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**ASSESSMENT REPORT**

describing

**PROSPECTING, GEOCHEMICAL SAMPLING  
AND AIRBORNE GEOPHYSICS**

at the

**MELOY PROPERTY**

Meloy 1-42 YC65705-YC65766

NTS 115G/08 and 115G/09  
Latitude 61°29'N; Longitude 138°11'W

in the

Whitehorse Mining District  
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

**STRATEGIC METALS LTD.**

by

H. Smith, B.Sc. Geology, P. Geo.  
January 2011

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## **INTRODUCTION**

The Meloy property covers a porphyry prospect located in the Ruby Range of southwestern Yukon. The prospect is notably enriched in copper, molybdenum, tungsten, tin, zinc and gold. It is owned by Strategic Metals Ltd.

This report describes an exploration program that was conducted on July 28, 2010 by Archer, Cathro & Associates (1981) Limited on behalf of Strategic. The program consisted of prospecting, geochemical sampling and airborne geophysics. The author participated in and directed the program and her Statement of Qualifications appears in Appendix I.

## **PROPERTY LOCATION, CLAIM DATA AND ACCESS**

The Meloy property comprises 42 contiguous mineral claims located approximately 90 km northwest of Haines Junction in southwestern Yukon, at latitude 61°29'N and longitude 138°11'W on NTS map sheets 115G/08 and 115G/09 (Figure 1). The claims are registered with the Whitehorse Mining Recorder in the name of Archer Cathro, which holds them in trust for Strategic. Claim data are listed below while the locations of individual claims are illustrated on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Meloy 1-42	YC18054-YC18073	March 21, 2014

\*Expiry date does not include 2010 work that has not yet been filed for assessment credit.

In 2010, the crew stayed in Haines Junction and was mobilized to and from the property by a Hughes 500D helicopter owned by Oceanview Helicopters of Powell River, BC and operated by Fireweed Helicopters of Whitehorse, from a temporary base at the Haines Junction Airport.

The closest road access to the Meloy property is at the abandoned community of Aishihik about 35 km to the east-northeast. If required, heavy equipment could access the property via a trail that leads to old placer workings. That trail extends from Aishihik to within 500 m of the property.

## **HISTORY**

J. Meloy initially staked the area in 1951 as the Molly claims and he performed hand trenching in 1952. The Molly claims were allowed to lapse and were restaked in 1960 by J. McConnery as the Big Sam claims and again in 1962 by L. Nault as the Pag and Bird claims (Smith, 1971). No reports were filed regarding any of these claims.

In 1970, Phelps Dodge conducted mapping, geochemical surveys and one diamond drill hole (66.7 m). No assays were reported from this work (Smith, 1971).

In 1986, the Geological Survey of Canada (GSC) performed a regional stream sediment survey on the map sheet where the Meloy property is located. Samples taken from streams draining the

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FIGURE 1  
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

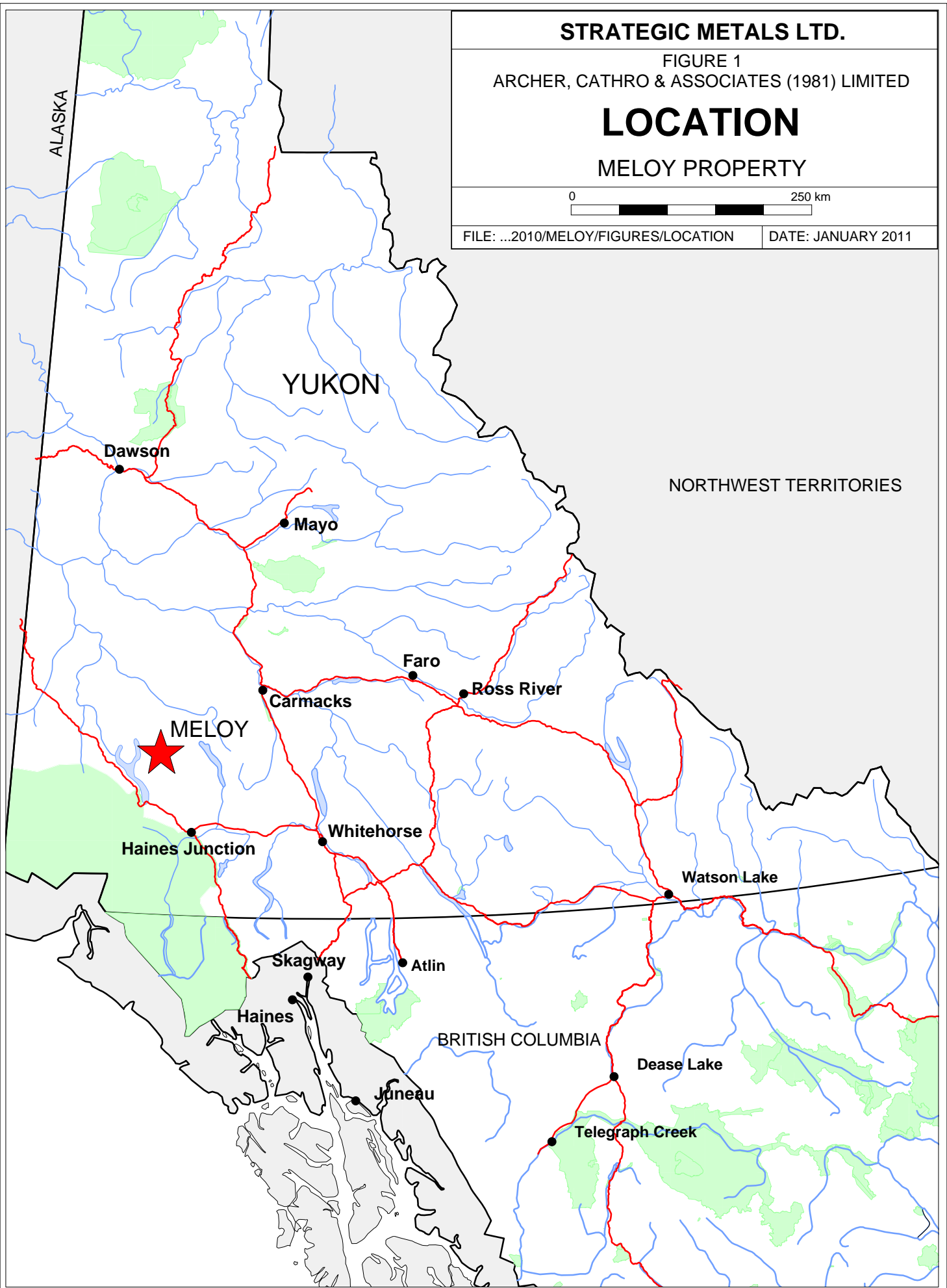
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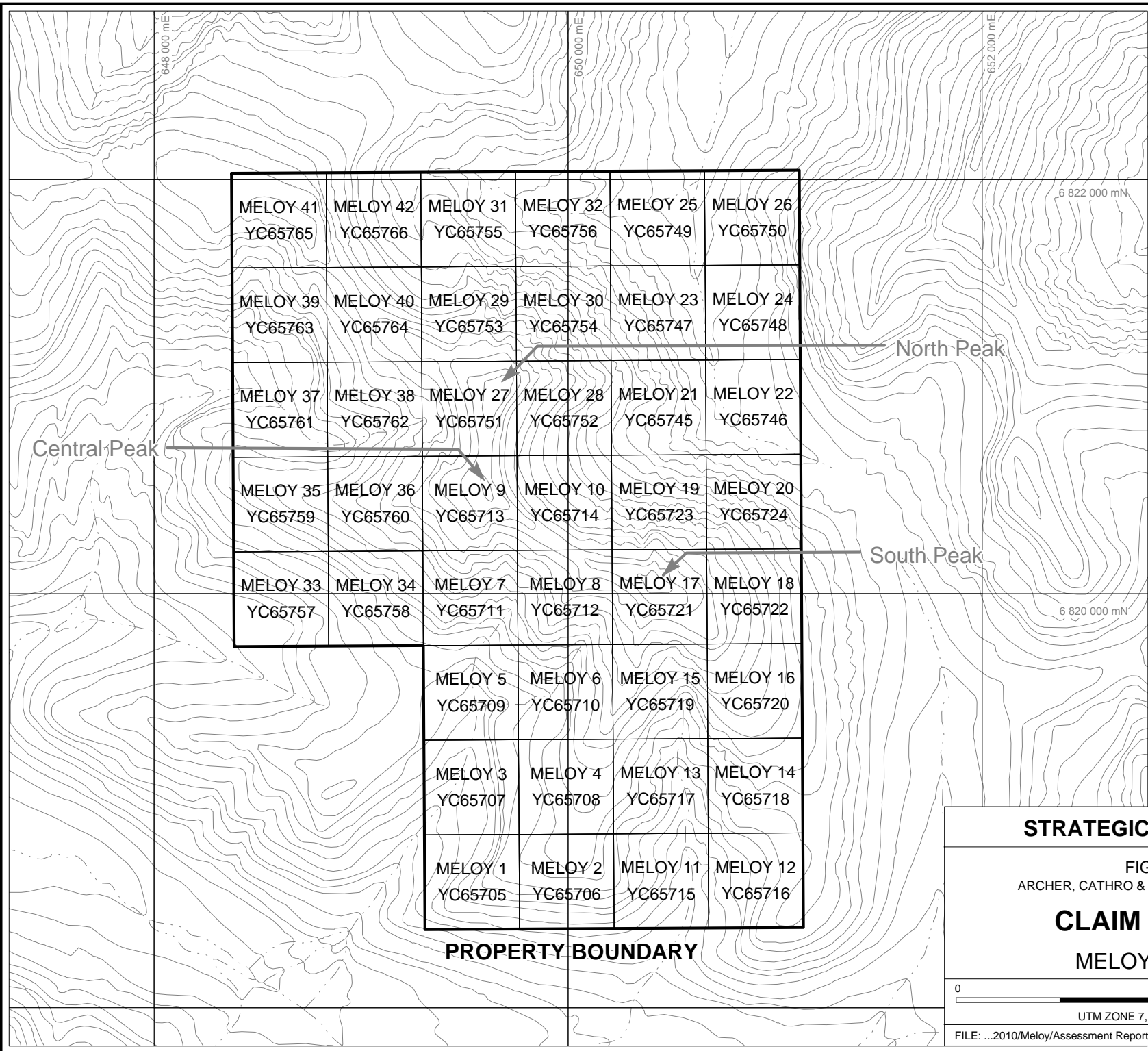
MELOY PROPERTY



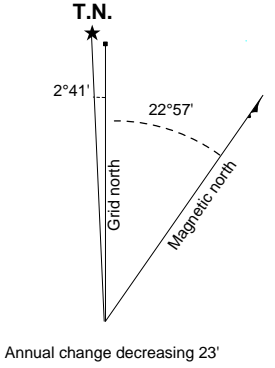
FILE: ...2010/MELOY/FIGURES/LOCATION

DATE: JANUARY 2011





MELOY 41 YC65765	MELOY 42 YC65766	MELOY 31 YC65755	MELOY 32 YC65756	MELOY 25 YC65749	MELOY 26 YC65750
MELOY 39 YC65763	MELOY 40 YC65764	MELOY 29 YC65753	MELOY 30 YC65754	MELOY 23 YC65747	MELOY 24 YC65748
MELOY 37 YC65761	MELOY 38 YC65762	MELOY 27 YC65751	MELOY 28 YC65752	MELOY 21 YC65745	MELOY 22 YC65746
MELOY 35 YC65759	MELOY 36 YC65760	MELOY 9 YC65713	MELOY 10 YC65714	MELOY 19 YC65723	MELOY 20 YC65724
MELOY 33 YC65757	MELOY 34 YC65758	MELOY 7 YC65711	MELOY 8 YC65712	MELOY 17 YC65721	MELOY 18 YC65722
		MELOY 5 YC65709	MELOY 6 YC65710	MELOY 15 YC65719	MELOY 16 YC65720
		MELOY 3 YC65707	MELOY 4 YC65708	MELOY 13 YC65717	MELOY 14 YC65718
		MELOY 1 YC65705	MELOY 2 YC65706	MELOY 11 YC65715	MELOY 12 YC65716



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FIGURE 2  
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**CLAIM LOCATION**

MELOY PROPERTY

---

0 2 km

UTM ZONE 7, NAD 83, 115G/08 & 09

FILE: ...2010/Meloy/Assessment Report DATE: JANUARY 2011

**PROPERTY BOUNDARY**

area of the property produced weakly to moderately anomalous results including peak values of 28 ppm tungsten, 97 ppm copper and 298 ppm zinc (Friske *et al.*, 1986).

In 2008, Strategic performed a three day program comprising prospecting and soil sampling. Results from this work were encouraging. Twenty-six rock samples were assayed with peak values of 832 ppb gold, 4.89% copper, 9770 ppm molybdenum, 6420 ppm tin and 3.51% tungsten. One hundred and fifteen soil samples were also analyzed yielding peak values of 42 ppb gold, 2300 ppm copper, 595 ppm molybdenum, 127 ppm tin and 129 ppm tungsten (Smith, 2008).

### **GEOMORPHOLOGY**

The Meloy property lies within the Ruby Range in the southern part of the Yukon Plateau. It comprises rugged alpine terrain characterized by sharp peaks and high rounded ridges, which are bounded by steep walled valleys with broad flat floors. Some of the peaks and ridges may have escaped glaciation but glacial features are common at lower elevations (Muller, 1967).

A large northwest trending ridge runs through the centre of the property connecting three prominent peaks referred to as South, Central and North (Figure 2). A series of southwest trending spurs extend off the South and Central peaks. South facing slopes are moderately steep and are blanketed by relatively stable talus. North facing slopes are almost completely inaccessible because of cliffs and unstable talus.

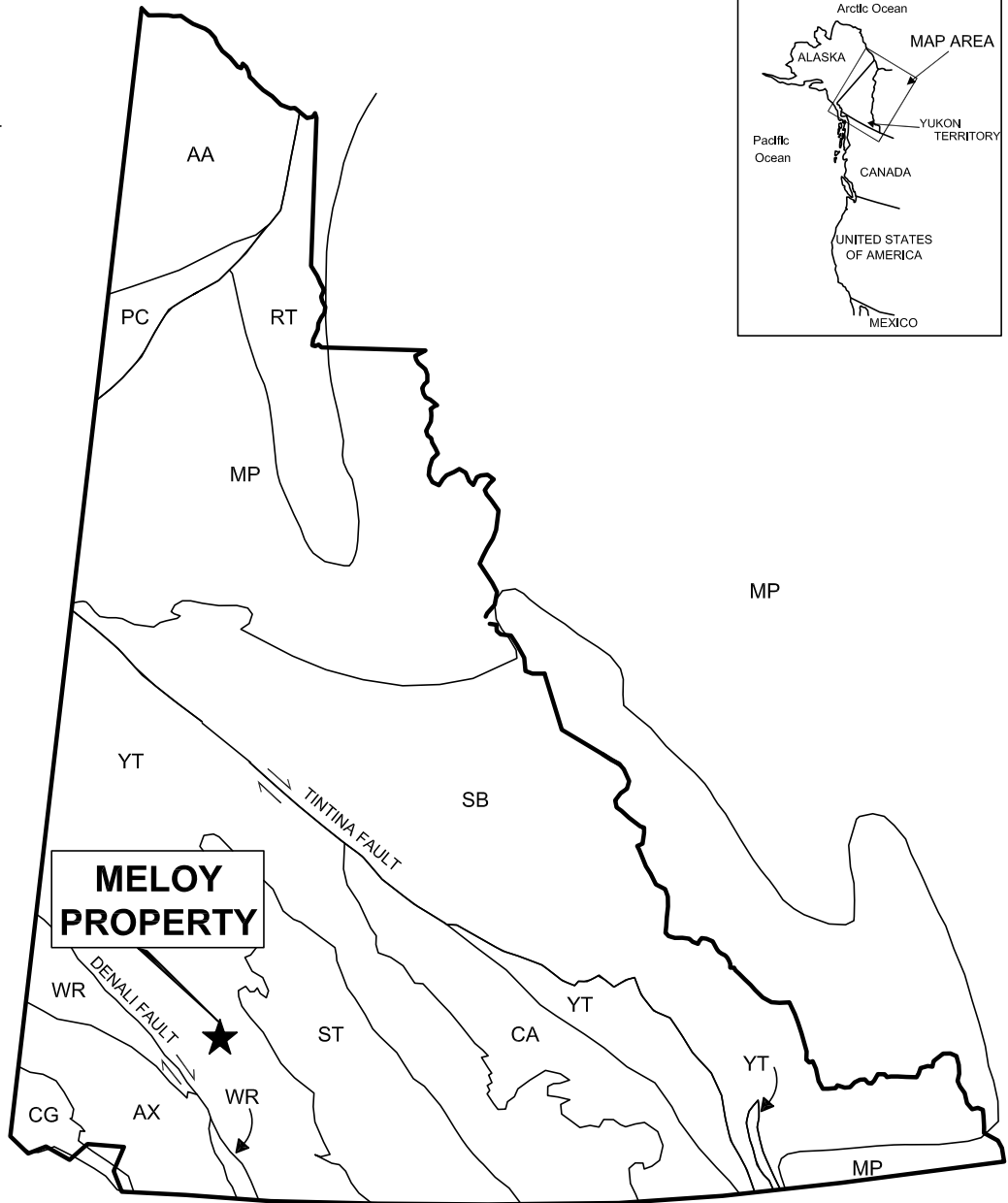
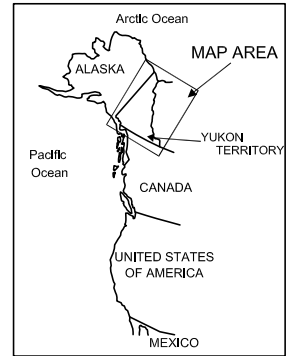
Elevations on the property range from 1675 m to 2245 m. Sparse vegetation consisting of moss and grass is found on valley floors and in areas of low topographic relief where small plateaus have formed.

All creeks draining the property ultimately flow into Talbot Arm of Kluane Lake, which is part of the Yukon River watershed.

### **REGIONAL GEOLOGY**

The property is located in the Nisling subterrane in the southwestern part of the Yukon-Tanana Terrane, which lies between the Tintina and Denali faults (Figure 3). The regional geology was most recently mapped at 1:250,000 scale by the GSC in the early 1970s (Tempelman-Kluit, 1974). In 1999, Gordey and Makepeace (1999) compiled regional geology to create the map illustrated on Figure 4.

Two main lithological packages occur in the area. The older package comprises Devonian and Mississippian metamorphic rocks of the Nasina Assemblage (DMN) and the younger package consists of Early Tertiary granitic plutons belonging to the Nisling Range Suite (ETN). The closest DMN rocks lie approximately two kilometres northeast of the Meloy property. These rocks typically include quartzite, micaceous quartzite, and quartz-muscovite schist with minor metaconglomerate and metagrit (DMN3). DMN3 is intruded by ETN plutons composed of medium to coarse grained intermediate intrusive rocks and felsic porphyritic granitic rocks. ETN plutons underlie most of the Ruby Range.



ANCESTRAL NORTH AMERICA

- MP Mackenzie Platform
- SB Selwyn Basin
- RT Richardson Trough

TERRANES  
Displaced Continental Margin

- AA Arctic Alaska
- CA Cassiar
- PC Porcupine

Pericratonic Terranes

- YT Yukon-Tanana / Slide Mountain

ACCRETED TERRANES

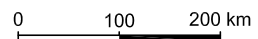
- ST Stikinia / Cache Creek
- AX Alexander
- WR Wrangellia
- CG Chugach

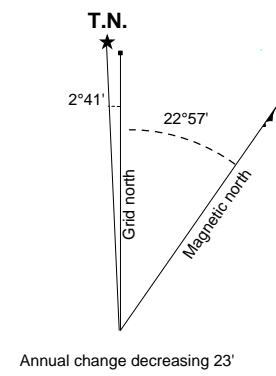
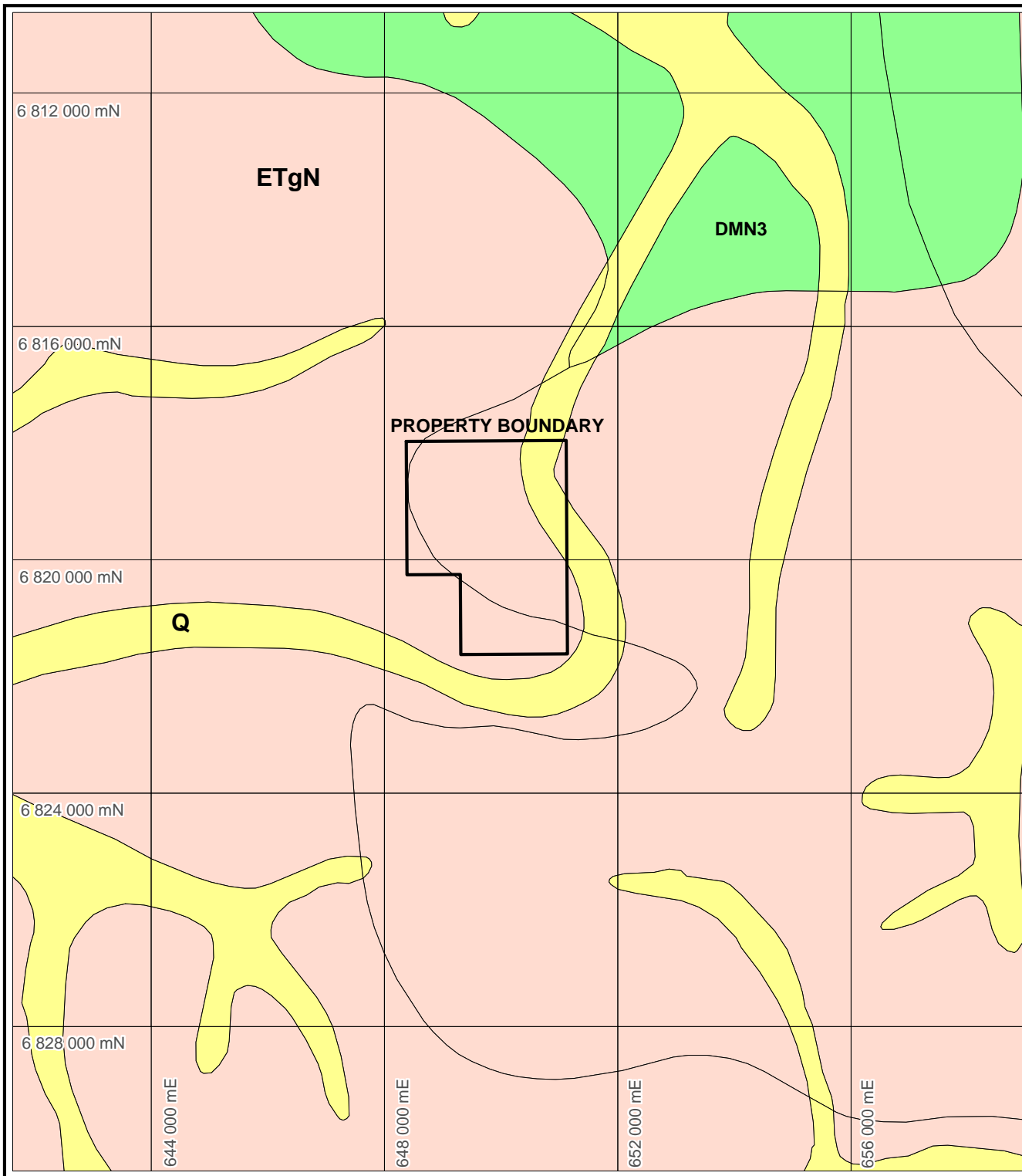
## STRATEGIC METALS LTD.

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
FIGURE 3

# TECTONIC SETTING

## MELOY PROPERTY





**Unit Descriptions**

Devonian, Mississippian and older(?)

**DMN3** quartz muscovite schist

Early Tertiary

**ETgN** biotite-hornblende and granodiorite

Quaternary

**Q** overburden

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FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**REGIONAL GEOLOGY**

MELOY PROPERTY

0 4 km  
 UTM ZONE 7, NAD 83, 115G/08 & 09

FILE: ...2008/MELOY DATE: JANUARY 2011

No regional scale faults have been mapped in the immediate vicinity of the property.

### **PROPERTY GEOLOGY**

Systematic geological mapping on the property is difficult because access to bedrock is limited by talus cover in some areas and cliffs in others. In 2008, two days of mapping was performed along ridge lines and on south facing, talus covered slopes (Figure 5). No geological mapping was done in 2010.

Geology on the property is wholly composed of two subunits of Nisling Range Suite. The first is the Nisling Range Suite Alaskite (ETqN) and the second is the Ruby Range Suite (ETgN).

ETqN comprises alaskite with hypidiomorphic coarse granular texture. It is composed of potassium feldspar with lesser quartz, plagioclase and biotite and rare hornblende. The alaskite is locally altered to an assemblage featuring chlorite, saussurite and sericite. No zoning of potassium feldspar or sericite-chlorite assemblages have been noted. ETgN consists of: biotite-hornblende granodiorite with local potassium feldspar megacrysts; quartz monzonite; and, hornblende and biotite-hornblende diorite (Gordey and Makepeace, 1999).

ETqN underlies approximately 90% of the property including all three peaks. The geological contact between ETqN and ETgN forms a broad arc that extends from the southeast corner to the northwest corner of the claim block before curving to the northeast.

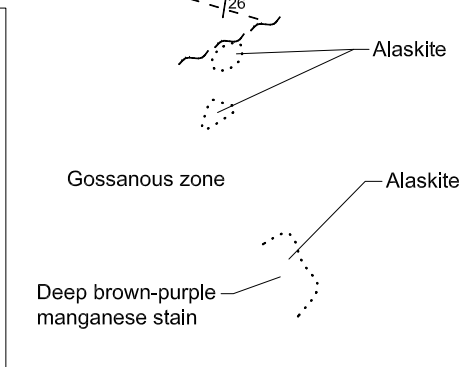
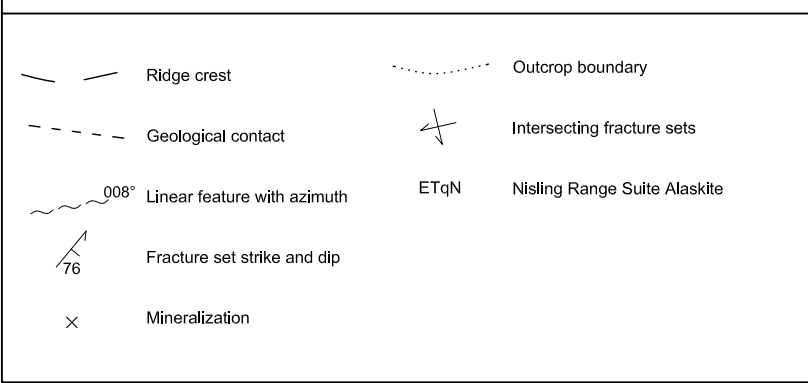
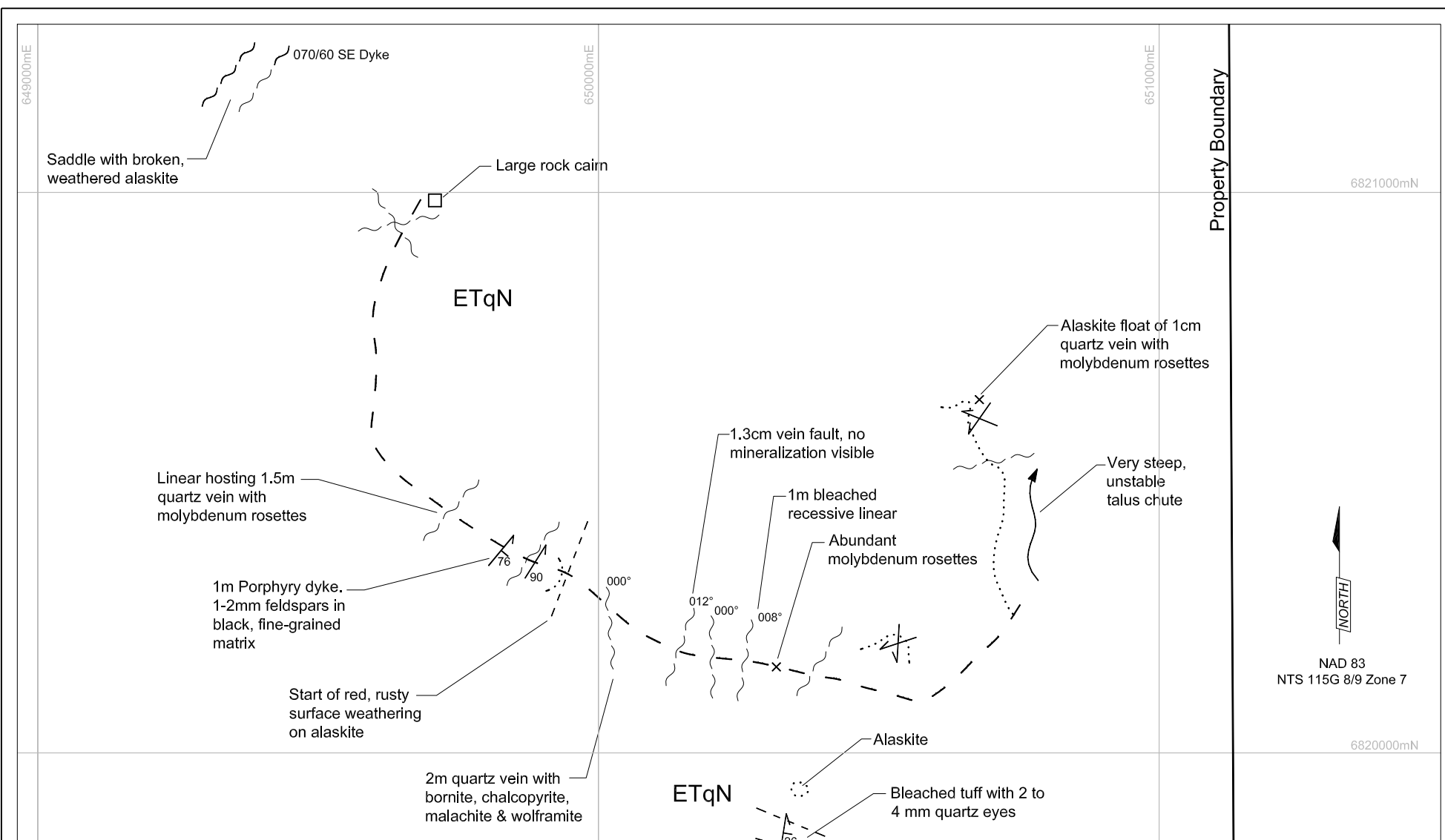
A gossanous zone is located on the southern part of the property close to the ETqN-ETgN contact. It exhibits closely spaced jointing and random shearing that are superimposed on relatively fresh alaskite. This zone is distinguished by its red-brown hematite rich staining, which covers all outcrop surfaces and scree material (Smith, 1971).

Several joint sets were measured within ETgN. Although a wide range of attitudes were recorded, the strongest fractures consistently strike north-south and east-west. A number of strong linears cut the main ridge between South and Central peaks. These linears typically trend 000° to 012° and contain up to two metre wide zones that exhibit multiple quartz flooded fractures.

### **MINERALIZATION**

Most of the mineralization on the property is hosted in quartz veins and veinlets both within fresh alaskite and the sheared gossanous zone in the southern part of the property.

Primary sulphide mineralization in the veins consists of varying amounts of pyrite, chalcopyrite, arsenopyrite, molybdenum, bornite and wolframite. Table I describes styles of mineralization in the veins.



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FIGURE 5  
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**PROPERTY GEOLOGY**

**MELOY PROPERTY**

Scale 1:10,000

0 100 200 300 400 500m

DRAWN / REVISED BY: M. Kammerer	PROJECT: MELOY
FILE:2008/MELOY/FIGURES/GEOLOGY.dwg	DATE: JANUARY 2011

**Table I – Styles of Mineralization within Quartz Veins**

<b>Mineral</b>	<b>Abundance</b>	<b>Size and form</b>
Pyrite	Approximately 2%	Disseminated, two millimetre cubic crystals
Chalcopyrite	Approximately 4%	Disseminated and blebby crystals
Arsenopyrite	Less than 1%	Fine stringers
Molybdenum	Approximately 3%	Up to one centimetre coarse rosettes
Bornite	Less than 1%	Massive bands up to two centimetres thick
Wolframite	Approximately 1%	Three millimetre to two centimetre bladed crystals.

Secondary mineralization occurs within and adjacent to weathered quartz veins. Malachite and azurite coat rock surfaces and fracture planes in north-south trending linears while small limonitic pits after pyrite are common within quartz veins along the main ridge. Scorodite is found within an east-west trending zone of quartz veins in the southern half of the property.

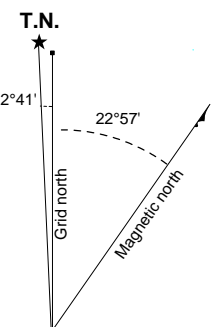
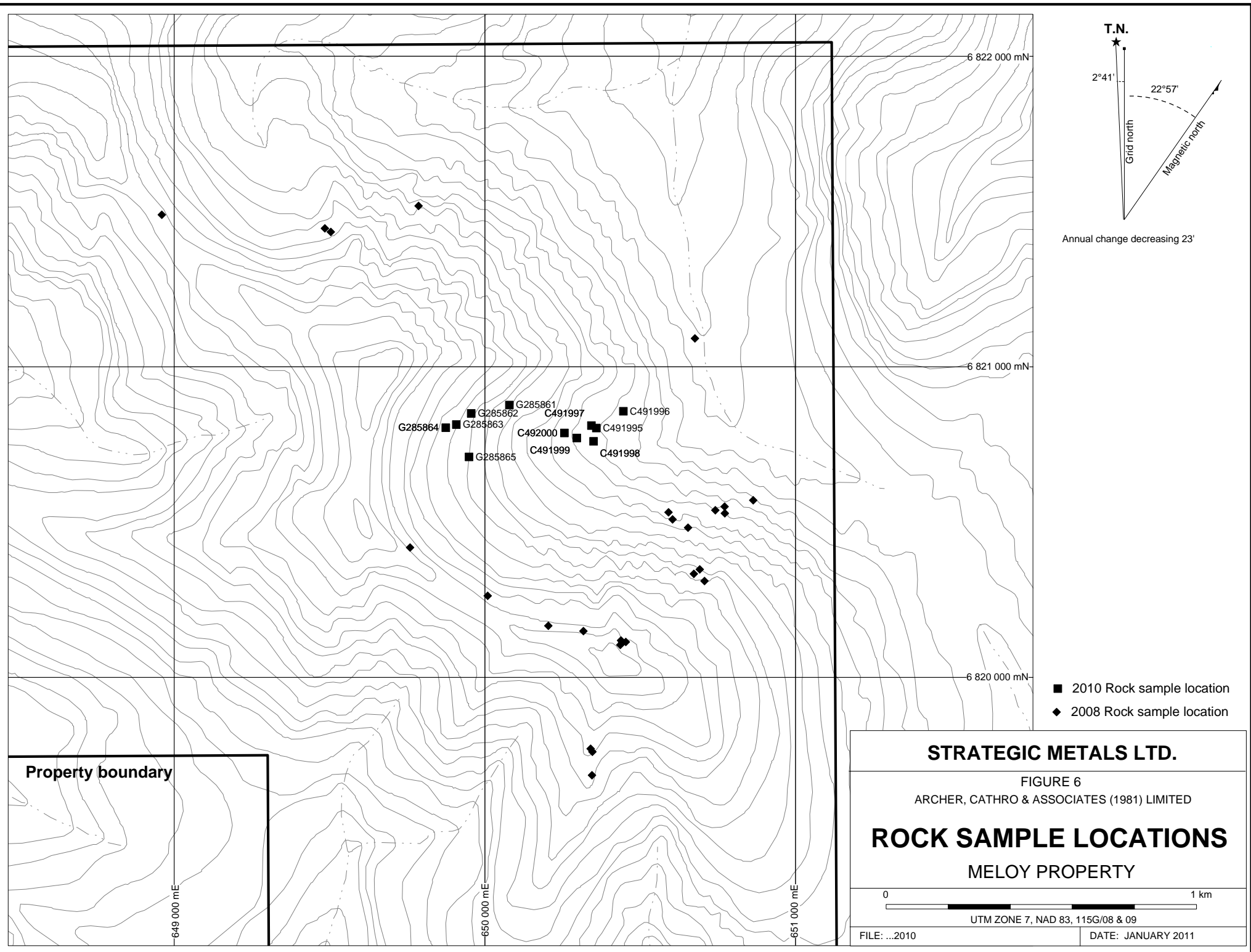
The highest concentrations of quartz veins occur within recessive linears. Elsewhere, quartz veins are typically less than four centimetres thick and are generally confined to widely scattered fractures within alaskite. Overall abundance of quartz veins in most parts of the property is not yet known.

In 2008, twenty-six rock samples, all of float material, were collected from four main clusters on the property. Geochemical signatures of clusters A and B are relatively similar, but clusters C and D have quite different signatures. In 2010, 11 rock samples were collected for assay from a 600 by 250 m area (Cluster E), which lies southeast of North Peak. Rock sample locations and results for gold, copper, molybdenum, tin, tungsten and zinc are plotted on Figures 6 to 12, respectively. Sampling and Analytical Procedures are explained in Appendix II, Rock Sample Descriptions are provided in Appendix III and Certificates of Analysis are given in Appendix IV.

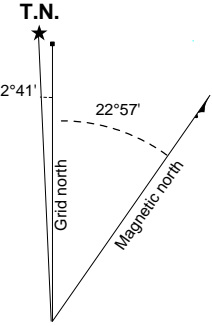
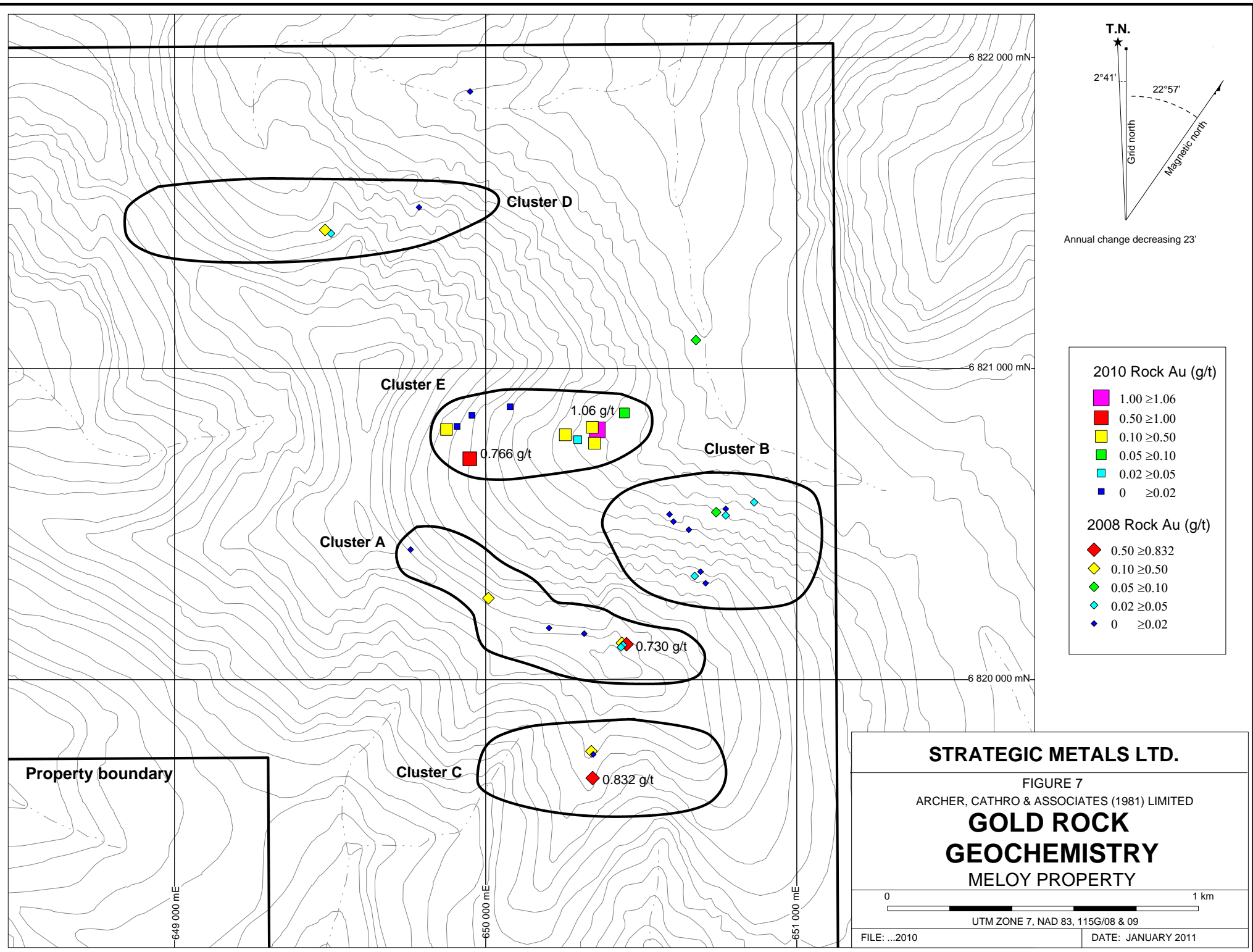
Cluster A includes South Peak and a string of samples taken for a length of 700 m along the main ridge heading toward Central Peak. Most samples from this cluster returned anomalous values for tungsten, molybdenum, gold and tin but has subdued copper response. Three of the five highest tungsten values from the 2008 sampling (7380, 24,800 and 35,100 ppm) are in this cluster. Other noteworthy values from this area are 6420 ppm molybdenum, 730 ppb gold, and 1950 ppm tin. The string of samples taken along the ridge also produced elevated copper and/or molybdenum values with accessory silver. A bornite-rich quartz vein yielded 4.89% copper with 138 ppm silver, while other quartz veins returned two of the three highest molybdenum values (6420 and 8720 ppm).

Cluster B is centred about 500 m northeast of South Peak. Meloy's discovery showing was reported in this area. All 10 samples collected from this cluster came from talus on a steep, north facing slope. Anomalous copper, molybdenum, tungsten and zinc values were returned including: 3220 ppm and 1.63% copper; 651, 1000 and 3250 ppm molybdenum; 1140, 1970, and 9770 ppm tungsten; and 1010, 1020 and 1580 ppm zinc.

Cluster C coincides with the gossanous zone described earlier in the section. It comprises three samples collected 400 m south-southwest of South Peak. Two samples were taken from east-



Annual change decreasing 23'



Annual change decreasing 23'

2010 Rock Au (g/t)

- 1.00 ≥ 1.06
- 0.50 ≥ 1.00
- 0.10 ≥ 0.50
- 0.05 ≥ 0.10
- 0.02 ≥ 0.05
- 0 ≥ 0.02

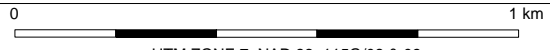
2008 Rock Au (g/t)

- 0.50 ≥ 0.832
- 0.10 ≥ 0.50
- 0.05 ≥ 0.10
- 0.02 ≥ 0.05
- 0 ≥ 0.02

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FIGURE 7  
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**GOLD ROCK  
 GEOCHEMISTRY  
 MELOY PROPERTY**



UTM ZONE 7, NAD 83, 115G/08 & 09

FILE: ...2010

DATE: JANUARY 2011

Property boundary

649 000 mE

650 000 mE

651 000 mE

6 822 000 mN

6 821 000 mN

6 820 000 mN

Cluster D

Cluster E

Cluster B

Cluster A

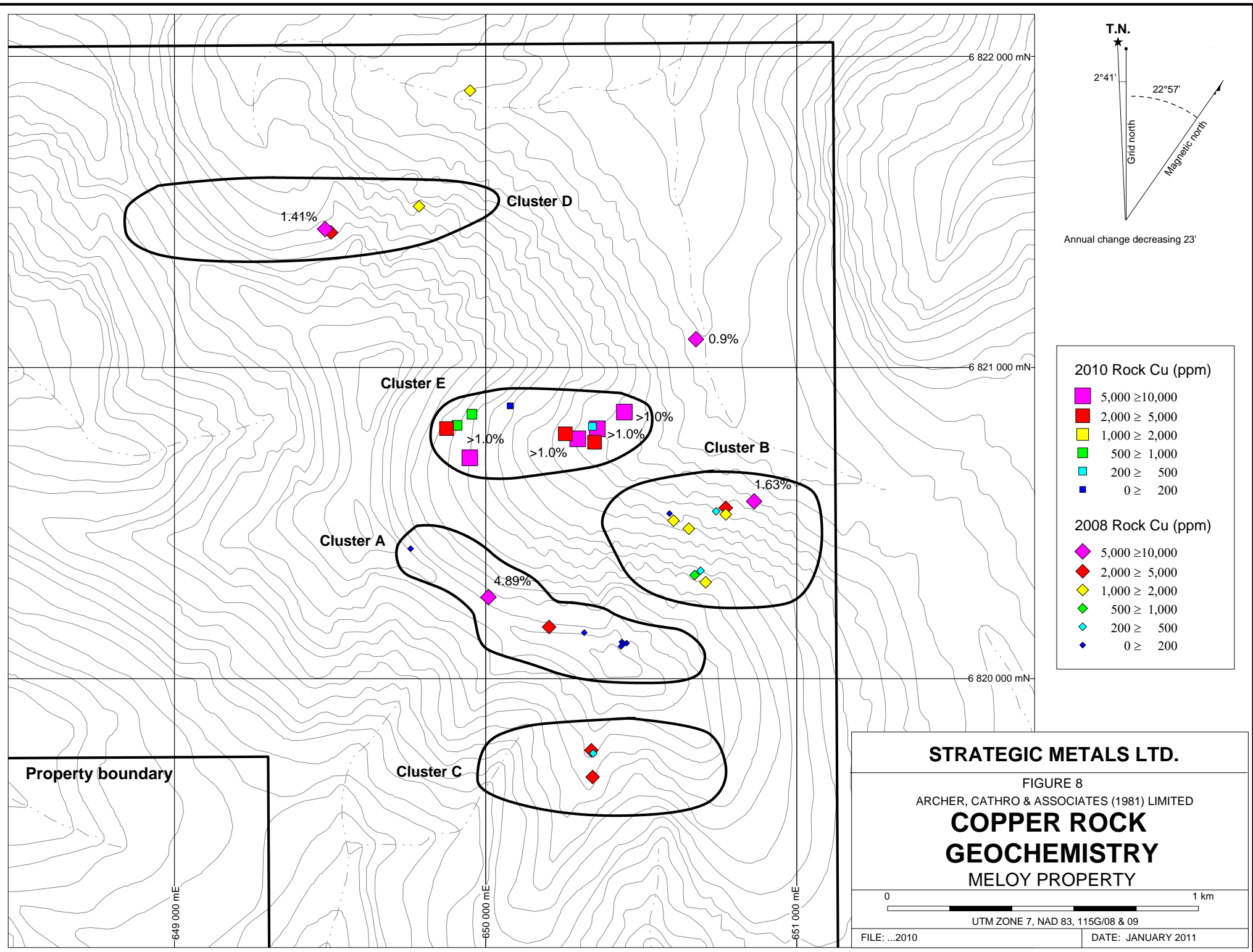
Cluster C

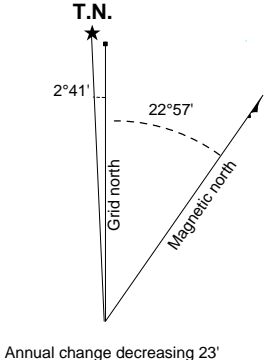
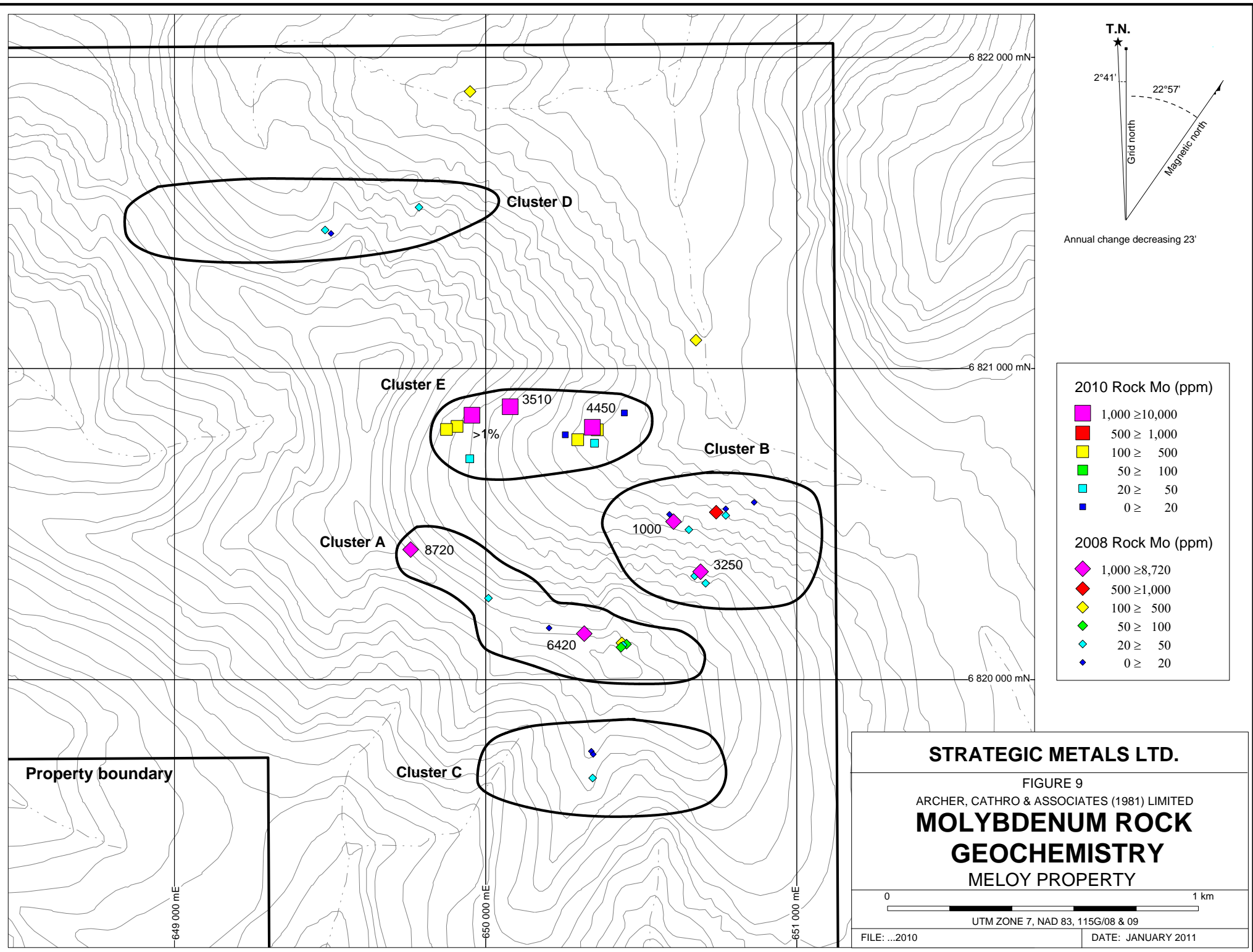
1.06 g/t

0.766 g/t

0.730 g/t

0.832 g/t





2010 Rock Mo (ppm)	
■	1,000 ≥ 10,000
■	500 ≥ 1,000
■	100 ≥ 500
■	50 ≥ 100
■	20 ≥ 50
■	0 ≥ 20

2008 Rock Mo (ppm)	
◆	1,000 ≥ 8,720
◆	500 ≥ 1,000
◆	100 ≥ 500
◆	50 ≥ 100
◆	20 ≥ 50
◆	0 ≥ 20

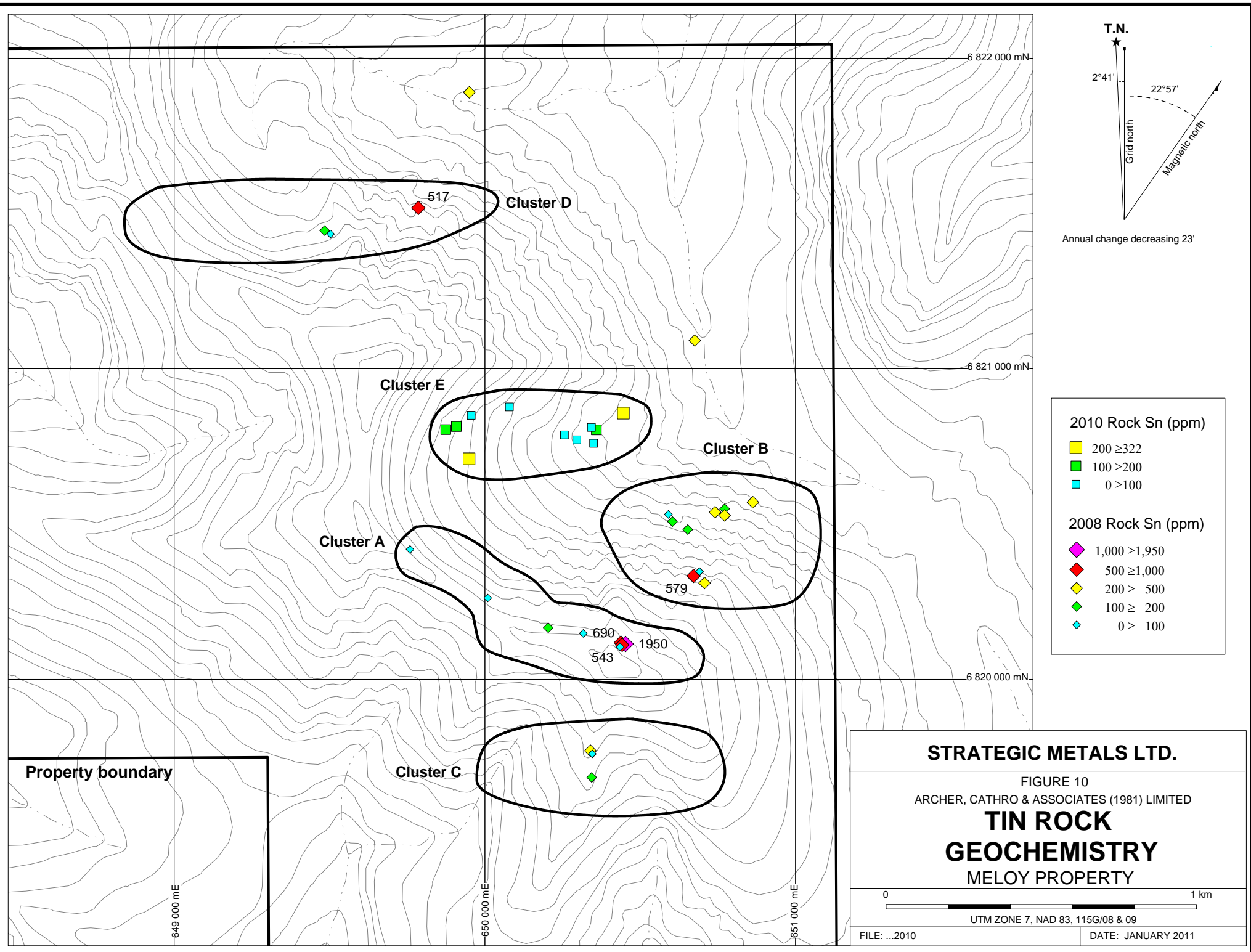
**STRATEGIC METALS LTD.**

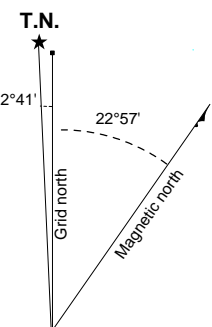
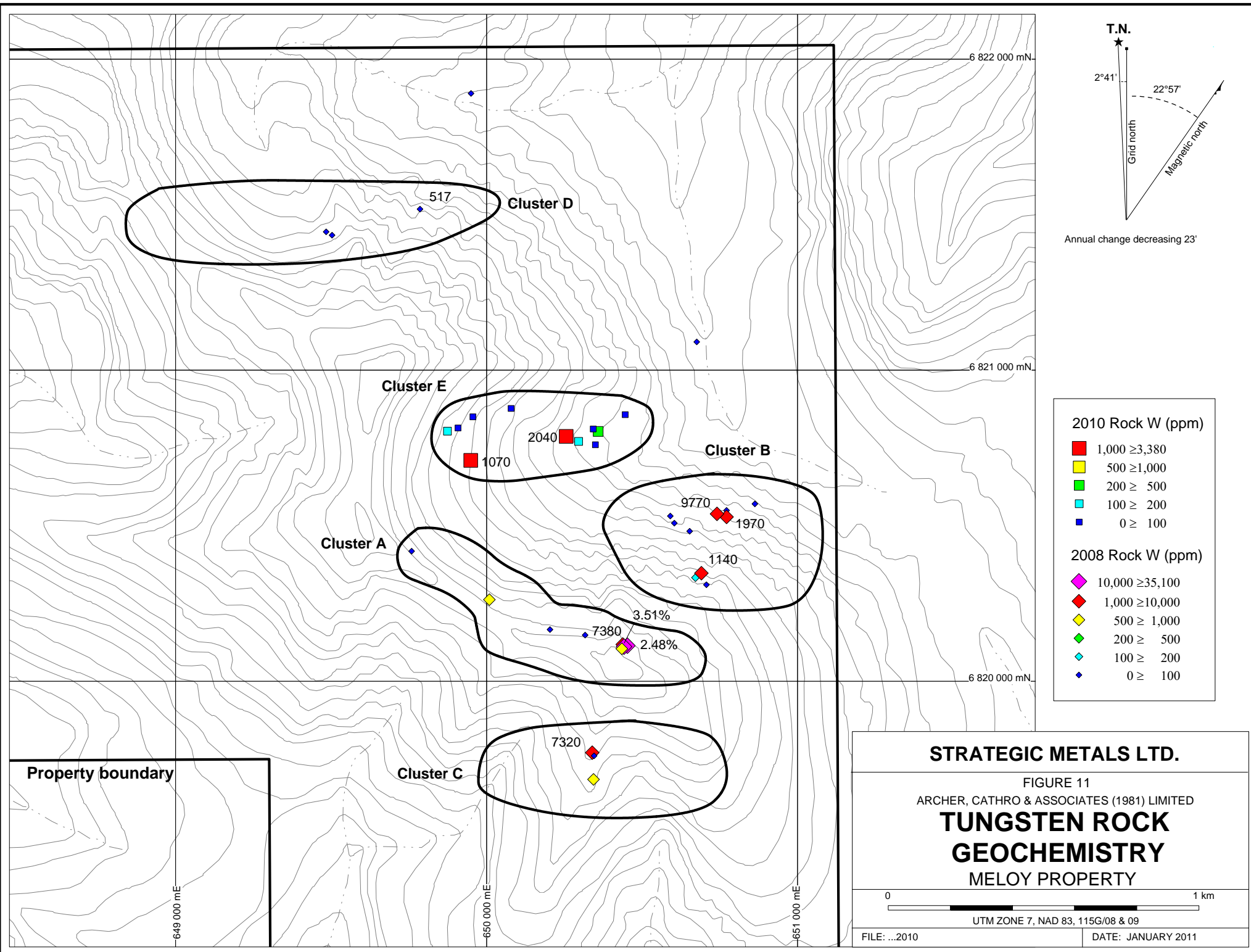
FIGURE 9  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**MOLYBDENUM ROCK  
 GEOCHEMISTRY**  
 MELOY PROPERTY

0 1 km

UTM ZONE 7, NAD 83, 115G/08 & 09

FILE: ...2010 DATE: JANUARY 2011





2010 Rock W (ppm)	
Red square	1,000 ≥ 3,380
Yellow square	500 ≥ 1,000
Green square	200 ≥ 500
Cyan square	100 ≥ 200
Blue square	0 ≥ 100

2008 Rock W (ppm)	
Pink diamond	10,000 ≥ 35,100
Red diamond	1,000 ≥ 10,000
Yellow diamond	500 ≥ 1,000
Green diamond	200 ≥ 500
Cyan diamond	100 ≥ 200
Blue diamond	0 ≥ 100

Property boundary

649 000 mE

Cluster D

517

Cluster E

1070

2040

Cluster B

9770

1970

1140

Cluster A

7380

3.51%

2.48%

Cluster C

7320

6 822 000 mN

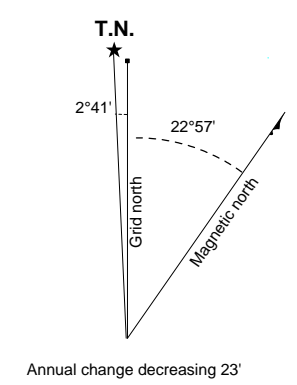
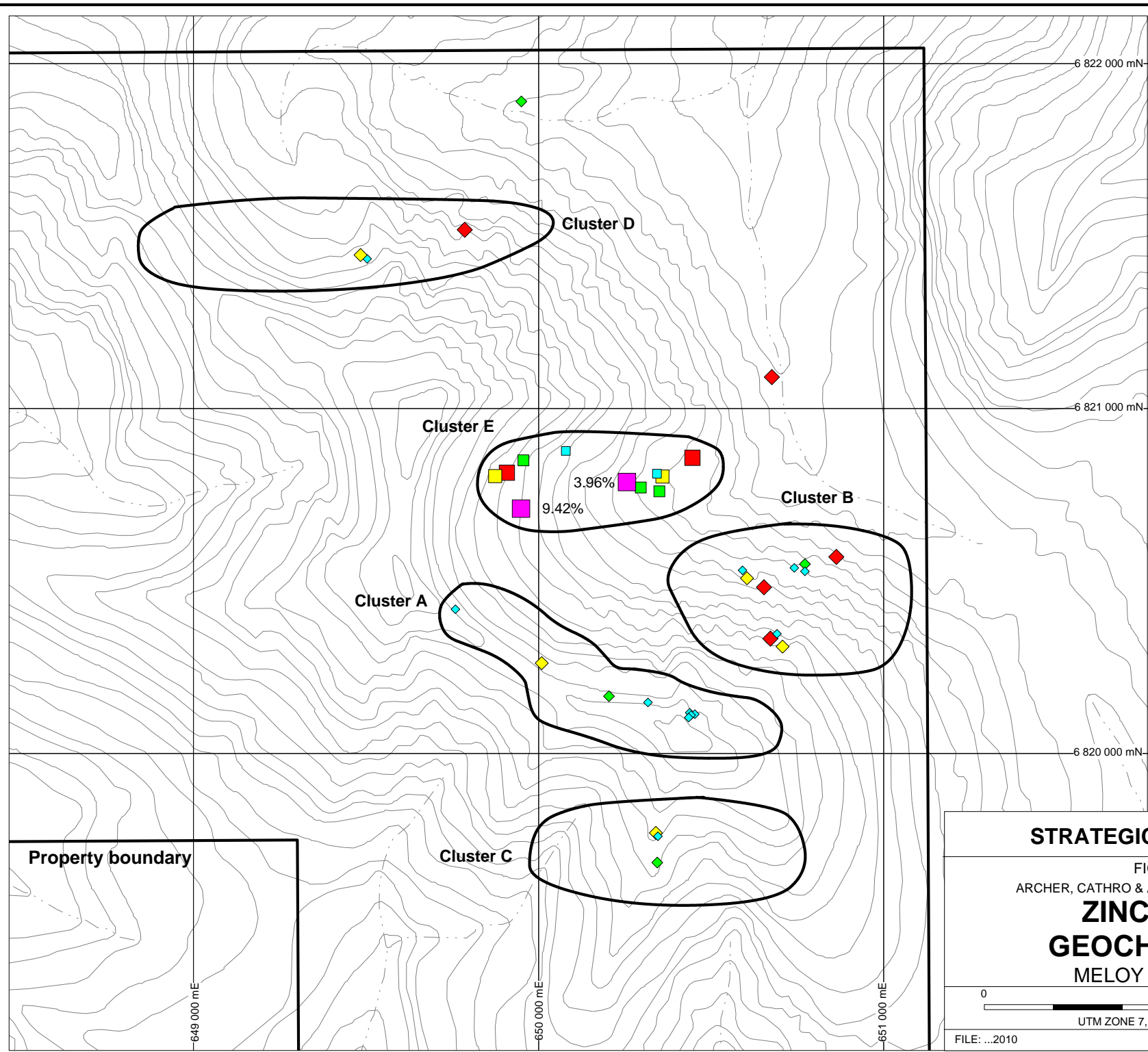
6 821 000 mN

6 820 000 mN

6 820 000 mN

650 000 mE

651 000 mE



2010 Rock Zn (ppm)	
<span style="color: magenta;">■</span>	5,000 ≥ 94,200
<span style="color: red;">■</span>	1,000 ≥ 5,000
<span style="color: yellow;">■</span>	500 ≥ 1,000
<span style="color: green;">■</span>	200 ≥ 500
<span style="color: cyan;">■</span>	0 ≥ 200

2008 Rock Zn (ppm)	
<span style="color: red;">◆</span>	1,000 ≥ 1,880
<span style="color: yellow;">◆</span>	500 ≥ 1,000
<span style="color: green;">◆</span>	200 ≥ 500
<span style="color: cyan;">◆</span>	0 ≥ 200

Property boundary

**STRATEGIC METALS LTD.**

FIGURE 12  
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

## ZINC ROCK GEOCHEMISTRY

MELOY PROPERTY

UTM ZONE 7, NAD 83, 115G/08 & 09

FILE: ...2010
DATE: JANUARY 2011

west trending quartz-flooded fractures while the third sample tested weakly gossanous alaskite host rock. Both quartz veins exhibit moderate scorodite staining. One of these samples yielded 132 ppb gold and 7320 ppm tungsten, while the other returned 832 ppb gold.

Cluster D consists of four samples taken approximately 450 m north of North Peak. These samples returned elevated gold and copper values with subdued results for all other elements. The best sample yielded 151 ppb gold and 1.41% copper.

Samples collected within Cluster E returned strongly anomalous gold, copper, molybdenum and zinc values with moderately anomalous tungsten and tin values. Peak values from Cluster E were 1.06 g/t gold, 2.27% copper, 2.79% molybdenum, 9.42% zinc, 2040 ppm tungsten and 322 ppm tin.

### SOIL GEOCHEMISTRY

A reconnaissance scale stream sediment survey conducted in the 1980s by the GSC showed that samples taken from streams draining ETgN rocks in the Meloy area are often anomalous compared to regional backgrounds, using the 95<sup>th</sup> percentile to define anomalous (Friske *et al.*, 1986). Threshold values used to categorize anomalous soil samples from the Meloy property are set much higher than the regional thresholds, as shown in Table II.

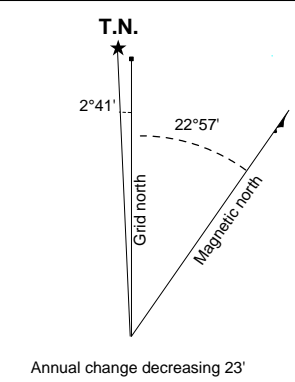
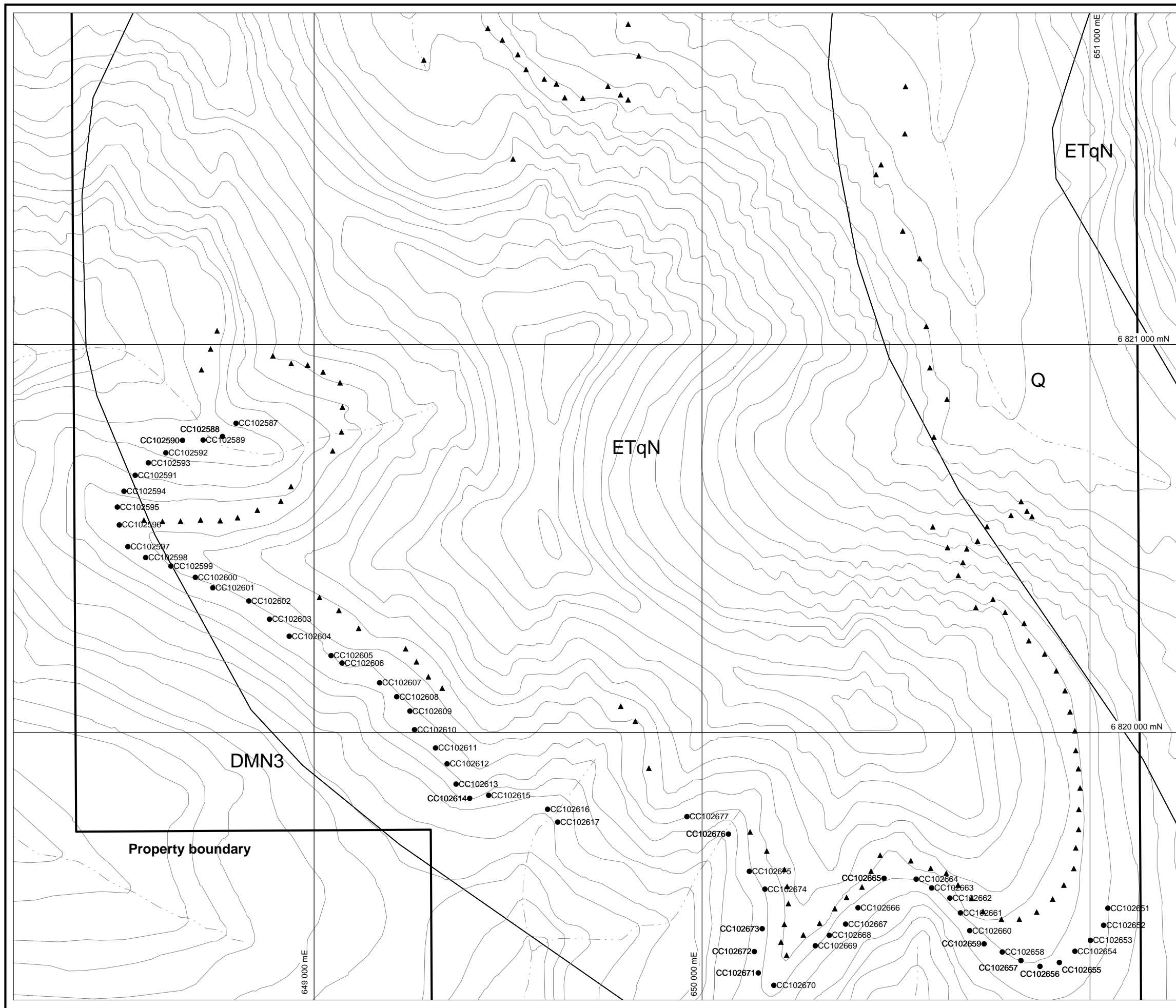
**Table II-Anomalous Thresholds**

<b>Element</b>	<b>Weak (ppm)</b>	<b>Moderate (ppm)</b>	<b>Strong (ppm)</b>	<b>Peak (ppm)</b>	<b>95<sup>TH</sup> Percentile* (ppm)</b>
Copper	>100 <200	>200 <500	>500	2300	118
Molybdenum	>5 <10	>10 <50	>50	595	3
Tungsten	>10 <20	>20 <50	>50	129	16
Tin	>10 <25	>25 <50	>50	127	16
Zinc	>200 <500	>500 <1000	>1000	1380	298

\*Stream sediment samples (Friske *et al.*, 1986)

One hundred and fifteen contour soil samples were collected during the 2008 program. A relatively high proportion of the soil samples returned strongly anomalous values for copper, molybdenum, tungsten and tin and moderately anomalous values for gold. Three areas hosting anomalous values were identified (Anomalies 1, 2 and 3).

In 2010, a total of 58 soil samples were taken along two contour lines in the southern part of the property (Figure 13). Results for gold, copper, molybdenum, tin, tungsten and zinc are plotted on Figures 14 to 19, respectively. Certificates of Analysis are in Appendix IV. All 2010 soil sample locations were recorded using hand-held GPS units. Sample sites are marked by aluminum tags inscribed with the sample numbers and affixed to 0.5 m wooden lath that were driven into the ground. Soil samples were dug using a geotul and material was collected from as deep in the soil profile as ground conditions allowed, which was typically about 30 cm depth. Samples were placed into individually pre-numbered Kraft paper bags. The soil samples were



- 2008 Soil sample location
- ▲ 2010 Soil sample location

**STRATEGIC METALS LTD.**

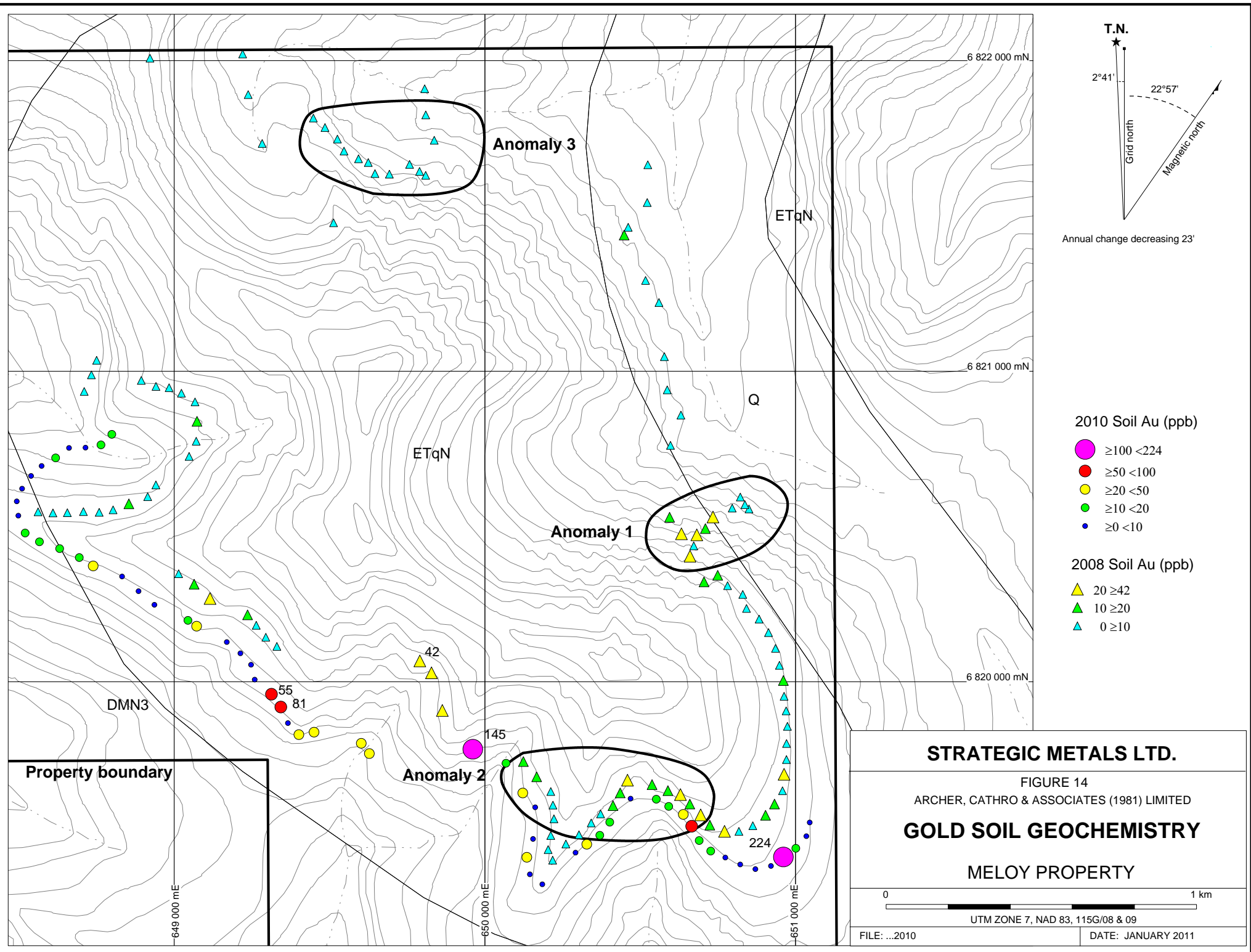
FIGURE 13  
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

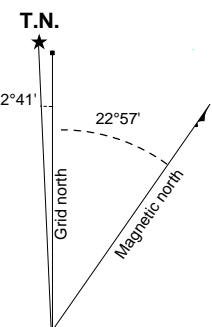
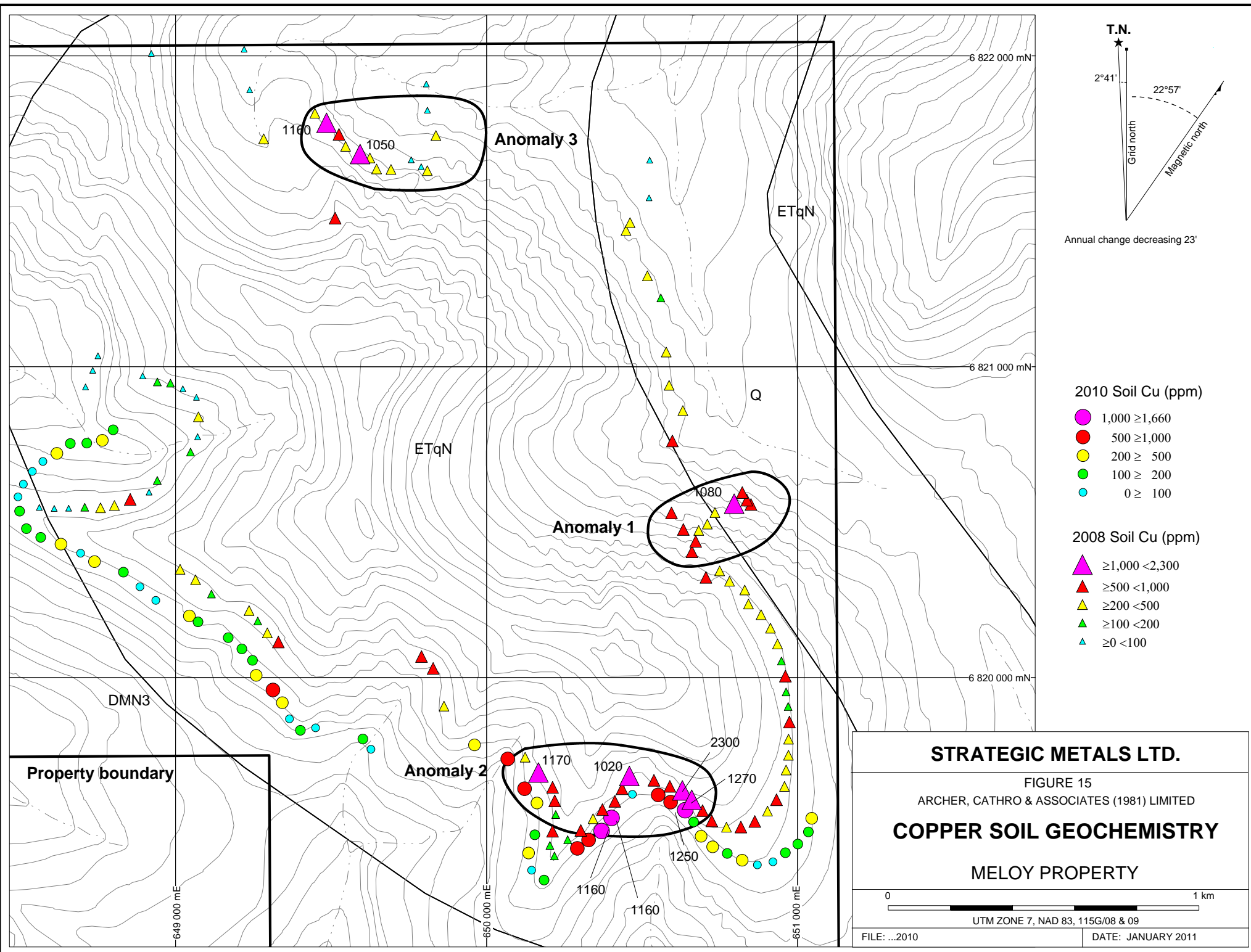
**SOIL SAMPLE LOCATIONS**

MELOY PROPERTY

UTM ZONE 7, NAD 83, 115G/08 & 09

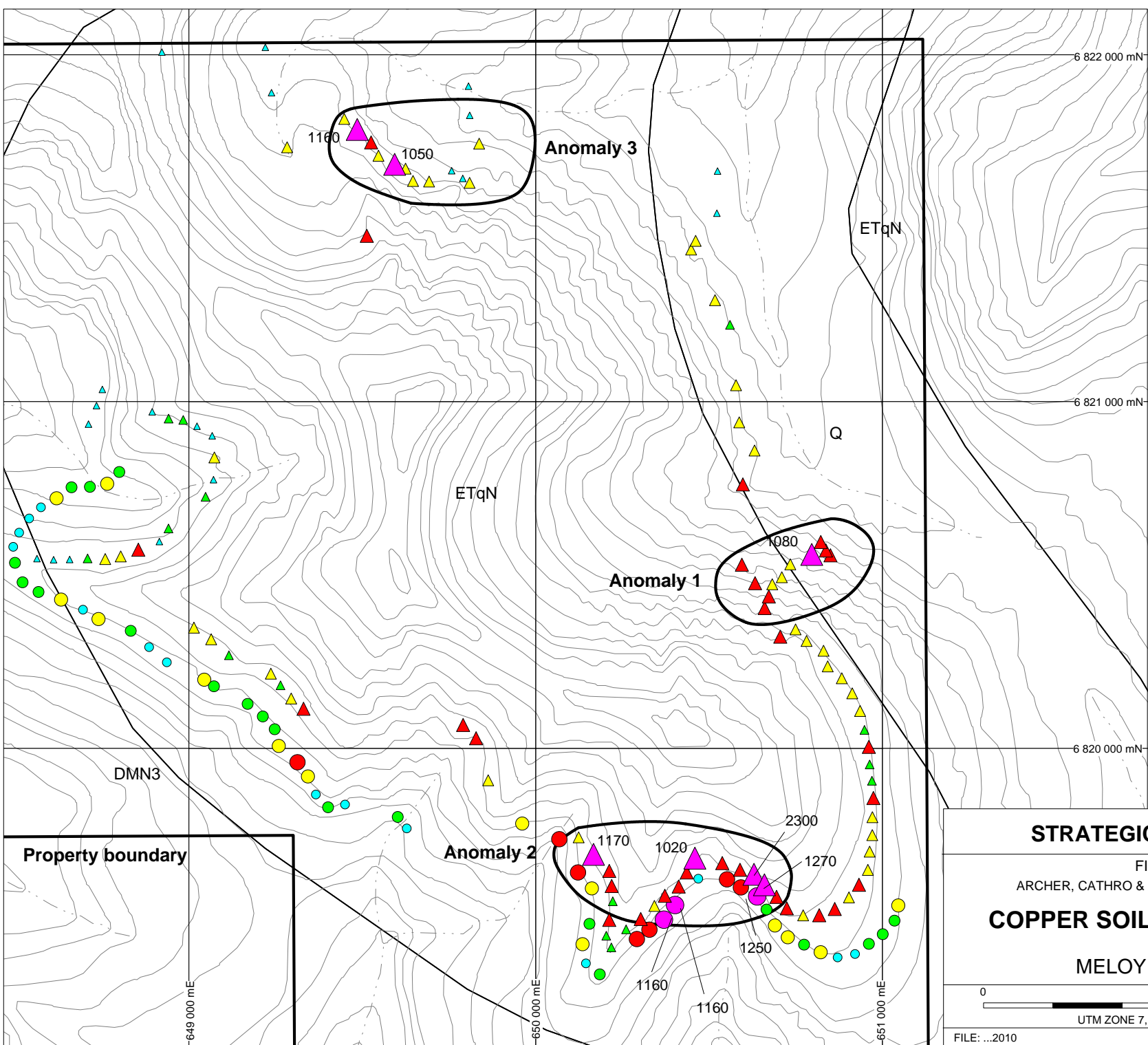
FILE: ...2010	DATE: JANUARY 2011
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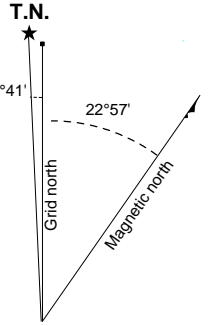
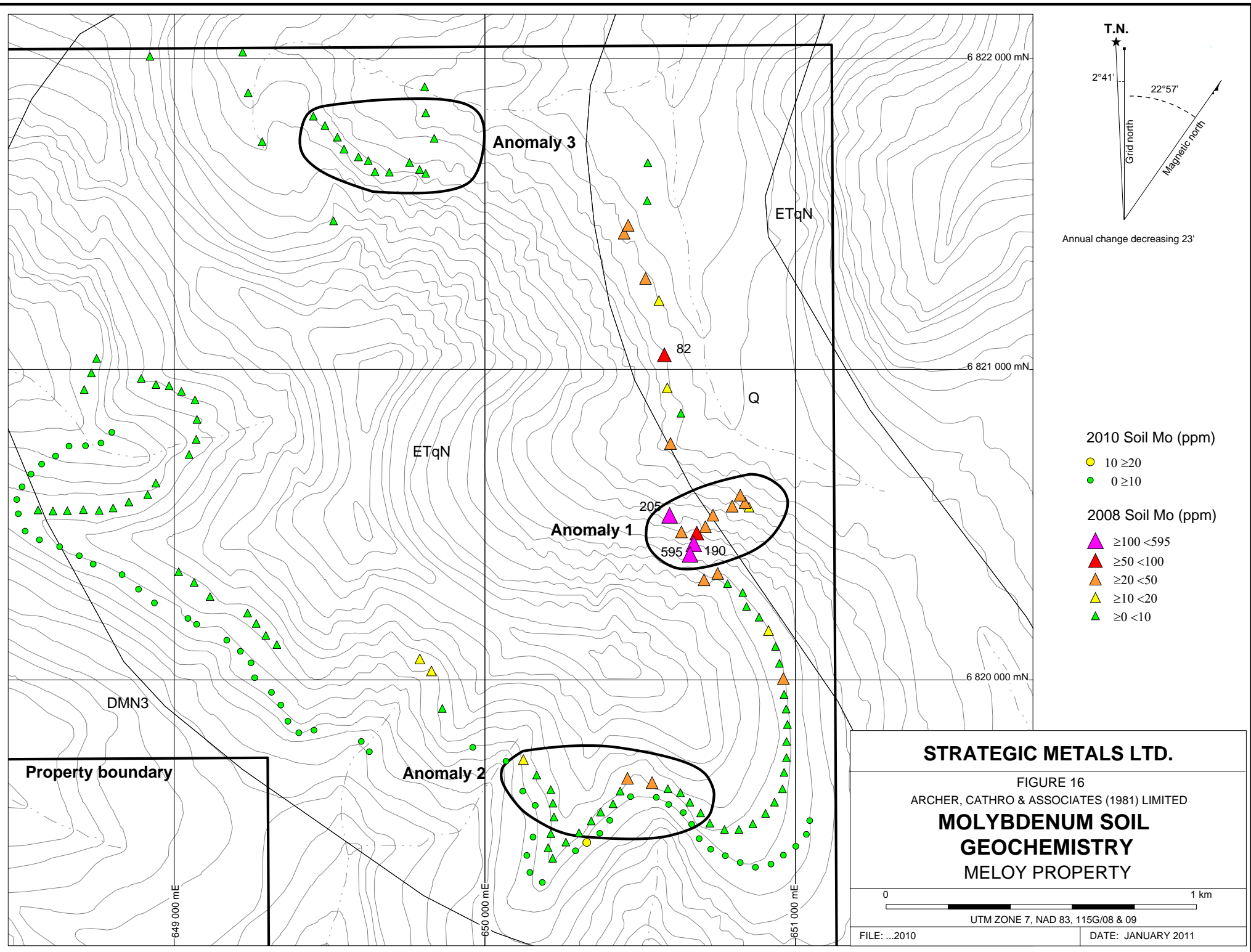




- 2010 Soil Cu (ppm)**
- 1,000 ≥ 1,660
  - 500 ≥ 1,000
  - 200 ≥ 500
  - 100 ≥ 200
  - 0 ≥ 100
- 2008 Soil Cu (ppm)**
- ▲ ≥ 1,000 < 2,300
  - ▲ ≥ 500 < 1,000
  - ▲ ≥ 200 < 500
  - ▲ ≥ 100 < 200
  - ▲ ≥ 0 < 100

Property boundary





Annual change decreasing 23'

2010 Soil Mo (ppm)

- 10 ≥ 20
- 0 ≥ 10

2008 Soil Mo (ppm)

- ▲ ≥ 100 < 595
- ▲ ≥ 50 < 100
- ▲ ≥ 20 < 50
- ▲ ≥ 10 < 20
- ▲ ≥ 0 < 10

Anomaly 3

Anomaly 1

Anomaly 2

Property boundary

DMN3

ETqN

ETqN

Q

205

595

190

82

6 822 000 mN

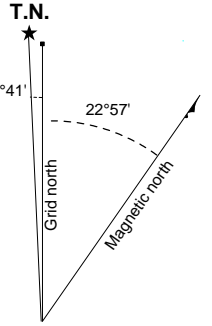
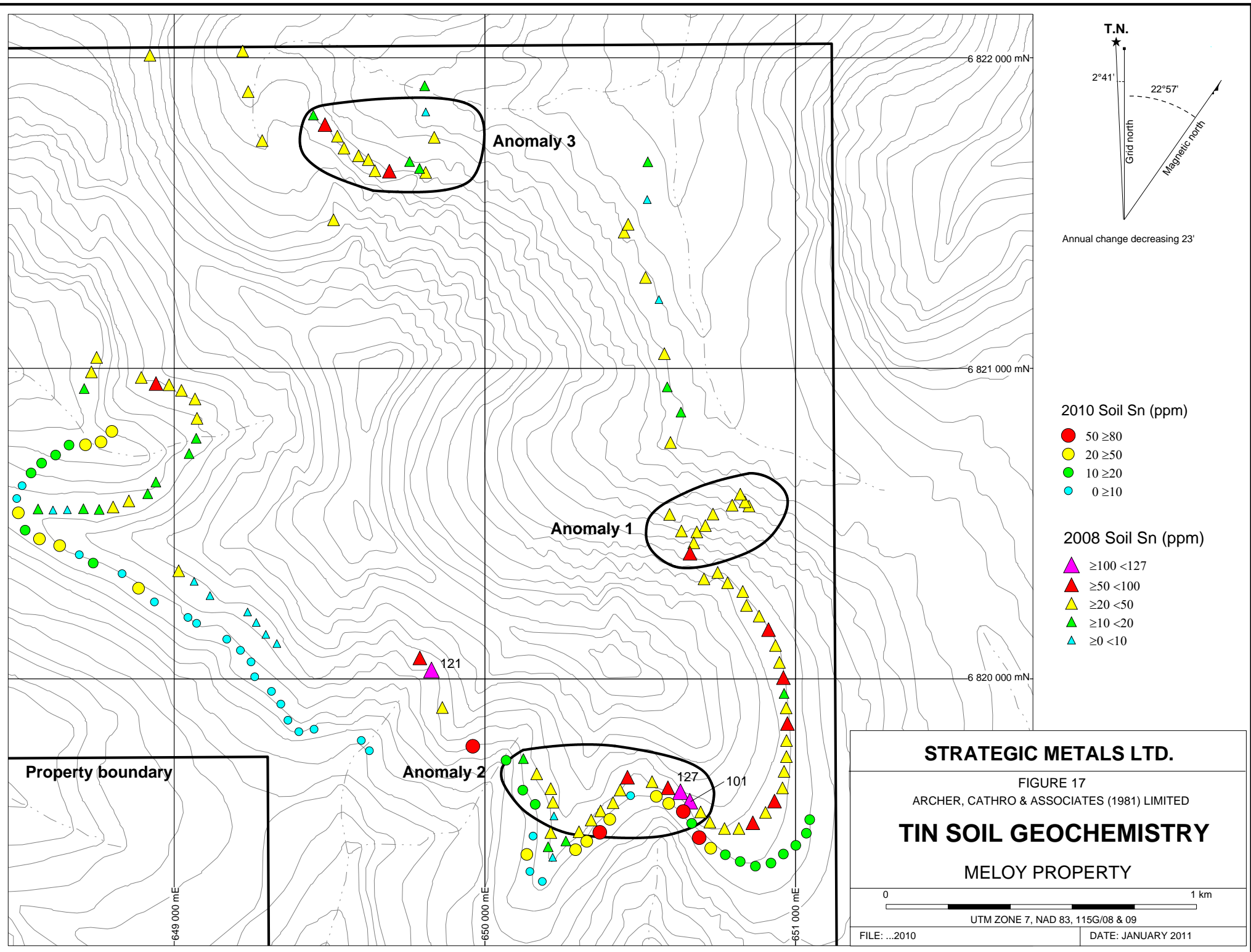
6 821 000 mN

6 820 000 mN

649 000 mE

650 000 mE

651 000 mE



Annual change decreasing 23'

2010 Soil Sn (ppm)

- 50 ≥ 80
- 20 ≥ 50
- 10 ≥ 20
- 0 ≥ 10

2008 Soil Sn (ppm)

- ▲ ≥ 100 < 127
- ▲ ≥ 50 < 100
- ▲ ≥ 20 < 50
- ▲ ≥ 10 < 20
- ▲ ≥ 0 < 10

Anomaly 3

Anomaly 1

Anomaly 2

Property boundary

121

127

101

6 822 000 mN

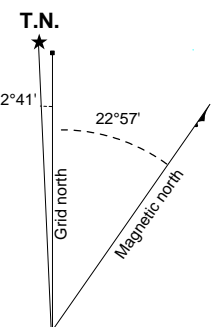
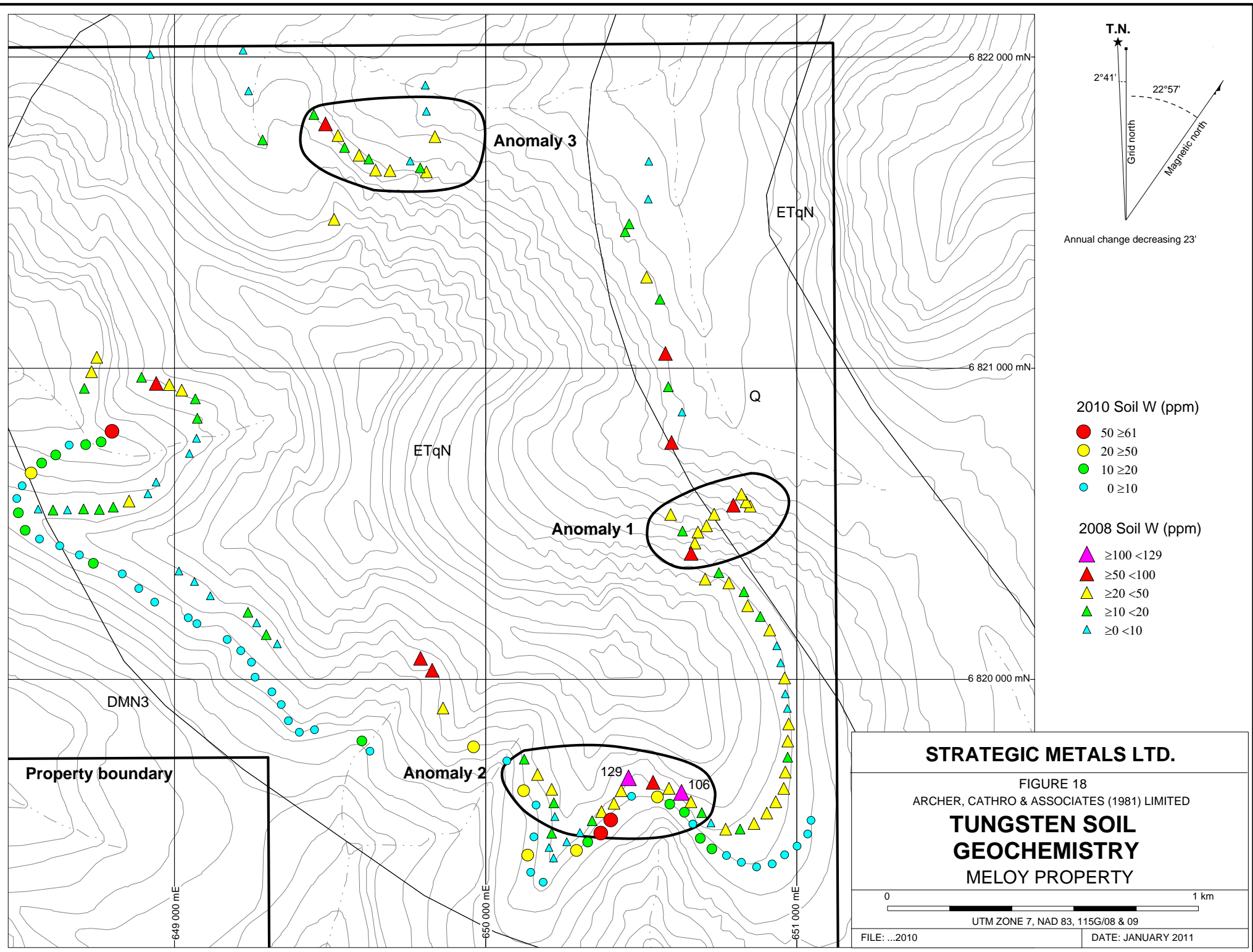
6 821 000 mN

6 820 000 mN

649 000 mE

650 000 mE

651 000 mE



2010 Soil W (ppm)

- 50 ≥ 61
- 20 ≥ 50
- 10 ≥ 20
- 0 ≥ 10

2008 Soil W (ppm)

- ▲ ≥ 100 < 129
- ▲ ≥ 50 < 100
- ▲ ≥ 20 < 50
- ▲ ≥ 10 < 20
- ▲ ≥ 0 < 10

Anomaly 3

Anomaly 1

Anomaly 2

129

106

Property boundary

DMN3

ETqN

ETqN

Q

6 822 000 mN

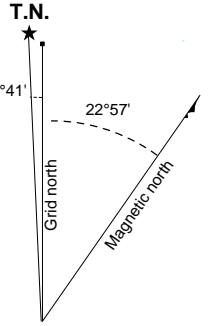
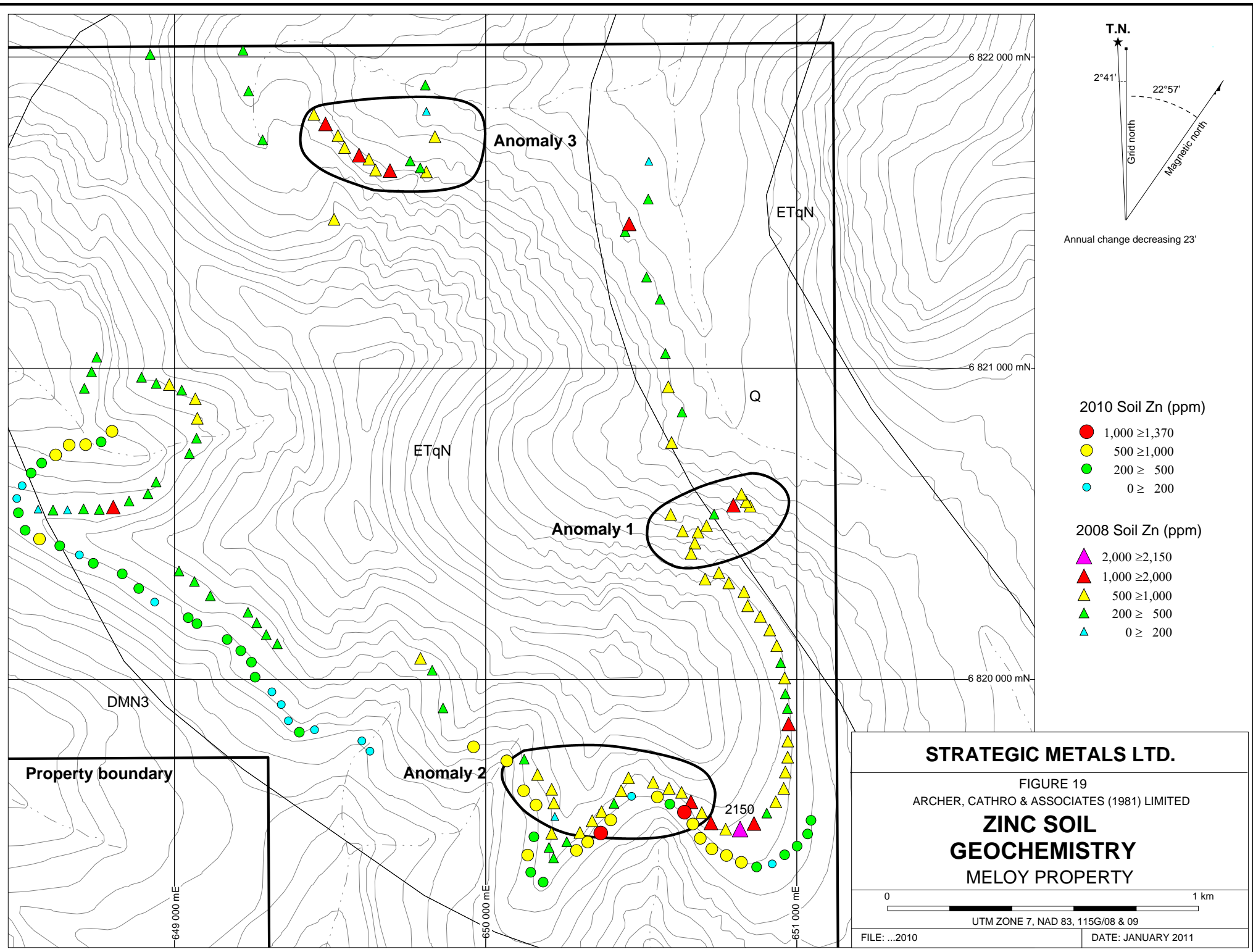
6 821 000 mN

6 820 000 mN

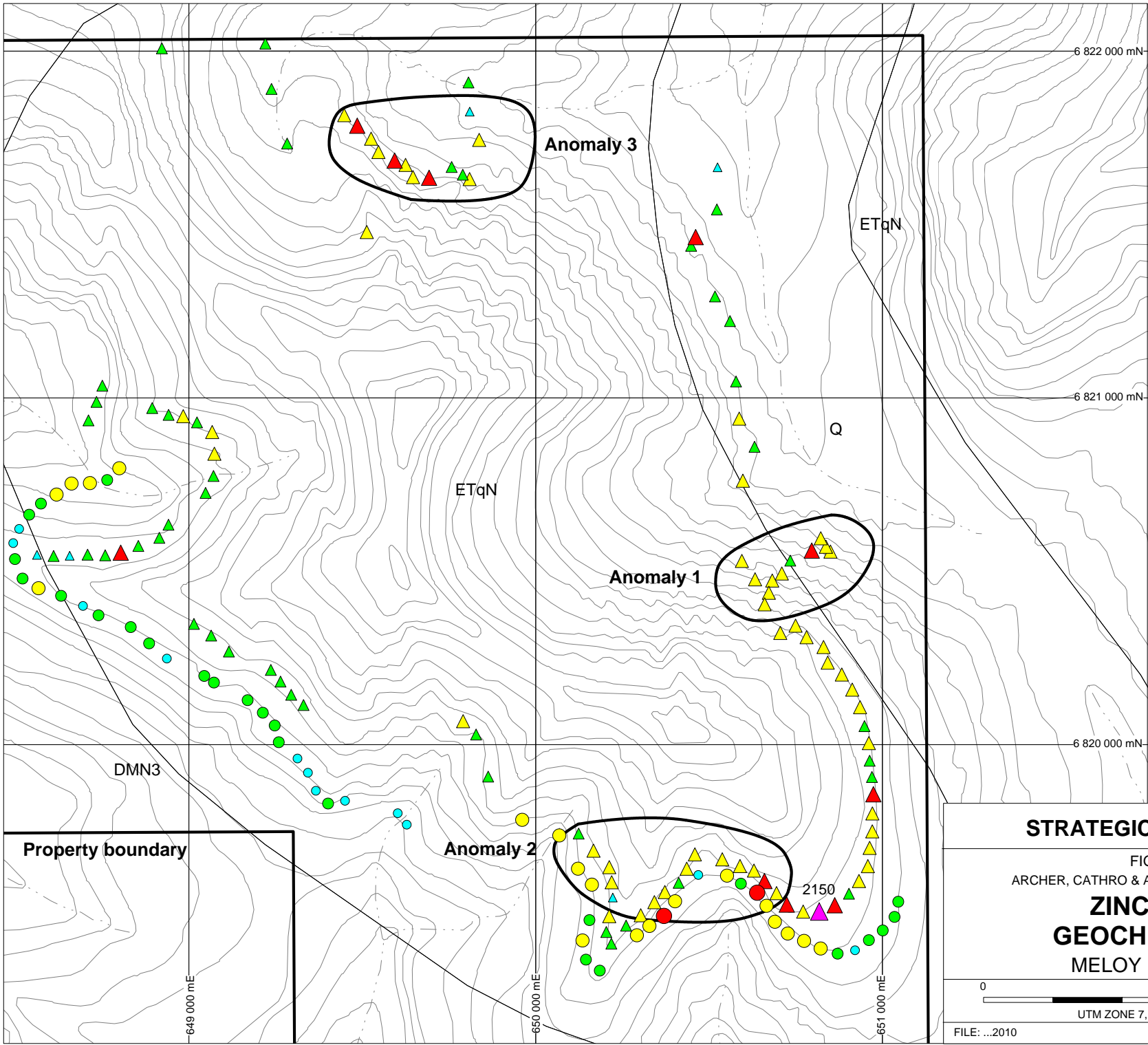
649 000 mE

650 000 mE

651 000 mE



- 2010 Soil Zn (ppm)**
- 1,000 ≥ 1,370
  - 500 ≥ 1,000
  - 200 ≥ 500
  - 0 ≥ 200
- 2008 Soil Zn (ppm)**
- ▲ 2,000 ≥ 2,150
  - ▲ 1,000 ≥ 2,000
  - ▲ 500 ≥ 1,000
  - ▲ 200 ≥ 500
  - ▲ 0 ≥ 200



sent to ALS Chemex, where they were dried and screened to minus 180 microns. One split of the screened fraction were dissolved in aqua regia and analyzed for 38 elements by ME-MS81. An additional 50 g charge was further analysed for gold by fire assay with inductively coupled plasma-atomic emissions spectroscopy finish (Au-AA24).

Anomaly 1 comprises 12 samples in an area roughly 250 m long and 200 m wide, which coincides with showings in Cluster B. This area is characterized by high molybdenum and copper values with moderate tungsten, gold and zinc response. All of the moderately to strongly anomalous molybdenum results from the property lie within this anomaly. The three best molybdenum values are 190, 205 and 595 ppm. The highest copper value from this anomaly is 1080 ppm.

Anomaly 2 comprises a 450 m long zone of anomalous results that approximately coincide with Cluster C. This zone hosts four of the seven highest copper values on the property including the peak value of 2300 ppm. It also has the two highest tungsten values (109 and 129 ppm). The most anomalous zinc value (2150 ppm) lies immediately east of this anomaly.

Anomaly 3 consists of contour samples from the valley that hosts Cluster D. Copper is the only element that shows strongly anomalous values. Tungsten, tin and zinc analyses returned moderate values.

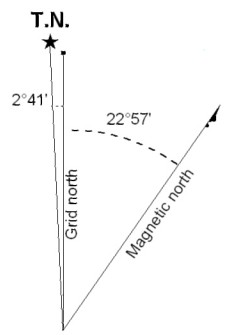
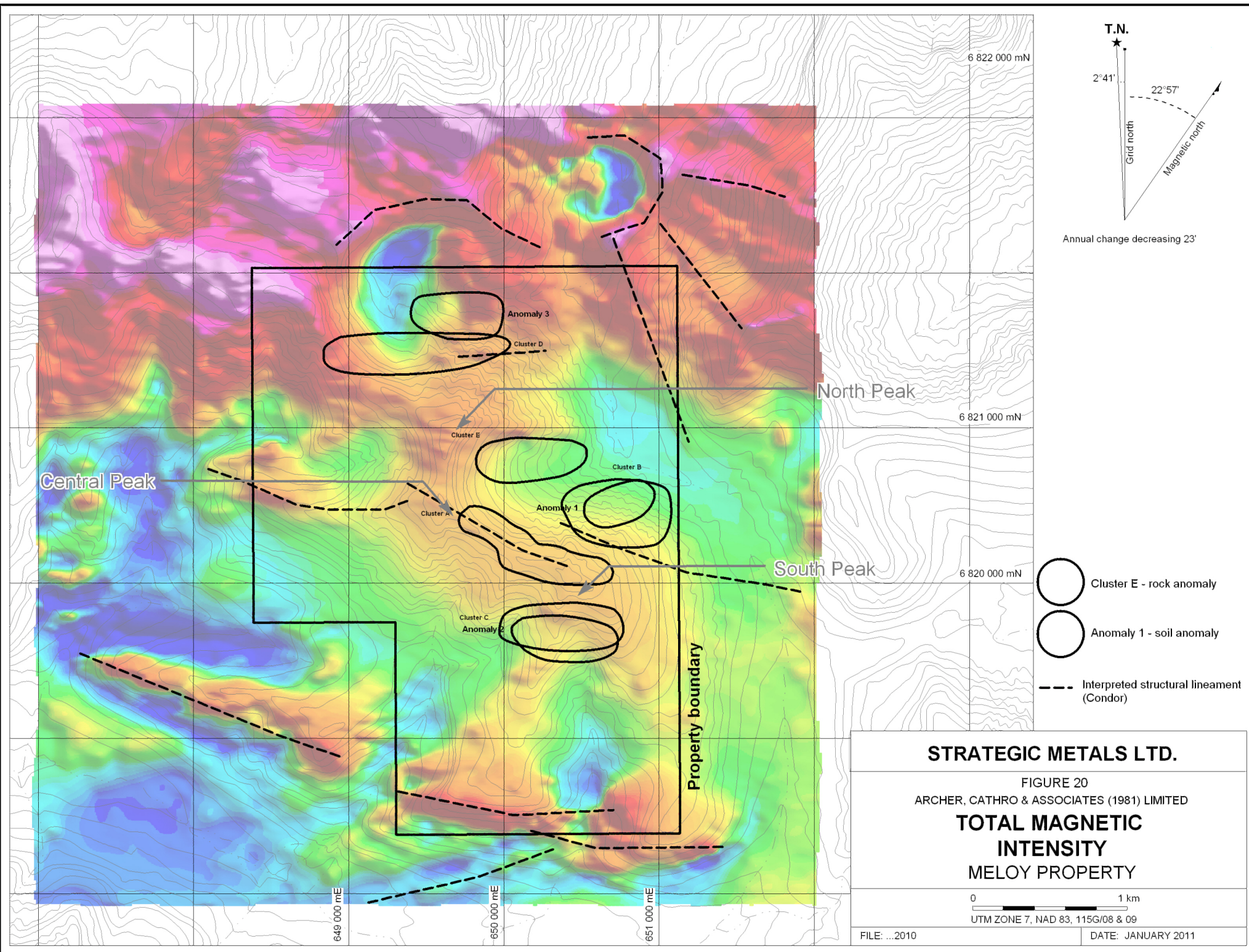
The contour soil sampling performed in 2010 in part duplicated the soil sampling performed in 2008. In general, 2010 sampling yielded weaker soil geochemical values with the exception of gold. Previous sampling yielded a maximum gold value of 42 ppb while the maximum value from 2010 sampling was 224 ppb gold. Four other samples yielded greater than 50 ppb gold. The elevated gold values generally occur as single point anomalies; however, two consecutive samples returned 55 and 81 ppb, respectively. These anomalous gold-in-soil values occur in the southern part of the property. Additional moderately to strongly anomalous copper, tin, tungsten and zinc values were returned from Anomaly 2. Peak values from this anomaly were 1250 ppm copper, 80 ppm tin, 61 ppm tungsten and 1370 ppm zinc.

### **AIRBORNE GEOPHYSICAL SURVEYS**




In 2010, airborne magnetics and radiometric surveys were contracted to New-Sense Geophysics Ltd. of Markham, Ontario. Interpretation of the data collected was completed by Condor Consulting Inc. of Lakewood, Colorado.

A total of 293 line kilometres were flown over the Meloy property. Appendix V contains reports by New-Sense and Condor, which describe equipment and procedures that were used during the surveys and interpreted results. CDs containing digital survey data are also attached to this report.

Figure 20 illustrates total field magnetics with interpreted structural lineaments identified by Condor. Anomalous geochemical samples, which define the Clusters and Anomalies described in previous sections, transcend boundaries between magnetic highs and lows. Due to the fact that the rock samples were rarely collected from bedrock, the source material may be from

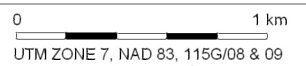


Annual change decreasing 23'

-  Cluster E - rock anomaly
-  Anomaly 1 - soil anomaly
-  Interpreted structural lineament (Condor)

**STRATEGIC METALS LTD.**

FIGURE 20  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**TOTAL MAGNETIC INTENSITY**  
 MELOY PROPERTY



moderately magnetic areas between the south, central and north peaks. There are two, circular magnetic lows immediately north of the property. This signature is favourable for porphyry deposit types. Condor recommends follow up work in the southern part of the claim block where strong east-west trending lineaments are interpreted.

### **DISCUSSION AND CONCLUSIONS**

The Meloy property hosts a number of structurally controlled copper-molybdenum-tungsten occurrences in quartz veins within alaskite of the Nisling Range Suite. Preliminary prospecting and soil sampling have identified five clusters of anomalous rock values, three of which have associated soil geochemical anomalies.

The Meloy property is unusual in that it exhibits a classic copper, gold and molybdenum geochemical signature with an overprint of tin, tungsten and zinc. Most mineralization is closely tied to a series of north-south trending linears. These linears are apparent on the peaks and main ridge but are likely obscured by thick talus in other areas. They host millimetre to centimetre thick, moderate to well mineralized quartz veins. A strong fracture set occurs orthogonal to the linears. These fractures host weak to moderate scorodite altered quartz veins. Relative timing of mineralization is not known as cross cutting relationships were not observed.

Further exploration is warranted at the Meloy property. Additional claims should be staked to cover the circular magnetic anomalies and the strong east-west trending lineaments that lie southwest of the property. The work program should consist of extensive and closer spaced soil geochemical coverage coupled with geological mapping and prospecting, followed by hand trenching.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

Heather Smith B.Sc. Geology, P.Geol.

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**APPENDIX I**  
**STATEMENT OF QUALIFICATIONS**

## **STATEMENT OF QUALIFICATIONS**

I, Heather Smith, geologist, with business addresses in Vancouver, British Columbia and Whitehorse, Yukon Territory and residential address at #604-175 West 1 Street, North Vancouver, British Columbia, V7M 3N9 do hereby certify that:

1. I graduated from the University of British Columbia in 2006 with a B. Sc in Geological Sciences.
2. From 2004 to present, I have been actively engaged in mineral exploration in the Yukon Territory, British Columbia and Northwest Territories.
3. I am a Professional Geoscientist (P. Geo.) with the Association of Professional Engineers and Geoscientists of British Columbia (Member Number 150000).
4. I have personally directed the fieldwork reported herein and have interpreted all data resulting from this work.

Heather Smith, B.Sc., P.Geo.

**APPENDIX II**  
**SAMPLE AND ANALYTICAL PROCEDURES**

## **Rock Geochemical Samples**

All rock sample sites in 2010 were marked with orange flagging tape labelled with the sample number. The location of each sample was determined using a handheld GPS unit. All samples sent for shipment were double bagged with pre-numbered sample tags placed in the bags.

The rock samples were submitted to ALS Chemex in North Vancouver, British Columbia where they were dried and fine crushed to -2 mm. A 250 g split was then pulverized to 75 micron and a portion of this material was digested in aqua regia before being analyzed for 38 elements by lithium metaborate fusion technique (ME-MS81). All rock samples were then analyzed for gold using fire assay technique (AU-AA24). Samples were further analyzed for tin and tungsten using pressed pellet X-Ray Fluorescence (XRF) technique. This technique requires a finely ground sample powder (20g minimum) to be mixed with a few drops of liquid binder, which is compressed in a pellet press and then analyzed by XRF spectrometry (Sn-XRF-05 and W-XRF-05).

**APPENDIX III**  
**ROCK SAMPLE DESCRIPTIONS**

---

**Rock Sample Descriptions**Project: Meloy Property: Meloy

---

Sample Number:	Grid East:	E	Grid North:	N	Type: Specimen	Dimension: 20 x 12 x 30 cm
C491995	UTM:	650359 E	UTM:	6820803 N	Sample Width:	Abundance:
	Elevation:	m				

Comments: Specimen sample from cat-flattened area. Quartz vein with < 1 cm bands of fine grained black material - soft - wolframite? Vein hosts abundant disseminated chalcopyrite.

---

Sample Number:	Grid East:	E	Grid North:	N	Type: Specimen	Dimension: 30 x 16 x 10 cm
C491996	UTM:	650446 E	UTM:	6820857 N	Sample Width:	Abundance:
	Elevation:	m				

Comments: Specimen sample from cat road. Monzonite to dunite- intermediate to mafic intrusive composition. Medium to coarse grained, dull brown-rusty surface. Biotite-hornblende-quartz- feldspar with abundant disseminated chalcopyrite and fracture coatings.

---

Sample Number:	Grid East:	E	Grid North:	N	Type: Composite	Dimension: 5 pc / 3 m
C491997	UTM:	650343 E	UTM:	6820811 N	Sample Width:	Abundance:
	Elevation:	m				

Comments: From original blast area - in hole. Composite sample of 5 pc/3 m. Alaskite with 2 cm grey-white quartz vein with molybdenum rosettes <0.75 cm.

---

Sample Number:	Grid East:	E	Grid North:	N	Type: Specimen	Dimension: 5 x 10 x 22 cm
C491998	UTM:	650350 E	UTM:	6820760 N	Sample Width:	Abundance:
	Elevation:	m				

Comments: From end of cat road. Quartz vein with fine grained wolframite crystals.

---

Sample Number:	Grid East:	E	Grid North:	N	Type: Specimen	Dimension: 25 x 30 x 15 cm
C491999	UTM:	650296 E	UTM:	6820771 N	Sample Width:	Abundance:
	Elevation:	m				

Comments: Specimen from float. Alaskite in contact with fine grained, ultramafic diabase dyke. Both are cut horizontally by 1 cm quartz vein with bornite <0.5cm blebs.

---

Sample Number:	Grid East:	E	Grid North:	N	Type: Specimen	Dimension: 45 x 12 x 30 cm
C492000	UTM:	650256 E	UTM:	6820787 N	Sample Width:	Abundance:
	Elevation:	m				

Comments: Specimen from telus. Silicified grey quartz vein with laminar fractures and abundant mineralization. Chalcopyrite, bornite and wolframite. Fine grained, semi banded and poddy mineralization.

---

**Rock Sample Descriptions**Project: Meley Property: Meley

---

Sample Number: G285861    Grid East: E    Grid North: N    Type: Composite    Dimension:  
UTM: 650079 E    UTM: 6820877 N    Sample Width: 2 pc/ 1 m    Abundance:  
Elevation: m

Comments: Composite chip directly below outcrop of alaskite. Sample of alaskite cut by 1 to 5 cm wide quartz vein with molybdenum mineralization.

---

Sample Number: G285862    Grid East: E    Grid North: N    Type: Bedrock    Dimension:  
UTM: 649956 E    UTM: 6820850 N    Sample Width: 10 x 20 cm    Abundance:  
Elevation: m

Comments: Sample from the larger of two parallel quartz veins cutting Alaskite. Vein is heavily mineralized with molybdenum rosettes. Orientation of vein: 202/42NW. Vein appears to pinch and swell.

---

Sample Number: G285863    Grid East: E    Grid North: N    Type: Bedrock    Dimension:  
UTM: 649908 E    UTM: 6820814 N    Sample Width: 61 cm    Abundance:  
Elevation: m

Comments: Sample from bedrock. Quartz-arsenopyrite-scorodite vein (21 cm) with 20 cm envelopes on each side of vein. Envelopes host maroon oxidation surface. Orientation: 214/40 NW

---

Sample Number: G285864    Grid East: E    Grid North: N    Type: Chip    Dimension:  
UTM: 649874 E    UTM: 6820804 N    Sample Width: 1.5 m    Abundance:  
Elevation: m

Comments: Chip sample across bedrock. 1.5 m of crystalline quartz-arsenopyrite-scorodite vein with rare blebby chalcopyrite. Hosted in Alaskite. Three veins within 20 m, all parallel. Distinct maroon weathering surface. Orientation: 200/64 NW

---

Sample Number: G285865    Grid East: E    Grid North: N    Type: Specimen    Dimension:  
UTM: 649949 E    UTM: 6820710 N    Sample Width:    Abundance:  
Elevation: m

Comments: Specimen of talus. Laminated quartz vein with moderate to heavy chalcopyrite, molybdenum and wolframite (fine grained?). Mineralization all occurs as < 4 mm bands parallel to lamination.

---

Sample Number:    Grid East: E    Grid North: N    Type:    Dimension:  
UTM: E    UTM: N    Sample Width:    Abundance:  
Elevation: m

Comments:

---

---

**Rock Sample Descriptions**Project: MeloyProperty: Meloy

---

Sample Number:    Grid East:            E    Grid North:            N            Type:            Dimension:  
  UTM:                    E            UTM:                    N    Sample Width:            Abundance:  
  Elevation:            m

Comments:

---

Sample Number:    Grid East:            E    Grid North:            N            Type:            Dimension:  
  UTM:                    E            UTM:                    N    Sample Width:            Abundance:  
  Elevation:            m

Comments:

---

Sample Number:    Grid East:            E    Grid North:            N            Type:            Dimension:  
  UTM:                    E            UTM:                    N    Sample Width:            Abundance:  
  Elevation:            m

Comments:

---

Sample Number:    Grid East:            E    Grid North:            N            Type:            Dimension:  
  UTM:                    E            UTM:                    N    Sample Width:            Abundance:  
  Elevation:            m

Comments:

---

Sample Number:    Grid East:            E    Grid North:            N            Type:            Dimension:  
  UTM:                    E            UTM:                    N    Sample Width:            Abundance:  
  Elevation:            m

Comments:

---

Sample Number:    Grid East:            E    Grid North:            N            Type:            Dimension:  
  UTM:                    E            UTM:                    N    Sample Width:            Abundance:  
  Elevation:            m

Comments:

---

**APPENDIX IV**  
**CERTIFICATES OF ANALYSIS**



ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **STRATEGIC METALS LTD.**  
**C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**  
**1016- 510 W HASTINGS ST**  
**VANCOUVER BC V6B 1L8**

**Page: 1**  
**Finalized Date: 17- JAN- 2011**  
**Account: MTT**

**CERTIFICATE VA11007247**


Project: MELOY  
 P.O. No.:  
 This report is for 5 Rock samples submitted to our lab in Vancouver, BC, Canada on 13- JAN- 2011.  
 The following have access to data associated with this certificate:  
 JOAN MARIACHER                      BILL WENZYNOWSKI

<b>SAMPLE PREPARATION</b>	
ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

<b>ANALYTICAL PROCEDURES</b>		
ALS CODE	DESCRIPTION	INSTRUMENT
Mo- OG46	Ore Grade Mo - Aqua Regia	VARIABLE
Zn- OG46	Ore Grade Zn - Aqua Regia	VARIABLE
Cu- OG46	Ore Grade Cu - Aqua Regia	VARIABLE
ME- OG46	Ore Grade Elements - AquaRegia	ICP- AES

To: **STRATEGIC METALS LTD.**  
**ATTN: JOAN MARIACHER**  
**C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**  
**1016- 510 W HASTINGS ST**  
**VANCOUVER BC V6B 1L8**

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

**Signature:**   
 Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.  
 2103 Dollarton Hwy  
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Page: 2 - A  
 Total # Pages: 2 (A)  
 Finalized Date: 17- JAN- 2011  
 Account: MTT

Project: MELOY

**CERTIFICATE OF ANALYSIS VA11007247**

Sample Description	Method Analyte Units LOR	Cu- OG46	Mo- OG46	Zn- OG46
		Cu %	Mo %	Zn %
		0.001	0.001	0.001
C491996		1.760		
C491999		2.10		
C492000				3.96
G285862			2.79	
G285865		2.27		9.42



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**1016- 510 W HASTINGS ST**  
**VANCOUVER BC V6B 1L8**

Page: 1  
 Finalized Date: 12- SEP- 2010  
 Account: MTT

**CERTIFICATE VA10129084**


Project: MELOY  
 P.O. No.:  
 This report is for 11 Rock samples submitted to our lab in Vancouver, BC, Canada on 10- SEP- 2010.  
 The following have access to data associated with this certificate:  
 JOAN MARIACHER                      BILL WENZYNOWSKI

<b>SAMPLE PREPARATION</b>	
ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

<b>ANALYTICAL PROCEDURES</b>		
ALS CODE	DESCRIPTION	INSTRUMENT
ME- XRF05	Trace Level XRF Analysis	XRF

To: **STRATEGIC METALS LTD.**  
**ATTN: JOAN MARIACHER**  
**C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**  
**1016- 510 W HASTINGS ST**  
**VANCOUVER BC V6B 1L8**

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

**Signature:**   
 Colin Ramshaw, Vancouver Laboratory Manager



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 VANCOUVER BC V6B 1L8

Page: 2 - A  
 Total # Pages: 2 (A)  
 Finalized Date: 12- SEP- 2010  
 Account: MTT

Project: MELOY

**CERTIFICATE OF ANALYSIS VA10129084**

Sample Description	Method Analyte Units LOR	ME- XRF05 W ppm 10
C491995		430
C491996		80
C491997		10
C491998		40
C491999		180
C492000		3380
G285861		10
G285862		30
G285863		30
G285864		160
G285865		1740



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Page: 1  
 Finalized Date: 31- AUG- 2010  
 Account: MTT

**CERTIFICATE VA10116081**


Project: MELOY  
 P.O. No.:  
 This report is for 11 Rock samples submitted to our lab in Vancouver, BC, Canada on 18- AUG- 2010.  
 The following have access to data associated with this certificate:  
 JOAN MARIACHER                      BILL WENZYNOWSKI

<b>SAMPLE PREPARATION</b>	
ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

<b>ANALYTICAL PROCEDURES</b>		
ALS CODE	DESCRIPTION	INSTRUMENT
Sn- XRF05	Sn- Trace Level XRF Analysis	XRF

To: **STRATEGIC METALS LTD.**  
**ATTN: JOAN MARIACHER**  
**C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**  
**1016- 510 W HASTINGS ST**  
**VANCOUVER BC V6B 1L8**

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

**Signature:**   
 Colin Ramshaw, Vancouver Laboratory Manager



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 Account: MTT

Project: MELOY

**CERTIFICATE OF ANALYSIS VA10116081**

Sample Description	Method Analyte Units LOR	Sn- XRF05 Sn ppm 5
C491995		120
C491996		200
C491997		42
C491998		36
C491999		22
C492000		97
G285861		13
G285862		26
G285863		105
G285864		150
G285865		322



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Page: 1  
 Finalized Date: 17- AUG- 2010  
 Account: MTT

**CERTIFICATE VA10106007**

Project: Meloy  
 P.O. No.:  
 This report is for 58 Soil samples submitted to our lab in Vancouver, BC, Canada on 3- AUG- 2010.  
 The following have access to data associated with this certificate:  
 JOAN MARIACHER                      BILL WENZYNOWSKI

<b>SAMPLE PREPARATION</b>	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
SCR- 41	Screen to - 180um and save both

<b>ANALYTICAL PROCEDURES</b>		
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS81	38 element fusion ICP- MS	ICP- MS

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

**Signature:**   
 Colin Ramshaw, Vancouver Laboratory Manager



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 Account: MTT

Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Sample Description	Method Analyte Units LOR	WEI- 21	Au- AA24	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81
		Recvd Wt. kg	Au ppm	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm
		0.02	0.005	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2
CC102587		0.26	0.011	1	500	288	8.6	30	12.15	122	23.0	12.75	1.45	30.4	29.1	32.3
CC102588		0.22	0.011	1	502	165.5	9.0	30	8.68	223	14.55	8.25	1.20	27.9	17.55	23.6
CC102589		0.24	0.006	1	650	171.0	13.2	50	32.6	156	14.95	8.34	1.39	25.8	18.15	16.3
CC102590		0.18	0.006	1	571	199.0	12.8	50	7.27	145	12.15	6.99	1.19	26.2	15.65	25.3
CC102591		0.14	0.008	<1	542	88.8	15.9	50	6.84	93	7.30	4.19	1.45	21.9	9.34	7.8
CC102592		0.18	0.011	1	610	114.0	11.9	60	8.24	236	10.85	6.29	1.30	24.3	12.60	20.9
CC102593		0.22	0.007	<1	675	107.0	12.1	40	5.85	88	7.96	4.37	1.23	24.6	10.40	11.8
CC102594		0.18	0.005	<1	416	44.4	22.0	40	1.61	37	4.07	2.11	1.36	25.3	5.37	5.2
CC102595		0.16	0.007	<1	661	56.6	20.1	100	3.95	51	4.13	2.46	1.06	19.9	4.71	7.8
CC102596		0.14	0.005	<1	631	86.2	16.4	80	8.19	152	6.46	3.61	1.36	22.3	8.08	11.5
CC102597		0.16	0.010	1	605	118.0	14.6	80	5.42	172	8.68	5.30	1.23	24.8	10.45	19.0
CC102598		0.20	0.019	1	613	168.5	15.3	90	6.03	181	11.25	6.48	1.56	23.0	14.40	24.9
CC102599		0.30	0.015	1	572	138.5	12.4	50	12.40	229	10.60	5.91	1.22	26.1	12.80	18.8
CC102600		0.28	0.012	<1	509	68.8	18.3	40	2.98	97	5.95	3.31	1.22	25.0	7.50	8.4
CC102601		0.22	0.026	1	612	149.5	15.3	70	10.65	248	14.90	8.60	1.58	27.2	17.35	22.7
CC102602		0.26	0.006	<1	445	80.0	9.9	50	4.49	119	8.22	4.93	1.09	19.6	9.20	8.1
CC102603		0.12	0.006	<1	475	95.0	11.0	60	4.03	78	6.22	3.79	0.83	19.9	7.11	10.5
CC102604		0.18	<0.005	<1	545	45.5	13.7	40	3.30	78	3.89	2.21	1.00	20.5	4.48	4.9
CC102605		0.18	0.013	1	452	63.9	8.3	50	7.98	215	5.93	3.50	0.82	20.1	6.57	7.3
CC102606		0.26	0.021	<1	401	84.8	6.6	40	7.69	163	7.78	4.45	0.75	21.4	8.40	8.7
CC102607		0.20	0.005	1	517	60.0	13.1	40	5.14	151	5.57	3.19	1.08	23.2	6.63	6.0
CC102608		0.26	0.007	1	542	86.7	7.5	30	8.94	186	6.40	3.72	0.70	20.5	7.19	5.9
CC102609		0.14	0.009	1	563	122.0	8.6	80	6.19	173	6.71	4.17	0.85	20.7	8.04	12.2
CC102610		0.30	<0.005	1	537	57.6	5.7	20	6.60	361	5.21	2.97	0.72	20.9	5.51	3.7
CC102611		0.24	0.055	2	466	82.8	7.1	50	4.96	521	6.39	3.80	0.81	20.5	7.06	9.4
CC102612		0.24	0.081	1	473	74.5	10.2	60	4.75	457	6.81	3.91	0.84	20.2	7.40	8.2
CC102613		0.18	0.005	<1	463	36.0	19.4	30	1.16	40	3.31	1.68	1.32	25.0	4.47	4.3
CC102614		0.30	0.025	<1	579	120.0	13.1	70	9.63	110	10.60	6.17	1.10	25.0	12.50	21.7
CC102615		0.22	0.021	<1	544	77.0	16.0	40	5.43	63	8.74	4.73	1.25	25.2	10.40	11.0
CC102616		0.22	0.020	<1	593	87.6	13.7	90	3.54	107	6.00	3.53	1.25	18.5	7.26	13.4
CC102617		0.16	0.020	<1	563	112.0	13.4	90	4.32	60	8.02	4.90	1.19	19.4	9.86	13.3
CC102651		0.20	0.008	1	601	143.5	12.8	70	8.72	287	11.10	6.46	1.41	26.5	14.00	18.7
CC102652		0.22	0.006	1	684	98.2	14.6	110	5.70	135	6.47	3.91	1.25	20.9	8.15	13.3
CC102653		0.24	0.012	<1	621	104.5	13.7	100	3.38	151	6.32	3.78	1.22	19.6	7.90	12.9
CC102654		0.24	0.224	1	564	102.5	10.5	70	5.02	145	6.52	3.71	1.05	25.5	7.94	10.6
CC102655		0.22	0.009	<1	574	55.5	12.4	70	4.64	83	4.99	3.07	0.98	20.0	5.31	8.5
CC102656		0.22	0.007	<1	699	50.5	15.7	90	5.32	63	4.71	2.98	0.98	21.9	4.78	7.5
CC102657		0.20	0.007	<1	565	120.0	12.5	80	6.00	240	8.72	5.03	1.25	21.9	10.75	16.8
CC102658		0.24	0.006	<1	614	113.0	10.1	60	7.07	101	6.94	4.22	0.92	24.7	8.09	13.4
CC102659		0.22	0.010	1	534	191.5	10.0	50	8.70	283	11.40	6.37	1.19	24.6	14.60	21.3



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 Total # Pages: 3 (A - C)  
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 Finalized Date: 17- AUG- 2010  
 Account: MTT

Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Sample Description	Method Analyte Units LOR	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81
		Ho ppm	La ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	Pb ppm	Pr ppm	Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm
CC102587		4.42	126.0	1.67	4	67.3	142.5	14	169	34.5	107.5	30.2	47	193.5	4.6	4.25
CC102588		2.85	73.2	1.23	5	46.2	79.0	14	61	19.95	111.5	17.45	20	252	3.4	2.58
CC102589		2.93	75.7	1.08	4	43.9	84.9	24	101	20.7	94.5	17.65	36	205	2.9	2.67
CC102590		2.41	92.8	1.00	3	36.6	85.3	21	53	23.1	83.6	16.55	19	229	2.6	2.22
CC102591		1.42	41.3	0.55	2	17.5	43.1	21	28	10.70	60.7	9.08	13	501	1.4	1.35
CC102592		2.14	52.3	0.88	3	31.1	57.1	20	42	14.35	85.9	12.85	19	242	2.3	1.88
CC102593		1.49	47.3	0.62	3	23.9	51.9	19	34	13.00	85.1	10.60	16	280	1.7	1.44
CC102594		0.77	18.6	0.26	<2	9.2	25.1	25	8	5.82	27.4	5.56	3	884	0.7	0.75
CC102595		0.84	24.2	0.37	4	14.8	24.1	37	25	6.22	66.8	4.80	5	208	1.2	0.70
CC102596		1.24	39.6	0.55	3	17.1	37.8	32	57	9.81	60.9	8.07	21	322	1.3	1.12
CC102597		1.78	48.2	0.78	3	31.4	50.5	29	27	12.75	71.8	10.70	10	209	2.1	1.55
CC102598		2.27	70.9	0.96	3	33.2	70.4	31	29	18.30	70.7	14.15	20	269	2.4	2.01
CC102599		2.14	59.3	0.86	3	40.0	62.6	18	36	15.80	107.5	13.55	28	259	2.4	1.89
CC102600		1.17	28.4	0.43	3	15.4	34.7	24	15	8.11	46.1	7.71	6	667	1.1	1.05
CC102601		2.96	58.0	1.18	4	42.4	75.4	34	27	17.90	102.0	17.25	11	210	2.8	2.64
CC102602		1.66	36.9	0.67	<2	15.5	39.9	23	23	9.96	92.4	8.84	7	278	1.5	1.39
CC102603		1.27	41.7	0.58	3	16.3	37.5	25	26	10.10	97.1	7.38	20	232	1.8	1.08
CC102604		0.75	19.0	0.31	2	9.8	20.3	23	29	5.04	61.9	4.42	5	466	1.0	0.69
CC102605		1.17	27.6	0.52	2	13.1	27.7	20	20	7.18	106.5	6.32	8	216	1.5	1.05
CC102606		1.53	37.7	0.64	<2	15.2	37.5	16	22	9.85	121.5	8.19	5	134.0	1.8	1.27
CC102607		1.09	26.3	0.43	2	12.8	29.0	23	23	7.12	76.2	6.39	5	516	1.3	0.96
CC102608		1.28	35.1	0.53	2	15.5	32.9	21	29	8.54	128.0	6.73	6	155.5	1.9	1.10
CC102609		1.39	48.7	0.64	3	15.0	42.0	32	25	11.45	99.4	8.20	6	172.5	1.7	1.16
CC102610		1.06	22.6	0.39	2	10.8	23.1	13	25	5.92	130.0	5.54	6	212	1.4	0.88
CC102611		1.28	36.0	0.56	<2	12.8	35.1	18	19	9.04	112.5	7.25	6	165.0	1.5	1.05
CC102612		1.31	29.7	0.52	<2	16.7	30.1	24	18	7.80	101.0	7.03	4	191.5	1.7	1.22
CC102613		0.61	15.5	0.21	<2	7.0	20.8	21	6	4.59	27.9	4.76	2	1010	0.6	0.62
CC102614		2.08	48.6	0.88	7	34.7	56.4	26	20	13.75	109.0	12.50	8	195.5	2.5	1.89
CC102615		1.73	32.8	0.61	4	20.7	42.9	24	11	9.98	77.0	10.30	4	515	1.5	1.50
CC102616		1.19	40.6	0.53	4	16.0	38.4	32	13	10.05	62.9	7.53	4	280	1.4	1.05
CC102617		1.62	47.6	0.67	8	17.1	49.9	32	18	12.50	66.0	10.55	4	266	1.5	1.45
CC102651		2.22	61.9	0.92	2	33.8	67.4	25	48	16.60	92.0	14.35	17	219	2.5	2.03
CC102652		1.28	40.2	0.56	2	20.8	40.8	34	59	10.25	69.7	8.33	12	252	1.6	1.14
CC102653		1.25	47.9	0.55	2	20.9	43.2	32	30	11.45	59.0	8.16	10	265	1.6	1.14
CC102654		1.28	48.3	0.51	5	17.4	44.3	25	37	12.25	81.6	8.97	10	216	1.3	1.19
CC102655		1.04	26.7	0.45	4	19.2	25.5	28	29	6.80	72.2	5.58	10	254	1.5	0.84
CC102656		0.96	23.7	0.45	4	19.9	23.3	39	34	6.19	81.9	5.04	13	208	1.5	0.80
CC102657		1.76	52.3	0.76	2	24.8	53.9	31	37	14.10	76.9	11.60	16	241	1.7	1.60
CC102658		1.41	51.1	0.64	3	26.7	44.0	24	43	12.05	113.5	9.06	19	189.5	1.9	1.24
CC102659		2.21	89.8	0.94	2	30.9	82.0	21	135	22.2	102.5	16.70	29	210	2.4	2.08



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 Total # Pages: 3 (A - C)  
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 Finalized Date: 17- AUG- 2010  
 Account: MTT

Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Sample Description	Method Analyte Units LOR	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	
		Th	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.5	0.01	0.05	5	1	0.5	0.03	5	2
CC102587		38.6	0.7	1.78	15.35	56	58	117.0	11.15	601	1090
CC102588		22.6	0.7	1.23	12.70	63	18	74.3	7.91	497	752
CC102589		27.2	0.6	1.16	12.45	80	11	72.2	7.48	602	562
CC102590		26.0	0.6	0.99	9.42	93	9	60.4	6.66	545	881
CC102591		10.20	<0.5	0.57	4.98	113	27	36.6	3.85	318	274
CC102592		18.60	0.6	0.93	8.85	91	14	54.2	5.73	522	746
CC102593		15.00	0.6	0.64	5.57	89	10	38.6	3.96	337	409
CC102594		4.64	<0.5	0.28	2.01	214	4	19.2	1.76	131	198
CC102595		7.36	<0.5	0.39	3.69	163	5	21.7	2.37	178	286
CC102596		19.70	0.5	0.51	6.41	126	11	31.6	3.47	371	402
CC102597		20.3	0.5	0.75	7.37	126	12	44.3	4.92	489	692
CC102598		22.3	0.5	0.94	8.60	129	7	55.6	6.07	517	871
CC102599		20.8	0.7	0.83	7.36	92	8	54.3	5.46	395	671
CC102600		9.10	<0.5	0.46	3.94	158	5	28.6	2.92	166	289
CC102601		30.5	0.6	1.18	11.25	115	12	75.8	7.52	365	807
CC102602		16.95	0.5	0.71	10.95	79	4	46.4	4.75	215	275
CC102603		18.10	<0.5	0.56	8.90	90	4	33.8	3.79	240	347
CC102604		8.86	<0.5	0.33	4.03	119	2	20.7	2.04	198	168
CC102605		14.50	0.5	0.51	10.05	72	3	33.8	3.34	219	233
CC102606		19.40	0.6	0.68	12.55	54	3	43.2	4.16	234	258
CC102607		10.65	<0.5	0.46	6.48	112	3	31.4	2.96	221	196
CC102608		19.15	0.7	0.54	8.46	53	4	34.6	3.40	289	169
CC102609		19.55	0.5	0.63	10.70	70	5	37.7	4.20	289	405
CC102610		9.74	0.7	0.44	7.65	41	4	30.1	2.71	309	109
CC102611		17.40	0.6	0.57	8.69	62	4	35.4	3.72	196	303
CC102612		14.35	0.6	0.57	7.18	79	4	34.9	3.54	182	268
CC102613		3.47	<0.5	0.22	1.56	176	2	15.7	1.37	98	158
CC102614		23.6	0.6	0.88	8.04	101	4	52.2	5.86	280	762
CC102615		12.55	<0.5	0.66	6.58	149	2	45.4	4.04	192	408
CC102616		10.75	<0.5	0.51	4.68	120	10	30.9	3.40	178	481
CC102617		15.90	<0.5	0.73	6.15	117	4	43.6	4.64	147	472
CC102651		24.8	0.6	0.92	10.50	102	7	58.0	6.19	470	624
CC102652		21.7	0.5	0.57	7.17	121	9	32.5	3.65	309	468
CC102653		15.00	<0.5	0.56	4.90	124	6	32.1	3.68	247	447
CC102654		16.15	<0.5	0.55	5.54	101	6	35.7	3.34	337	361
CC102655		11.55	0.5	0.49	5.39	140	4	27.4	2.93	187	290
CC102656		9.66	0.5	0.48	4.83	164	4	26.8	2.91	201	272
CC102657		21.6	0.5	0.77	6.27	108	5	48.3	4.78	694	584
CC102658		17.65	0.6	0.64	5.57	110	7	39.4	4.18	512	461
CC102659		30.8	0.6	0.96	8.28	81	10	62.3	6.05	941	728



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Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Sample Description	Method Analyte Units LOR	WEI- 21	Au- AA24	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81
		Recvd Wt. kg	Au ppm	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm
		0.02	0.005	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2
CC102660		0.22	0.014	1	558	188.0	10.4	50	9.08	265	15.25	9.14	1.22	25.9	16.80	31.0
CC102661		0.24	0.062	<1	560	189.5	12.9	40	5.98	113	11.90	6.85	1.18	27.8	14.20	23.9
CC102662		0.26	0.030	4	596	225	13.1	60	9.86	1250	17.80	10.20	1.85	26.2	21.2	25.3
CC102663		0.32	0.012	2	591	149.5	3.9	10	7.03	506	13.10	7.95	0.95	27.9	14.80	21.2
CC102664		0.20	0.016	2	595	159.0	13.3	50	9.51	506	11.85	6.70	1.23	26.7	13.55	13.2
CC102665		0.26	<0.005	<1	410	58.2	19.5	30	1.76	73	4.60	2.46	1.33	24.7	5.83	4.9
CC102666		0.22	0.015	4	546	179.5	11.6	40	9.01	1160	15.85	8.96	1.47	26.5	18.75	26.6
CC102667		0.20	0.014	3	574	229	10.5	40	6.41	1660	15.25	8.21	1.71	24.3	19.15	15.7
CC102668		0.22	0.024	2	611	222	10.7	40	11.35	594	15.35	8.39	1.29	29.3	18.75	27.0
CC102669		0.26	NSS	1	547	300	17.3	40	8.47	814	14.65	8.42	1.50	27.7	19.65	32.7
CC102670		0.28	0.005	<1	605	121.5	15.7	90	4.60	120	9.90	5.57	1.57	20.4	12.00	15.2
CC102671		0.22	0.005	<1	586	89.1	14.2	80	4.56	74	6.86	4.02	1.13	21.1	7.77	15.6
CC102672		0.30	0.027	2	612	180.5	12.9	80	8.17	340	11.10	6.25	1.40	23.5	14.30	19.6
CC102673		0.24	<0.005	<1	491	64.5	18.1	50	3.08	121	5.24	2.78	1.24	23.0	6.53	8.0
CC102674		0.20	0.006	1	593	90.0	13.4	70	6.73	409	7.50	4.39	1.10	22.2	8.49	11.9
CC102675		0.30	0.031	1	565	192.0	14.3	90	7.45	816	12.40	7.14	1.60	21.6	15.30	23.6
CC102676		0.26	0.017	2	606	140.5	10.5	40	6.98	544	11.25	6.27	1.20	24.9	13.00	15.1
CC102677		0.28	0.145	1	752	125.0	10.7	60	10.55	388	8.66	4.85	1.37	21.8	10.40	15.1



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Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Sample Description	Method Analyte Units LOR	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	
		Ho ppm	La ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	Pb ppm	Pr ppm	Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm
CC102660		3.06	85.8	1.42	2	53.9	84.3	18	42	22.7	113.5	18.40	63	219	4.2	2.64
CC102661		2.34	91.1	1.02	3	36.8	81.5	21	35	22.2	101.0	16.50	15	411	2.7	2.14
CC102662		3.58	101.5	1.49	7	42.8	106.0	22	161	28.0	119.0	23.8	72	247	3.0	3.24
CC102663		2.62	77.9	1.15	3	42.7	70.3	9	55	19.70	145.0	15.60	26	147.5	3.4	2.29
CC102664		2.28	56.4	0.96	8	33.0	61.2	25	62	15.55	128.5	14.25	34	254	2.6	2.09
CC102665		0.88	27.0	0.30	<2	9.9	30.1	21	7	7.49	32.3	6.94	3	1070	0.6	0.88
CC102666		3.10	76.9	1.32	4	42.2	88.0	18	24	22.3	113.5	20.3	32	231	2.7	2.83
CC102667		2.90	102.5	1.08	4	24.9	103.5	20	24	27.1	95.4	21.5	80	256	1.7	2.86
CC102668		2.94	96.2	1.20	12	44.5	103.0	21	33	26.5	148.0	22.3	24	169.5	2.7	2.80
CC102669		2.85	143.0	1.24	6	37.4	122.5	21	30	33.8	89.9	23.0	42	479	2.9	2.69
CC102670		1.92	60.1	0.79	2	21.1	64.4	34	20	16.40	65.3	13.50	6	300	1.3	1.82
CC102671		1.34	41.7	0.63	4	21.6	40.2	30	23	10.60	75.8	8.95	7	287	1.5	1.23
CC102672		2.12	87.6	0.87	5	31.7	77.4	26	35	21.7	103.5	15.80	30	264	2.5	2.03
CC102673		1.01	30.1	0.39	2	13.3	32.8	24	12	8.26	53.2	7.08	6	780	0.8	0.97
CC102674		1.51	40.1	0.65	4	23.9	41.6	30	28	10.35	93.4	9.30	15	249	1.5	1.36
CC102675		2.42	87.2	1.02	9	27.3	83.6	29	22	22.6	92.2	17.55	17	269	2.0	2.29
CC102676		2.19	63.4	0.86	6	31.2	66.1	20	21	17.20	121.0	15.20	14	258	2.2	1.98
CC102677		1.64	56.4	0.69	5	23.0	55.0	23	21	14.75	142.5	11.45	57	301	1.6	1.54

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Sample Description	Method Analyte Units LOR	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	
		Th	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.5	0.01	0.05	5	1	0.5	0.03	5	2
CC102660		58.4	0.5	1.41	14.10	79	11	85.2	9.00	988	1040
CC102661		26.3	<0.5	1.04	8.39	107	5	64.7	6.57	530	822
CC102662		35.6	0.8	1.52	17.25	89	18	101.5	9.30	1370	829
CC102663		24.6	0.9	1.19	11.15	19	18	76.2	7.72	451	683
CC102664		30.9	1.0	1.03	10.95	93	21	62.7	6.21	678	416
CC102665		6.80	<0.5	0.33	2.33	177	3	23.9	1.94	179	176
CC102666		28.8	0.8	1.36	13.50	81	61	86.0	8.46	862	885
CC102667		26.1	0.8	1.17	10.80	76	57	83.8	7.12	1010	547
CC102668		37.1	0.9	1.23	12.50	66	11	83.2	7.66	869	898
CC102669		40.6	0.5	1.24	11.90	137	25	80.7	7.96	952	1150
CC102670		17.75	<0.5	0.80	8.91	128	4	53.0	4.90	450	555
CC102671		12.80	<0.5	0.62	5.66	148	8	38.1	3.84	299	539
CC102672		22.0	0.7	0.93	7.97	116	25	58.6	5.80	655	688
CC102673		9.57	<0.5	0.43	3.56	163	3	28.3	2.60	212	288
CC102674		17.85	0.6	0.69	6.49	127	6	42.3	4.10	613	425
CC102675		23.4	0.7	1.05	11.80	108	37	71.0	6.57	658	808
CC102676		21.5	0.7	0.90	8.96	67	8	62.9	5.64	532	543
CC102677		15.95	1.1	0.74	8.31	82	44	50.0	4.43	504	570



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Project: Meloy

**CERTIFICATE OF ANALYSIS VA10106007**

Method	CERTIFICATE COMMENTS
ALL METHODS	NSS is non- sufficient sample.



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**CERTIFICATE VA10106006**


Project: MELOY  
 P.O. No.:  
 This report is for 11 Rock samples submitted to our lab in Vancouver, BC, Canada on 3- AUG- 2010.  
 The following have access to data associated with this certificate:  
 JOAN MARIACHER                      BILL WENGZYNOWSKI

<b>SAMPLE PREPARATION</b>	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% < 75 um

<b>ANALYTICAL PROCEDURES</b>		
ALS CODE	DESCRIPTION	INSTRUMENT
ME- MS81	38 element fusion ICP- MS	ICP- MS
Au- AA24	Au 50g FA AA finish	AAS

To: **STRATEGIC METALS LTD.**  
**ATTN: JOAN MARIACHER**  
**C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**  
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**VANCOUVER BC V6B 1L8**

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

**Signature:**   
 Colin Ramshaw, Vancouver Laboratory Manager



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Project: MELOY

**CERTIFICATE OF ANALYSIS VA10106006**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS81 Ag ppm	ME- MS81 Ba ppm	ME- MS81 Ce ppm	ME- MS81 Co ppm	ME- MS81 Cr ppm	ME- MS81 Cs ppm	ME- MS81 Cu ppm	ME- MS81 Dy ppm	ME- MS81 Er ppm	ME- MS81 Eu ppm	ME- MS81 Ga ppm	ME- MS81 Gd ppm	ME- MS81 Hf ppm
		0.02	0.005	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2
C491995		0.96	1.060	22	198.5	14.2	5.0	90	9.95	5320	2.20	1.26	0.39	12.5	2.15	1.2
C491996		2.34	0.065	18	629	79.8	2.8	10	5.77	>10000	5.49	3.07	0.40	24.2	6.54	6.2
C491997		1.52	0.215	2	671	57.8	0.7	10	7.36	281	4.71	2.74	0.51	17.5	5.25	6.1
C491998		0.80	0.313	5	843	58.3	18.9	130	32.6	2020	5.43	3.00	1.12	20.4	5.89	4.4
C491999		1.34	0.025	110	574	36.3	7.8	40	22.3	>10000	3.18	1.74	0.90	18.9	3.72	2.7
C492000		2.08	0.291	18	30.0	3.0	4.0	30	0.90	4450	0.59	0.30	0.08	3.9	0.38	<0.2
G285861		1.34	<0.005	1	524	59.5	1.1	10	5.03	115	7.21	4.78	0.44	15.0	6.21	5.5
G285862		1.04	<0.005	4	190.5	20.5	0.9	20	3.33	635	1.76	0.98	0.15	7.5	2.12	1.7
G285863		1.68	<0.005	2	463	69.9	1.5	10	7.99	533	5.05	2.83	0.65	19.2	5.60	6.2
G285864		1.72	0.214	13	548	57.6	2.4	10	8.19	3540	5.21	2.95	0.28	22.1	5.50	5.8
G285865		1.12	0.766	59	136.5	10.0	9.6	40	4.41	>10000	0.92	0.51	0.24	9.2	0.94	0.6



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**CERTIFICATE OF ANALYSIS VA10106006**

Sample Description	Method Analyte Units LOR	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	
		Ho ppm	La ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	Pb ppm	Pr ppm	Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm
C491995		0.44	7.0	0.17	115	7.1	8.2	17	56	1.96	165.5	2.21	114	41.2	0.3	0.38
C491996		1.07	39.4	0.41	3	15.3	36.0	<5	18	9.72	238	7.29	190	10.5	0.9	1.00
C491997		0.95	28.0	0.40	4450	18.9	27.7	<5	31	7.27	278	5.97	42	85.8	1.3	0.83
C491998		1.04	27.8	0.40	25	18.8	30.1	48	15	7.49	390	6.41	32	213	1.0	0.94
C491999		0.59	17.4	0.24	333	8.6	19.6	7	45	4.76	292	4.38	21	429	0.5	0.59
C492000		0.11	1.6	0.04	4	1.9	1.4	5	84	0.35	30.1	0.36	92	6.0	<0.1	0.09
G285861		1.59	29.1	0.67	3510	18.4	29.1	<5	14	7.61	164.0	6.46	13	65.0	1.1	1.12
G285862		0.35	9.6	0.13	>10000	10.0	10.3	<5	11	2.68	82.1	2.56	30	7.9	0.5	0.32
G285863		0.97	33.5	0.38	106	17.3	31.7	<5	12	8.56	216	6.56	97	9.8	1.1	0.89
G285864		1.02	27.5	0.38	114	15.3	27.7	<5	10	7.29	227	6.20	142	8.7	1.1	0.89
G285865		0.18	4.8	0.07	20	2.3	5.4	23	48	1.30	108.0	1.13	312	5.6	0.1	0.16



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Project: MELOY

**CERTIFICATE OF ANALYSIS VA10106006**

Sample Description	Method Analyte Units LOR	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	ME- MS81	
		Th ppm	Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm
C491995		2.91	1.7	0.18	2.33	28	425	11.3	1.21	682	43
C491996		10.70	2.9	0.42	3.01	7	51	27.3	2.69	1325	211
C491997		10.75	2.3	0.38	3.73	6	12	23.2	2.53	115	186
C491998		4.88	3.2	0.41	2.43	119	14	28.4	2.64	327	182
C491999		3.25	3.1	0.24	2.24	84	157	17.2	1.58	348	103
C492000		0.14	0.5	0.04	0.60	9	2040	3.0	0.34	>10000	4
G285861		10.75	1.2	0.69	4.19	6	14	42.8	4.36	135	180
G285862		3.30	0.9	0.13	1.58	<5	22	9.2	0.86	232	59
G285863		10.45	2.7	0.40	2.78	5	14	24.5	2.50	2930	204
G285864		10.75	2.1	0.40	3.02	6	147	26.5	2.67	612	186
G285865		0.66	1.4	0.05	0.66	43	1070	4.7	0.45	>10000	30

**APPENDIX V**  
**GEOPHYSICAL SURVEYS AND INTERPRETATION DATA**

**Logistics  
Report**

For the

**High Resolution Helicopter Magnetic and  
Gamma-ray Spectrometric Airborne Geophysical Survey**

Flown over

**MINT, NIKKI, CORKY, MELOY, KING, AND MARS Project Properties, Yukon**

From

**White River Lodge (Mint and Nikki), Burwash Landing (Corky and Meloy), and Braeburn Lodge (King and Mars), Yukon**

Carried out on behalf of

**STRATEGIC METALS LTD.**

By

**New-Sense Geophysics Limited**



Toronto, Canada  
October 5<sup>th</sup>, 2010  
(HMR100806-report)

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**AMENDMENT RECORD**

<b>Rev</b>	<b>Date</b>	<b>Description</b>	<b>Report Section</b>	<b>Prepared by</b>

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## 1. INTRODUCTION

A high sensitivity helicopter magnetic and gamma-ray spectrometric airborne survey was carried out for Strategic Metals Ltd. (Client) over six (6) project areas known as:

*Mint* and *Nikki*, located ~25 Km west and 30 Km south-west respectively of White River Lodge, Yukon; *Corky* and *Meloy*, located ~21 Km west and ~47 Km north-east respectively of Burwash Landing, Yukon; *King* and *Mars*, located ~32 Km north-west and ~56 Km south-east respectively of Braeburn Lodge, Yukon.

New-Sense Geophysics (NSG) flew the survey under the terms of an agreement with Client dated August 6<sup>th</sup>, 2010.

The survey was flown between August 8<sup>th</sup> and August 17<sup>th</sup>, 2010. A total of 1,207 line kilometers of field magnetic and radiometric data was flown, collected, processed and plotted. These lines were flown in 6 separate blocks listed below:

Mint Property	- 272 km
Nikki Property	- 162 km
Corky Property	- 87 km
Meloy Property	- 293 km
King Property	- 231 km
Mars Property	- 162 km

Geophysical equipment was comprised of 1 high-sensitivity Cesium-3 magnetometer mounted in a fixed stinger assemble and a 1024-channel spectrometer with four downward looking crystals (total 16 liters) and one upward looking crystal (total 4 liters). Airborne ancillary equipment included digital recorders, fluxgate magnetometer, radar altimeter and global positioning system (GPS) receiver, which provided accurate real-time navigation and subsequent flight path recovery. Surface equipment included a magnetic base station with GPS time synchronization and a PC-based field workstation, which was used to check the data quality and completeness on a daily basis.

The technical objective of the survey was to provide high-resolution total field magnetic and radiometric maps suitable for anomaly delineation, detailed structural evaluation, and identification of lithologic trends. Fully corrected magnetic and radiometric maps were prepared by New-Sense Geophysics Limited, in their Toronto office, after the completion of survey activities.

This report describes the acquisition, processing, and presentation of data for the Strategic Metals Ltd. airborne survey over Mint, Nikki, Corky, Meloy, King and Mars blocks, Yukon.

**2. SURVEY LOCATION**

Datum: NAD83

Projection: Universal Transverse Mercator Zone 7N and Zone 8N

Local Datum Transform: North America (all Canada and USA subunits)

**Table 2.1: Mint Property Coordinates**

UTN Zone 7N			
NAD83_X	NAD83_Y	WGS84_X	WGS84_Y
503454	6855015	503454	6855015
507048	6855015	507048	6855015
507048	6852165	507048	6852165
508398	6852165	508398	6852165
508398	6849474	508398	6849474
503454	6849474	503454	6849474
503454	6855015	503454	6855015

**Table 2.2: Nikki Property Coordinates**

UTN Zone 7N			
NAD83_X	NAD83_Y	WGS84_X	WGS84_Y
500000	6881475	500000	6881475
503500	6881475	503500	6881475
503500	6877500	503500	6877500
500000	6877500	500000	6877500
500000	6881475	500000	6881475

**Table 2.3: Corky Property Coordinates**

UTN Zone 7N			
NAD83_X	NAD83_Y	WGS84_X	WGS84_Y
582177	6806658	582177	6806658
584919	6806658	584919	6806658
584918	6803915	584918	6803915
582176	6803915	582176	6803915
582177	6806658	582177	6806658

**Table 2.4: Meloy Property Coordinates**

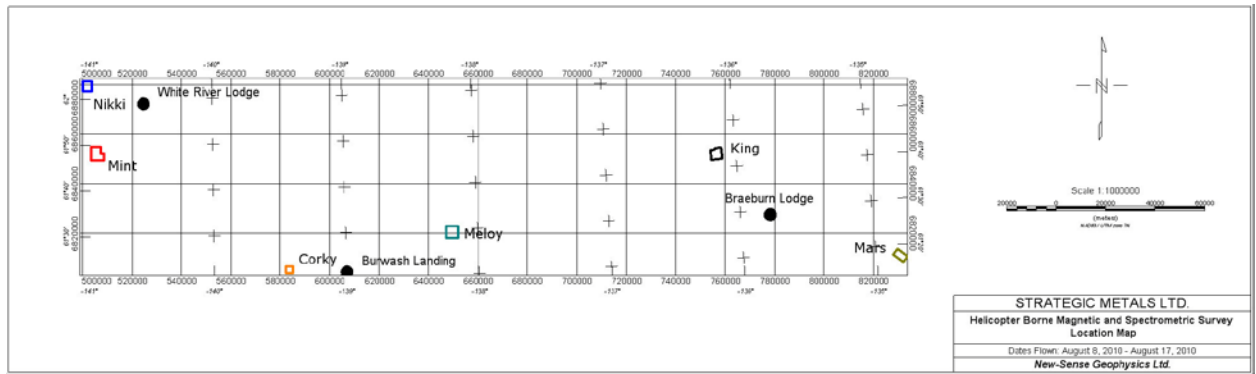
UTN Zone 7N			
NAD83_X	NAD83_Y	WGS84_X	WGS84_Y
647000	6823000	647000	6823000
652000	6823000	652000	6823000
652000	6818000	652000	6818000
647000	6818000	647000	6818000
647000	6823000	647000	6823000

**Table 2.5: King Property Coordinates**

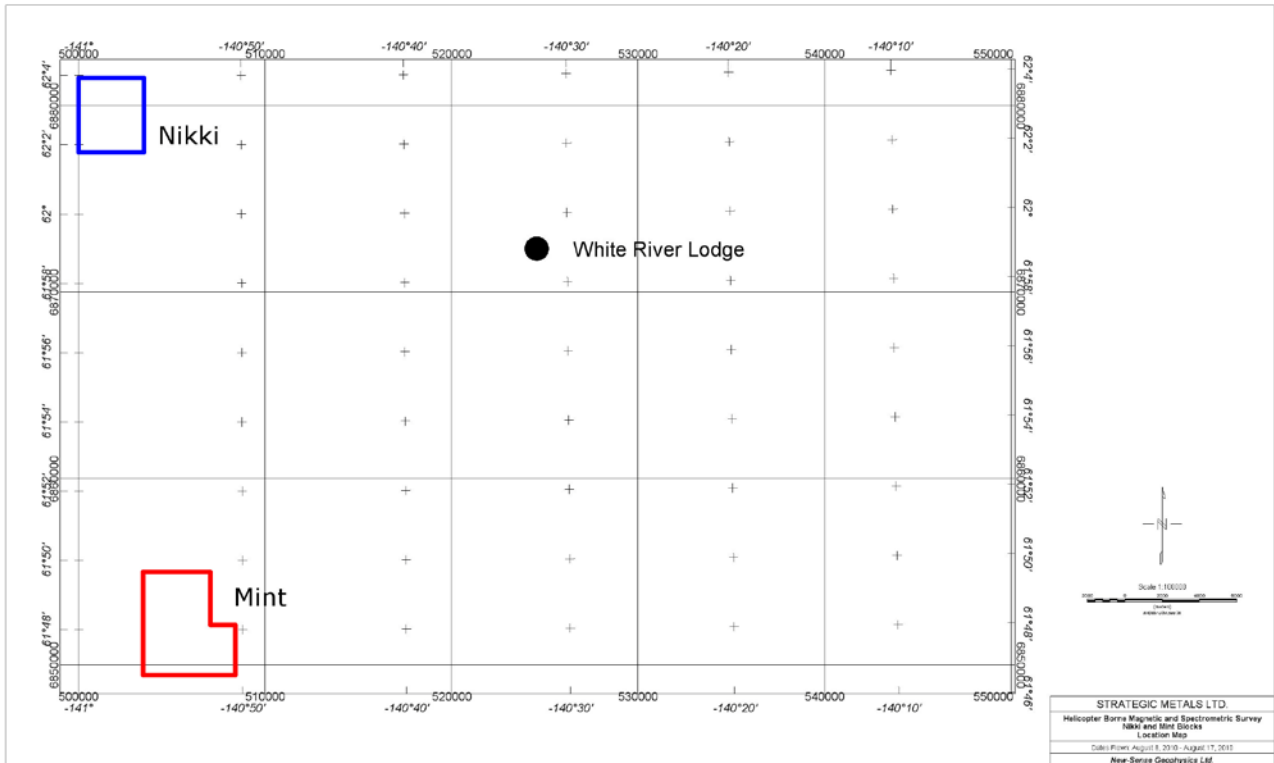
UTN Zone 8N			
NAD83_X	NAD83_Y	WGS84_X	WGS84_Y
438766	6845463	438766	6845463
441425	6845467	441425	6845467
441509	6844655	441509	6844655
441514	6840897	441514	6840897
436938	6840899	436938	6840899
436938	6845004	436938	6845004
438766	6845004	438766	6845004
438766	6845463	438766	6845463

**Table 2.6: Mars Property Coordinates**

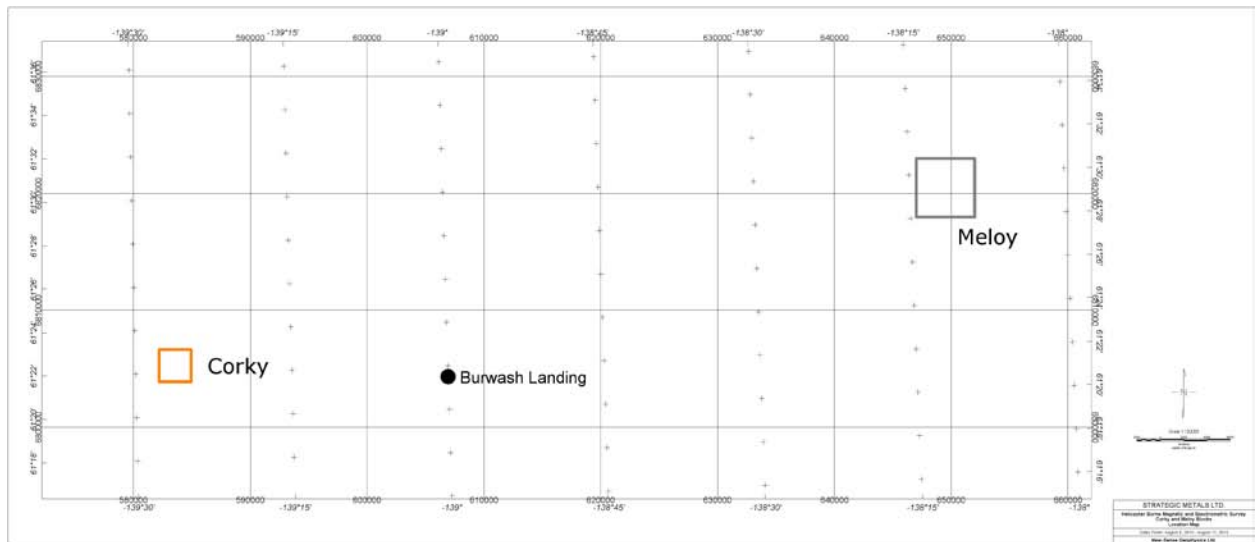
UTN Zone 8N			
NAD83_X	NAD83_Y	WGS84_X	WGS84_Y
508795	6798209	508795	6798209
512466	6794761	512466	6794761
510594	6792767	510594	6792767
506923	6796215	506923	6796215
508795	6798209	508795	6798209



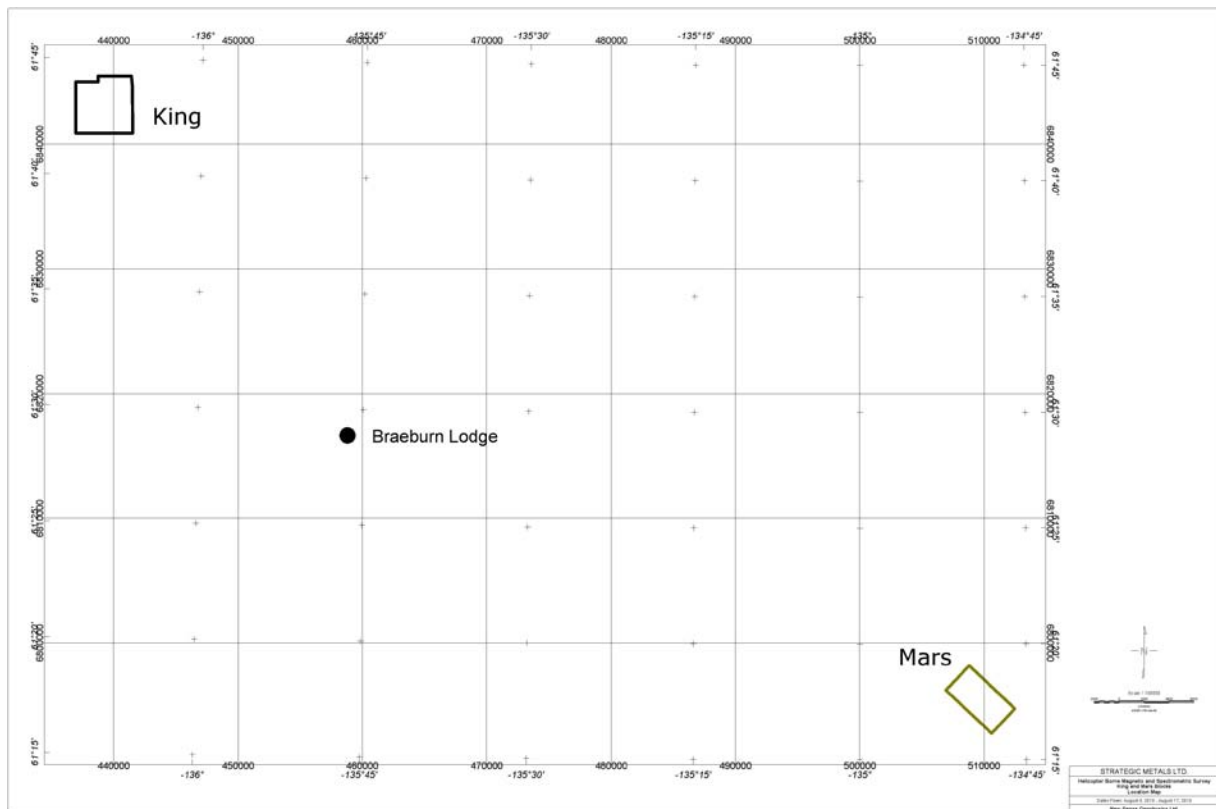
**Figure 2.1** Location map depicting the outlines of all six (6) properties: Nikki (blue), Mint (red), Corky (orange), Meloy (grey), King (black), and Mars (green). The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 7N.



**Figure 2.2** Location map depicting the outlines of Nikki (blue) and Mint (red) The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 7N.



**Figure 2.3** Location map depicting the outlines of Corky (orange) and Meloy (grey). The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 7N.



**Figure 2.4** Location map depicting the outlines of King (black) and Mars (green). The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 8N.

### **3. PERSONNEL**

#### **3.1 FIELD OPERATIONS**

New-Sense Geophysics Ltd., Geophysicist:	Chris Evans
Fireweed Helicopters, Pilot:	Brent Vansickle
Fireweed Helicopters, Pilot:	RJ Price

#### **3.2 OFFICE DATA PROCESSING AND OFFSITE QA/QC**

QA/QC (NSG):	Andrei Yakovenko
Data Processing and Grids (NSG):	Andrei Yakovenko Sean Plener Chris Evans
Maps (NSG):	Andrei Yakovenko Sean Plener
Logistics Report (NSG):	Andrei Yakovenko Sean Plener

#### **3.3 PROJECT MANAGEMENT**

New-Sense Geophysics Ltd.:	Andrei Yakovenko
Strategic Metals Ltd.:	W. Douglas Eaton

#### 4. SURVEY PARAMETERS

Airborne Digital Record:	Line Number Flight Number Radar Altimeter Total Field Magnetics Live Time Thorium counts Potassium counts Uranium counts Upward looking Uranium counts Cosmic counts Down Spectrum Total Counts Time (System and GPS) Raw Global Positioning System (GPS) data Magnetic compensation parameters (fluxgate mag.)
Base Station Record:	Ambient Total Field Magnetics Raw Global Positioning System (GPS) data Time (System and GPS)

**Table 4.1 Survey Parameters**

Property Name	Mint	Nikki	Corky	Meloy	King	Mars
Traverse Line Spacing (m)	100	100	100	100	100	100
Control Line Spacing (m)	1000	1000	1000	1000	1000	1000
Nominal Terrain Clearance (m)	35	35	35	35	35	35
Observed Terrain Clearance (avrg. m)	33.8	41.0	33.1	39.2	36.5	35.4
Navigation	GPS	GPS	GPS	GPS	GPS	GPS
Traverse Line Direction (deg.)	90, 270	90, 270	90, 270	0, 180	90, 270	132, 312
Control Line Direction (deg.)	0, 180	0, 180	0, 180	90, 270	0, 180	42, 222
Magnetic Data Measurement Interval (sec.)	0.1	0.1	0.1	0.1	0.1	0.1
Radiometric Data Measurement Interval (sec.)	1	1	1	1	1	1
Ground Speed (avrg. km/h)	80.6	76.7	80.3	68.4	107.28	103.7
Magnetic Measurement Interval (avrg. m/0.1sec.)	2.2	2.1	2.2	1.9	3	2.9
Radiometric Measurement Interval (avrg. /1.0sec.)	22.4	21.3	22.3	19	29.8	28.8

## **5. AIRCRAFT AND EQUIPMENT**

### **5.1 AIRCRAFT**

The aircraft used was a Bell 206B3 helicopter (C-FFWH) equipped with a Cesium magnetometer mounted in a fixed stinger assembly and RS-500 airborne spectrometer mounted in the storage compartment. The aviation company providing the aircraft service was Fireweed Helicopters based in Whitehorse, Yukon, Canada.

### **5.2 AIRBORNE GEOPHYSICAL SYSTEM**

#### **5.2.1 MAGNETOMETER**

One Scintrex CS-3 optically pumped Cesium split beam sensor was mounted in a fixed stinger assembly. The magnetometer's Larmor frequency output was processed by a KMAG-4 magnetometer counter, which provides a resolution of 0.15 ppm (in a magnetic field of 50,000 nT, resolution equivalent to 0.0075 nT). The raw magnetic data was recorded at 50 Hz, anti-aliased with 51 point COSINE filter and resampled at 10 Hz .

#### **5.2.2 MAGNETIC COMPENSATION**

The proximity of the aircraft to the magnetic sensor creates a measurable anomalous response as a result of the aircraft's movement. The orientation of the aircraft with respect to the sensor and the motion of the aircraft through the earth's magnetic field are contributing factors to the strength of this response. A special calibration flight, Figure of Merit (i.e., FOM), was flown to record the information necessary to compensate for these effects.

The FOM maneuvers consist of a series of calibration lines flown at high altitude to gain information in each of the required line directions. During this procedure, pitch, roll and yaw maneuvers are performed on the aircraft (typical angle ranges are 10° pitch, 10° roll, and 10° yaw). Each variation is conducted three times in succession (first pitch, then roll, then yaw), providing a complete picture of the aircraft's effects at designated headings in all orientations.

A three-axis Bartington fluxgate magnetometer (recorded at 50 Hz) was used to measure the orientation and rates of change of the magnetic field of the aircraft, away from localized terrestrial magnetic anomalies. The QC Tools digital compensation algorithm was then applied to generate a correction factor to compensate for permanent, induced, and eddy current magnetic responses generated by the aircraft's movements.

### **5.2.3 GPS NAVIGATION**

A U-BLOX RCB-LJ sixteen channel GPS receiver, which is an integral component of the iNAV V3 computer system, was used to run the flight control system and provide precise positioning of the aircraft.

### **5.2.4 ALTIMETER**

A TRA 3500 radar altimeter was mounted inside the stinger. This instrument operates with a linear performance over the range of 0 to 2,500 feet and records the terrain clearance of the sensors. The raw radar altimeter data was recorded at 50 Hz, anti-aliased with a 21 point COSINE filter and re-sampled at 10 Hz.

### **5.2.5 GEOPHYSICAL FLIGHT CONTROL SYSTEM**

New-Sense's iNAV V3 geophysical flight control system monitored and recorded magnetometer, spectrometer, altimeter, and GPS equipment performance. Input from the various sensors was monitored every 0.005 seconds for the precise coordination of geophysical and positional measurements. The input was recorded fifty times per second (one time per second in the case of GPS and radiometric data).

GPS positional coordinates and terrain clearance were presented to the pilot by means of a panel mounted indicator display. The magnetometer response, forth difference, altimeter profile and profiles of the radiometric windows were also available on the touch screen display, for real-time monitoring of equipment performance.

### **5.2.6 SPECTROMETER**

The RS-500 Airborne Spectrometer with RSX-5 detector pack, manufactured by Radiation Solutions Inc. (RSI), was used for the survey. The RS-500 spectrometer has a multi-peak gain stabilization algorithm and is capable of recording 1024 channels with accuracy of 0.1 to 10 counts/second.

The RS-500 is connected to a crystal pack comprising four downward looking crystals (16 liters total) and one upward looking crystal (4 liters total). The downward crystals record the radiometric spectrum from 410 KeV to 2810 KeV over 1024 discrete energy windows, as well as from a cosmic ray channel that detects photons with energy levels above 3.0 MeV. From these 1024 channels, the standard Total Count, Potassium, Uranium and Thorium channels are extracted. The upward crystal is used to measure and correct for atmospheric Radon interference. The shock-protected Sodium Iodide (Thallium) crystal package is unheated and automatically stabilizes with respect to the multiple peaks. The RS-500 provides raw data that has been automatically corrected for gain, base level, ADC offset, and dead time.

### **5.2.7 IDAS DIGITAL RECORDING**

The output of the CS-3 magnetometer, fluxgate magnetometer, altimeter, temperature, pressure, GPS coordinates, and time (system and GPS), were recorded digitally on a Compact Flash drive at a sample rate of fifty times per second (one time per second for GPS) by the iNAV V3 system.

### **5.2.8 PRESSURE AND TEMPERATURE**

A Honeywell Precision Pressure Transducer, model PPT0020AWN2VA-A, was used to record the ambient pressure and temperature during the survey. The device was mounted in the helicopter stinger. The pressure and temperature outputs units were mbar and degrees Celsius respectively.

### **5.2.9 SPECTROMETER DIGITAL RECORDING**

The output of the RS-500 spectrometer, GPS coordinates and time (UTC) were recorded digitally on an internal RS-500 flash drive at a sample rate of 1 Hz. After each flight the data were copied and synchronized using UTC clock with the iDAS digital records.

## **5.3 GROUND MONITORING SYSTEM**

### **5.3.1 BASE STATION MAGNETOMETER**

A Scintrex CS-3 optically pumped cesium split beam sensor was used at the base of operations within the airport boundaries, in an area of low magnetic gradient and low/free from cultural electric & magnetic noise sources. The sensitivity and absolute accuracy of the ground magnetometer is +/- 0.01 nT. Data was recorded continuously at least every one second throughout all survey operations in digital form on a TC-10 data acquisition system. Both the ground and airborne magnetic readings were synchronized based on the GPS clock.

### **5.3.2 RECORDING**

The output of the magnetic and GPS monitors was recorded digitally on a dedicated TC-10 computer. A visual record of the last three hours was graphically maintained on the computer screen to provide an up to date appraisal of magnetic activity. At the conclusion of each production flight raw GPS and magnetic data were transferred to the main field compilation computer.

#### **5.4 FIELD COMPILATION SYSTEM**

A field laptop computer was used for field data processing and presentation. The raw data was imported to Geosoft Oasis montaj for QA/QC and processing purposes. After the data was checked for quality control, the database with uncompensated magnetic readings was exported to QC Tools software package for magnetic compensation and base station data merging purposes. The compensated database was then imported back to Oasis for the subsequent and final processing.

## 6. PRE-SURVEY SPECTROMETER CALIBRATIONS

Pre-survey calibrations and testing of the RS-500 (SN 5503) airborne gamma-ray spectrometry system were carried out on August, 8<sup>th</sup>, 2010 (from White River lodge, YT), August 15<sup>th</sup>, 2010 (from Braeburn lodge, YT), and August 20<sup>th</sup>, 2010 (from Carmacks, YT). For these calibrations and tests, the survey aircraft (registration C-FFWH) was mobilized in survey configuration. The installed equipment and configurations were selected to conform to contract technical specifications.

Calibration of the spectrometer system is a vital process to airborne gamma-ray spectrometry. The calibration of the spectrometer system involved three tests:

- **Calibration Pad** measurements, which are used to determine the “spectral overlap” (Compton scattering) coefficients. The calibration test was performed within a 12 month period before the survey by the manufacturer (Radiation Solutions Inc.), at its headquarters location in Mississauga, Ontario.
- **Cosmic Flight Test**, which is used to determine the aircraft background values and cosmic coefficients for Mint, Nikki, Melody, and Corky was conducted on August 8<sup>th</sup>, 2010. The Cosmic Flight Test that was used to determine the coefficients for King and Mars was conducted on August 15<sup>th</sup>, 2010.
- **Height Attenuation Test**, which determined the altitude attenuation coefficients for Mint, Nikki, Melody, and Corky was conducted on August 8<sup>th</sup>, 2010 and the Height Attenuation Test used to determine the coefficients for King and Mars was conducted on August 15<sup>th</sup>, 2010.

### 6.1 ENERGY WINDOWS

The airborne radiometric technique requires measurement of count rates for specific energy regions or windows in the natural gamma-ray spectrum. The standard energy regions (in accordance with the International Atomic Energy Agency (IAEA) 323), and their corresponding channel limits are:

**Table 6.1 Downward spectrometer energy windows**

Designation	Energy Limit (keV)		Channel Limit (inclusive)	
	Lower	Upper	Unit Values	
			Lower	Upper
Total Count (TC)	410	2810	137	937
K	1370	1570	457	523
U	1660	1860	553	620
Th	2410	2810	803	937
U (upward)	1660	1860	553	620
Cosmic	3200	infinity		

## 6.2 CALIBRATION PAD TEST

The Compton stripping coefficients as provided by RSI are listed below:

**Table 6.2 Compton Stripping coefficients**

Stripping Ratios	Spectrometer (SN 5503)	“normal” values
Th into U (alpha = $a_{23}/a_{33}$ )	0.284	0.250
Th into K (beta = $a_{13}/a_{33}$ )	0.432	0.400
U into K (gamma = $a_{12}/a_{22}$ )	0.771	0.810
U into Th (a = $a_{32}/a_{22}$ )	0.039	0.060
K into Th (b = $a_{31}/a_{11}$ )	-0.001	0
K into U (g = $a_{21}/a_{11}$ )	0.001	0.003

## 6.3 COSMIC FLIGHT TEST

In each of the spectral windows, the radiation increases exponentially with height due to radiation of cosmic origin. As well, the aircraft itself contributes a constant background to the count rate. By completing a series of flights within the same region, over a range of altitudes, these background contributions can be determined.

### 6.3.1 SETUP AND MEASUREMENT PROCEDURE

1. A resolution check was completed at the aircraft base using a Thorium source prior to the cosmic test to insure the sensitivity and accuracy of the spectrometer.
2. Once the aircraft reached the desired altitude (first at ~8000 feet), survey data were recorded for approximately ten minutes.
3. Step 2 was then repeated at the following remaining altitudes: 9,000, 10,000, 11,000 and 12,000 feet above sea level.

**Table 6.3 Cosmic Test data from August 8, 2010**

Altitude (ft)	Cosmic Test Flight Data (average counts)					
	Cosmic	UU	K	U	Th	TC
8297	197	3	22	13	13	285
9292	228	4	23	14	15	356
10225	262	4	26	16	17	356
11334	310	5	26	16	17	400

**Table 6.4 Cosmic Test data from August 15, 2010**

Altitude (ft)	Cosmic Test Flight Data (average counts)					
	Cosmic	UU	K	U	Th	TC
7848	176	3	20	12	11	265
8914	203	3	23	13	13	338
9943	238	4	25	15	15	338
11117	381	4	27	17	19	383
12109	328	5	30	19	21	420

### 6.3.2 RESULTS FROM COSMIC FLIGHT TEST

At each altitude, the raw data for the five windows of interest (Th, K, U, TC, and U upward) were evaluated for quality. The mean values were then extracted and plotted against the cosmic background window (see Appendix A). The result is a linear trend, where the slope and intercept represent the cosmic stripping ratio and the aircraft background respectively. The results from the graphs are summarized below.

**Table 6.5 Cosmic and Aircraft Background coefficients used for Nikki, Mint, Corky and Meloy blocks**

Cosmic Flight Test Result From August 8, 2010		
Element	Cosmic	Aircraft Background
K	0.0647	8.8788
U	0.0456	3.8854
Th	0.0617	0.8817
TC	1.10161	86.996
UU	0.016	0

**Table 6.6 Cosmic and Aircraft Background coefficients used for King and Mars blocks**

Cosmic Flight Test Result From August 15, 2010		
Element	Cosmic	Aircraft Background
K	0.0621	9.7817
U	0.0471	3.6567
Th	0.0646	0
TC	1.023	90.165
UU	0.0132	0.5736

## 6.4 ALTITUDE ATTENUATION TEST

The height attenuation of the spectrometer systems was calculated by flying a series of passes across a line over flat ground with uniform radioelement ground concentration. The test range was flown by acquiring data on a series of seven passes over a set path, at the following altitudes: 100, 150, 200, 250, 300, 400, 600, 800 and 1000 feet above ground.

### 6.4.1 RESULTS FROM ALTITUDE ATTENUATION TEST

The airborne data from the altitude attenuation test was checked for quality, edited and divided into lines, where each line represents a pass. The radiometric windows were then corrected for background (aircraft and cosmic) and stripped of Compton contributions. After averaging the data for each line, the four windows of interest (K, U, Th, and Total Count) were plotted against the altimeter in order to obtain the height attenuation. The results were obtained using an exponential regression, where the slope represents the attenuation coefficient and the 'y' intercept represents the counts at 0 feet (see Tables 6.7 and 6.8 and Appendix A).

**Table 6.7 Height Attenuation coefficients from August 8, 2010: Nikki, Mint, Corky and Meloy blocks**

Element	Altitude attenuation coefficients
K	-0.0071
U	-0.0084
Th	-0.0065
TC	-0.0056

**Table 6.8 Height Attenuation coefficients from August 15, 2010: King and Mars blocks**

Element	Altitude attenuation coefficients
K	-0.0072
U	-0.005
Th	-0.006
TC	-0.0056

## 6.5 RADON TEST STRIPS

On all survey flights, at least one radon normalization test was flown before or after data collection.

The test consists of the helicopter flying a designated test line at nominal survey altitude near each of the bases of operation: White River Lodge; Burwash Landing; and Braeburn Lodge.

All test line locations were selected in areas of flat and dry terrain, close to survey areas being flown. The tests consists of the pilot being guided using the iDAS navigation system, at fixed speed, and for approximately 5 minutes, to allow for adequate statistics to be collected.

Since no noticeable radon fluctuations were observed on any of the blocks, no test line corrections were applied to the data set.

## 6.6 RADIOELEMENT GROUND CONCENTRATIONS AND SYSTEM SENSITIVITIES

The radiometric ground concentrations were measured using a calibrated portable spectrometer (RSI-125) during the same time as the airborne altitude attenuation flights took place (i.e., August 8 and 15<sup>th</sup>, 2010). The sensor was positioned one meter above the soil and away from the operators' body in the vicinity of altitude attenuation test strip. Twenty-three 300-second measurements were taken over the length of the calibration range.



The resulting mean radiometric equivalent ground concentrations for the calibration range on August 8<sup>th</sup>, 2010 and August 15<sup>th</sup>, 2010 were as follows:

**Table 6.9 Ground Concentrations from August 8<sup>th</sup>, 2010: Nikki, Mint, Corky and Meloy blocks**

Radio Element	Ground Concentration	
Potassium	1.28	%
Equivalent Uranium	1.68	<i>ppm</i>
Equivalent Thorium	5.76	<i>ppm</i>
Total	41.54	<i>nGy/h</i>

**Table 6.10 Ground Concentrations from August 15<sup>th</sup>, 2010: King and Mars blocks**

<b>Radio Element</b>	<b>Ground Concentration</b>	
Potassium	1.61	%
Equivalent Uranium	2.4	<i>ppm</i>
Equivalent Thorium	6.14	<i>ppm</i>
Total	50.57	<i>nGy/h</i>

Using these ground concentrations and the altitude attenuation calibration flight data, the System Sensitivities were obtained:

$$S = N/C$$

**Where:**

- *S* is the sensitivity for each window
- *N* is the striped count rate in the window at the survey altitude (i.e, 35m)
- *C* is the respective ground radioelement concentration.

With the following results:

**Table 6.11 Sensitivities @35m from August 8<sup>th</sup>, 2010: Nikki, Mint, Corky and Meloy blocks**

	<b>Sensitivities @ 35m</b>
<b>K</b>	77.47 <i>cps/(%)</i>
<b>U</b>	8.19 <i>cps/(ppm)</i>
<b>Th</b>	2.86 <i>cps/(ppm)</i>
<b>TC</b>	23.12 <i>cps/(nGy/h)</i>

**Table 6.12 Sensitivities @35m from August 15<sup>th</sup>, 2010: King and Mars blocks**

	<b>Sensitivities @ 35m</b>
<b>K</b>	86.7 <i>cps/(%)</i>
<b>U</b>	6.08 <i>cps/(ppm)</i>
<b>Th</b>	3.75 <i>cps/(ppm)</i>
<b>TC</b>	23.17 <i>cps/(nGy/h)</i>

Note: Determining of radioelement ground concentrations and system sensitivities were not part of the signed agreement. Such data are made available to the client as a courtesy.

## **7. OPERATIONS AND PROCEDURES**

### **7.1 FLIGHT PLANNING AND FLIGHT PATH**

The block outline coordinates (section 2.0) were used to generate pre-calculated navigation files. The navigation files were used to plan flights at the designated traverse line spacing of 100 meters and control lines of 1000 meters.

Preliminary flight path maps and magnetic maps were plotted and updated, to monitor coverage of the survey area.

### **7.2 BASE STATION**

Magnetic base stations were established in magnetically quiet areas in the vicinity of survey blocks.

For Mint and Nikki blocks: in the vicinity of White River Lodge at Latitude: 61.982645 deg.; Longitude: -140.531458 deg.

For Corky and Meloy: in the vicinity of Burwash Landing at Latitude: 61.358406 deg.; Longitude: -139.000274 deg.

For King and Mars: in the vicinity of Braeburn Lodge at Latitude: 61.481381 deg.; Longitude: -135.773504 deg.

The base station readings were monitored to ensure that the diurnal variation were within the peak-to-peak envelope of 20 nT from a long chord distance equivalent to a period of two minutes.

### **7.3 AIRBORNE MAGNETOMETERS**

An FOM test of the performance of the CS-3 and fluxgate magnetometers was performed in order to monitor the ability of the system to remove the effects of aircraft motion on the magnetic measurement.

The FOM maneuvers consisted of a series of calibration lines flown at high altitude (10,000+ ft above sea level) to gain information in each of the required line directions. During this procedure, pitch, roll and yaw maneuvers were performed on the aircraft.

The following ranges were used:

Pitch: 10-15°

Roll: 10-15°

Yaw: 10-15°

See Appendix B for the FOM results as flown on August 8<sup>th</sup>, August 13<sup>th</sup>, August 15<sup>th</sup>, and August 17<sup>th</sup> 2010 and were used to compensate the magnetic data.

## **7.4 THORIUM RESOLUTION TESTS**

In order to monitor the resolution of the crystal pack, a daily a resolution test of the spectrometer was performed in RadAssist (RSX-5 spectrometer interface program) using ~2000 thorium background counts per crystal.

The results from the resolution tests were always found to be within the contract specifications (see Appendix D for the daily test results).

## **7.5 DATA COMPILATION**

Data recorded by the airborne and base station systems was transferred to the field compilation system. As each flight was completed, the following compilation operations were carried out:

### **7.5.1 FLIGHT PATH CORRECTIONS**

The navigational correction process yields a flight path expressed in WGS84, World and transformed to correspond to NAD83 UTM ZONE 7N, and ZONE 8N North America.

The following projection parameters were used for Mint, Nikki, Corky, and Meloy:

**Coordinate System**

X,Y channels: UTM\_X\_NAD83,UTM\_Y\_NAD83

Coordinate system:  Projected (x,y)  Geographic (long, lat)  
 Unknown Copy from...

Length units: metre

Transformation: none

Orientation: none

Datum: NAD83

Ellipsoid:	GRS 1980
Major axis radius:	6378137
Inverse Flattening:	298.25722
Prime Meridian:	0

Local datum transform: [NAD83] (4m) North America - all Canada and USA subur

None applied

\*Projection method: UTM zone 7N

Type:	Transverse Mercator
Latitude of natural origin:	0
Longitude of natural origin:	-141
Scale factor at natural origin:	0.9996
False easting:	500000
False northing:	0

New

OK Cancel

The following projection parameters were used for King and Mars:

**Coordinate System**

X,Y channels: **UTM\_X\_NAD83,UTM\_Y\_NAD83**

Coordinate system:  Projected (x,y)  Geographic (long, lat)  
 Unknown Copy from...

Length units: metre

Transformation: none

Orientation: none

Datum: NAD83

Ellipsoid:	GRS 1980
Major axis radius:	6378137
Inverse Flattening:	298.25722
Prime Meridian:	0

Local datum transform: [NAD83] (4m) North America - all Canada and USA subur

None applied

\*Projection method: UTM zone 8N

Type:	Transverse Mercator
Latitude of natural origin:	0
Longitude of natural origin:	-135
Scale factor at natural origin:	0.9996
False easting:	500000
False northing:	0

New

OK Cancel

All 1.0 Hz GPS records were linearly interpolated and resampled at 10 Hz (0.1 sec) intervals.

## 7.5.2 DIGITAL TERRAIN MODEL (DTM)

The DTM data were produced by first adjusting the GPS sensor height to that of the radar altimeter height (lowering GPS height by 2.1m). Next the radar altimeter channel (in meters) was subtracted from the GPS height data producing a raw DTM channel.

Due to changing satellite positions (constellation configuration) and varying atmospheric conditions, the receiver may measure slightly varying GPS heights line-to-line. In addition, due to rugged topography, the radar altimeter measures inaccurately when the helicopter is pitched forward position (example: approach a steep hill), as the radar beam would be directed away or down the slope. Because of these inherent errors, the raw DTM channel required leveling.

It was decided to apply a microlevelling technique to the raw DTM data developed by Paterson, Grant & Watson Limited and available through Geosoft Oasis montaj as miclev.GX extension (see Appendix F for full description of the procedure).

The following key microlevelling parameters were used:

**Table 7.1 DTM microlevelling parameters per block**

Block Name	Line Spacing (m)	Line Direction (deg.)	Grid Cell Size (m)	Decorrugation Cutoff (m)	Amplitude Limit (m)	Amplitude Limit Mode	Naudy Filter Limit
Mint	100	90	10	400	11.4	clip	0
Nikki	100	90	10	400	30.0	clip	0
Corky	100	90	10	400	3.97	clip	500
Meloy	100	0	10	400	8.8	clip	0
King	100	90	10	400	3.6	clip	0
Mars	100	132	10	400	7.0	clip	0

The final DTM data were stored under DTM channel name.

## 7.5.3 MAGNETIC CORRECTIONS

First the 50 Hz aeromagnetic data from Cesium 3 and fluxgate magnetometers were filtered with a 51 cosine anti-aliasing algorithm and re-sampled at 10 Hz. Then the magnetic data from the Cesium 3 magnetometer was compensated for permanent, induced, and eddy current magnetic noise generated by the aircraft using data from the fluxgate magnetometer. The compensated magnetic data were then stored in the MAG\_COMP channel.

### 7.5.3.1 DIURNAL CORRECTIONS

The compensated magnetic data were adjusted to account for diurnal variations. When the magnetic variations recorded at the base station recognized to be caused by man-made sources, (such as equipment, vehicles passing by the sensor), they were removed and gaps interpolated.

Diurnal variations recorded by the base station were filtered with a 101-point low pass filter. The filtered data was then subtracted directly from the aeromagnetic measurements to provide a first order diurnal correction.

After base station removal, the total magnetic field values become very small. To bring the total magnetic measurements back to ‘normal’ values, project averages from the base station readings were added back to the magnetic data.

**Table 7.2 Base Station project averages per block**

<b>Block Name</b>	<b>Average Readings (nT)</b>
Mint	56316.36
Nikki	56293.73
Corky	56664.12
Meloy	56661.30
King	57363.36
Mars	57326.92

The resulting base station corrected data were stored in the MAG\_DIURNAL\_CORR channel.

### 7.5.3.2 LAG CORRECTIONS

There are two potential types of Lag offsets when collecting airborne data: time lag and distance lag.

NSG insures that there is no time lag in the data acquisition system by recording unique markers every 1-second based on the GPS time stamp (associated with the EXACT change in GPS positioning). This information is used to realign (if necessary) the individual data records.

The distance lag is determined by dividing the distance from the GPS antenna to the sensor head by the averaged sample rate distance.

**Table 7.3 Lag corrections**

<b>Block Name</b>	<b>Horizontal Distance From GPS Antenna to Sensor Head (m)</b>	<b>Average Sample Interval (m)</b>	<b>Lag Applied to Magnetic Data (records)</b>
Mint	9.2	2.2	-4
Nikki	9.2	2.1	-4
Corky	9.2	2.2	-4
Meloy	9.2	1.9	-4
King	9.2	3.0	-3
Mars	9.2	2.9	-3

The lag corrections were applied to the MAG\_DIURNAL\_CORR channel and stored in the MAG\_LAG\_CORR channel.

### 7.5.3.3 HEADING CORRECTIONS

Optically pumped magnetic sensors have an inherent heading error, typically 1 to 2 nT peak-to-peak, as the sensor is rotated through 360 degrees. On flight line directions of the opposite heading, the affect is reasonably predictable.

Three heading test flights were flown at magnetically quite area at 10,000+ ft above sea level altitude on August 13<sup>th</sup>, 2010 (one) and August 15<sup>th</sup>, 2010 (two) with the following results:

**Table 7.4 Heading Test flight results: August 13<sup>th</sup>, 2010**

<b>Direction (deg.)</b>	<b>Mean on line (nT)</b>	<b>Mean in direction (nT)</b>	<b>Mean on heading (nT)</b>	<b>Error (nT)</b>
360				-4.64
0	57067.72	57067.43	57062.78	-4.64
0	57067.13			
180	57058.52	57058.14	57056.40	4.64
180	57057.76			
90	57054.26	57054.22	57056.40	2.18
90	57054.17			
270	57058.32	57058.59	57056.40	-2.19
270	57058.85			

**Table 7.5 Heading Test flight results: August 15<sup>th</sup>, 2010 (N-S and E-W directions)**

Direction (deg.)	Mean on line (nT)	Mean in direction (nT)	Mean on heading (nT)	Error (nT)
360				-4.60
0	57198.68	57198.60	57194.00	-4.60
0	57198.52			
180	57189.39	57189.41		4.60
180	57189.42			
90	57198.5	57200.04	57201.38	1.34
90	57201.58			
270	57201.86	57202.72		-1.34
270	57203.58			

**Table 7.6 Heading Test flight results: August 15<sup>th</sup>, 2010 (42-132 deg. and 222-312 deg. dir.)**

Direction (deg.)	Mean on line (nT)	Mean in direction (nT)	Mean on heading (nT)	Error (nT)
0				-3.33
42	57198.04	57197.12	57194.73	-2.39
42	57196.2			
222	57193.6	57192.34		2.39
222	57191.08			
132	57220.9	57217.54	57221.96	4.42
132	57214.18			
312	57228.03	57226.37		-4.41
312	57224.71			

The following heading corrections tables were constructed and applied to the data set:

**Nikki, Mint, Corky and Meloy blocks:**

/ Geosoft Heading Correction Table

/= Direction:real:i

/= Correction:real

/ Direction Correction

0 -4.64

90 2.18

180 4.64

270 -2.19

360 -4.64

**King block:**

```
/ Geosoft Heading Correction Table
/= Direction:real:i
/= Correction:real
/   Direction  Correction
   0   -4.60
   90   1.34
  180   4.60
  270  -1.34
  360  -4.60
```

**Mars block:**

```
/ Geosoft Heading Correction Table
/= Direction:real:i
/= Correction:real
/   Direction  Correction
   42   -2.39
  132   4.42
  222   2.39
  312  -4.42
  360  -3.33
```

The heading corrected magnetic data were stored in MAG\_HEADING\_CORR channel.

### 7.5.3.4 IGRF CORRECTIONS

The total field strength of the International Geomagnetic Reference Field (IGRF, 2010 model) was calculated for every data point, based on the spot values of Latitude, Longitude and altitude. This IGRF was removed from the measured survey data on a point-by-point basis from the lag corrected channel.

After IGRF correction the total magnetic field values become negative. To bring the total magnetic measurements back to 'normal' values an average of IGRF values based on the whole project were added back to the magnetic data.

**Table 7.7 IGRF averages per block**

<b>Block Name</b>	<b>Average Readings (nT)</b>
Mint	56840.8
Nikki	56896.1
Corky	56884.2
Meloy	57033.5
King	57314.1
Mars	57346.2

The IGRF corrections were applied to the MAG\_HEADING\_CORR channel and stored in the MAG\_IGRF\_CORR channel.

### 7.5.3.5 LEVELING CORRECTIONS

After the data were corrected for IGRF, a survey traverse/control line intercepts array/matrix (i.e., Simple Leveling) was created for determining differences in magnetic field at the intersection points. Somewhat rugged terrain of the survey blocks, which resulted in some line-to-line difference in altitude, and relatively strong magnetic anomalies made magnetic signal at some Traverse/Control line intersection points quite different. As a result, some of those intersection points needed to be manually adjusted in order to reduce line-to-line magnetic differences.

The resulting simple leveled magnetic data were stored in MAG\_SIMPLE\_LVL channel.

Further it was decided to apply microlevelling techniques to the conventionally leveled magnetic data for Mint, Meloy and Mars blocks only (see Appendix F for full description of the procedure).

The following key parameters were used:

**Table 7.8 Total Magnetic Intensity (TMI) microlevelling parameters**

Block Name	Line Spacing (m)	Line Direction (deg.)	Grid Cell Size (m)	Decorrugation Cutoff (m)	Amplitude Limit (nT)	Amplitude Limit Mode	Naudy Filter Limit
Mint	100	90	10	400	43.0	clip	100
Meloy	100	0	10	400	8.0	clip	100
Mars	100	132	10	400	32.0	clip	100

The resulting microleveled channels for Mint, Meloy and Mars blocks were stored in MAG\_MICLEV channel.

The final Total Magnetic Intensity (TMI) data were stored in TMI\_FINAL channel. Note, for the Mint, Meloy and Mars blocks, TMI\_FINAL is copied directly from MAG\_MICLEV channel; for the Nikki, Corky and King blocks, TMI\_FINAL is copied directly from MAG\_SIMPLE\_LVL channel.

### 7.5.4 VERTICAL DERIVATIVE

A 1-st Order Vertical Derivative (VDV) data were calculated using 2D FFT2 algorithm based on final TMI grids. The resulting VDV grids were then sampled back to the database.

The VDV data were stored under VDV channel.

### **7.5.5 GRIDDING**

All the magnetic (TMI & VDV) and DTM grids were produced from the corresponding TMI\_FINAL, VDV and DTM channels.

The data were gridded using a bi-directional line gridding method with a grid cell size of 15 meters, Akima interpolation method for across and down line spline and trend angles perpendicular to those of traverse line directions.

### **7.5.6 RADIOMETRIC DATA CORRECTIONS**

#### **7.5.6.1 LIVE TIME CORRECTIONS**

The spectrometer uses the notion of “live time” to express the relative period of time the instrument was able to register new pulses per sample interval.

The live time correction is applied to the total count, potassium, uranium, thorium and upward uranium channels.

The formula used to apply the correction is as follows:

$$C_{LT} = C_{raw} \times \left( \frac{1000}{LT} \right)$$

**Where:**

- $C_{LT}$  is the live time corrected channel
- $C_{raw}$  is the raw channel
- $LT$  is the Live Time channel

#### **7.5.6.2 PRE-FILTERING**

The cosmic channel data were processed with a 15-point low pass filter to remove spikes.

The radar altimeter channel while recorded at 50Hz was filtered with 21-point COSINE filter and then sampled to 1Hz.

### 7.5.6.3 AIRCRAFT AND COSMIC BACKGROUND

Aircraft background and cosmic stripping corrections (see section 6.3.2) were applied to the live corrected total count, potassium, uranium, thorium and upward uranium channels using the following formula:

$$C_{ac} = C_{LT} - (ac + bc \times cof)$$

**Where:**

- $C_{ac}$  is the background and cosmic corrected channel
- $C_{LT}$  is the live time corrected channel
- $ac$  is the aircraft background for this channel
- $bc$  is the cosmic stripping coefficient for this channel
- $cof$  is the filtered cosmic channel

All negative counts after this correction step were replaced with zeroes.

### 7.5.6.4 RADON CORRECTION

No Radon corrections were applied to the data.

### 7.5.6.5 COMPTON STRIPPING

Following the background and cosmic corrections the potassium, uranium and thorium were corrected for spectral overlap (see section 6.2). First the stripping ratios  $\alpha$ ,  $\beta$ , and  $\chi$  were modified according to altitude. Then an adjustment factor based on the reversed stripping ratio (a), uranium into thorium, was calculated.

$$\alpha h = \alpha + hef \times 0.00049$$

$$\beta h = \beta + hef \times 0.00065$$

$$\chi h = \chi + hef \times 0.00069$$

**Where:**

- $\alpha, \beta, \chi$  are the Compton stripping coefficients
- $\alpha h, \beta h, \chi h$  are the height corrected Compton stripping coefficients
- $hef$  is the height above ground in meters

The stripping corrections are then carried out using the following formulas:

$$ar = \frac{1}{1 - a\alpha h}$$

$$Th_c = (Th_{bc} - aU_{rc}) \times ar$$

$$U_c = (U_{rc} - Th_{bc}\alpha h) \times ar$$

$$K_c = K_{bc} - \beta h Th_c - \chi h U_c$$

**Where:**

- $U_c$ ,  $Th_c$ , and  $K_c$  are corrected Uranium, Thorium and Potassium
- $\alpha h$ ,  $\beta h$ ,  $\chi h$  are the height corrected Compton stripping coefficients
- $U_{bc}$ ,  $Th_{bc}$ , and  $K_{bc}$  are background and cosmic corrected Uranium, Thorium and Potassium
- $ar$  is the backscatter correction
- $a$  is the reverse stripping ratio U into Th

All negative counts after this correction step were replaced with zeroes.

### 7.5.6.6 EQUIVALENT HEIGHT AT STP

The following formula was used to calculate Equivalent Height at STP:

$$H_e = H \times \left( \frac{273.15}{T + 273.15} \right) \times \left( \frac{P}{1013.25} \right)$$

**Where:**

- $H$  is the observed height
- $H_e$  is the equivalent height at STP
- $T$  is the temperature in degrees Celsius
- $P$  is the barometric pressure in mbar.

### 7.5.6.7 ATTENUATION CORRECTIONS

The Total Count, Potassium, Uranium and Thorium data were then corrected to a nominal survey altitude of 35m (see section 6.4.1) using the following equation:

$$C_a = C \times e^{-\mu(h_0 - h_e)}$$

**Where:**

- $C_a$  is the output altitude corrected channel
- $C$  is the input channel
- $\mu$  is the attenuation correction for that channel
- $h_e$  is the STP height
- $h_0$  is the nominal survey altitude

The altitude attenuation corrected data were then stored in U\_CORR, Th\_CORR, K\_CORR and TC\_CORR channels.

### 7.5.6.8 LEVELING OF ATTENUATION CORRECTED DATA

Microleveling techniques were applied to specific altitude attenuation corrected elements (i.e., some or all of K, Th, U and Total Count) on all of the survey blocks with the exception of Corky.

The following key parameters were used (see Appendix F for full description of the procedure).

**Table 7.9 Uranium microlevelling parameters**

Block Name	Line Spacing (m)	Line Direction (deg.)	Grid Cell Size (m)	Decorrugation Cutoff (m)	Amplitude Limit (nT)	Amplitude Limit Mode	Naudy Filter Limit
Mint	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nikki	100	90	20	400	1.3	clip	100
Corky	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Meloy	100	0	20	400	2.2	clip	100
King	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mars	100	132	20	400	1.7	clip	0

**Table 7.10 Thorium microlevelling parameters**

Block Name	Line Spacing (m)	Line Direction (deg.)	Grid Cell Size (m)	Decorrugation Cutoff (m)	Amplitude Limit (nT)	Amplitude Limit Mode	Naudy Filter Limit
Mint	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nikki	100	90	20	400	1.2	clip	100
Corky	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Meloy	100	0	20	400	2.6	clip	100
King	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mars	100	132	20	400	7.0	clip	0

**Table 7.11 Potassium microlevelling parameters**

Block Name	Line Spacing (m)	Line Direction (deg.)	Grid Cell Size (m)	Decorrugation Cutoff (m)	Amplitude Limit (nT)	Amplitude Limit Mode	Naudy Filter Limit
Mint	100	90	20	400	8.2	clip	0
Nikki	100	90	20	400	10.4	clip	100
Corky	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Meloy	100	0	20	400	21.0	clip	100
King	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mars	100	132	20	400	13.0	clip	0

**Table 7.12 Total Count microlevelling parameters**

Block Name	Line Spacing (m)	Line Direction (deg.)	Grid Cell Size (m)	Decorrugation Cutoff (m)	Amplitude Limit (nT)	Amplitude Limit Mode	Naudy Filter Limit
Mint	100	90	20	400	23.7	clip	0
Nikki	100	90	20	400	100.0	clip	0
Corky	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Meloy	100	0	20	400	180.0	clip	0
King	100	90	20	400	35.7	clip	0
Mars	100	132	20	400	150.0	clip	0

The resulting microleveled altitude attenuation corrected line data were then stored in the final U\_FINAL\_CORR, Th\_FINAL\_CORR, K\_FINAL\_CORR and TC\_FINAL\_CORR channels. Note, in the instances where no microlevelling was applied, the data in the final channels were copied directly from U\_CORR, Th\_CORR, K\_CORR and TC\_CORR.

#### **7.5.6.9 CONVERSION TO APPARENT RADIOELEMENT CONCENTRATIONS**

The next step is to convert the corrected potassium (K\_FINAL\_CORR channel), uranium (U\_FINAL\_CORR channel) and thorium (Th\_FINAL\_CORR channel) to apparent radioelement concentrations (see section 6.6) using the following formula:

$$eE = C_{cor} / s$$

**Where:**

- $eE$  is the element concentration  $K_{\%}$  and equivalent element concentration of  $U_{ppm}$  &  $Th_{ppm}$
- $s$  is the experimentally determined sensitivity
- $C_{cor}$  is the fully corrected channel

The resulting apparent concentration data were stored in K\_Percent, eU and eTh channels.

Note: Determining of apparent radioelement concentrations were not part of the signed agreement. Such data are made available to the client as a courtesy.

**7.5.6.10 AIR ABSORPTION DOSE RATE**

Finally the natural air absorption dose rate was determined using the following formula:

$$E = 13.078 \times K_{\%} + 5.675 \times eU_{ppm} + 2.494 \times eTh_{ppm}$$

**Where:**

- $E$  is the air absorption rate ( $nGy/h$ )
- $K_{\%}$  is the concentration of potassium (%)
- $eU_{ppm}$  is the equivalent concentration of potassium (ppm)
- $eTh_{ppm}$  is the equivalent concentration of potassium (ppm)

The resulting natural air absorption rate data were stored in E channel.

Note: Determining of the absorption rate was not part of the signed agreement. Such data are made available to the client as a courtesy.

A detailed description of how most of the procedures, formulae and constants were determined could be found in:

I.A.E.A. *Report, Airborne Gamma Ray Spectrometer Surveying*, Technical Report Series No. 323, 1991.

and

I.A.E.A *Guidelines for Radioelement Mapping Using Gamma Ray Spectrometry Data*, Technical Document No. 1363, 2003.

#### **7.5.6.11 GRIDDING**

All the radiometric grids are in counts/sec units and were produced from U\_FINAL\_CORR, Th\_FINAL\_CORR, K\_FINAL\_CORR and TC\_FINAL\_CORR channels.

The data were gridded using a bi-directional line gridding method with a grid cell size of 25 meters, Akima interpolation method for across and down line spline and trend angles perpendicular to those of traverse line directions.

#### **7.5.6.12 TERNARY MAP**

The radioelement ternary map was produced by creating individual grids for each of the three radioelements (potassium, thorium and uranium), then assigning a specific colour to each. Cyan represents thorium, yellow uranium, and magenta potassium. The relative concentrations of the radioelements are represented by the blends of the three colours.

## 8. MAP PRODUCTS AND DIGITAL DATA DELIVERABLES

The following is the list of items delivered to **STRATEGIC METALS Ltd.**

### **Hard Copy Maps for Nikki, Mint, Corky, Meloy, King and Mars Blocks @ 1:20,000 scale (x2):**

- Maps of Total Magnetic Intensity
- Maps of 1st order Vertical Derivative
- Maps of Digital Terrain Model
- Maps of Ternary Image (Th, U and K)
- Maps of Potassium counts
- Maps of Thorium counts
- Maps of Uranium counts
- Maps of Total Count

### **Hard Copy Logistics Report (x2):**

### **Digital Copy (DVD) Maps for Nikki, Mint, Corky, Meloy, King and Mars Blocks @ 1:20,000 scale (x2):**

- Maps of Total Magnetic Intensity
- Maps of 1st order Vertical Derivative
- Maps of Digital Terrain Model
- Maps of Potassium counts
- Maps of Thorium counts
- Maps of Uranium counts
- Maps of Total Count
- Ternary Map of Th, U and K

### **Digital Copy Grids (DVD) for Nikki, Mint, Corky, Meloy, King and Mars Blocks (x2):**

- Grids of Total Magnetic Intensity (nT)
- Grids of 1st order Vertical Derivative (nT/m)
- Grids of Digital Terrain Model (m above MSL)
- Grids of Potassium (counts/sec)
- Grids of Thorium (counts/sec)
- Grids of Uranium (counts/sec)
- Grids of Total Count (counts/sec)

### **Digital Copy (DVD) Databases for Nikki, Mint, Corky, Meloy, King and Mars Blocks (x2):**

- Magnetism data databases: MAGNETIC\_ *blockname* \_BK.gdb (See Appendix C for details)
- Radiometric data database: RADIOMETRIC\_ *blockname* \_BK.gdb (See Appendix C for details)

**Digital Copy (DVD) Logistics Report (x2):**

**Digital Copy (DVD) Weekly and Line Report (x2):**

## 9. SUMMARY

This report describes the logistics of the survey, equipment used, field procedures, data acquisition and presentation of results.

The various maps included with this report display the magnetic and radiometric properties of the survey area. It is recommended that the survey results be reviewed in detail, in conjunction with all available geophysical, geological and geochemical information.

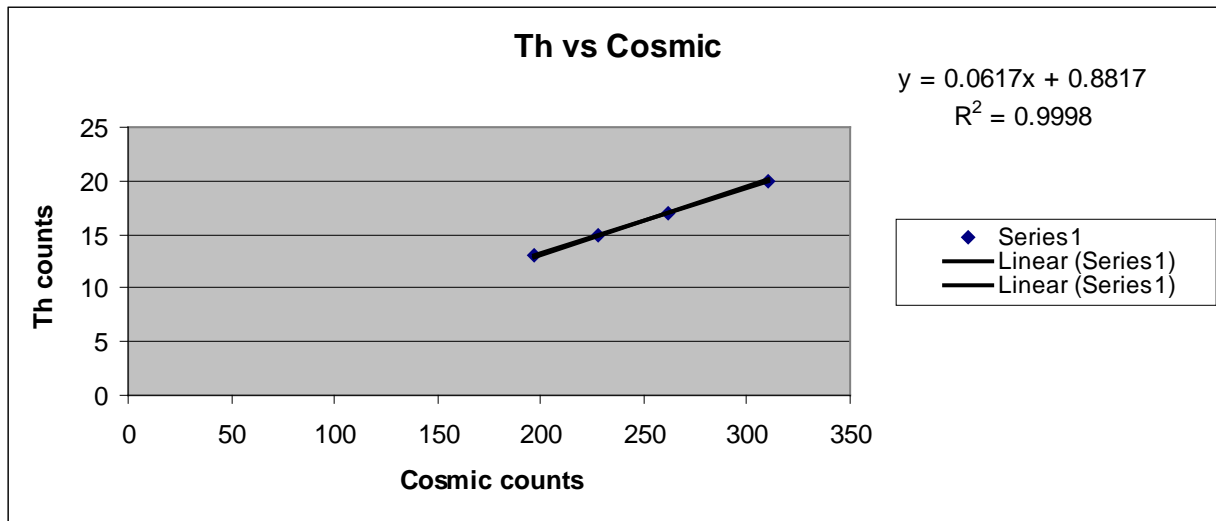
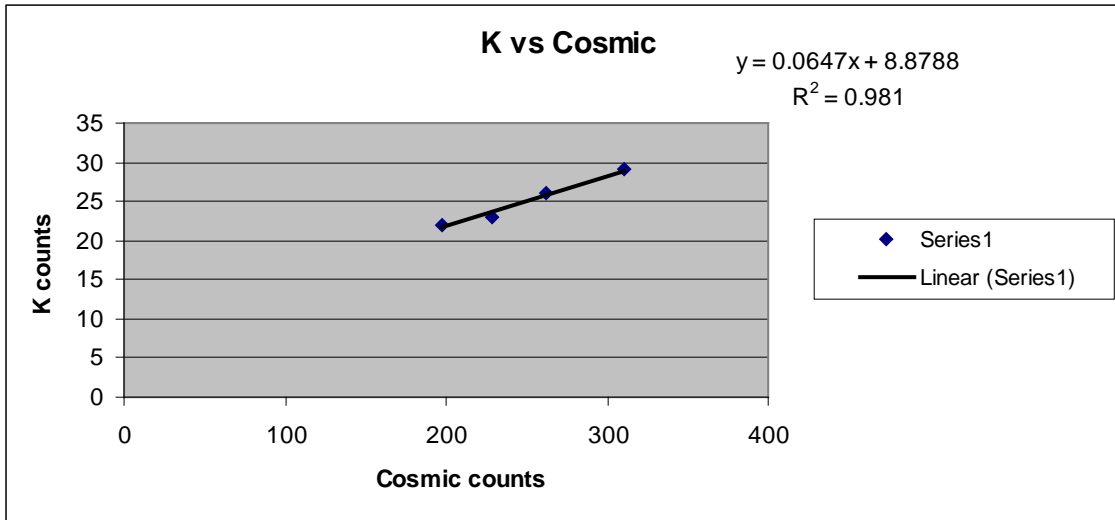
Further processing of the data may enhance subtle features that can be of importance for exploration purposes.

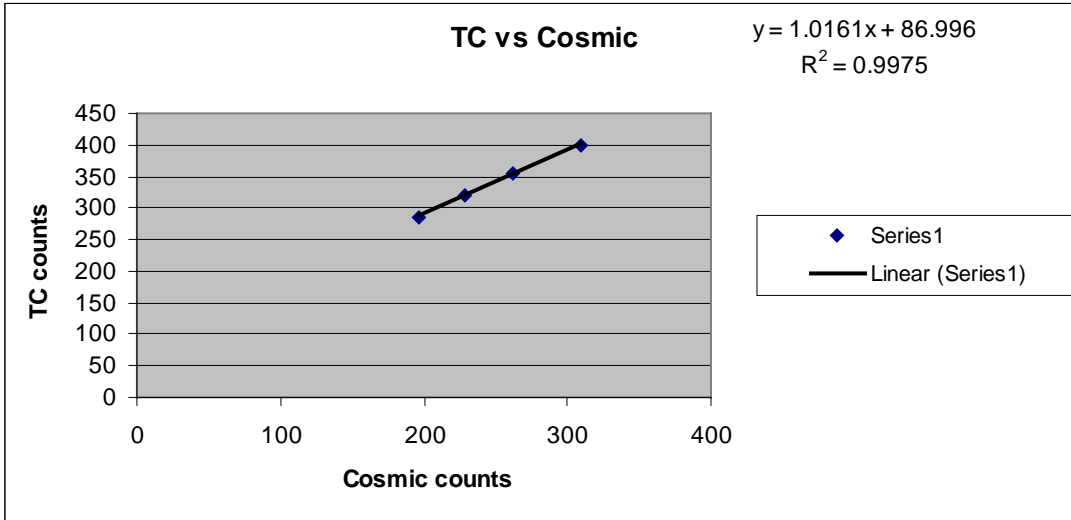
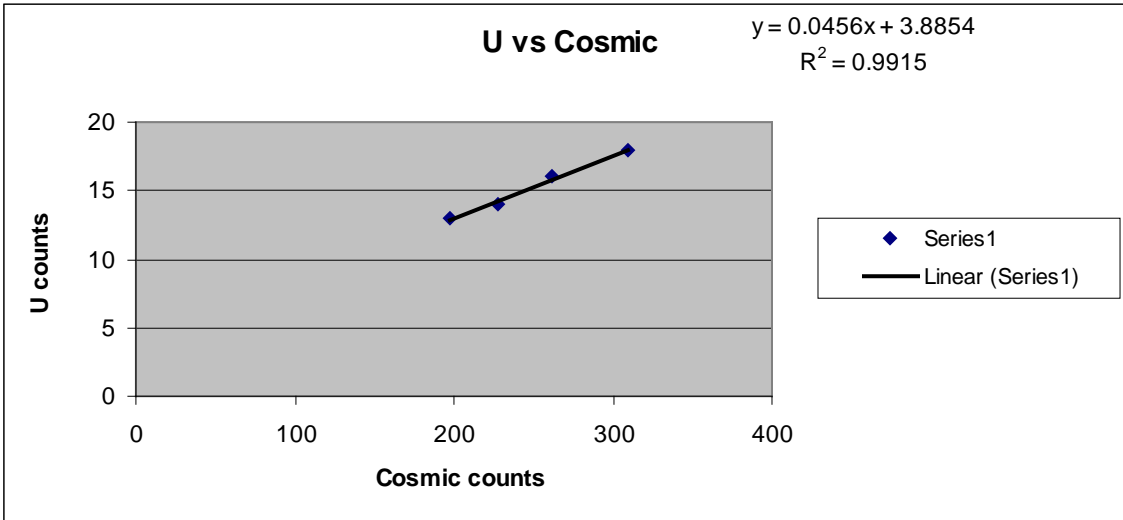
Respectfully submitted,

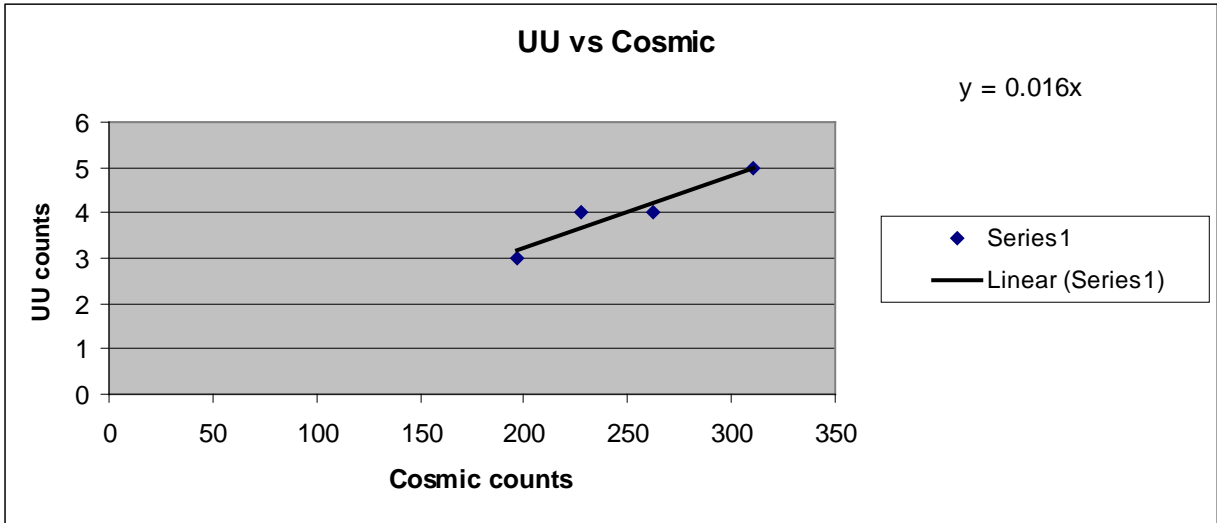
Andrei Yakovenko  
New-Sense Geophysics Ltd.  
Date: October 5<sup>th</sup>, 2010

**APPENDIX A: BACKGROUND AND COSMIC TESTS CHARTS**

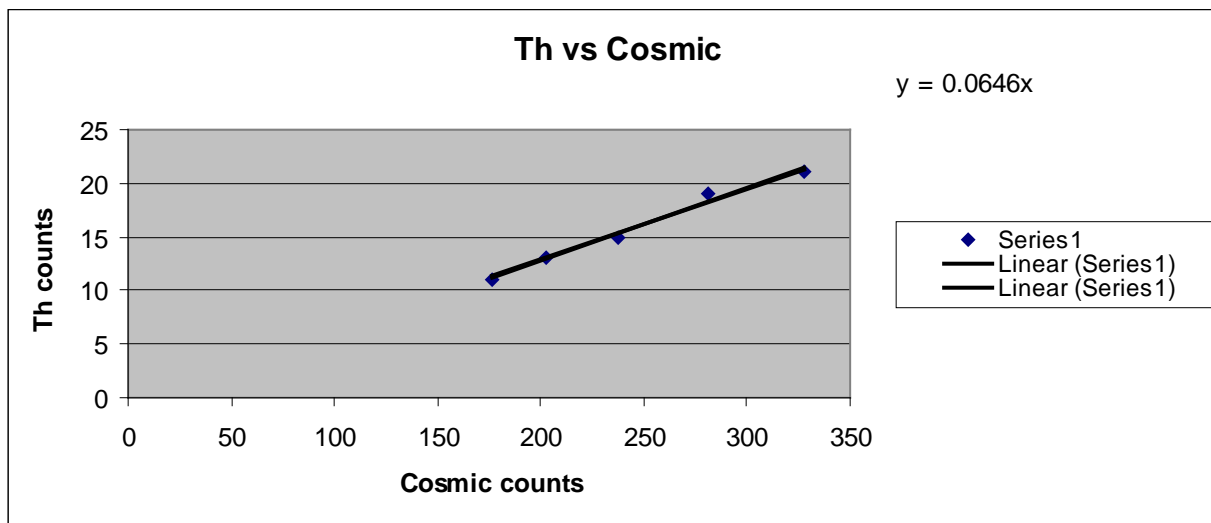
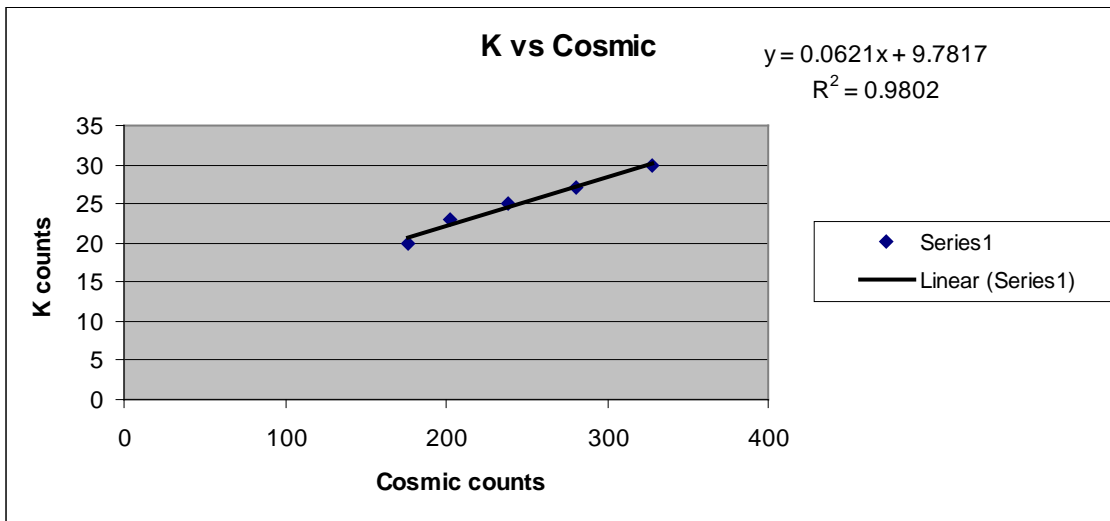
**August 8, 2010**

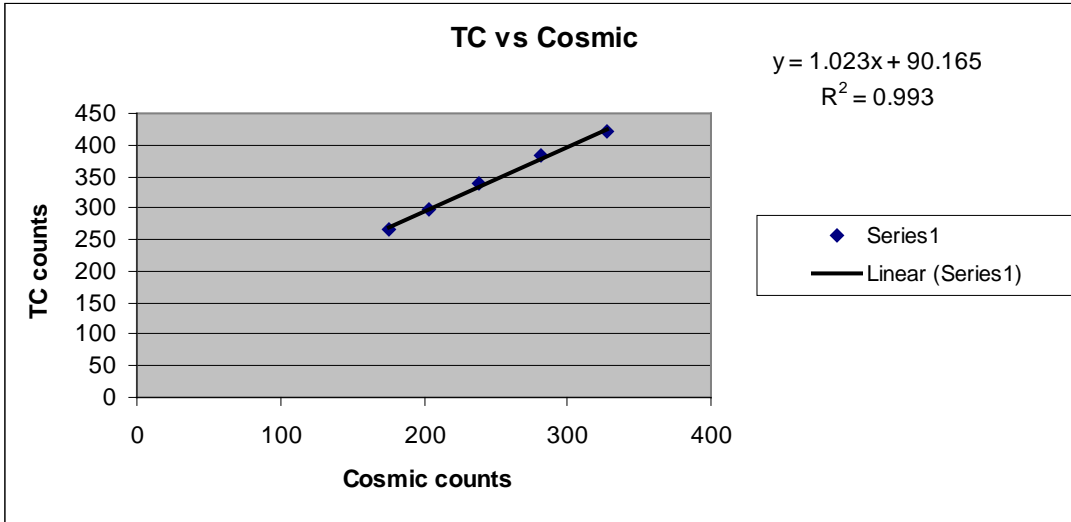
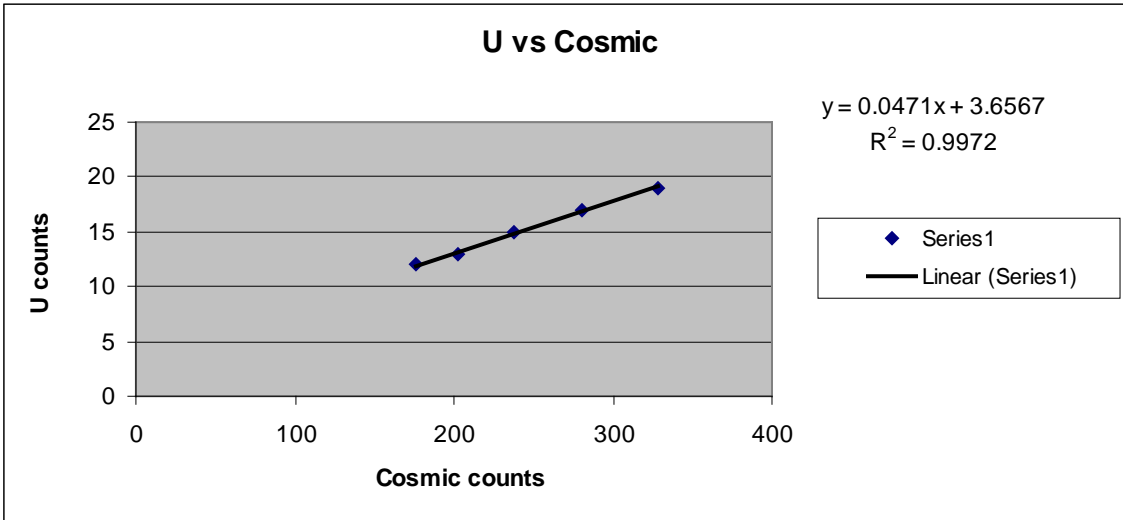


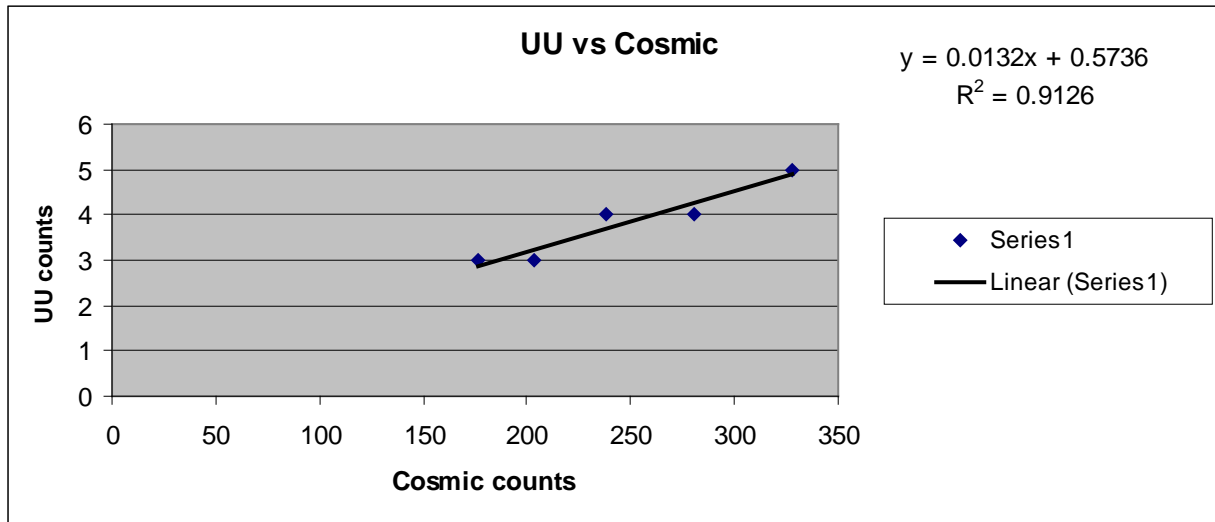




August 15, 2010

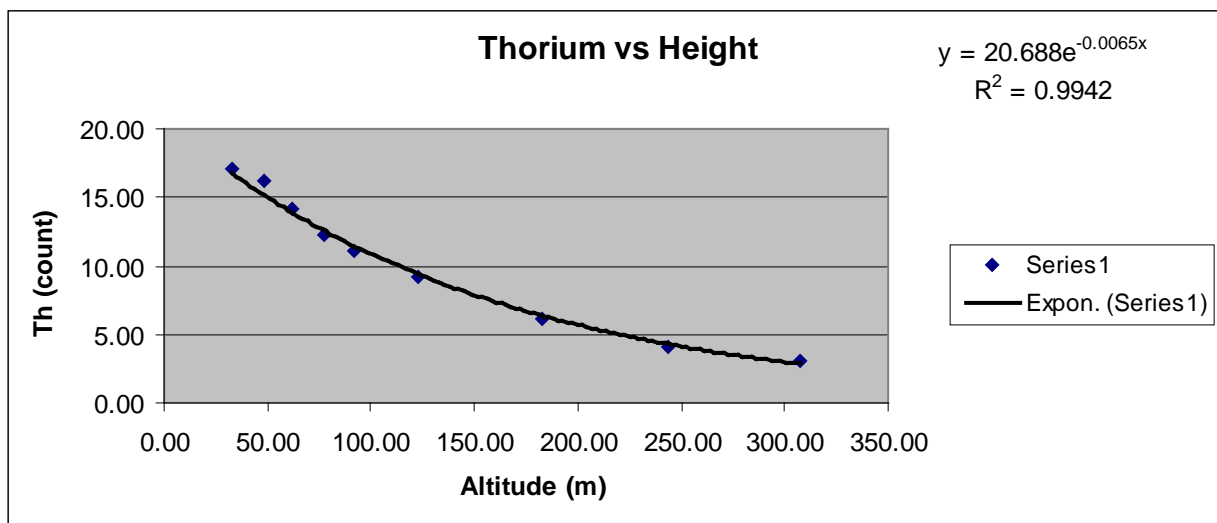
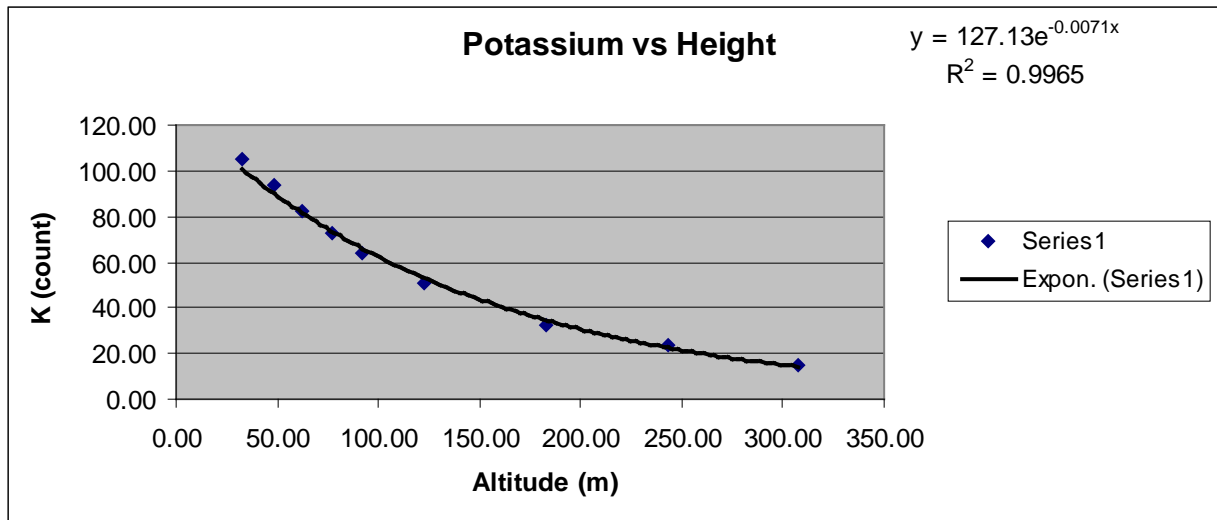


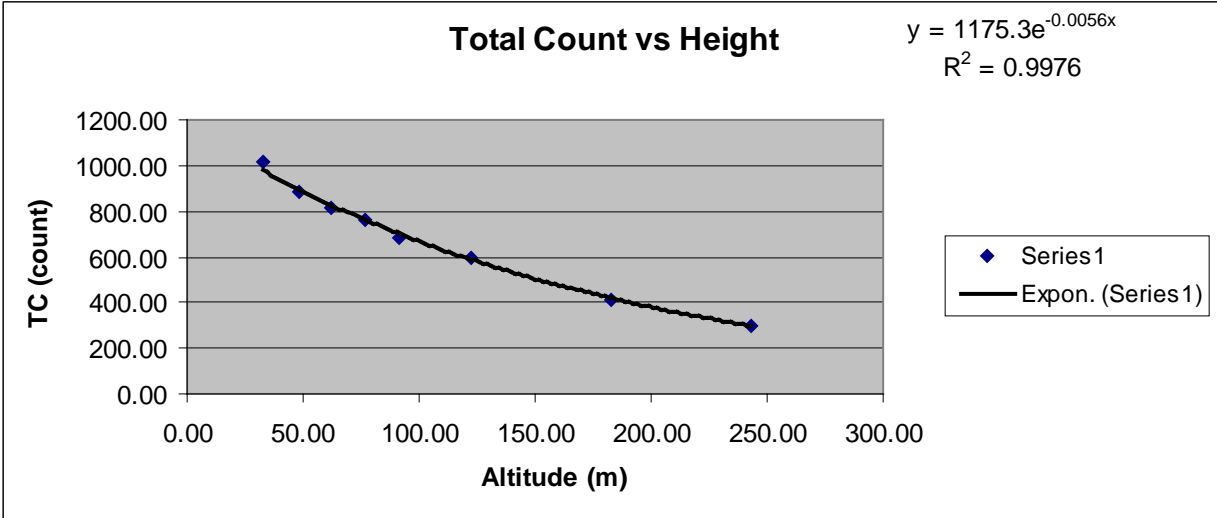
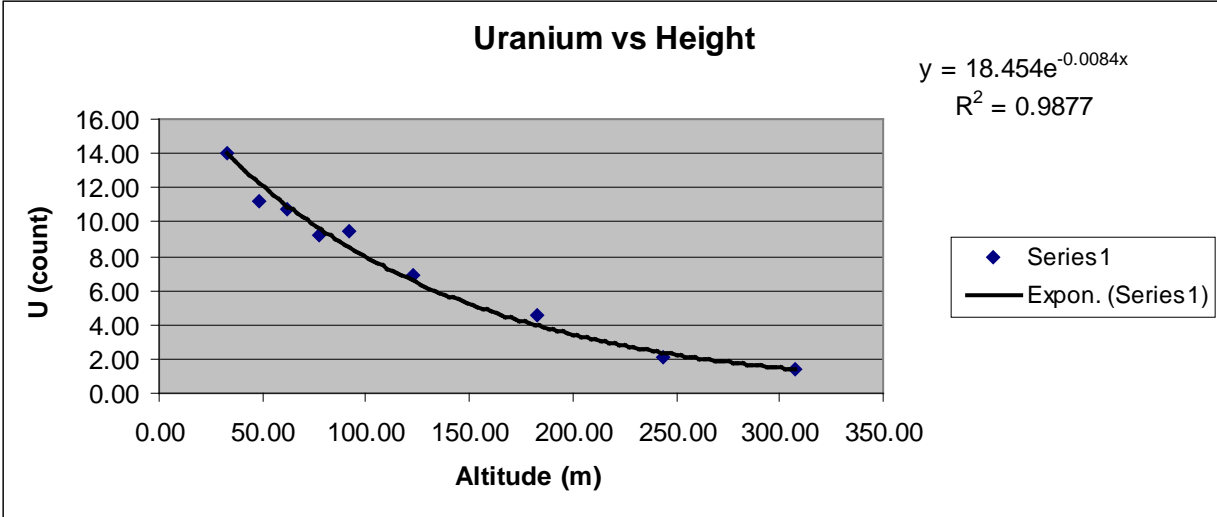




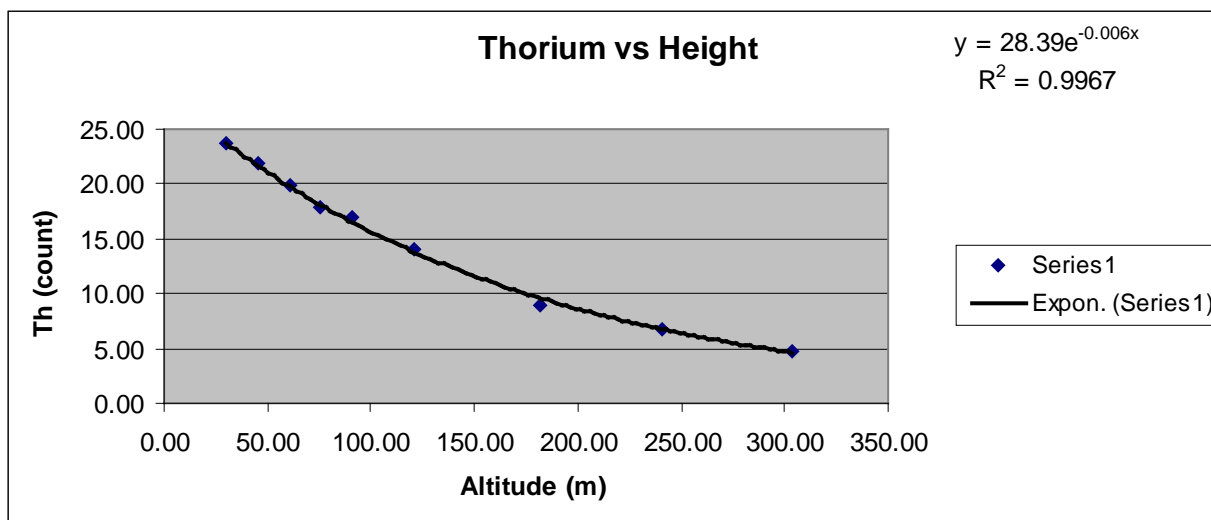
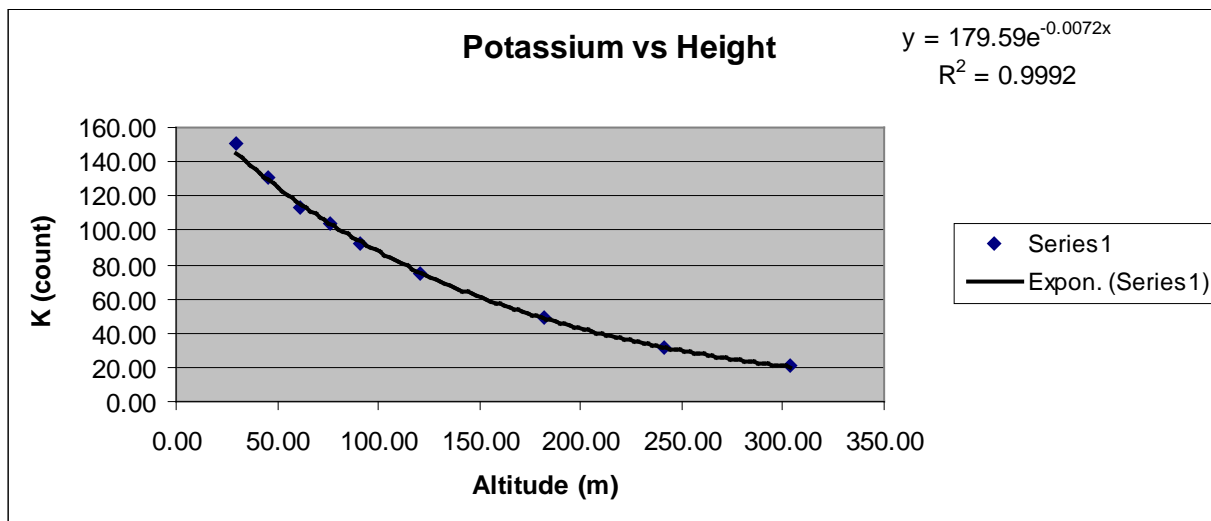
# Height Attenuation Test Charts

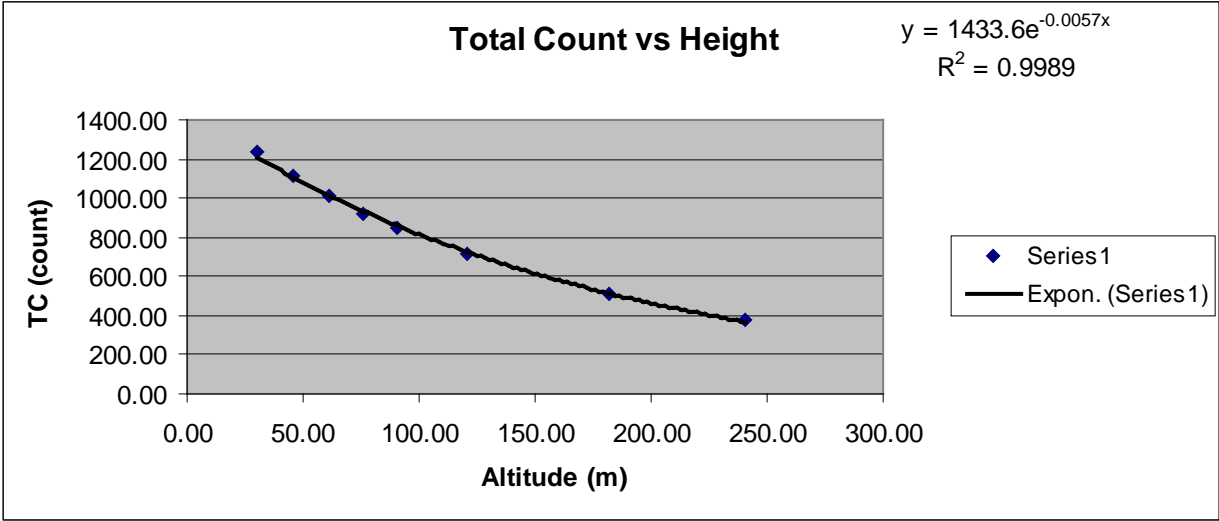
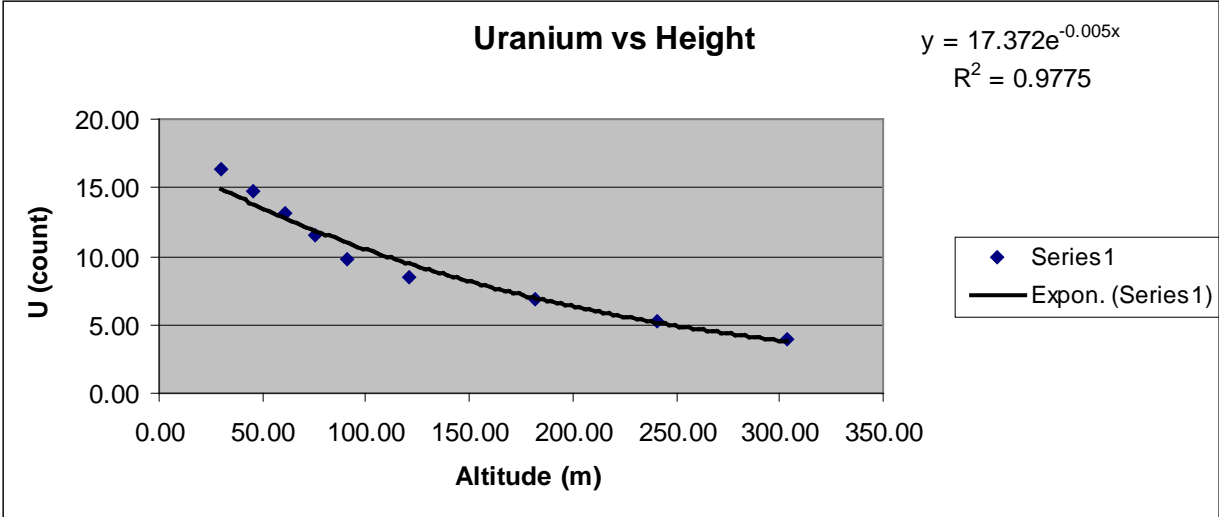
August 8, 2010





August 15, 2010

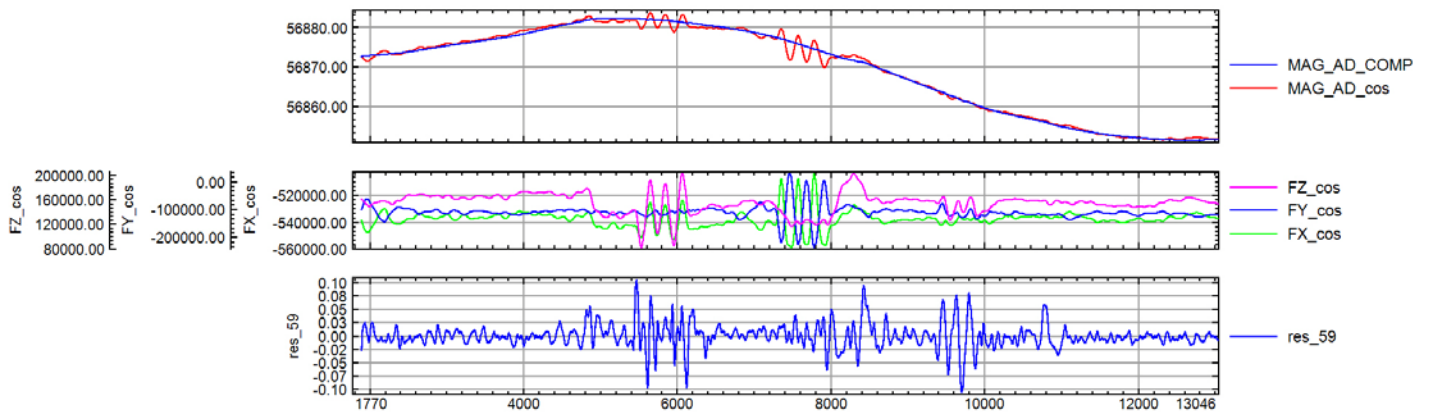




## APPENDIX B: FOM RESULTS

Strategic Metals, Yukon, FOM result, August 8 <sup>th</sup> , 2010					
line	direction	pitch	roll	yaw	total
<b>1000</b>	<b>0</b>	0.175	0.113	0.183	0.470
<b>2000</b>	<b>90</b>	0.275	0.075	0.150	0.500
<b>3000</b>	<b>180</b>	0.163	0.050	0.075	0.288
<b>4000</b>	<b>270</b>	0.200	0.075	0.135	0.410
	<b>total</b>	0.813	0.313	0.543	<b>1.668</b>

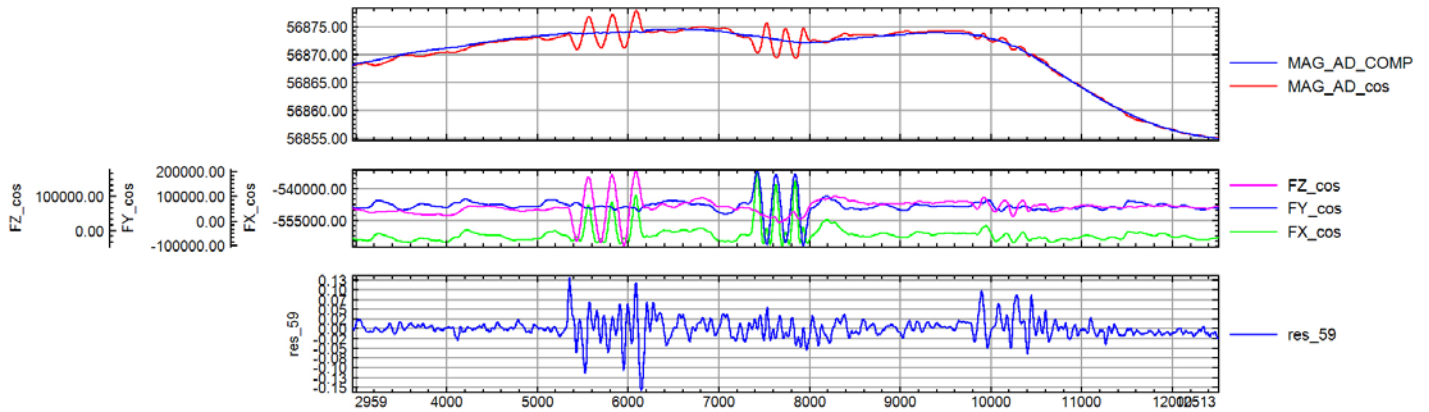
### FOM results, August 8th 2010, 0 degree direction



database: D:\Strategic Metals\FOM\FOM west August 9, 2010\FLT01\_FOM\_08082010\_Short.gdb line/group: L1000

2010/08/09

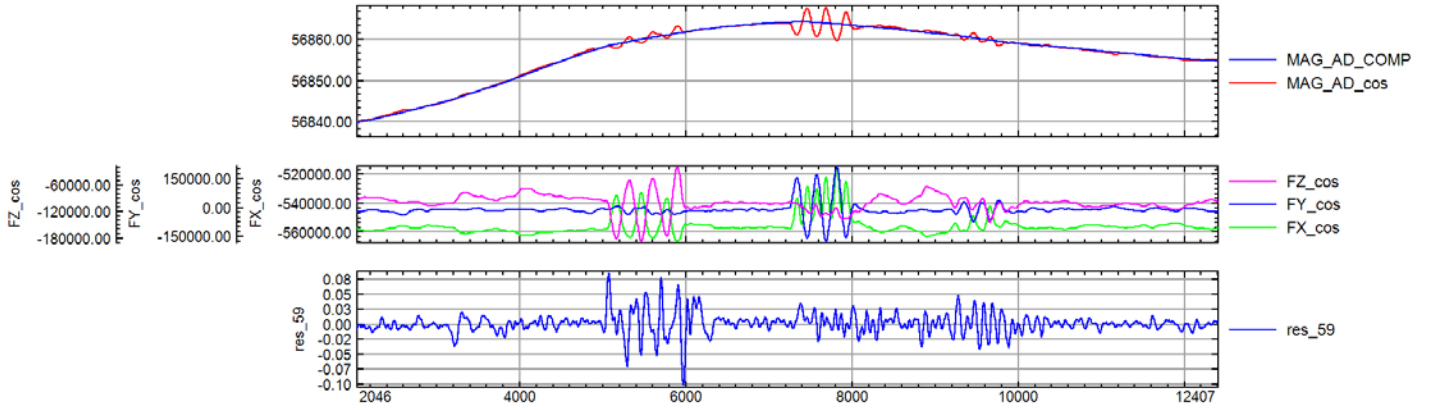
### FOM results, August 8th 2010, 90 degree direction



database: D:\Strategic Metals\FOM\FOM west August 9, 2010\FLT01\_FOM\_08082010\_Short.gdb line/group: L2000

2010/08/09

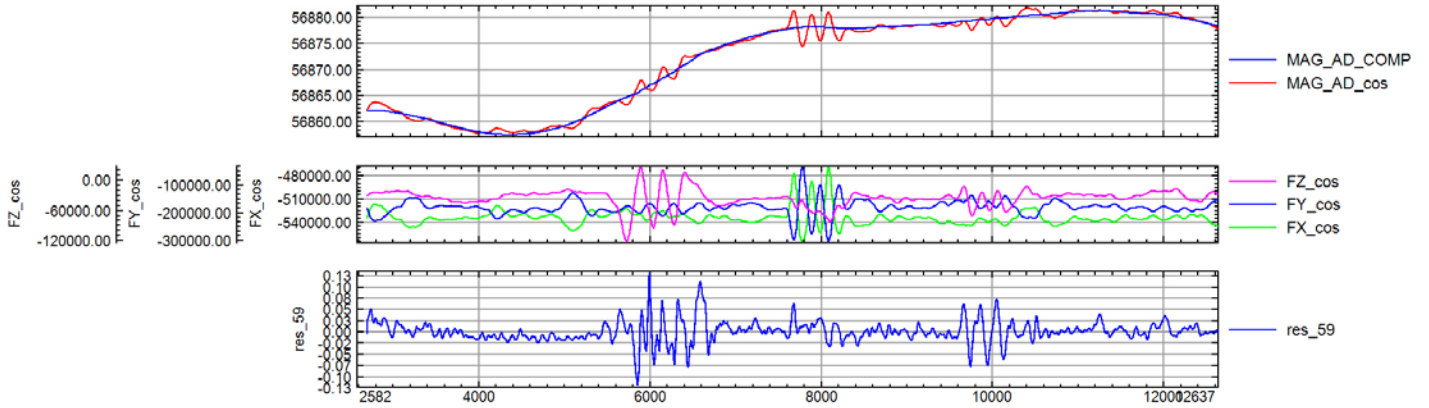
### FOM results, August 8th 2010, 180 degree direction



database: D:\Strategic Metals\FOM\FOM west August 9, 2010\FLT01\_FOM\_08082010\_Short.gdb line/group: L3000

2010/08/09

### FOM results, August 8th 2010, 270 degree direction

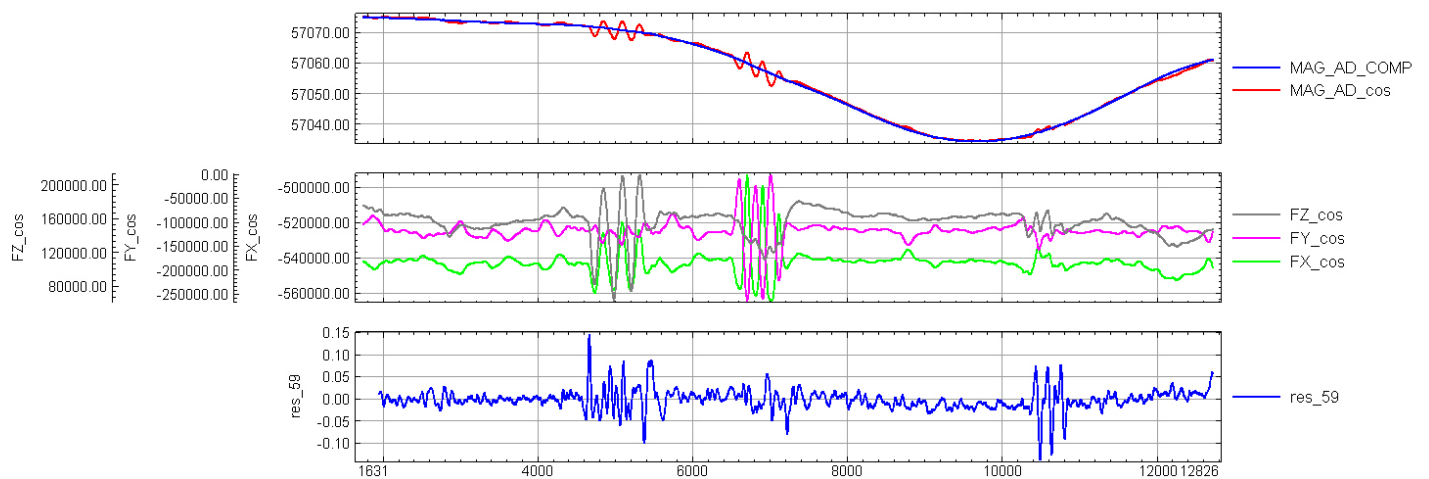


database: D:\Strategic Metals\FOM\FOM west August 9, 2010\FLT01\_FOM\_08082010\_Short.gdb line/group: L4000

2010/08/09

Strategic Metals, Yukon, FOM result, August 13, 2010					
line	direction	pitch	roll	yaw	total
1000	0	0.200	0.105	0.200	0.505
2000	90	0.195	0.080	0.150	0.425
3000	180	0.140	0.060	0.085	0.285
4000	270	0.160	0.075	0.180	0.415
	<b>total</b>	0.695	0.320	0.615	<b>1.630</b>

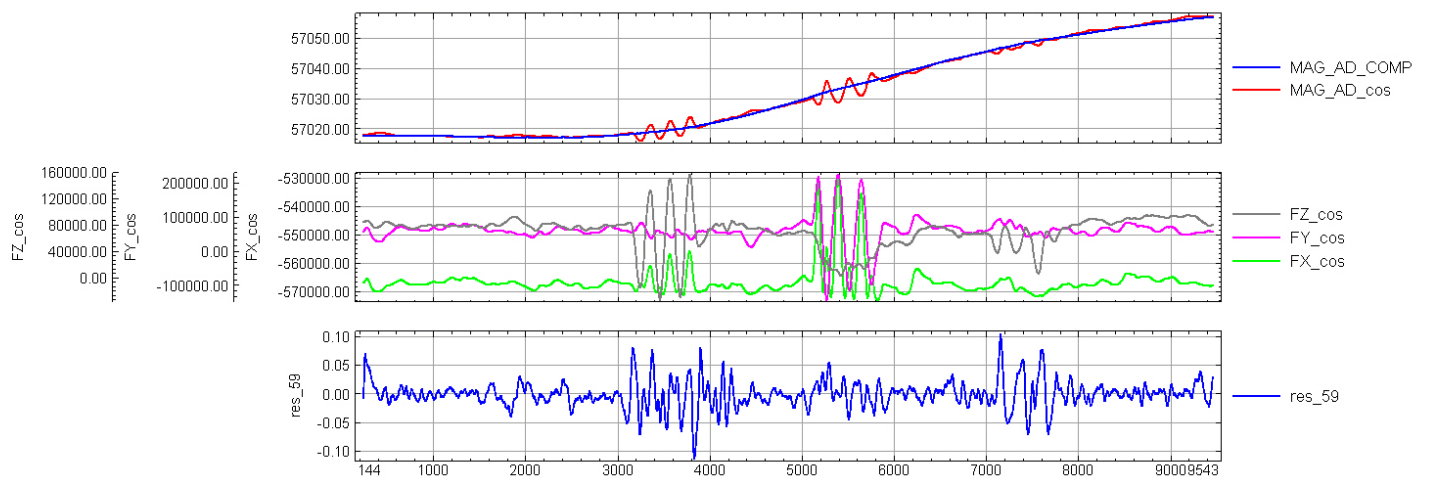
### FOM results, August 13th 2010, 0 degree direction



database: D:\Strategic\FOMs\Strategic Metals\FOM west August 13, 2010\FOM\_FLT10\_08132010\_Short.gdb line/group: L1000

2010/09/27

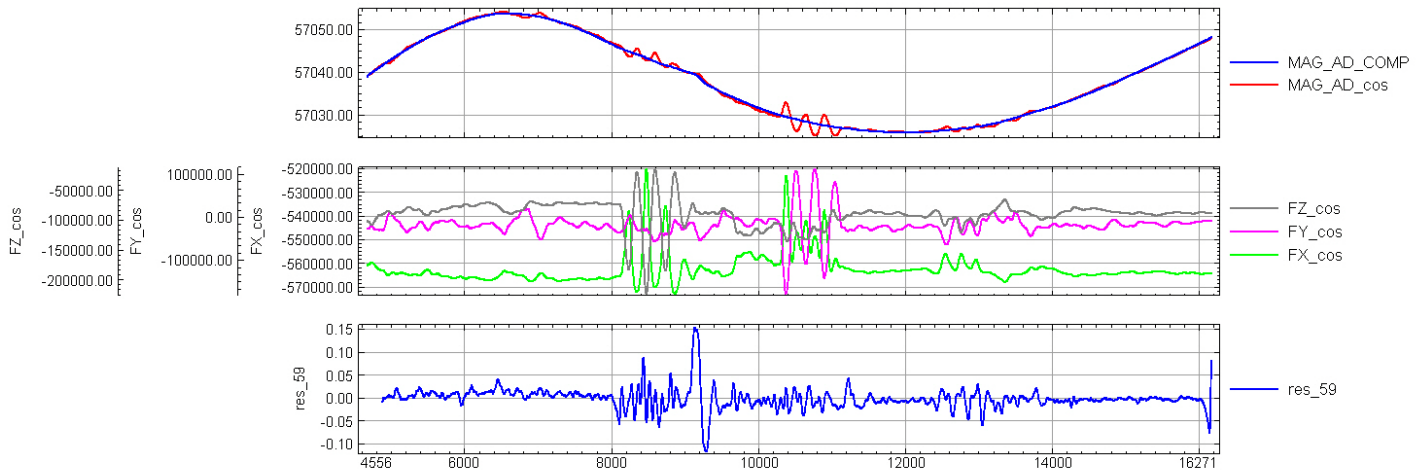
### FOM results, August 13th 2010, 90 degree direction



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2010/09/27

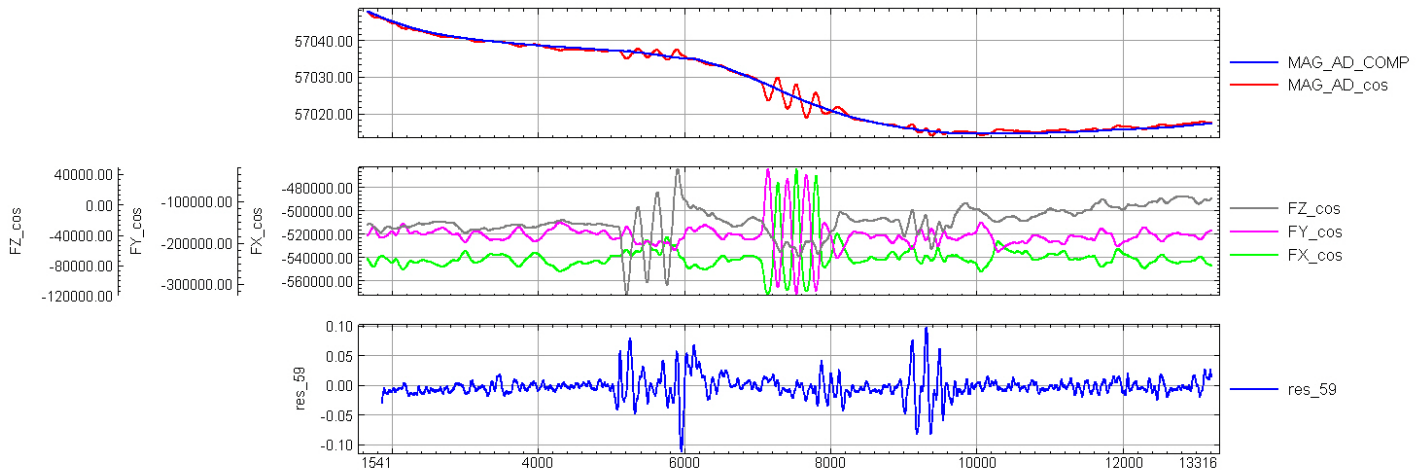
### FOM results, August 13th 2010, 180 degree direction



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2010/09/27

### FOM results, August 13th 2010, 270 degree direction

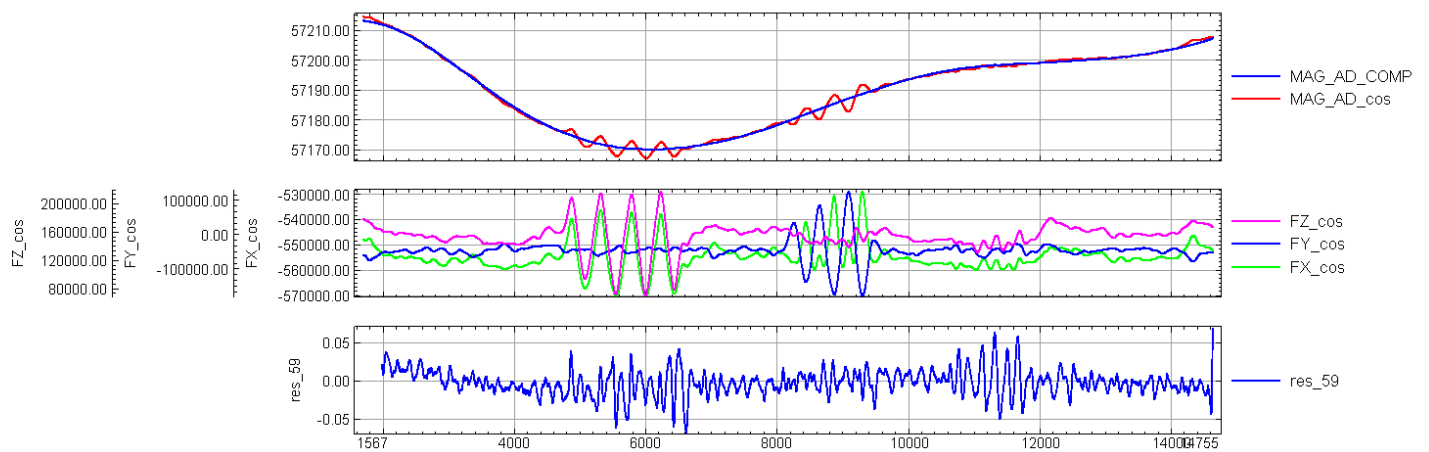


database: D:\Strategic\FOMs\Strategic Metals\FOM west August 13, 2010\FOM\_FLT10\_08132010\_Short.gdb line/group: L4000

2010/09/27

Strategic Metals, Yukon, FOM result, August 15, 2010					
line	direction	pitch	roll	yaw	total
1000	42	0.150	0.050	0.115	0.315
2000	132	0.200	0.100	0.135	0.435
3000	222	0.130	0.050	0.125	0.305
4000	312	0.100	0.070	0.125	0.295
	<b>total</b>	0.580	0.270	0.500	<b>1.350</b>

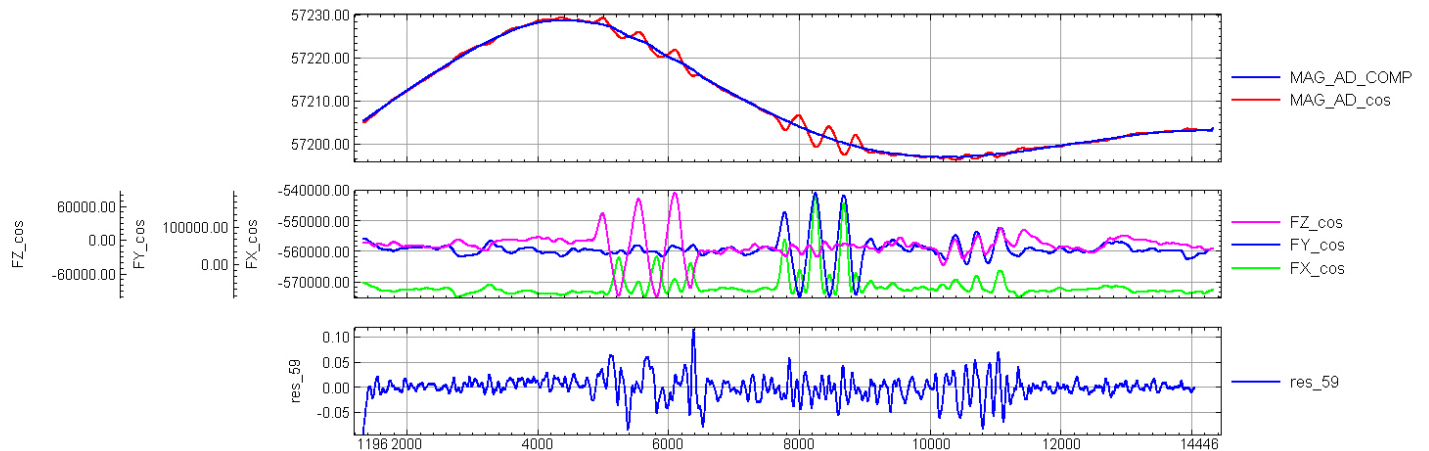
FOM results, August 15th 2010, 42 degree direction



database: D:\StrategicFOMs\Strategic Metals\FOW east August 15, 2010\FOM\_FLT13\_08132010\_Short\_2.gdb line/group: L1000

2010/09/27

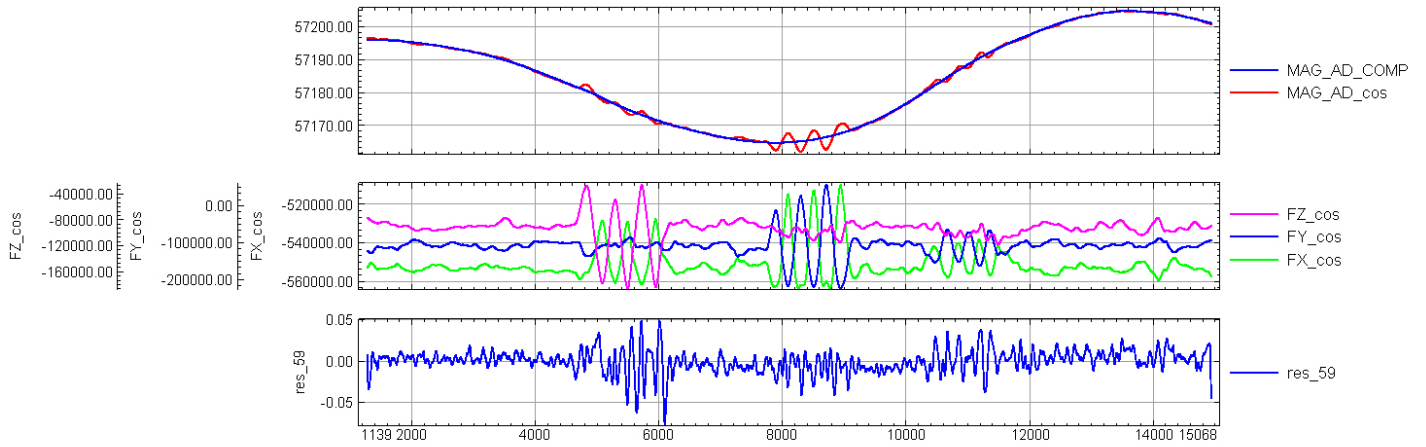
FOM results, August 15th 2010, 132 degree direction



database: D:\StrategicFOMs\Strategic Metals\FOW east August 15, 2010\FOM\_FLT13\_08132010\_Short\_2.gdb line/group: L2000

2010/09/27

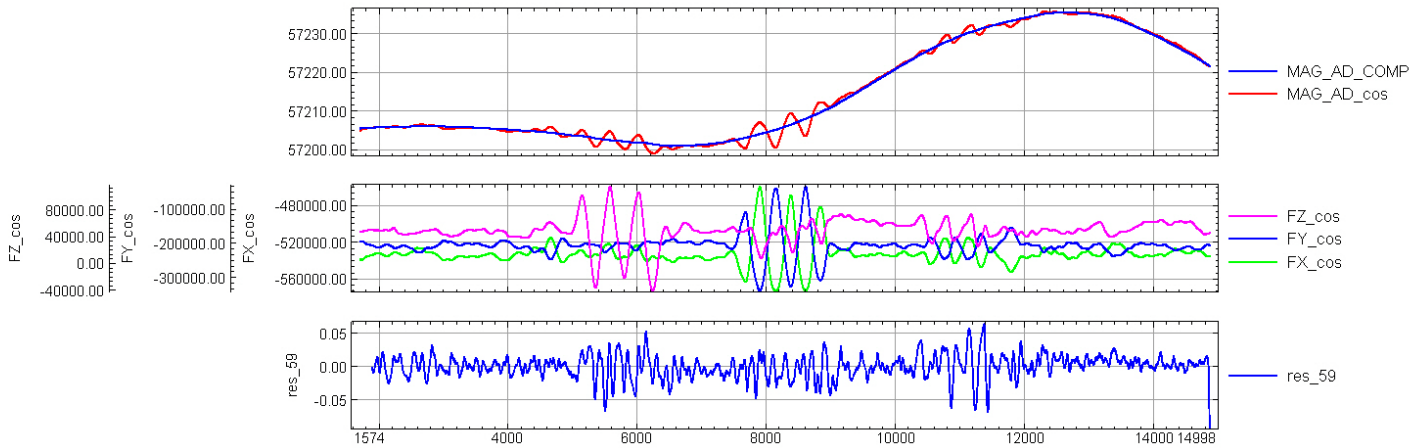
### FOM results, August 15th 2010, 222 degree direction



database: D:\Strategic\FOMs\Strategic Metals\FOW east August 15, 2010\FOM\_FLT13\_08132010\_Short\_2.gdb line/group: L3000

2010/09/27

### FOM results, August 15th 2010, 312 degree direction

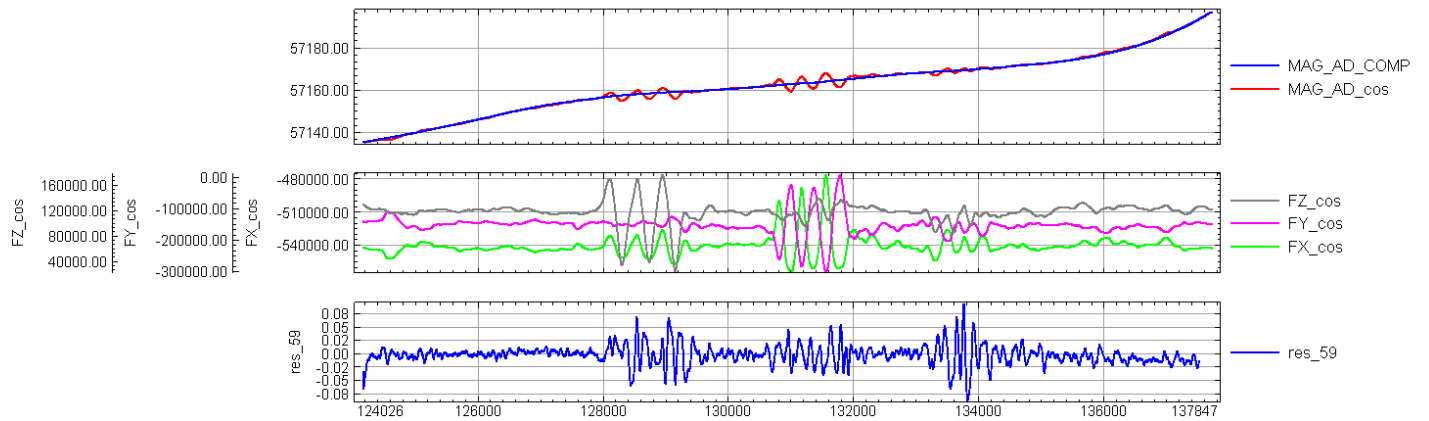


database: D:\Strategic\FOMs\Strategic Metals\FOW east August 15, 2010\FOM\_FLT13\_08132010\_Short\_2.gdb line/group: L4000

2010/09/27

Strategic Metals, Yukon, FOM result, August 17, 2010					
line	direction	pitch	roll	yaw	total
1000	0	0.125	0.085	0.175	0.385
2000	90	0.125	0.050	0.138	0.313
3000	180	0.138	0.050	0.055	0.243
4000	270	0.100	0.050	0.108	0.258
	<b>total</b>	0.488	0.235	0.475	<b>1.198</b>

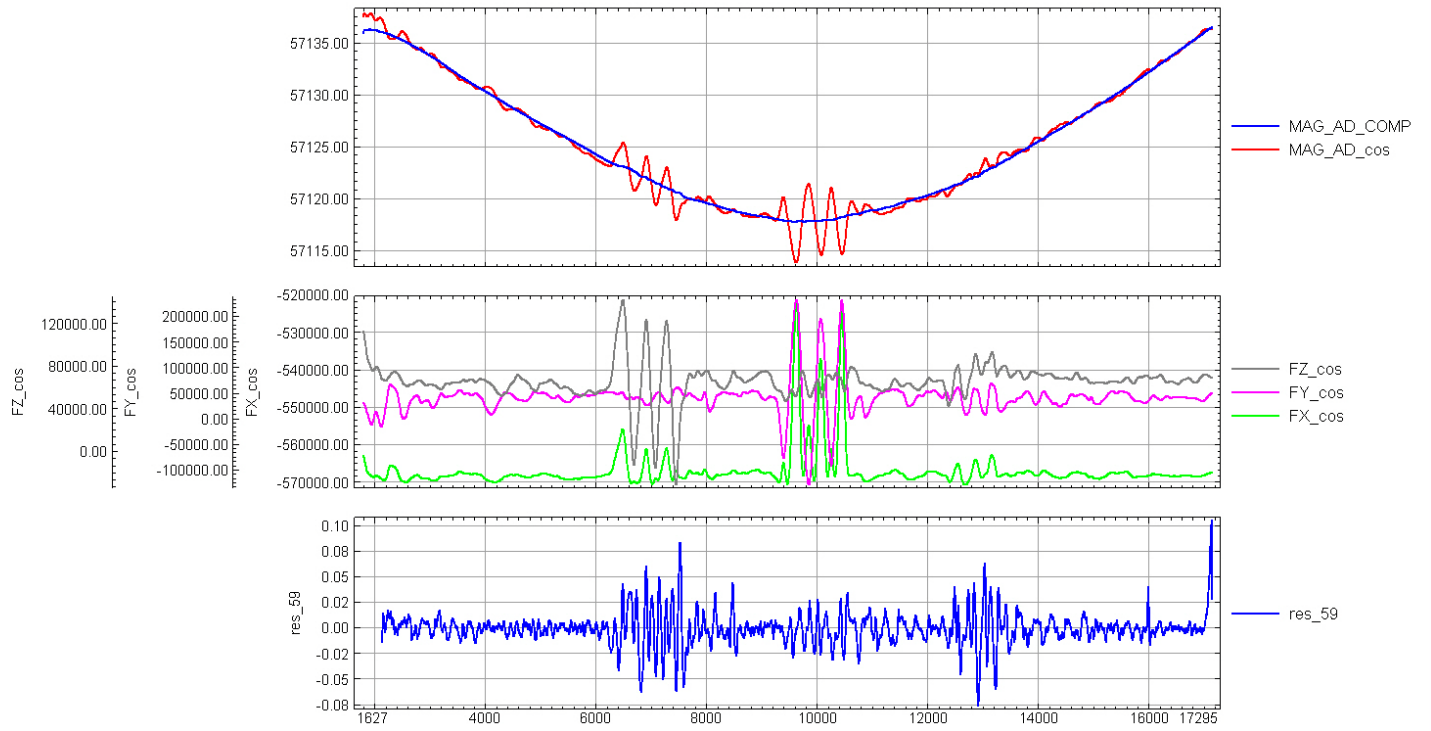
FOM results, August 17th 2010, 0 degree direction



database: D:\Strategic\FOMs\Klassin NS and Klaza\FOM east August 17, 2010\FOM\_FLT18\_08172010\_Short\_1.gdb line/group: L1000.1

2010/09/27

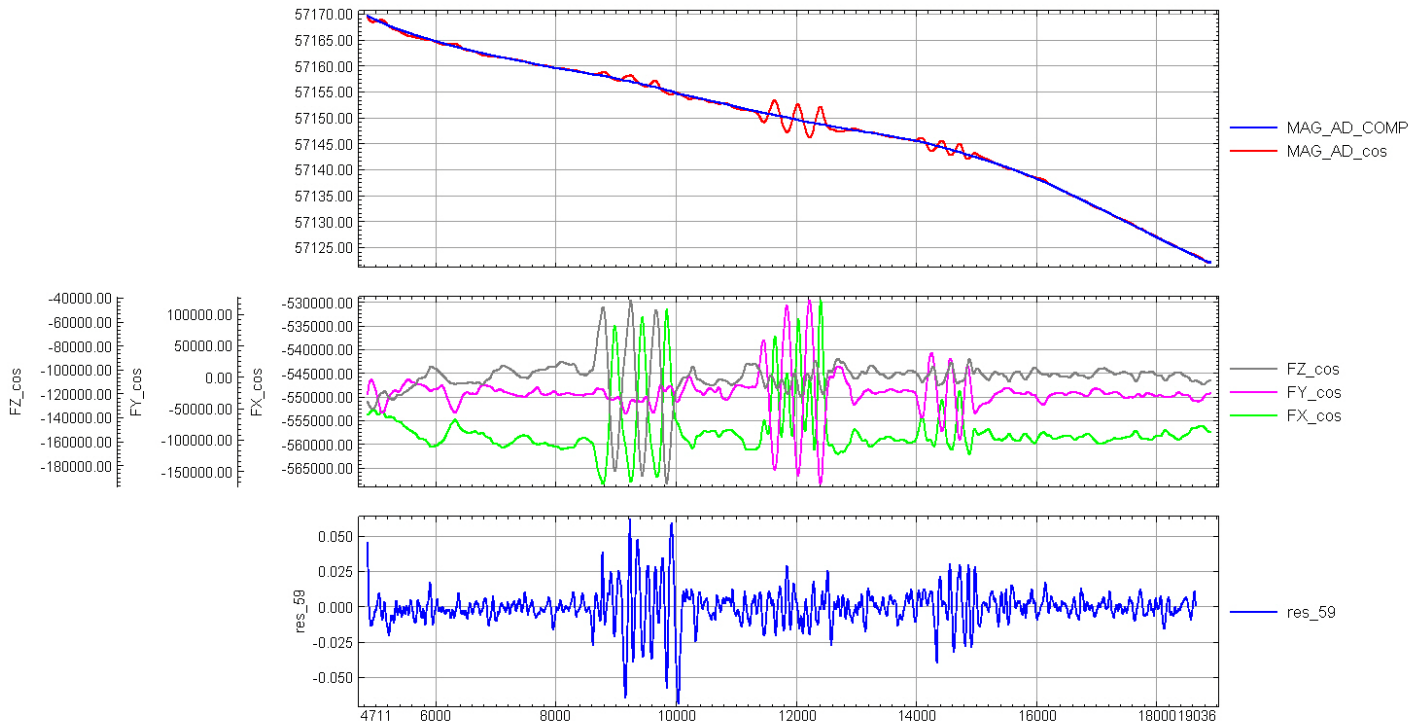
# FOM results, August 17th 2010, 90 degree direction



database: D:\Strategic\FOMs\Klotassin NS and Klaza\FOM east August 17, 2010\FOM\_FLT18\_08172010\_Short\_1.gdb line/group: L2000.1

2010/09/27

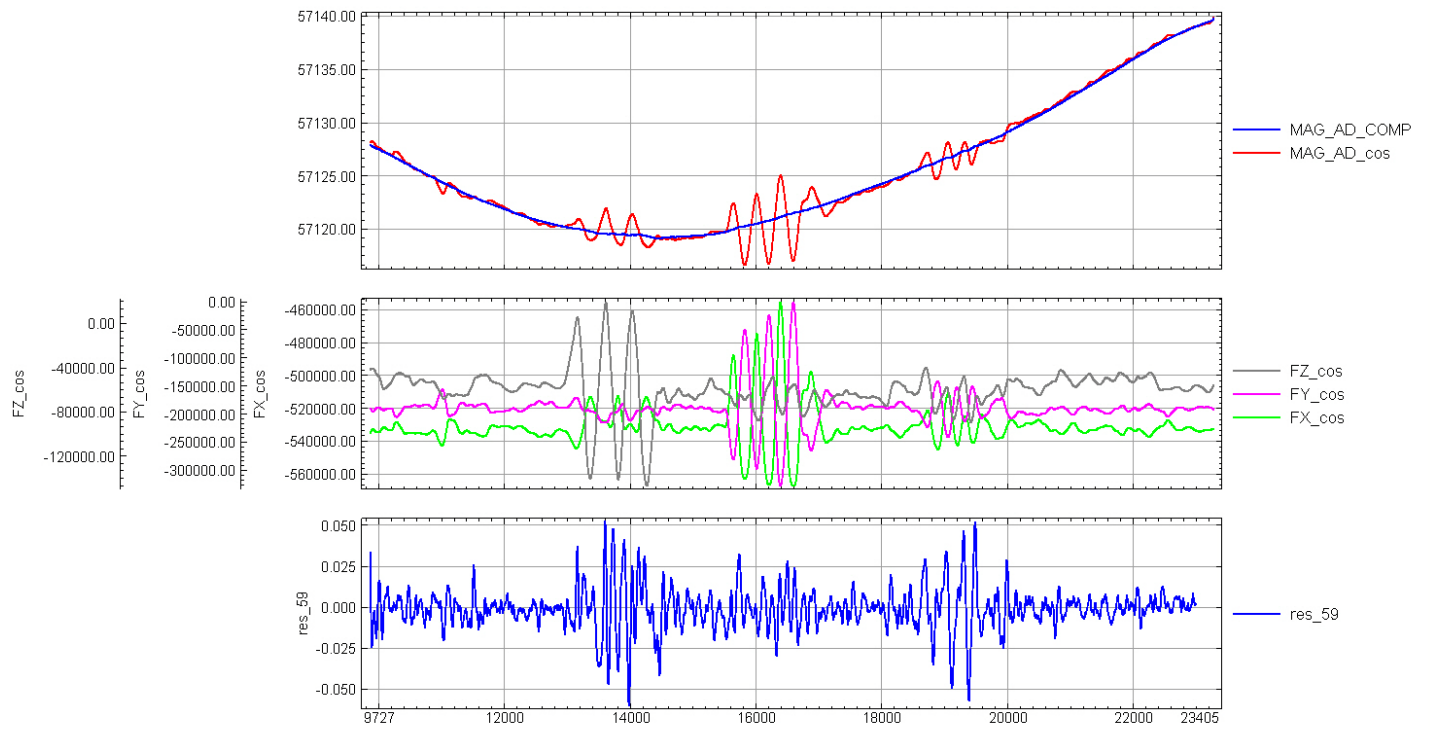
# FOM results, August 17th 2010, 180 degree direction



database: D:\StrategicFOMs\Klotassin NS and Klaza\FOM east August 17, 2010\FOM\_FLT18\_08172010\_Short\_1.gdb line/group: L3000.1

2010/09/27

# FOM results, August 17th 2010, 270 degree direction



database: D:\StrategicFOMs\Klotassin NS and Klaza\FOM east August 17, 2010\FOM\_FLT18\_08172010\_Short\_1.gdb line/group: L4000.1

2010/09/27

## APPENDIX C: DATABASE DESCRIPTIONS

### Magnetic Databases for Mint, Nikki, Corky, Meloy, King, and Mars blocks

Database Name: MAGNETIC\_blockname\_BK.gdb

Format: Geosoft .gdb

Number of Channels: 28

Note: If the database is opened in Oasis montaj, please load included “*Magnetic database channel display.dbview*” file to insure that ALL the channels are displayed in the same order as listed below (Database menu -> Get Saved View).

Channel Name	Units	Description
LINE	number	Line number
FLIGHT	number	Flight number
DATE	date	Date flown (YYMMDD)
FIDUCIAL	number	Fiducial count (flight specific)
SYSTEM_CLOCK	milsec	KANA8 (A/D converter) counter
UTM_X_NAD83	meters	UTM East in NAD83, North America, Zone 7N/Zone 8N
UTM_Y_NAD83	meters	UTM North in NAD83, North America, Zone 7N/Zone 8N
LATITUDE_WGS84	degrees	GPS latitude, WGS 84, World
LONGITUDE_WGS84	degrees	GPS longitude, WGS 84, World
GPS_HEIGHT_WGS84	meters	GPS height (orthometric) above MSL, WGS 84, World
UTC_DAYSEC	decimal seconds	UTC daily second counter (0-86399)
FLUX_X	volts	Fluxgate x-axis
FLUX_Y	volts	Fluxgate y-axis
FLUX_Z	volts	Fluxgate z-axis
RAD_ALT_feet	feet	Radar altimeter, height above ground
MAG_RAW	nT	Raw magnetometer data
MAG_COMP	nT	Compensated magnetometer data
DIURNAL	nT	Base station magnetometer data (filtered with 101point low pass filter)
MAG_DIURNAL_CORR	nT	Base station (diurnal) corrected magnetometer data
MAG_LAG_CORR	nT	Lag corrected magnetometer data
MAG_HEADING_CORR	nT	Heading corrected magnetometer data
IGRF	nT	Calculated IGRF, using 2010 model
MAG_IGRF_CORR	nT	IGRF corrected magnetometer data
MAG_SIMPLE_LVL	nT	Conventionally (simple) leveled magnetometer data
MAG_MICLEV	nT	Microleveled magnetometer data (if applicable)
TMI_FINAL	nT	Final magnetometer data (a copy of either MAG_SIMPLE_LVL or MAG_MICLEV channels)
VDV	nT/m	1 <sup>st</sup> order Vertical Derivative (VDV)
DTM	meters	Calculated DTM channel

## Radiometric Databases for Mint, Nikki, Corky, Meloy, King, and Mars blocks

Database Name: `RADIOMETRIC_blockname_BK.gdb`

Format: Geosoft .gdb

Number of Channels: 34

Note: If the database is opened in Oasis montaj, please load included “*Radiometric database channel display.dbview*” file to insure that ALL the channels are displayed in the same order as listed below (Database menu -> Get Saved View).

Channel Name	Units	Description
LINE	number	Line Number
FLIGHT	number	Flight Number
DATE	date	Date flown (YYMMDD)
FIDUCIAL	number	Fiducial count (line specific)
UTM_X_NAD83	meters	UTM East in NAD83, North America, Zone 7N/8N
UTM_Y_NAD83	meters	UTM North in NAD83, North America, Zone 7N/8N
LATITUDE_WGS84	degrees	GPS latitude, WGS 84, World
LONGITUDE_WGS84	degrees	GPS longitude, WGS 84, World
GPS_HEIGHT_WGS84	meters	GPS height (orthometric) above MSL, WGS 84, World
UTC_DAYSEC	seconds	UTC daily second counter (0-86399)
RAD_ALT_feet	feet	Radar altimeter, height above ground
PRESSURE	mbar	Ambient pressure output
TEMPERATURE	degrees C	Ambient temperature output
DOWN_LIVE_TIME	seconds	Live time channel
RAW_Potassium	counts/sec	Raw Potassium channel
RAW_Thorium	counts/sec	Raw Thorium channel
RAW_Uranium	counts/sec	Raw Uranium channel
RAW_TotCount	counts/sec	Raw Total Count channel
RAW_UpDet	counts/sec	Raw upward looking crystal Uranium channel
COSMIC	counts/sec	Raw Cosmic channel from downward looking crystals
SPECTRUM	counts/sec	1024 channel down spectrum
EQUIVALENT_HEIGHT_m	meters	Equivalent height above ground at STP
K_CORR	counts/sec	Live Time, Background, Cosmic, Compton Scattering and Altitude Attenuation corrected Potassium counts
Th_CORR	counts/sec	Live Time, Background, Cosmic, Compton Scattering and Altitude Attenuation corrected Thorium counts
U_CORR	counts/sec	Live Time, Background, Cosmic, Compton Scattering and Altitude Attenuation corrected Uranium counts
TC_CORR	counts/sec	Live Time, Background, Cosmic, Compton Scattering and Altitude Attenuation corrected Total Count counts
K_FINAL_CORR	counts/sec	Final Potassium counts; microleveled (if applicable, see section 7.5.6.8 for details)

Th_FINAL_CORR	counts/sec	Final Thorium counts; microleveled (if applicable, see section 7.5.6.8 for details)
U_FINAL_CORR	counts/sec	Final Uranium counts; microleveled (if applicable, see section 7.5.6.8 for details)
TC_FINAL_CORR	counts/sec	Final Total Count counts; microleveled (if applicable, see section 7.5.6.8 for details)
K_Percent	%	Estimated concentrations of Potassium
eTh	ppm	Estimated equivalent concentrations of Thorium
eU	ppm	Estimated equivalent concentrations of Uranium
DOSE_RATE	nGy/h	Natural air absorption Dose Rate

**APPENDIX D: RSX-5 SPECTROMETER (SN 5503): DAILY RESOLUTION TESTS RESULTS**

Executed 2010/08/08 21:59:25

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2001	2005	2001	2001	2001	8008
Gain	0.962986	0.953878	0.981236	0.953903	1.021441	-
Peak	871.76 (+/- 0.543)	874.70 (+/- 0.870)	873.30 (+/- 0.602)	871.13 (+/- 0.653)	860.80 (+/- 2.204)	872.82 (+/- 0.324)
FWHM	4.13 (+/- 1.371)	5.75 (+/- 2.547)	4.78 (+/- 1.562)	4.99 (+/- 1.734)	5.91 (+/- 8.576)	4.66 (+/- 0.839)

Executed 2010/08/09 17:47:25

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2003	2001	2004	2006	2002	8014
Gain	0.988165	0.992147	1.015323	0.990002	1.054202	-
Peak	873.10 (+/- 0.470)	874.73 (+/- 0.764)	872.23 (+/- 0.543)	870.40 (+/- 0.612)	868.10 (+/- 1.097)	872.84 (+/- 0.265)
FWHM	4.07 (+/- 1.209)	5.21 (+/- 2.095)	4.94 (+/- 1.400)	5.11 (+/- 1.581)	6.89 (+/- 3.116)	4.63 (+/- 0.676)

Executed 2010/08/10 07:39:17

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2003	2002	2002	2005	2004	8012
Gain	0.940138	0.916487	0.950094	0.929034	0.987978	-
Peak	869.25 (+/- 0.535)	876.70 (+/- 0.938)	873.98 (+/- 0.600)	870.59 (+/- 0.673)	868.49 (+/- 1.006)	872.08 (+/- 0.336)
FWHM	4.21 (+/- 1.345)	4.29 (+/- 2.392)	4.73 (+/- 1.594)	4.77 (+/- 1.820)	6.71 (+/- 3.081)	4.49 (+/- 0.840)

Executed 2010/08/11 07:51:16

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2006	2001	2001	2001	2002	8009
Gain	0.969962	0.948579	0.977909	0.954461	1.013296	-
Peak	871.53 (+/- 0.573)	876.57 (+/- 0.814)	873.60 (+/- 0.753)	872.19 (+/- 0.592)	867.11 (+/- 0.950)	873.16 (+/- 0.403)
FWHM	4.34 (+/- 1.543)	5.16 (+/- 2.319)	4.99 (+/- 2.074)	4.42 (+/- 1.566)	6.34 (+/- 2.804)	4.63 (+/- 1.116)

Executed 2010/08/12 11:03:00

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2006	2005	2003	2003	2001	8017
Gain	0.975655	0.958596	0.984948	0.96152	1.022175	-
Peak	870.06 (+/- 0.579)	876.22 (+/- 0.769)	873.15 (+/- 0.798)	871.27 (+/- 0.781)	869.11 (+/- 0.892)	872.42 (+/- 0.389)
FWHM	3.94 (+/- 1.506)	4.46 (+/- 2.045)	4.82 (+/- 2.290)	5.17 (+/- 2.069)	6.31 (+/- 2.451)	4.61 (+/- 1.042)

Executed 2010/08/13 16:15:45

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2001	2003	2001	2001	2001	8006
Gain	0.991344	0.985067	1.008989	0.982447	1.054639	-
Peak	871.28 (+/- 0.484)	881.69 (+/- 1.148)	873.48 (+/- 0.561)	872.15 (+/- 0.749)	870.62 (+/- 1.398)	873.64 (+/- 0.294)
FWHM	3.88 (+/- 1.219)	4.89 (+/- 3.600)	4.49 (+/- 1.467)	5.34 (+/- 2.120)	7.00 (+/- 4.542)	4.63 (+/- 0.770)

Executed 2010/08/15 11:27:34

Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2011	2001	2003	2001	2004	8016
Gain	0.952273	0.931188	0.958818	0.942567	1.003903	-
Peak	871.87 (+/- 0.553)	877.53 (+/- 0.772)	872.17 (+/- 0.611)	870.80 (+/- 0.494)	870.03 (+/- 1.044)	872.13 (+/- 0.295)
FWHM	4.26 (+/- 1.307)	4.55 (+/- 2.180)	4.74 (+/- 1.628)	4.95 (+/- 1.263)	6.93 (+/- 3.149)	4.75 (+/- 0.730)

Executed 2010/08/16 07:57:10

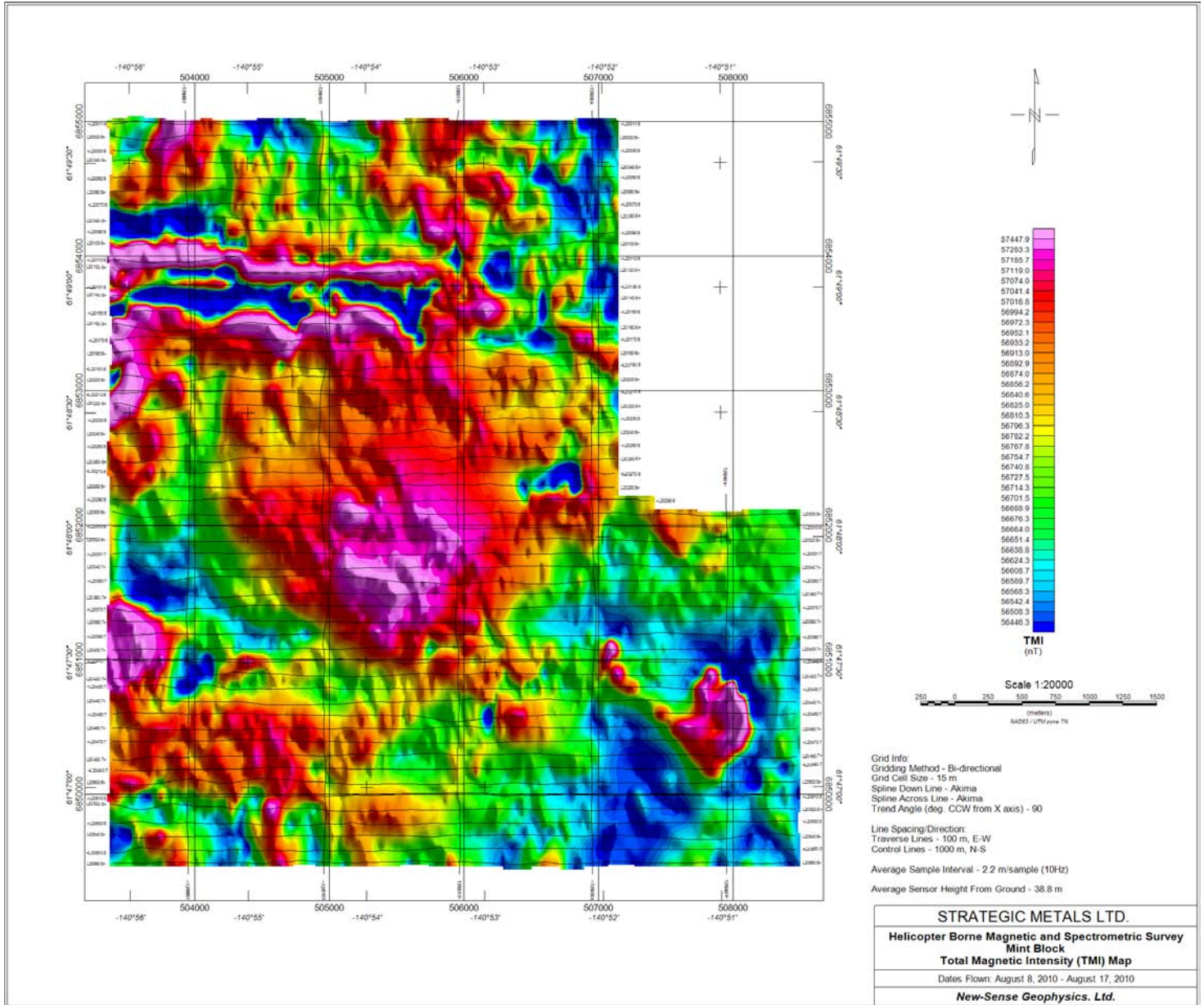
Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2002	2004	2007	2001	2005	8014
Gain	0.930262	0.915566	0.940916	0.920625	0.995206	-
Peak	870.26 (+/- 0.472)	877.55 (+/- 1.109)	872.20 (+/- 0.606)	871.61 (+/- 0.667)	870.10 (+/- 0.998)	872.22 (+/- 0.364)
FWHM	4.28 (+/- 1.250)	4.85 (+/- 3.181)	4.74 (+/- 1.735)	4.81 (+/- 1.765)	6.70 (+/- 2.825)	4.69 (+/- 0.969)

Executed 2010/08/17 08:02:17

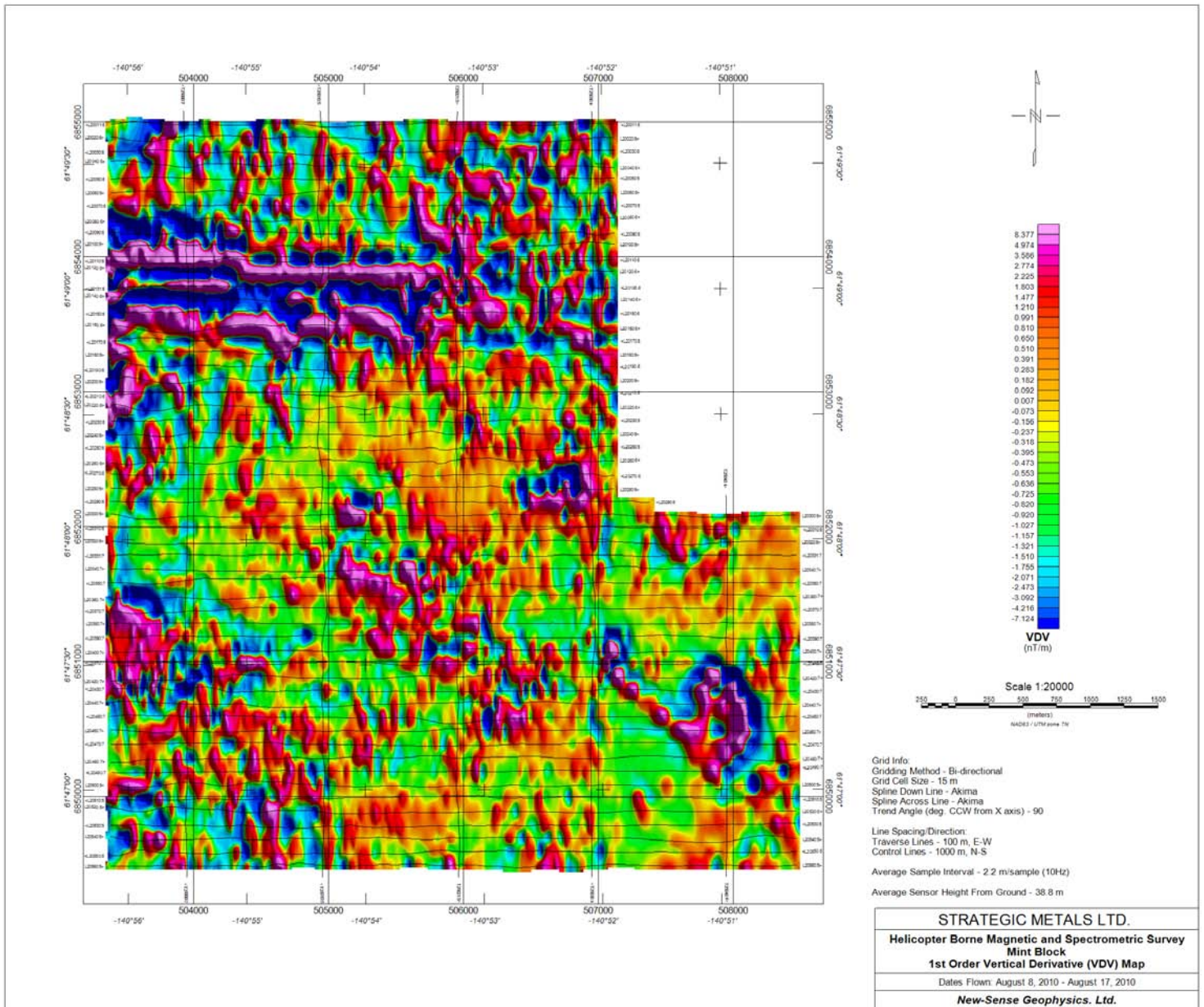
Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2001	2004	2005	2005	2004	8015
Gain	0.926781	0.913206	0.938985	0.920016	0.991829	-
Peak	871.25 (+/- 0.475)	875.69 (+/- 1.079)	872.19 (+/- 0.727)	870.29 (+/- 0.673)	868.95 (+/- 0.913)	872.37 (+/- 0.379)
FWHM	4.30 (+/- 1.250)	5.19 (+/- 3.182)	4.78 (+/- 2.097)	4.90 (+/- 1.808)	6.52 (+/- 2.523)	4.52 (+/- 1.044)

# APPENDIX E: IMAGES OF FINAL MAPS

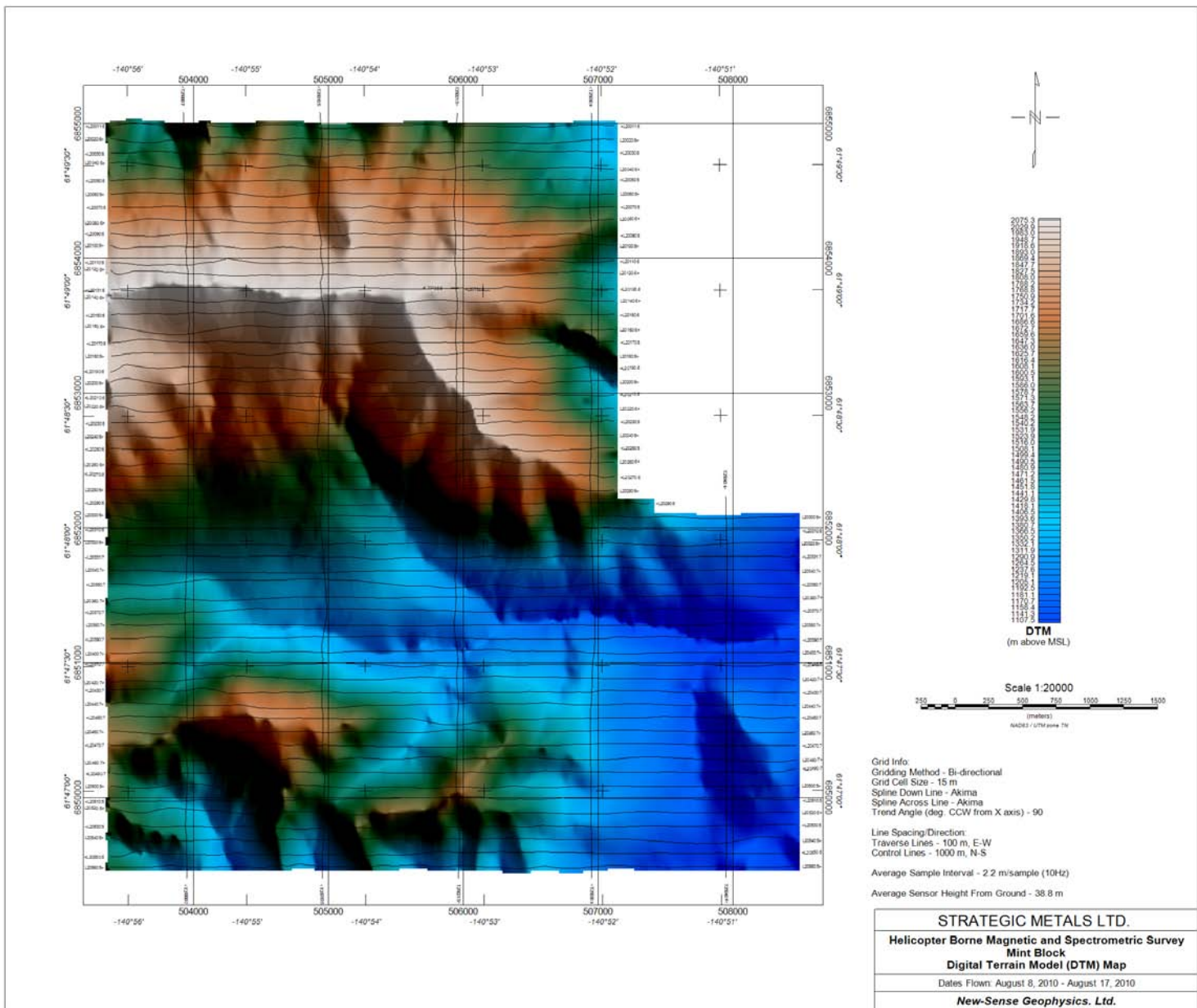
## Mint Block Image of TMI FINAL Map



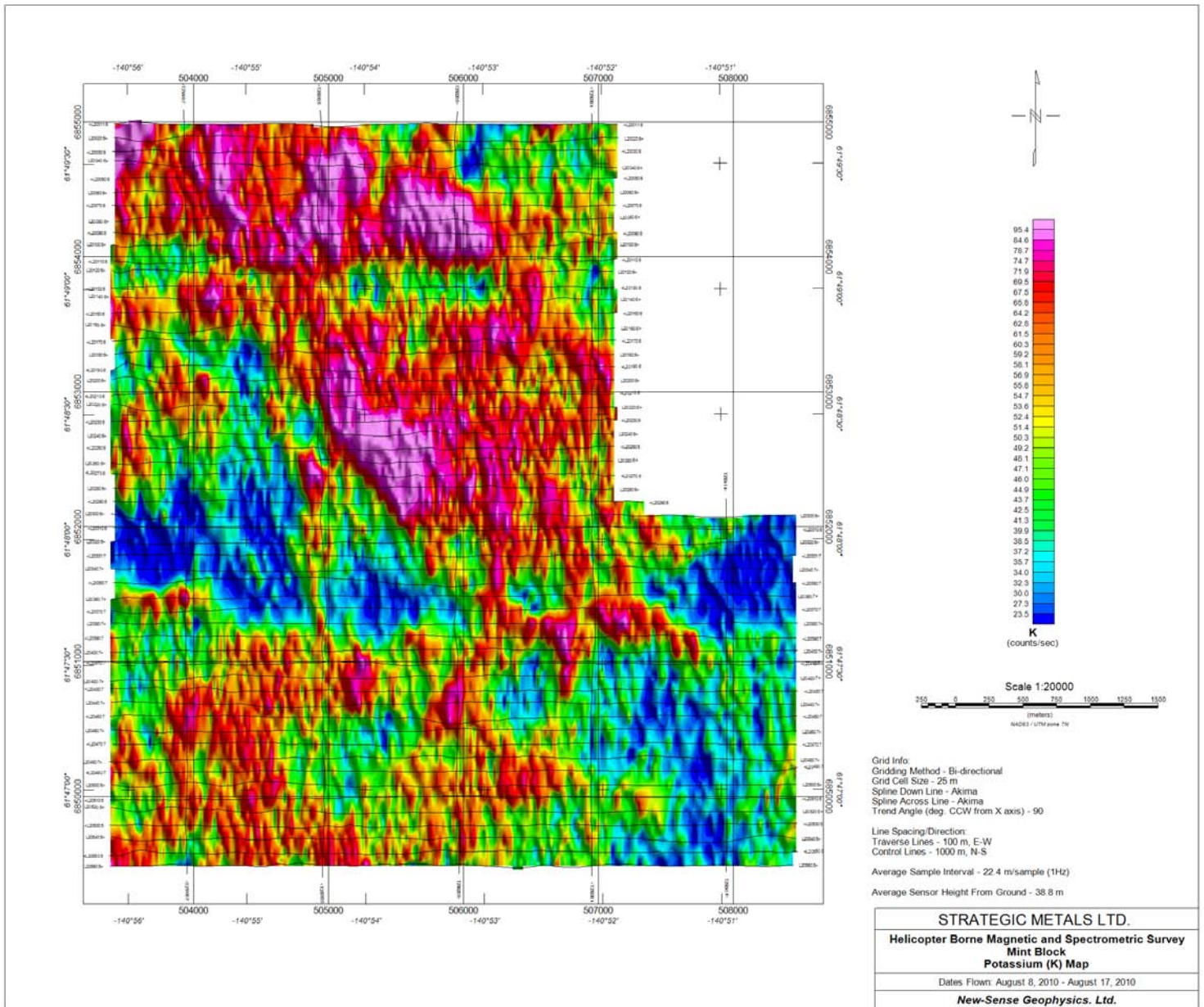
# Mint Block Image of VDV Map



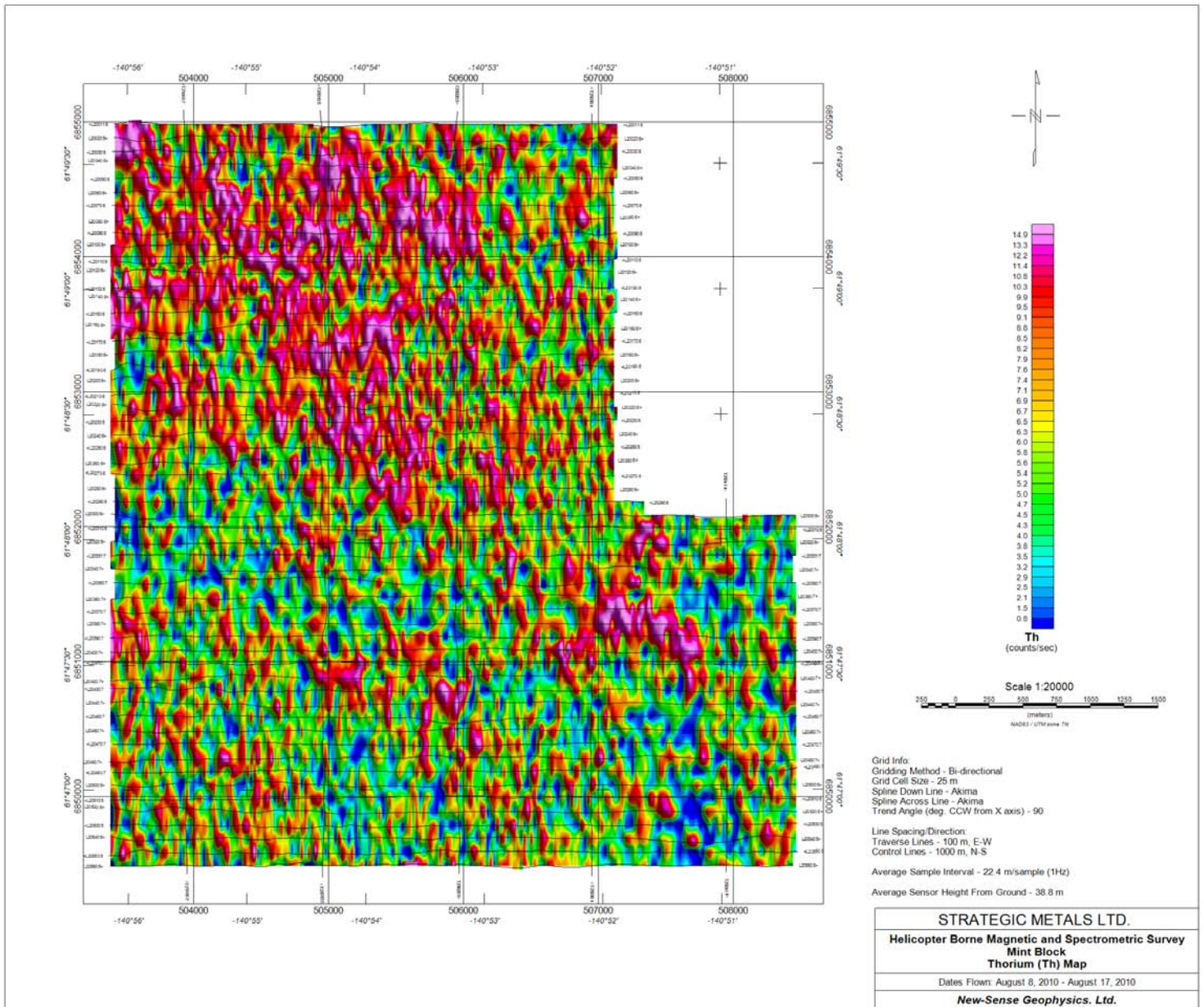
# Mint Block Image of DTM Map



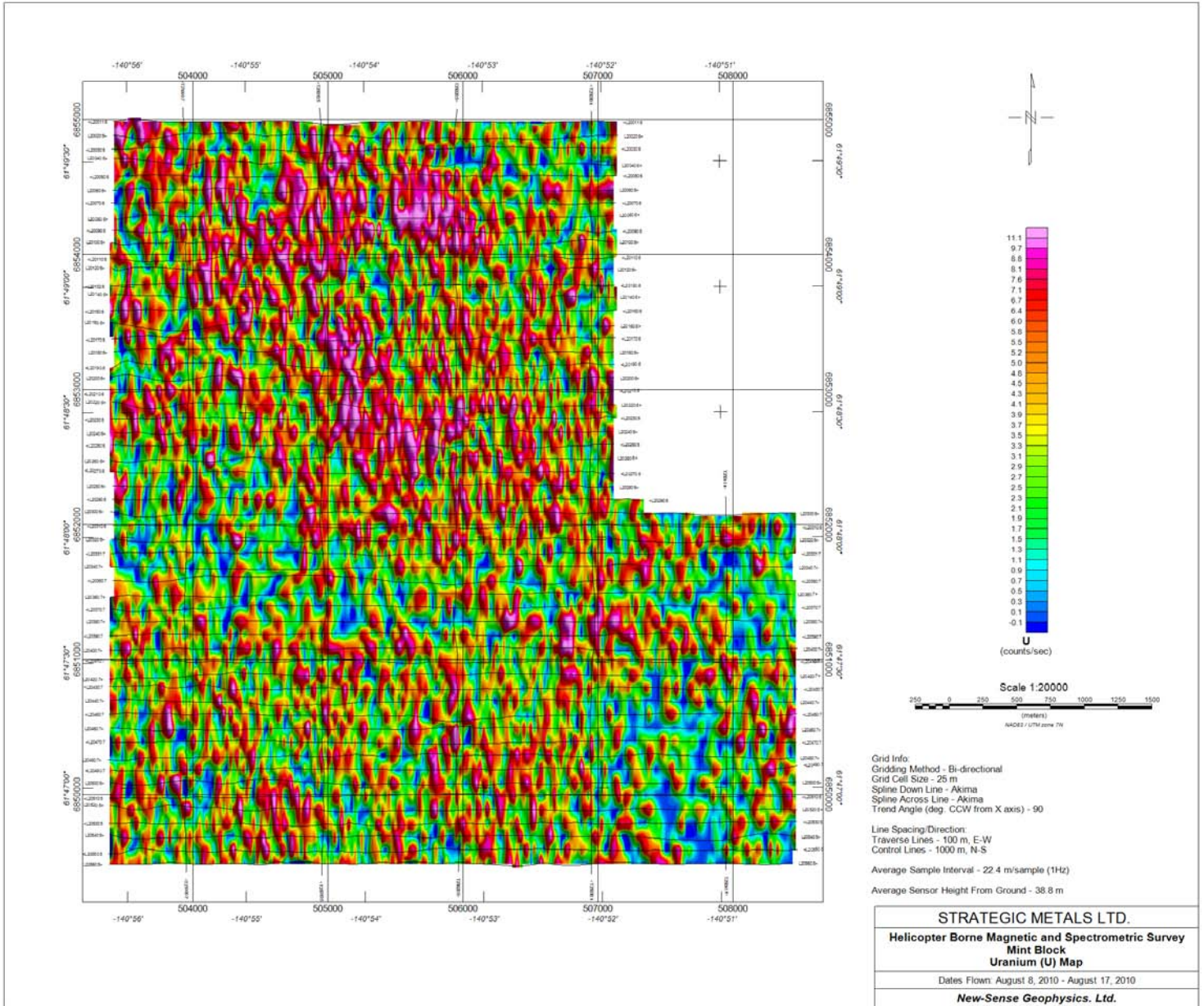
# Mint Block Image of Potassium Map



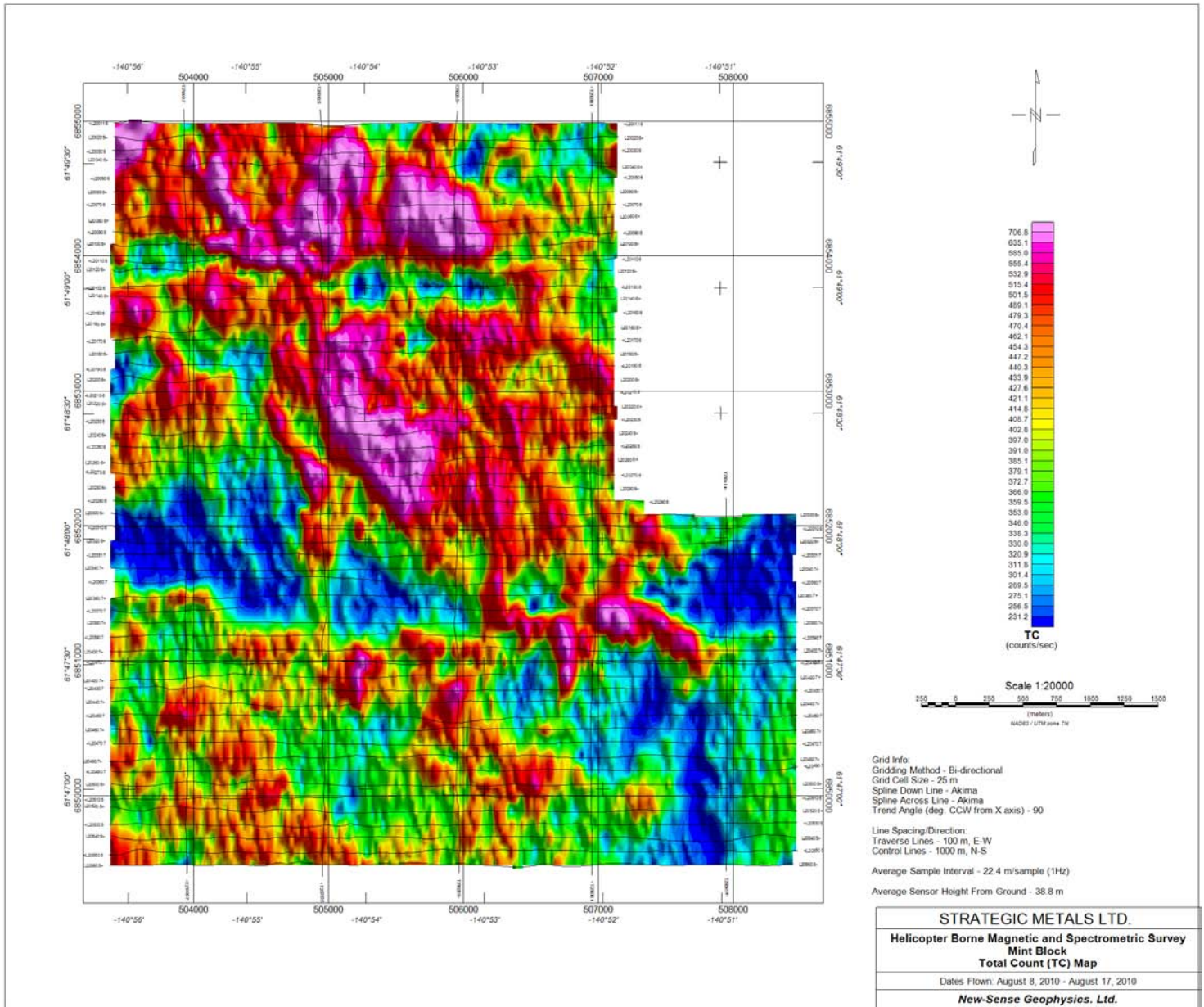
# Mint Block Image of Thorium Map



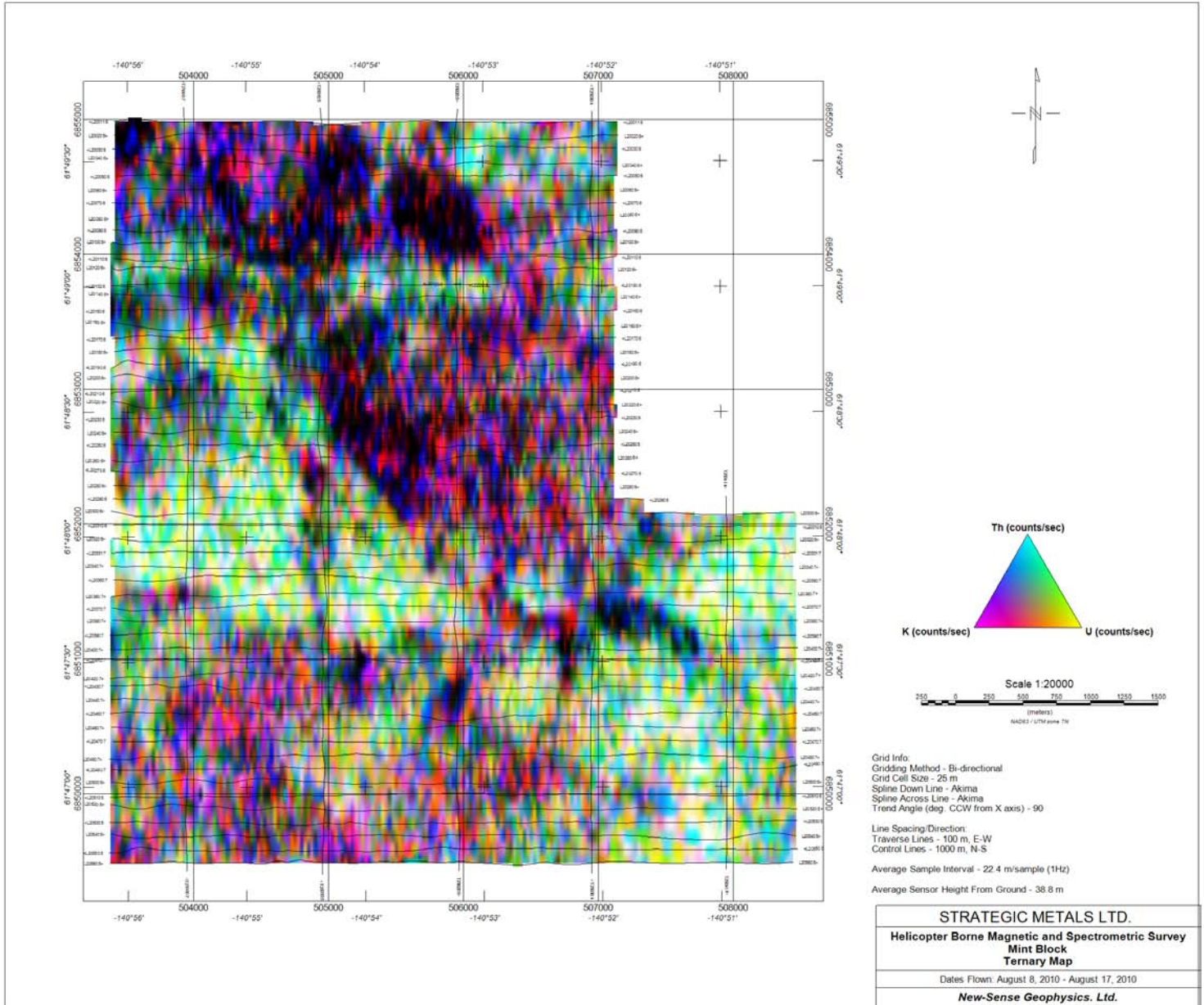
# Mint Block Image of Uranium Map



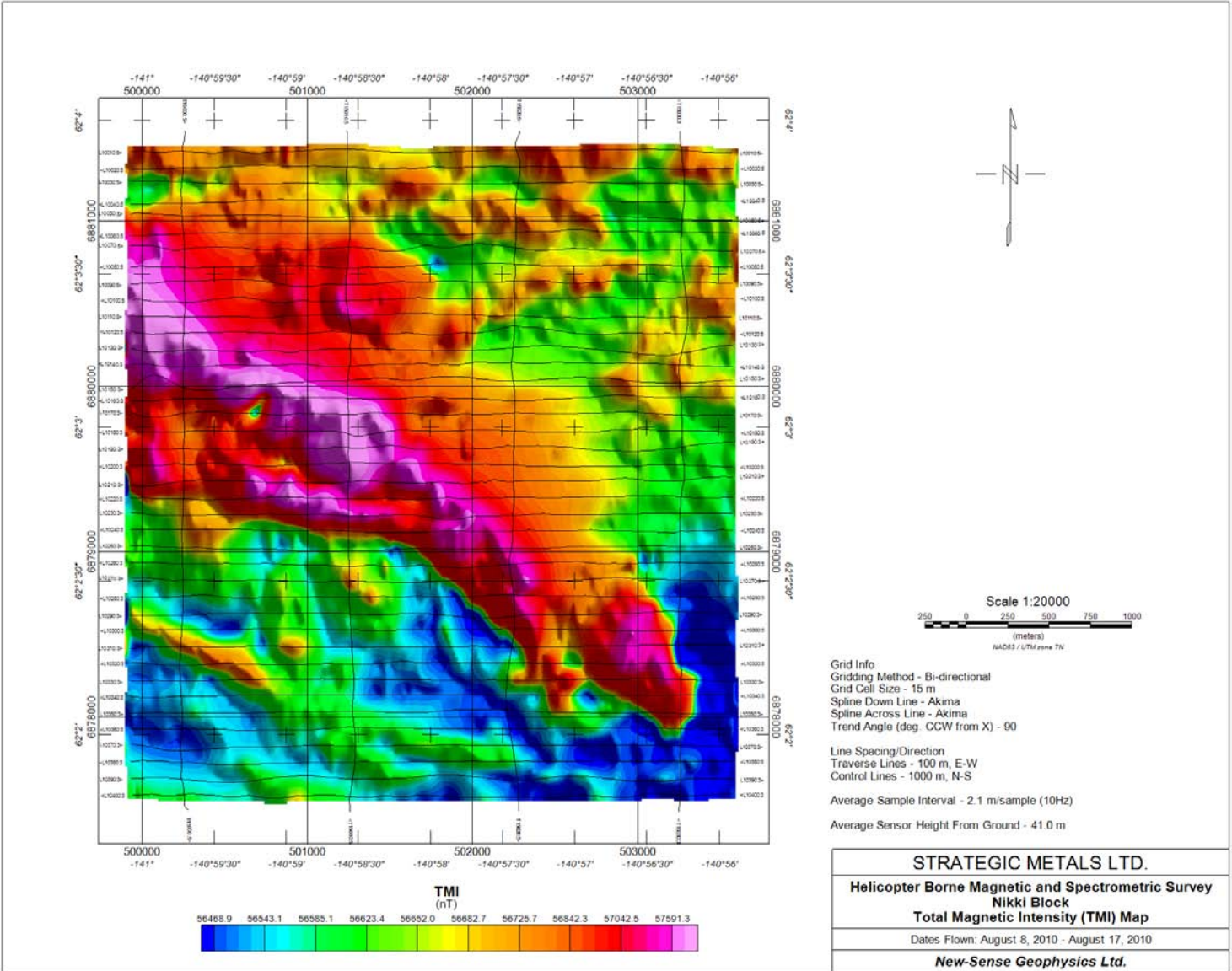
# Mint Block Image of Total Count Map



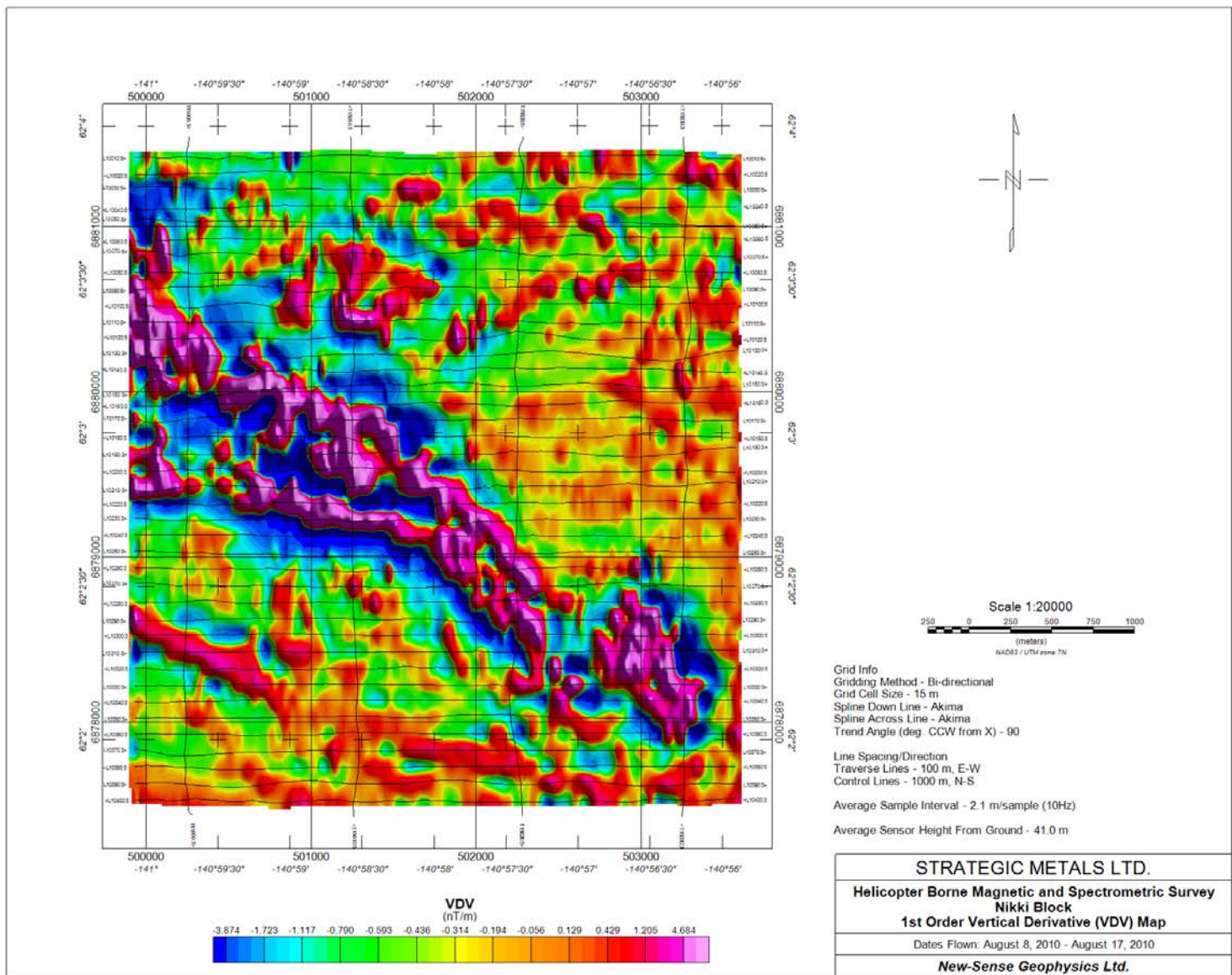
# Mint Block Image of Ternary Map



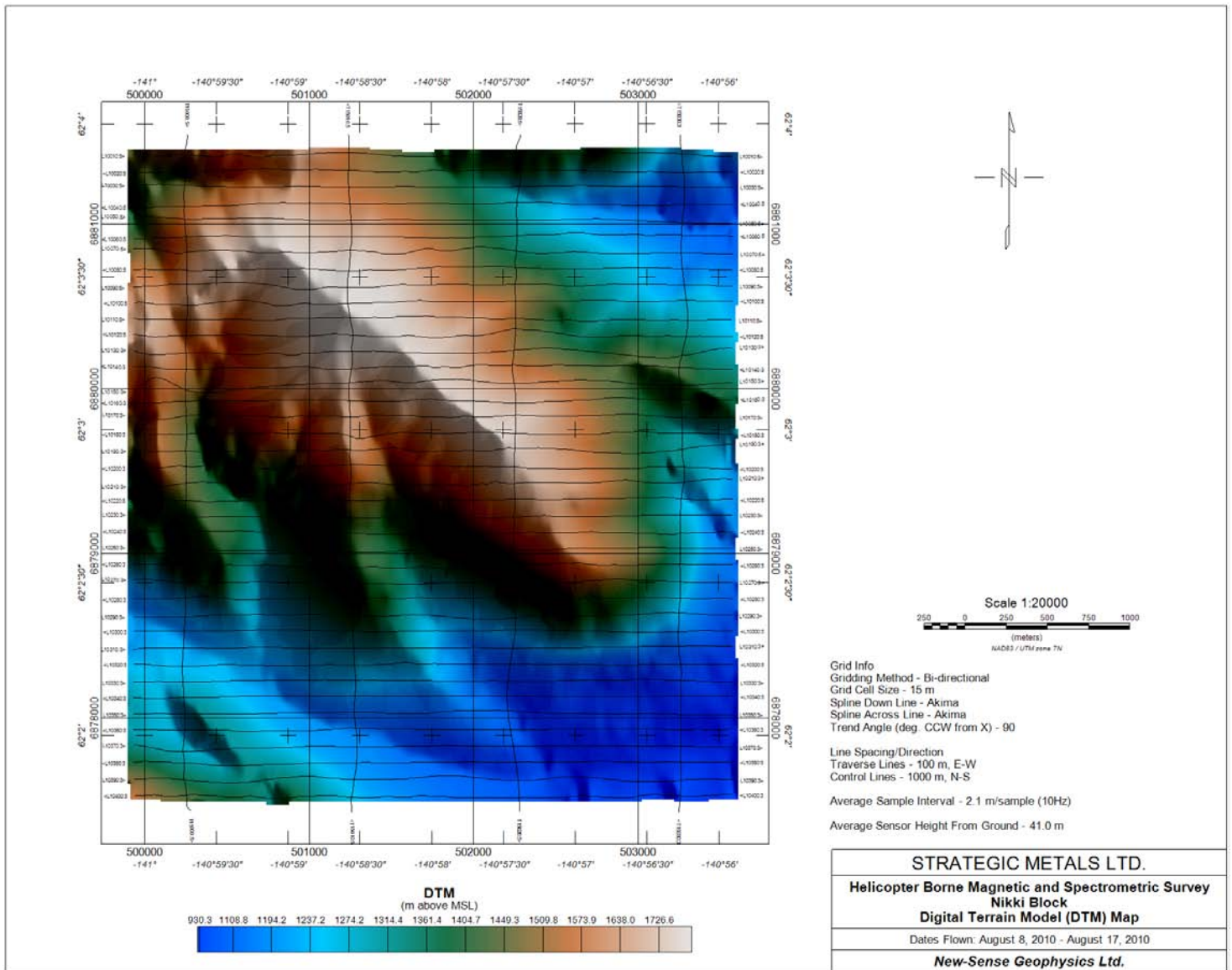
# Nikki Block Image of TMI FINAL Map



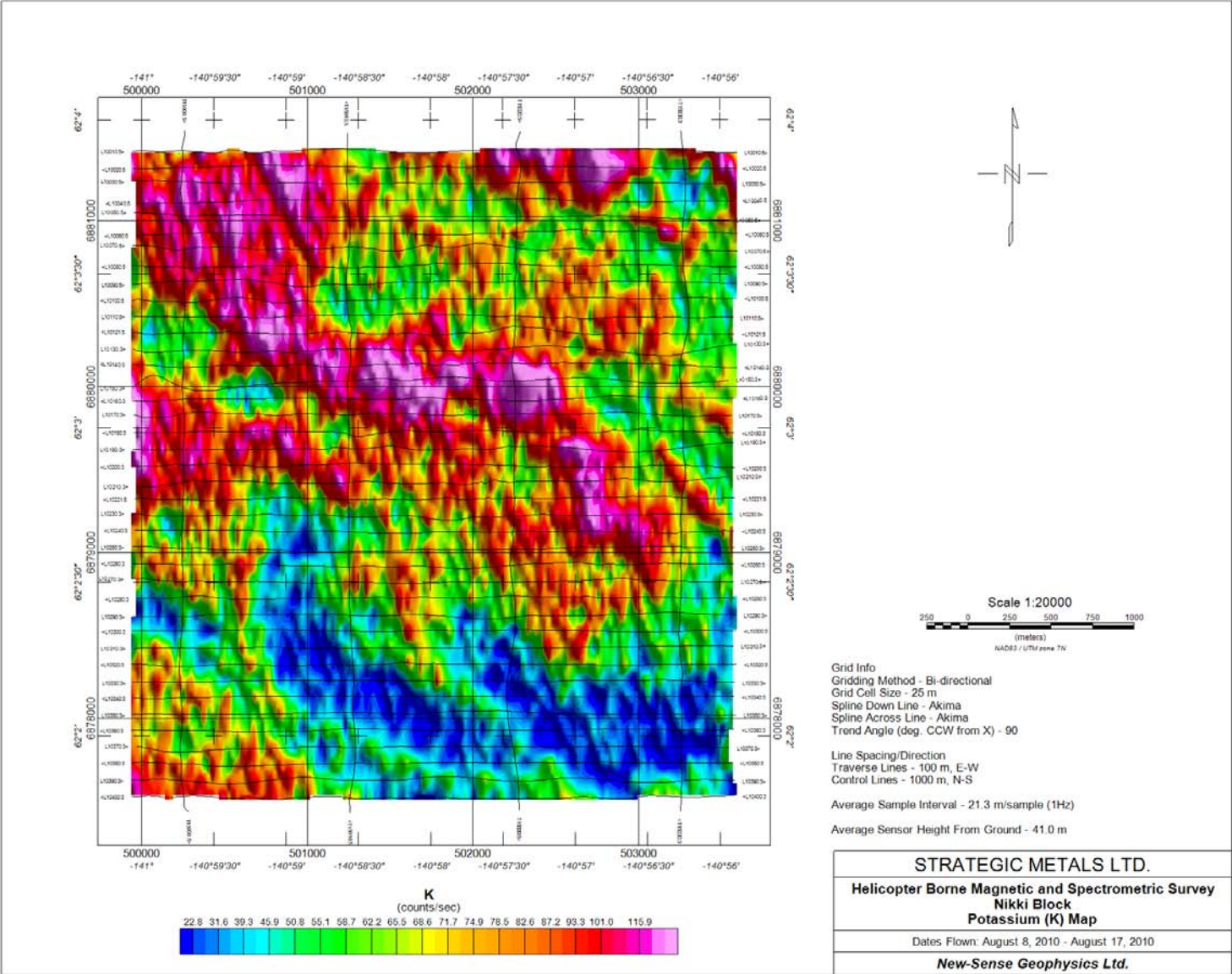
# Nikki Block Image of VDV Map



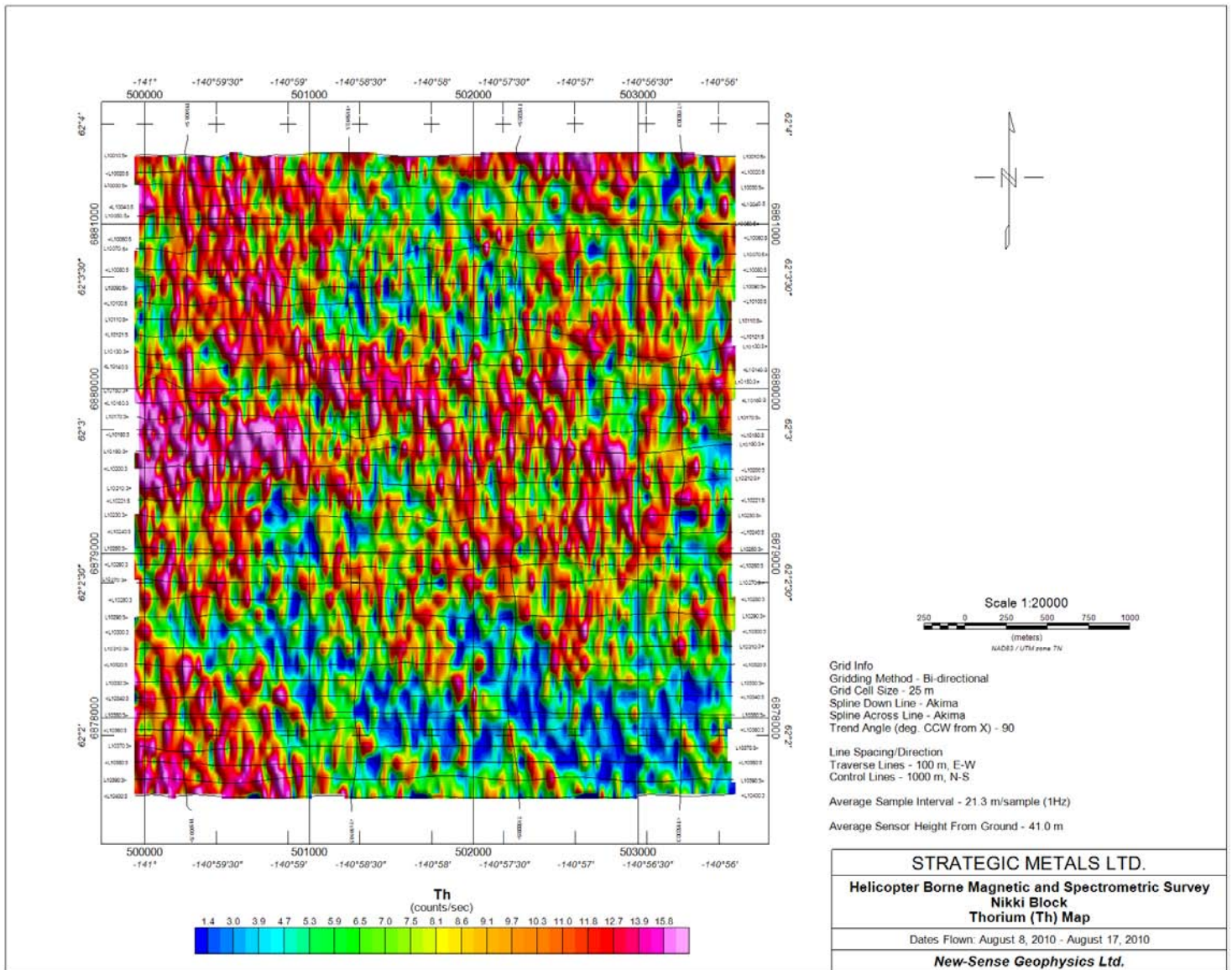
# Nikki Block Image of DTM Map



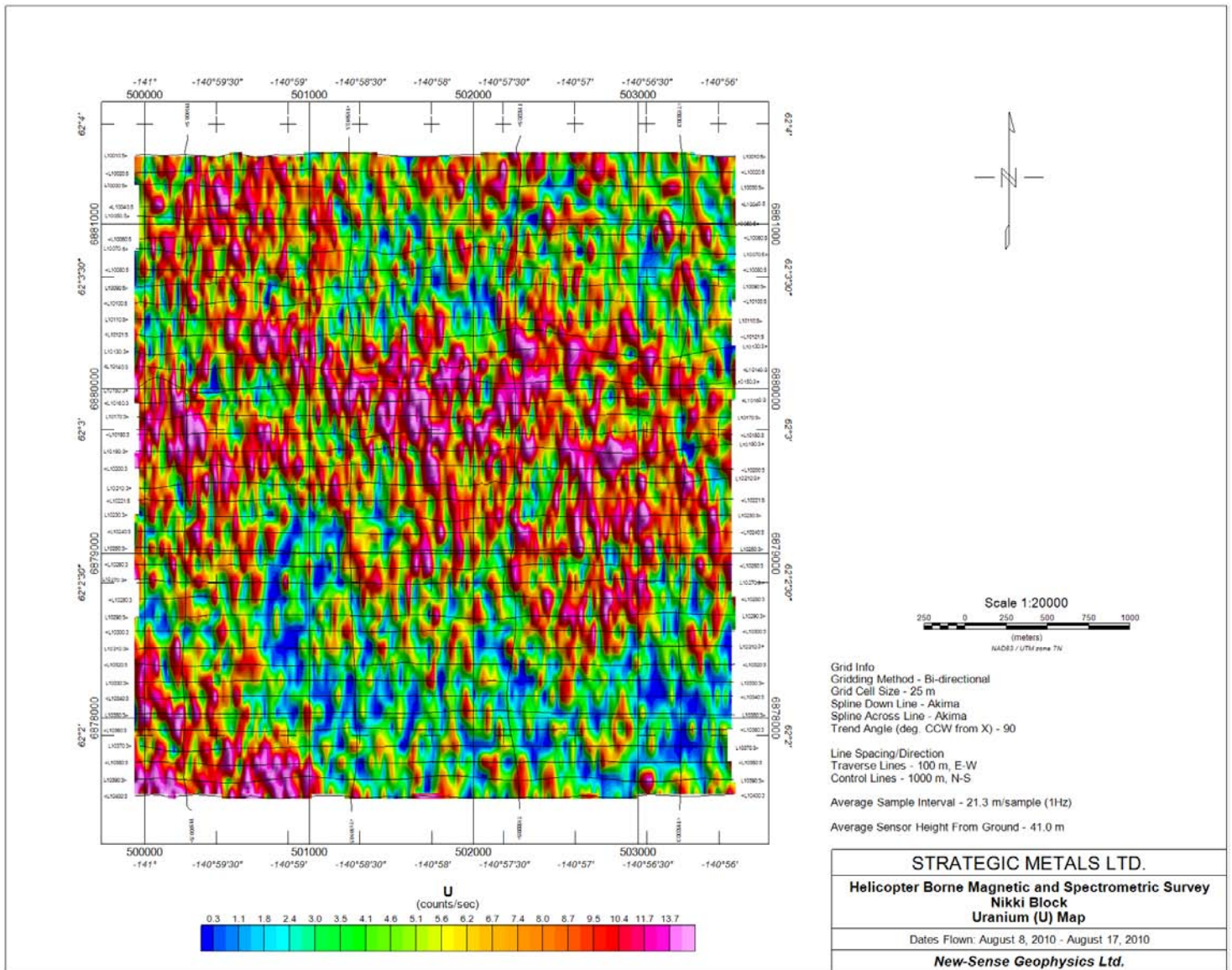
# Nikki Block Image of Potassium Map



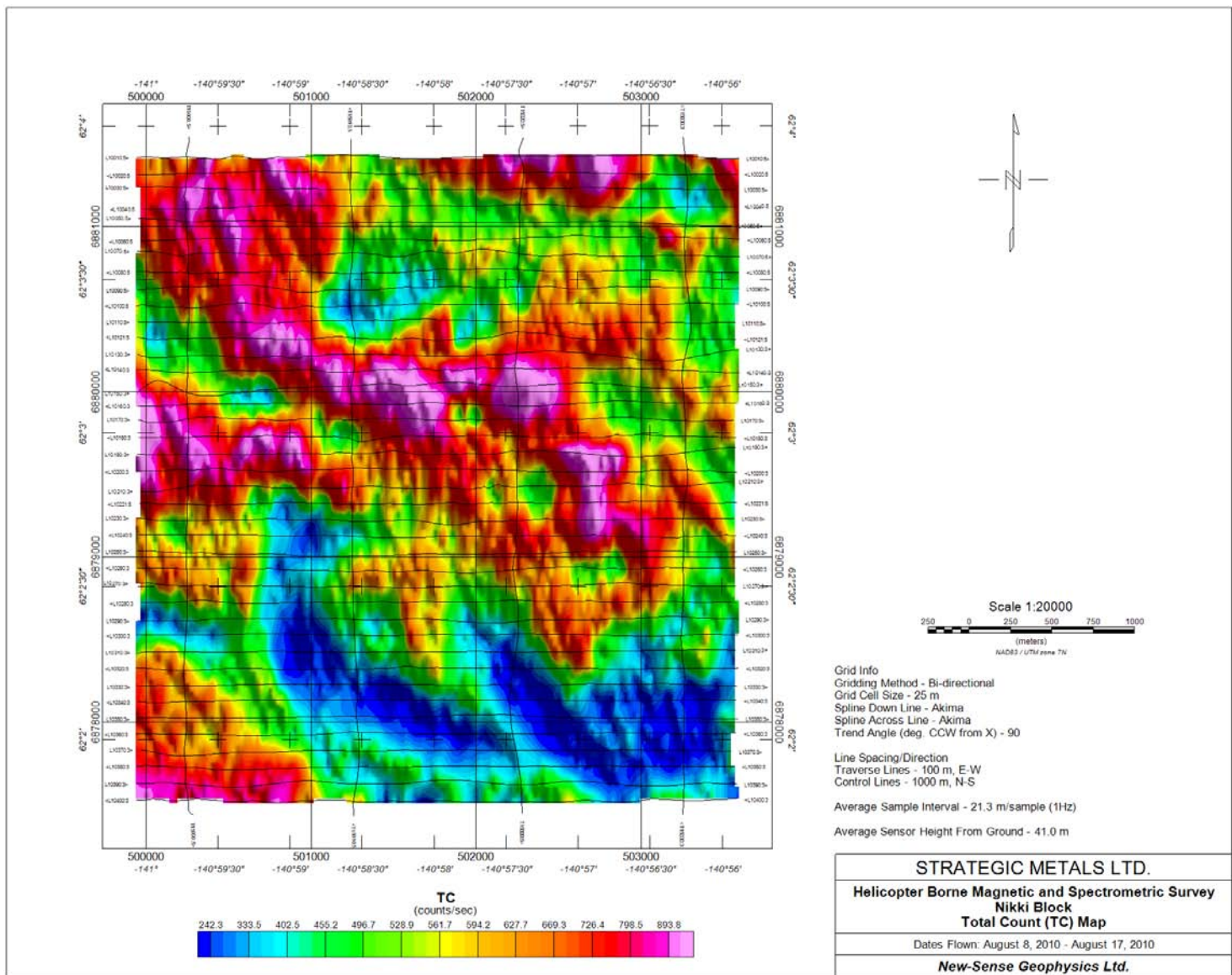
# Nikki Block Image of Thorium Map



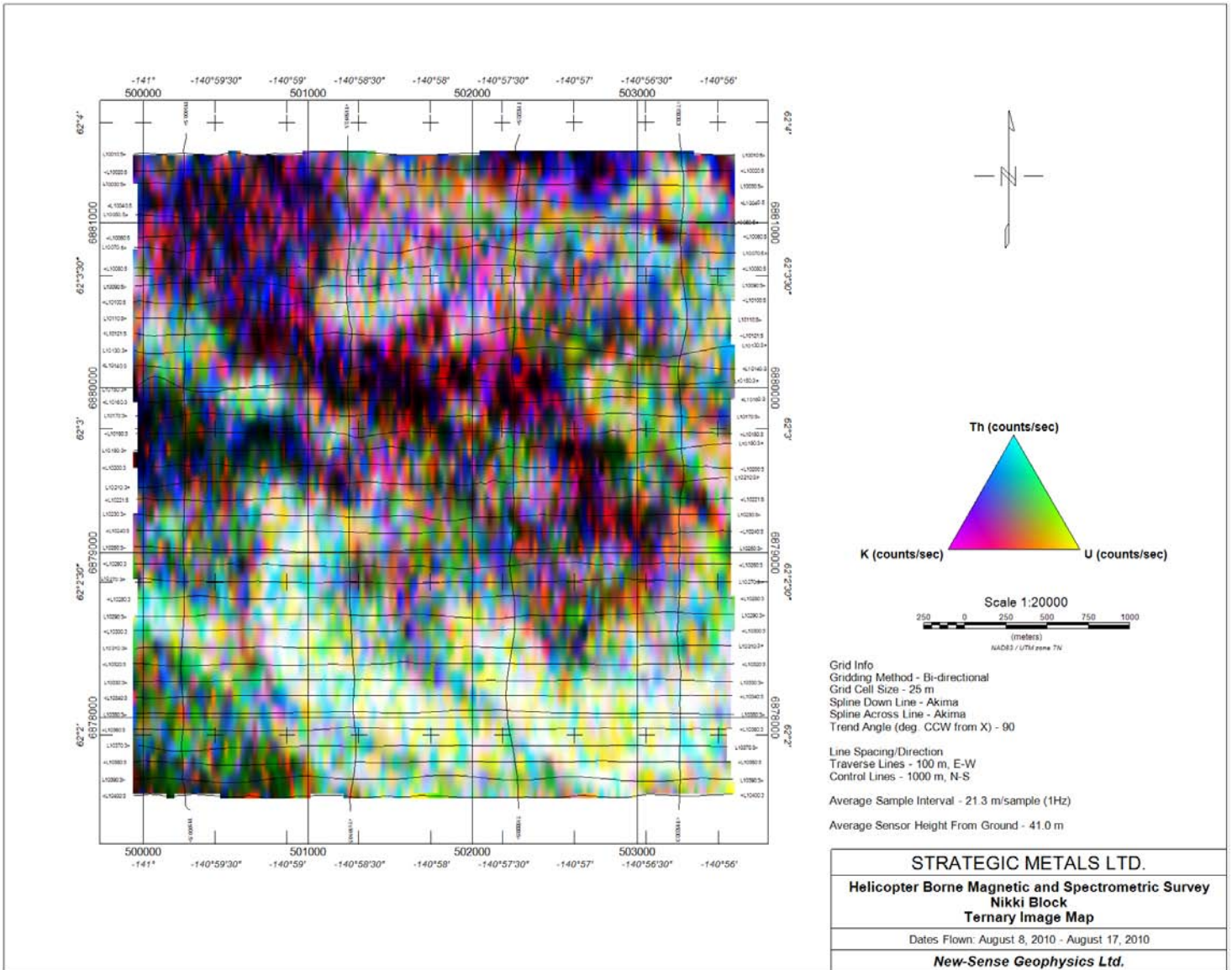
# Nikki Block Image of Uranium Map



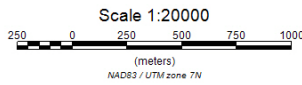
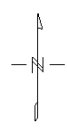
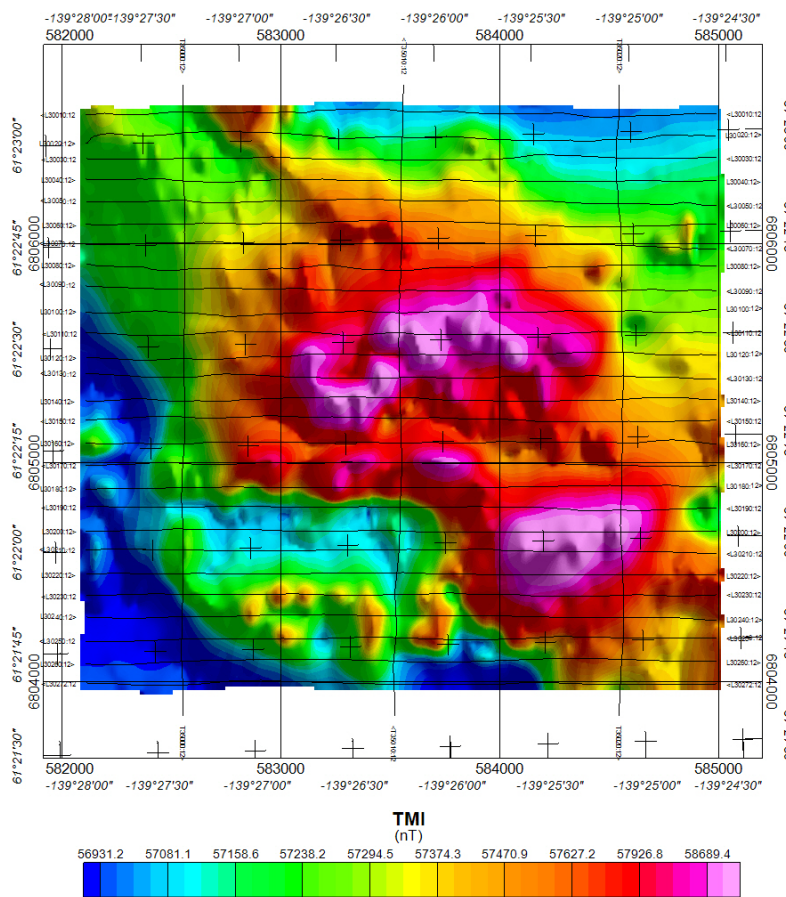
# Nikki Block Image of Total Count Map



# Nikki Block Image of Ternary Map



# Corky Block Image of TMI FINAL Map



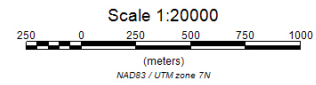
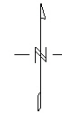
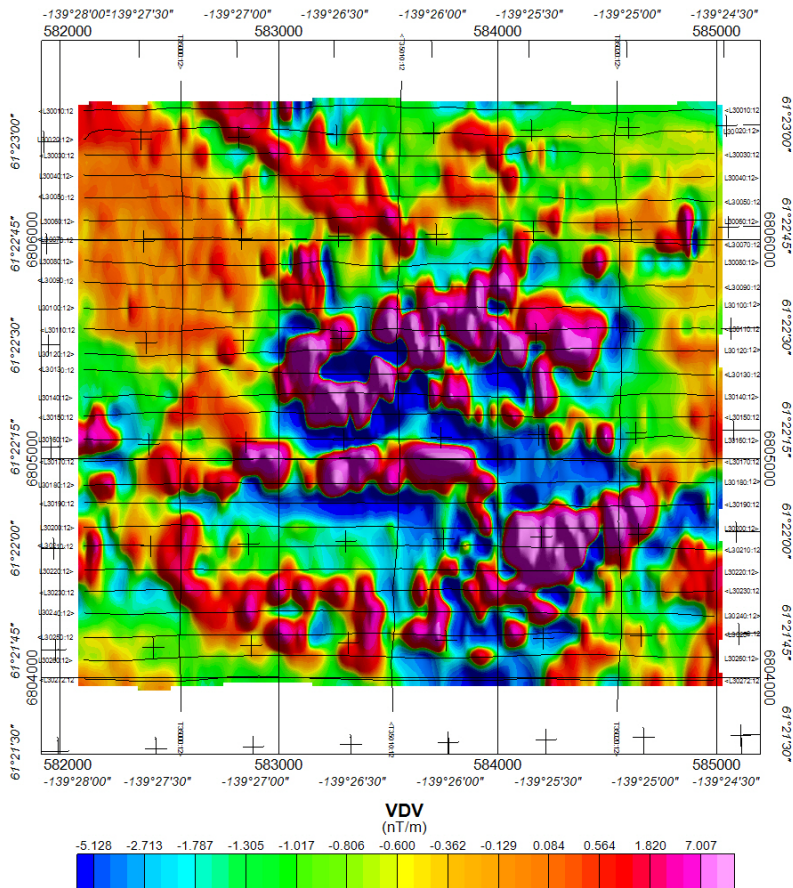
Grid Info:  
 Gridding Method - Bi-directional  
 Grid Cell Size - 15 m  
 Spline Down Line - Akima  
 Spline Across Line - Akima  
 Trend Angle (deg. CCW from X axis) - 90

Line Spacing/Direction:  
 Traverse Lines - 100 m, E-W  
 Control Lines - 1000 m, N-S

Average Sample Interval - 2.2 m/sample (10Hz)  
 Average Sensor Height From Ground - 33.1 m

<b>STRATEGIC METALS LTD.</b>
<b>Helicopter Borne Magnetic and Spectrometric Survey Corky Block Total Magnetic Intensity (TMI) Map</b>
Dates Flown: August 8, 2010 - August 17, 2010
<b>New-Sense Geophysics. Ltd.</b>

# Corky Block Image of VDV Map



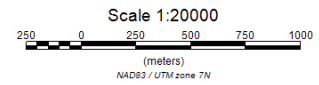
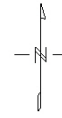
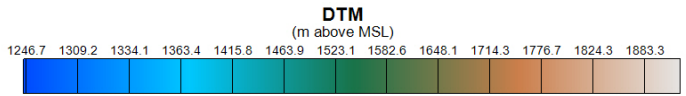
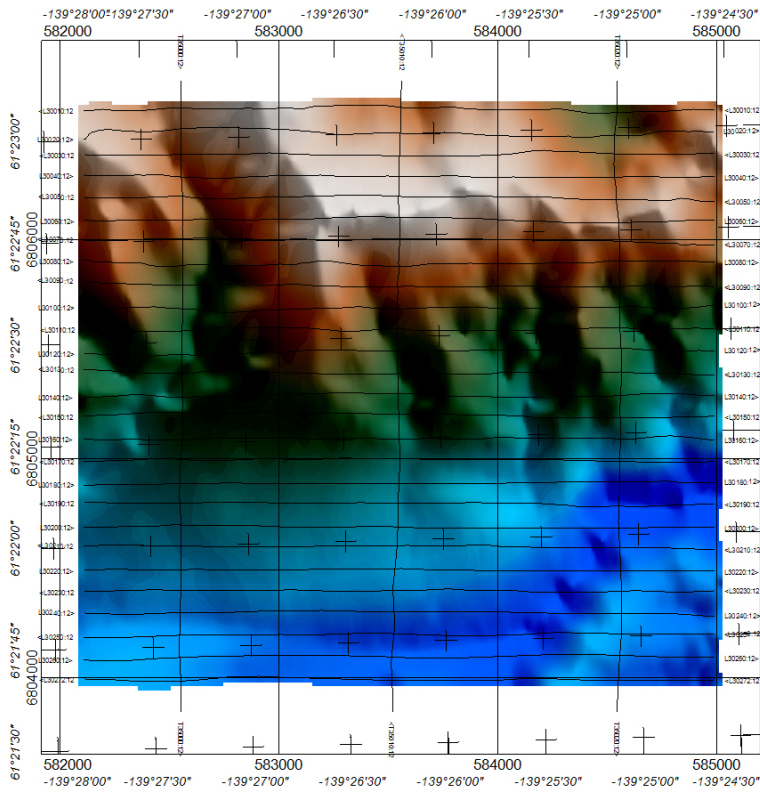
Grid Info:  
 Gridding Method - Bi-directional  
 Grid Cell Size - 15 m  
 Spline Down Line - Akima  
 Spline Across Line - Akima  
 Trend Angle (deg. CCW from X axis) - 90

Line Spacing/Direction:  
 Traverse Lines - 100 m, E-W  
 Control Lines - 1000 m, N-S

Average Sample Interval - 2.2 m/sample (10Hz)  
 Average Sensor Height From Ground - 33.1 m

<b>STRATEGIC METALS LTD.</b>
<b>Helicopter Borne Magnetic and Spectrometric Survey Corky Block 1st Order Vertical Derivative (VDV) Map</b>
Dates Flown: August 8, 2010 - August 17, 2010
<b>New-Sense Geophysics. Ltd.</b>

# Corky Block Image of DTM Map



Grid Info:  
 Gridding Method - Bi-directional  
 Grid Cell Size - 15 m  
 Spline Down Line - Akima  
 Spline Across Line - Akima  
 Trend Angle (deg. CCW from X axis) - 90

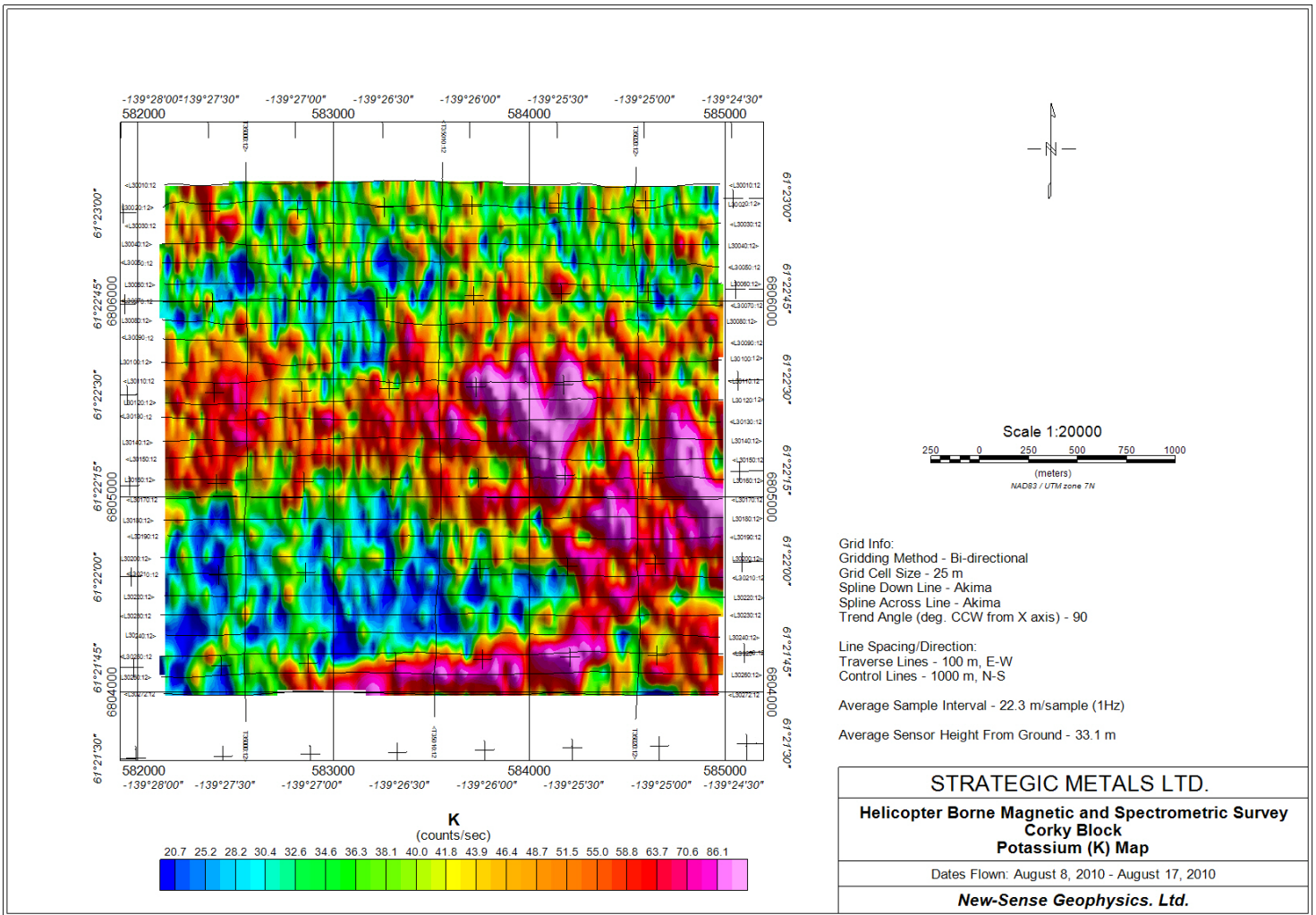
Line Spacing/Direction:  
 Traverse Lines - 100 m, E-W  
 Control Lines - 1000 m, N-S

Average Sample Interval - 2.2 m/sample (10Hz)

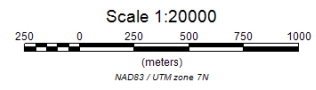
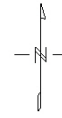
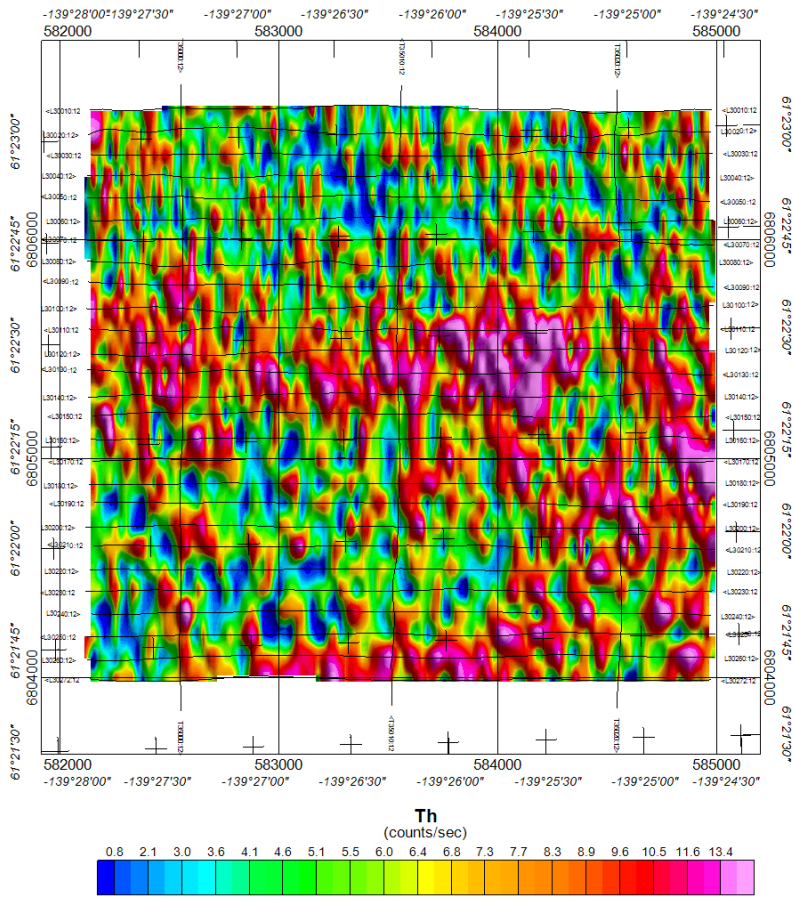
Average Sensor Height From Ground - 33.1 m

<b>STRATEGIC METALS LTD.</b>
<b>Helicopter Borne Magnetic and Spectrometric Survey Corky Block Digital Terrain Model (DTM) Map</b>
Dates Flown: August 8, 2010 - August 17, 2010
<b><i>New-Sense Geophysics. Ltd.</i></b>

# Corky Block Image of Potassium Map



# Corky Block Image of Thorium Map



Grid Info:  
 Gridding Method - Bi-directional  
 Grid Cell Size - 25 m  
 Spline Down Line - Akima  
 Spline Across Line - Akima  
 Trend Angle (deg. CCW from X axis) - 90

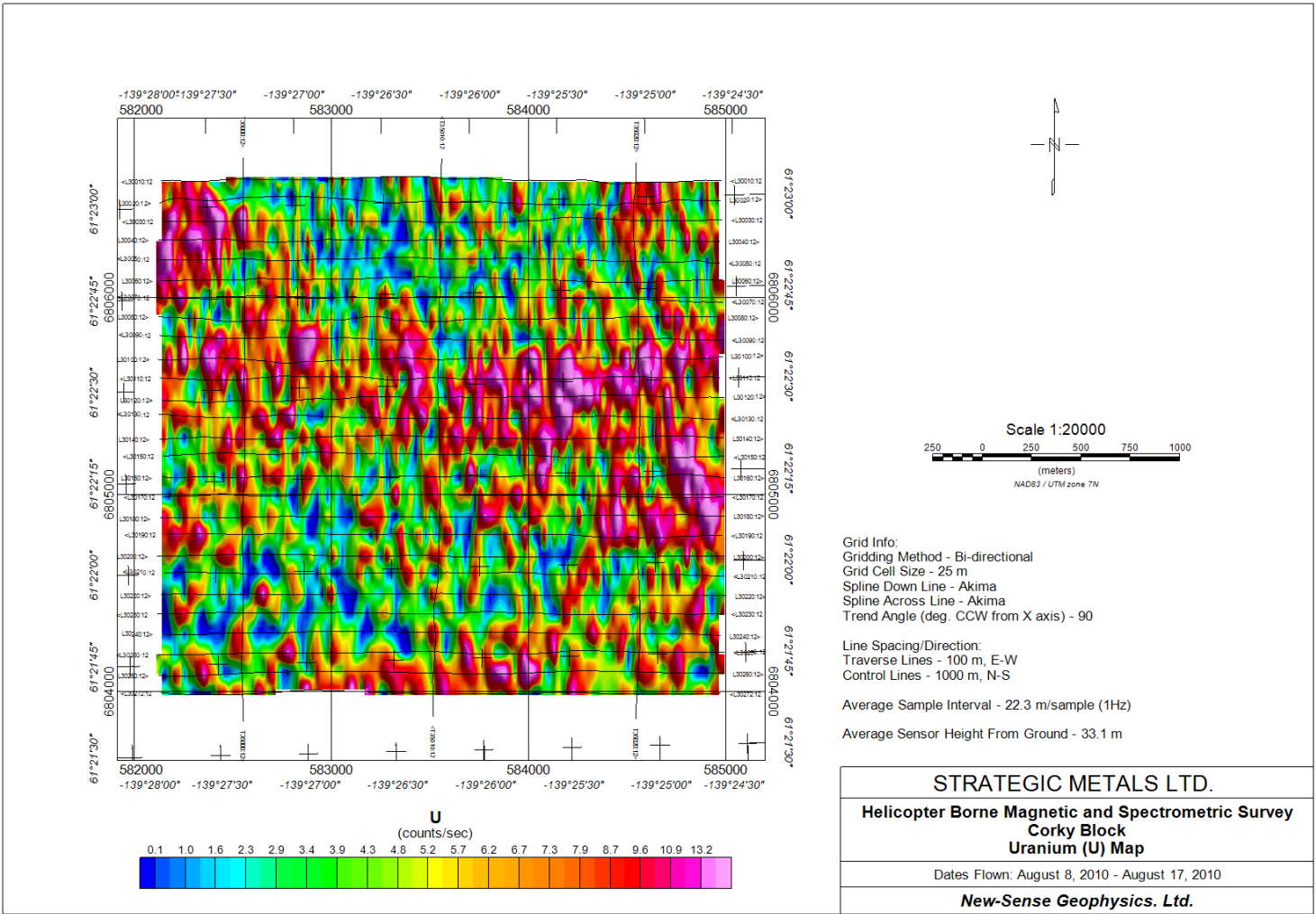
Line Spacing/Direction:  
 Traverse Lines - 100 m, E-W  
 Control Lines - 1000 m, N-S

Average Sample Interval - 22.3 m/sample (1Hz)

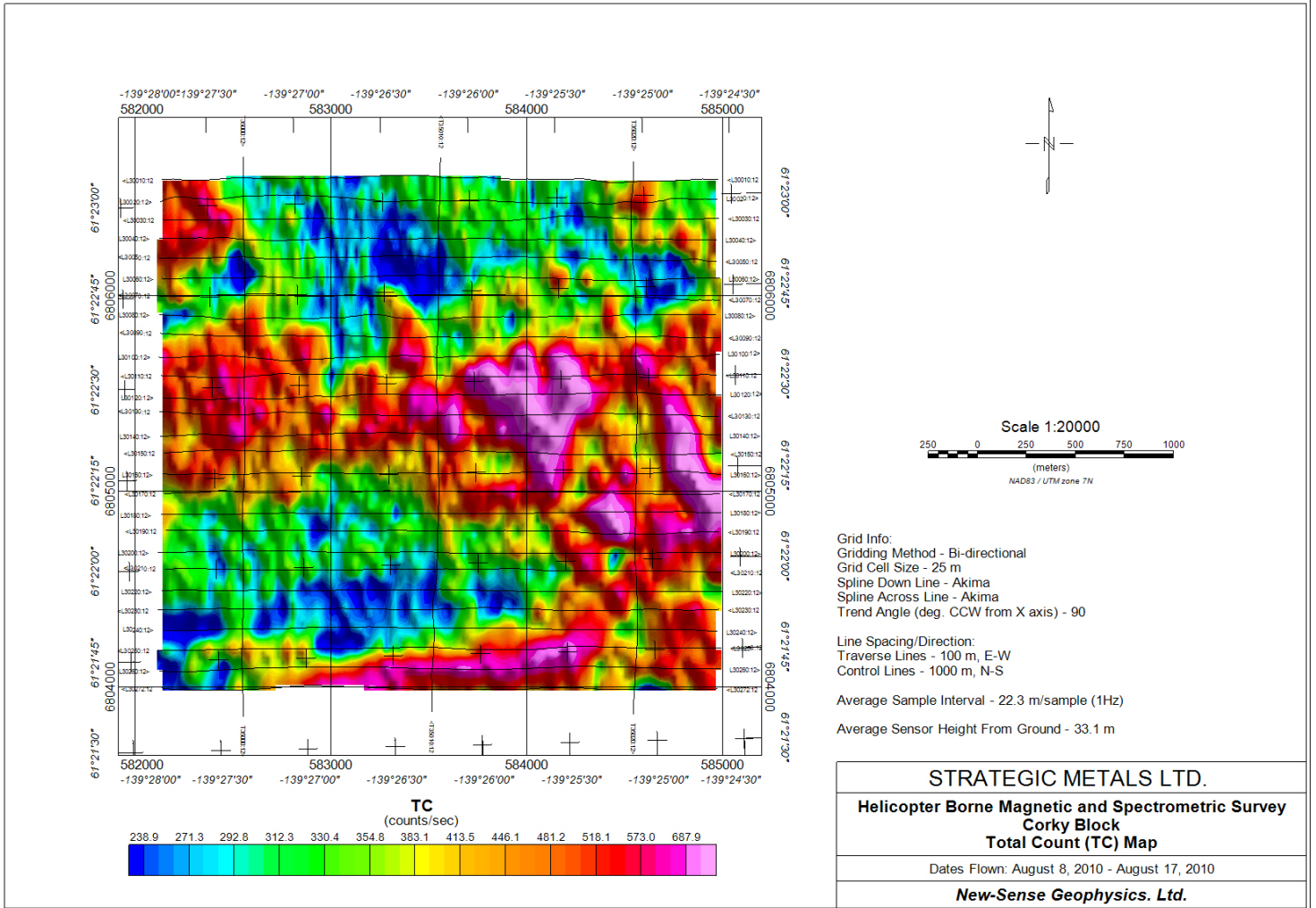
Average Sensor Height From Ground - 33.1 m

<b>STRATEGIC METALS LTD.</b>
<b>Helicopter Borne Magnetic and Spectrometric Survey Corky Block Thorium (Th) Map</b>
Dates Flown: August 8, 2010 - August 17, 2010
<b>New-Sense Geophysics. Ltd.</b>

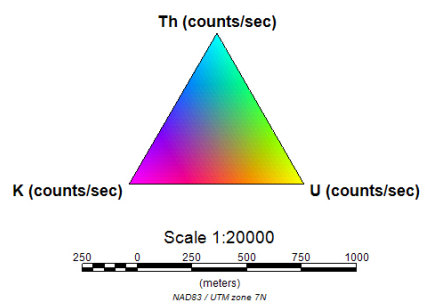
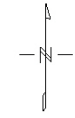
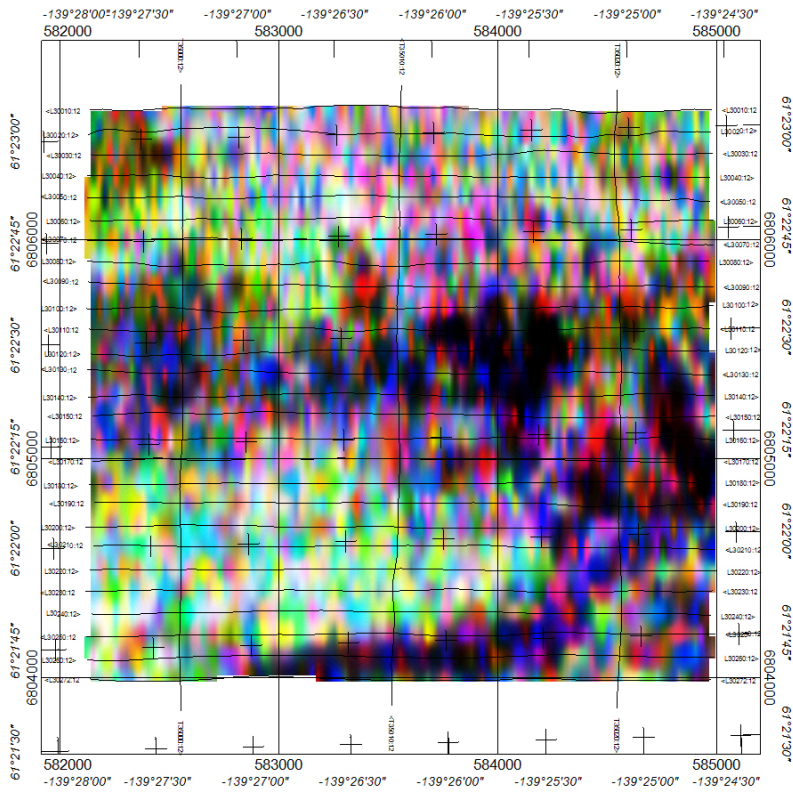
# Corky Block Image of Uranium Map



# Corky Block Image of Total Count Map



# Corky Block Image of Ternary Map



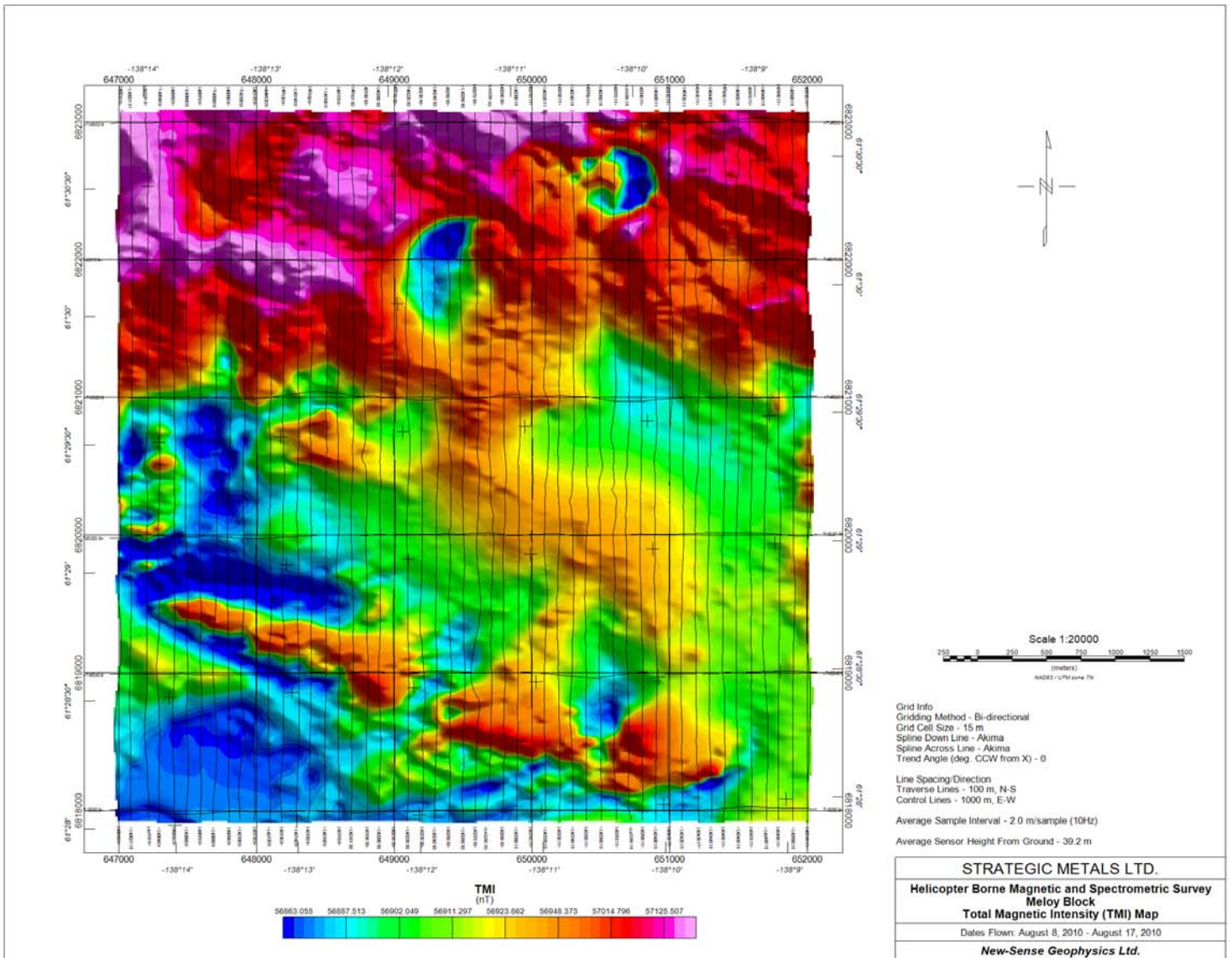
Grid Info:  
 Gridding Method - Bi-directional  
 Grid Cell Size - 25 m  
 Spline Down Line - Akima  
 Spline Across Line - Akima  
 Trend Angle (deg. CCW from X axis) - 90

Line Spacing/Direction:  
 Traverse Lines - 100 m, E-W  
 Control Lines - 1000 m, N-S

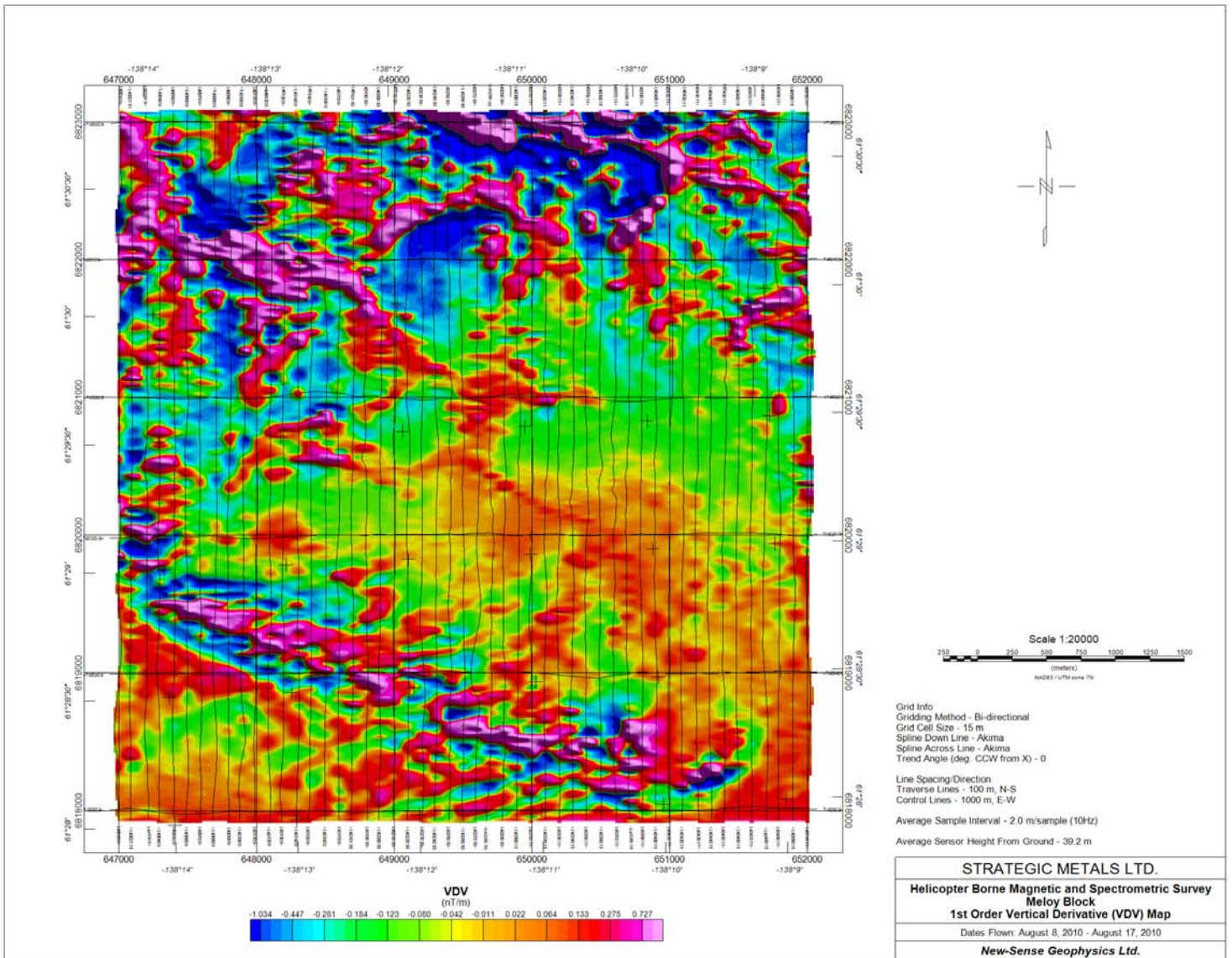
Average Sample Interval - 22.3 m/sample (1Hz)  
 Average Sensor Height From Ground - 33.1 m

<b>STRATEGIC METALS LTD.</b>
<b>Helicopter Borne Magnetic and Spectrometric Survey Corky Block Ternary Map</b>
Dates Flown: August 8, 2010 - August 17, 2010
<b><i>New-Sense Geophysics. Ltd.</i></b>

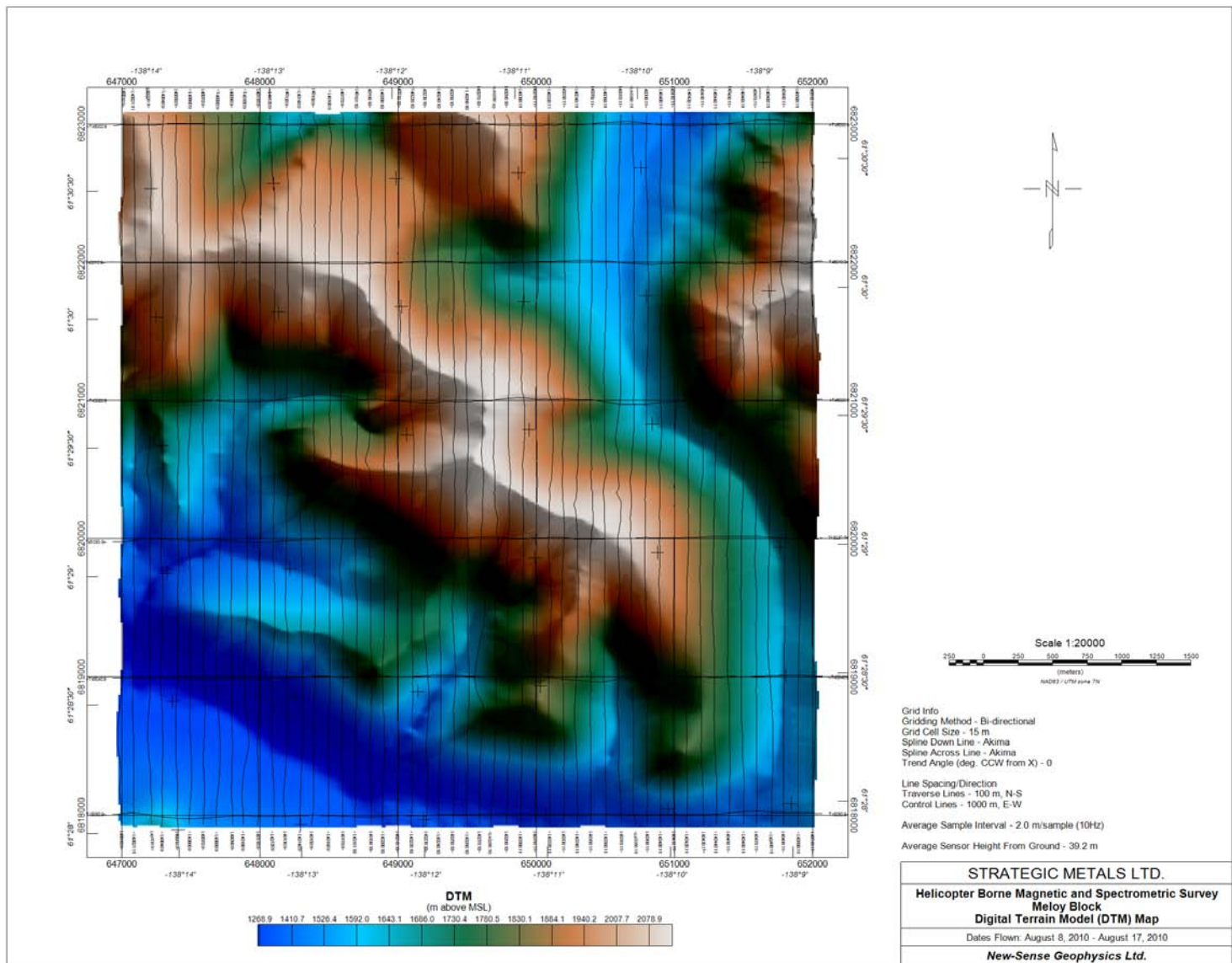
# Meloy Block Image of TMI FINAL Map



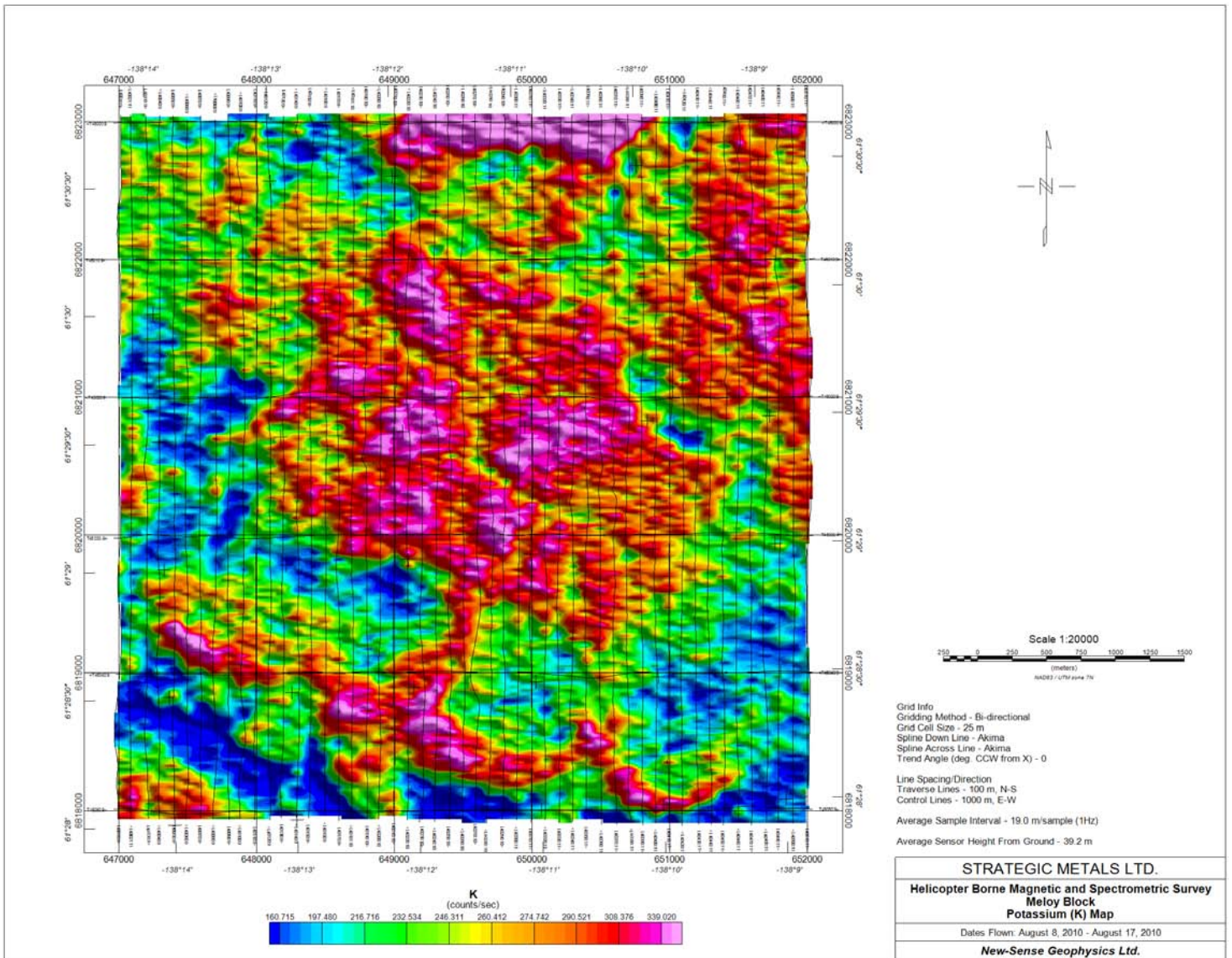
# Meloy Block Image of VDV Map



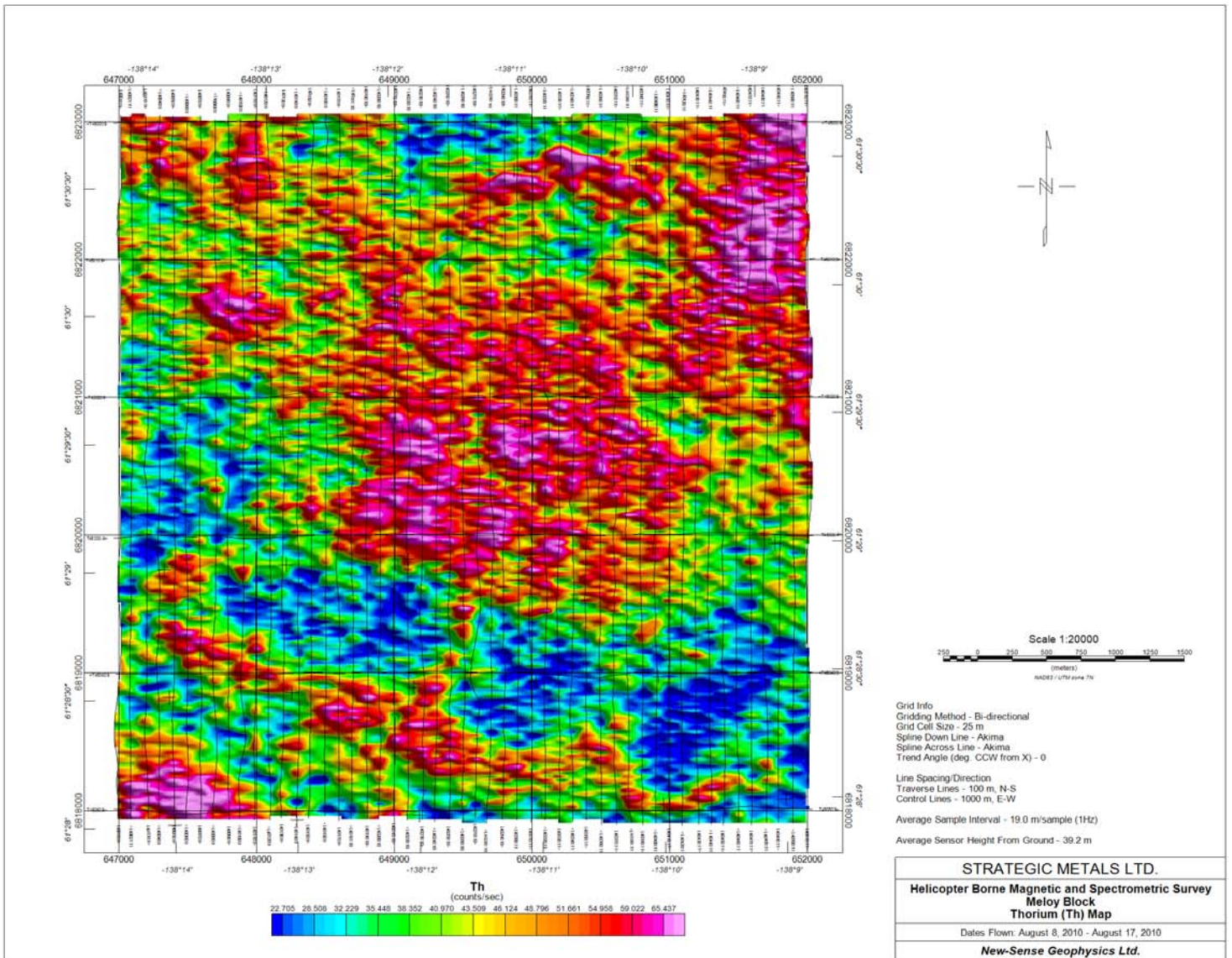
# Meloy Block Image of DTM Map



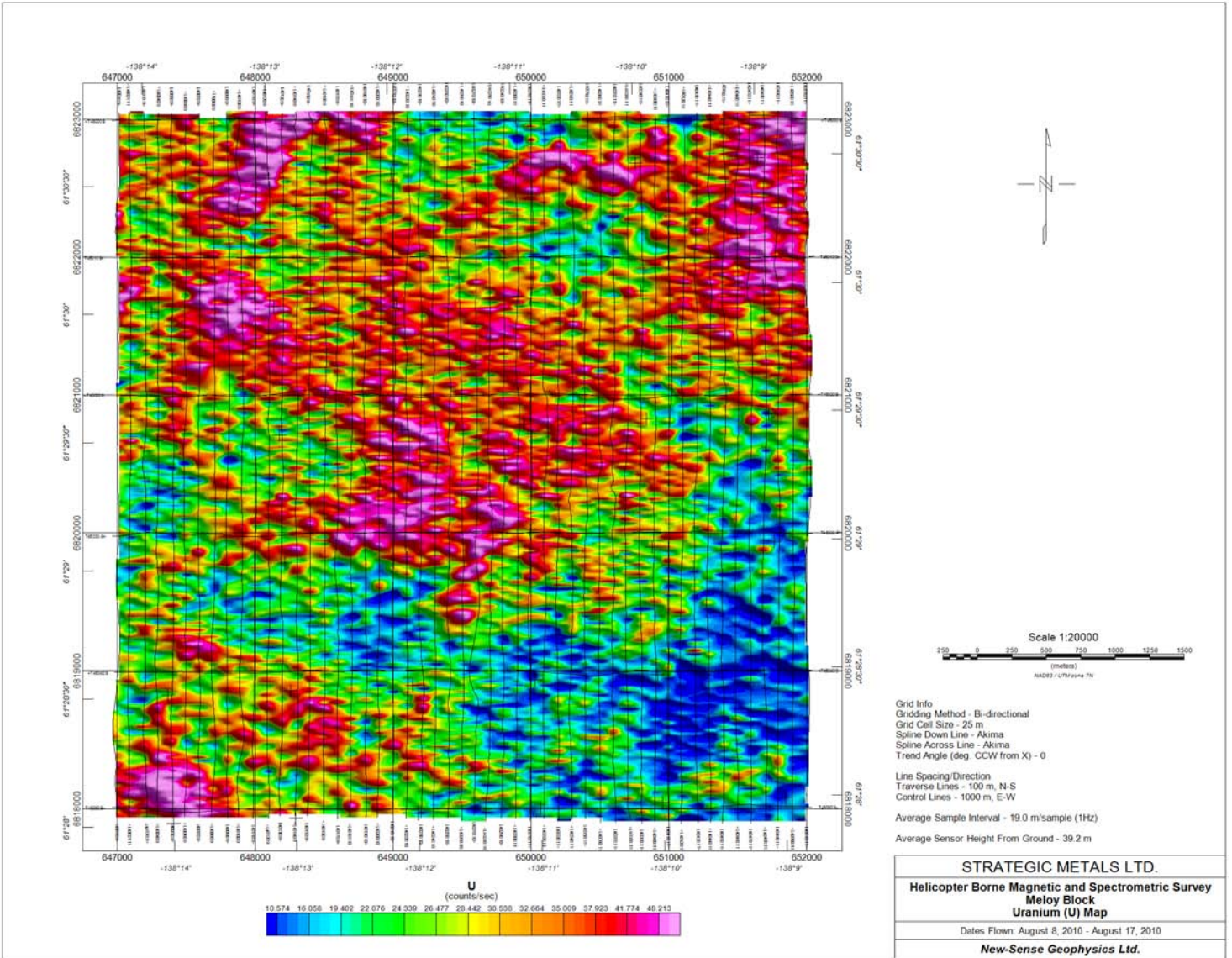
# Meloy Block Image of Potassium Map



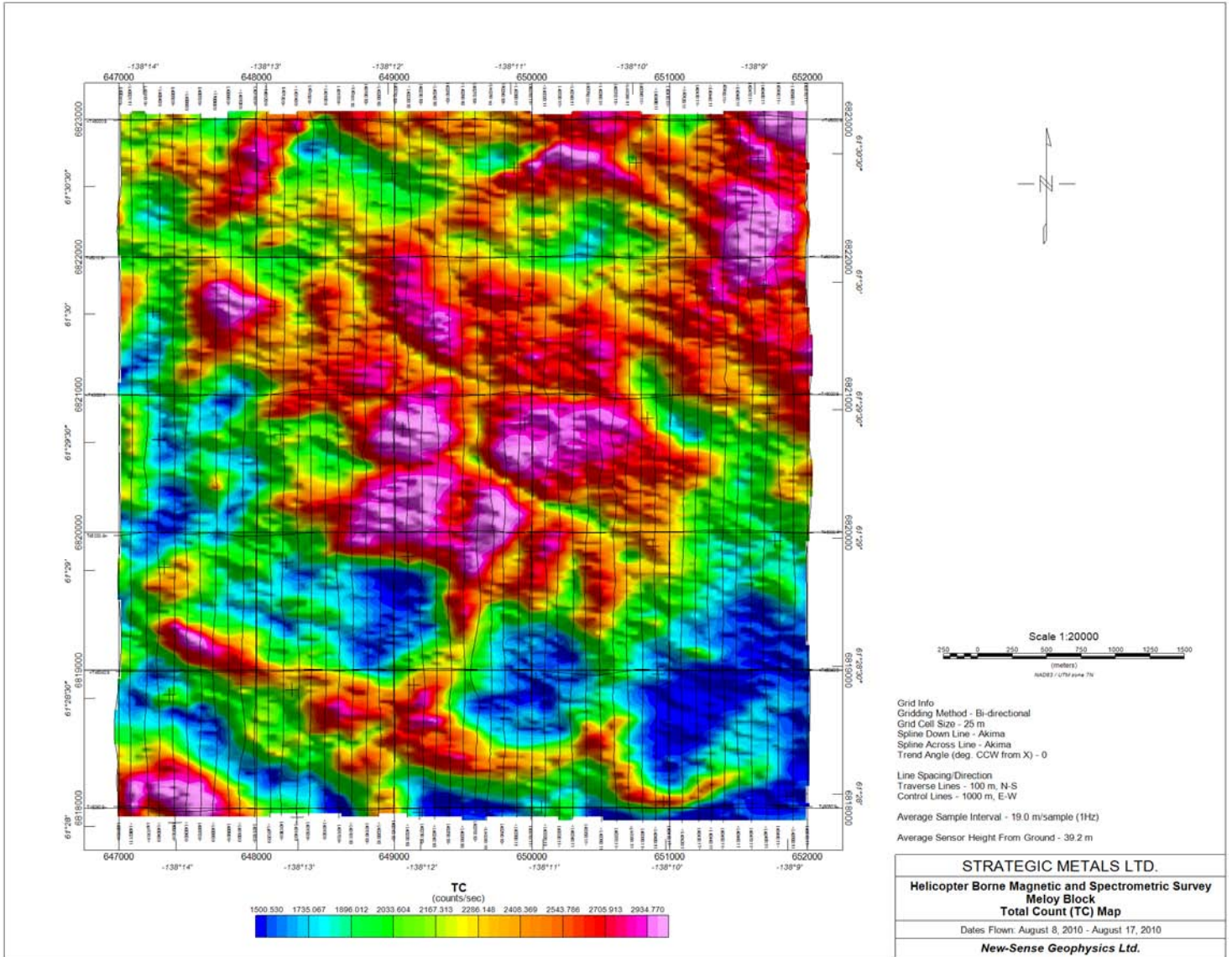
# Meloy Block Image of Thorium Map



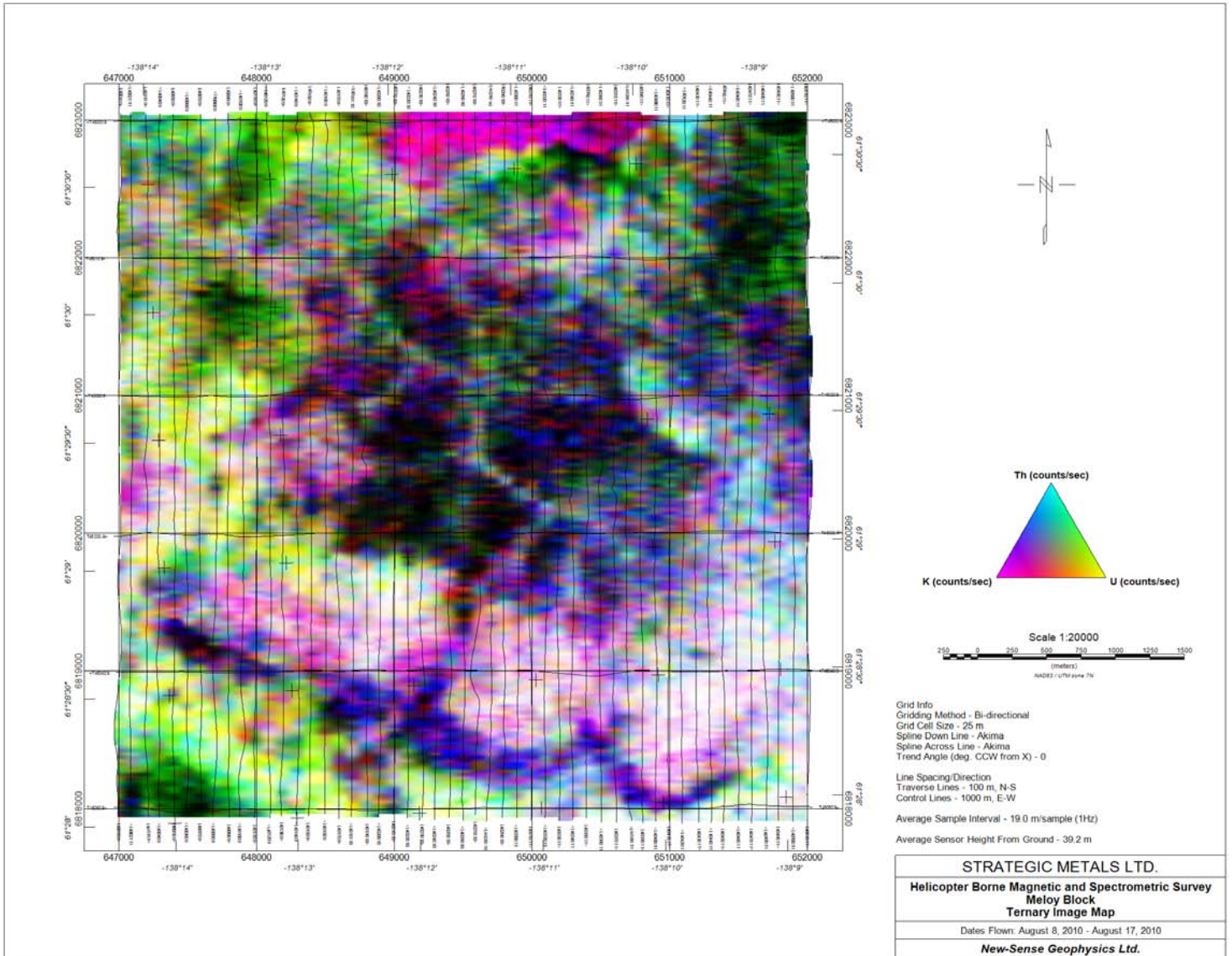
# Meloy Block Image of Uranium Map



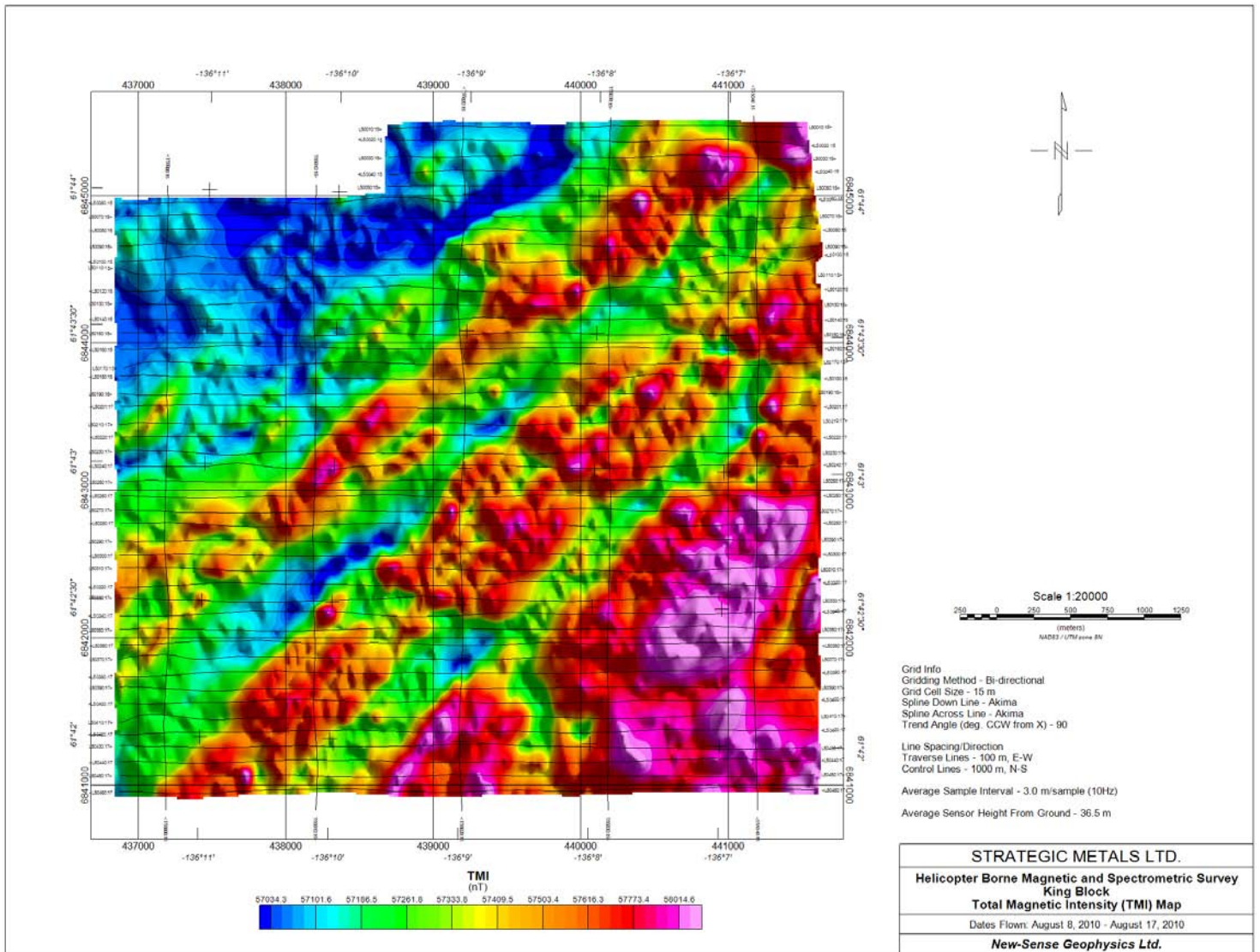
# Meloy Block Image of Total Count Map



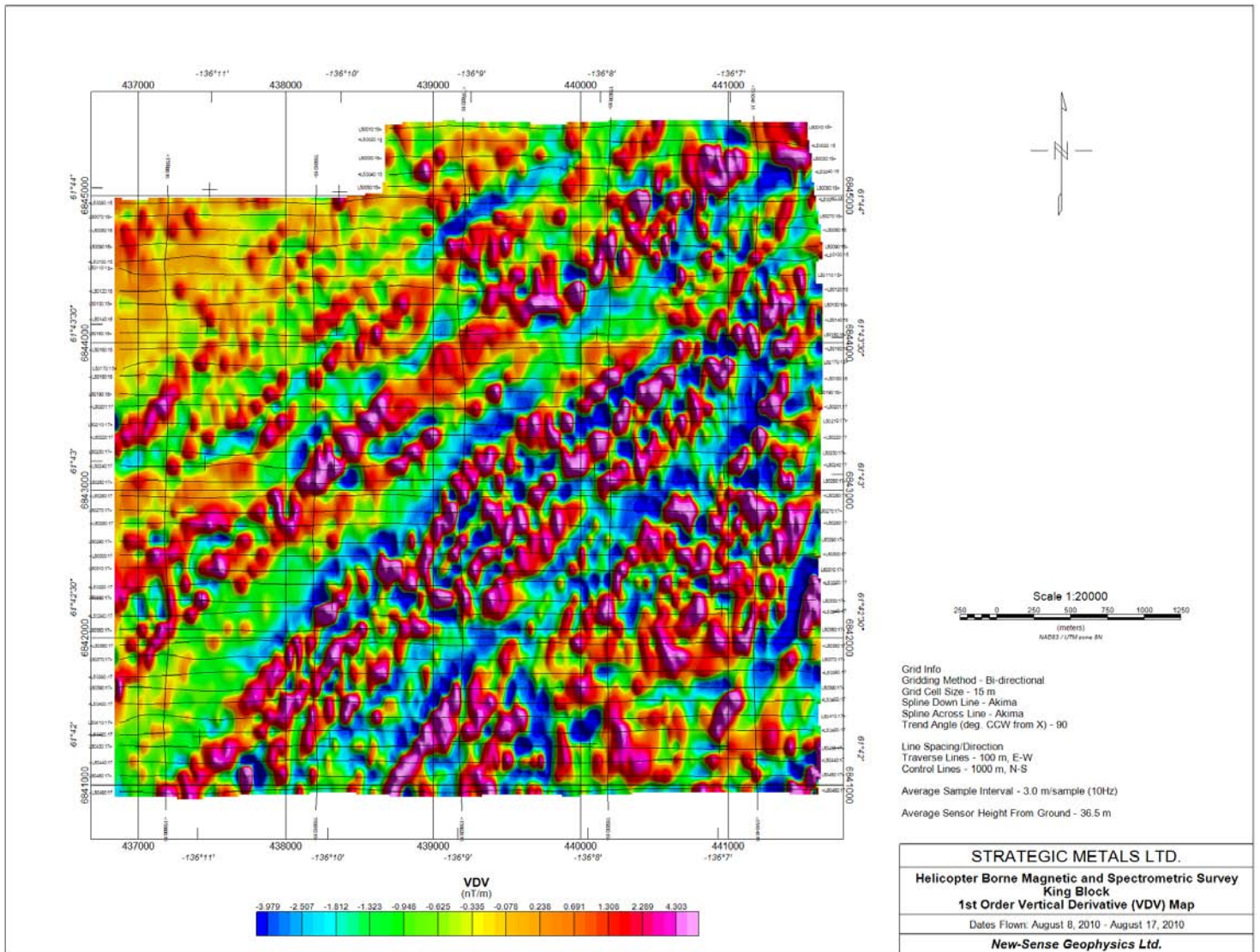
# Meloy Block Image of Ternary Map



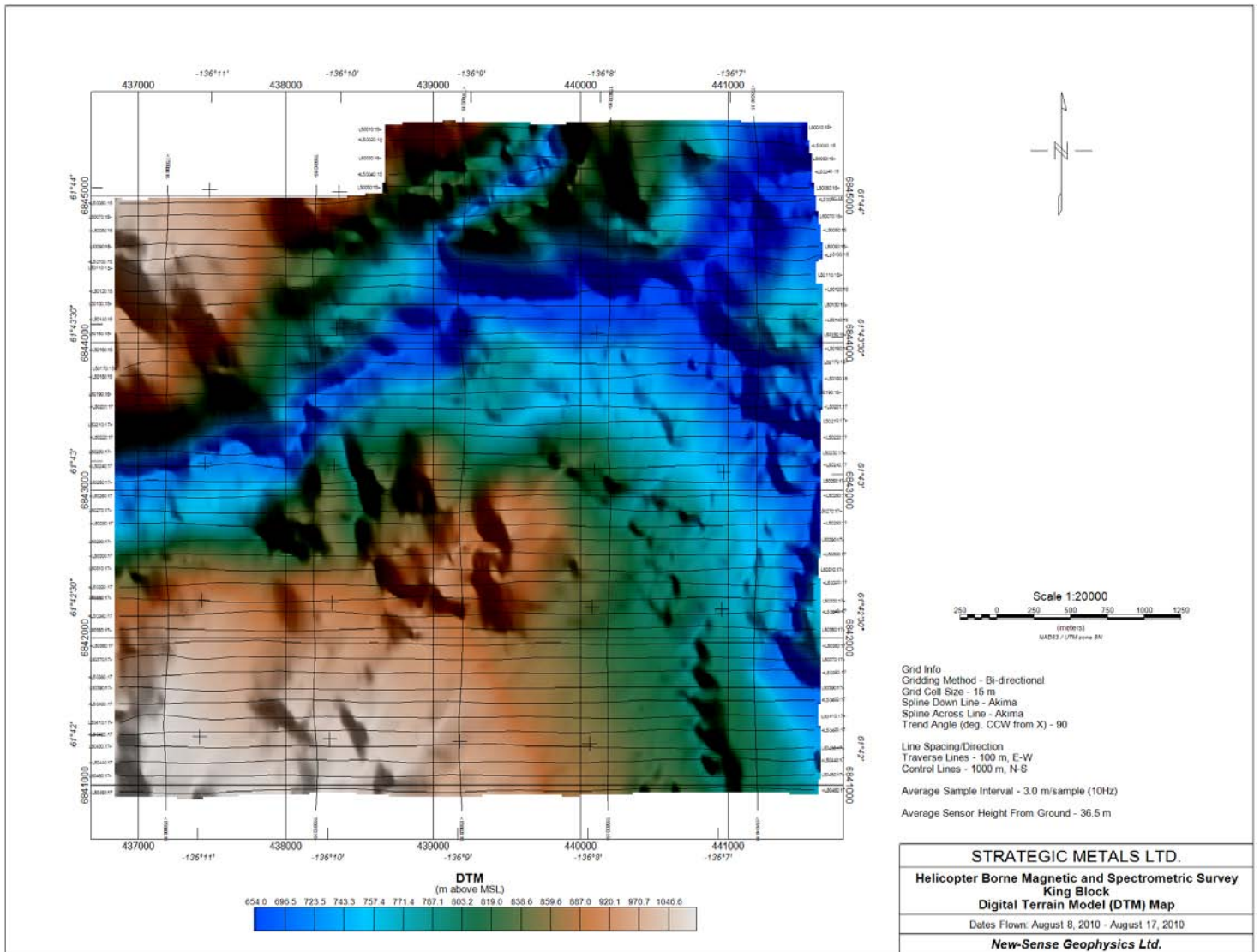
# King Block Image of TMI FINAL Map



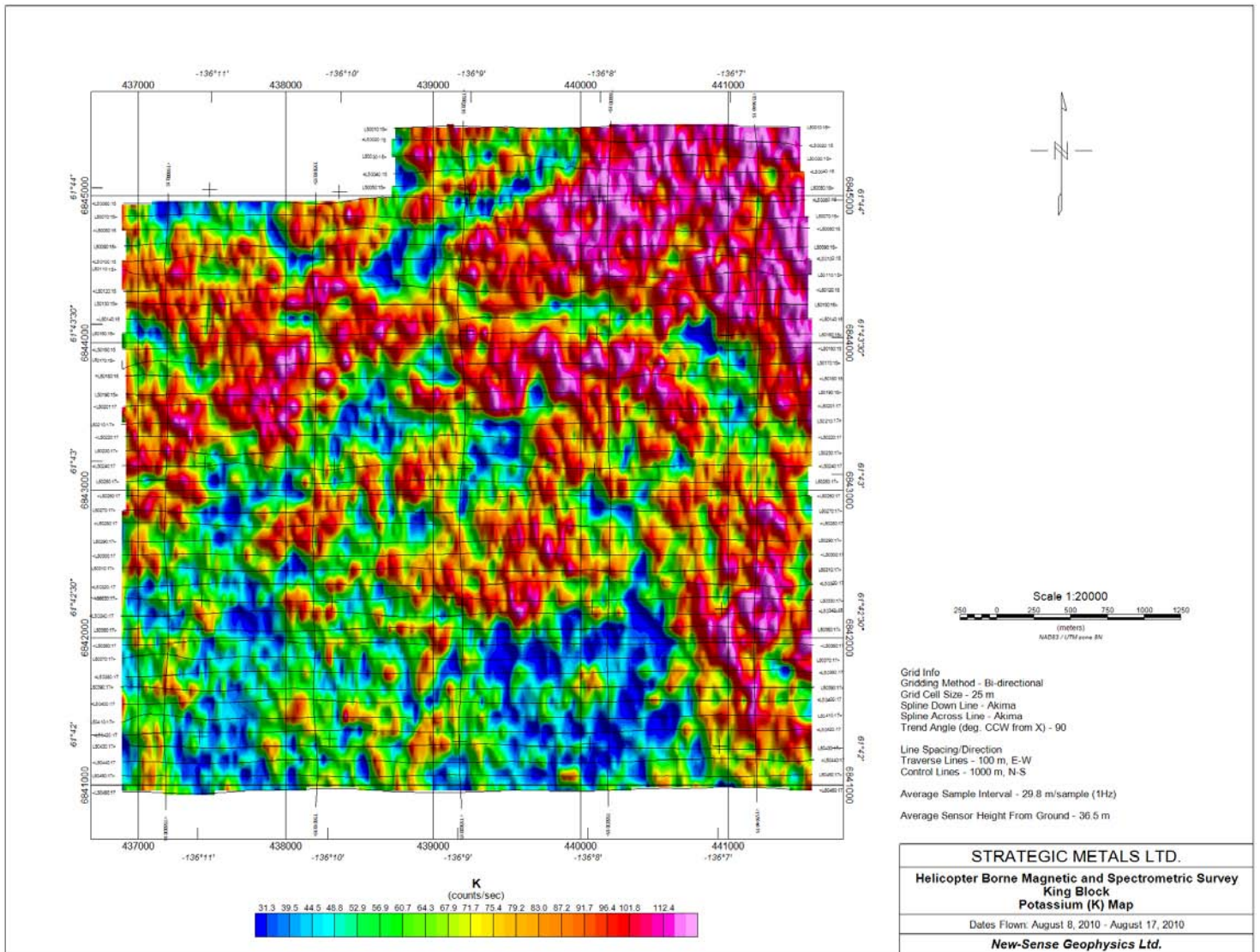
# King Block Image of VDV Map



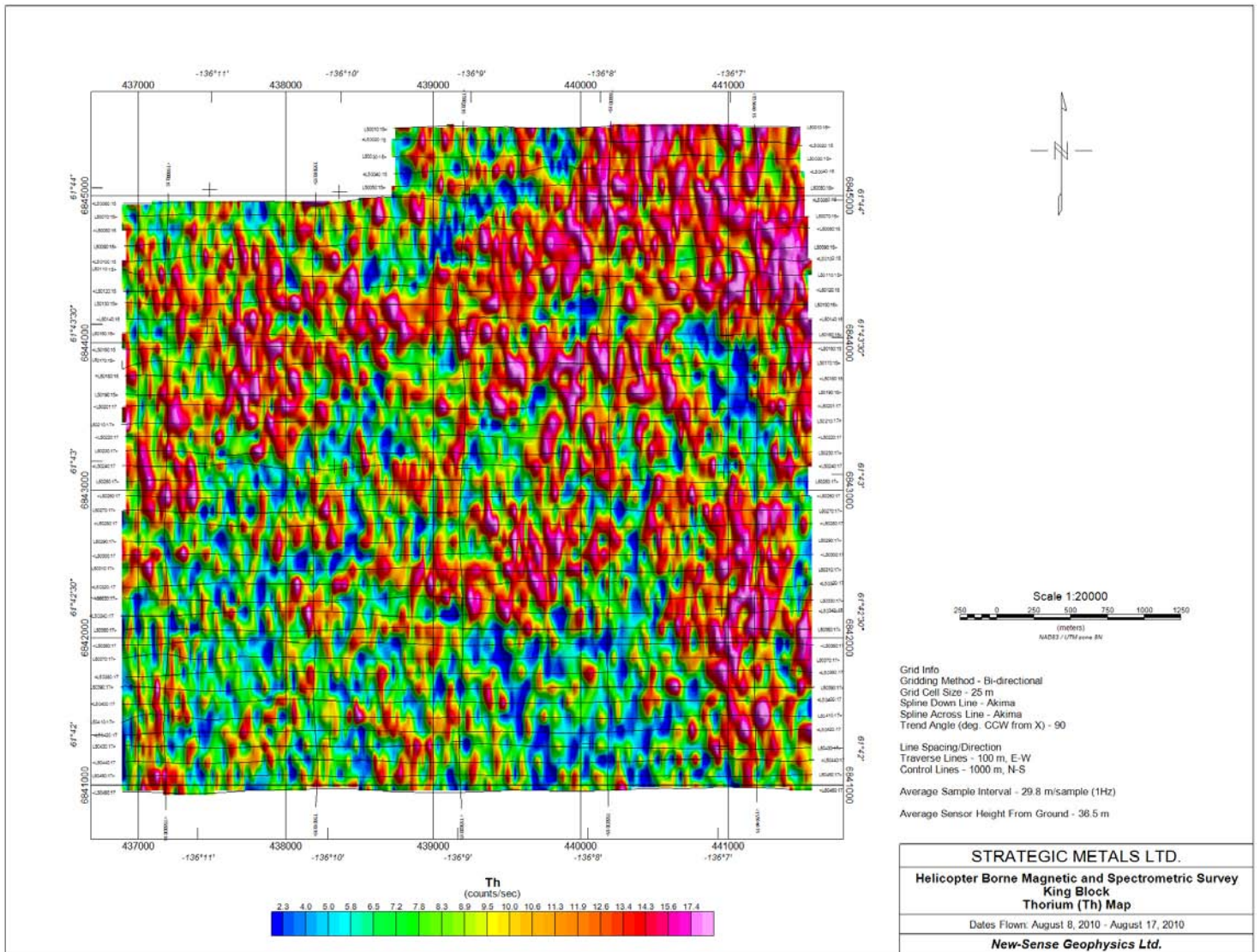
# King Block Image of DTM Map



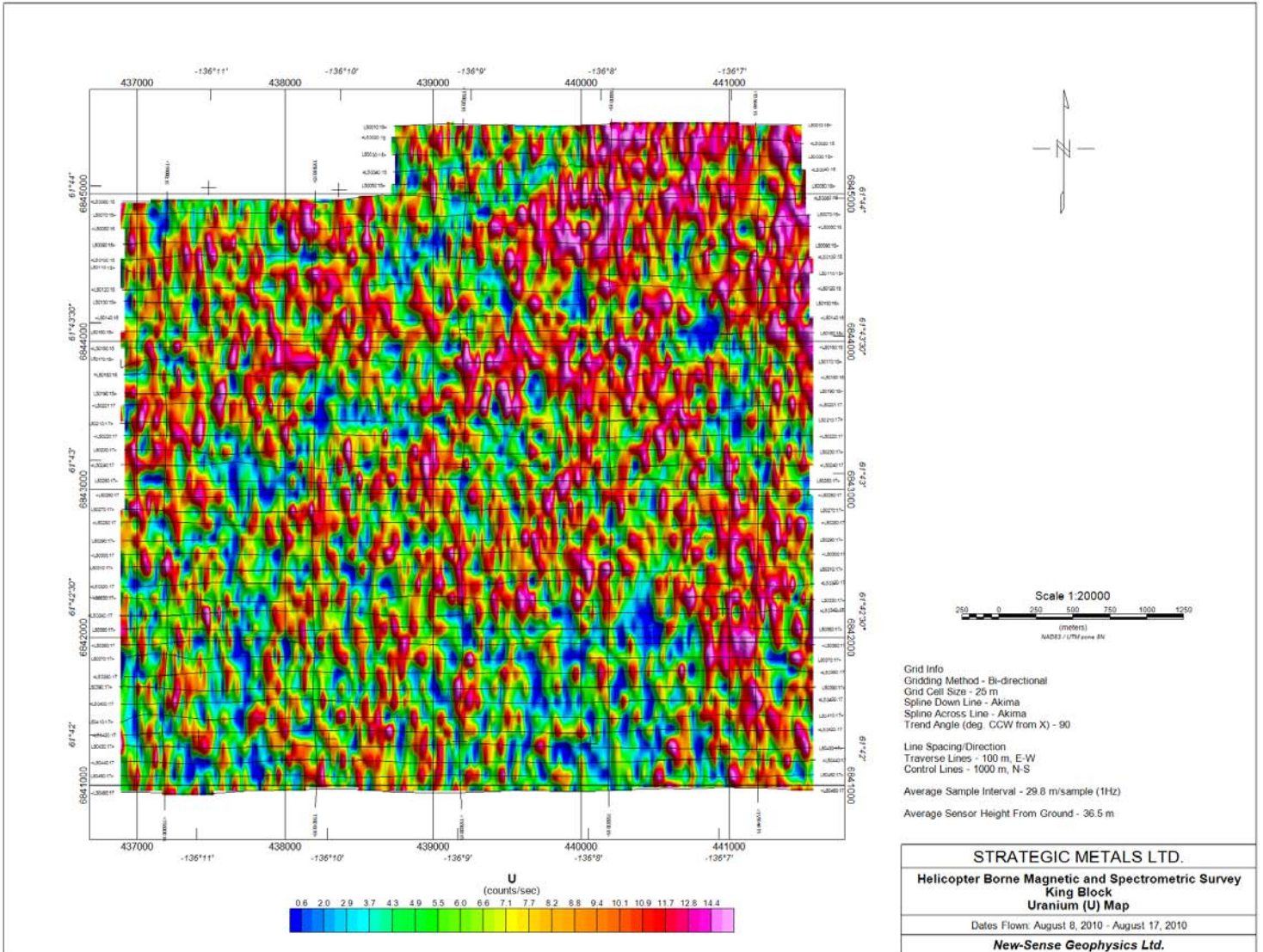
# King Block Image of Potassium Map



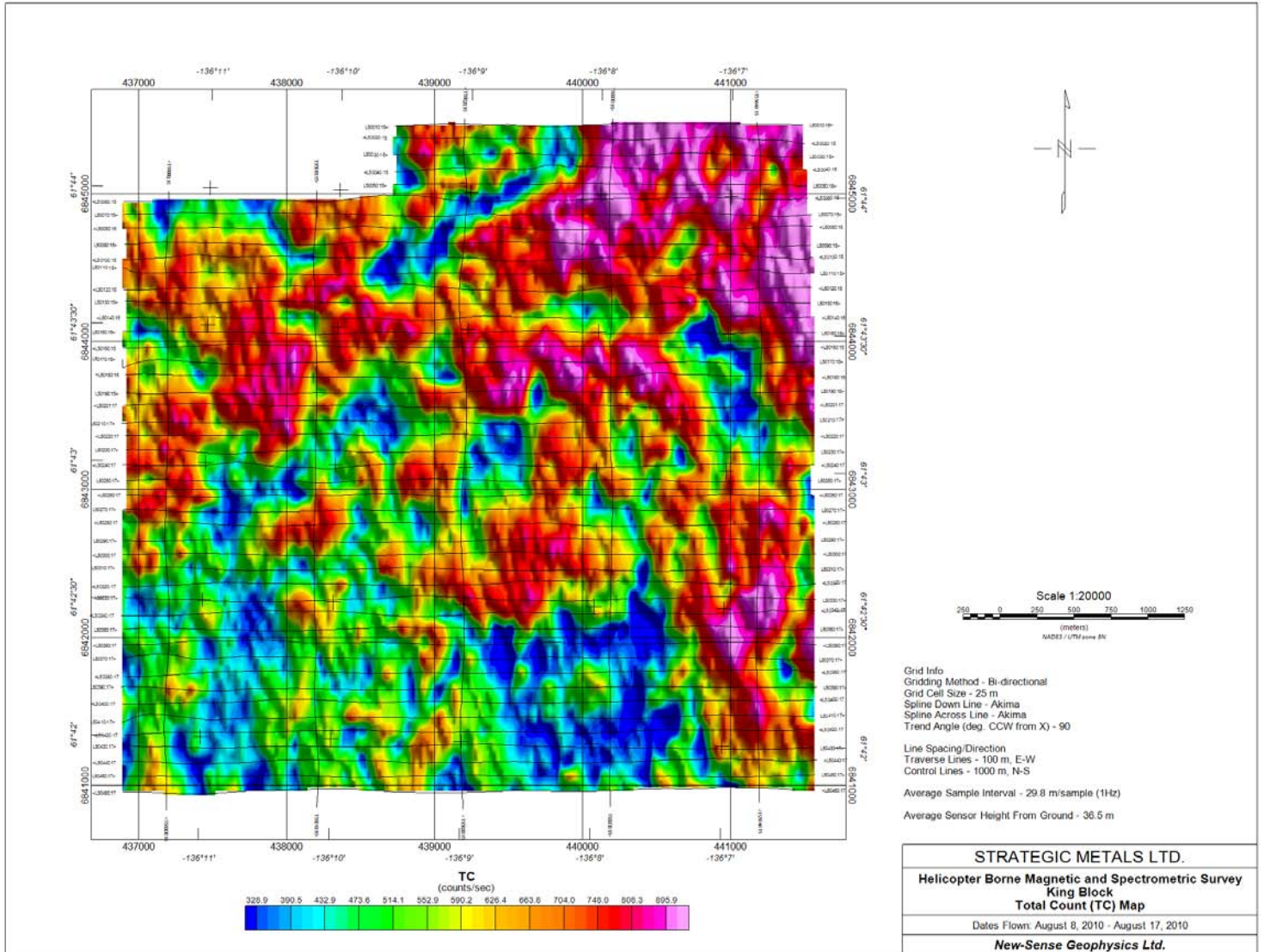
# King Block Image of Thorium Map



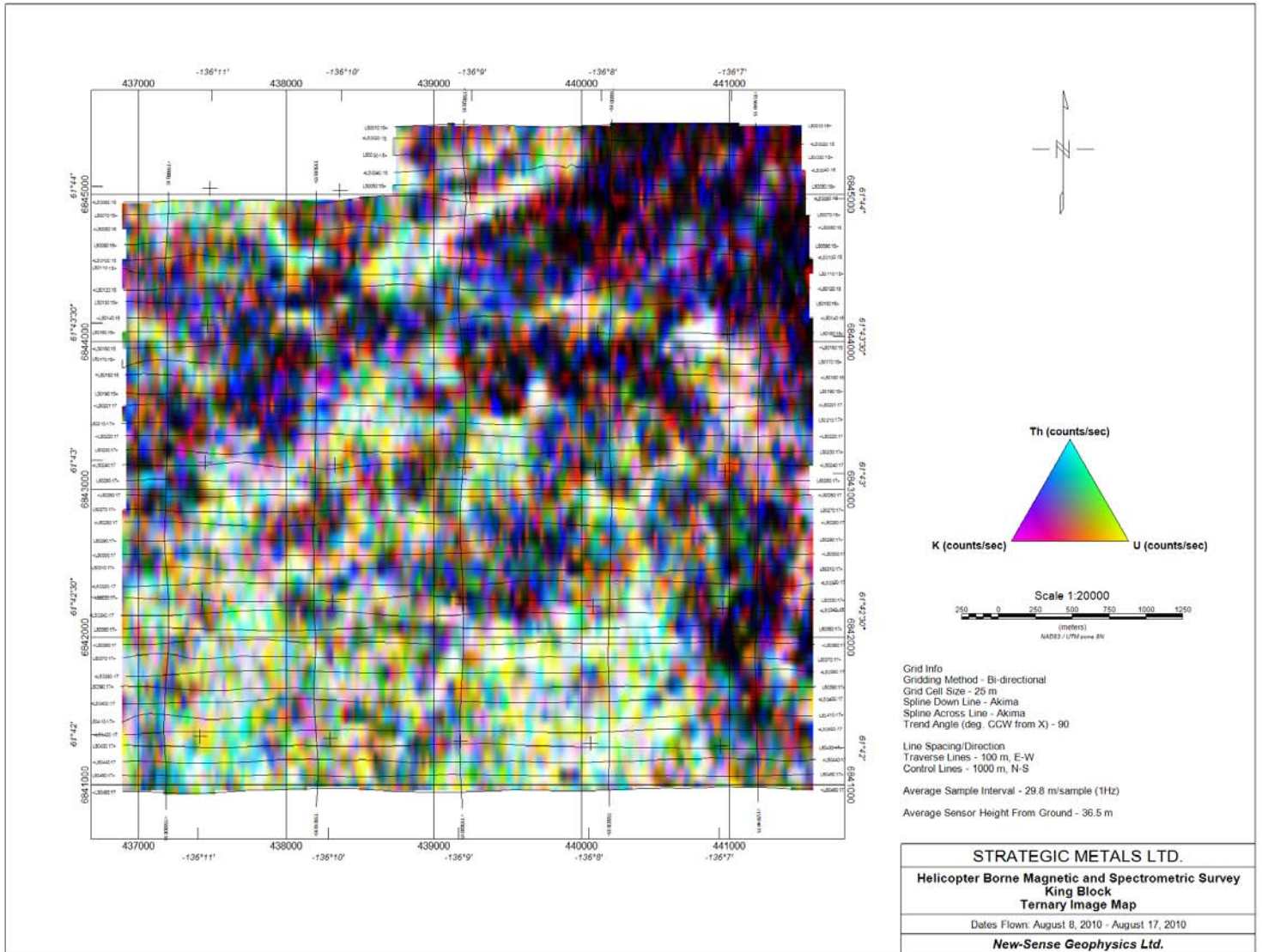
# King Block Image of Uranium Map



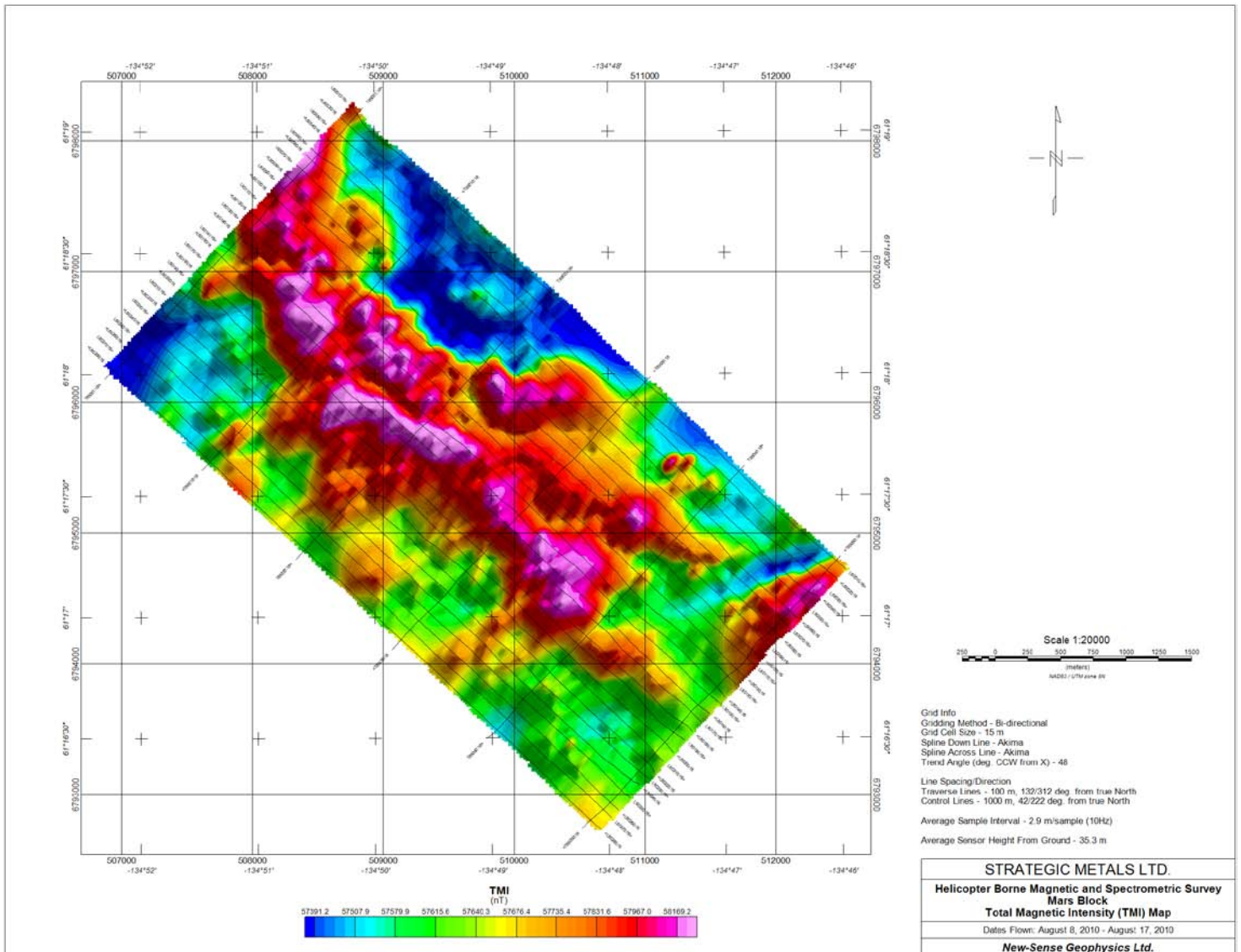
# King Block Image of Total Count Map



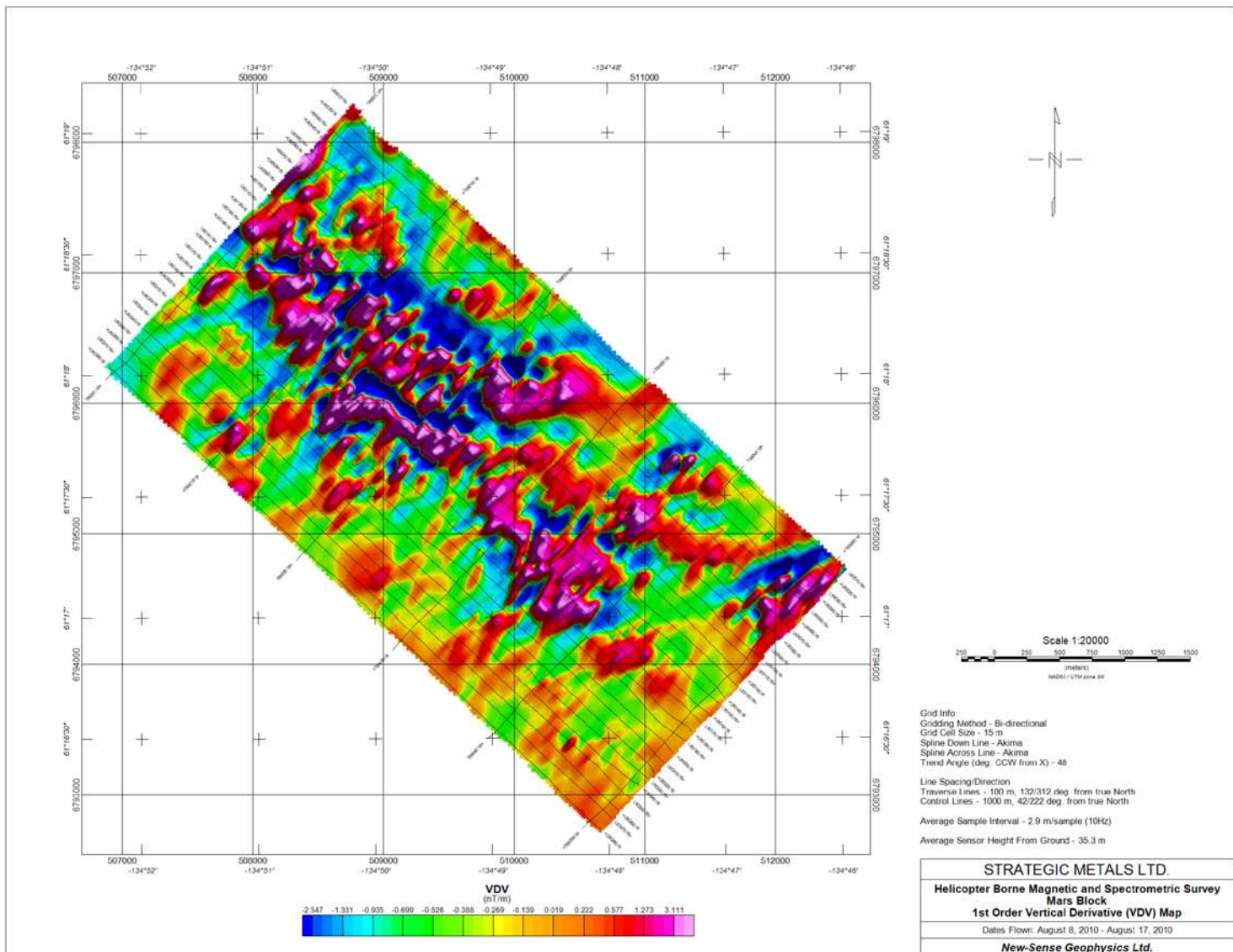
# King Block Image of Ternary Map



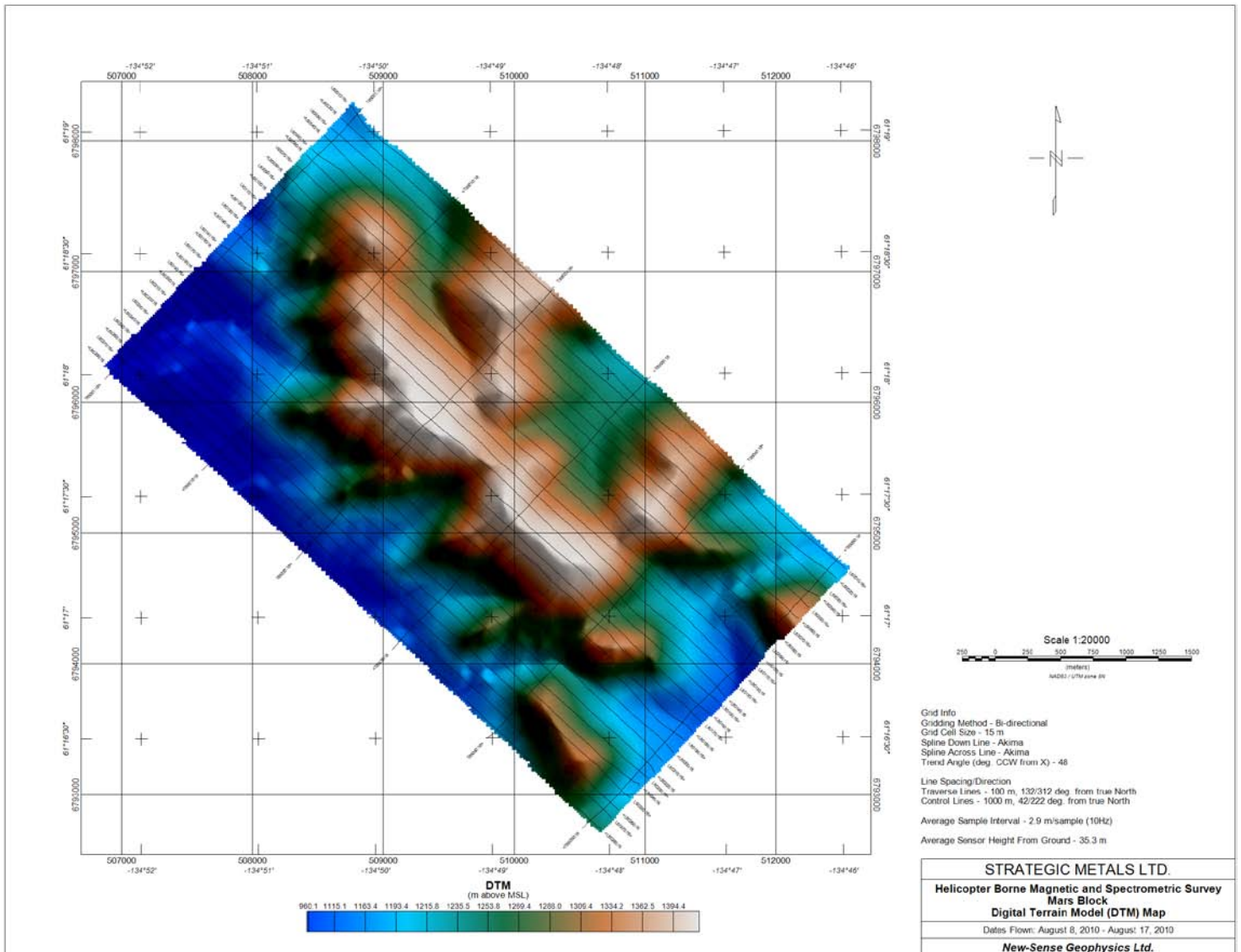
# Mars Block Image of TMI FINAL Map



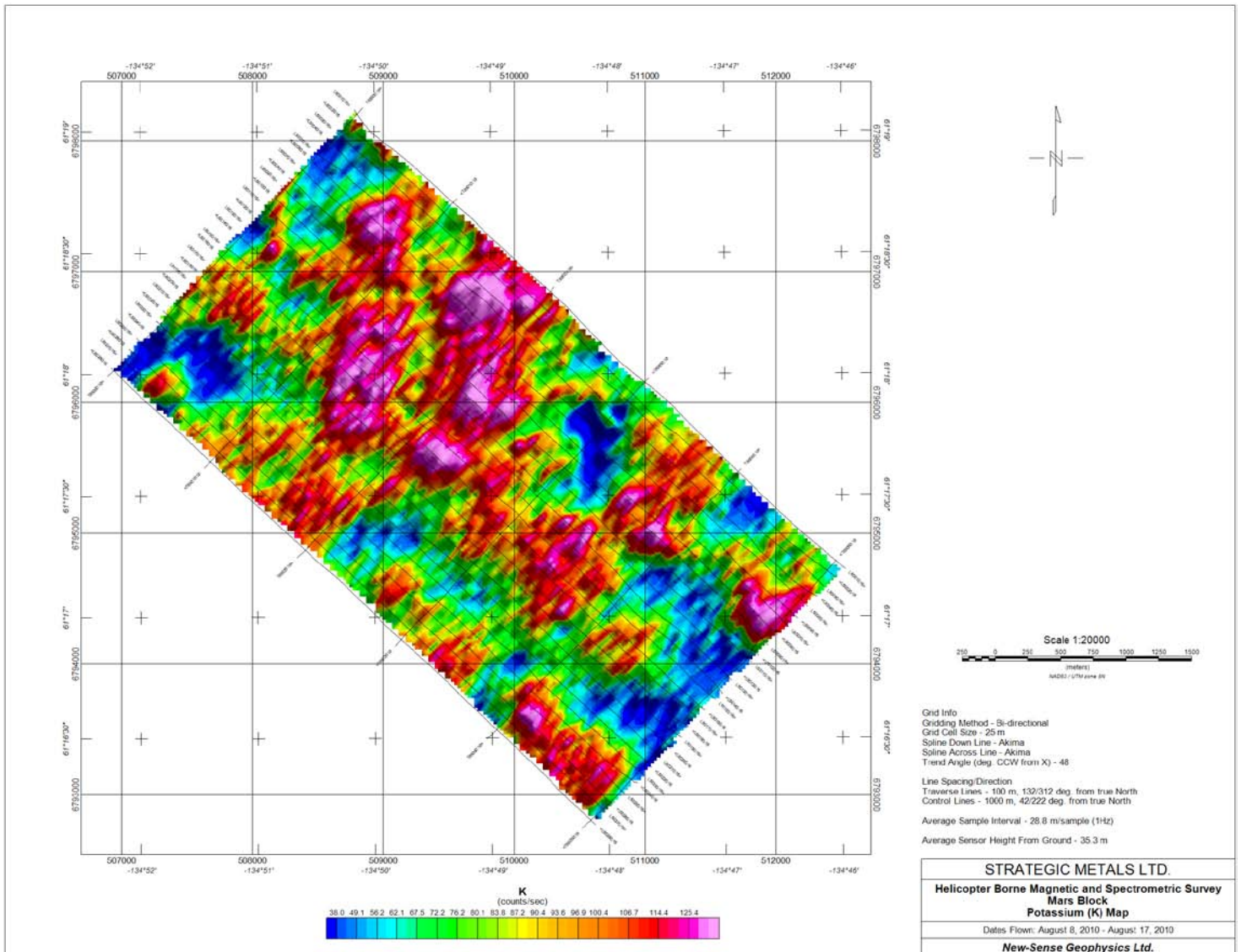
# Mars Block Image of VDV Map



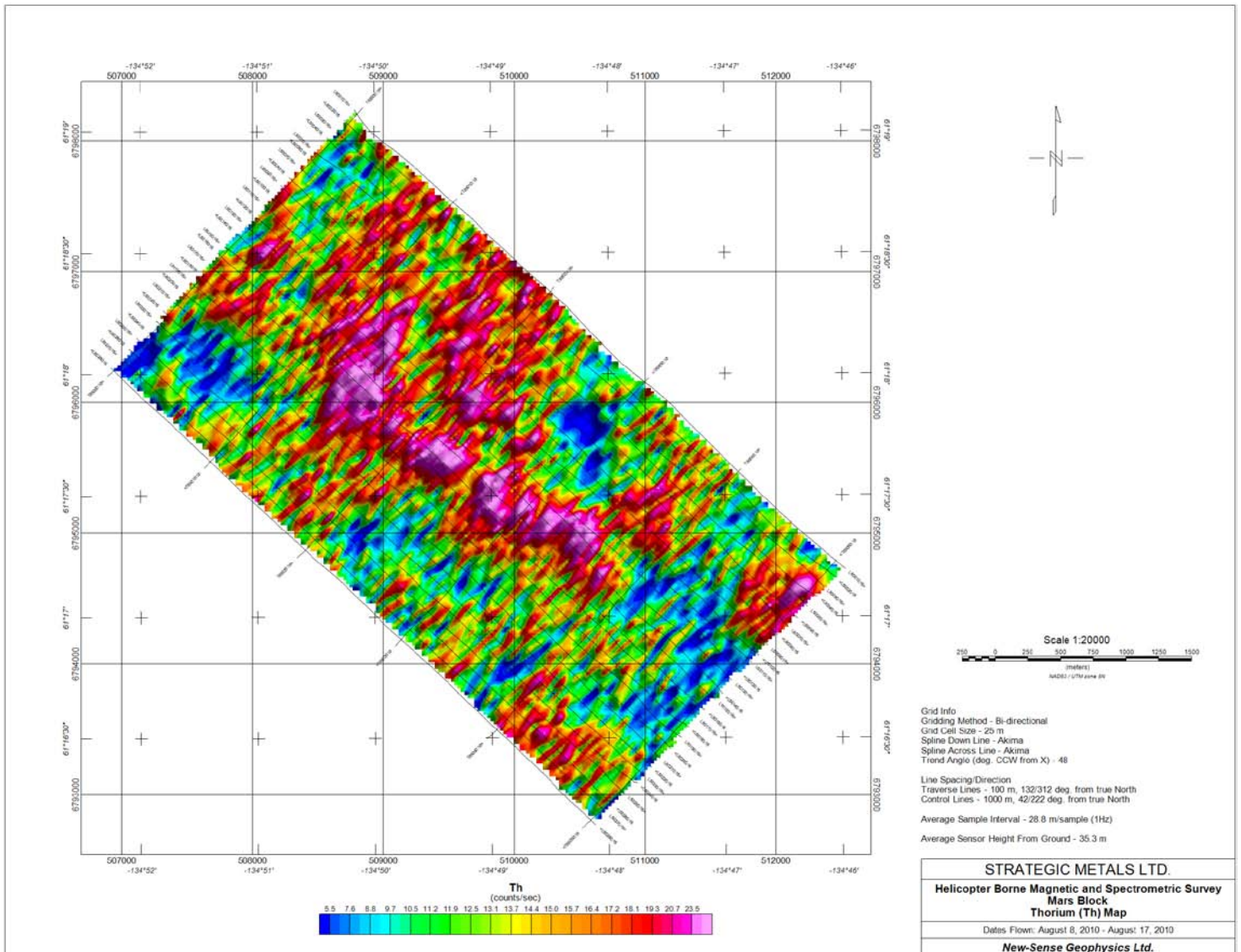
# Mars Block Image of DTM Map



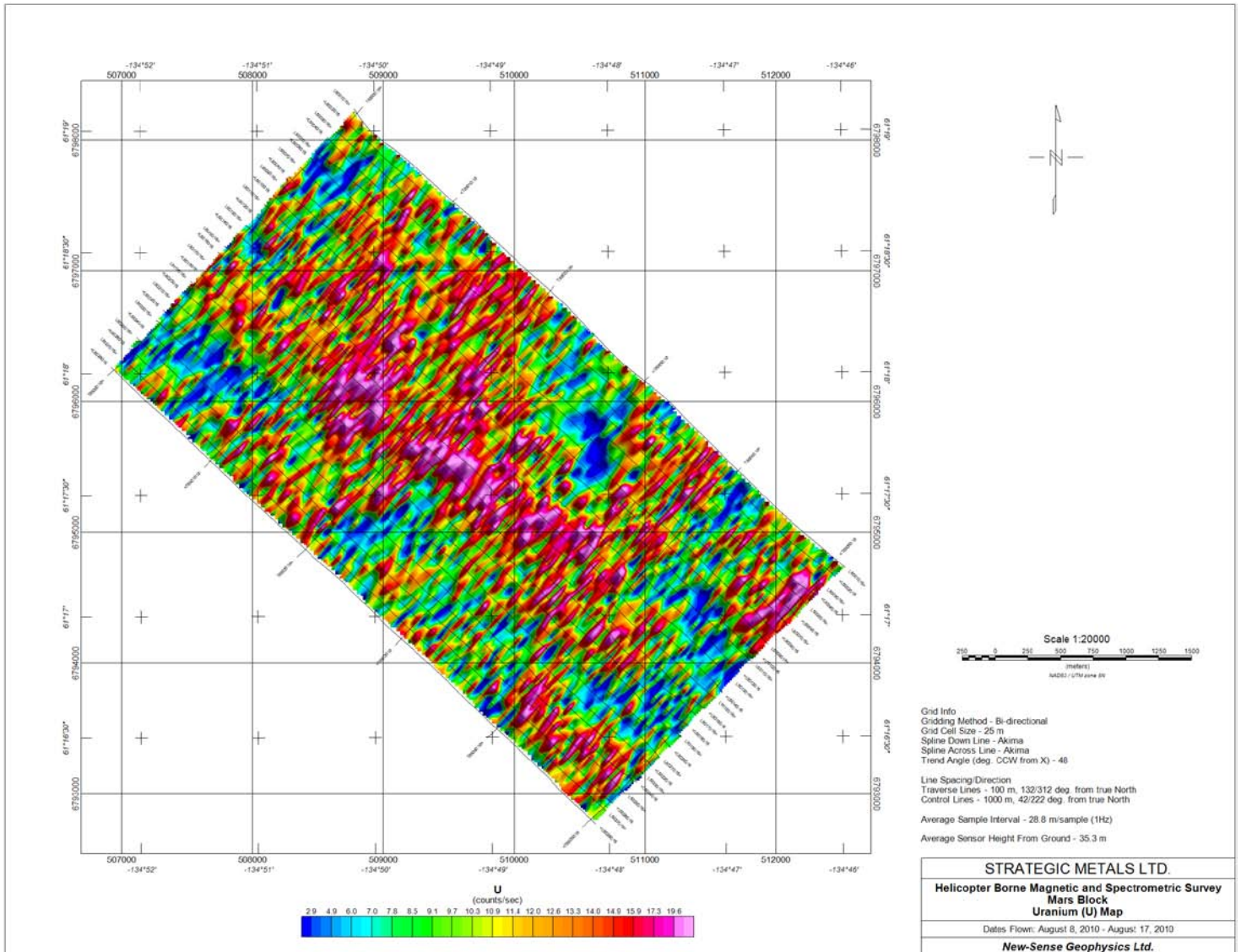
# Mars Block Image of Potassium Map



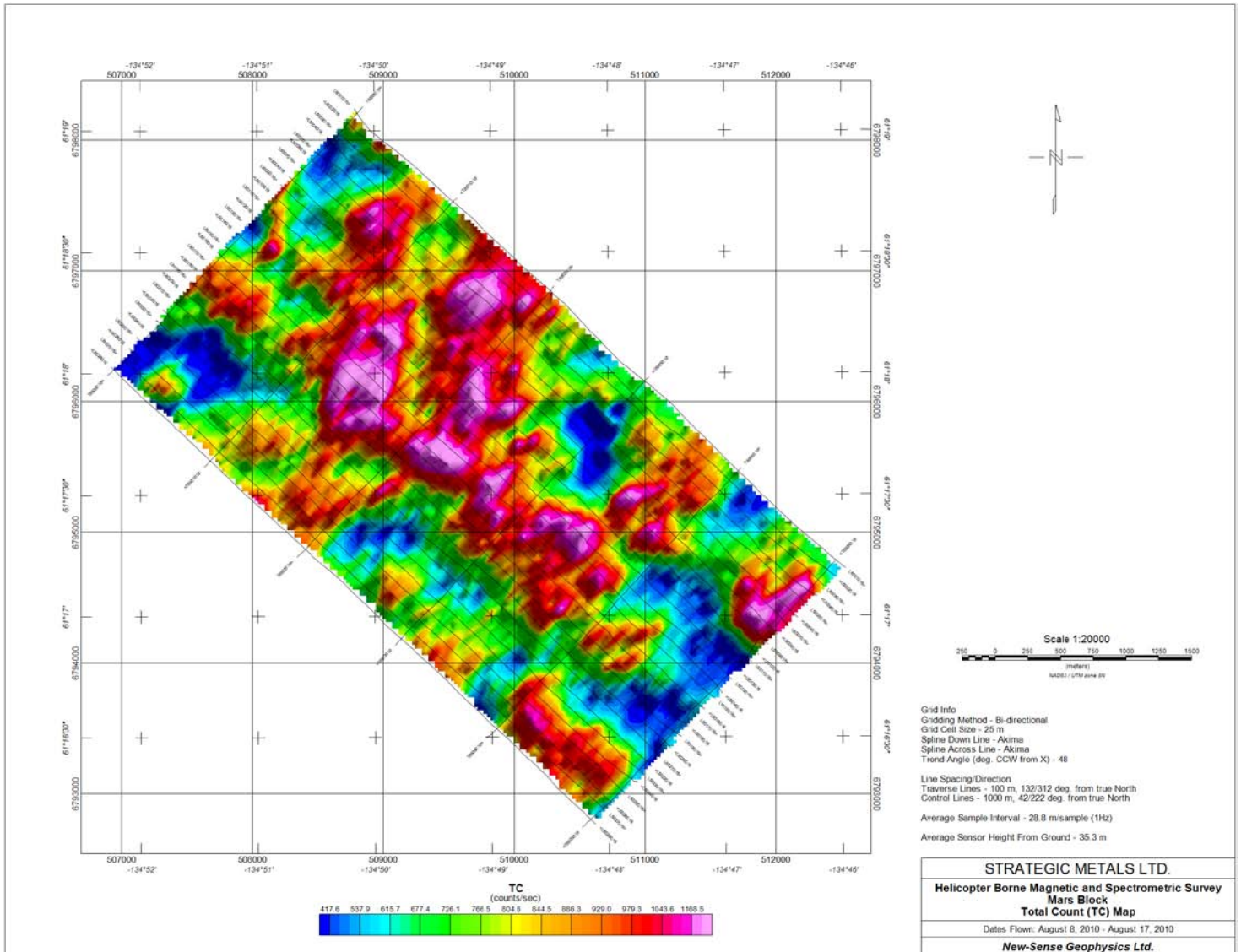
# Mars Block Image of Thorium Map



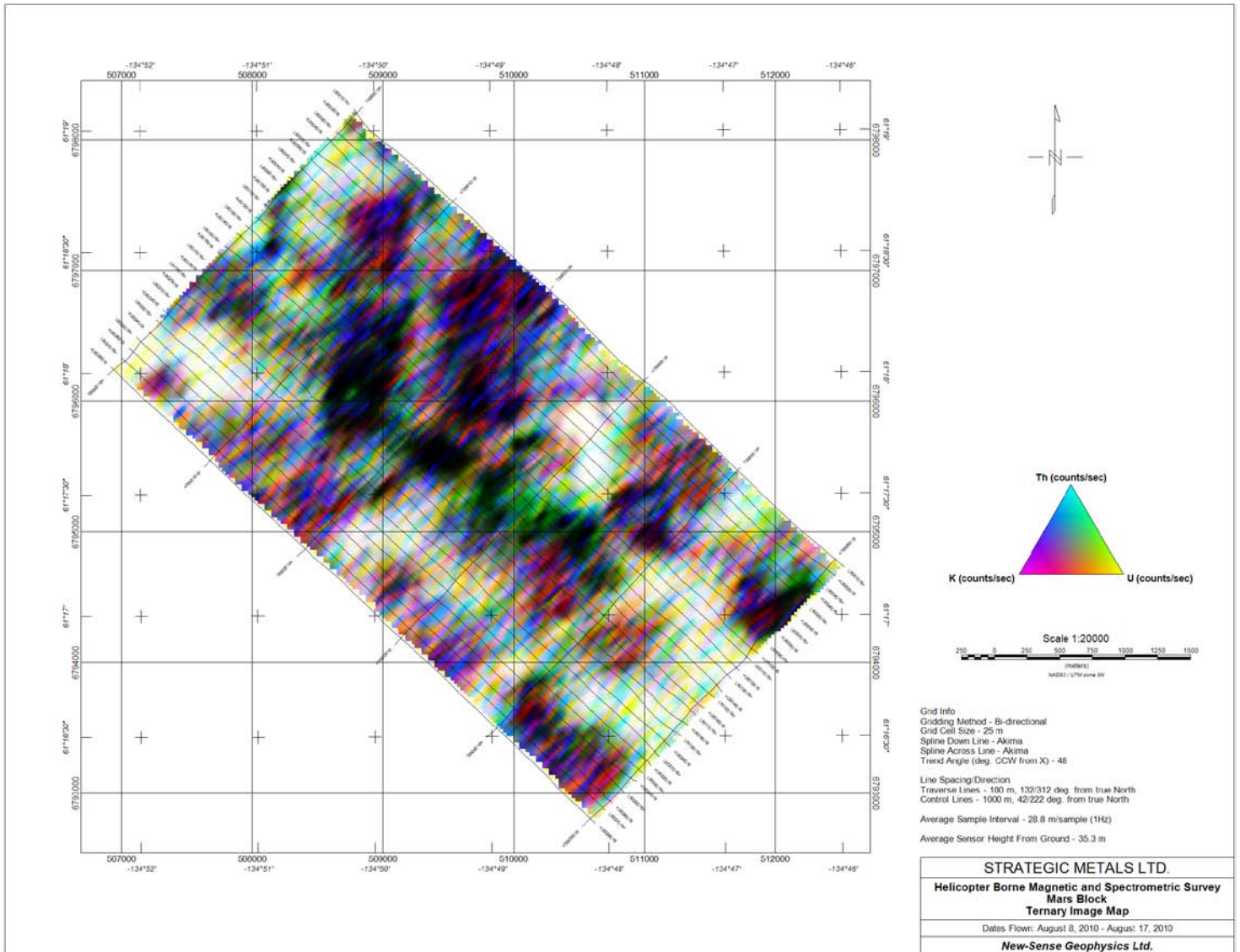
# Mars Block Image of Uranium Map



# Mars Block Image of Total Count Map



# Mars Block Image of Ternary Map



## APPENDIX F: MICROLEVELLING DESCRIPTION

As per PGW Microlevelling GX help file available through Geosoft Oasis montaj 7.2

**DECORR.GX**                   Version 3.0  
                              Paterson, Grant & Watson Limited  
                              March 2003

**PARAMETERS:** (miclev group parameters are used, so that values set will be passed to MICLEV.GX)

miclev.Xchan = x channel (default "x")  
.Ychan = y channel (default "y")  
.Ochan = original data channel (no default)  
.Nchan = decorrugation noise channel (default "dcor\_noise")  
.Space = flight line spacing  
.Dir = flight line direction in degrees azimuth (clockwise from North)  
.Cell = cell size to use for gridding (default = line spacing/5)  
.Wlen = decorrugation high-pass wavelength (default = 4 \* line spacing)  
.Ogrid = original output grid, new or existing  
.Nnoise= decorrugation noise grid  
.XY = Xmin,Ymin,Xmax,Ymax (optional)  
.LOGOPT= Log option (optional)  
.LOGMIN= Log minimum (optional)  
.DSF = Low-pass desampling factor (optional)  
.BKD = Blanking distance (optional)  
.TOL = Tolerance (optional)  
.PASTOL= % pass tolerance (optional)  
.ITRMAX= Max. iterations (optional)  
.ICGR = Starting coarse grid (optional)  
.SRD = Starting search radius (optional)  
.TENS = Internal tension (0-1) (optional)  
.EDGCLP= Cells to extend beyond data (optional)

### DESCRIPTION:

decorr.gx and miclev.gx implement a procedure called microlevelling which removes any low-amplitude component of flight line noise still remaining in airborne survey data after tie line levelling. Microlevelling calculates a correction channel and adds it to the profile database. This correction is subtracted from the original data to give a set of levelled profiles, from which a final levelled grid may then be generated. Microlevelling has the advantage over standard methods of decorrugation that it better distinguishes flight line noise from geological signal, and thus can remove the noise without causing a loss in resolution of the data.

To microlevel data, first run decorr.gx, then miclev.gx. decorr.gx offers two options for the grid of the channel to be microlevelled. If a grid prepared from this channel already exists, it may be specified, and when prompted to overwrite, the user should answer no. If the user wishes to prepare a new grid of the channel to be microlevelled, the minimum curvature gridding algorithm (rangrid.gx) is applied. The advanced button provides access to the standard minimum

curvature gridding parameters. Once the gridding is completed, `decorr.gx` applies a directional high-pass filter (see end note) perpendicular to the flight line direction, in order to produce a decorrugation noise grid. (The default grid cell size is 1/5 of the line spacing. The user may specify a different cell size if desired. A smaller cell size will give a more accurate result, but a larger cell size will make the `gx` run faster and use less disk space.) The noise grid is then extracted as a new channel in the database (default name is "dcor\_noise"). This channel contains the line level drift component of the data, but it also contains some residual high-frequency components of the geological signal. `miclev.gx` applies amplitude limiting and low-pass filtering to the noise channel in order to remove this residual geological signal and leave only the component of line level drift, which is then subtracted from the original data to produce a levelled output channel named "miclev".

`decorr.gx` calculates default amplitude limit and filter length values for use in `miclev.gx`, but the skilled user may be able to set better values for these parameters based on an inspection of the noise grid. (The micro-levelling process is broken up into two separate GXes in order to allow the user to do this.) Flight line noise should appear in the decorrugation noise grid as long stripes in the flight-line direction, whereas geological anomalies should appear as small spots and cross-cutting lineaments, generally with a higher amplitude than the flight line noise, but with a shorter wavelength in the flight-line direction. The user can estimate the maximum amplitude of the flight line noise, and set the noise amplitude limit value accordingly. Similarly the user can estimate the minimum wavelength of the level drift along the flight lines, and set the low-pass Naudy filter width to half this wavelength. The defaults are to set the amplitude limit equal to the standard deviation of the noise grid, and to set the filter width equal to five times the flight line spacing.

There is an option of using either of two kinds of amplitude limiting. In "clip" mode any value outside the limit is set equal to the limit value. In "zero" mode any value outside the limit is set equal to zero. The clip mode makes more sense intuitively, but it has been found in practise that the zero mode may reject geologic signal better, depending on the particular data set. As a rule the zero mode works better on datasets in which the noise grid contains a lot of high-amplitude geological signals (e.g. shallow basement areas). For datasets in which the noise grid contains mainly flight line noise (e.g. sedimentary basins), the clip mode works better.

Microlevelling applies a level correction to the traverse lines only. If it is desired to grid the tie lines together with the micro-levelled traverse lines, then it may be necessary to also apply a level correction to the tie lines so that their values agree with the micro-levelled traverse lines at the intersections. This may be done as follows:

- 1) Copy the tie line values to the microlevelled channel.
- 2) Use `intersct.gx` to find cross-difference values for the microlevelled data.
- 3) Use `xlevel.gx` to load these cross-difference values to the tie lines.
- 4) Apply `fulllev.gx` to the tie lines. The output will be a set of tie lines that matches the microlevelled traverse lines at all intersections.

- 5) Copy the microlevelled traverse line values into the same channel as the corrected tie line values.

---

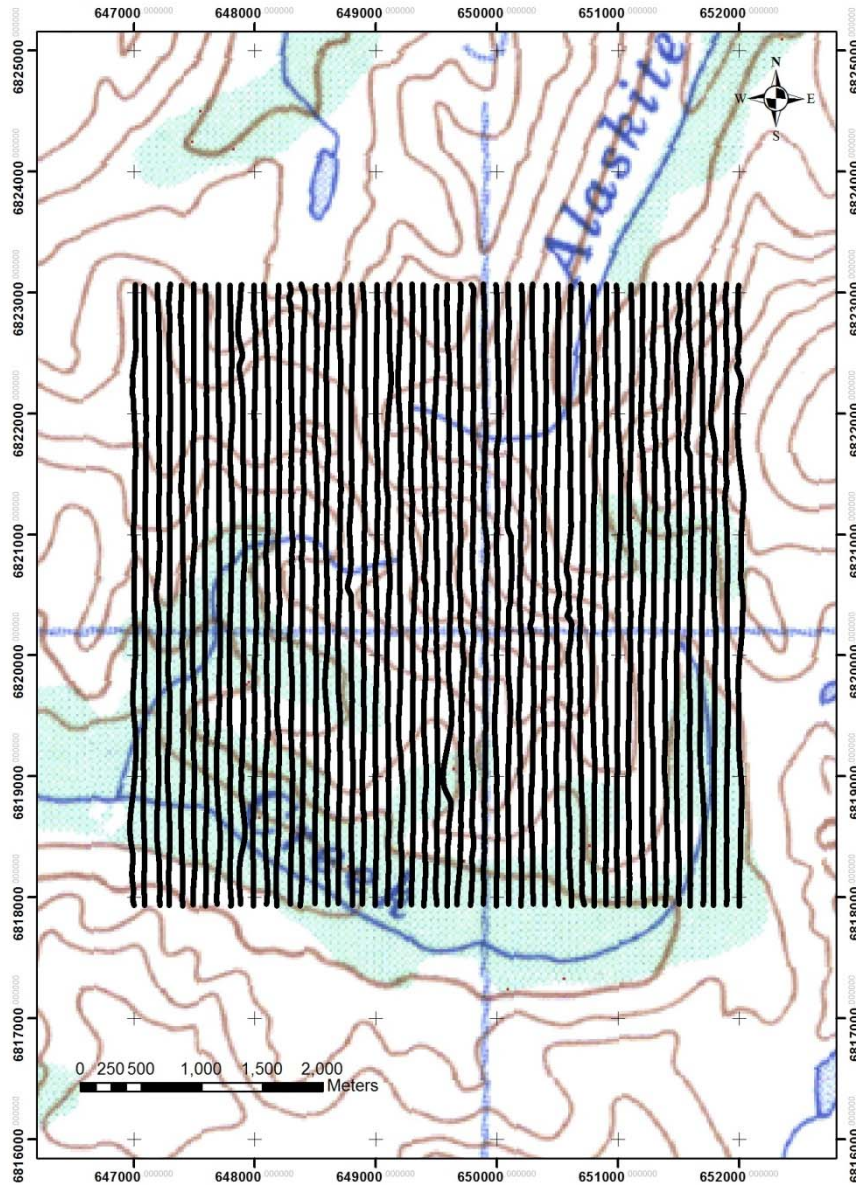
#### **Decorrugation Filter:**

The decorrugation noise filter is a sixth-order high-pass Butterworth filter with a default cutoff wavelength of four times the flight line spacing, combined with a directional filter. The directional filter coefficient as a function of angle is  $F=(\sin(a))^2$ , where  $a$  is the angle between the direction of propagation of a wave and the flight line direction, i.e.  $F=0$  for a wave travelling along the flight lines, and  $F=1$  for a wave travelling perpendicular to them. (Note this is the exact opposite of what is usually called a decorrugation filter, since the intention here is to pass the noise only, rather than reject it.)

The default cutoff wavelength ( $4 * \text{line spacing}$ ) gives good results if the data is already fairly well levelled to start with. In cases where many lines are badly mis-levelled, it may be necessary to set a longer cutoff wavelength, at the risk of removing more geological signal.

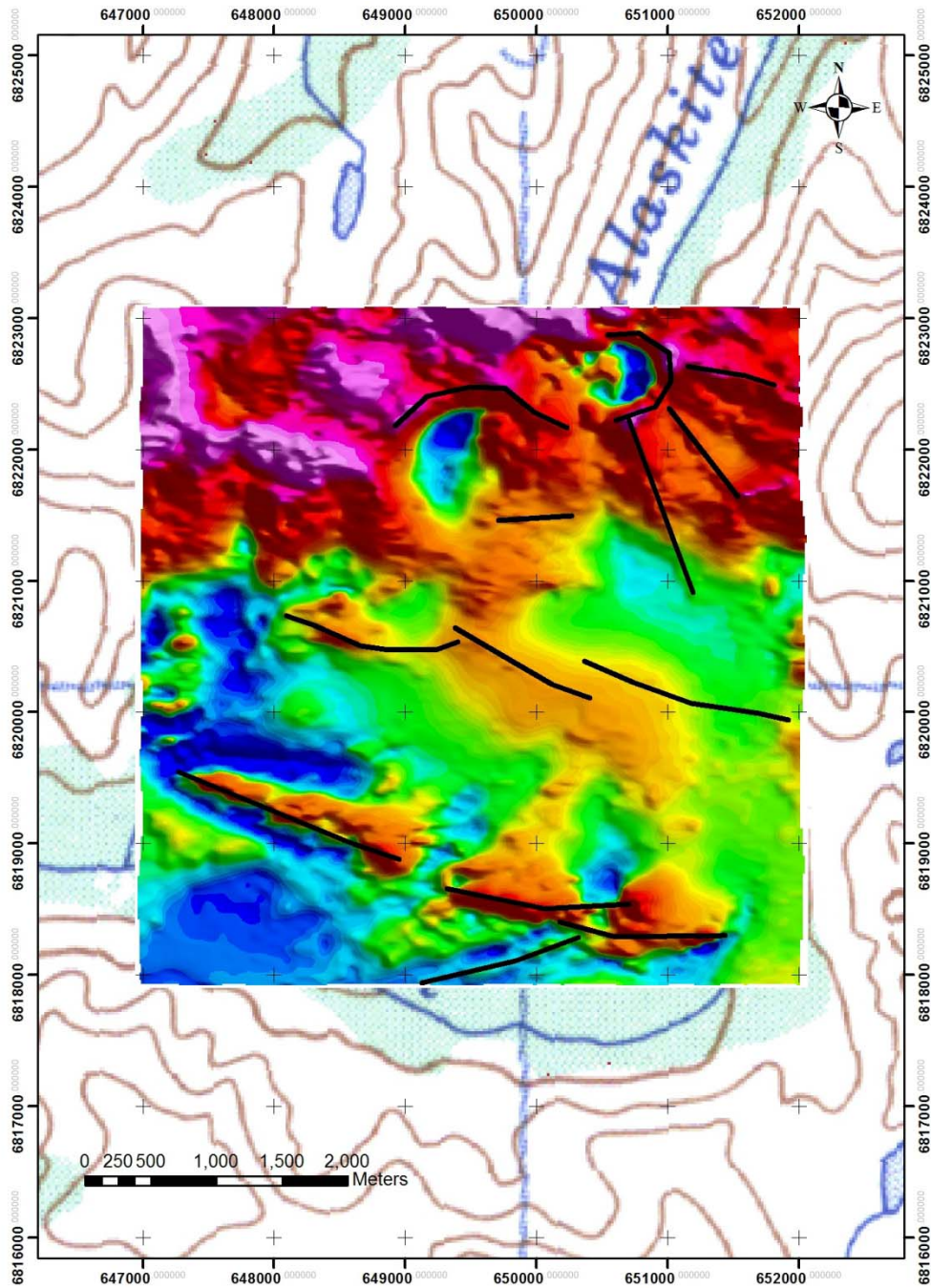
## Assessment of Airborne Magnetics and Radiometrics Surveys at the Meloy Prospect

A 293 line km helicopter magnetic and radiometric survey has been completed over the Meloy project by New-Sense Geophysics Ltd. (New-Sense) for Strategic Metals Ltd. (Strategic Metals). The survey area covers the previously drilled porphyry Cu-Mo-Au prospect (Raft) that is located 190 km north-west of Whitehorse in the Yukon Territory. Condor Consulting, Inc. (Condor) has been commissioned to assess the data sets and provide a 3D model of the magnetics. Refer to New-Sense's logistic report (HMR100806) for any additional survey details. Figure 1 shows the location of the survey area and flight path.



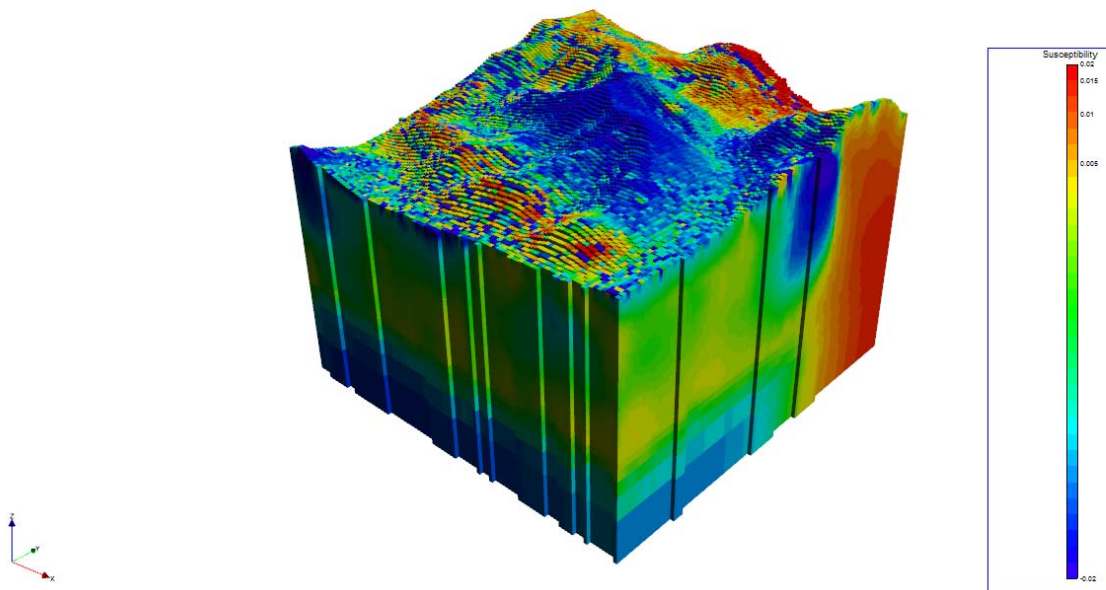
**Figure 1:** Meloy airborne magnetics and radiometrics survey flight path.

The range of the magnetic response across the survey area is approximately 1,100 nT. The northern half of the survey area is dominated by a strong magnetic response with a pair of discrete lows in areas of lower topography (Figure 2), while the southern portion of the survey area exhibits a more subdued magnetic response including a series of south-east trending structures. Anomalous stream sediment Cu and As samples (up to 57 and 16 ppm respectively) were collected in the south-west corner of the survey area. It is recommended that the zones corresponding to the interpreted structures be followed up with a field check and subsequent mapping and sampling.



**Figure 1:** Meloy total magnetic intensity image and interpreted structural lineaments.

The University of British Columbia (UBC) 3D magnetic inversion program MAD3D (version 4.0) was used to produce a model of the magnetics data. MAG3D is a program library for carrying out forward modeling and inversion of surface, airborne, and/or borehole magnetic data in the presence of a three dimensional Earth. Data are assumed to be the anomalous magnetic response to buried susceptible material, not including Earth's ambient field. The model is specified using a mesh of rectangular cells, each with a constant value of susceptibility, and topography is included. The magnetic response can be calculated anywhere within the model volume, including above the topography, simulating ground or airborne surveys, and inside the ground simulating borehole surveys. Figure 3 displays the 3D inversion results of the magnetics data at Meloy.



**Figure 3:** Meloy 3D magnetic model.

The elevated radiometrics response appears for the most part to correlate with higher topographic relief and outcrop, while the lows can be seen associated with the drainages and the valley floor.

The following products can be found and downloaded from the Condor ftp site

(<ftp://ftp.condorconsult.com> , user id: [archer@condorconsult.com](mailto:archer@condorconsult.com) , password: skywalker19):

- Summary report of the assessment
- Registered images of the airborne magnetics and radiometrics (NAD83, Zone 7N)
- 3D magnetic model and associated sections
- ArcGIS formatted .shp file of the interpreted lineaments derived from the magnetics

It is recommended that the results of the airborne magnetics and radiometrics data be compared with any available geologic and geochemical information, in particular with the historic drilling, in order to help advance the exploration program at Meloy.

Respectfully submitted;

Mark Goldie

Condor Consulting, Inc.

December 2, 2010

**References:**

Li, Y. and Oldenburg, D. W., 1996, 3-D Inversion of Magnetic Data: *Geophysics*, 61, no. 02, 394-408.

Yakovenko, A., Logistics Report for the High Resolution Helicopter Magnetic and Gamma-ray Spectrometric Airborne Geophysical Survey flown over Mint, Nikki, Corky, Meloy, King, and Mars Project Properties, Yukon, from White River Lodge (Mint and Nikki), Burwash Landing (Corky and Meloy), and Braeburn Lodge (King and Mars), Yukon carried out on behalf of Strategic Metals Ltd. by New-Sense geophysics Limited, Project # HMR100806, October 2010.

QW28739

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
1016 – 510 West Hastings Street  
Vancouver, B.C. V6B 1L8

Telephone: 604-688-2568

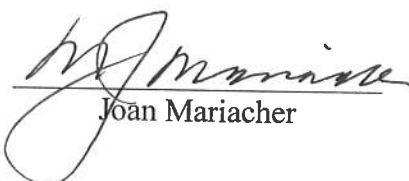
Fax: 604-688-2578

AFFIDAVIT



I, Joan Mariacher, of Vancouver, B.C. make oath and say:

That to the best of my knowledge the attached Statement of  
Expenditures for exploration work on the Meloy 1-42 mineral claims  
on Claim Sheet 115 G/8 & 9 is accurate.

  
Joan Mariacher

Sworn before me at Vancouver, B.C.

this 30th day of March 2011.

  
Barrister & Solicitor

**IAN J. TALBOT**  
Barrister & Solicitor  
281 East 5th Street  
North Vancouver  
British Columbia  
Canada V7L 1A1

Statement of Expenditures  
Meloy 1-42 Mineral Claims  
March 30, 2011

Contract ZTEM survey

New-Sense Geophysics Limited

\$23,571.76

# New-Sense

Geophysics Limited

## Invoice - 1

Job ID: HMR100806

August 6<sup>th</sup>, 2010

To: STRATEGIC METALS LTD.  
1016-510 West Hastings st.  
Vancouver, BC, V6B 1L8  
Telephone: (604) 687 2522  
Email: lorna\_xy@telus.net

Attn: W. Douglas Eaton, President and CEO

From: NEW-SENSE GEOPHYSICS LTD.  
195 Clayton Drive, Unit 11,  
Markham, ON, Canada, L3R 7P3  
Telephone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207  
GST #: 86982 9283 RT0001

Description: Helicopter aeromagnetic and spectrometric survey over Nikki, Mint, Corky, Meloy, King and Mars properties, Yukon, Canada:

Estimated total contract value due to New-Sense: 1,180 km @ CAD \$104.59 /km: CAD \$ 123,416.20 Mobilization/Demobilization: CAD \$ 7,600.00	CAD \$ 131,016.20
Invoice On Signing (30% contract value):	CAD \$ 39,304.86
GST 5%	CAD \$ 1,965.24
<b>Total due on this invoice:</b>	<b>CAD \$ 41,270.10</b>

### Wire Transfer instructions:

Beneficiary: New-Sense Geophysics Limited  
Bank: The Bank of Nova Scotia  
Account #: 02011  
Transit #: 11452  
Institution Code: 002  
Swift: NOSCCATT  
ABA Routing: 026002532  
Address: 880 Eglinton Avenue E. at Laird Drive  
Toronto, Ontario, M4G 2L2, Canada

AM AU

NA //

✓ Corky - 6550.81  
✓ King - 6550.81  
✓ Mars - 6550.81  
6878.75 ✓ Meloy - 6550.81  
✓ Mint - 6550.81  
✓ Nikki - 6550.81

Andrei Yakovenko  
Vice President  
New-Sense Geophysics Limited

195 Clayton Drive, Unit 11, Markham,  
Ontario, Canada, L3R 7P3  
Phone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207

San Juan de la Cruz 13631  
Las Condes, Santiago, Chile  
Tel: (56) 2 326-5116 / Fax: (56) 2 217-5865  
E-mail: surveys@new-sense.com

# New-Sense

Geophysics Limited

## Invoice - 2

Job ID: HMR100806

August 9<sup>th</sup>, 2010

To: STRATEGIC METALS LTD.  
1016-510 West Hastings st.  
Vancouver, BC, V6B 1L8  
Telephone: (604) 687 2522  
Email: lorna\_xy@telus.net

Attn: W. Douglas Eaton, President and CEO

From: NEW-SENSE GEOPHYSICS LTD.  
195 Clayton Drive, Unit 11,  
Markham, ON, Canada, L3R 7P3  
Telephone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207  
GST #: 86982 9283 RT0001

*NA -*  
Corky - 4585.57  
King - 4585.56  
Mars - 4585.57  
Melen - 4585.56  
Mint - 4585.57  
Nikki - 4585.57

Description: Helicopter aeromagnetic and spectrometric survey over Nikki, Mint, Corky, Melen, King and Mars properties, Yukon, Canada:

Estimated total contract value due to New-Sense: CAD \$ 131,016.20  
1,180 km @ CAD \$104.59/km: CAD \$ 123,416.20  
Mobilization/Demobilization: CAD \$ 7,600.00

Invoice On Mobilization (20% contract value): CAD \$ 26,203.24

GST 5% CAD \$ 1,310.16

Total due on this invoice: CAD \$ 27,513.40

### Wire Transfer instructions:

Beneficiary: New-Sense Geophysics Limited  
Bank: The Bank of Nova Scotia  
Account #: 02011  
Transit #: 11452  
Institution Code: 002  
Swift: NOSCCATT  
ABA Routing: 026002532  
Address: 880 Eglinton Avenue E. at Laird Drive  
Toronto, Ontario, M4G 2L2, Canada

*NA 11*  
Corky - 4367.21  
Mars - 4367.20  
Melen - 4367.20  
Mint - 4367.21  
King - 4367.21  
Nikki - 4367.21

Andrei Yakovenko  
Vice President  
New-Sense Geophysics Limited

195 Clayton Drive, Unit 11, Markham,  
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Fax: (905) 480-1207

San Juan de la Cruz 13631  
Las Condes, Santiago, Chile  
Tel: (56) 2 326-5116 / Fax: (56) 2 217-5865  
E-mail: surveys@new-sense.com

# New-Sense Geophysics Limited

## Invoice – 3

Job ID: HMR100806

August 17<sup>th</sup>, 2010

To: STRATEGIC METALS LTD.  
1016-510 West Hastings st.  
Vancouver, BC, V6B 1L8  
Telephone: (604) 687 2522  
Email: lorna\_xy@telus.net

Attn: W. Douglas Eaton, President and CEO

From: NEW-SENSE GEOPHYSICS LTD.  
195 Clayton Drive, Unit 11,  
Markham, ON, Canada, L3R 7P3  
Telephone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207  
GST #: 86982 9283 RT0001

*Corky - 9171.13*  
*Mars - 9171.13*  
*Mint - 9171.14*  
*A<sup>4</sup> Meloy - 9171.13*  
*King - 9171.14*  
*Nikki - 9171.13*

Description: Helicopter aeromagnetic and spectrometric survey over Nikki, Mint, Corky, Meloy, King and Mars properties, Yukon, Canada:

Estimated total contract value due to New-Sense: CAD \$ 131,016.20  
1,180 km @ CAD \$104.59 /km: CAD \$ 123,416.20  
Mobilization/Demobilization: CAD \$ 7,600.00

Invoice On Completion of Flying (40% contract value): CAD \$ 52,406.48

GST 5% CAD \$ 2,620.32

Total due on this invoice: CAD \$ 55,026.80

*NA 11*

### Wire Transfer instructions:

Beneficiary: New-Sense Geophysics Limited  
Bank: The Bank of Nova Scotia  
Account #: 02011  
Transit #: 11452  
Institution Code: 002  
Swift: NOSCCATT  
ABA Routing: 026002532  
Address: 880 Eglinton Avenue E. at Laird Drive  
Toronto, Ontario, M4G 2L2, Canada

*NA Corky - 8734.41*  
*NA Mars - 8734.42*  
*NA Mint - 8734.41*  
*NA Meloy - 8734.42*  
*NA King - 8734.41*  
*NA Nikki - 8734.41*

Andrei Yakovenko  
Vice President  
New-Sense Geophysics Limited

195 Clayton Drive, Unit 11, Markham,  
Ontario, Canada, L3R 7P3  
Phone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207

San Juan de la Cruz 13631  
Las Condes, Santiago, Chile  
Tel: (56) 2 326-5116 / Fax: (56) 2 217-5865  
E-mail: surveys@new-sense.com

# New-Sense

Geophysics Limited

## Invoice – 4

Job ID: HMR100806

October 15<sup>th</sup>, 2010

To: STRATEGIC METALS LTD.  
1016-510 West Hastings st.  
Vancouver, BC, V6B 1L8  
Telephone: (604) 687 2522  
Email: lorna\_xy@telus.net

Attn: W. Douglas Eaton, President and CEO

From: NEW-SENSE GEOPHYSICS LTD.  
195 Clayton Drive, Unit 11,  
Markham, ON, Canada, L3R 7P3  
Telephone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207  
GST #: 86982 9283 RT0001

Description: Helicopter aeromagnetic and spectrometric survey over Nikki, Mint, Corky, Meloy, King and Mars properties, Yukon, Canada:

Actual total contract value due to New-Sense: CAD \$ 140,532.14  
1,207 km @ CAD \$104.59 /km: CAD \$ 126,240.13  
Mobilization/Demobilization: CAD \$ 7,600.00  
GST (5%): 6,692.01

Minus Invoice 1 (GST of \$ 1,965.24 included): CAD \$ 41,270.10  
Minus Invoice 2 (GST of 1,310.16 included): CAD \$ 27,513.40  
Minus Invoice 3 (GST of 2,620.32 included): CAD \$ 55,026.80  
Total: CAD \$ 123,810.30

Total due on this invoice (balance; GST of \$ 796.29 included): CAD \$ 16,721.84 *h*

Wire Transfer instructions:

Beneficiary: New-Sense Geophysics Limited  
Bank: The Bank of Nova Scotia  
Account #: 02011  
Transit #: 11452  
Institution Code: 002  
Swift: NOSCCATT  
ABA Routing: 026002532  
Address: 880 Eglinton Avenue E. at Laird Drive  
Toronto, Ontario, M4G 2L2, Canada

*796.29*  
*15925.23*  
*16721.84*  
*2796.87* *AA*  
*2796.88* *Corky*  
*2796.87* *King*  
*2796.87* *Mars*  
*2796.88* *Meloy*  
*2796.87* *Mint*  
*2796.87* *Nikki*  
*16721.84*

Andrei Yakovenko  
Vice President  
New-Sense Geophysics Ltd.

195 Clayton Drive, Unit 11, Markham,  
Ontario, Canada, L3R 7P3  
Phone: (905) 480-1107 / (905) 480-9989  
Fax: (905) 480-1207

San Juan de la Cruz 13631  
Las Condes, Santiago, Chile  
Tel: (56) 2 326-5116 / Fax: (56) 2 217-5865  
E-mail: surveys@new-sense.com