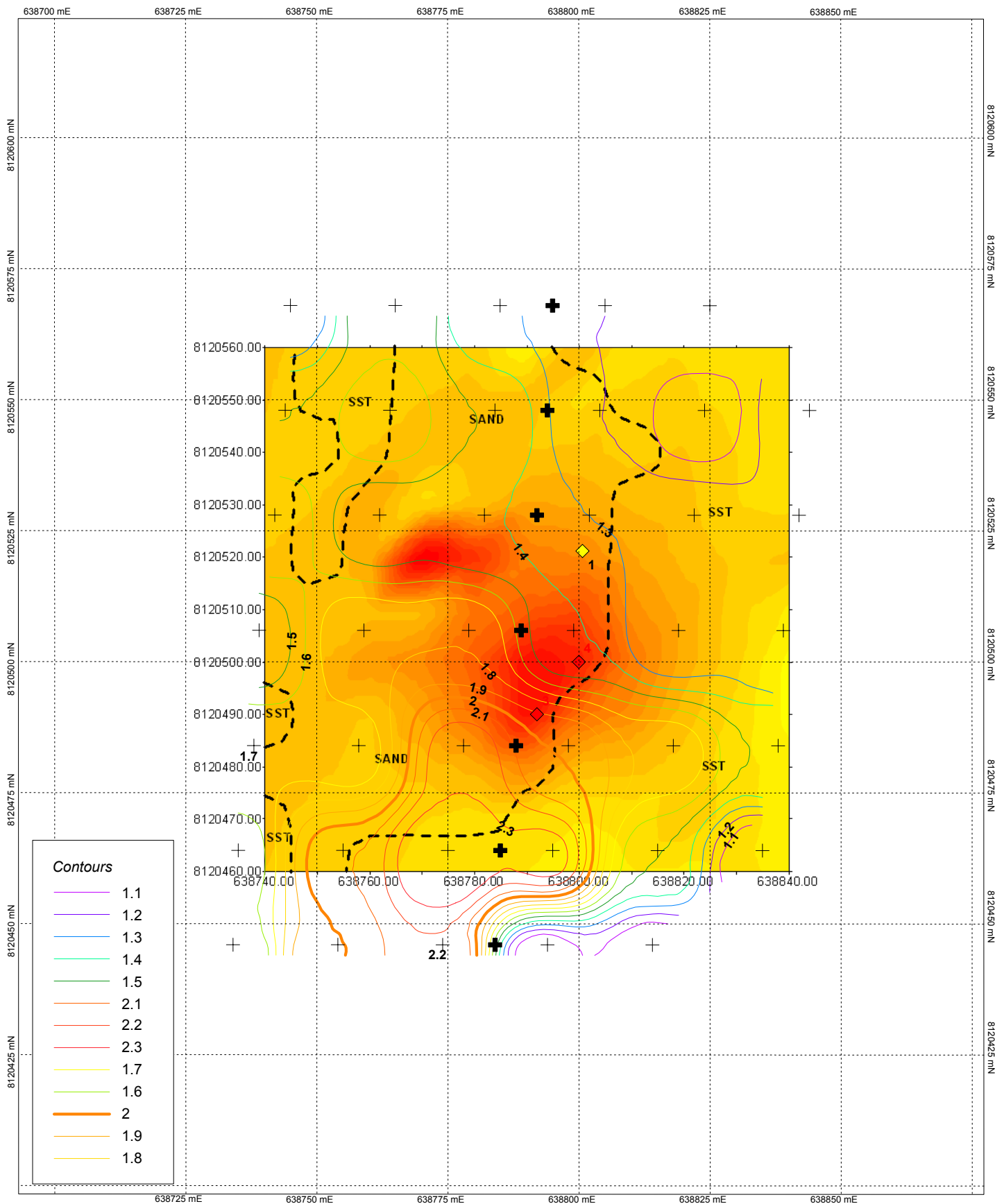




## **APPENDIX 3**

### **Ground Electromagnetic Survey Results**

| Line | Row | Easting | Northing | Reading |
|------|-----|---------|----------|---------|
| 1    | 1   | 638745  | 8120568  | 1.2     |
| 1    | 2   | 638765  | 8120568  | 1.6     |
| 1    | 3   | 638785  | 8120568  | 1.3     |
| 1    | 4   | 638805  | 8120568  | 1.2     |
| 1    | 5   | 638825  | 8120568  | 1.2     |
| 2    | 1   | 638744  | 8120548  | 1.5     |
| 2    | 2   | 638764  | 8120548  | 1.7     |
| 2    | 3   | 638784  | 8120548  | 1.5     |
| 2    | 4   | 638804  | 8120548  | 1.2     |
| 2    | 5   | 638824  | 8120548  | 1.0     |
| 2    | 6   | 638844  | 8120548  | 1.3     |
| 3    | 1   | 638742  | 8120528  | 1.7     |
| 3    | 2   | 638762  | 8120528  | 1.4     |
| 3    | 3   | 638782  | 8120528  | 1.4     |
| 3    | 4   | 638802  | 8120528  | 1.3     |
| 3    | 5   | 638822  | 8120528  | 1.3     |
| 3    | 6   | 638842  | 8120528  | 1.2     |
| 4    | 1   | 638739  | 8120506  | 1.4     |
| 4    | 2   | 638759  | 8120506  | 1.8     |
| 4    | 3   | 638779  | 8120506  | 1.8     |
| 4    | 4   | 638799  | 8120506  | 1.4     |
| 4    | 5   | 638819  | 8120506  | 1.2     |
| 4    | 6   | 638839  | 8120506  | 1.2     |
| 5    | 1   | 638738  | 8120484  | 1.7     |
| 5    | 2   | 638758  | 8120484  | 1.6     |
| 5    | 3   | 638778  | 8120484  | 2.3     |
| 5    | 4   | 638798  | 8120484  | 2.0     |
| 5    | 5   | 638818  | 8120484  | 1.8     |
| 5    | 6   | 638838  | 8120484  | 1.5     |
| 6    | 1   | 638735  | 8120464  | 1.5     |
| 6    | 2   | 638755  | 8120464  | 2.1     |
| 6    | 3   | 638775  | 8120464  | 2.5     |
| 6    | 4   | 638795  | 8120464  | 2.4     |
| 6    | 5   | 638815  | 8120464  | 1.5     |
| 6    | 6   | 638835  | 8120464  | 1.0     |
| 7    | 1   | 638734  | 8120446  | 1.5     |
| 7    | 2   | 638754  | 8120446  | 2.0     |
| 7    | 3   | 638774  | 8120446  | 2.2     |
| 7    | 4   | 638794  | 8120446  | 1.0     |
| 7    | 5   | 638814  | 8120446  | 1.0     |



#### Legend

- ✚ Base line
- ◆ Diamond Positive Sample
- ◆ Chromite Positive Sample

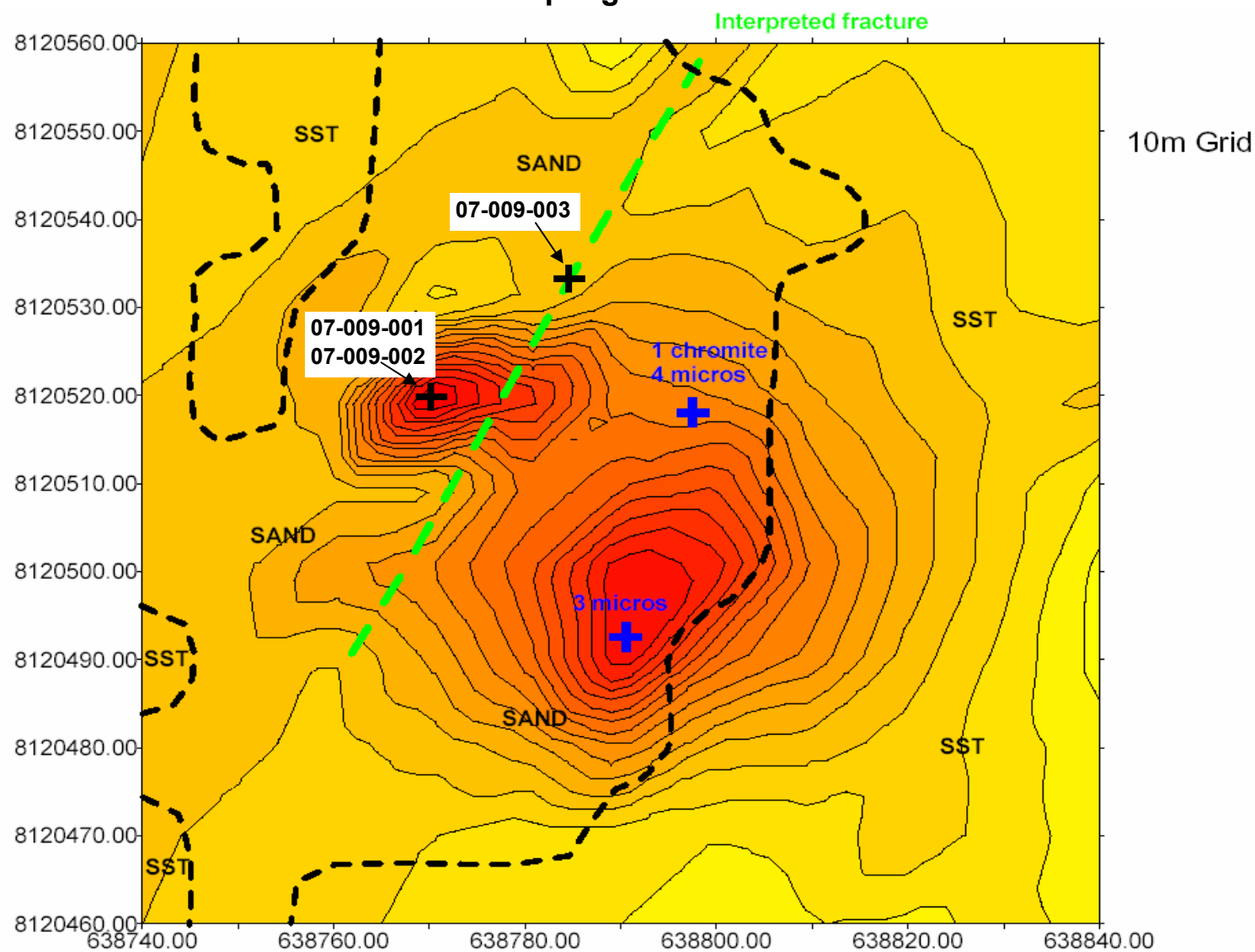
| North Australian Diamonds Ltd |                                  |
|-------------------------------|----------------------------------|
|                               | Tintagel Anomaly<br>GTINHEM06    |
| Date: 6/1/2007                | EM Survey<br>October 2007        |
| Author:                       |                                  |
| Office:                       |                                  |
| Drawing:                      |                                  |
| Scale: 1:1000                 | Projection: AMG Zone 53 (AGD 66) |
|                               |                                  |

## **APPENDIX 4**

### **Loam Sampling Results**

| Sample Number | Northing AGD66, 53K | Easting AGD66, 53K | Sample Type | Sieved | Sample Size | Diamond  | Chromite |
|---------------|---------------------|--------------------|-------------|--------|-------------|----------|----------|
| 07-009-001    | 8120520             | 638770             | Loam        | 1.0mm  | 4 bags      | Negative | Negative |
| 07-009-002    | 8120532             | 638785             | Loam        | 1.0mm  | 1 bag       | Negative | Negative |
| 07-009-003    | 8120520             | 638770             | Loam        | 1.0mm  | 1 bag       | Negative | Negative |

# Year 6 Loam Sampling over MAG03T



## **APPENDIX 5**

### **Jigsaw Geoscience Target Areas**

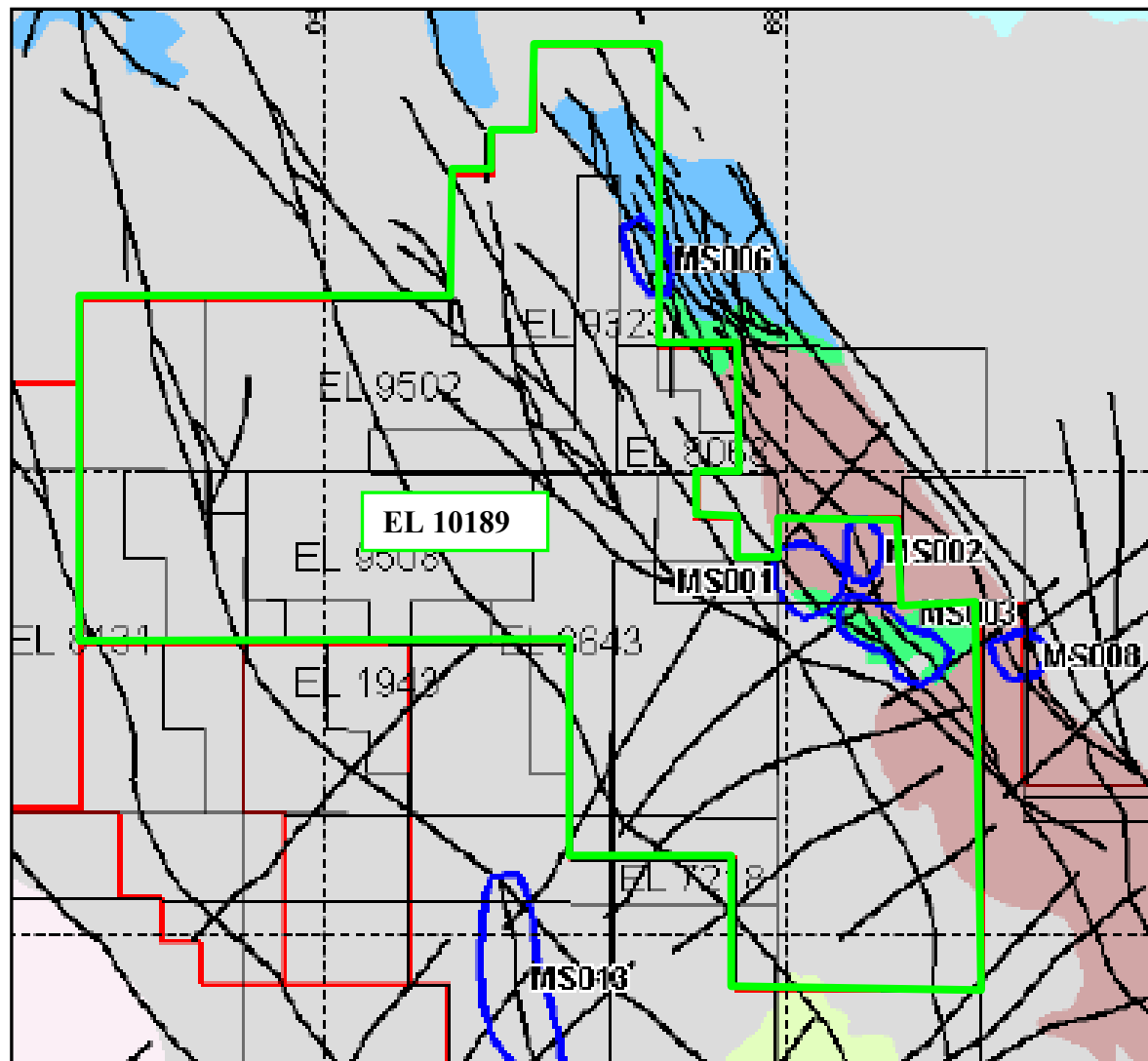


**Target areas on EL10189 include MS001, MS002, MS003 and MS006**

**Table 1. Target areas defined on the McArthur South project tenements.**

| Target | AMGE    | AMGN      | Structural Complexity | K illite Alt | Th AP Min | U anom  | Host Sequence                    | Unconformity | Priority | Comments        |
|--------|---------|-----------|-----------------------|--------------|-----------|---------|----------------------------------|--------------|----------|-----------------|
| MS001  | 660,800 | 8,115,700 | Fault Intersections   | Yes          | Yes       | No      | KRG, Tawallah Group              | Yes          | One      |                 |
| MS002  | 663,200 | 8,116,200 | Fault Duplex          | Yes          | Yes       | No      | KRG, Tawallah Group              | Yes          | Two      |                 |
| MS003  | 664,200 | 8,112,600 | Fault Intersections   | Yes          | Yes       | No      | Mafic Volcanics (McArthur Group) | Yes          | One      |                 |
| MS004  | 682,400 | 8,092,300 | Fault Intersections   | No           | Yes       | No      | Bukalara Sandstone               | No           | Three    | Deep cover      |
| MS005  | 682,900 | 8,089,200 | Radiometric Anomaly   | No           | Yes       | No      | Bukalara Sandstone               | No           | Three    | Deep cover      |
| MS006  | 653,800 | 8,129,200 | Thrust fault          | Unknown      | Unknown   | Unknown | Masterton Sandstone              | Yes          | Two      | Upper sequences |
| MS007  | 677,400 | 8,105,300 | Fault Duplex          | No           | Yes       | No      | Bukalara Sandstone               | Yes          | Three    |                 |
| MS008  | 670,000 | 8,112,200 | Fault Intersections   | No           | Yes       | No      | KRG, Tawallah Group              | Yes          | Two      |                 |
| MS009  | 709,000 | 8,080,000 | Fault Intersections   | No           | No        | Yes     | Lower Tawallah Gp                | Yes          | Two      | Neoprot cover   |
| MS010  | 693,000 | 8,078,000 | Fault Intersections   | No           | No        | Yes     | Lower Tawallah Gp                | Yes          | Two      | Mesozoic cover  |
| MS011  | 683,000 | 8,076,000 | Fault Intersections   | Yes          | No        | No      | Lower Tawallah Gp                | Yes          | One      | Mesozoic cover  |
| MS012  | 665,000 | 8,083,000 | Fault Intersections   | No           | No        | No      | Lower Tawallah Gp                | Yes          | One      | Mesozoic cover  |
| MS013  | 648,000 | 8,101,000 | Fault Intersections   | No           | No        | Yes     | Lower Tawallah Gp                | Yes          | One      | Neoprot cover   |
| MS014  | 657,000 | 8,083,000 | Fault Intersections   | No           | Yes       | Yes     | Lower Tawallah Gp                | Yes          | Two      | Mesozoic cover  |

**Source : Jigsaw Geoscience (2008). Jigsaw Geoscience Pty Ltd - Targeting Review: McArthur South project, Northern Territory. Confidential report to Top End Uranium Limited. April 2008.**



**Potential U Targets**

MS001  
MS002  
MS003  
MS006

**Source:**  
Jigsaw Geoscience  
(2008)