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ASSESSMENT REPORT

describing

AIRBORNE GEOPHYSICAL SURVEYS

at the

MARS PROPERTY

DDH 1-16 YB67058-YB67073
STARS 1-34 YC65873-YC65906

NTS 105E/07
Latitude 61º17'N; Longitude 134º49'W

in the

Whitehorse Mining District
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

STRATEGIC METALS LTD.

by

O. Fu, B.Sc. Geology
and
H. Smith, B.Sc. Geology, P.Geo.

February 2011

CONTENTS

	PAGE
INTRODUCTION	1
PROPERTY LOCATION, CLAIM DATA AND ACCESS	1
GEOMORPHOLOGY AND VEGETATION	1
PREVIOUS WORK	2
GEOLOGY	5
PROPERTY GEOLOGY	5
HISTORICAL SOIL GEOCHEMISTRY	6
HISTORICAL GEOPHYSICAL SURVEYS	6
2010 AIRBORNE GEOPHYSICAL SURVEYS	7
DISCUSSION AND CONCLUSIONS	8
REFERENCES	9

APPENDICES

I STATEMENT OF QUALIFICATIONS

II AIRBORNE GEOPHYSICAL SURVEY AND INTERPRETATION DATA

FIGURES

No.	Description	Follows Page
1	Property Location	1
2	Claim Locations	1
3	Historical Workings	2
4	Tectonic Setting	5
5	Regional Geology	5
6	Property Geology	5
7	Historical Molybdenum Soil Geochemistry	6
8	Historical Copper Soil Geochemistry	6
9	Historical Gold Geochemistry	6
10	Magnetics, Copper Geochemistry and Drill Hole Locations	7

TABLES

No.	Description	Page
I	Exploration History of Mars Property	2
II	1972 Grab Sample Results	4
III	1996 Rock Geochemistry Results	4

INTRODUCTION

The Mars property covers a copper-gold porphyry prospect associated with an alkalic-type intrusion in south-central Yukon. The property is owned by Strategic Metals Ltd.

This report describes airborne geophysical surveys carried out on behalf of Strategic by New-Sense Geophysics Limited of Markham, Ontario. The work was performed between August 8 and 17, 2010 and comprised high resolution helicopter-borne magnetic and gamma-ray spectrometric geophysical surveys. The authors supervised the program. Appendix I contains their Statements of Qualifications.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The Mars property consists of 50 contiguous mineral claims, which are located at latitude 61º17'N and longitude 134º49'W on NTS map sheet 105E/07. The general location of the property is shown on Figure 1 while the locations of individual claims are illustrated on Figure 2. The claims were staked under the Yukon Quartz Mining Act and are registered with the Whitehorse Mining Recorder in the name of Archer, Cathro & Associates (1981) Limited which holds them in trust for Strategic. The claims cover an area of approximately 1040 ha (10.4 sq. km). Claim registration data are listed below.

Claim Name	Grant Number	Expiry Date*
DDH 1-16	YB67058-YB67073	April 1, 2015
STARS 1-34	YC65873-YC65906	April 1, 2015

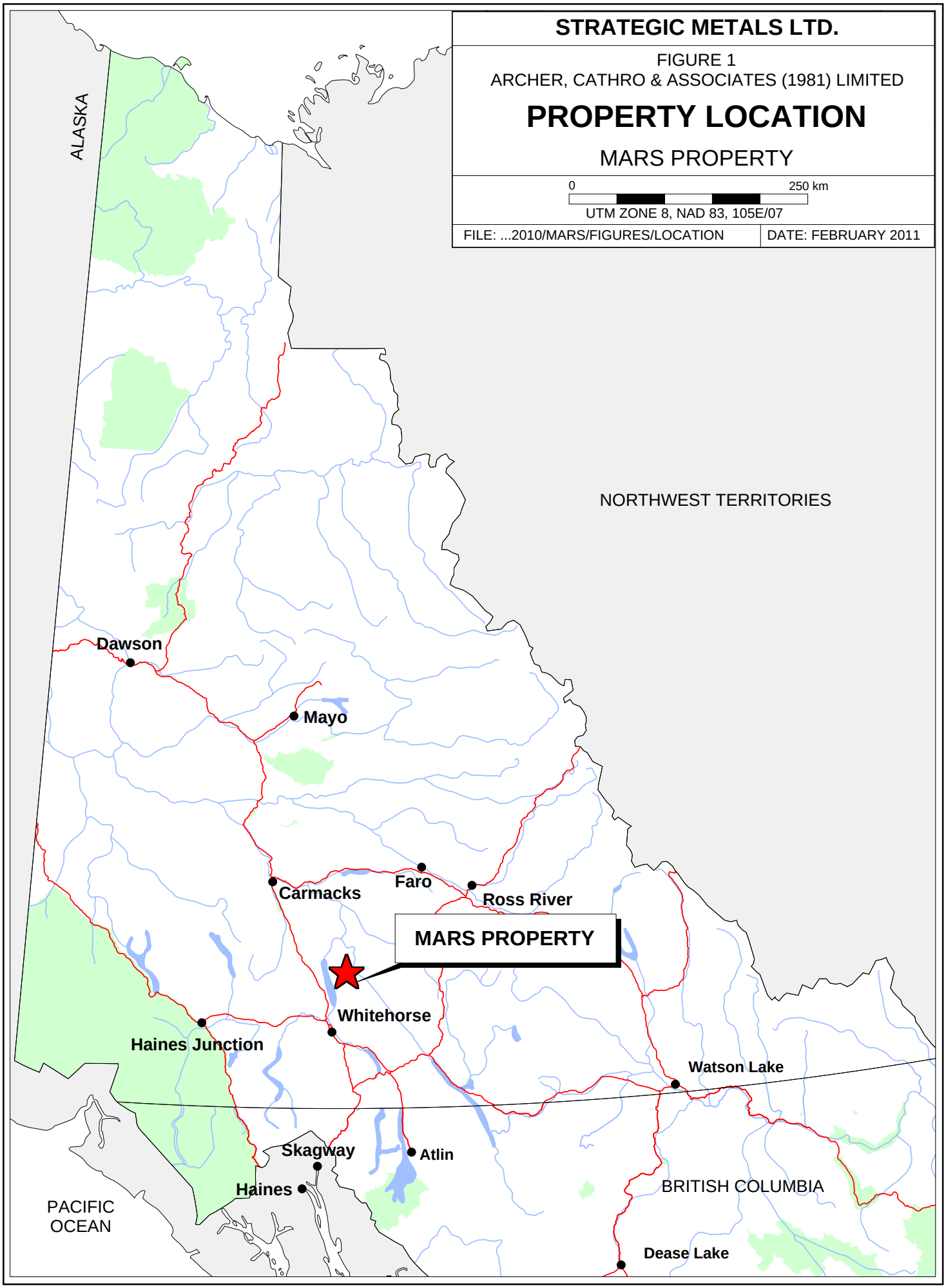
* Expiry dates include 2010 work that has been filed for assessment credit but not yet accepted.

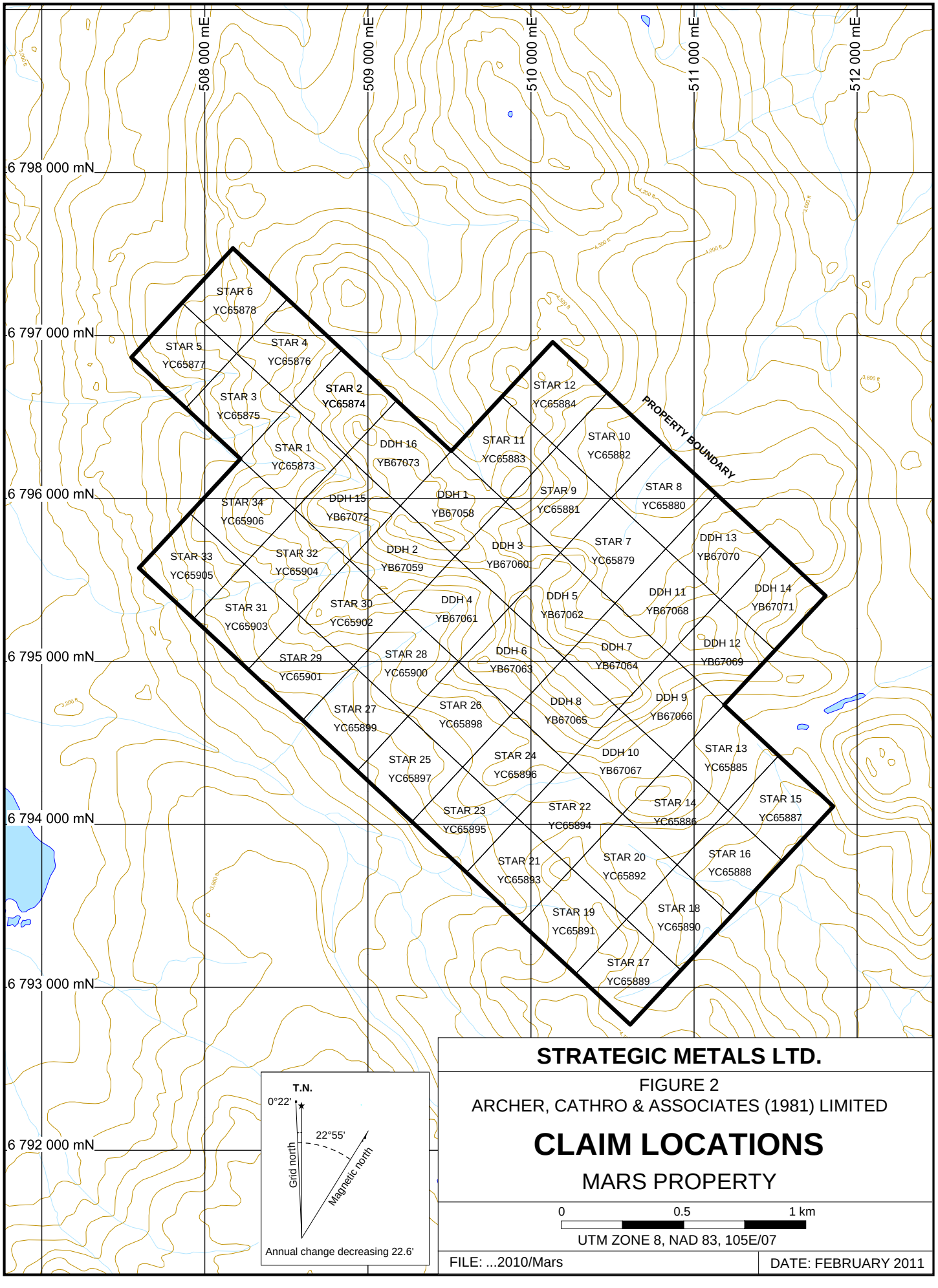
The Mars property lies approximately 65 km north of Whitehorse and is situated between Lake Laberge and the Teslin River. The Livingston Trail winter road passes within 5 km of the main area of exploration interest. Access to the property is by helicopter from Whitehorse.

GEOMORPHOLOGY AND VEGETATION

The Mars property is located within a physiographic region known as the Lewes Plateau, an area of moderate to rugged topography (James, 2004). A northwest trending ridge known as Windy Mountain is the most prominent feature in the area, and has been the main site of exploration activities. Limited outcrop is found on the top and sides of the ridge. Local elevations range from 1485 m atop Windy Mountain to 1220 m in a valley to the west. Creeks draining the property flow into Lake Laberge or the Teslin River, both of which are part of the Yukon River Watershed.

Treeline is at approximately 1370 m. Vegetation comprises stunted but mature black spruce, willow, birch and alder at lower elevations and alpine grasses and mosses at higher elevations.


STRATEGIC METALS LTD.
FIGURE 1
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
PROPERTY LOCATION
MARS PROPERTY
0
250 km
UTM ZONE 8, NAD 83, 105E/07
FILE: ...2010/MARS/FIGURES/LOCATION
DATE: FEBRUARY 2011
ALASKA
NORTHWEST TERRITORIES
Dawson
Mayo
Carmacks
Faro
Ross River
MARS PROPERTY
Whitehorse
Haines Junction
Watson Lake
Skagway
Atlin
Haines
BRITISH COLUMBIA
PACIFIC OCEAN
Dease Lake



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FIGURE 2

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATIONS

MARS PROPERTY

0 0.5 1 km

UTM ZONE 8, NAD 83, 105E/07

FILE: ...2010/Mars

DATE: FEBRUARY 2011

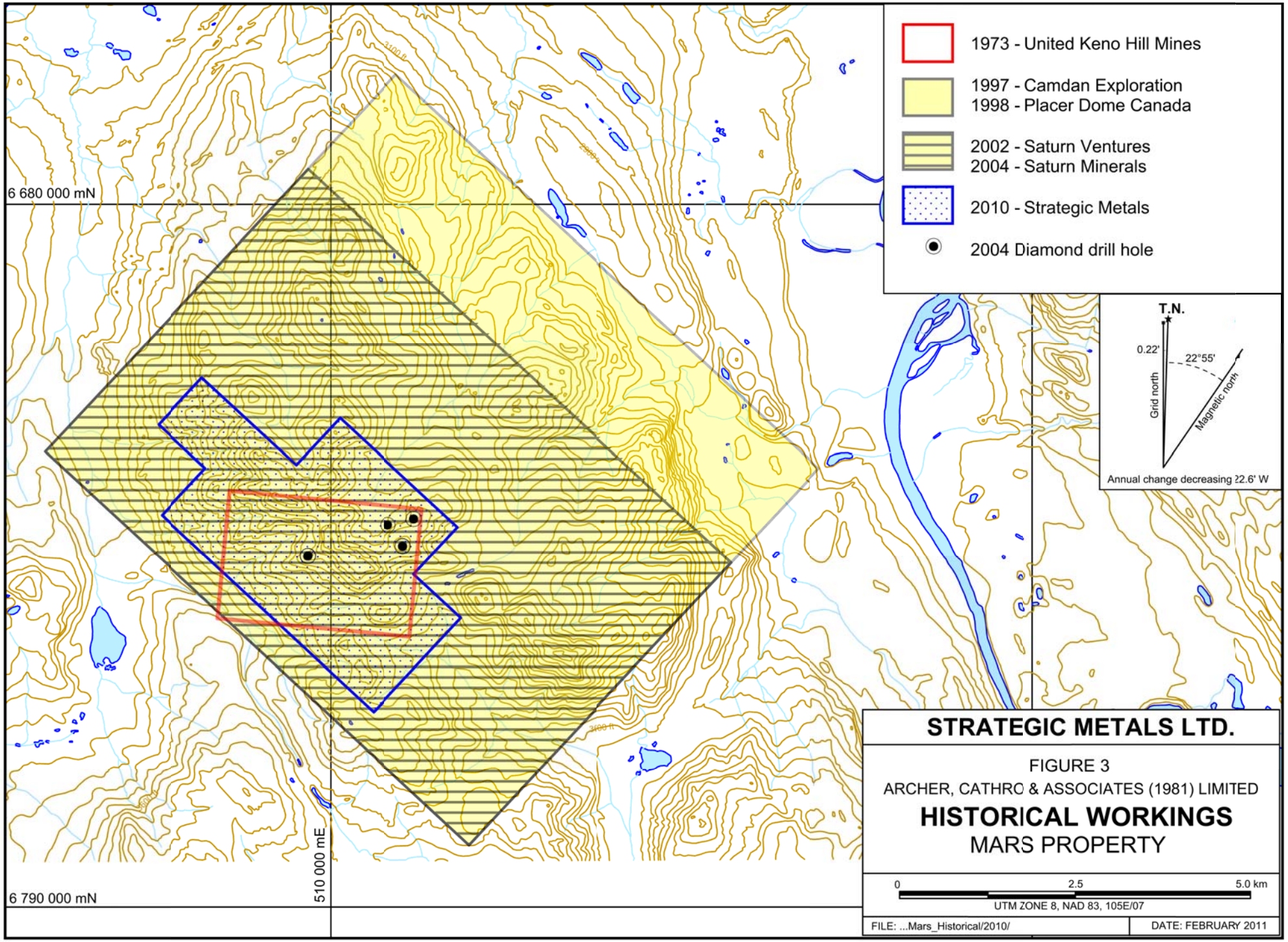
The climate on the property is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short mild summers. Precipitation averages about 30 cm annually, with moderate snowfalls during the winter months.

PREVIOUS WORK

Exploration programs have been carried out intermittently since 1971 by numerous operators in the Windy Mountain area (Figure 3). Table I summarizes these exploration programs.

Table I – Exploration History of Mars Property

Year of Work (Assessment Report)	Owner/Operator	Claims	Work Performed	Results
1971 (060152)	United Keno Hill Mines Ltd.	not staked	Stream sediment and grab sampling (36 samples).	Outlined isolated Cu & Mo anomalies. Grab samples returned up to 0.53% Cu, & 0.04% Mo. Note: no samples were analyzed for gold.
1972 (060152)	United Keno Hill Mines Ltd.	TUV	Prospecting, mapping, grab sampling (8 samples), contour soil sampling (62 samples), and reconnaissance soil sampling (840 samples).	Mapped 90.6 sq. km. Grab samples returned up to 0.28% Cu, & 4.38 g/t Ag. Erratic, isolated Cu & Mo soil anomalies trend northwesterly. Note: no samples were analyzed for gold.
1973 (060152)	United Keno Hill Mines Ltd.	TUV	Three hand trenches.	Trenches mentioned in report but no record of results.
1996 (093656)	Camdan Exploration Inc.	DDH and MARS	Prospecting, soil, grab and chip sampling, and ground magnetometer surveys.	23 grab samples returned 100 to 4790 ppb Au, 33 samples returned 1.0 to 195.7 ppm Ag, & 39 samples returned 0.05 to 1.95% Cu. Mag survey outlined a 350 m x 150 m anomalous zone, coincident with a high gold geochem anomaly.
1997 (093874)	Placer Dome Canada Ltd.	DDH and MARS	Line cutting, grid based soil sampling, mapping, IP survey, airborne magnetometer survey, airborne radiometric survey, and limited thin section petrography.	IP survey showed a high chargeability zone coincident with copper-gold surface mineralization. Recommended diamond drilling at 45° beneath the IP anomalies (never done).


1973 - United Keno Hill Mines
1997 - Camdan Exploration
1998 - Placer Dome Canada
2002 - Saturn Ventures
2004 - Saturn Minerals
2010 - Strategic Metals
2004 Diamond drill hole
T.N.
0.22'
22°55'
Grid north
Magnetic north
Annual change decreasing 22.6' W
6 680 000 mN
6 790 000 mN
510 000 mE
STRATEGIC METALS LTD.
FIGURE 3
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
HISTORICAL WORKINGS
MARS PROPERTY
0
2.5
5.0 km
UTM ZONE 8, NAD 83, 105E/07
FILE: ...Mars_Historical/2010/
DATE: FEBRUARY 2011

2001 (094290)	Saturn Ventures Inc.	DDH and MARS	Line cutting, prospecting, hand trenching, differential GPS surveying, soil and rock geochemistry. Compilation of all previous work.	Concluded populations of Au & Cu soil anomalies are distinctly separate (reflecting different dispersions of the metals or Au & Cu-rich bedrock are spatially independent). Anomalous Au & Cu soils are restricted to the SW part of the claims & follow a NW trend. Encountered one new mineralized zone (Kelly Zone)
2003 (work reported in 094480)	Saturn Minerals Inc.	DDH and MARS	Excavator trenching, and a review of previous work.	The first map of alteration distribution and assemblages for the property.
2004 (094480)	Saturn Minerals Inc.	DDH and MARS	Diamond drilling (827 m in 4 holes), and alteration mapping.	Geochem results from drill core: all but two of 192 samples returned under 667 ppm Cu (2902 and 813 ppm), 9 samples returned > 100 ppb Au (one 4.57 m interval 6435 ppb Au), and 17 samples exceeded 103 ppm Mo with a max of 1080 ppm Mo. Mapping outlined a broad NW K-feldspar alteration zone (1 x 3 km). Recommended drilling on untested prospects with exposed Au-Cu-Mo mineralization, and a detailed ground magnetometer survey.

Results from these exploration programs are further described in the following paragraphs.

The Mars property was first investigated in 1971 by United Keno Hill Mines Ltd. and Archer, Cathro & Associates (1981) Limited for intrusion-related copper mineralization.

From 1971 to 1973, United Keno entered into a joint venture with Falconbridge and Canadian Superior to follow up on elevated copper and molybdenum values in regional stream sediment samples. The work program comprised prospecting, geological mapping, contour and reconnaissance soil sampling, rock geochemistry and hand trenching. Though outcrop is sparse, a total of 90.6 square kilometers was mapped which revealed copper mineralization is widespread. Table II highlights the results from grab samples on the property. Soil sample results identified small, isolated, erratic anomalies for both copper and molybdenum (Pangman, 1973). Results from hand trenching were not reported, and no samples were analyzed for gold. The TUVclaims lapsed in 1973.

Table II – 1972 Grab sample results

Sample No.	Grade (% Cu)	Grade (g/t Ag)
14611	0.26	4.38
14612	0.04	3.75
14613	0.13	3.75
14614	0.28	3.75
14615	0.18	3.75
14616	0.01	1.25
14617	0.41	3.75

In 1996, Al Doherty and Brian Sauer staked the DDH and MARS claim blocks, covering the previous TUV claims, after recognizing the property's similarities to alkalic copper-gold deposits elsewhere in the Canadian Cordillera. Anomalous gold values returned during reconnaissance prospecting and sampling in early 1996 led to an option of the property to Camdan Exploration Inc. A brief exploration program was carried out that included grab and soil sampling, and ground magnetometer surveys. Table III summarizes the anomalous rock geochemistry results. Soil sampling over the most intense magnetic high outlined a coincident gold anomaly approximately 350 m by 150 m.

Table III – 1996 Rock geochemistry results

Grade Au (ppb)	No. of samples	Grade Cu (ppm)	No. of samples
> 100 ppb	23	> 500 ppm	39
> 500 ppb	11	> 100 ppm	13
> 1000 ppb	4	> 5000 ppm	5

In 1997, Placer Dome Canada Ltd optioned the property from Camdan and completed the most extensive exploration on the property to date (Wark, 1998). The program included airborne and ground geophysical surveys (magnetics, radiometrics, and IP), rock and soil geochemistry, hand trenching, geological mapping and limited thin section petrography (Wark, 1998; Wells, 1998). The IP survey showed a high chargeability zone coincident with copper-gold surface mineralization and diamond drilling was recommended, but Placer Dome dropped its option in 1998 and the claim block was returned to A. Doherty and B. Sauer.

In 2001, Saturn Ventures Inc. (successor company to Saturn Minerals Inc.) optioned the Mars property from A. Doherty and B. Sauer, and completed additional grid construction, soil and rock geochemistry, hand trenching and prospecting. Geological, geochemical, and geophysical data was compiled from previous exploration programs. Compilation work concluded populations of gold and copper soil anomalies are distinctly separate, reflecting different dispersions of the metals or gold and copper-rich bedrock are spatially independent. At least one new mineralized zone (Kelly Zone) was encountered (James, 2004).

In 2004, Saturn Minerals performed diamond drilling, excavator trenching and alteration mapping. A total of 827 meters was drilled in 7 holes at 4 drill sites on the Mars property. Overall drilling results were disappointing. The main highlights from 192 samples of core were:

2 samples immediately below surface that returned 2902 and 813 ppm copper; one 4.57 m interval that assayed 6435 ppb gold; and, 16 samples that exceeded 103 ppm molybdenum with a maximum of 1080 ppm. Alteration mapping outlined a broad northwesterly trending, potassium-feldspar alteration zone approximately 1 by 3 km. Follow up recommendations included additional drilling on untested prospects with exposed gold-copper-molybdenum mineralization, and detailed ground magnetic surveys. These recommendations were not acted on and the claims were returned to A. Doherty and B. Sauer.

In 2008 ATAC Resources Ltd. staked the Stars claims, and in 2009 it purchased a 50% interest in the DDH claims from B. Sauer.

In 2010 Strategic purchased ATAC's interests in the DDH and STARS claims and bought the other 50% interest in the DDH claims from A. Doherty.

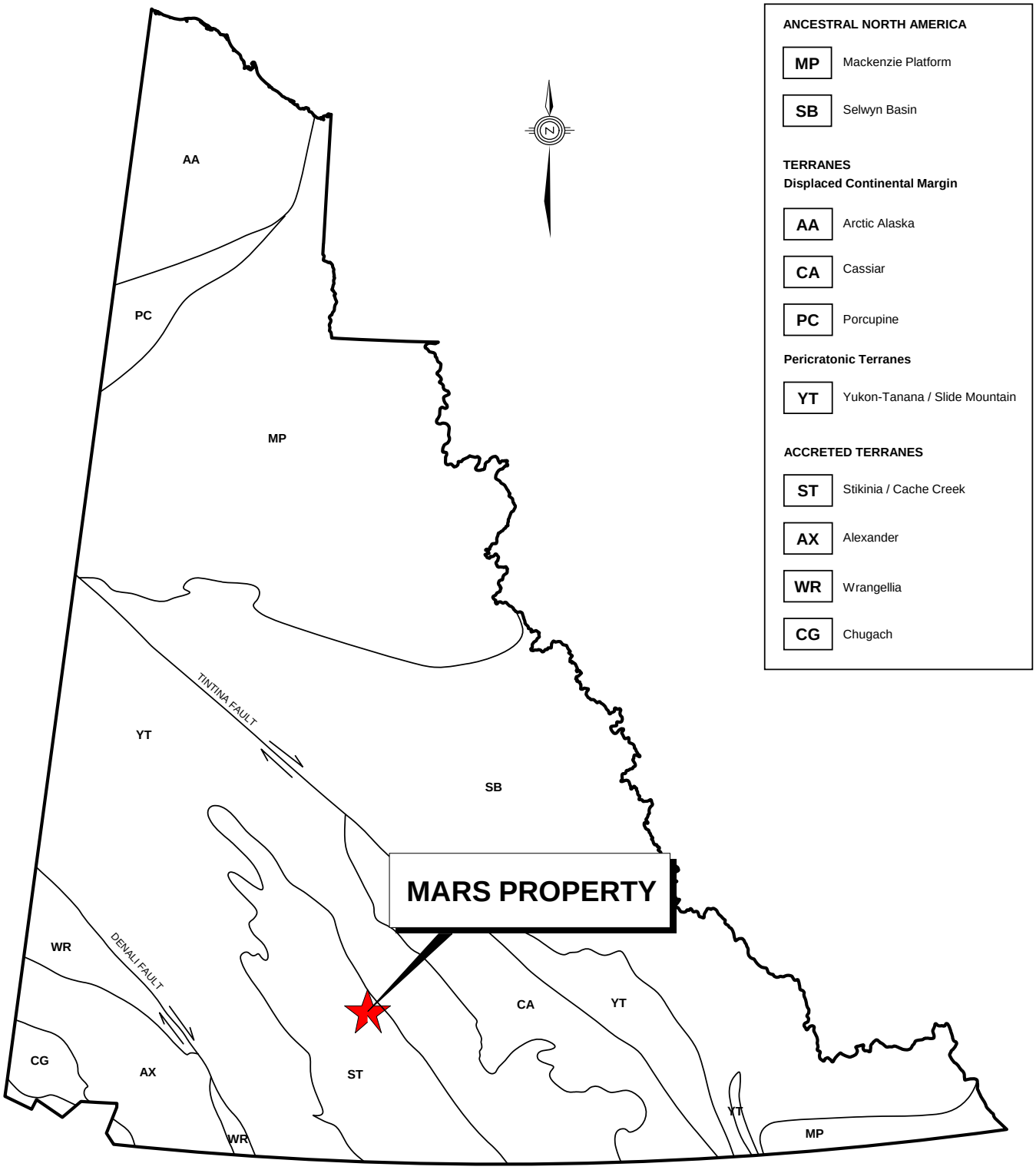
GEOLOGY

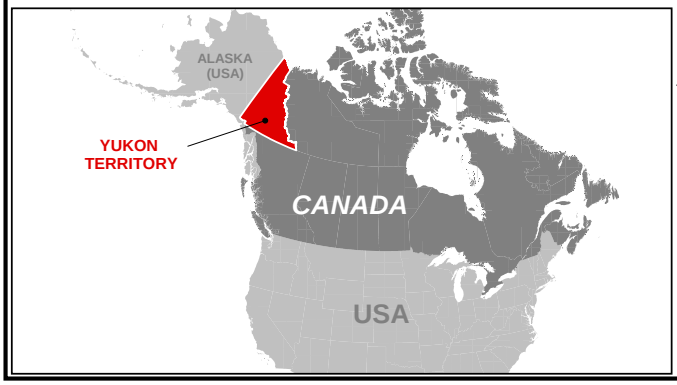
The Mars property is located in northern part of the Stikinia geological terrane (Figure 4). To the east, Stikinia is separated from the Yukon-Tanana Terrane by the Teslin Fault, and to the west it abuts to the Coast Plutonic Complex. The Stikinia Terrane is the largest of the accreted Cordilleran terranes. It consists of a basement believed to represent an Upper Paleozoic volcanic arc sequence, which is overlain by the Lewes River volcanic arc built during Middle and Late Triassic (Wark, 1998). During Middle Jurassic time, detritus from the uplifted arc accumulated up to seven kilometers of strata in an adjacent basin known as the Whitehorse Trough. The strata comprised a sequence of Late Triassic volcanic-rich detritus and carbonate of the Lewes River Group and Jurassic intrusive-rich clastics of the Laberge Group (Hart, 1997). Whitehorse Trough strata subsequently amalgamated with the Cache Creek Terrane and accreted to the west margin of North America along what is now known as the Teslin Suture Zone (Wark, 1998).

PROPERTY GEOLOGY

Geological mapping on the Mars property has been described by Pangman and Van Tassell (1972), Pangman (1973), Tempelman-Kluit (1984), and Wark (1998) as shown on Figures 5 and 6. Detailed geological mapping has been hindered by lack of outcrop and extensive overburden. Alteration mapping was performed during the 2003 program which outlined a broad, northwesterly trending zone of potassium-feldspar alteration that is up to 1 km wide and at least 3 km long.
The local geological setting of the Mars property has been summarized by Carne (2008), from which the following section was taken.

The area covering the Mars property is underlain by clastic sedimentary rocks (shale, siltstone, sandstone) of the Jurassic Laberge Group which are intruded by the Early to Middle Jurassic Teslin Crossing pluton, a zoned, silica-saturated alkalic stock. The 7 by 8.5 km intrusion consists of an equigranular syenite to hornblende monzonite central phase that is ringed by a hornblende-plagioclase porphyritic monzonite to monzodiorite border phase. Pyroxenite, gabbro and diorite xenoliths are common and locally occur in high concentrations within intrusive breccias. Associated dykes and sills occur within sedimentary rocks to the south. The main area





WOLVERINE MINERALS CORP.
STRATEGIC METALS LTD.

FIGURE 4

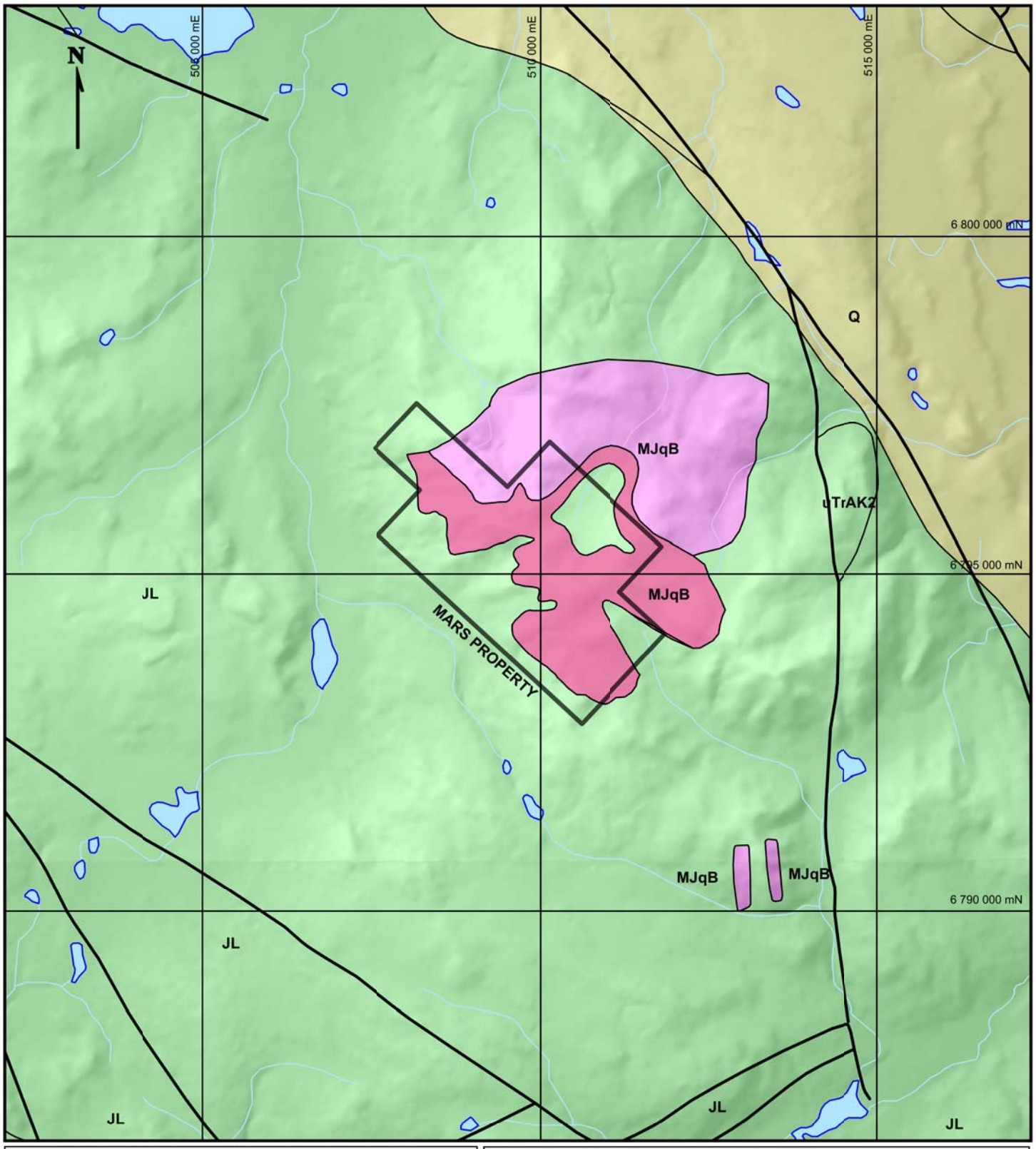
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TECTONIC SETTING

MARS PROPERTY

0 200 km

FILE: ...2010/MARS/FIGURES/ DATE: FEBRUARY2011



Quaternary
Q:Quaternary
Glacial till and overburden

Mid-Jurassic
MJqB: Teslin Crossing Stock
Equigranular syenite to hornblende monzonite

Mid-Jurassic
MJqB: Teslin Crossing Stock
Hornblende-plagioclase porphyritic mozonite to monzonite

Lower and Middle Jurassic
JL:Laberge
Bedded arkosic sandstone with minor shale

Upper Triassic
uTrAK2: Hancock Member
Bedded limestone, thin argillaceous beds and rare chert

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FIGURE 5
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

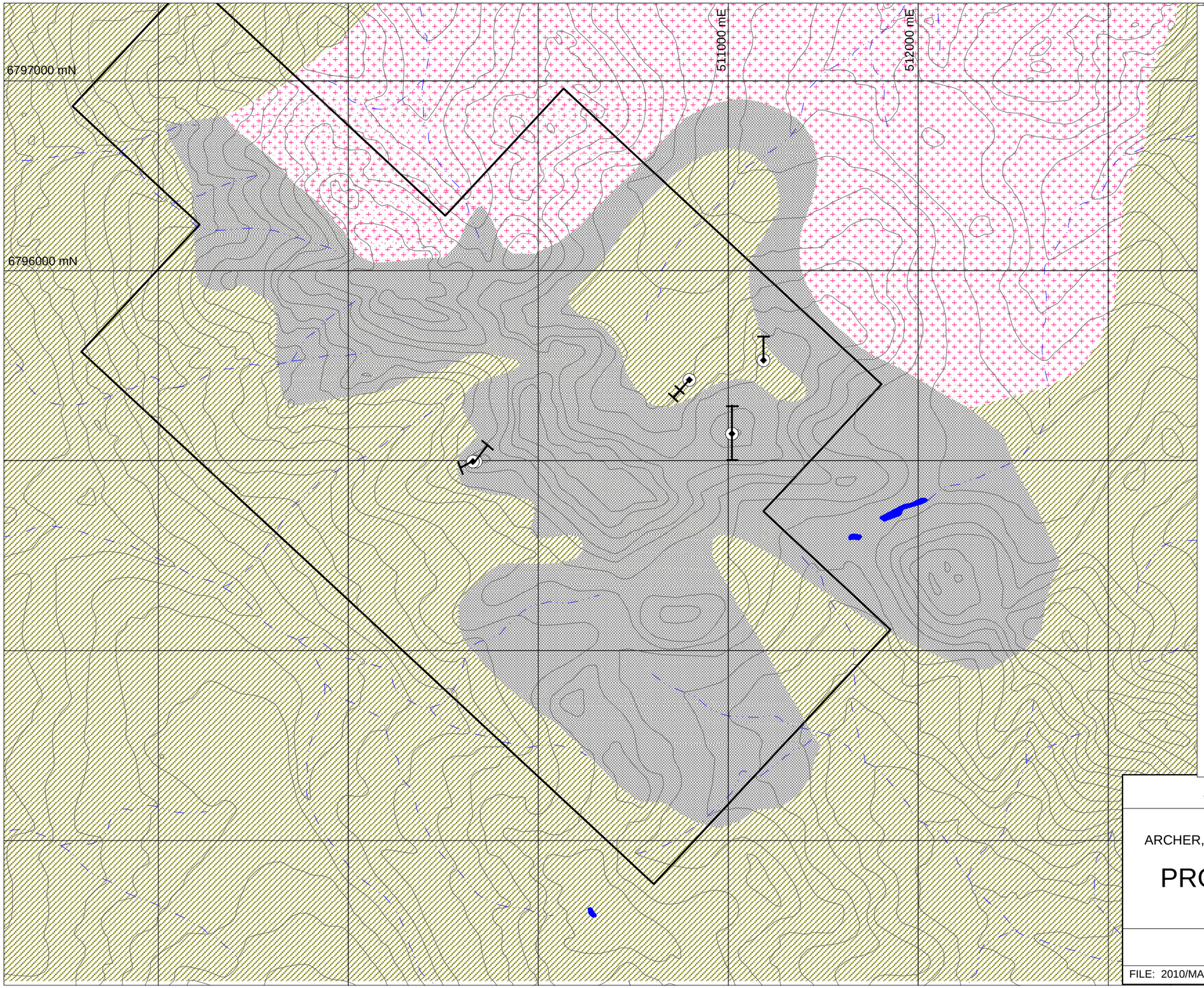
REGIONAL GEOLOGY

MARS PROPERTY

0 5 km

UTM ZONE 8, NAD 83, 105E/07

FILE: ...2010/Mars | DATE: FEBRUARY 2011



Jurassic

Teslin Crossing Pluton - central phase

Teslin Crossing Pluton - border phase

Jurassic

Tanglefoot Formation - shale to sandstone

2004 DIAMOND DRILL HOLE

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FIGURE 6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PROPERTY GEOLOGY

MARS PROPERTY

0 1 km

UTM Zone 8, NAD83, NTS 105C/13

FILE: 2010/MARS/FIGURES/F_5_GEO | DATE: FEBRUARY 2011

of exploration interest is located on Windy Ridge, along the southwest margin of the intrusion. A relatively large inlier of hornfelsed intermediate volcanic tuff that occurs just east of Windy Ridge is the only apparent evidence of possible comagmatic volcanic rocks in the area.

HISTORICAL SOIL GEOCHEMISTRY

In 1972, United Keno conducted reconnaissance soil sampling and collected 840 samples from a 1 km by 2.5 km grid over Windy Ridge. Samples were analyzed for molybdenum and copper. Results are thematically shown on Figures 7 and 8. Overall, copper values are moderately to very strongly anomalous. Six samples measured between 680 ppm and 1360 ppm copper. Molybdenum results are well correlated with copper, ranging up to 120 ppm. The anomalous soils show a northwest trend and concentrate atop Windy Ridge.

In 1997, Placer Dome collected 935 soil samples from a 2 km by 4 km grid established along Windy Ridge. Results for gold and copper from the survey are shown thematically on Figures 8 and 9. Copper geochemical response is strongest within a northwesterly trending band on the western slope of Windy Ridge, where almost every sample returned between 100 ppm and a peak of 500 ppm. Gold values are more scattered reaching a maximum of 485 ppb.

HISTORICAL GEOPHYSICAL SURVEYS

In 1997, Placer Dome completed airborne magnetic and radiometric surveys over the entire Teslin Crossing Pluton. The total field magnetic response delineates the extent of the intrusion. The pluton is truncated by a large fault along its northeast and southeast margins, and this is reflected by a sudden decrease in magnetic response across the structure. A broad zone of enhanced magnetic response along the south and west margins of the pluton suggests that the intrusive rocks continue beneath a relatively shallow southwest dipping roof pendant. The distinctive magnetic signature of the pluton appears to be the result of its high magnetite content.

The airborne radiometric survey measured total counts, potassium, thorium and uranium. All four data sets show good correlation with results of the magnetic survey and they similarly outline the surface exposures of the intrusion.

Placer Dome also completed an IP survey over the Windy Ridge area in 1997. The IP survey identified anomalies in both chargeability and resistivity. The chargeability highs are approximately coincident with the south dipping contact of the border phase of the pluton and, although they also broadly correspond to areas of known copper mineralization in the border phase rocks, much of the anomalous response probably reflects high contents of pyrite and pyrrhotite in overlying hornfelsed sedimentary rocks. Resistivity highs are found within the border phase of the pluton. They exhibit an excellent correlation with zones of copper mineralization, which are characterized by quartz veining, pervasive silicification and advanced potassic alteration. The resistivity highs display a northwest trend that lies within the area of anomalous copper soil geochemistry. They also have apparent dips to the southwest, conforming to the interpreted southwest facing attitude of the border phase of the pluton. There is good correlation of resistivity highs and magnetic highs. Potassium/thorium ratios have a strong negative correlation with maximum magnetic response, enforcing the observation that proximal

PROPERTY BOUNDARY

55
40
120
42
40
60

4,300 ft
4,000 ft
4,500 ft
3,800 ft
3,200 ft
3,600 ft
4,100 ft

6795000 mN
6794000 mN
510000 mE
512000 mE

1972 Mo (ppm)
- ≥20 <120
- ≥10 <20
- ≥5 <10
- ≥2 <5
- ≥1 <2
- ≥0 <1

2004 DIAMOND DRILL HOLE LOCATION

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FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

HISTORICAL MOLYBDENUM GEOCHEMISTRY

MARS PROPERTY

0 200 m 1000 m

UTM ZONE 8, NAD 83, 105E/07

FILE: ...2010/MARS/Figures/ | DATE: FEBRUARY 2011

511000 mE

512000 mE

6797000 mN

6796000 mN

PROPERTY BOUNDARY

693

680

1360

1150

840

930

4,300 ft

4,000 ft

4,500 ft

3,800 ft

3,200 ft

3,600 ft

1972 Cu (ppm)

- ≥650 <1360
- ≥500 <650
- ≥350 <500
- ≥200 <350
- ≥100 <200
- ≥0 <100

1997 Cu (ppm)

- ≥450 <500
- ≥350 <450
- ≥250 <350
- ≥150 <250
- ≥50 <150
- ≥0 <50

2004 DIAMOND DRILL HOLE LOCATION

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FIGURE 8

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

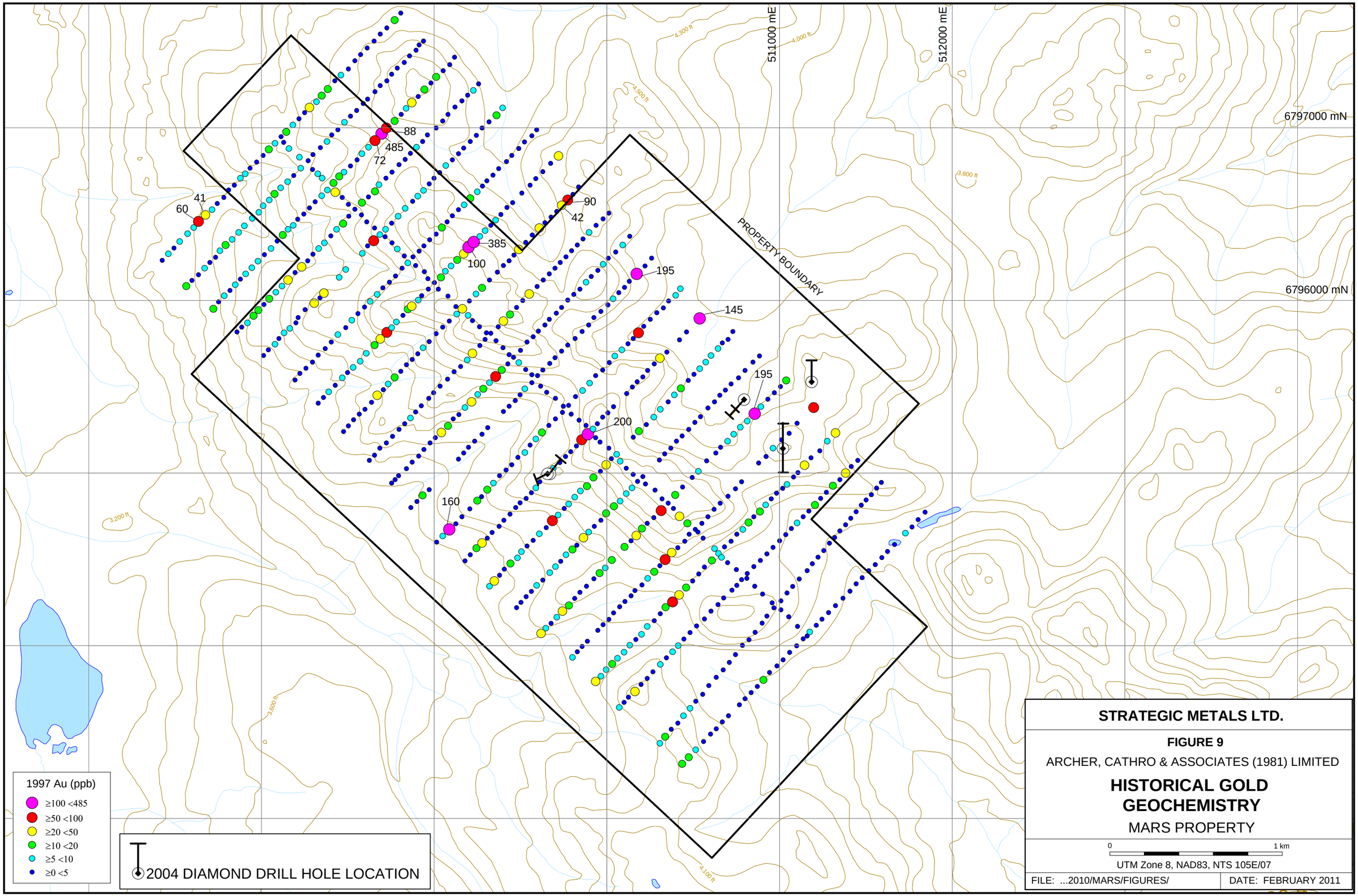
HISTORICAL COPPER GEOCHEMISTRY

MARS PROPERTY

0 1 km

UTM Zone 8, NAD83, NTS 105E/07

FILE: ...2010/MARS/FIGURES/ | DATE: FEBRUARY 2011


511000 mE
512000 mE
6797000 mN
6796000 mN
4,300 ft
4,000 ft
4,500 ft
3,800 ft
3,200 ft
3,600 ft
4,100 ft
PROPERTY BOUNDARY
88
485
72
41
60
90
42
385
100
195
145
195
200
160
1997 Au (ppb)
≥100 <485
≥50 <100
≥20 <50
≥10 <20
≥5 <10
≥0 <5
2004 DIAMOND DRILL HOLE LOCATION
STRATEGIC METALS LTD.
FIGURE 9
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
HISTORICAL GOLD GEOCHEMISTRY
MARS PROPERTY
0
1 km
UTM Zone 8, NAD83, NTS 105E/07
FILE: ...2010/MARS/FIGURES/
DATE: FEBRUARY 2011

silicification, albitization and magnetite enrichment associated with the copper mineralization overprint early stage pervasive potassic alteration.

In 2007, a helicopter-borne VTEM-magnetic survey was carried out over the Windy Ridge area by Strategic. Electromagnetic response was uniformly low across the survey area, indicating that no massive sulphide mineralization is present (porphyry style copper-gold mineralization does not normally respond to VTEM surveys). The magnetic survey data outlined five en echelon areas of high magnetic relief (up to 650 nanoTesla above surrounding areas) that correspond very closely to known copper-gold showings and copper soil geochemical anomalies. The individual magnetic anomalies are up to 1000 m long and 300 m wide and they lie entirely within border phase rocks over a 1 km width and a 3 km strike length. Asymmetries of the magnetic highs indicate dips to the southwest, coinciding well with the resistivity highs. The anomalous trend is open to extension in an unsurveyed area to the northwest.

2010 AIRBORNE GEOPHYSICAL SURVEYS

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

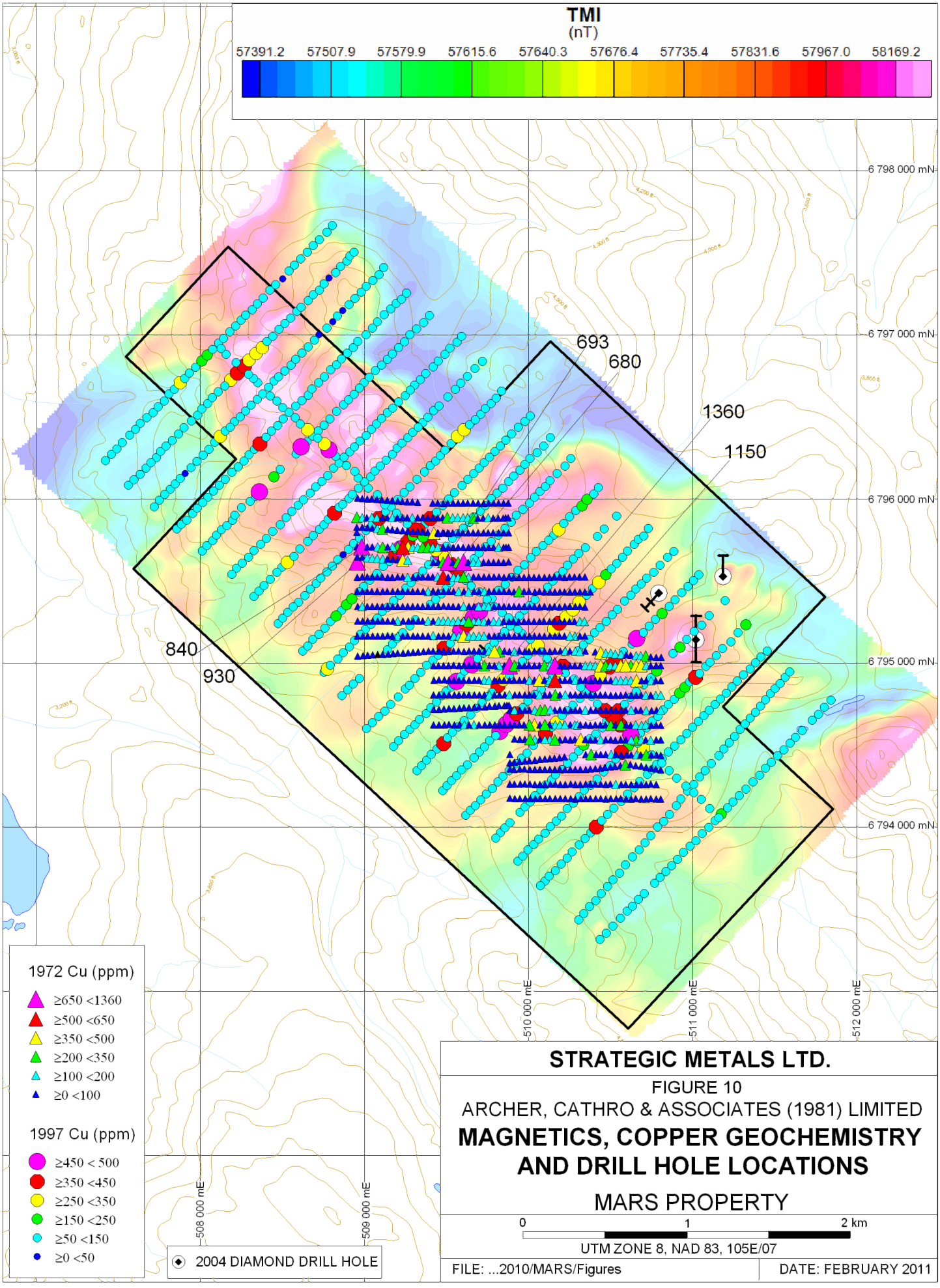
A total of 162 line kilometers were flown over the Mars property. Appendix II contains reports by New-Sense and Condor, which describe equipment and procedures that were used during the surveys and interpreted results. CDs containing digital survey data are also attached to this report.

Figure 10 illustrates total field magnetics, copper soil geochemistry and locations of 2004 diamond drill holes. The magnetic anomaly trends northwesterly and is most significant in the center part of the claim block. The strongest response correlates with the border phase of the Teslin Crossing Pluton, which consists of hornfelsed intermediate volcanic tuff, and hornblende-plagioclase porphyritic monzonite to monzodiorite. No lineaments are indicated by the geophysical survey. No tilt image was created because the size of the survey area was too small to allow for a property evaluation of the property.

Although anomalous gold-in-soil values are erratically dispersed over the property, they have a more direct correlation with elevated magnetic response than does copper. The highest gold value from the 2004 drill program was from hole M4-06, which intersected one 4.57 m interval assaying 6435 ppb. This elevated gold concentration corresponds to the presence of abundant magnetite-pyrite veins. M4-06 is the eastern most hole, and lies directly above a moderately high magnetic response.

Strong magnetic responses that overlay gold-in soil anomalies have not been drilled.

Radiometric results are inconclusive and are strongly influenced by elevation and depth of overburden cover.


TMI
(nT)
57391.2
57507.9
57579.9
57615.6
57640.3
57676.4
57735.4
57831.6
57967.0
58169.2
6 798 000 mN
6 797 000 mN
6 796 000 mN
6 795 000 mN
6 794 000 mN
693
680
1360
1150
840
930
510 000 mE
511 000 mE
512 000 mE
508 000 mE
509 000 mE
1972 Cu (ppm)
≥650 <1360
≥500 <650
≥350 <500
≥200 <350
≥100 <200
≥0 <100
1997 Cu (ppm)
≥450 < 500
≥350 <450
≥250 <350
≥150 <250
≥50 <150
≥0 <50
2004 DIAMOND DRILL HOLE
STRATEGIC METALS LTD.
FIGURE 10
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
MAGNETICS, COPPER GEOCHEMISTRY AND DRILL HOLE LOCATIONS
MARS PROPERTY
0
1
2 km
UTM ZONE 8, NAD 83, 105E/07
FILE: ...2010/MARS/Figures
DATE: FEBRUARY 2011

DISCUSSION AND CONCLUSIONS

Exploration on the Mars property has identified a copper-gold porphyry prospect associated with a Jurassic intrusive known as the Teslin Crossing Pluton. The zoned and texturally complex, alkalic pluton is similar to intrusives elsewhere in the Canadian Cordillera that host significant economic porphyry-style gold-copper deposits.

The property has been intermittently evaluated since 1971 due to limited bedrock exposures. Historical hand trenching was mentioned in previous reports, although proved to be relatively ineffective since results have never been reported. Thick glacial cover and/or overburden are likely the cause. Soil sampling, geological mapping and prospecting have been the main focus of most exploration programs.

The majority of anomalous copper and molybdenum soils lie directly above the border phase of the Teslin Crossing Pluton. There is a strong correlation between the magnetic highs and anomalous soils. The anomalous magnetic feature has never been explored at depth and merits at least one drill hole.

Porphyry-style mineralization has been partially tested by short holes drilled during the 2004 exploration program. Historical diamond drilling has identified one significant gold interval that coincides with a moderately high magnetic anomaly. However the drill holes did not fully test soil geochemical and geophysical anomalies believed to be related to the mineralized zones.

Additional staking is warranted to the northwest of the property where gold values measured up to 485 ppb.

Future work is warranted on the Mars property. The associated anomalous gold- and molybdenum-in-soil values and high magnetic response have identified new targets on the property that should be followed by additional diamond drilling.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

Oliver Fu, B.Sc.

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

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APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Oliver Fu, geologist, with business addresses in Vancouver, British Columbia and Ottawa, Ontario and residential address in Vancouver, British Columbia, do hereby certify that:

1. I graduated from McGill University in 2007 with a B.Sc. in Earth & Planetary Sciences.

2. From 2007 to present, I have been actively engaged in mineral exploration in Quebec, Newfoundland & Labrador, British Columbia, and the Yukon Territory.

3. I have personally participated in the compilation of the report herein.

Oliver Fu, B.Sc. Earth & Planetary Sciences

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

AIRBORNE GEOPHYSICAL SURVEY AND INTERPRETATION DATA

Assessment of Airborne Magnetics and Radiometrics Surveys at the Mars Prospect

A 162 line km helicopter magnetic and radiometric survey has been completed over the Mars 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 that is located 65 km north-east-north 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.

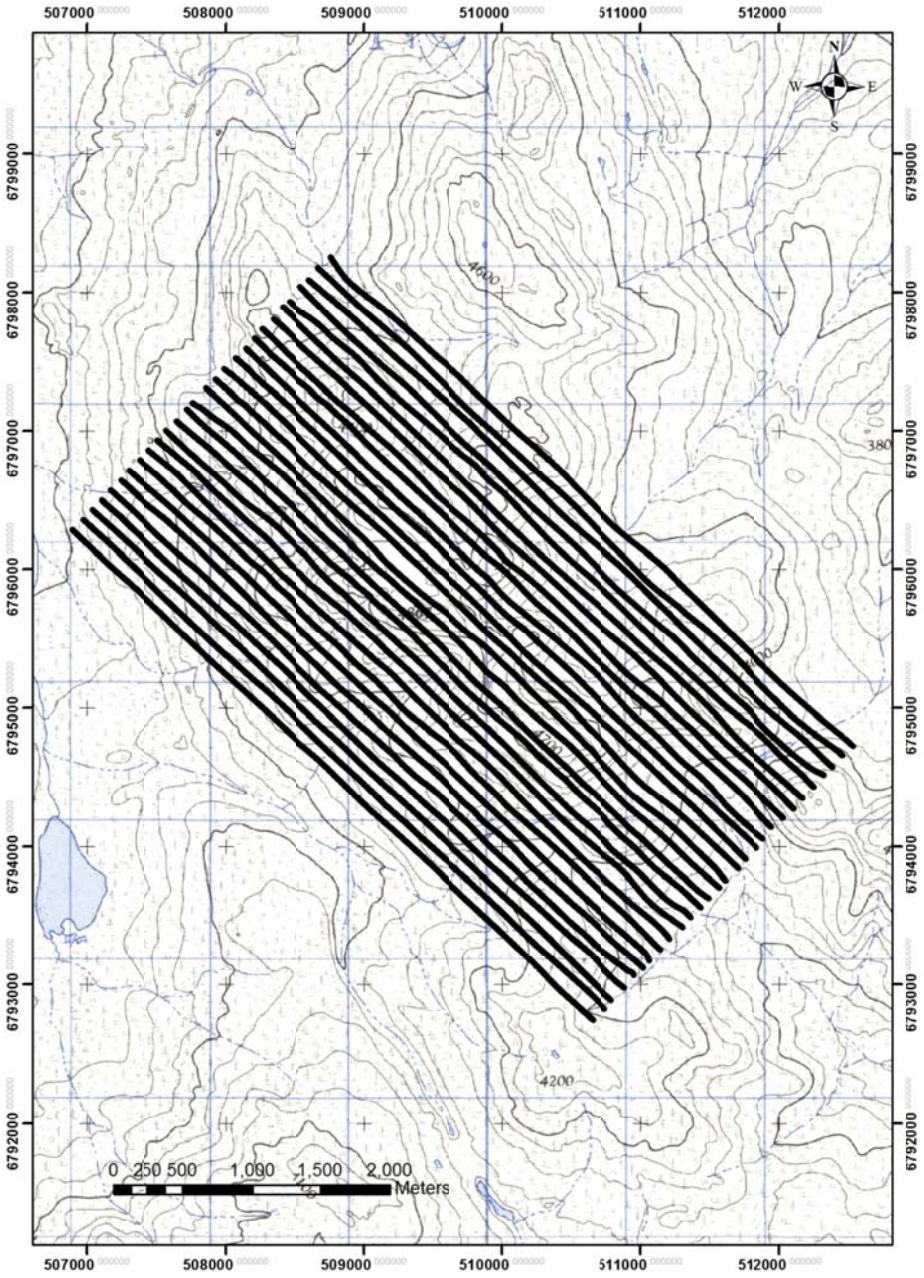


Figure 1: Mars airborne magnetics and radiometrics survey flight path.

The range of the magnetic response across the survey area is approximately 1,100 nT. The results show an elevated response associated with the main south-east trending topographic high and with the drilled prospect near the center of the survey area (Figure 2). Evidence in the data of structure is limited and some survey line effects remain associated with the higher relief through the center of the survey area. Anomalous stream sediment Cu and As samples (up to 38 and 4 ppm respectively) were collected at the edges 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.

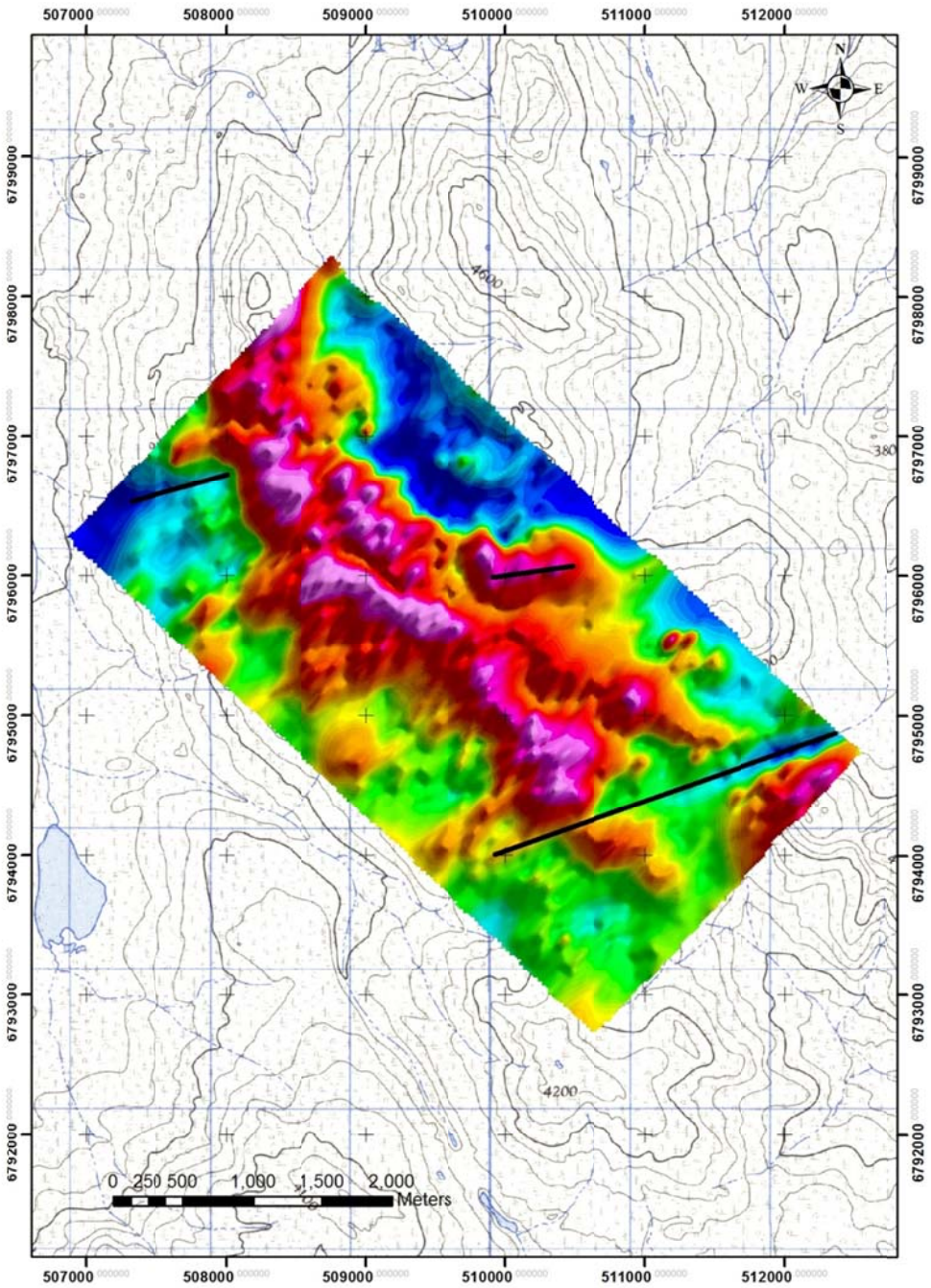


Figure 1: Mars total magnetic intensity image and interpreted structural lineaments.

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 Mars.

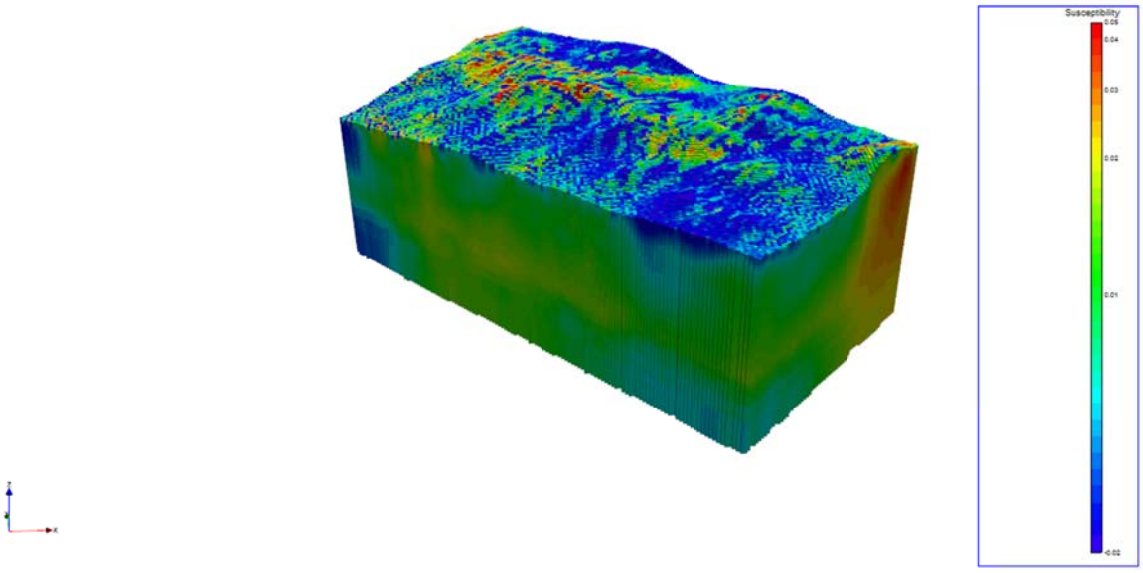


Figure 3: Mars 3D magnetic model.

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 , password: skywalker19):

- Summary report of the assessment
- Registered images of the airborne magnetics and radiometrics (NAD83, Zone 8N)
- 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 Mars.

Respectfully submitted;

Mark Goldie

Condor Consulting, Inc.

December 1, 2010

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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** (Corkey 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 5th, 2010
(HMR100806-report)

TABLE OF CONTENTS

AMENDMENT RECORD **4**

1. INTRODUCTION **5**

2. SURVEY LOCATION **6**

3. PERSONNEL **10**

3.1 Field Operations 10
3.2 Office Data Processing and Offsite QA/QC 10
3.3 Project Management 10

4. SURVEY PARAMETERS **11**

5. AIRCRAFT AND EQUIPMENT **12**

5.1 Aircraft 12
5.2 Airborne Geophysical System 12
5.2.1 Magnetometer *12*
5.2.2 Magnetic Compensation *12*
5.2.3 GPS Navigation *13*
5.2.4 Altimeter *13*
5.2.5 Geophysical Flight Control System *13*
5.2.6 Spectrometer *13*
5.2.7 iDAS Digital Recording *14*
5.2.8 Pressure and Temperature *14*
5.2.9 Spectrometer Digital Recording *14*
5.3 Ground Monitoring System 14
5.3.1 Base Station Magnetometer *14*
5.3.2 Recording *14*
5.4 Field Compilation System 15

6. PRE-SURVEY SPECTROMETER CALIBRATIONS **16**

6.1 Energy Windows 16
6.2 Calibration Pad Test 17
6.3 Cosmic Flight Test 17
6.3.1 Setup and Measurement Procedure *17*
6.3.2 Results from Cosmic Flight Test *18*
6.4 Altitude Attenuation Test 19
6.4.1 Results from Altitude Attenuation Test *19*
6.5 Radon TEST STRIPS 20
6.6 Radioelement ground concentrations and system sensitivities 20

7. OPERATIONS AND PROCEDURES **22**

7.1 Flight Planning and Flight Path 22
7.2 Base Station 22
7.3 Airborne Magnetometers 22
7.4 Thorium Resolution Tests 23
7.5 Data Compilation 23
7.5.1 Flight Path Corrections *23*
7.5.2 Digital Terrain Model (DTM) *26*
7.5.3 Magnetic Corrections *27*
7.5.3.1 Diurnal Corrections 27
7.5.3.2 Lag Corrections 27
7.5.3.3 Heading Corrections 29
7.5.3.4 IGRF Corrections 32
7.5.3.5 Leveling Corrections 33
7.5.4 Vertical Derivative *33*

7.5.5 Gridding 34
7.5.6 Radiometric Data Corrections 35
7.5.6.1 Live Time Corrections 35
7.5.6.2 Pre-filtering 35
7.5.6.3 Aircraft and Cosmic Background 35
7.5.6.4 Radon Correction 36
7.5.6.5 Compton Stripping 36
7.5.6.6 Equivalent Height at STP 37
7.5.6.7 Attenuation Corrections 37
7.5.6.8 Leveling of Attenuation Corrected Data 38
7.5.6.9 Conversion to Apparent Radioelemnt Concentrations 39
7.5.6.10 Air Absorption Dose Rate 40
7.5.6.11 Gridding 40
7.5.6.12 Ternary MAP 41
9. SUMMARY 44
APPENDIX A: BACKGROUND AND COSMIC TESTS CHARTS 45
APPENDIX B: FOM RESULTS 55
APPENDIX D: RSX-5 SPECTROMETER (SN 5503): DAILY RESOLUTION TESTS RESULTS 68
APPENDIX E: IMAGES OF FINAL MAPS 70
APPENDIX F: MICROLEVELLING DESCRIPTION 118

AMENDMENT RECORD

Rev	Date	Description	Report Section	Prepared by

DOCUMENT RECORD

Document Identification	HMR100806-report
Document Custodian	Field Operations Manager
Relates To	Final Deliverables
Original Date Issued	October 5th, 2010

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 6th, 2010.

The survey was flown between August 8th and August 17th, 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 Proporty	- 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

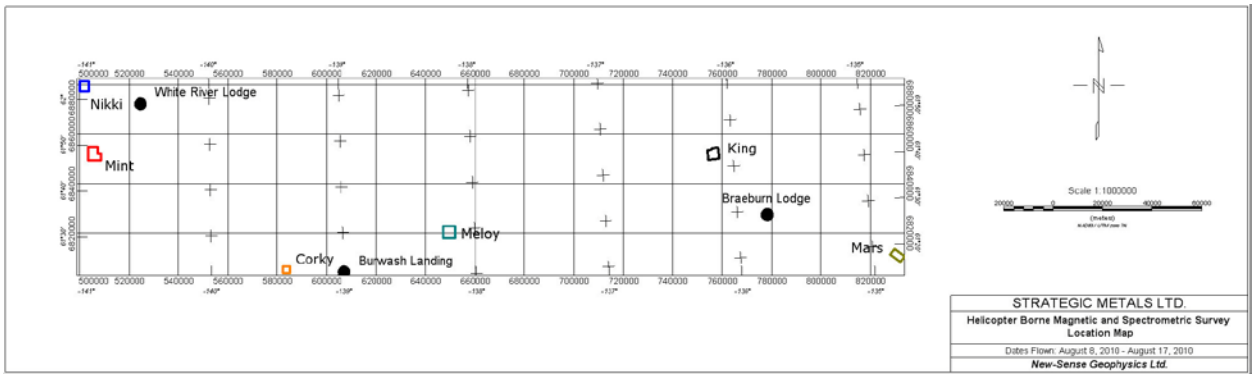


Figure 2.1 Location map depicting the outlines of all six (6) properties: Nikki (blue), Mint (red), Corky (orange), Meloy (grey), King (black), and Mars (green). The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 7N.

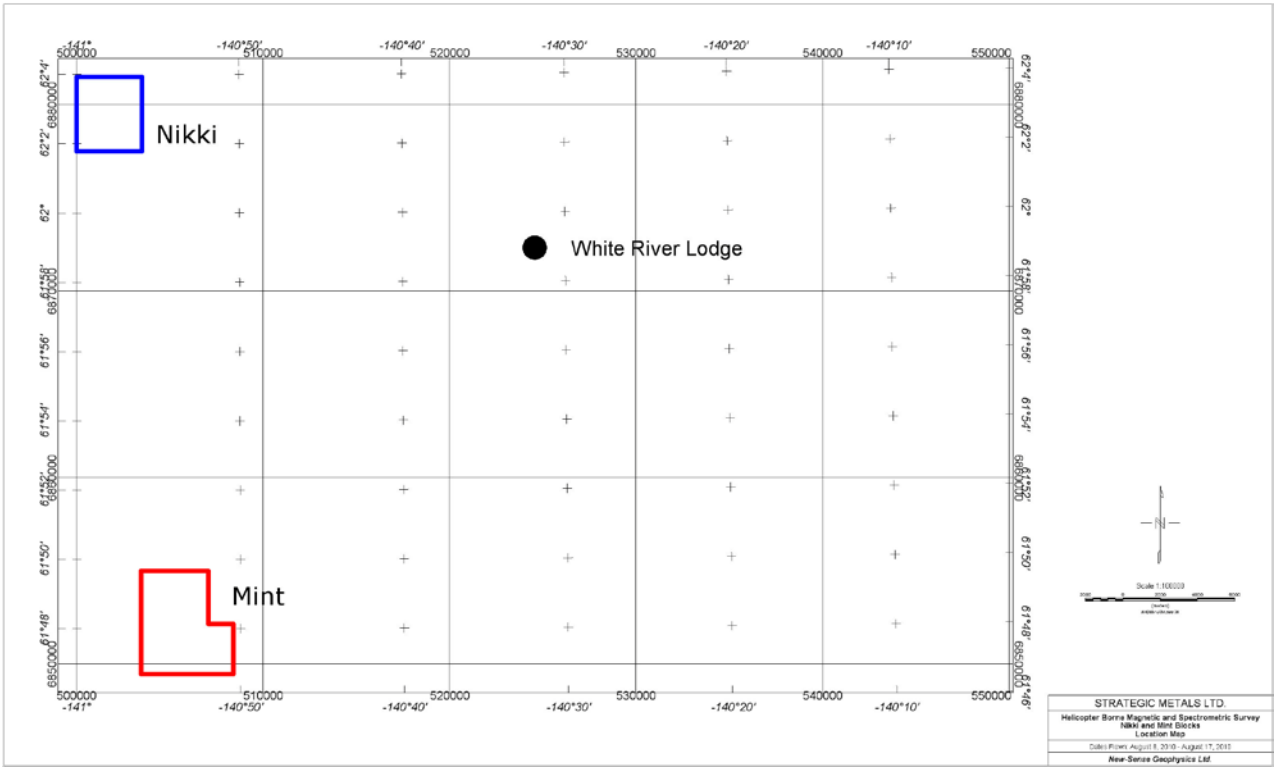


Figure 2.2 Location map depicting the outlines of Nikki (blue) and Mint (red) The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 7N.

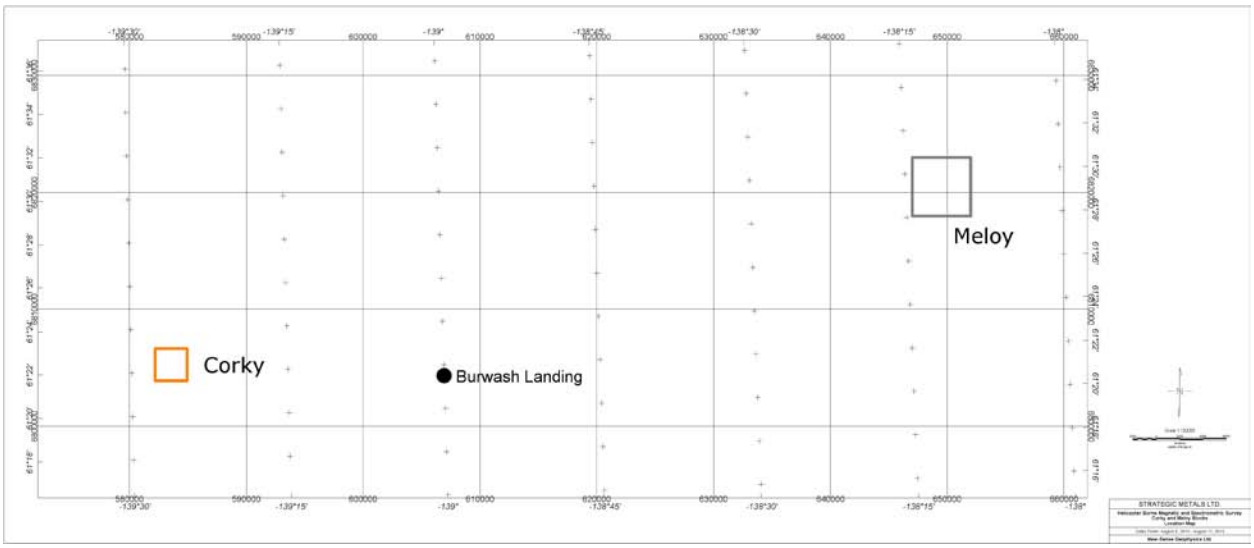


Figure 2.3 Location map depicting the outlines of Corky (orange) and Meloy (grey). The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 7N.

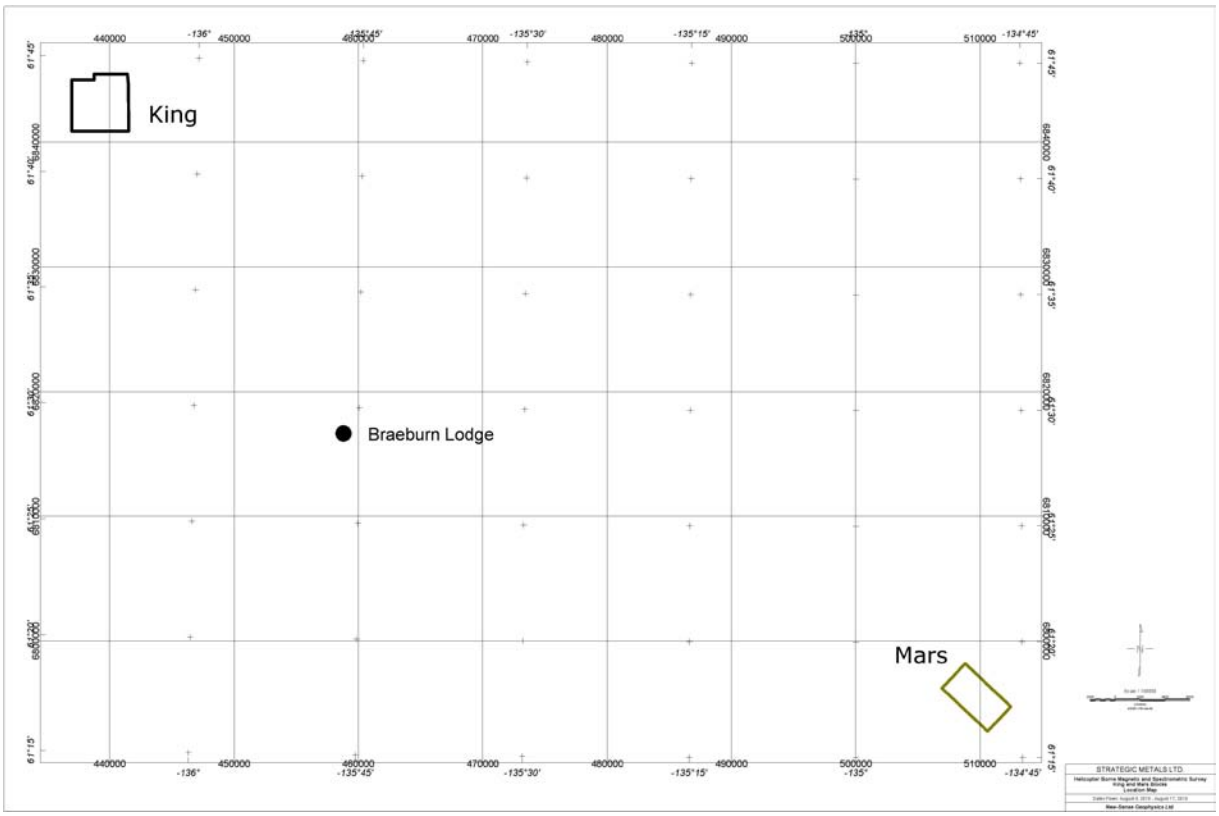


Figure 2.4 Location map depicting the outlines of King (black) and Mars (green). The coordinate system is NAD83, North America (all Canada and USA subunits), Zone 8N.

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 aircrafts 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^{o} pitch, 10^{o} roll, and 10^{o} 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 aircrafts 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, 8th, 2010 (from White River lodge, YT), August 15th, 2010 (from Braeburn lodge, YT), and August 20th, 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 8th, 2010. The Cosmic Flight Test that was used to determine the coefficients for King and Mars was conducted on August 15th, 2010.

- **Height Attenuation Test**, which determined the altitude attenuation coefficients for Mint, Nikki, Melody, and Corky was conducted on August 8th, 2010 and the Height Attenuation Test used to determine the coefficients for King and Mars was conducted on August 15th, 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 = a23/a33)	0.284	0.250
Th into K (beta = a13/a33)	0.432	0.400
U into K (gamma = a12/a22)	0.771	0.810
U into Th (a = a32/a22)	0.039	0.060
K into Th (b = a31/a11)	-0.001	0
K into U (g = a21/a11)	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

	Cosmic Test Flight Data (average counts)					
Altitude (ft)	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

	Cosmic Test Flight Data (average counts)					
Altitude (ft)	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 ror 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 15th, 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 8th, 2010 and August 15th, 2010 were as follows:

Table 6.9 Ground Concentrations from August 8th, 2010: Nikki, Mint, Corky and Meloy blocks

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

Table 6.10 Ground Concentrations from August 15th, 2010: King and Mars blocks

Radio Element	Ground Concentration	
Potassium	1.61	%
Equivalent Uranium	2.4	*ppm*
Equivalent Thorium	6.14	*ppm*
Total	50.57	nGy/h

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 8th, 2010: Nikki, Mint, Corky and Meloy blocks

	Sensitivities @ 35m
K	$77.47\ cps/(\%)$
U	$8.19\,cps/(ppm)$
Th	$2.86\ cps/(ppm)$
TC	$23.12\ cps/(nGy/h)$

Table 6.12 Sensitivities @35m from August 15th, 2010: King and Mars blocks

	Sensitivities @ 35m
K	$86.7\ cps/(\%)$
U	$6.08\ cps/(ppm)$
Th	$3.75\ cps/(ppm)$
TC	$23.17\ cps/(nGy/h)$

Note: Determining of radioelement ground concentrations and system sensitivities were not part of the singed 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^{o}
Roll: 10-15^{o}
Yaw: 10-15^{o}

See Appendix B for the FOM results as flown on August 8th, August 13th, August 15th, and August 17th 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).

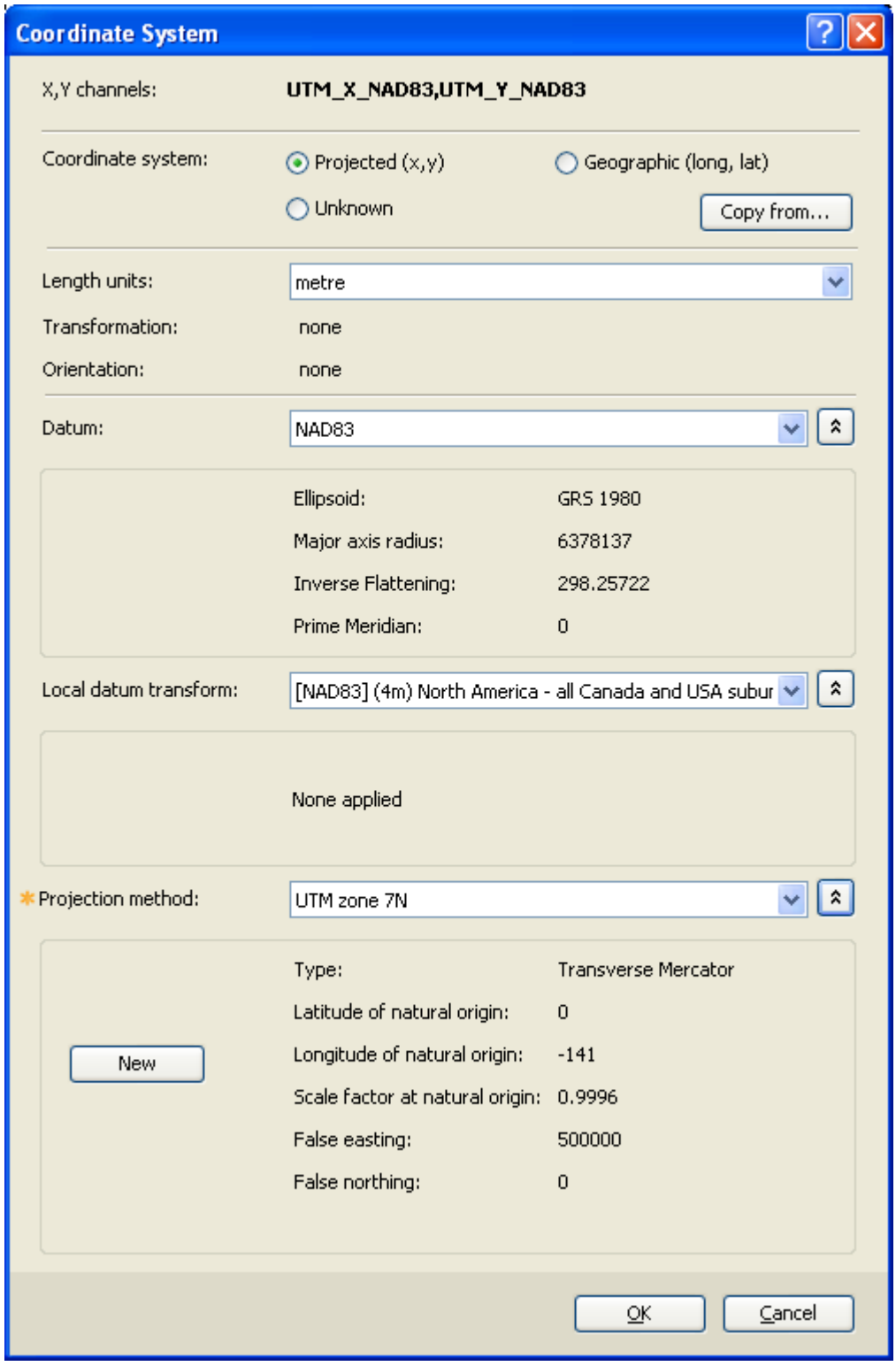
7.5 DATA COMPILATION

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:

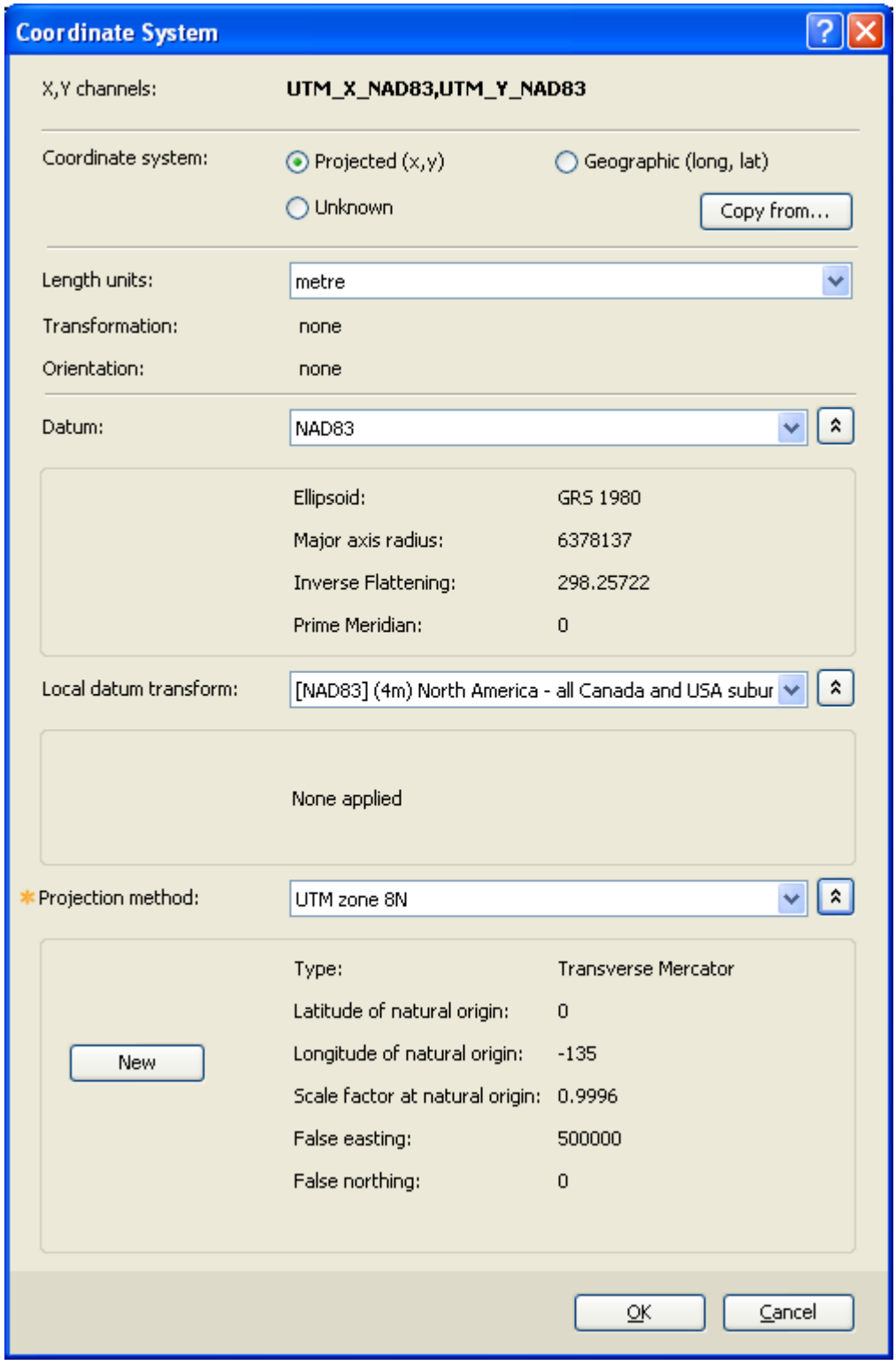
7.5.1 FLIGHT PATH CORRECTIONS

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:



The following projection parameters were used for King and Mars:



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

Block Name	Average Readings (nT)
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

Block Name	Horizontal Distance From GPS Antenna to Sensor Head (m)	Average Sample Interval (m)	Lag Applied to Magnetic Data (records)
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 13th, 2010 (one) and August 15th, 2010 (two) with the following results:

Table 7.4 Heading Test flight results: August 13th, 2010

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

Table 7.5 Heading Test flight results: August 15th, 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 15th, 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

Block Name	Average Readings (nT)
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:

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

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 α, β, and χ 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:

- α, β, χ 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
- μ 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 RADIOELEMNT 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 singed 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 singed 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.

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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):

- Magnetics 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.

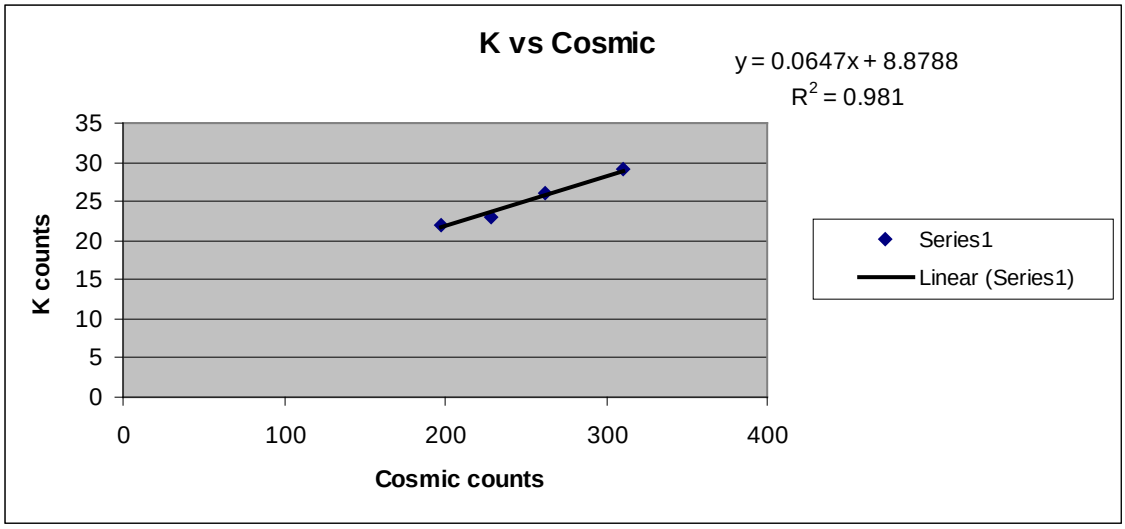
Further processing of the data may enhance subtle features that can be of importance for exploration purposes.

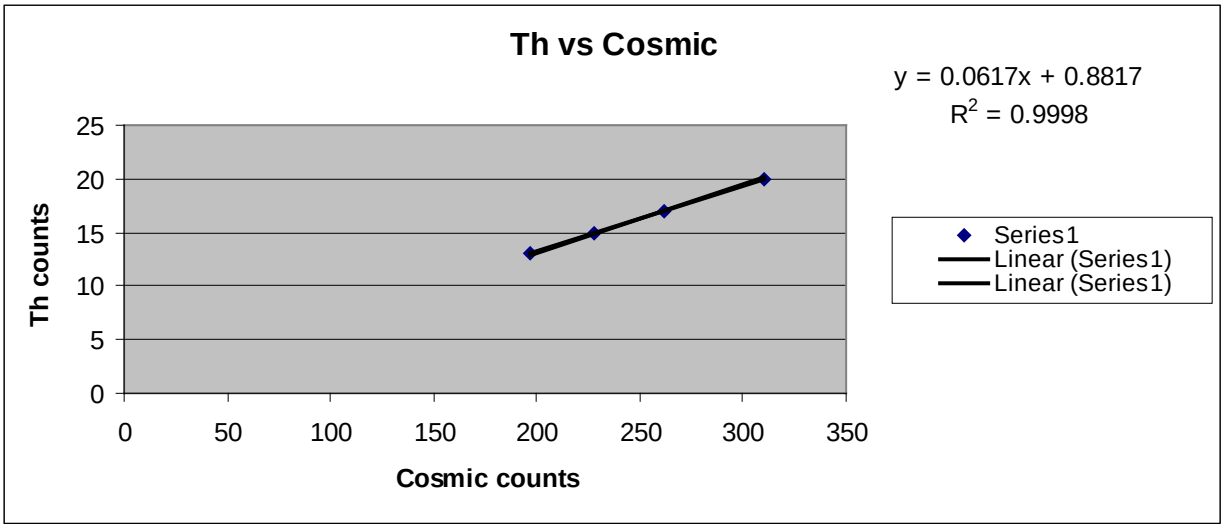
Respectfully submitted,

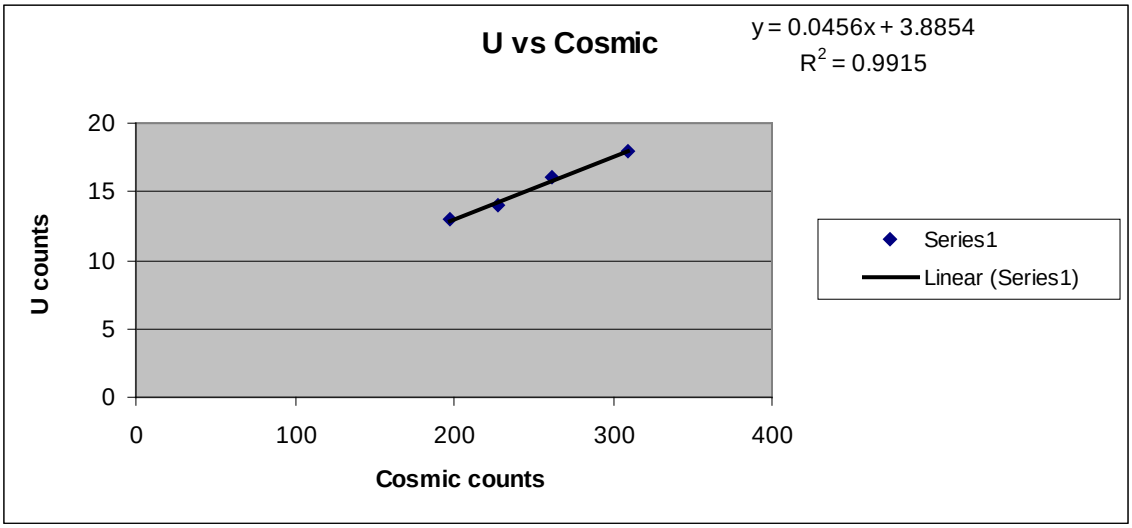
Andrei Yakovenko
New-Sense Geophysics Ltd.
Date: October 5th, 2010

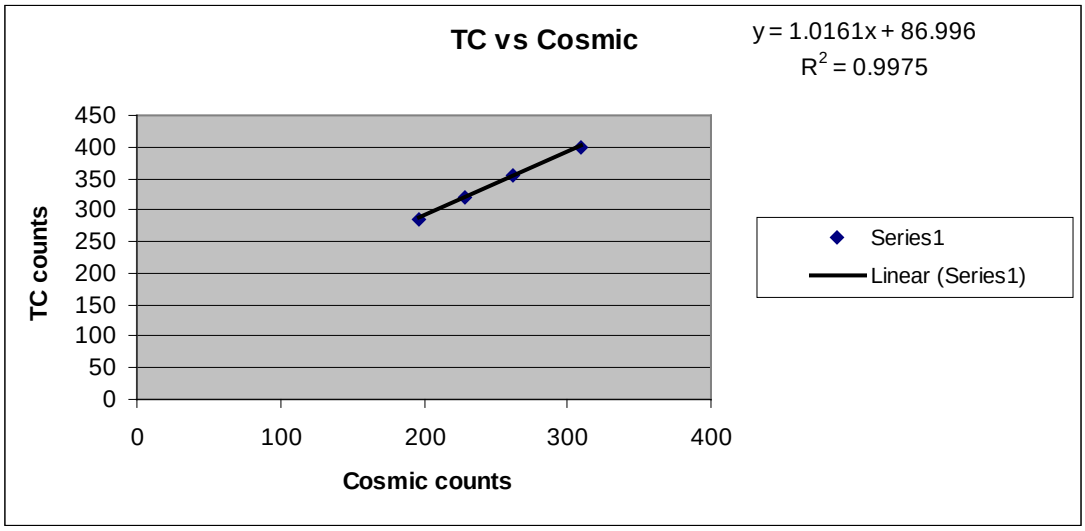
APPENDIX A: BACKGROUND AND COSMIC TESTS CHARTS

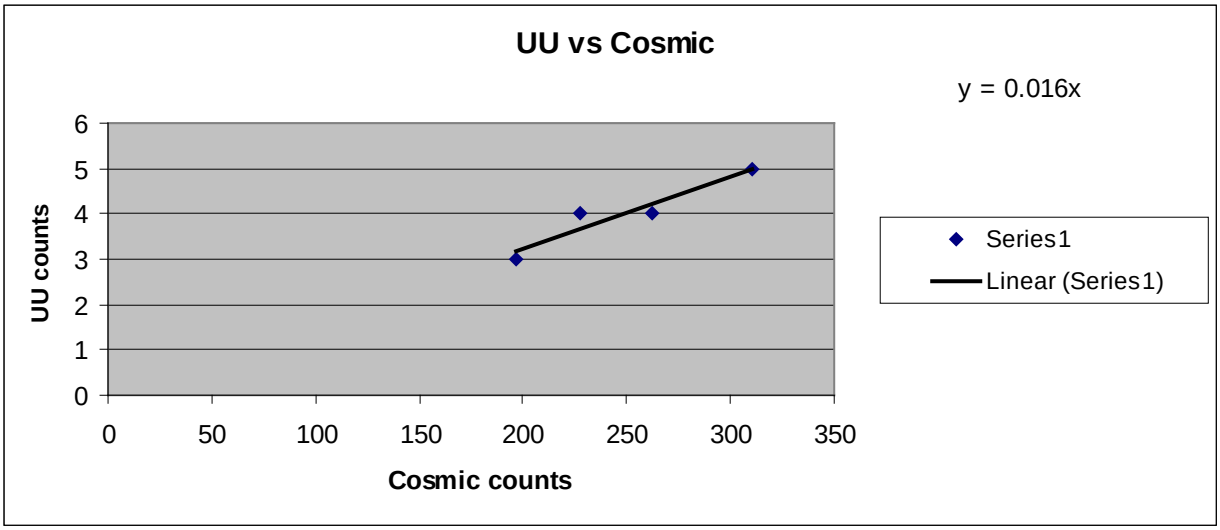
August 8, 2010



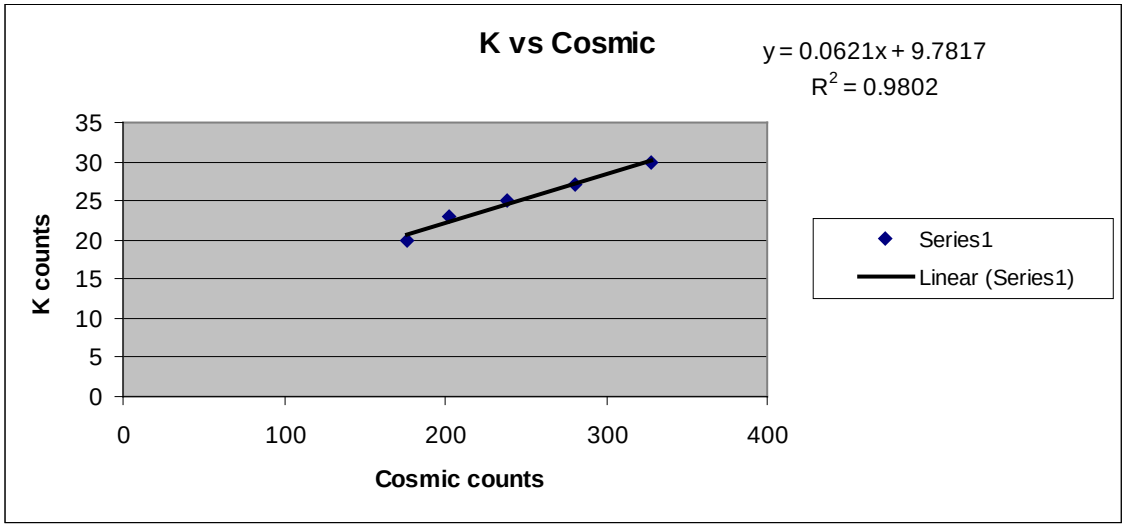


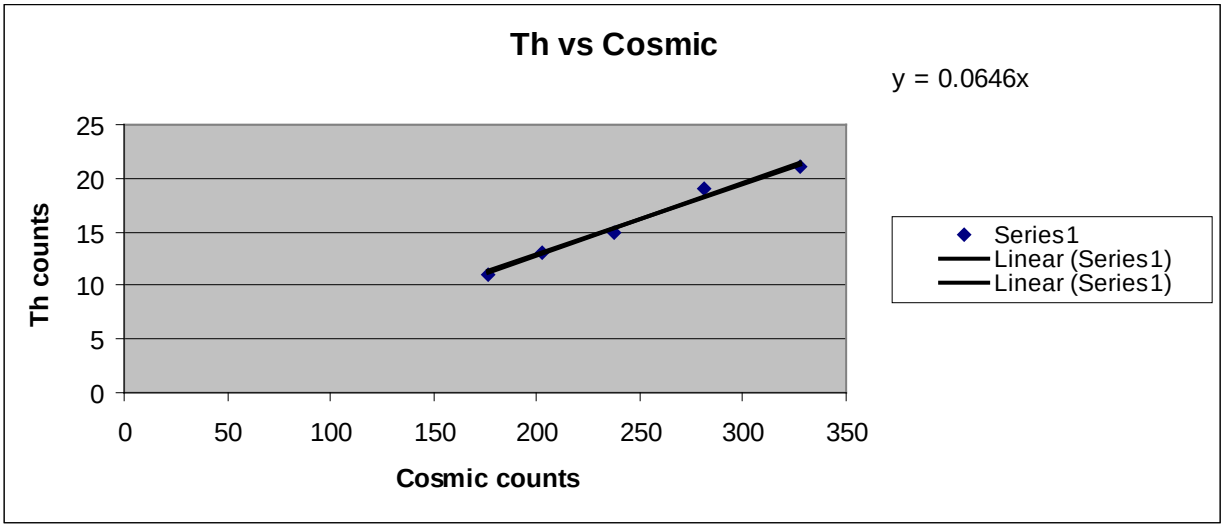

U vs Cosmic
y = 0.0456x + 3.8854
R2 = 0.9915
U counts
Cosmic counts
0
5
10
15
20
0
100
200
300
400
Series1
Linear (Series1)

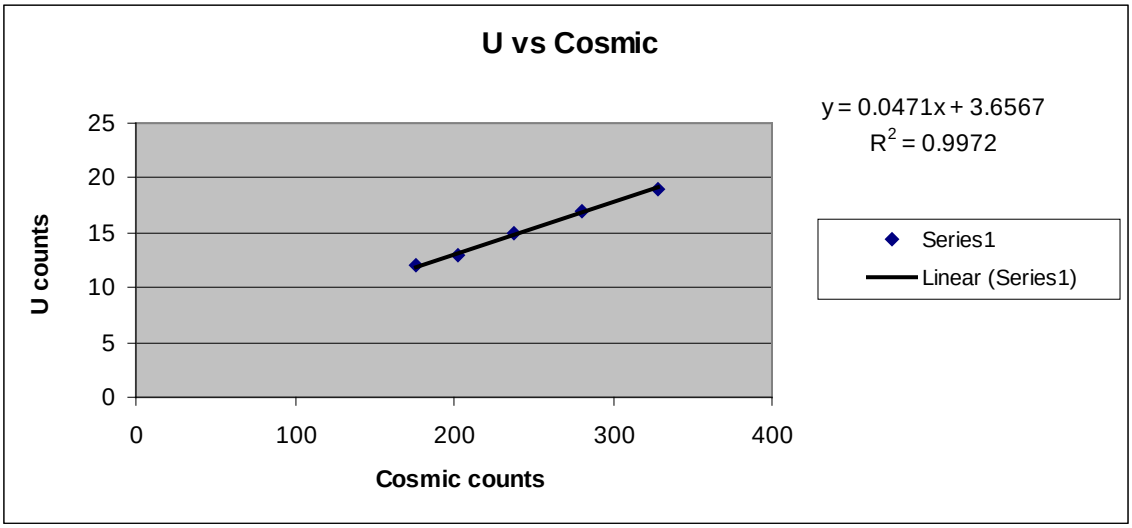

TC vs Cosmic
y = 1.0161x + 86.996
R2 = 0.9975
TC counts
Cosmic counts
0
50
100
150
200
250
300
350
400
450
0
100
200
300
400
Series1
Linear (Series1)

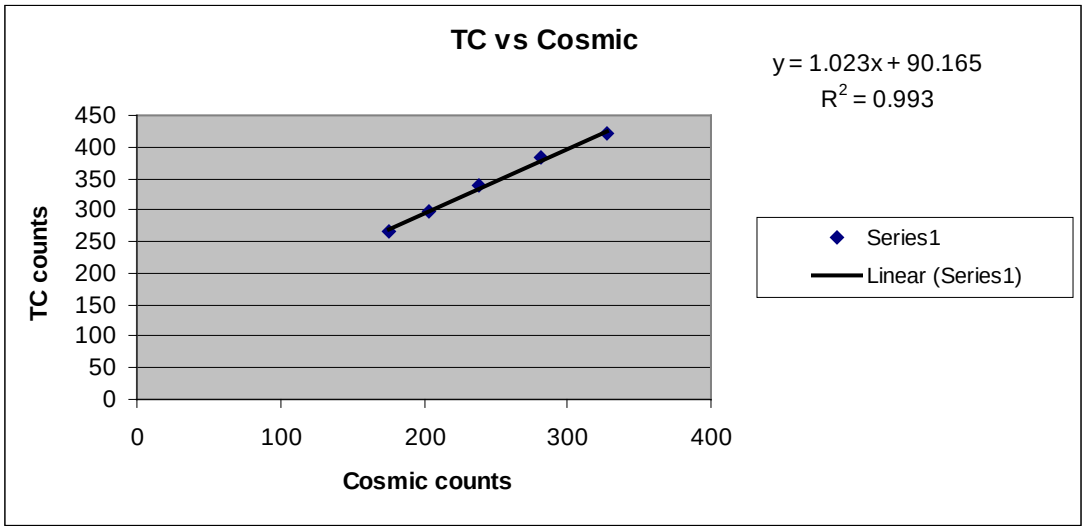

UU vs Cosmic
y = 0.016x
UU counts
Cosmic counts
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
Series1
Linear (Series1)

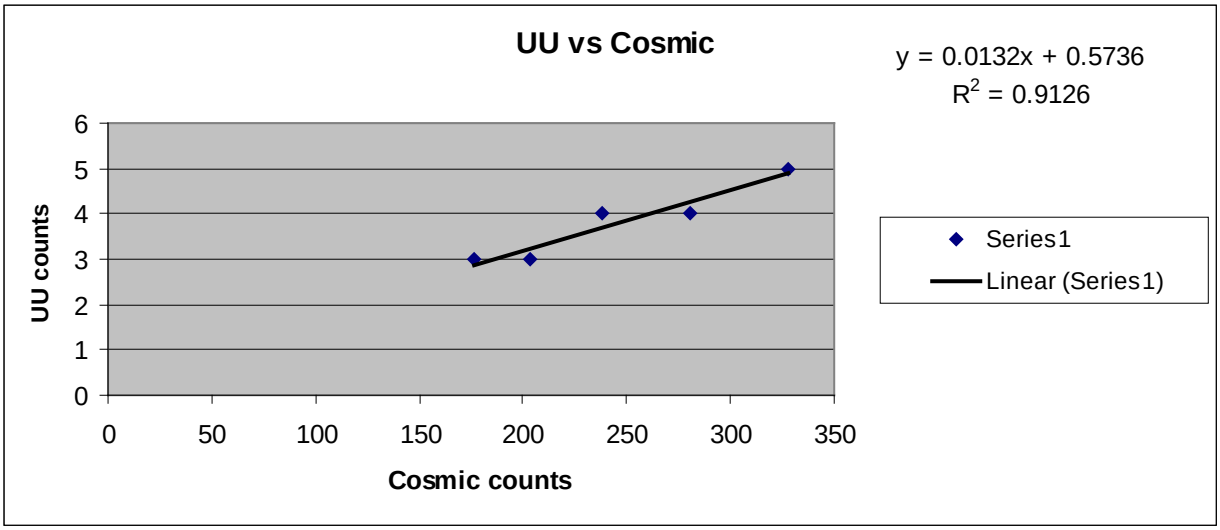
August 15, 2010





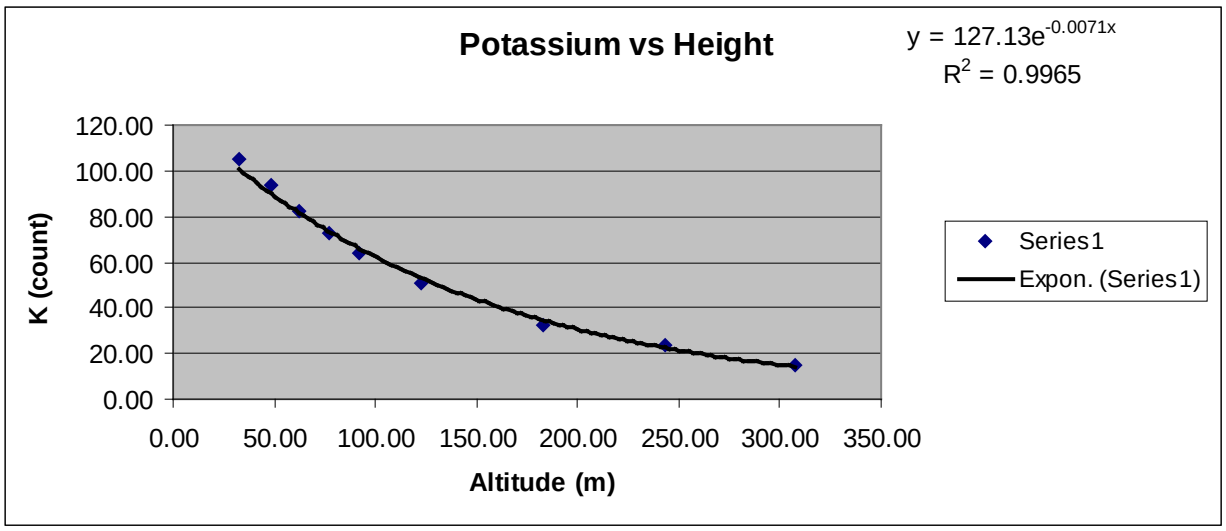

U vs Cosmic
y = 0.0471x + 3.6567
R2 = 0.9972
U counts
Cosmic counts
0
5
10
15
20
25
0
100
200
300
400
Series1
Linear (Series1)

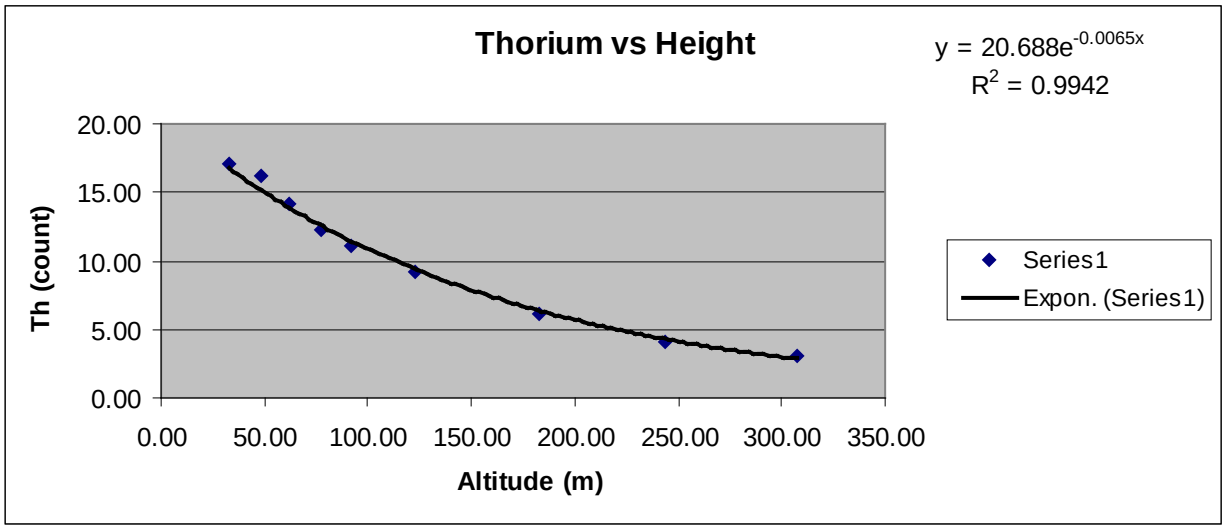

TC vs Cosmic
y = 1.023x + 90.165
R2 = 0.993
TC counts
Cosmic counts
0
50
100
150
200
250
300
350
400
450
0
100
200
300
400
Series1
Linear (Series1)

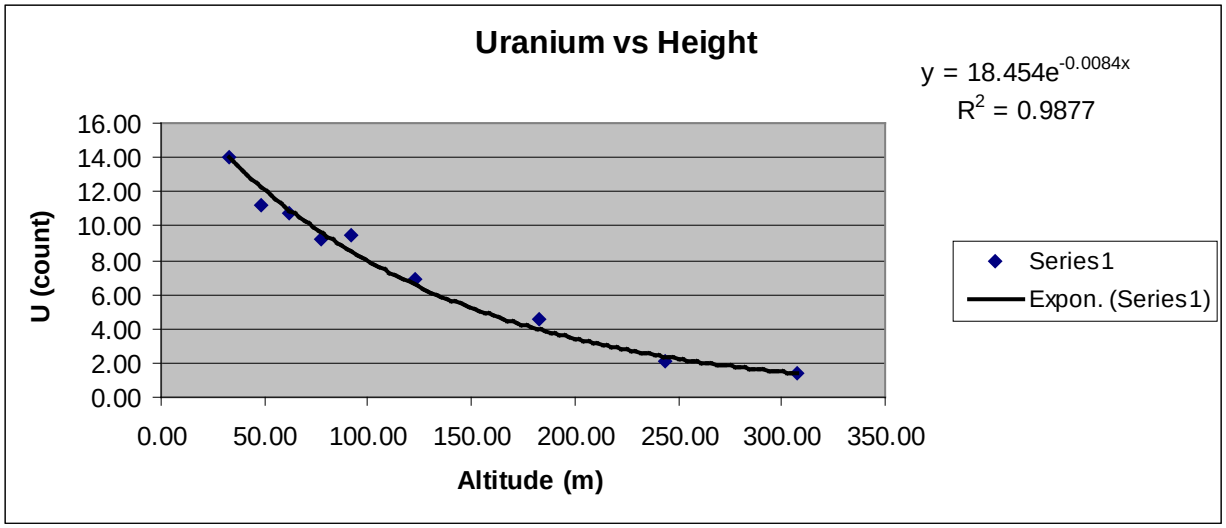

UU vs Cosmic
y = 0.0132x + 0.5736
R2 = 0.9126
UU counts
Cosmic counts
0
1
2
3
4
5
6
0
50
100
150
200
250
300
350
Series1
Linear (Series1)

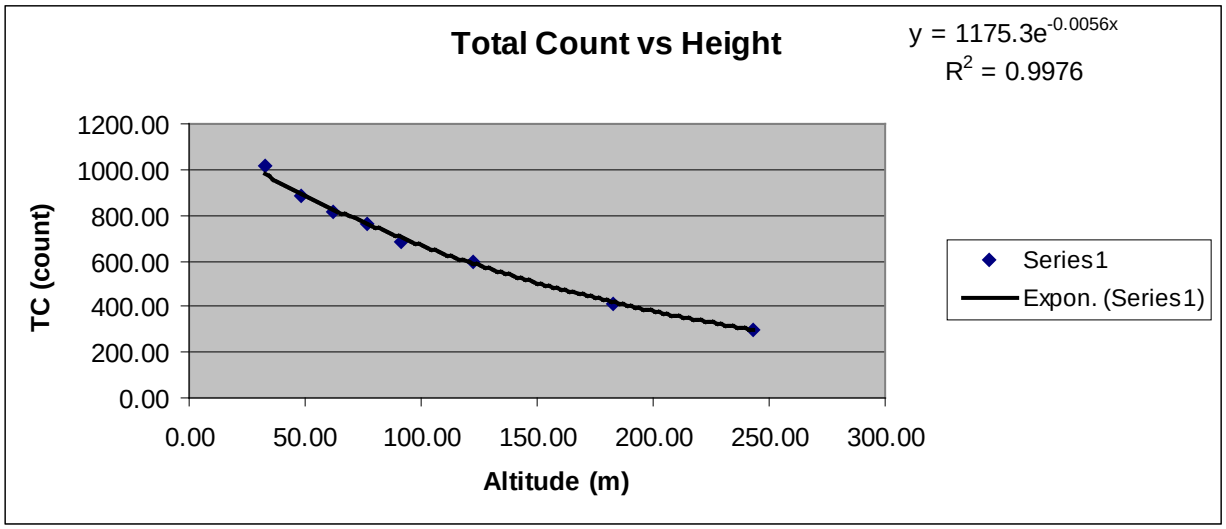
Height Attenuation Test Charts

August 8, 2010

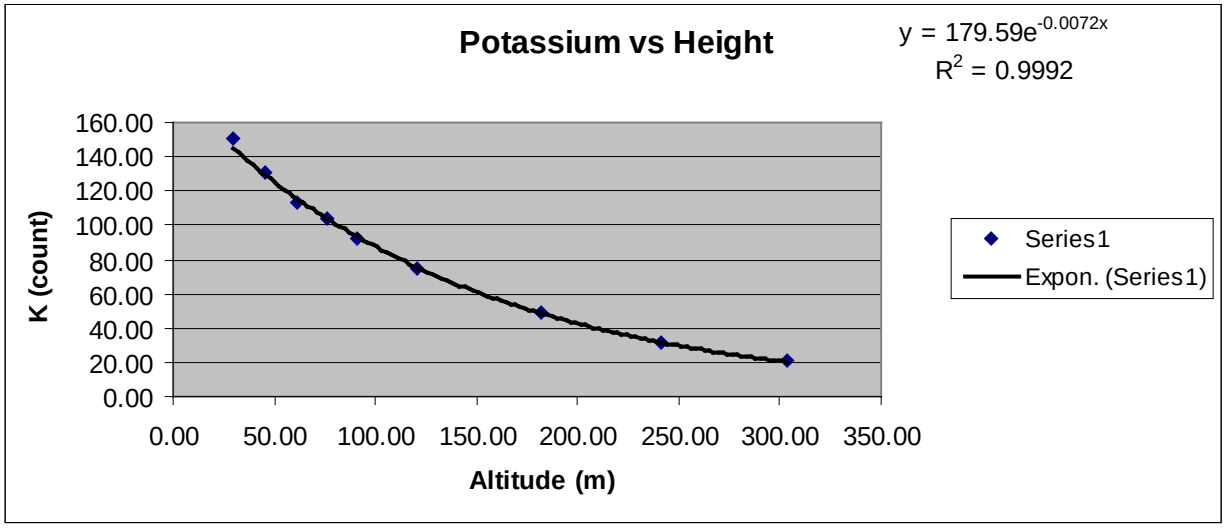


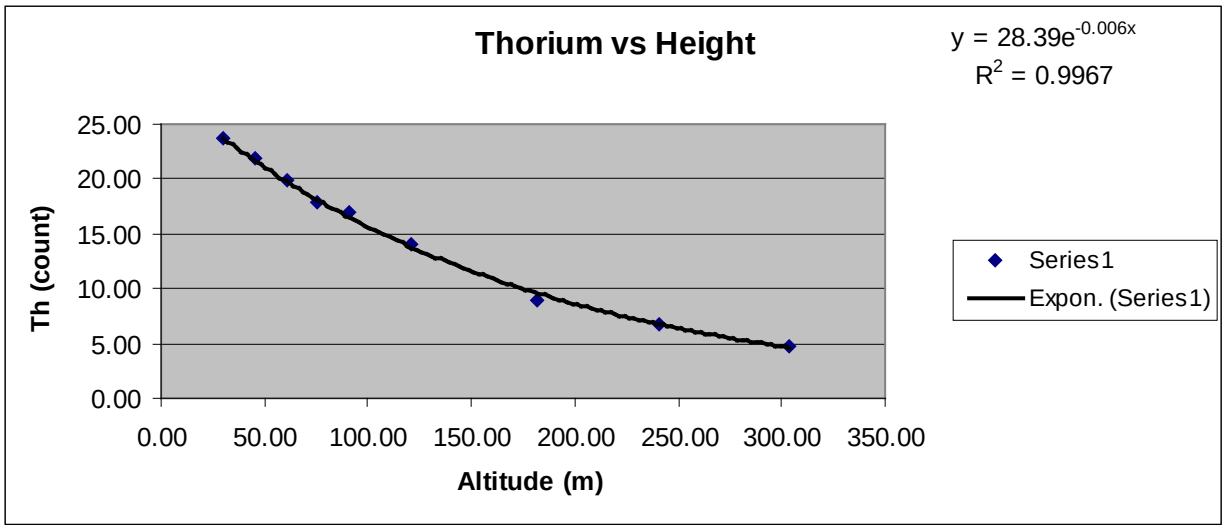


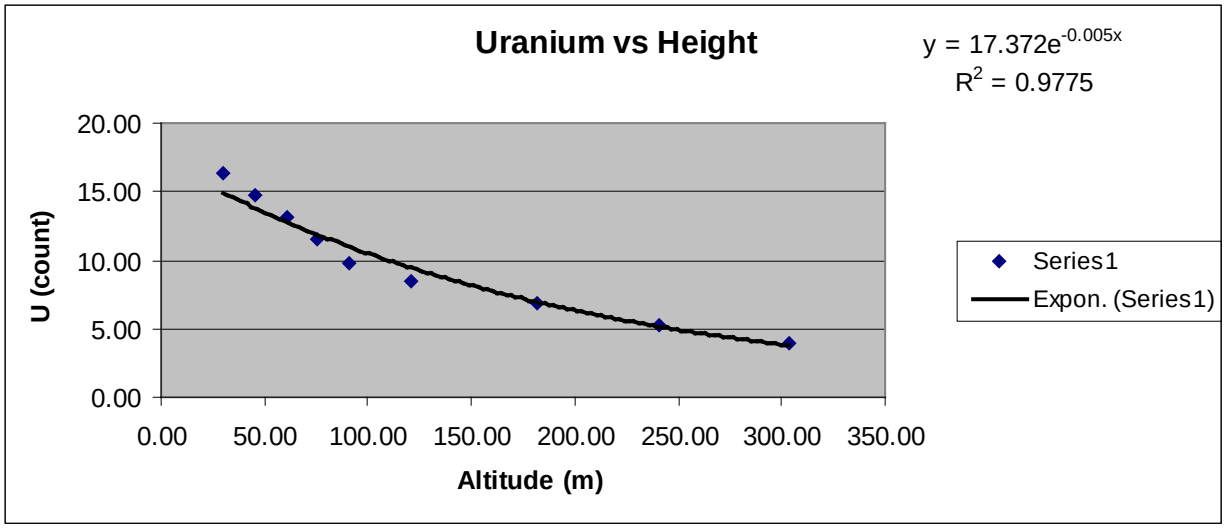

Uranium vs Height
y = 18.454e-0.0084x
R2 = 0.9877
U (count)
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
Altitude (m)
Series1
Expon. (Series1)

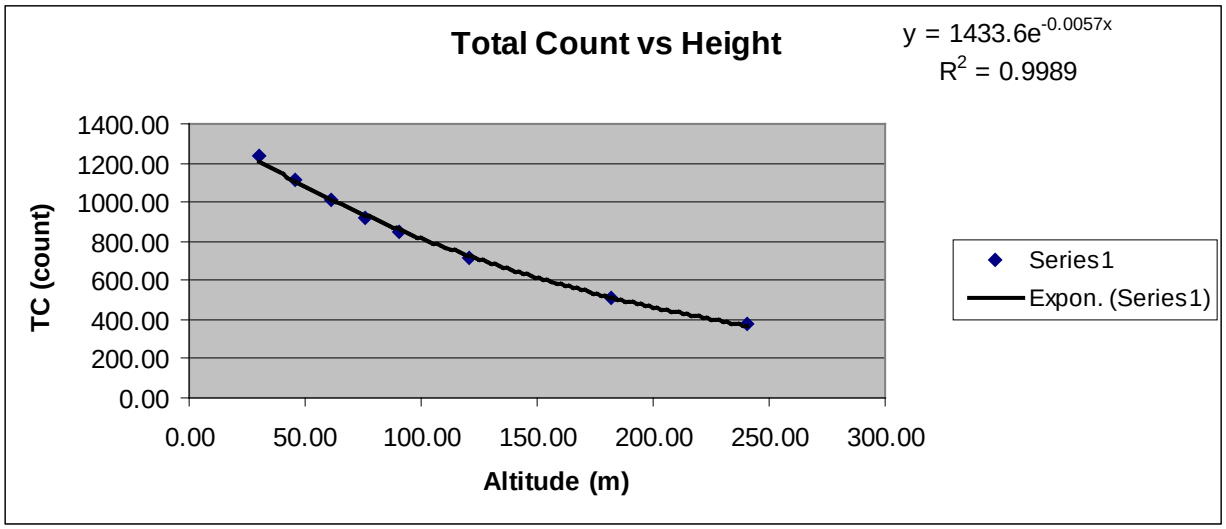

Total Count vs Height
y = 1175.3e-0.0056x
R2 = 0.9976
TC (count)
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
Altitude (m)
Series1
Expon. (Series1)

August 15, 2010



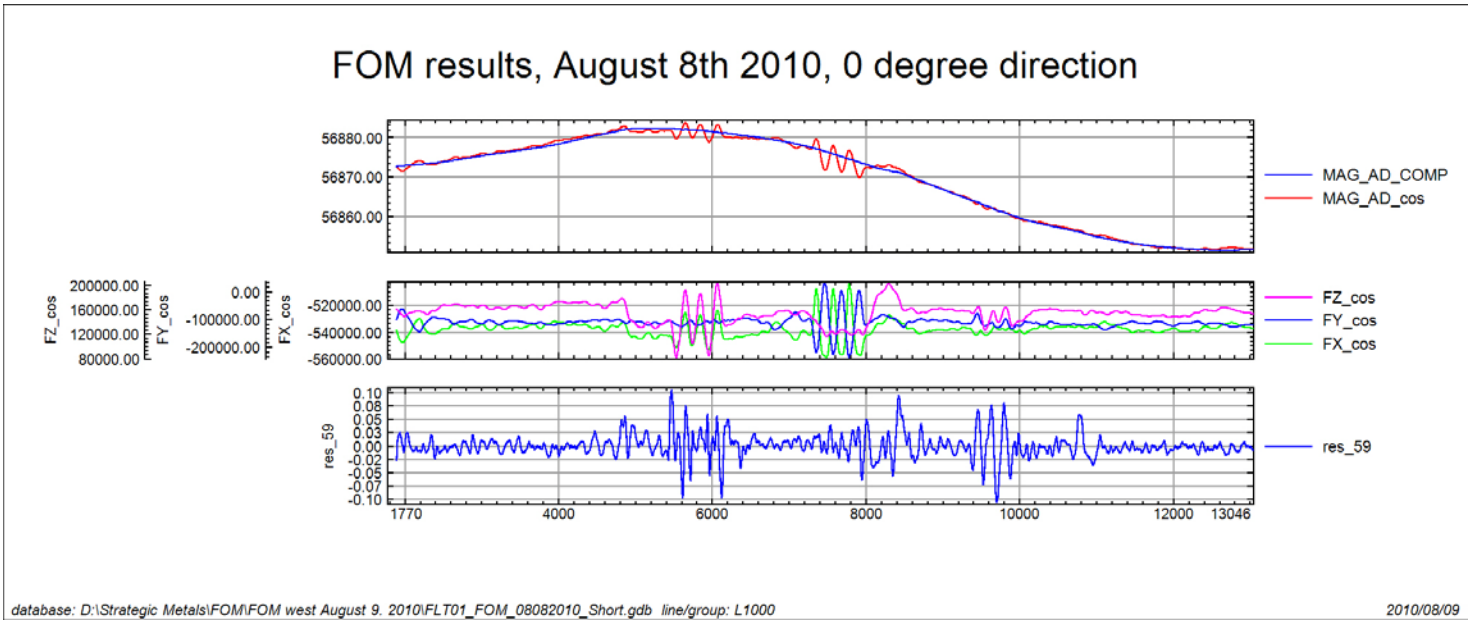


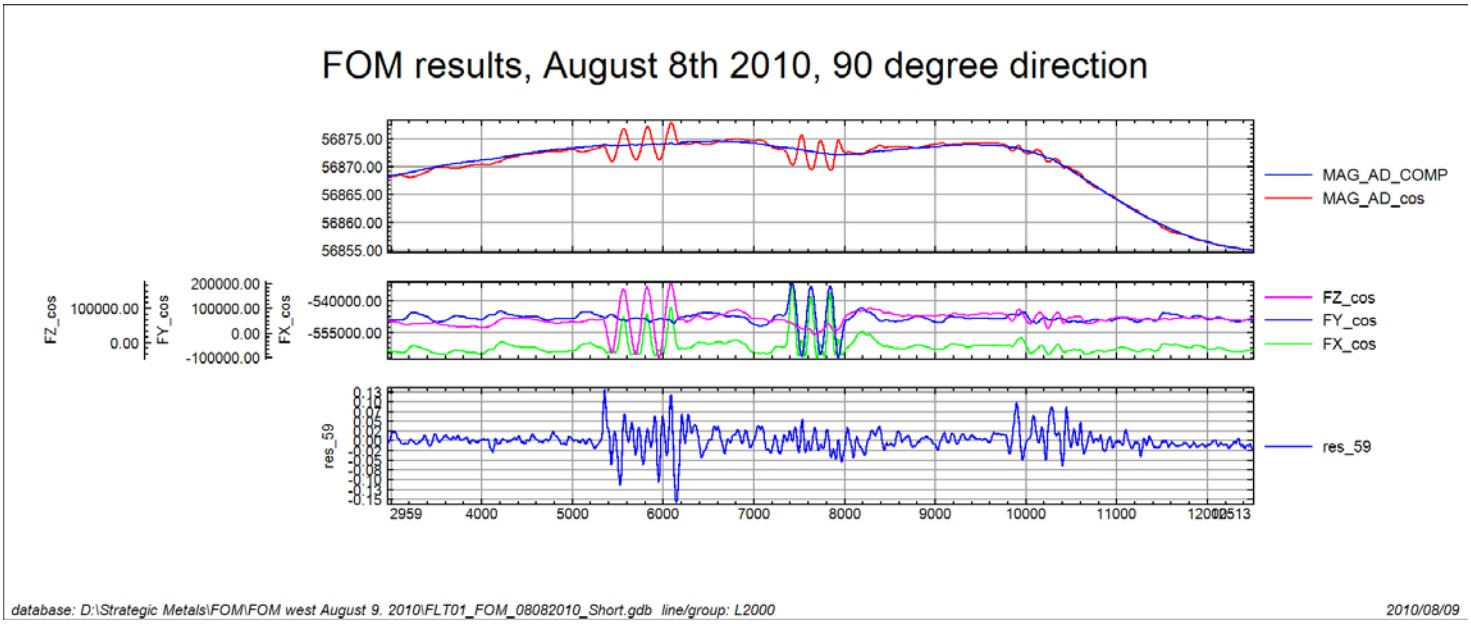

Uranium vs Height
y = 17.372e-0.005x
R2 = 0.9775
U (count)
20.00
15.00
10.00
5.00
0.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
Altitude (m)
Series1
Expon. (Series1)


Total Count vs Height
y = 1433.6e-0.0057x
R2 = 0.9989
TC (count)
1400.00
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
Altitude (m)
Series1
Expon. (Series1)

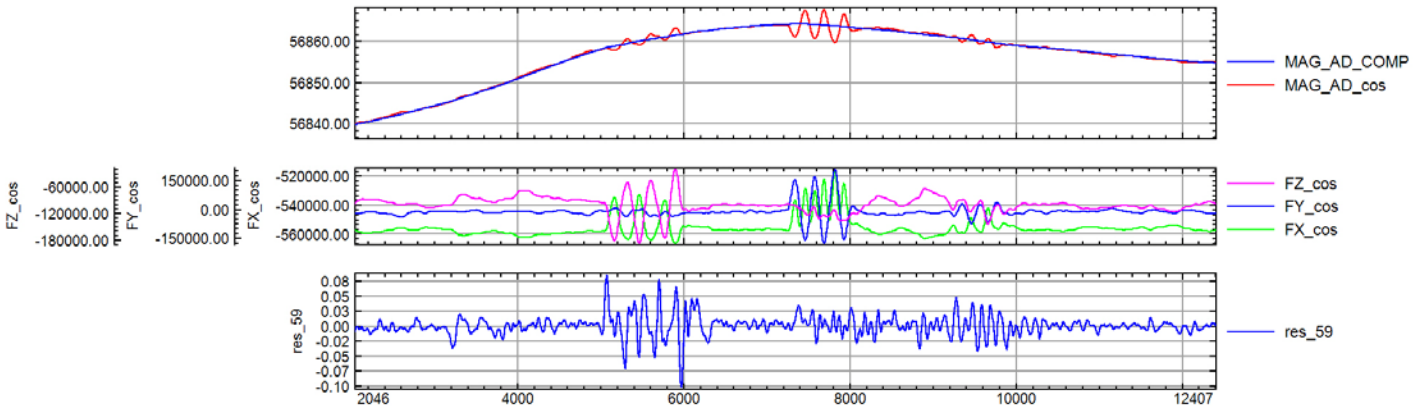
APPENDIX B: FOM RESULTS

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



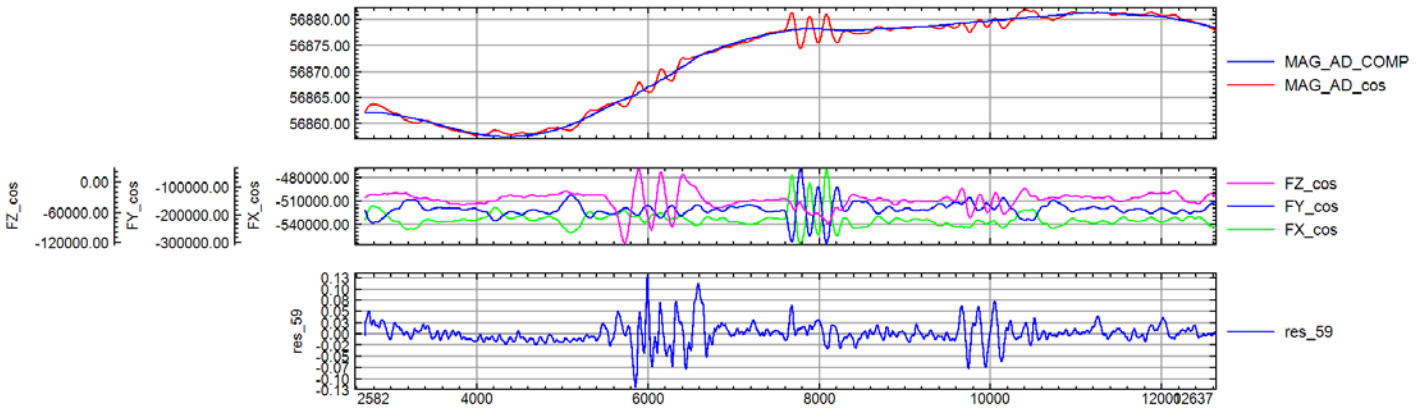


FOM results, August 8th 2010, 180 degree direction



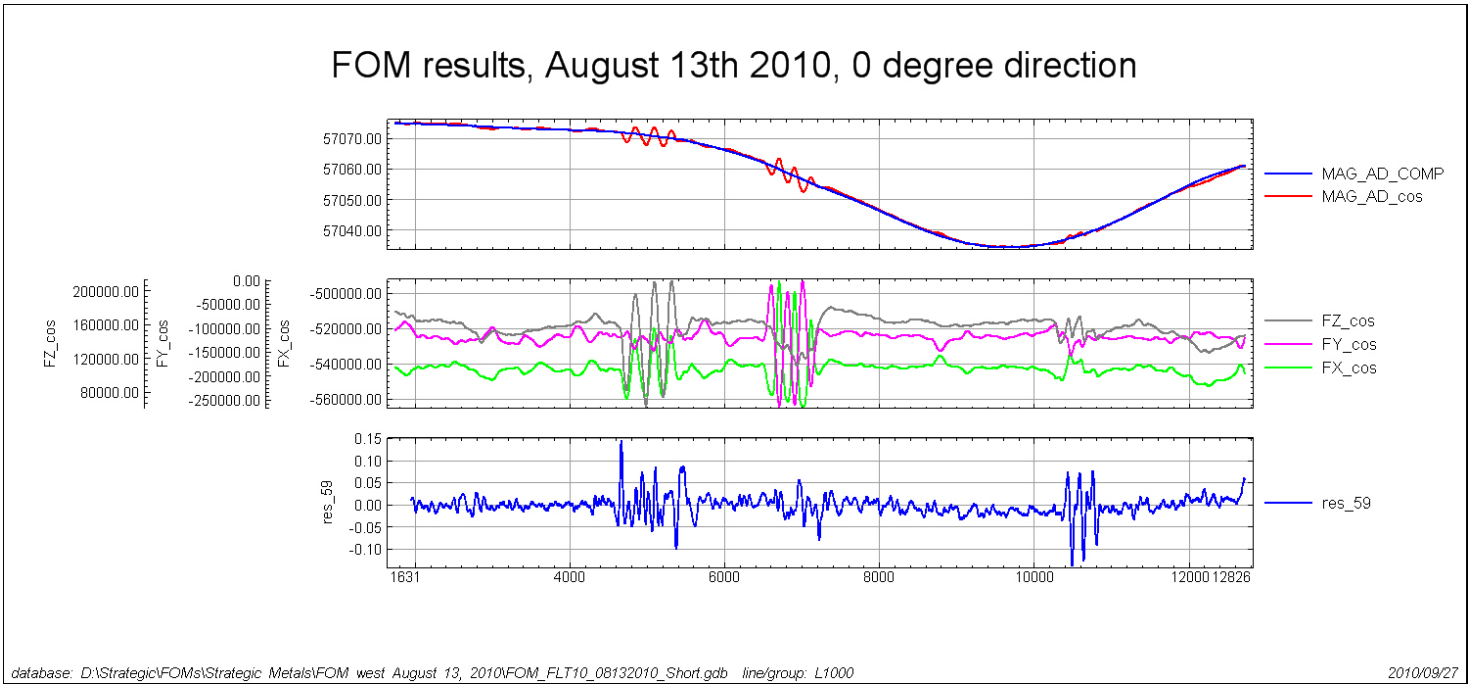
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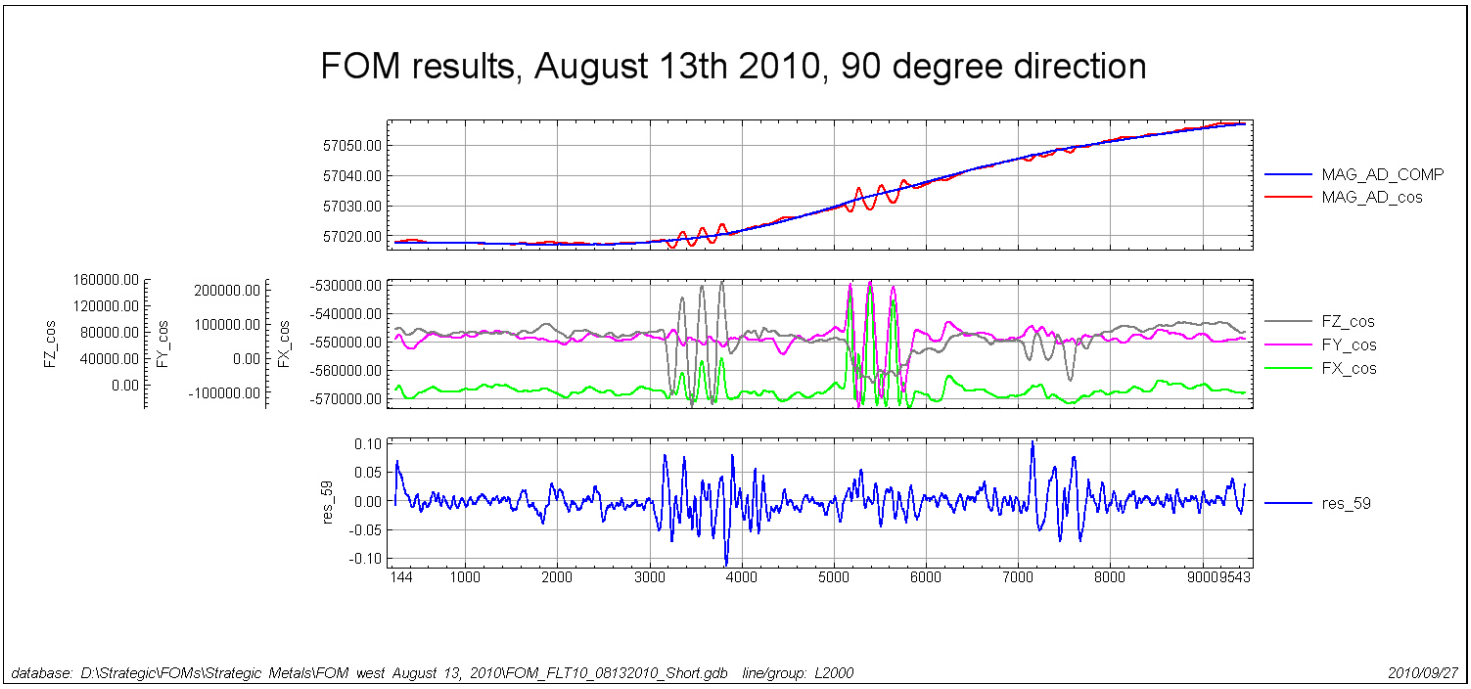
FOM results, August 8th 2010, 270 degree direction



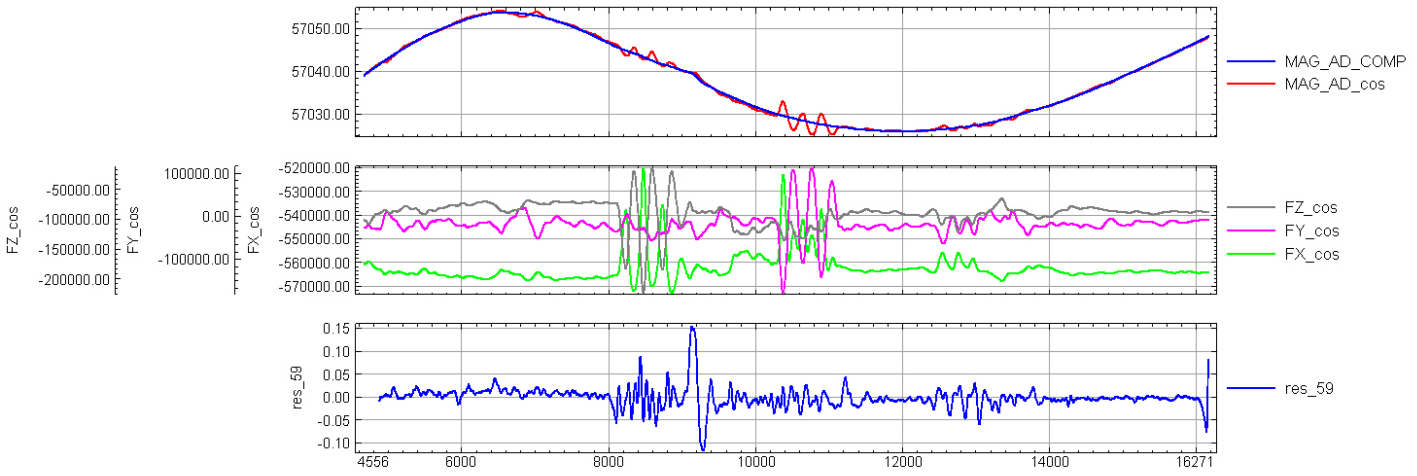
database: D:\Strategic Metals\FOM\FOM west August 9. 2010\FLT01_FOM_08082010_Short.gdb line/group: L4000 *2010/08/09*

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
	total	0.695	0.320	0.615	**1.630**



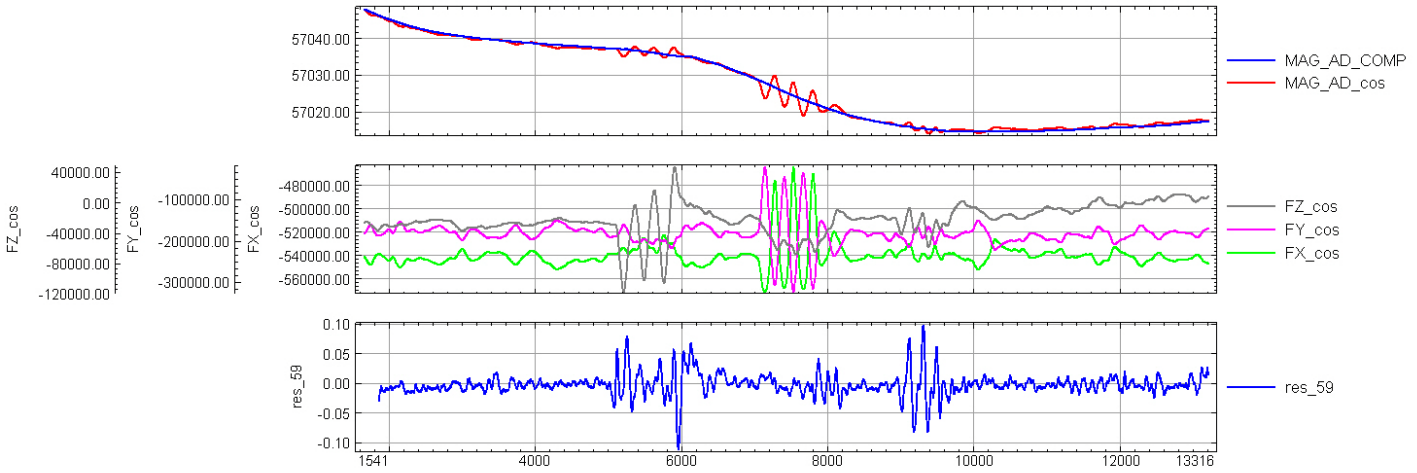


FOM results, August 13th 2010, 180 degree direction



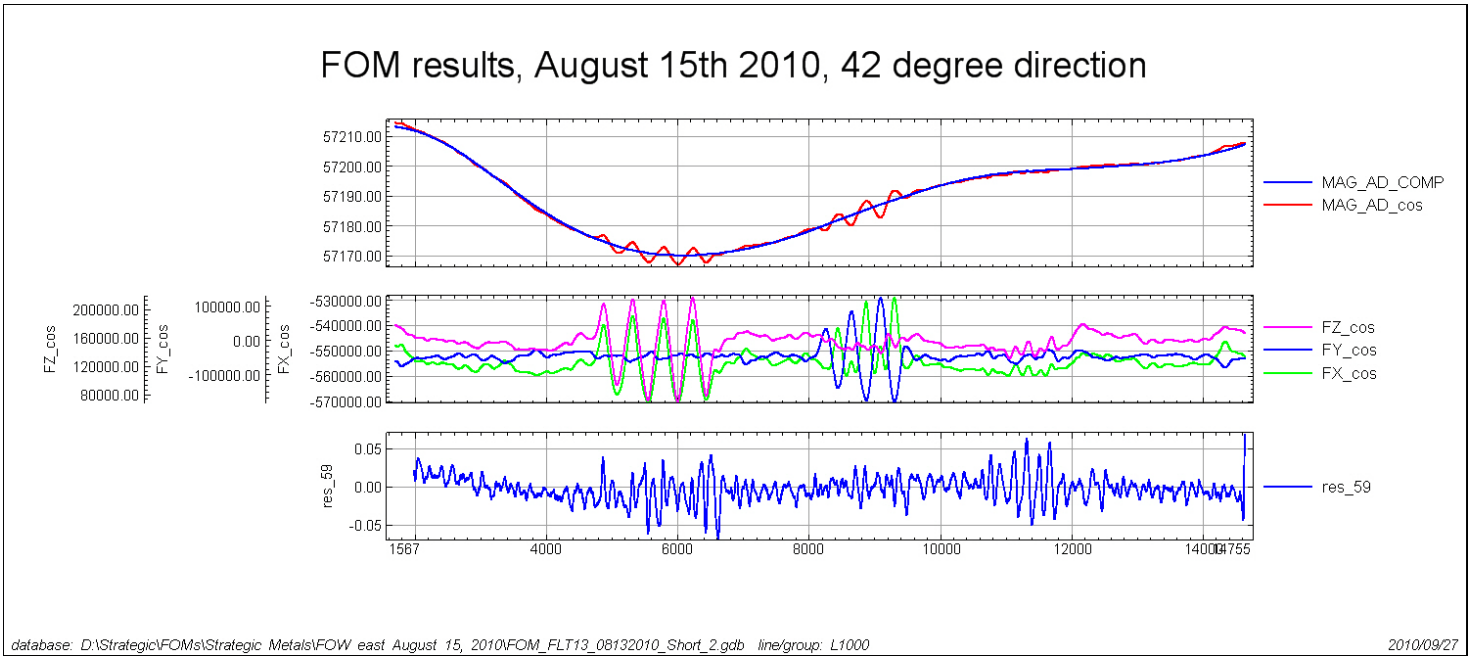
database: D:\Strategic\FOMs\Strategic Metals\FOM west August 13, 2010\FOM_FLT10_08132010_Short.gdb line/group: L3000 *2010/09/27*

FOM results, August 13th 2010, 270 degree direction

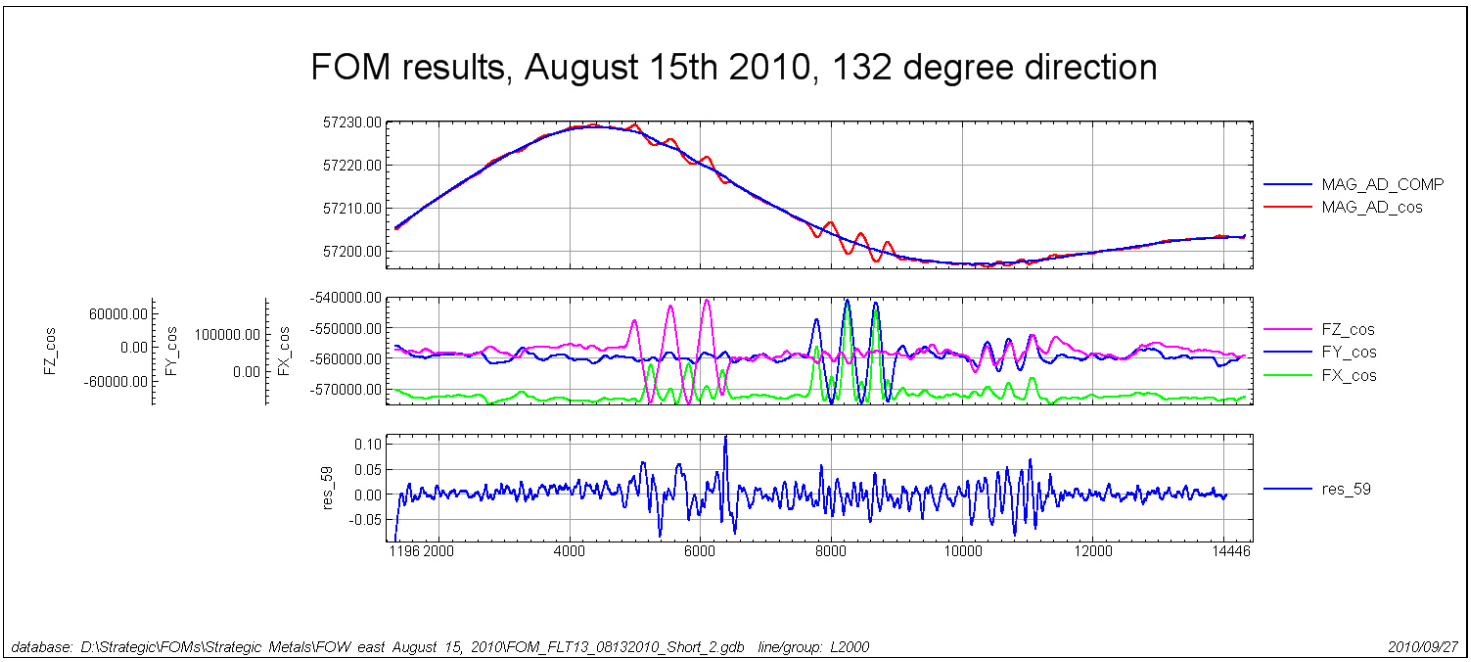


database: D:\Strategic\FOMs\Strategic Metals\FOM west August 13, 2010\FOM_FLT10_08132010_Short.gdb line/group: L4000 *2010/09/27*

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
	total	0.580	0.270	0.500	**1.350**

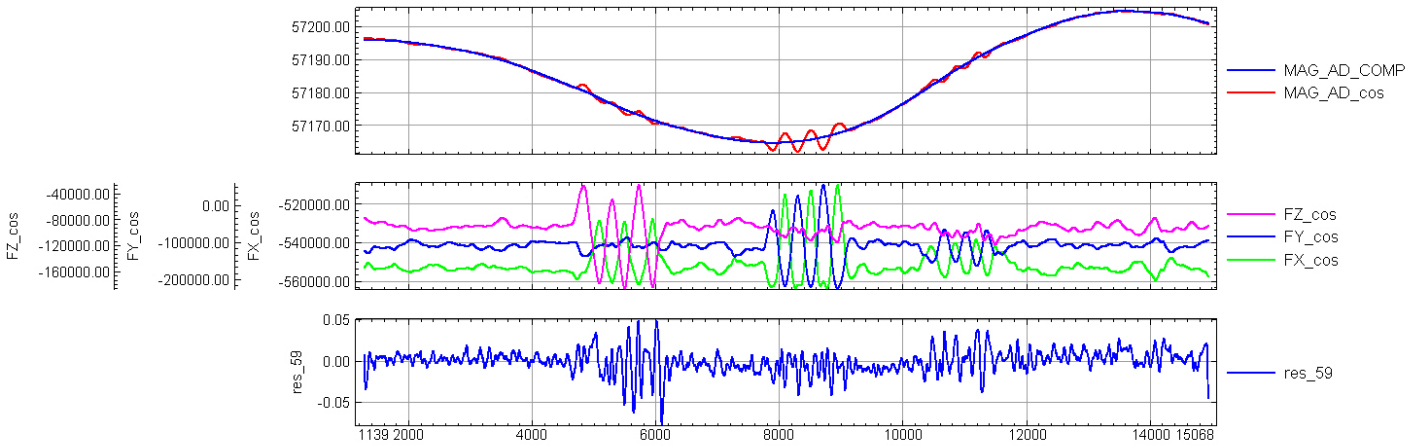


database: D:\Strategic\FOMs\Strategic Metals\FOW east August 15, 2010\FOM_FLT13_08132010_Short_2.gdb line/group: L1000 *2010/09/27*



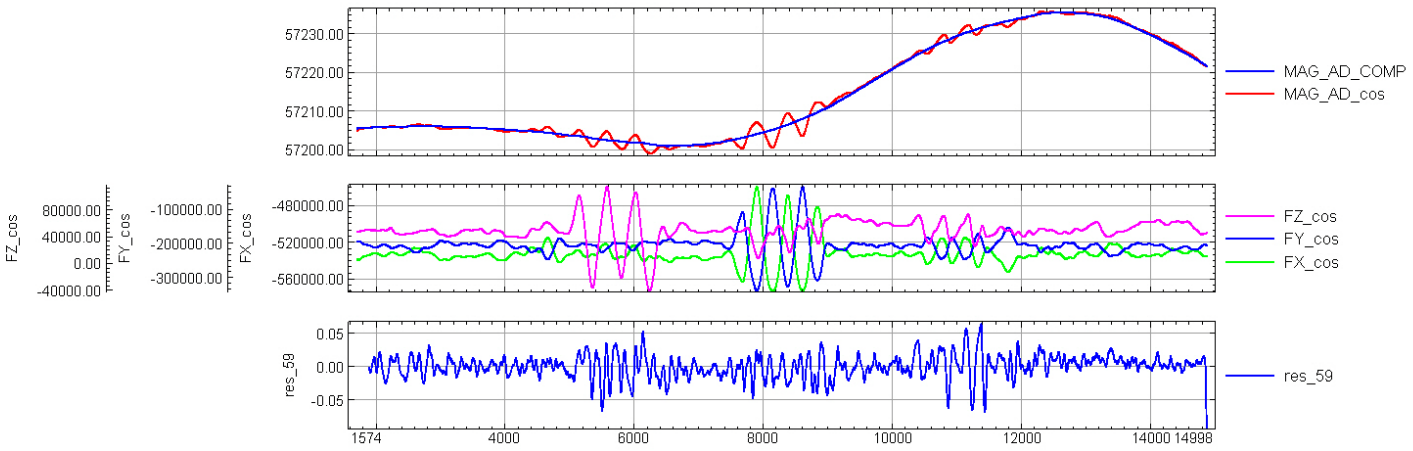
database: D:\Strategic\FOMs\Strategic Metals\FOW east August 15, 2010\FOM_FLT13_08132010_Short_2.gdb line/group: L2000 *2010/09/27*

FOM results, August 15th 2010, 222 degree direction



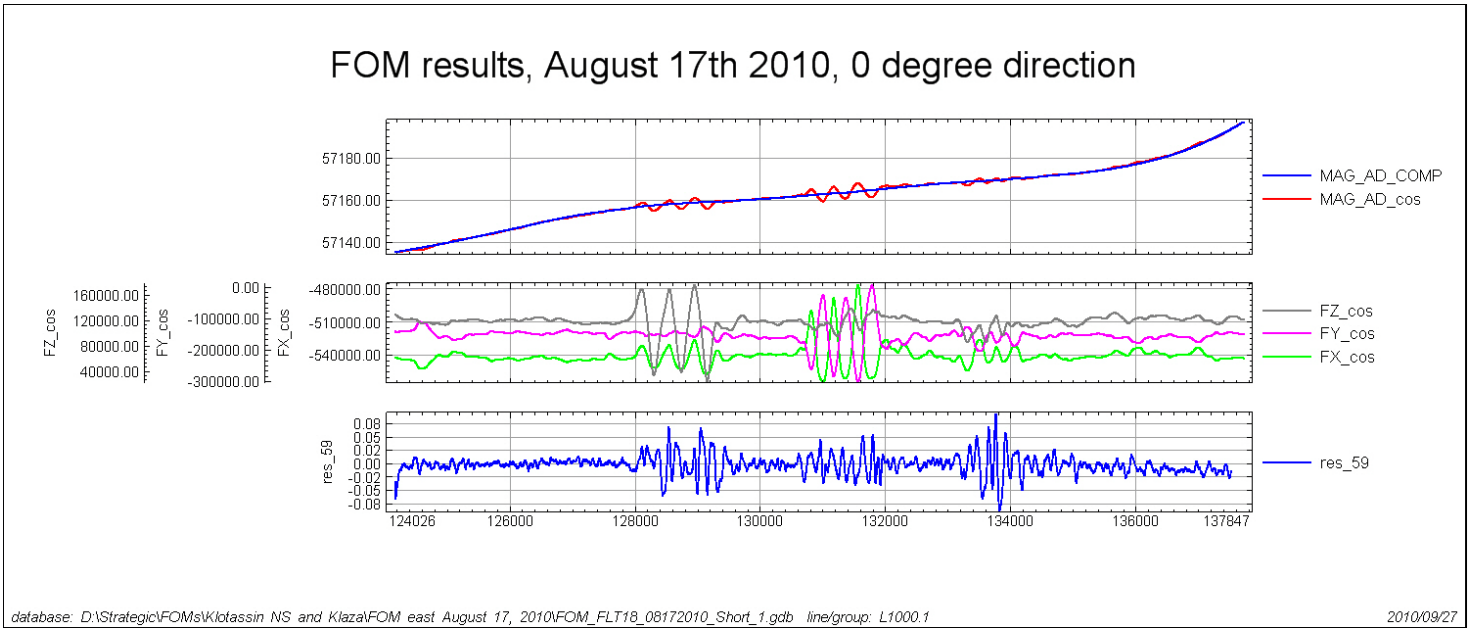
database: D:\Strategic\FOMs\Strategic Metals\FOW east August 15, 2010\FOM_FLT13_08132010_Short_2.gdb line/group: L3000 2010/09/27

FOM results, August 15th 2010, 312 degree direction

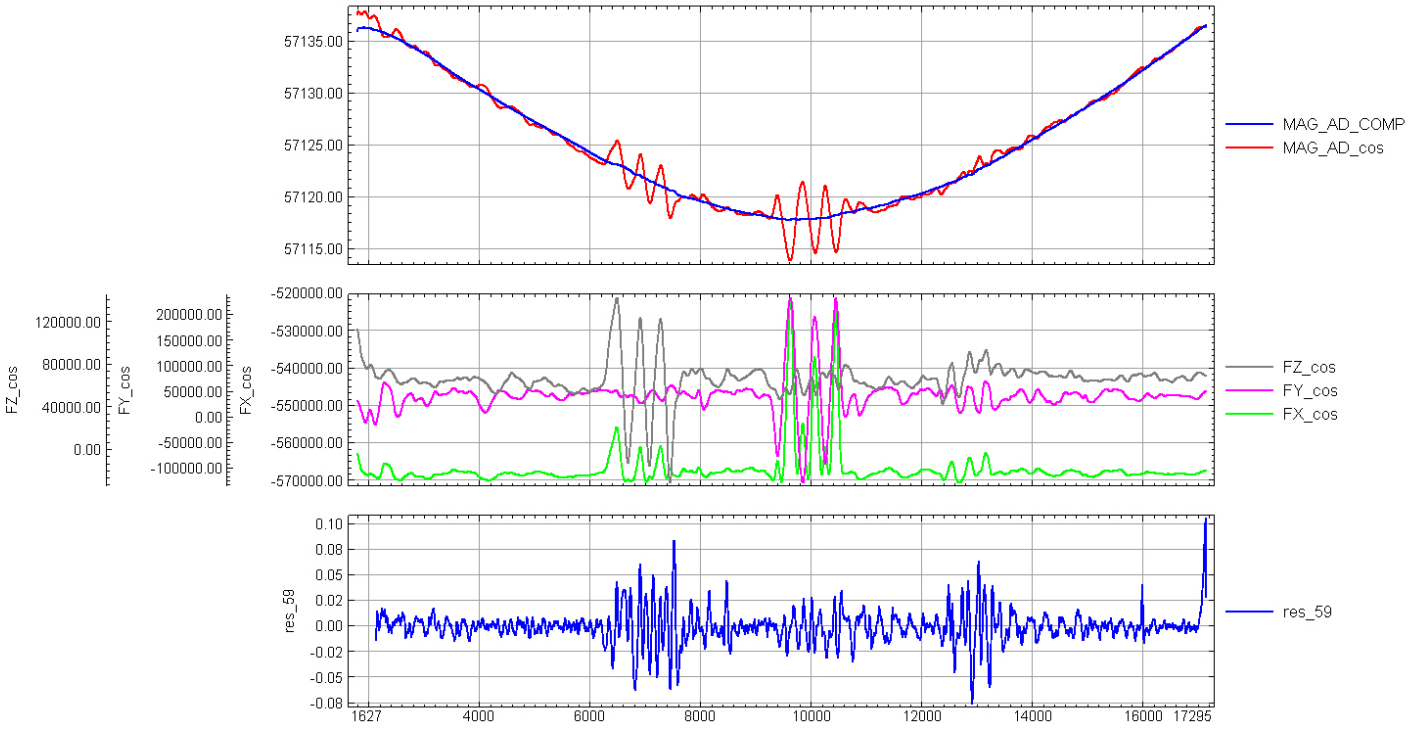


database: D:\Strategic\FOMs\Strategic Metals\FOW east August 15, 2010\FOM_FLT13_08132010_Short_2.gdb line/group: L4000 2010/09/27

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
	total	0.488	0.235	0.475	**1.198**

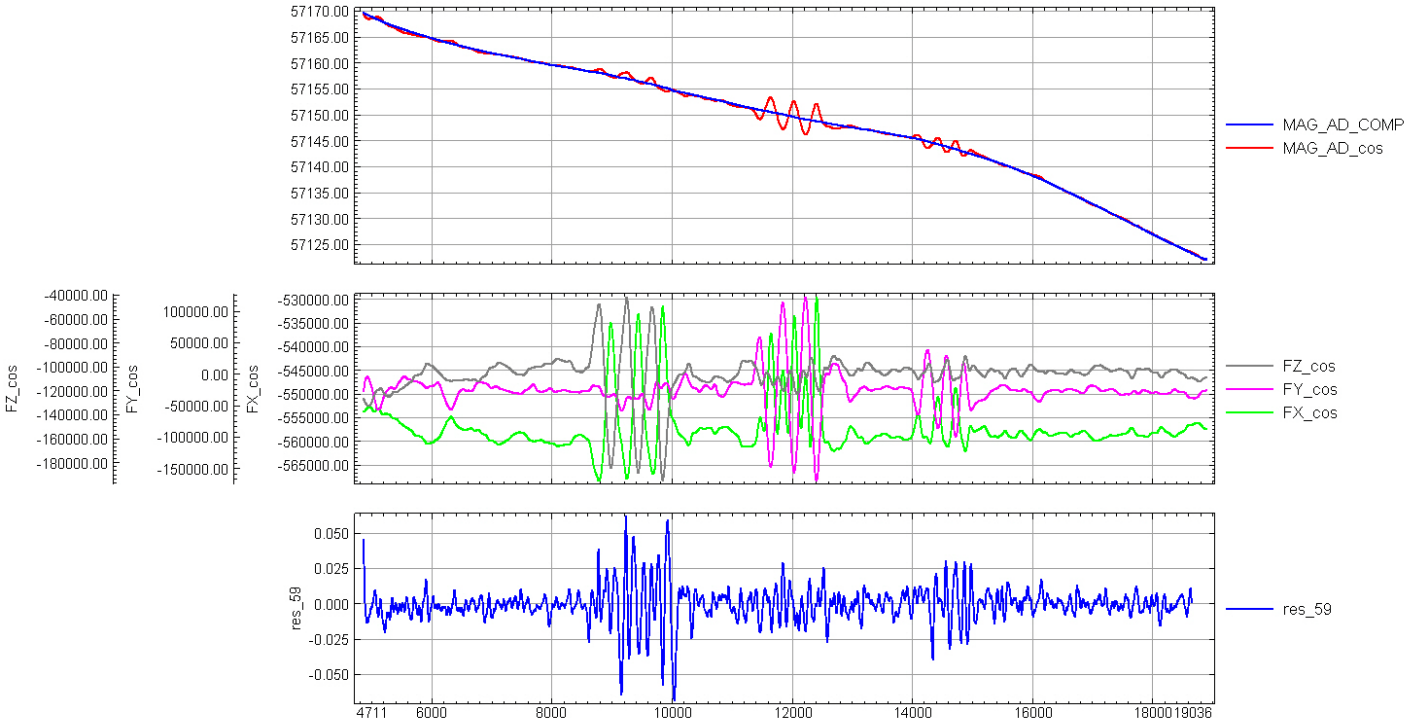


FOM results, August 17th 2010, 90 degree direction



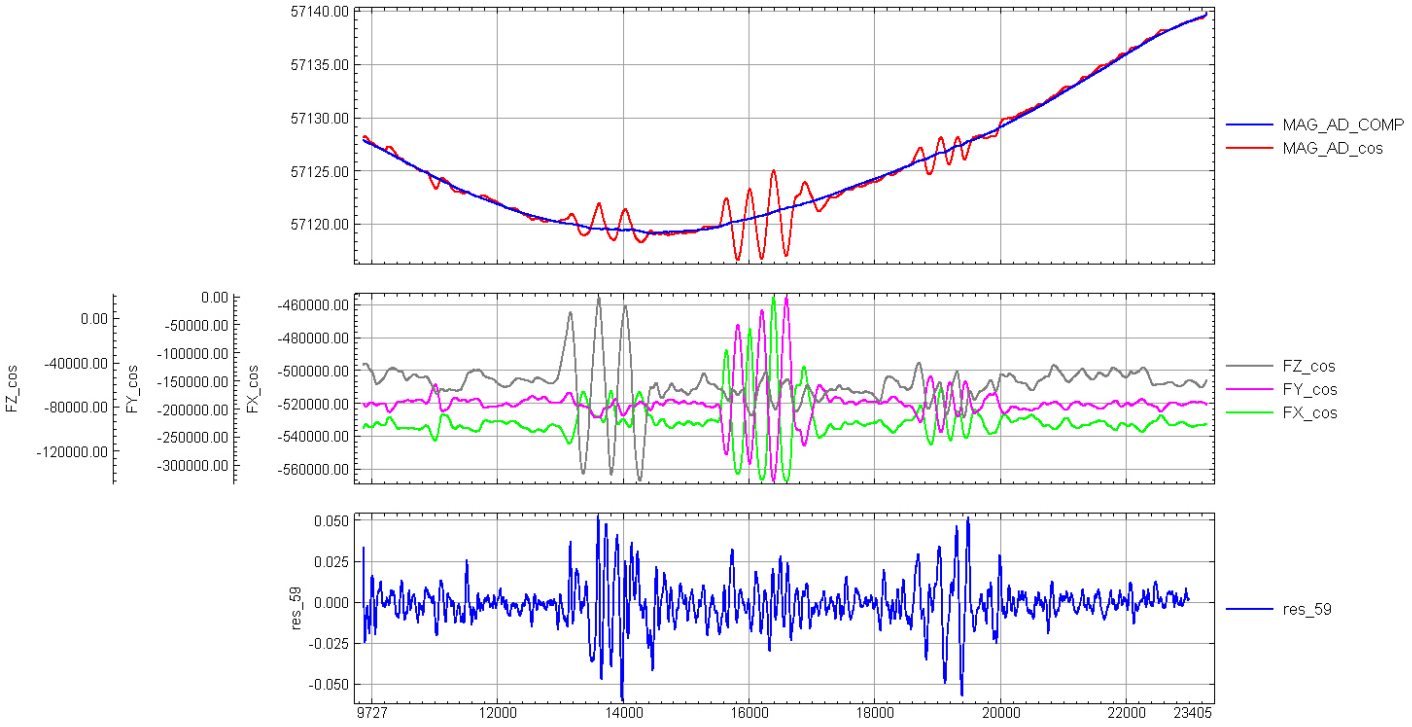
database: D:\Strategic\FOMs\Klotassin NS and Klaza\FOM east August 17, 2010\FOM_FLT18_08172010_Short_1.gdb line/group: L2000.1 *2010/09/27*

FOM results, August 17th 2010, 180 degree direction



database: D:\Strategic\FOMs\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:\Strategic\FOMs\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	1st 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, se section 7.5.6.8 for details)

Th_FINAL_CORR	counts/sec	Final Thorium counts; microleveled (if applicable, se section 7.5.6.8 for details)
U_FINAL_CORR	counts/sec	Final Uranium counts; microleveled (if applicable, se section 7.5.6.8 for details)
TC_FINAL_CORR	counts/sec	Final Total Count counts; microleveled (if applicable, se 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

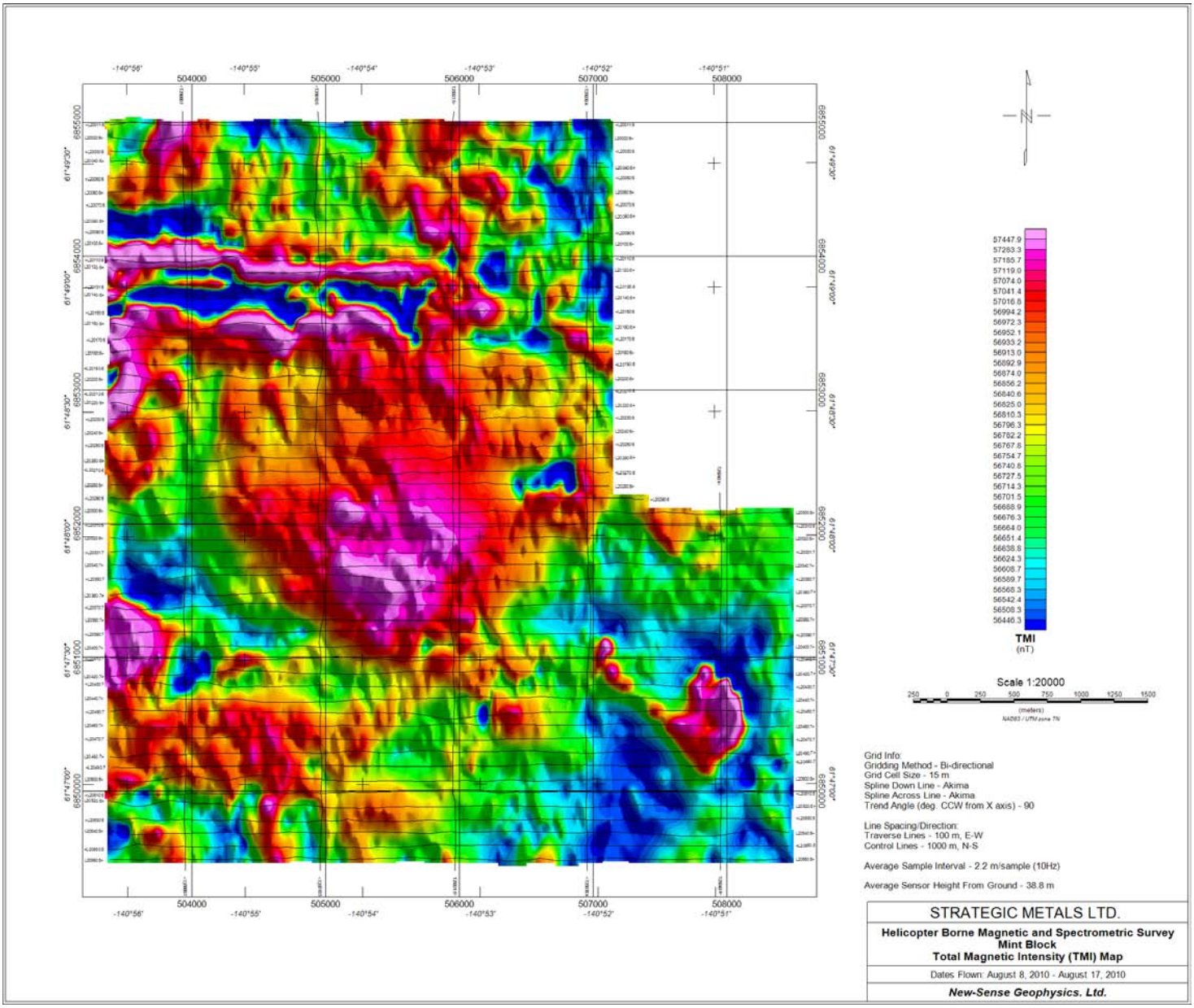
Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2002	2004	2007	2001	2005	8014
Gain	0.930262	0.915566	0.940916	0.920625	0.995206	-
Peak	870.26 (+/- 0.472)	877.55 (+/- 1.109)	872.20 (+/- 0.606)	871.61 (+/- 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

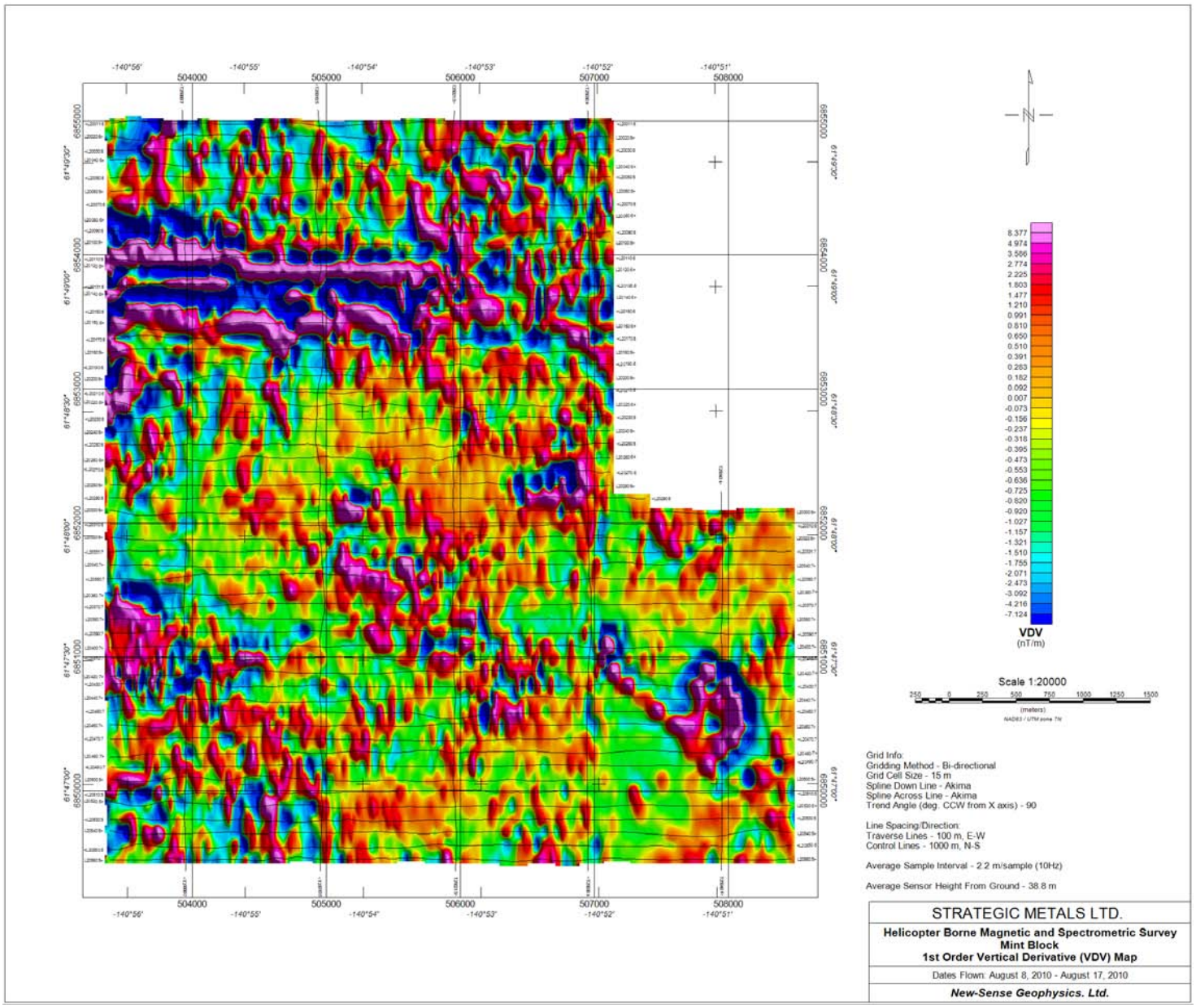
Detector	Det 1 - SN:00318	Det 2 - SN:00037	Det 3 - SN:00040	Det 4 - SN:00032	Det 5 - SN:00038	Det 1 + 2 + 3 + 4
Status	Done	Done	Done	Done	Done	Done
Counts	2001	2004	2005	2005	2004	8015
Gain	0.926781	0.913206	0.938985	0.920016	0.991829	-
Peak	871.25 (+/- 0.475)	875.69 (+/- 1.079)	872.19 (+/- 0.727)	870.29 (+/- 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

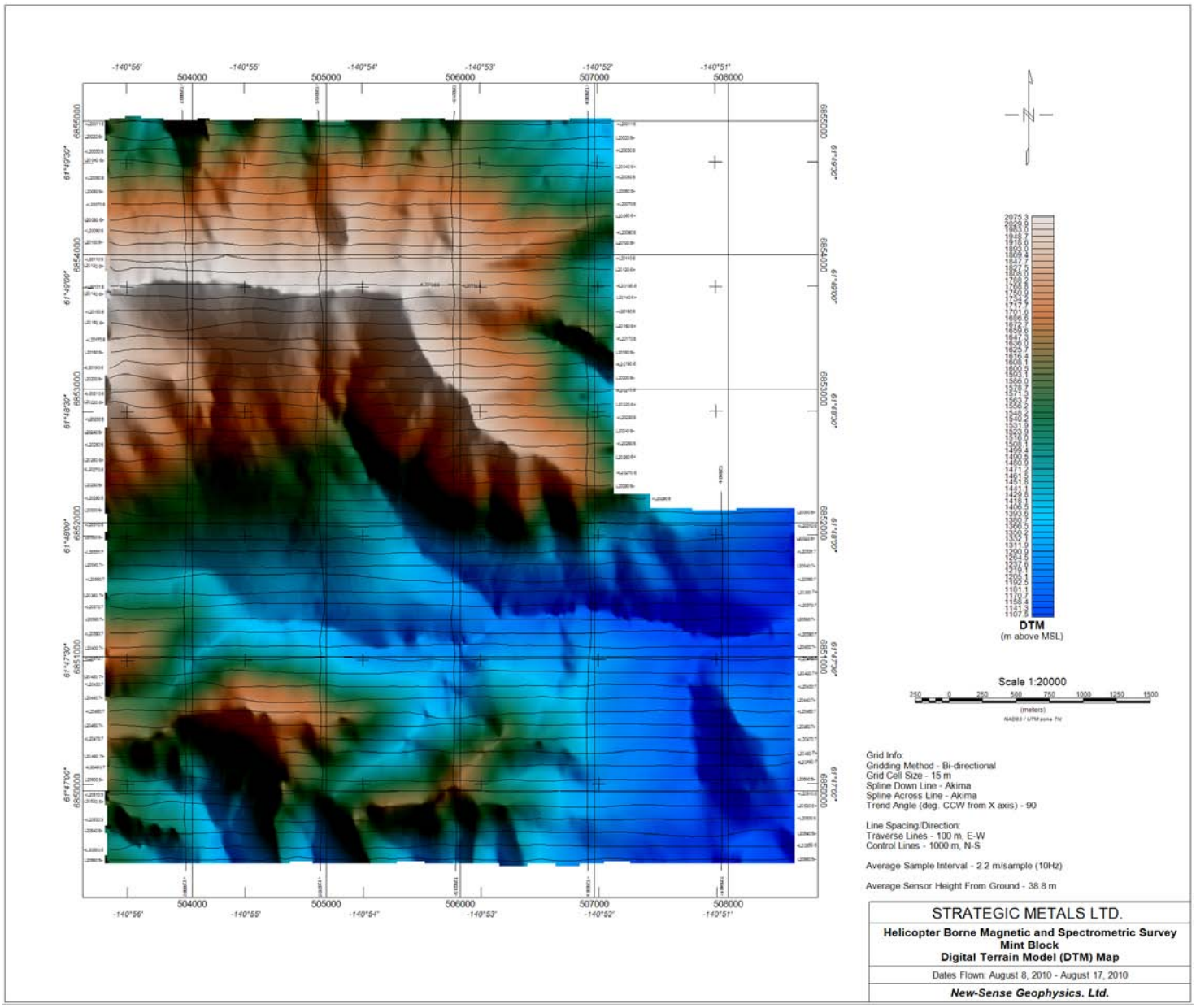
Mint Block Image of TMI FINAL Map



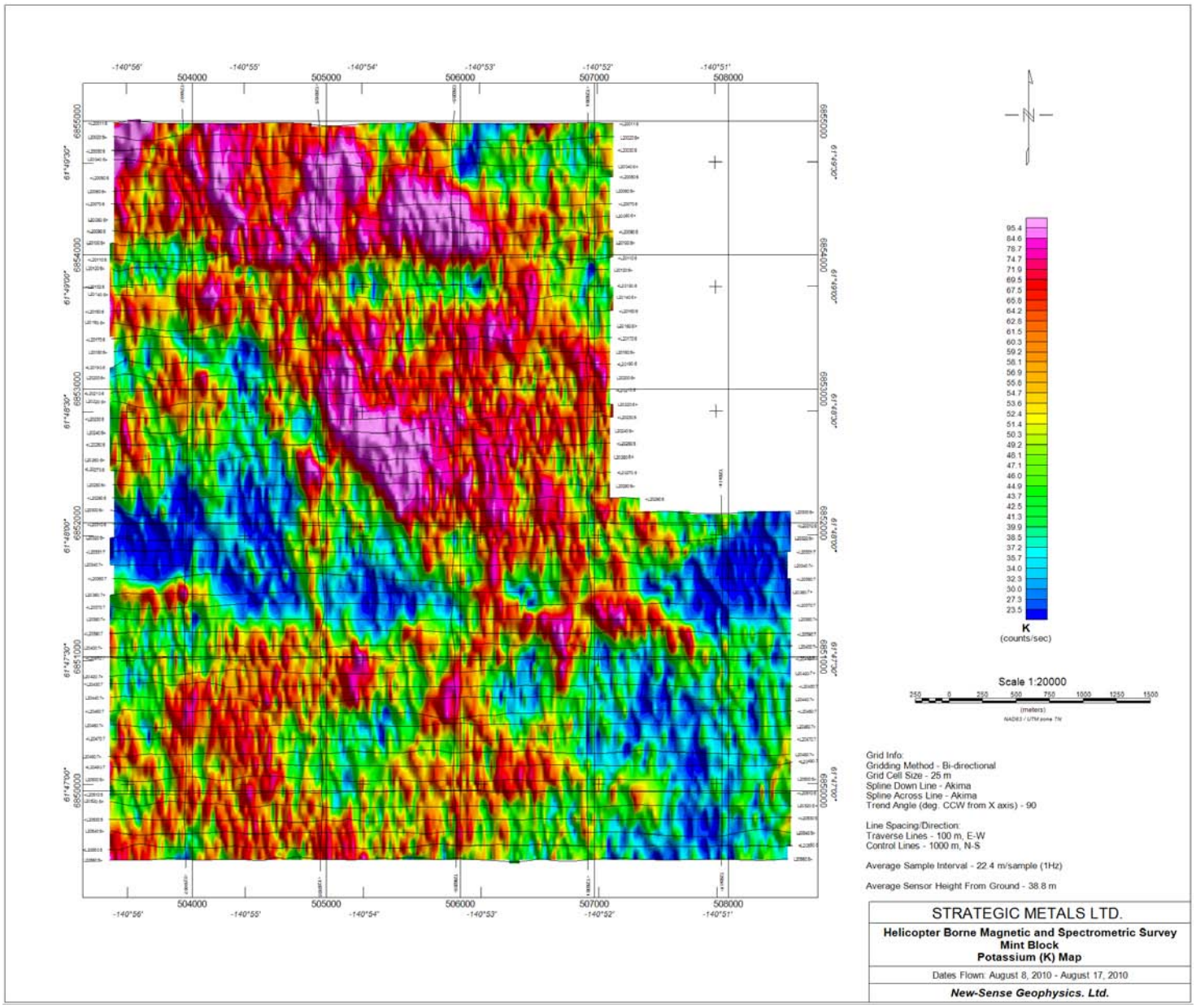
Mint Block Image of VDV Map



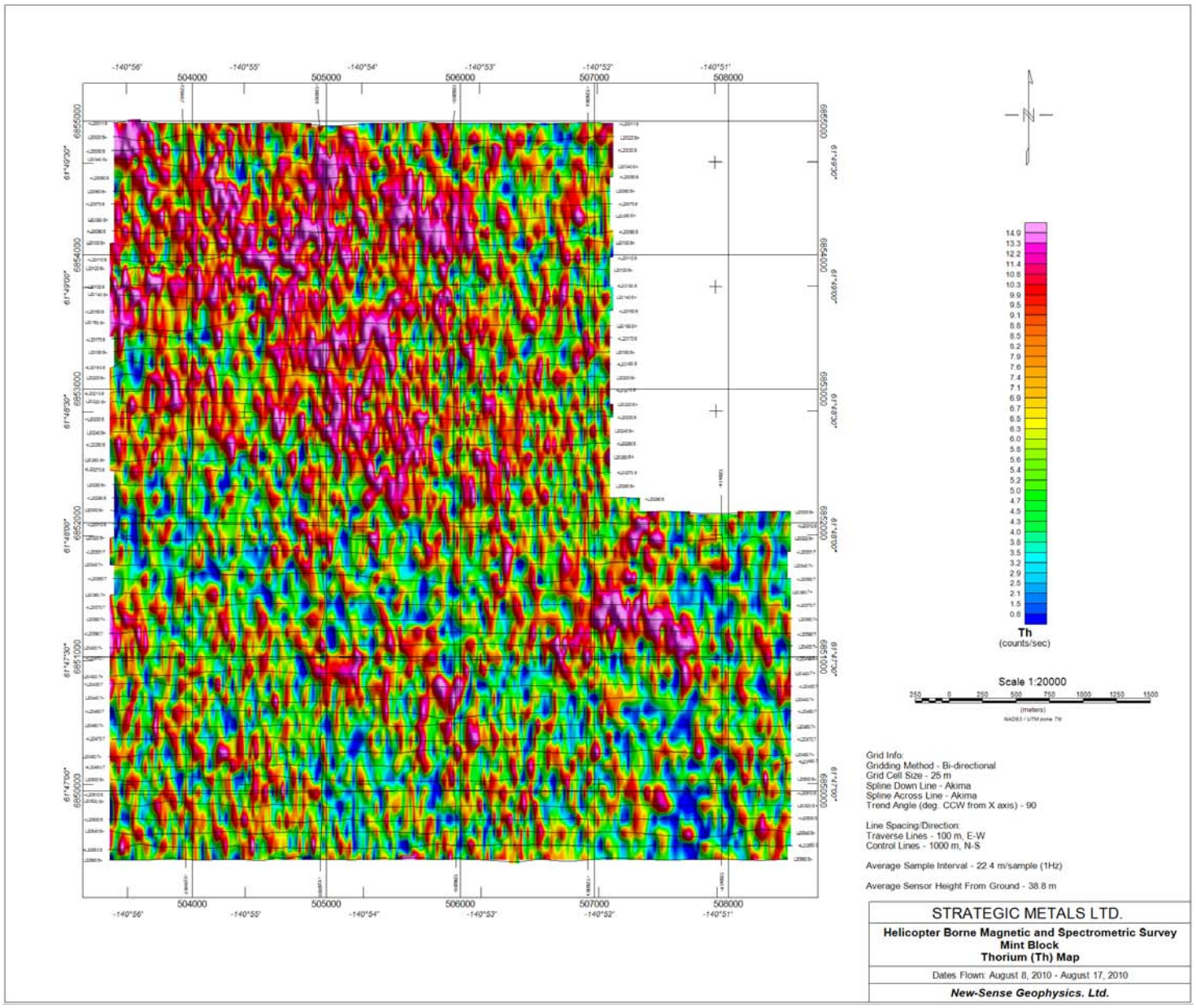
Mint Block Image of DTM Map



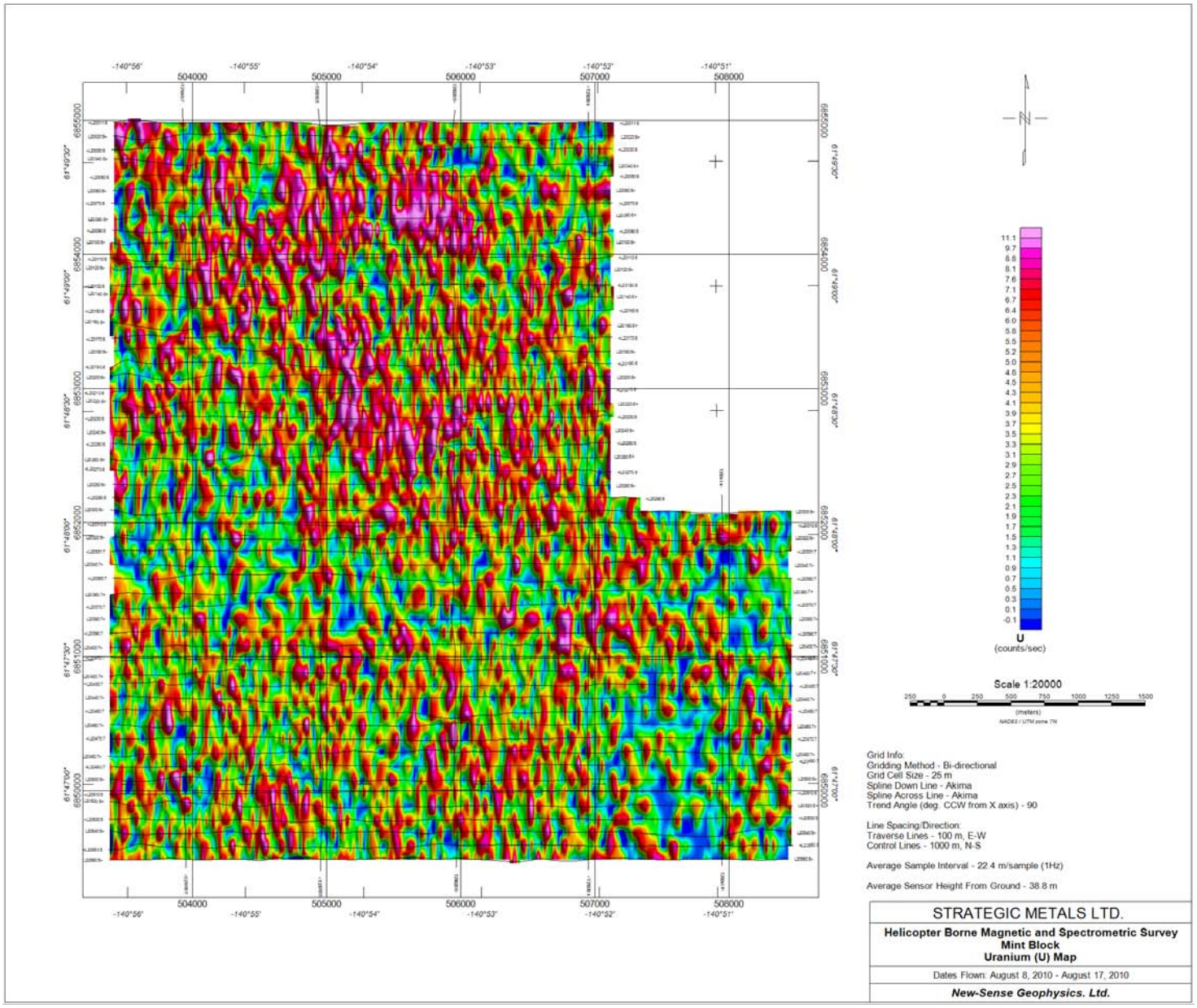
Mint Block Image of Potassium Map



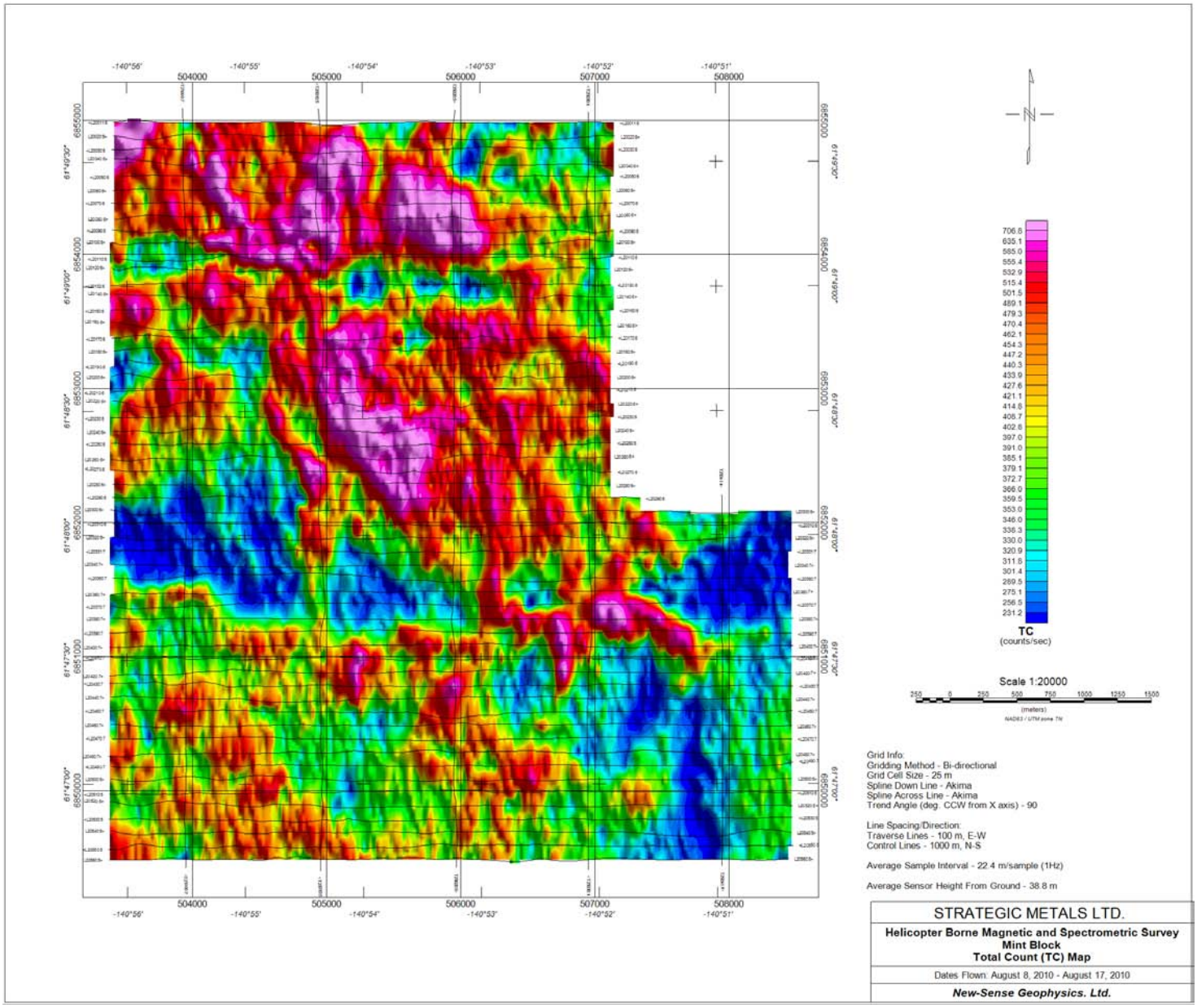
Mint Block Image of Thorium Map



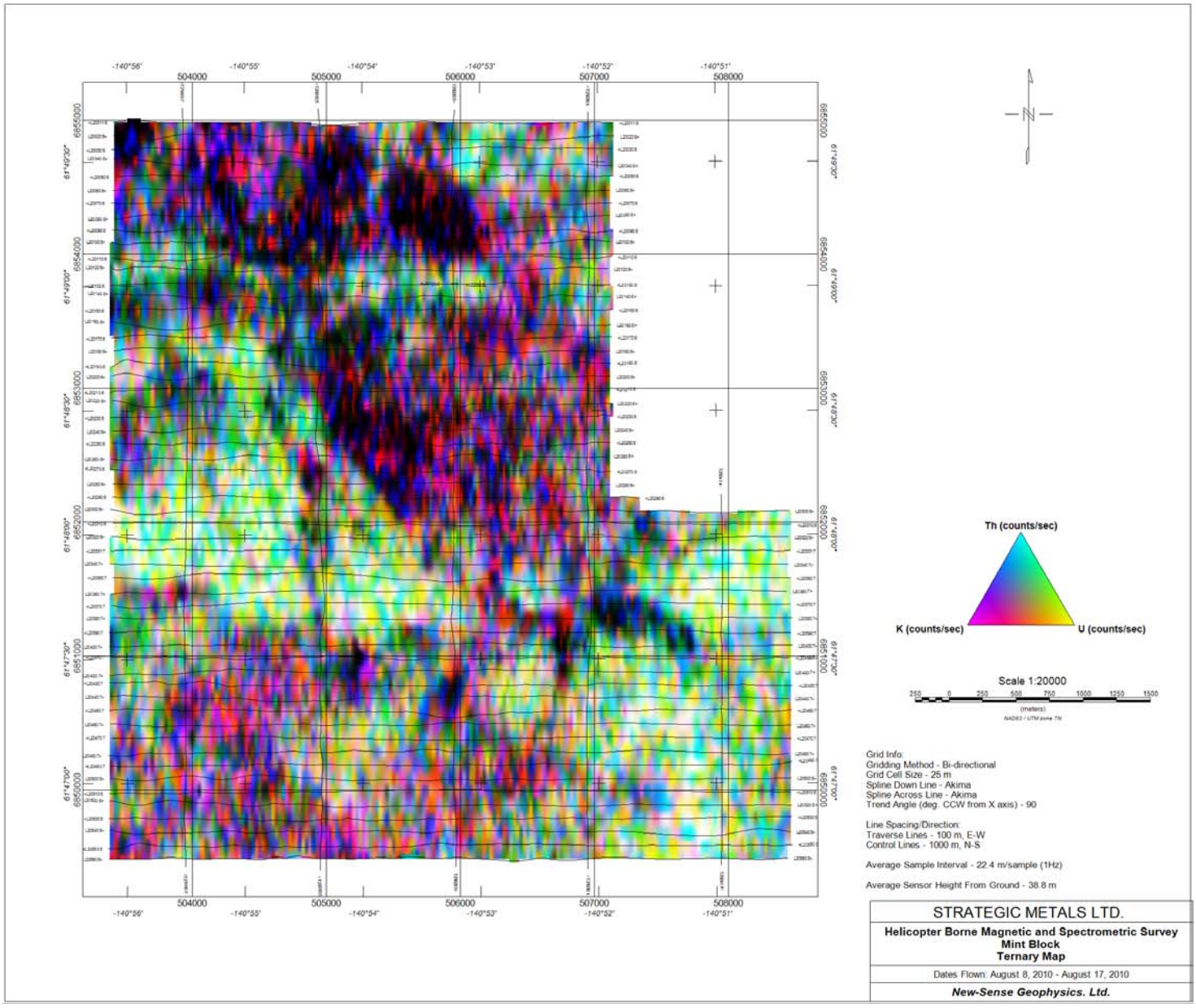
Mint Block Image of Uranium Map



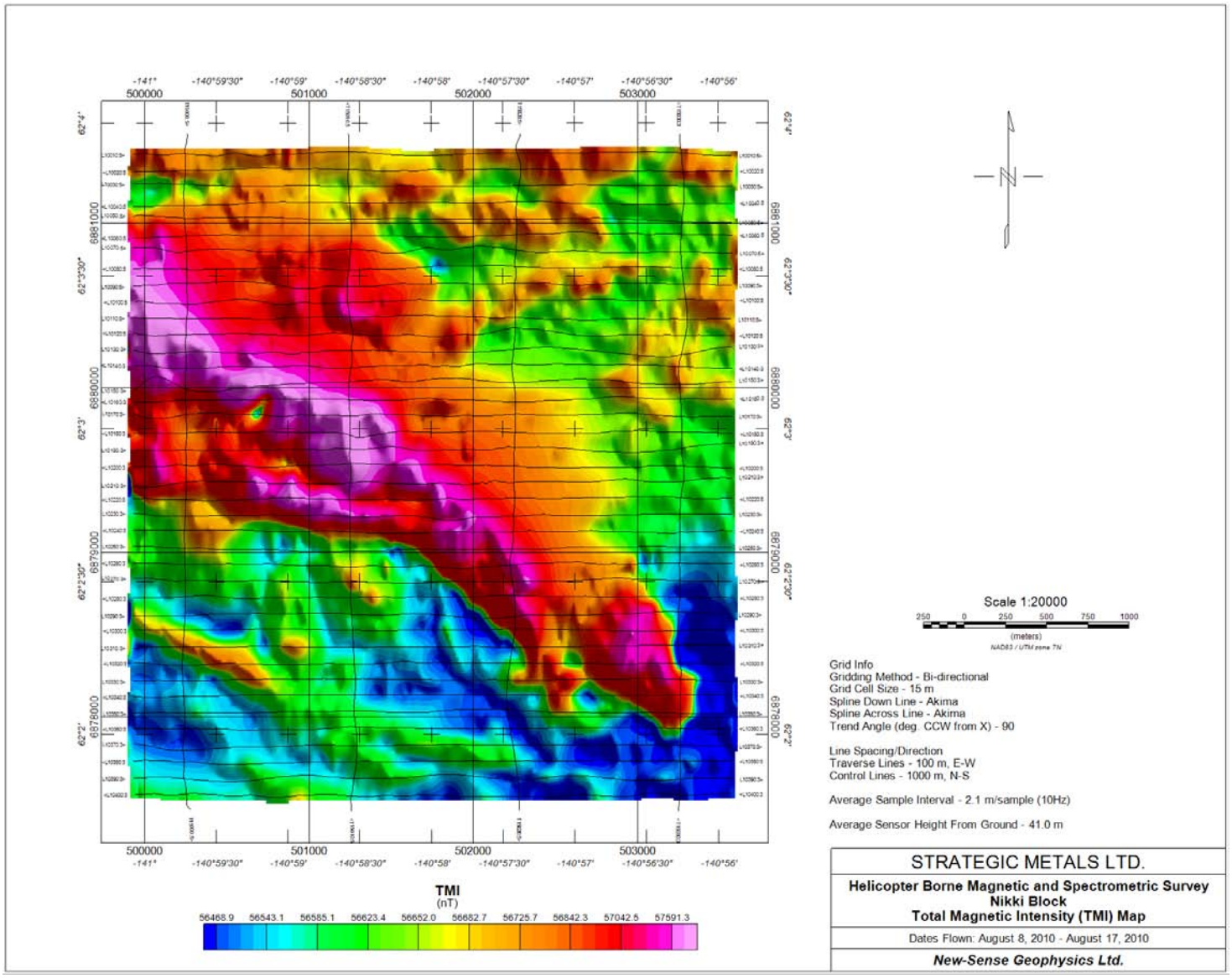
Mint Block Image of Total Count Map



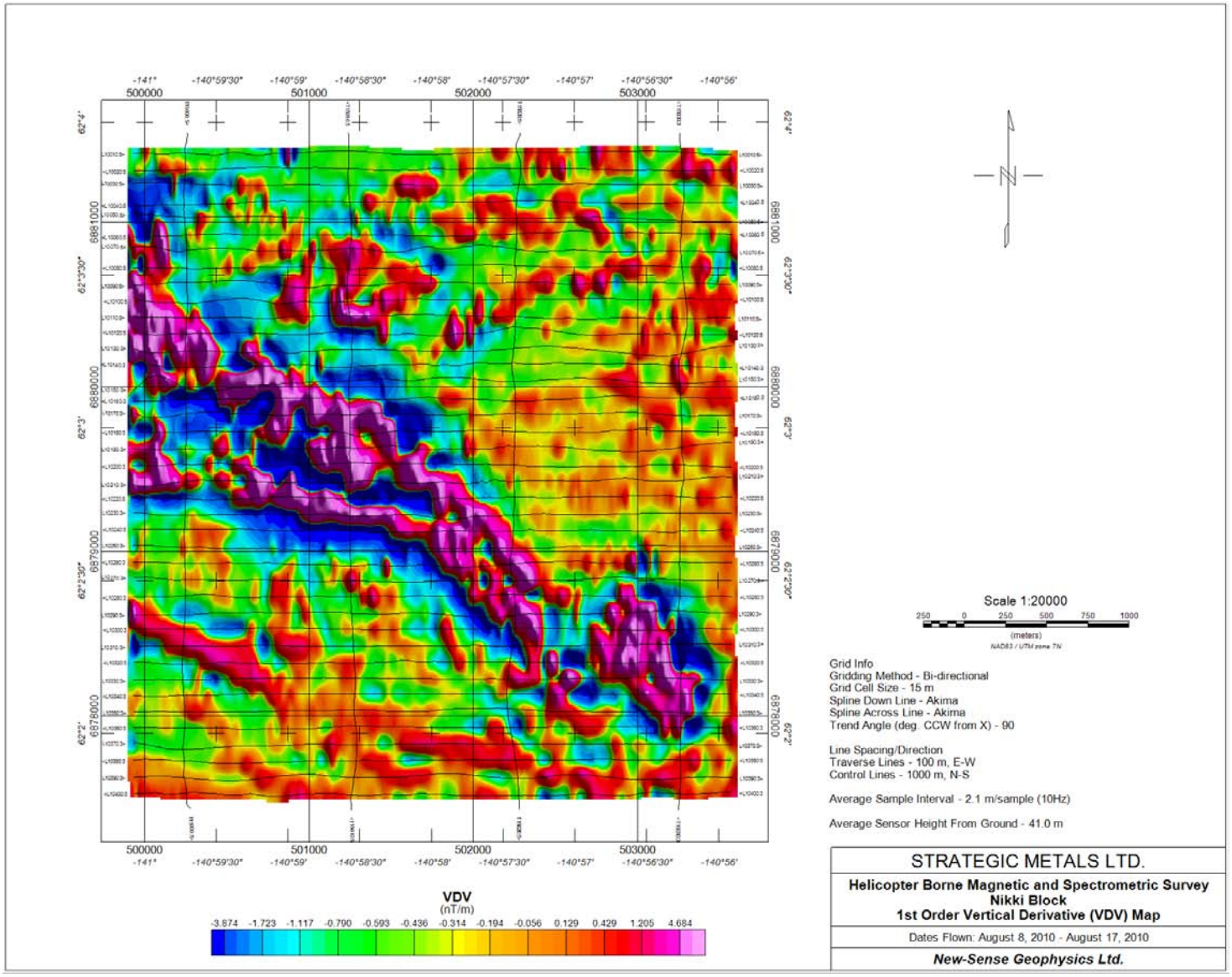
Mint Block Image of Ternary Map



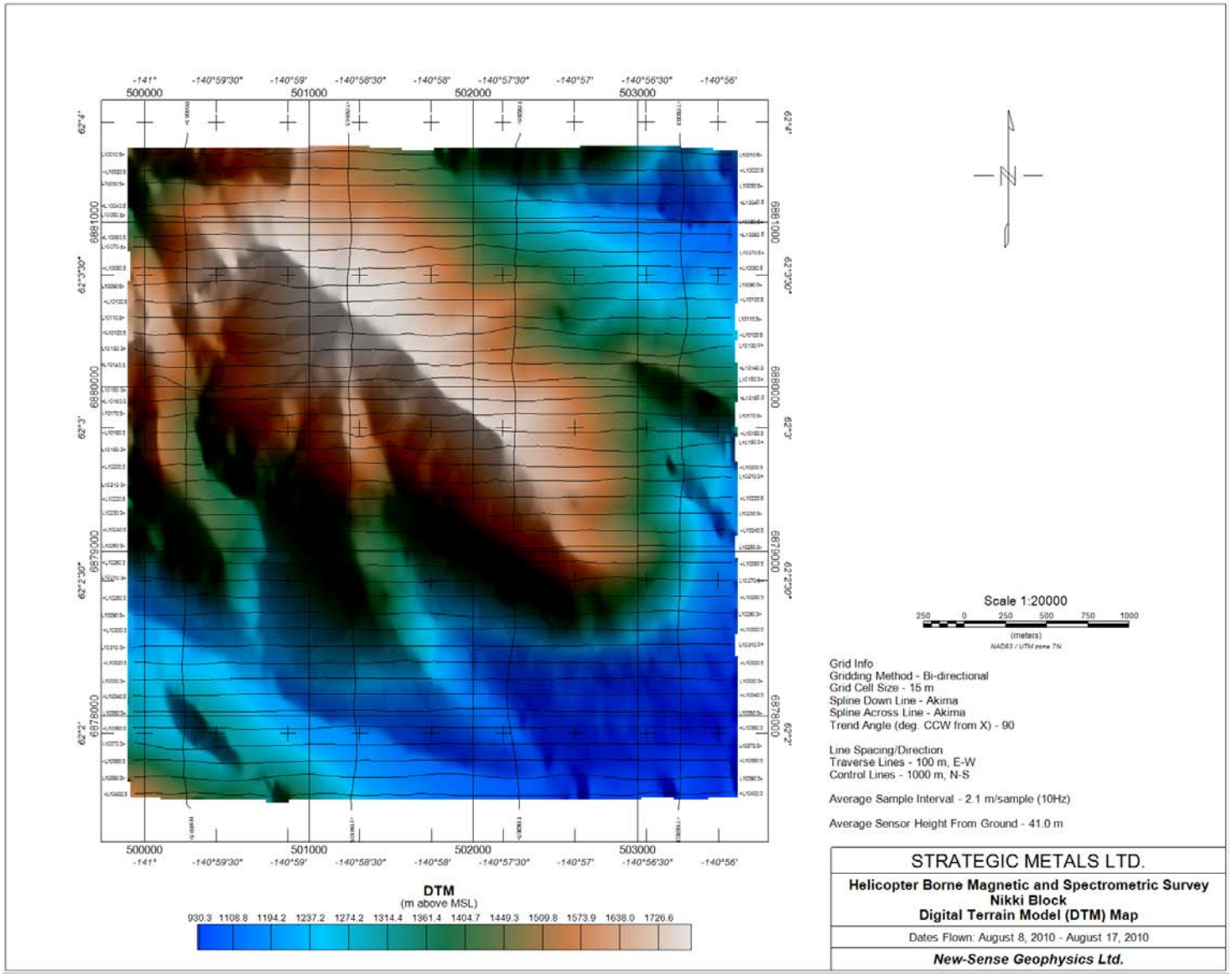
Nikki Block Image of TMI FINAL Map



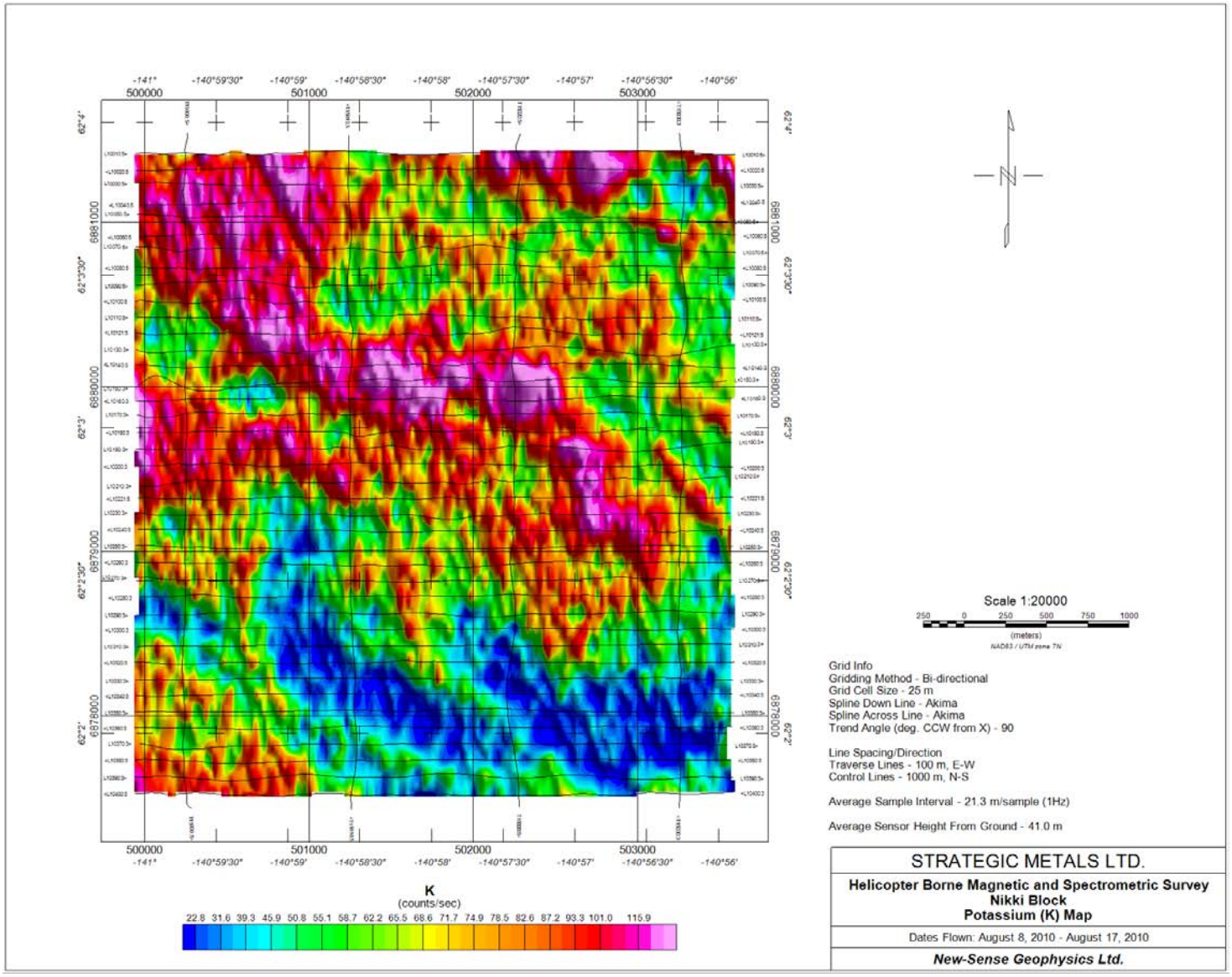
Nikki Block Image of VDV Map



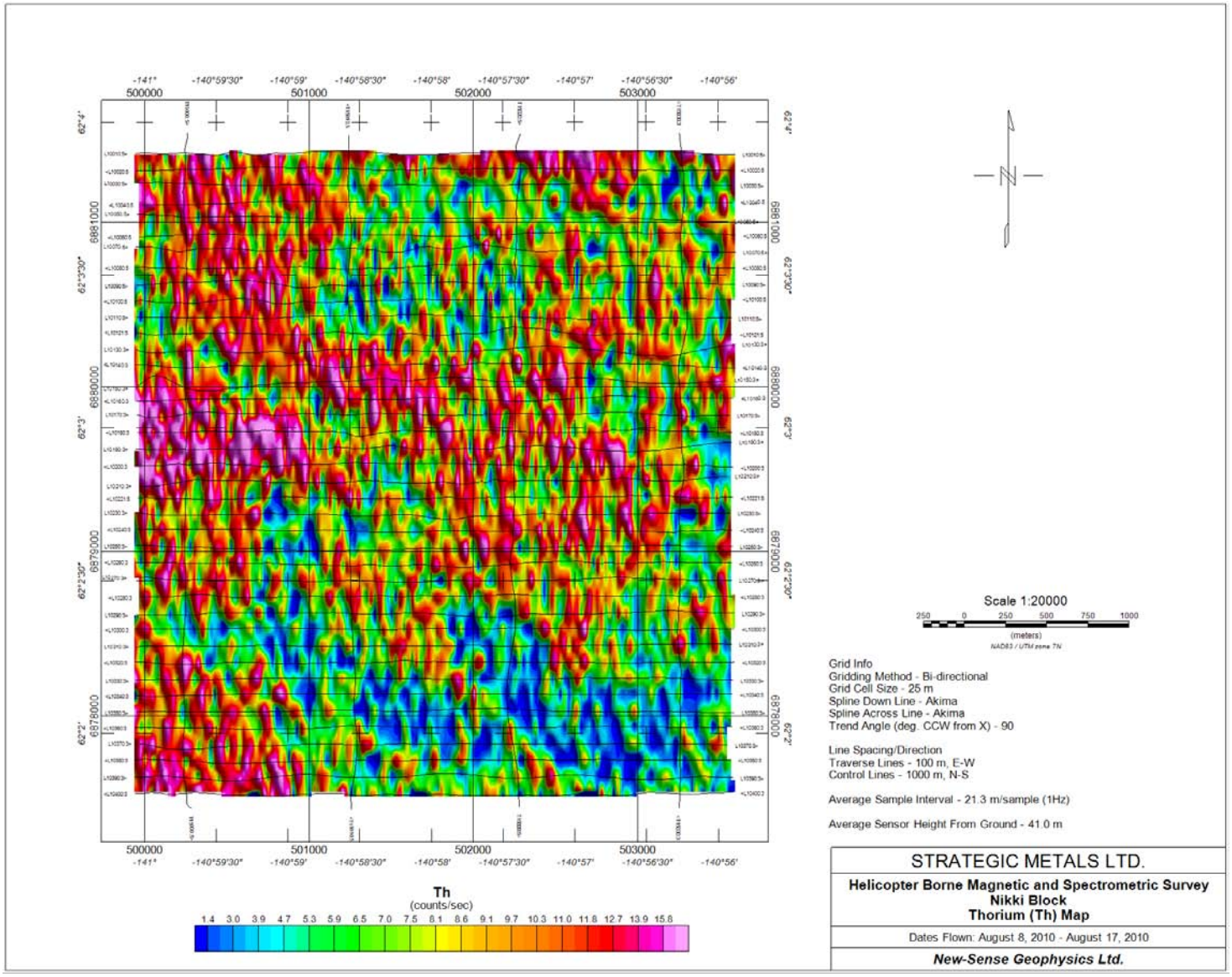
Nikki Block Image of DTM Map



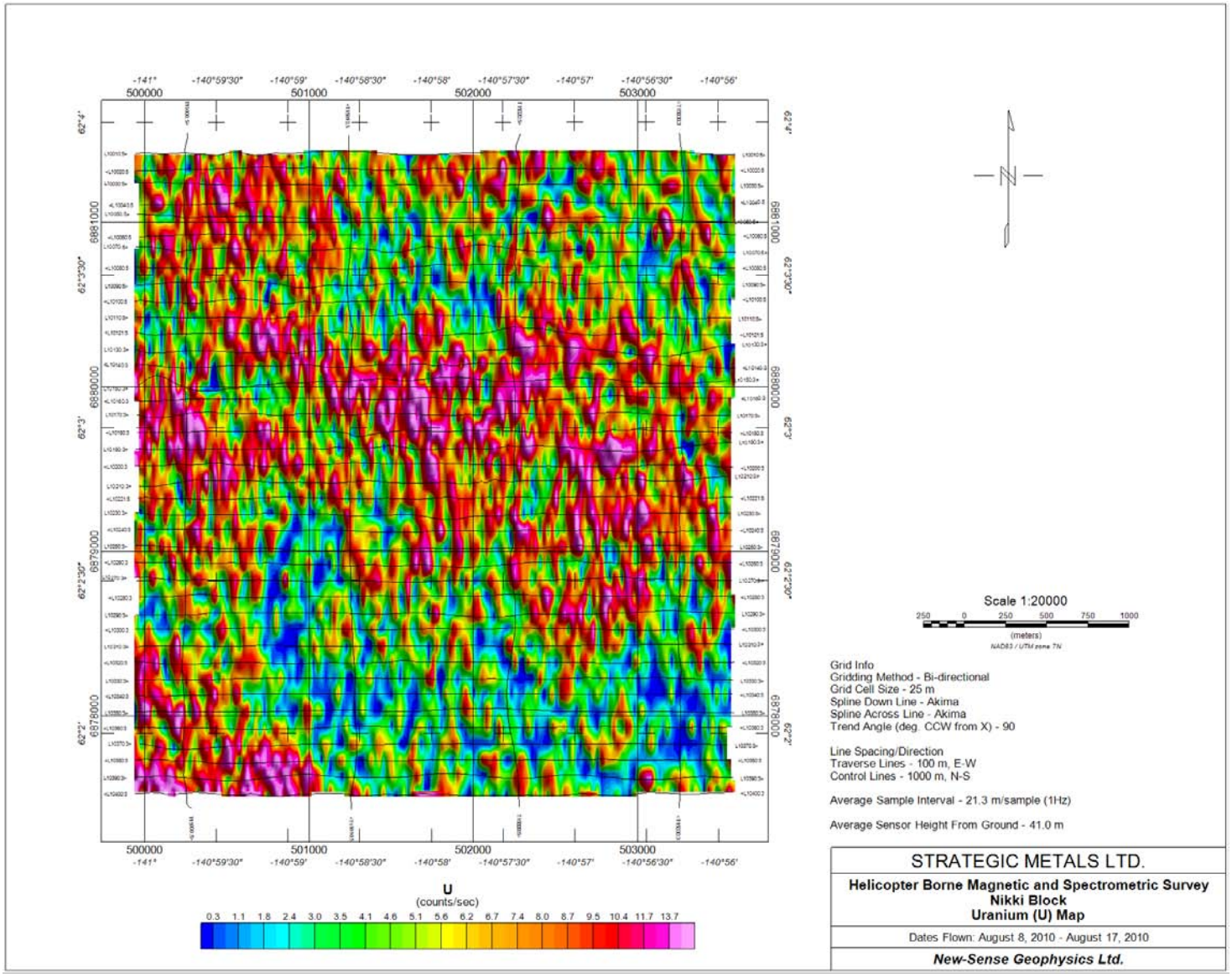
Nikki Block Image of Potassium Map



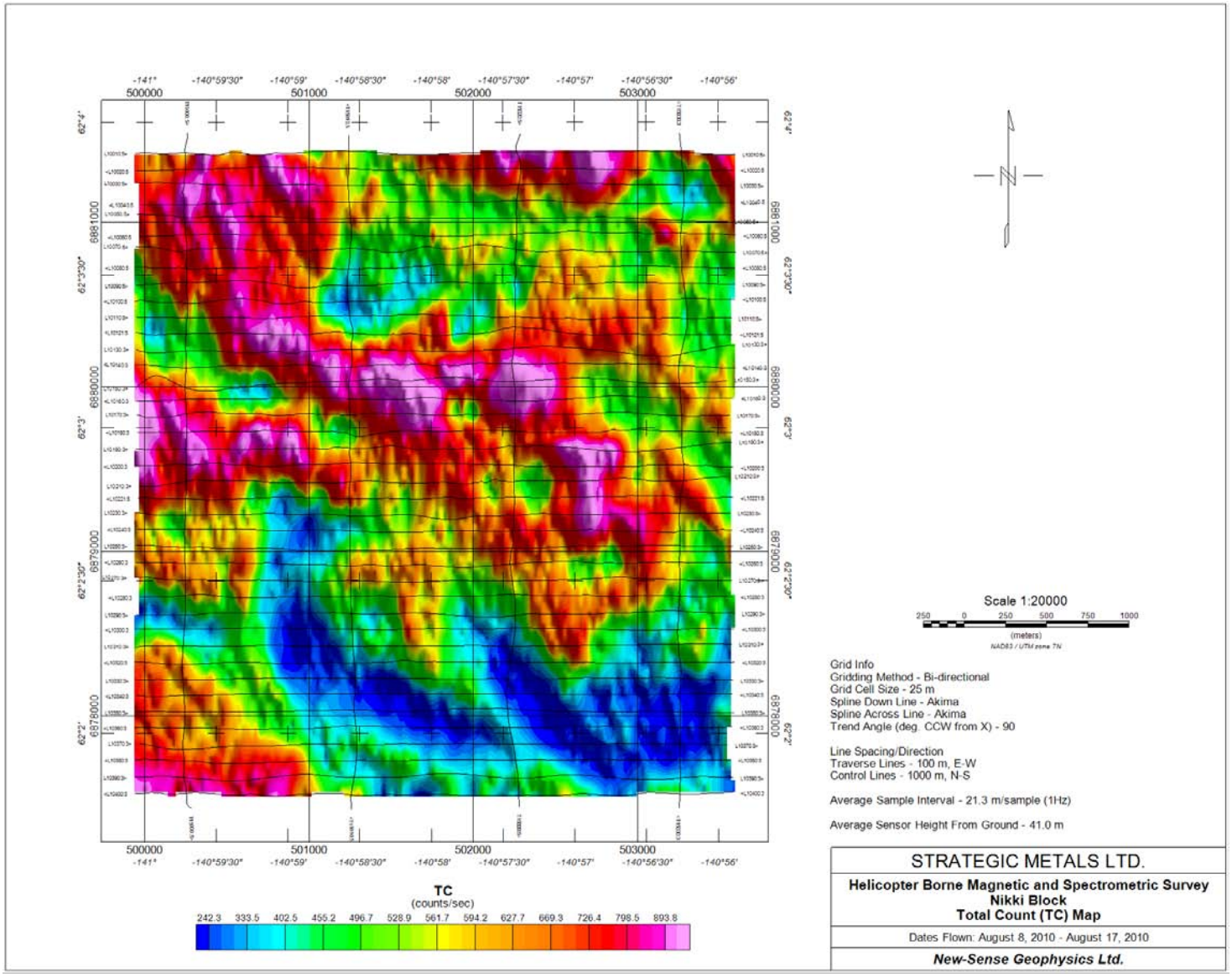
Nikki Block Image of Thorium Map



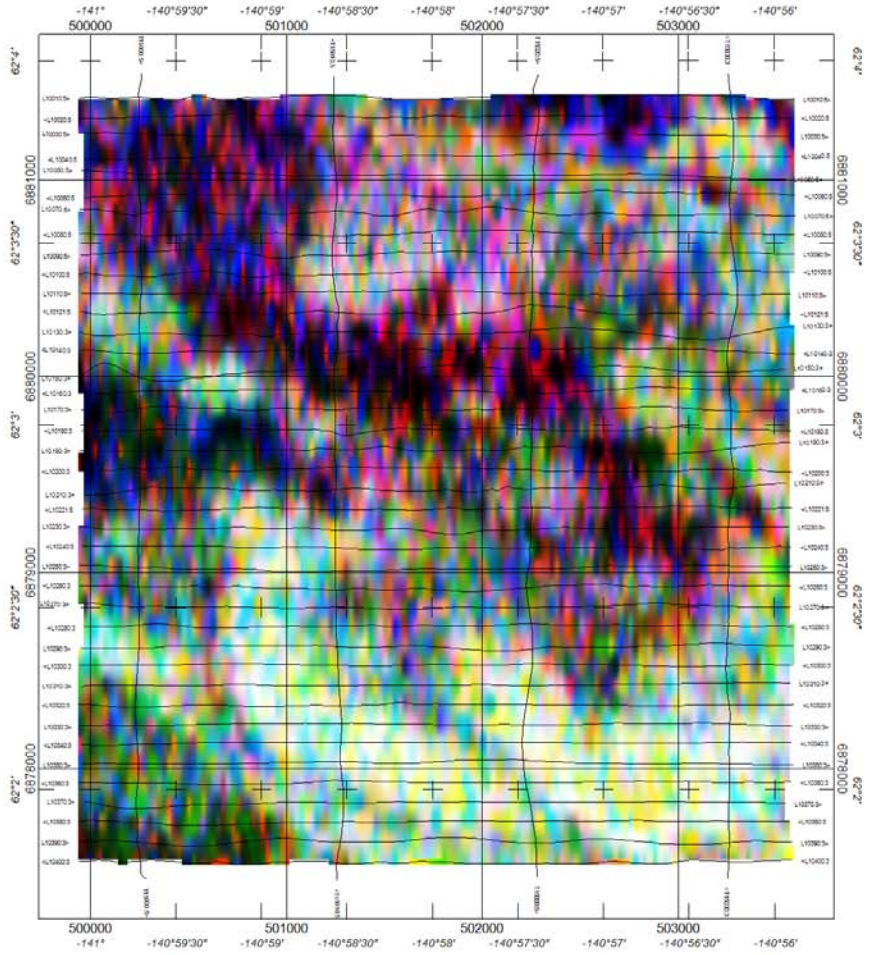
Nikki Block Image of Uranium Map



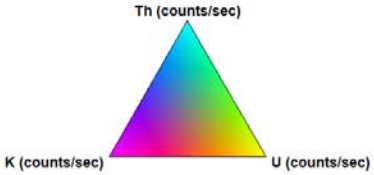
Nikki Block Image of Total Count Map



Nikki Block Image of Ternary Map







Scale 1:20000

250 0 250 500 750 1000

(meters)

NAD83 / UTM zone 7N

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) - 90

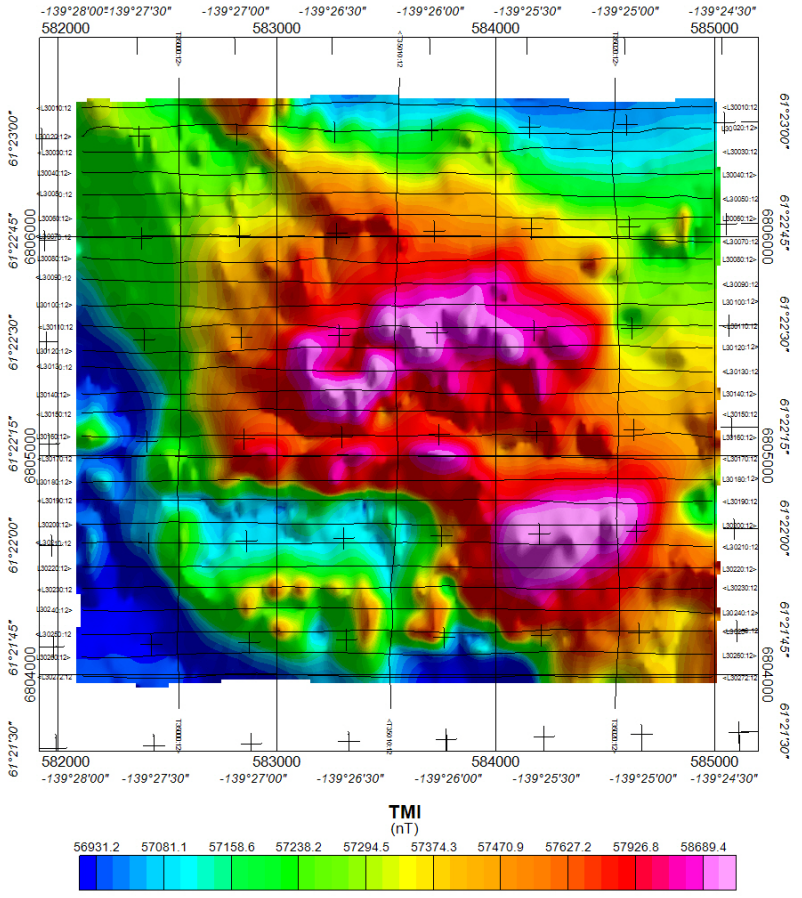
Line Spacing/Direction
Traverse Lines - 100 m, E-W
Control Lines - 1000 m, N-S

Average Sample Interval - 21.3 m/sample (1Hz)

Average Sensor Height From Ground - 41.0 m

STRATEGIC METALS LTD.
Helicopter Borne Magnetic and Spectrometric Survey **Nikki Block** **Ternary Image Map**
Dates Flown: August 8, 2010 - August 17, 2010
New-Sense Geophysics Ltd.

Corky Block Image of TMI FINAL Map



Scale 1:20000

250 0 250 500 750 1000

(meters)

NAD83 / UTM zone 7N

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

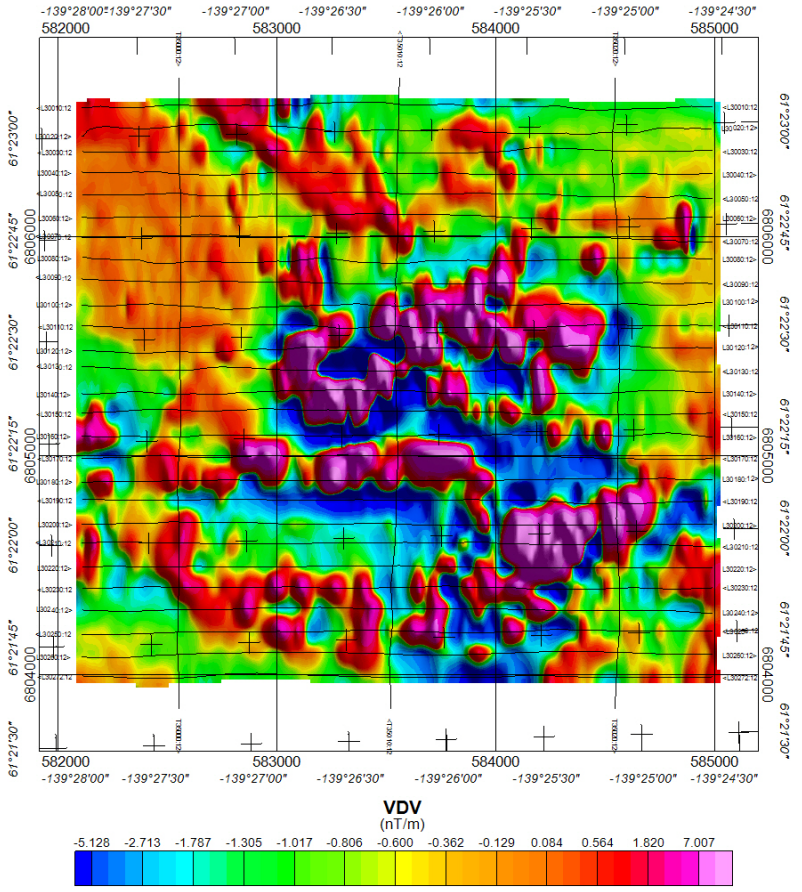
STRATEGIC METALS LTD.

Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
Total Magnetic Intensity (TMI) Map

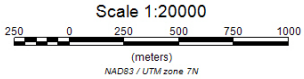
Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

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

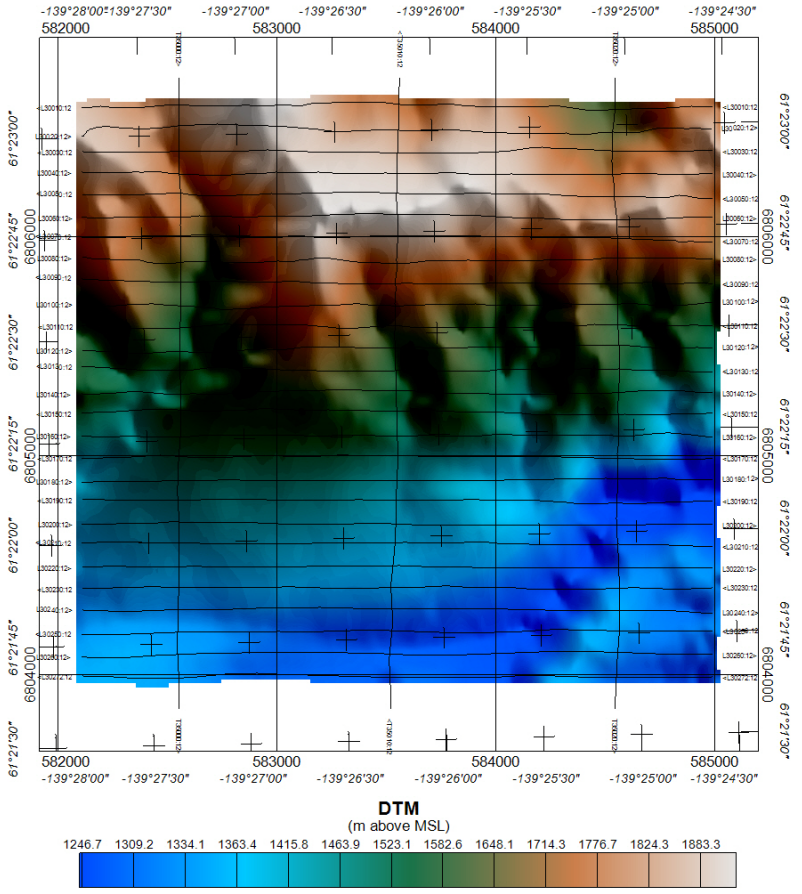
STRATEGIC METALS LTD.

Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
1st Order Vertical Derivative (VDV) Map

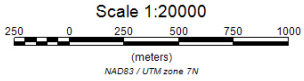
Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

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

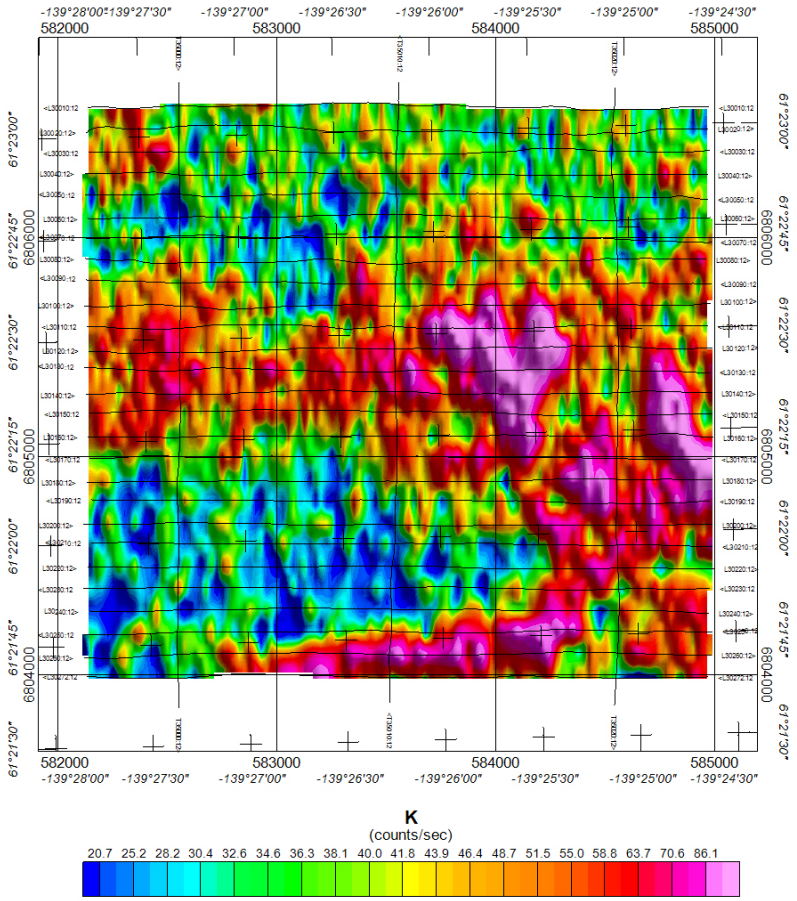
STRATEGIC METALS LTD.

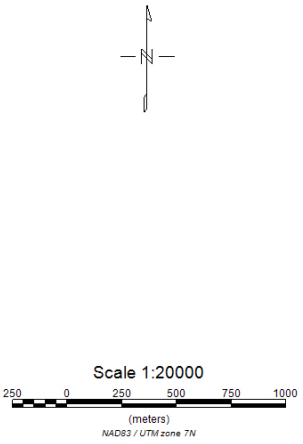
Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
Digital Terrain Model (DTM) Map

Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

Corky Block Image of Potassium 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

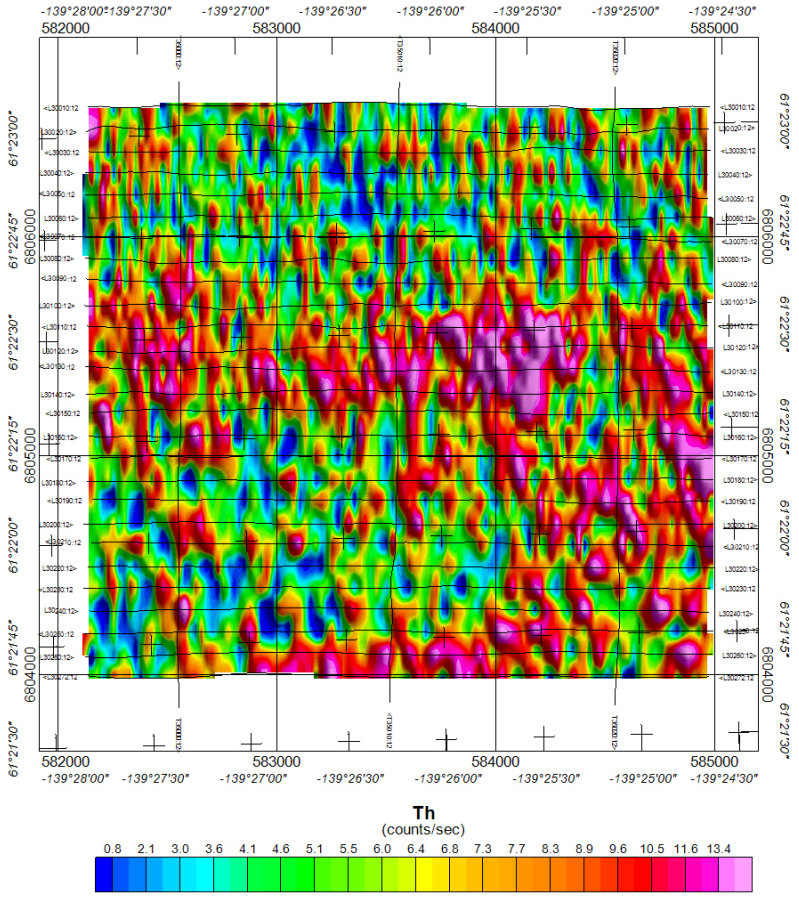
STRATEGIC METALS LTD.

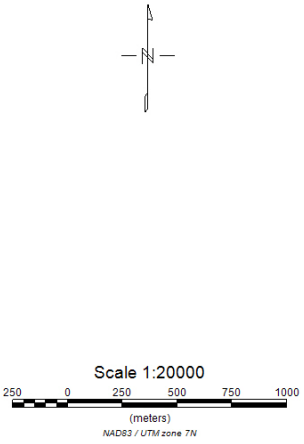
Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
Potassium (K) Map

Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

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

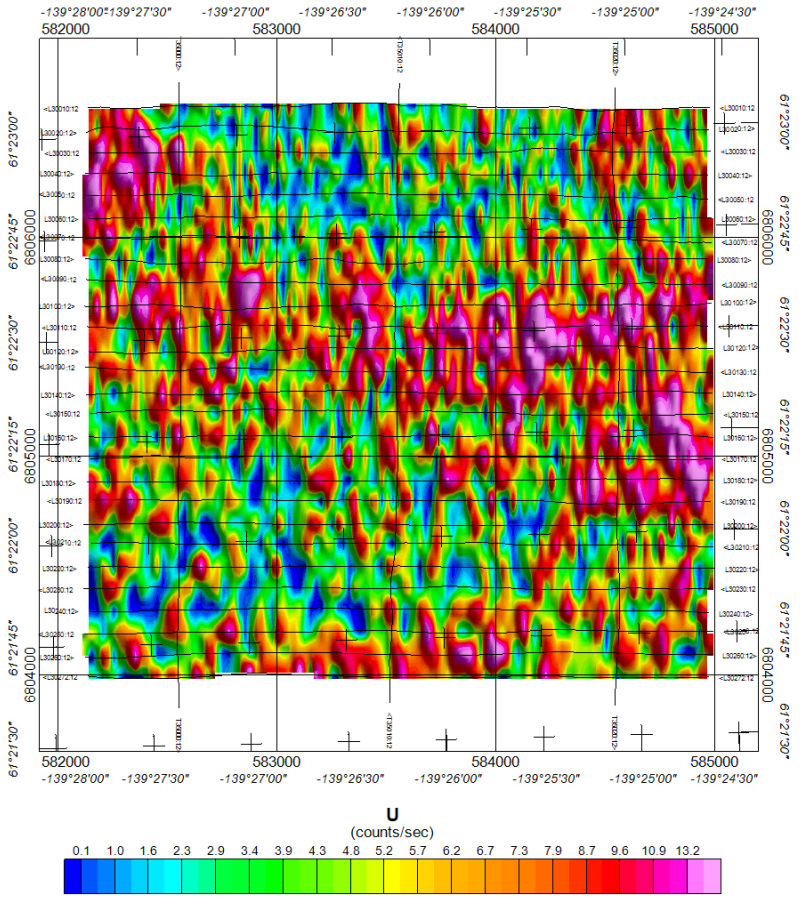
STRATEGIC METALS LTD.

Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
Thorium (Th) Map

Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

Corky Block Image of Uranium Map



Scale 1:20000

250 0 250 500 750 1000

(meters)

NAD83 / UTM zone 7N

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

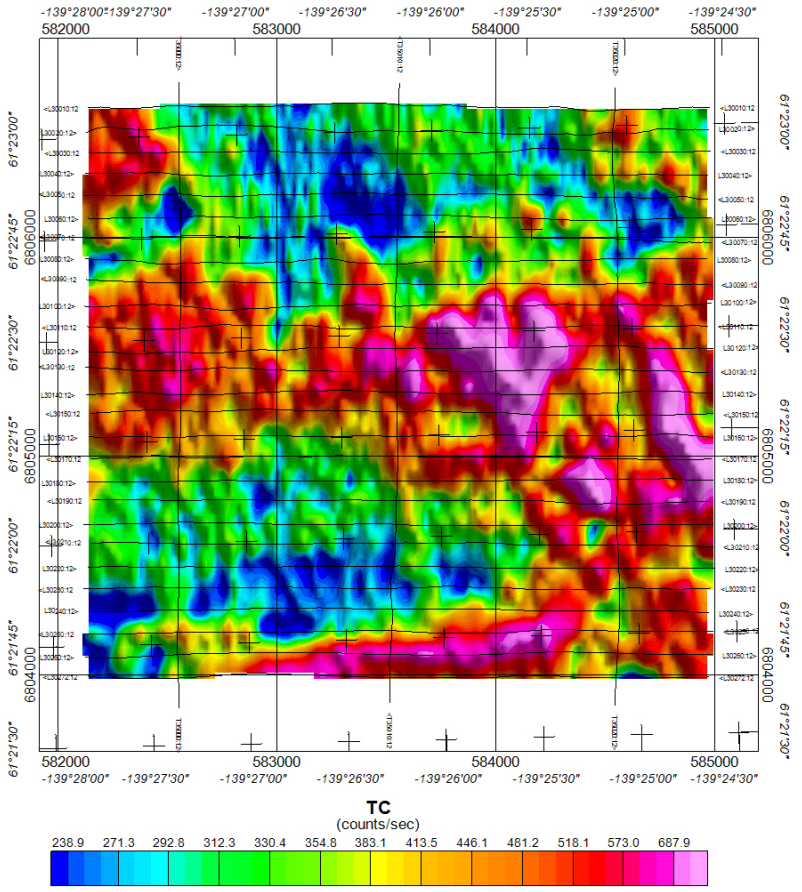
STRATEGIC METALS LTD.

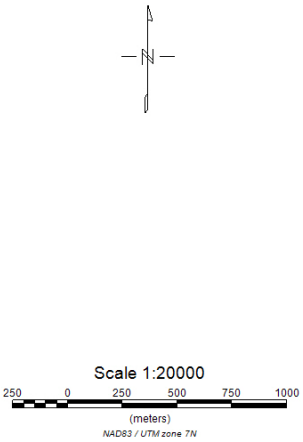
Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
Uranium (U) Map

Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

Corky Block Image of Total Count 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

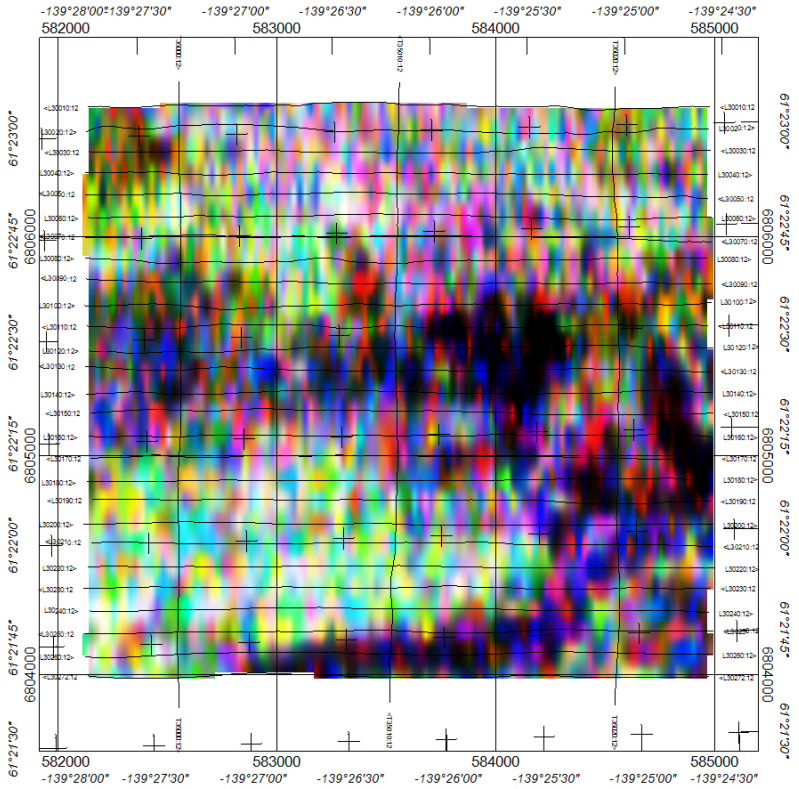
STRATEGIC METALS LTD.

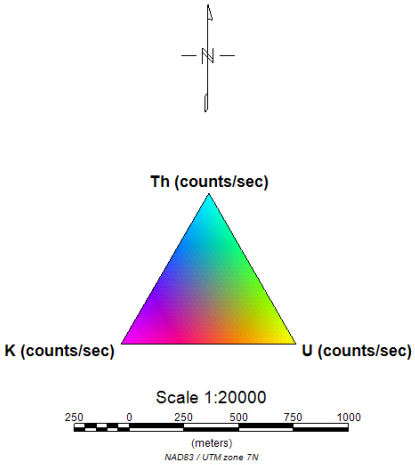
Helicopter Borne Magnetic and Spectrometric Survey
Corky Block
Total Count (TC) Map

Dates Flown: August 8, 2010 - August 17, 2010

New-Sense Geophysics. Ltd.

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

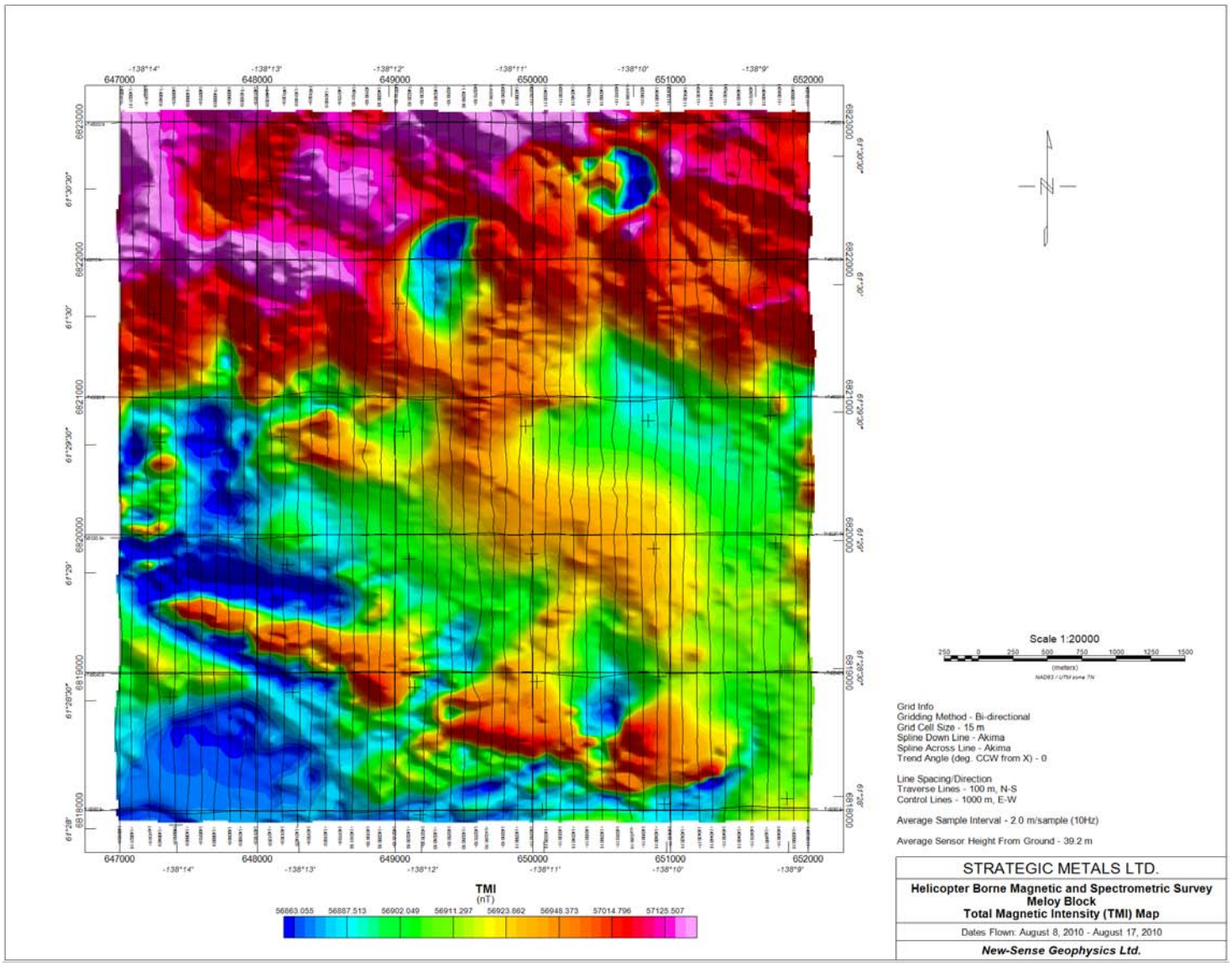
Line Spacing/Direction:
Traverse Lines - 100 m, E-W
Control Lines - 1000 m, N-S

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

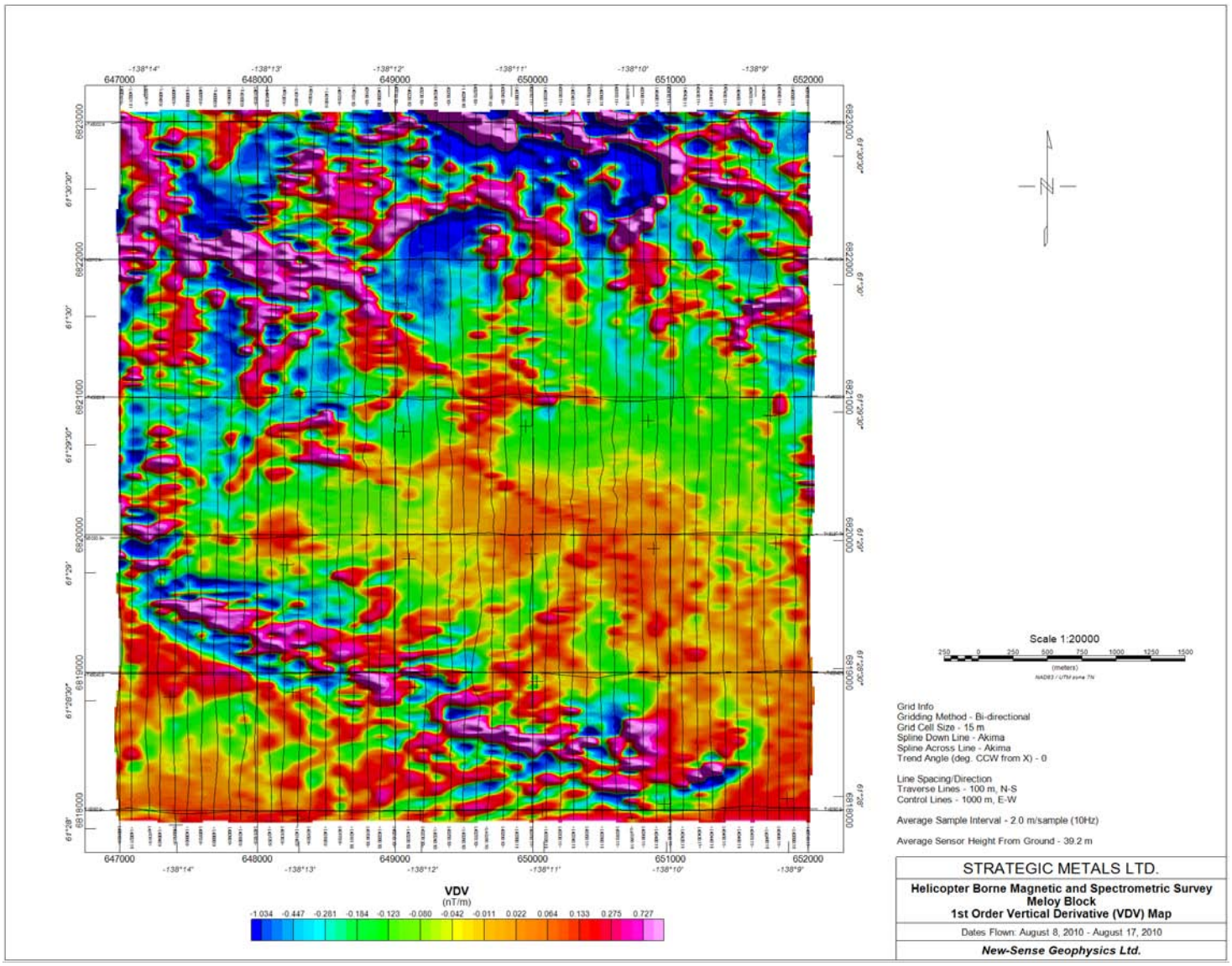
Average Sensor Height From Ground - 33.1 m

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

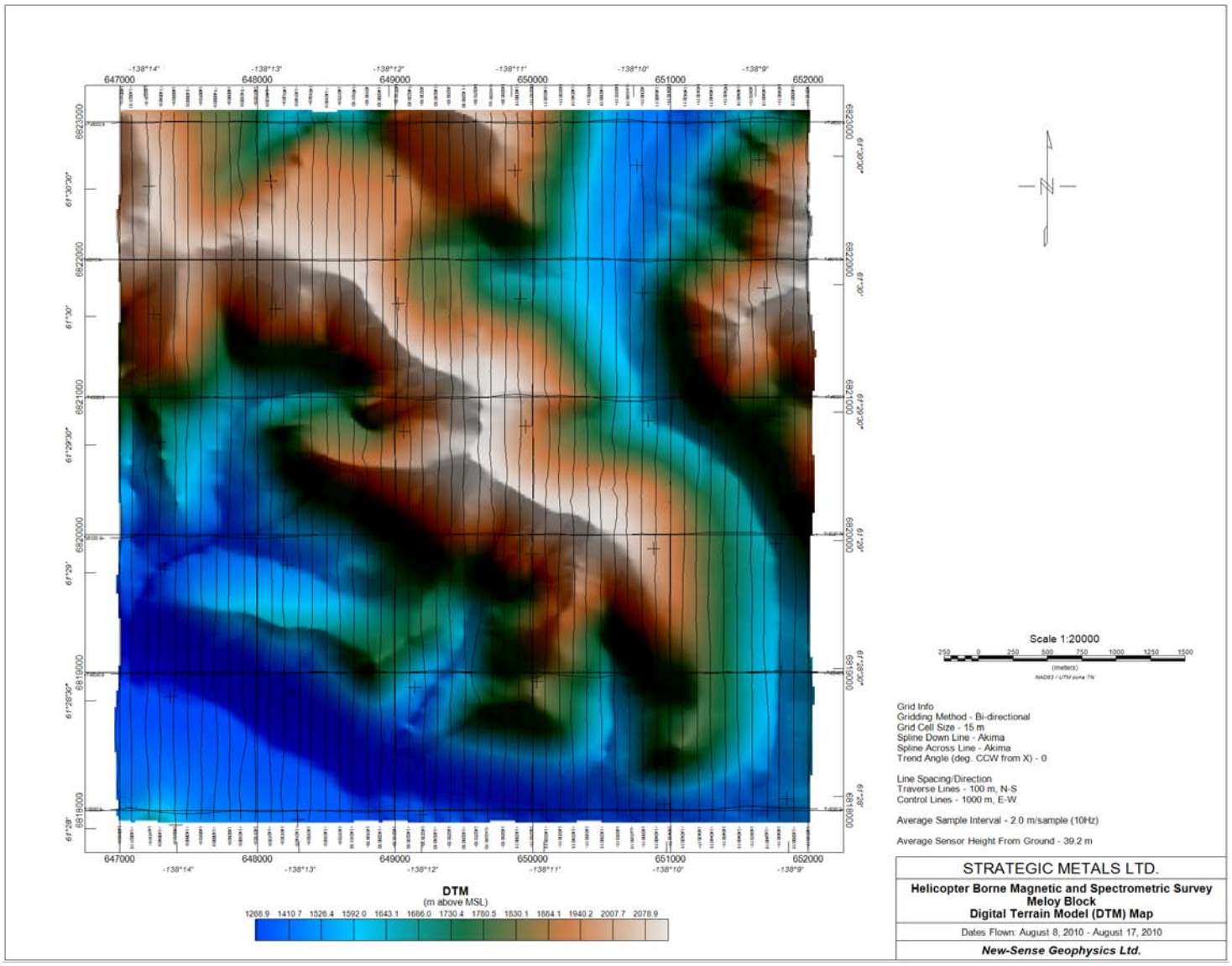
Meloy Block Image of TMI FINAL Map



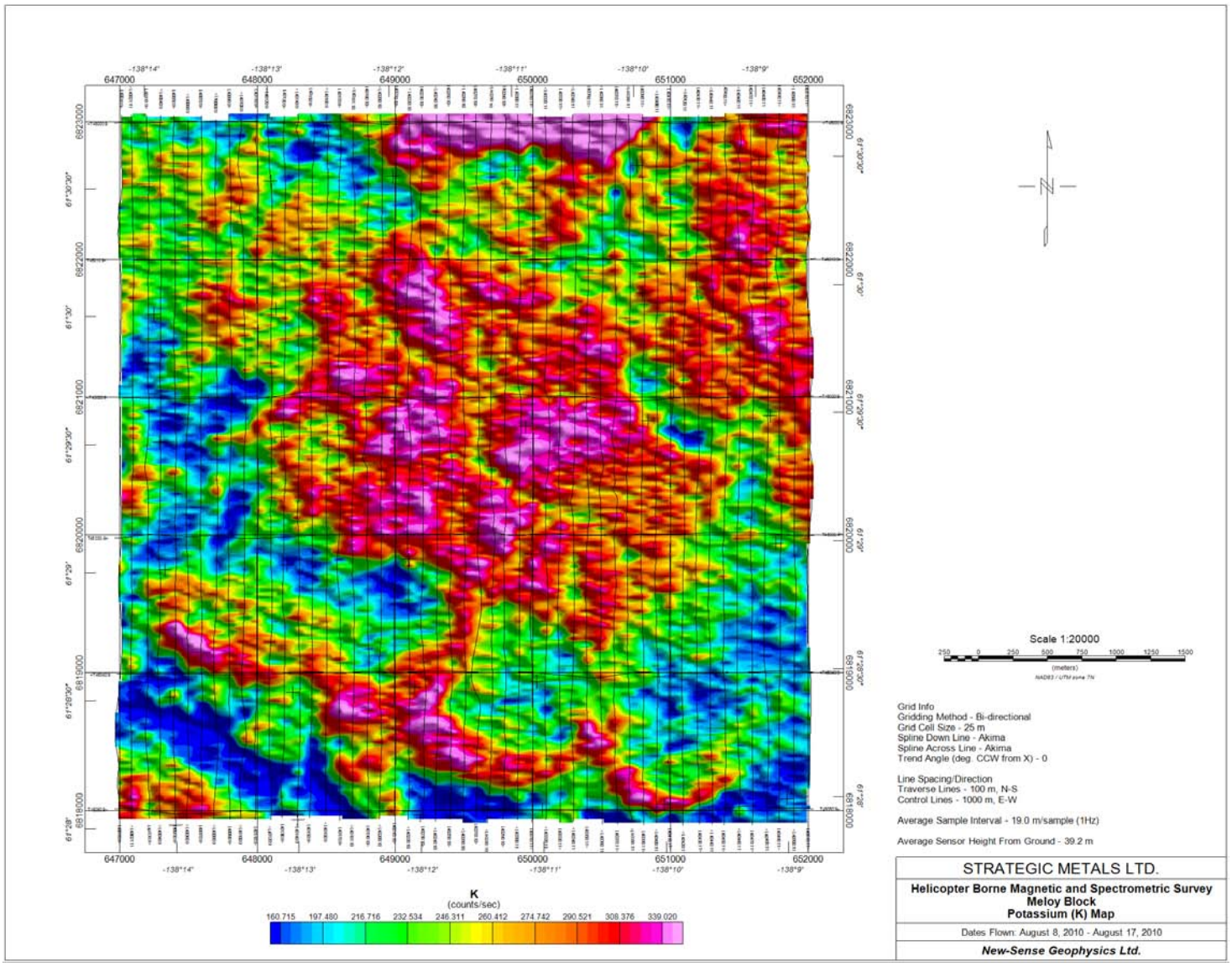
Meloy Block Image of VDV Map



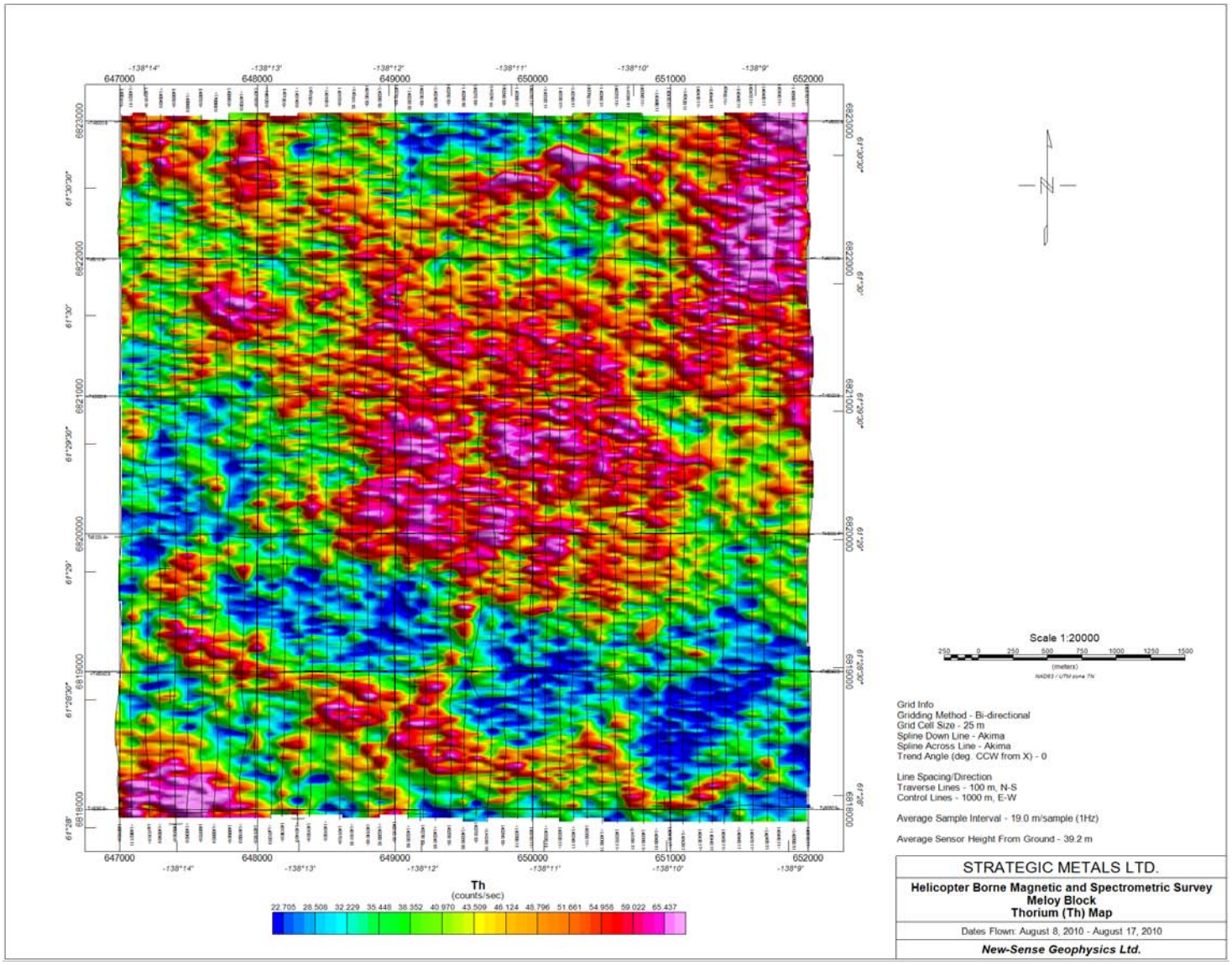
Meloy Block Image of DTM Map



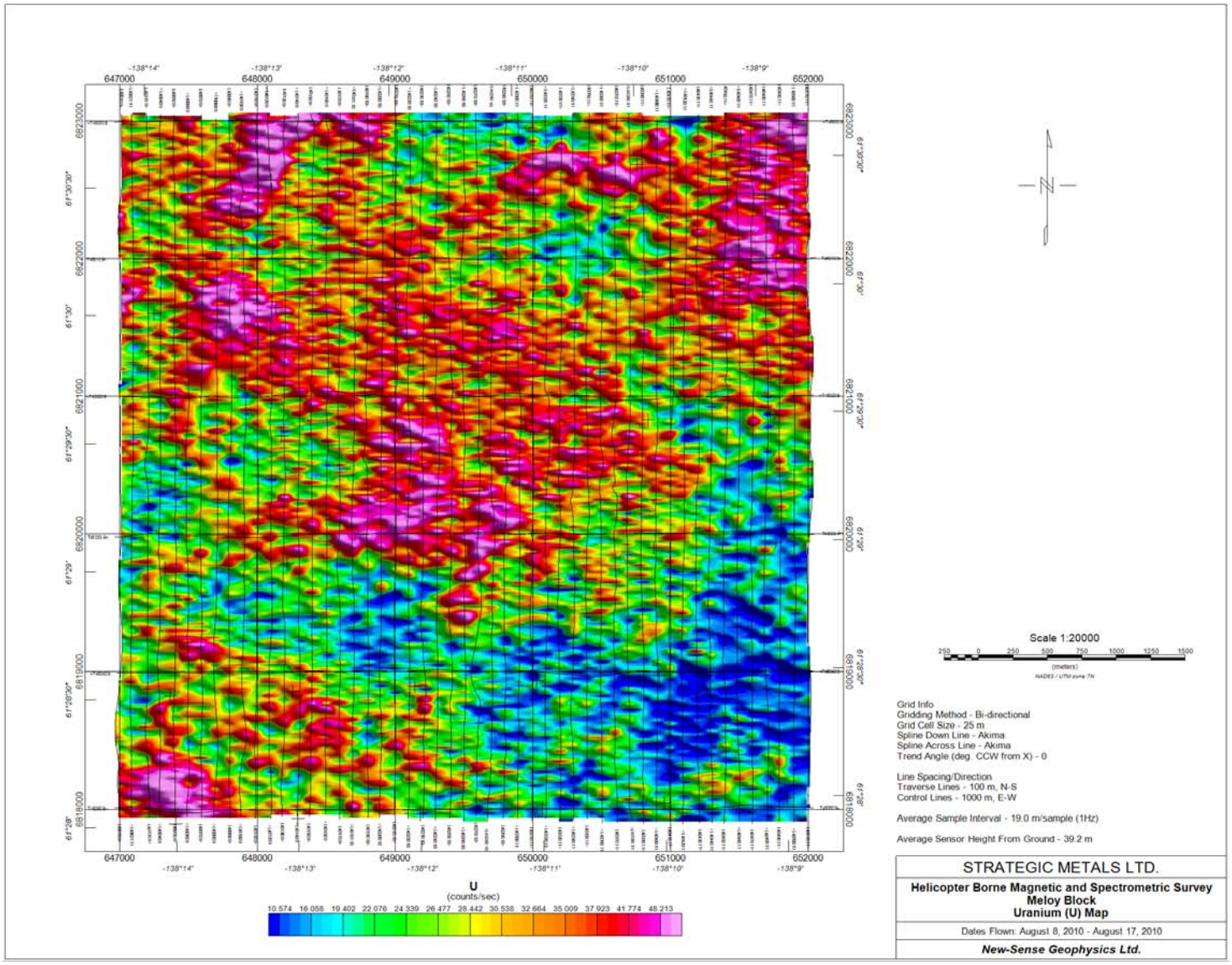
Meloy Block Image of Potassium Map



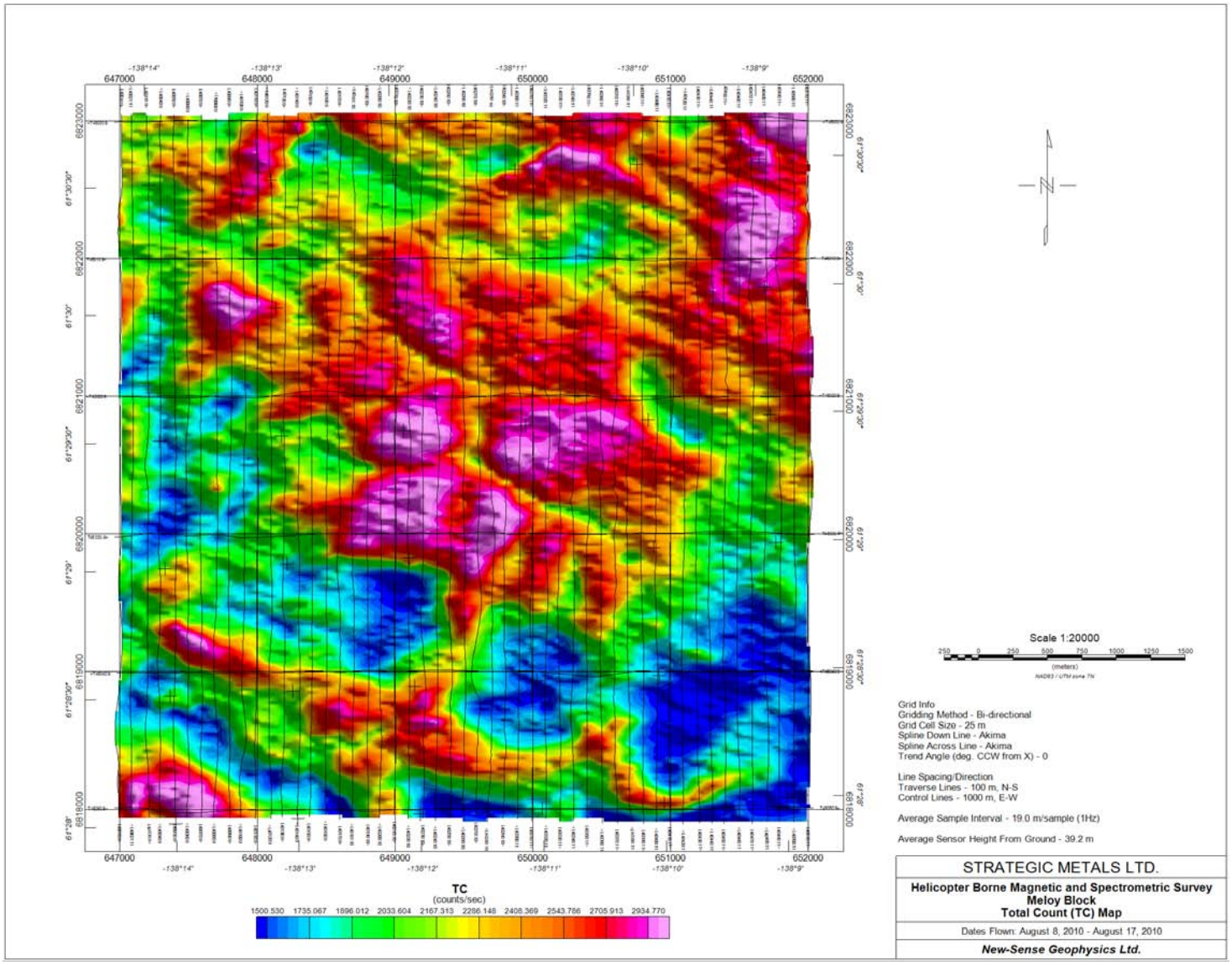
Meloy Block Image of Thorium Map



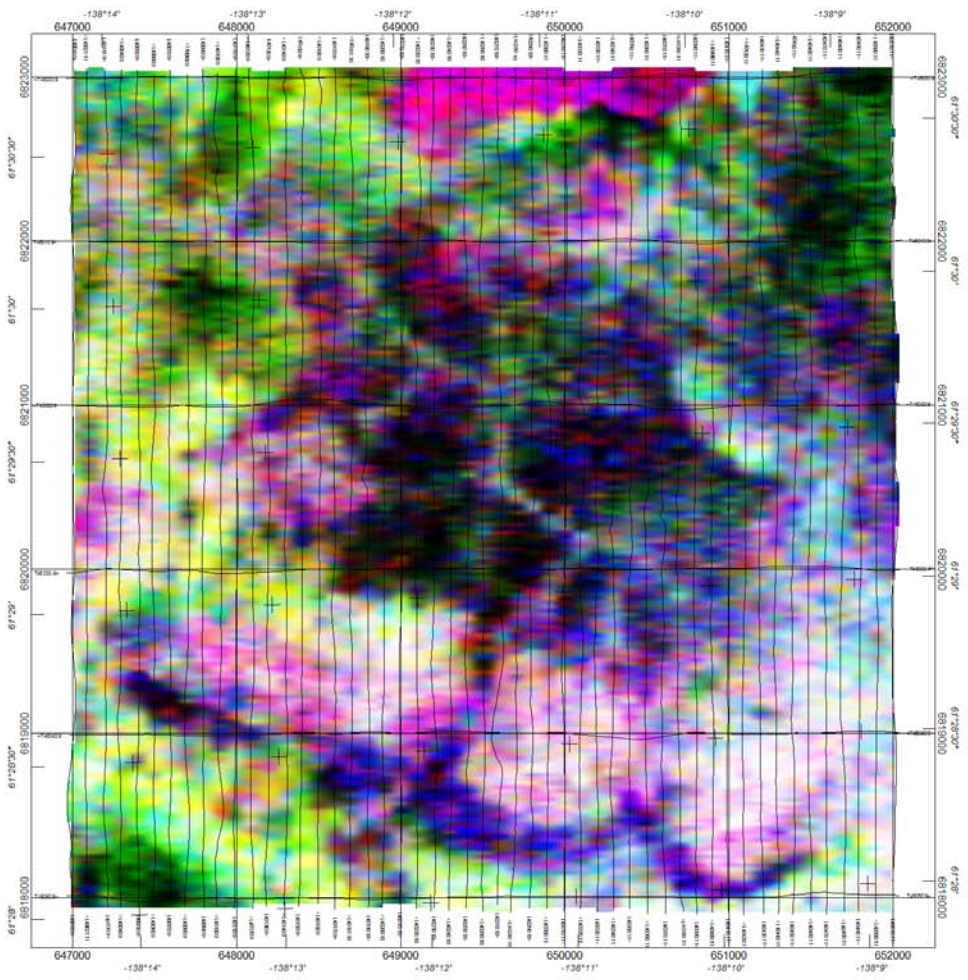
Meloy Block Image of Uranium Map



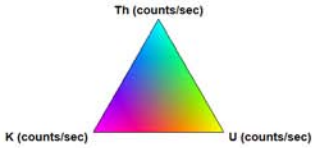
Meloy Block Image of Total Count Map



Meloy Block Image of Ternary Map









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) - 0

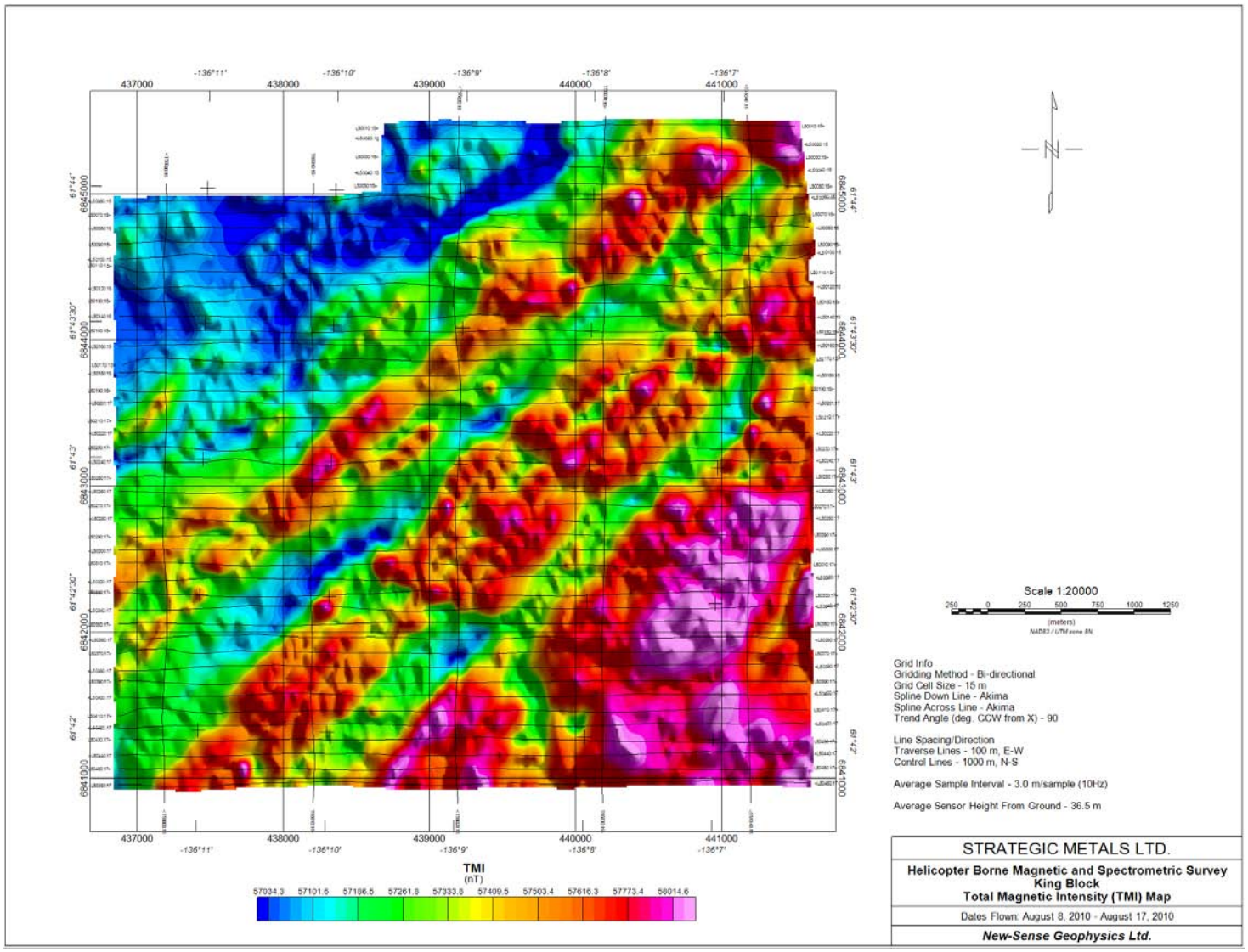
Line Spacing/Direction
Traverse Lines - 100 m, N-S
Control Lines - 1000 m, E-W

Average Sample Interval - 19.0 m/sample (1Hz)

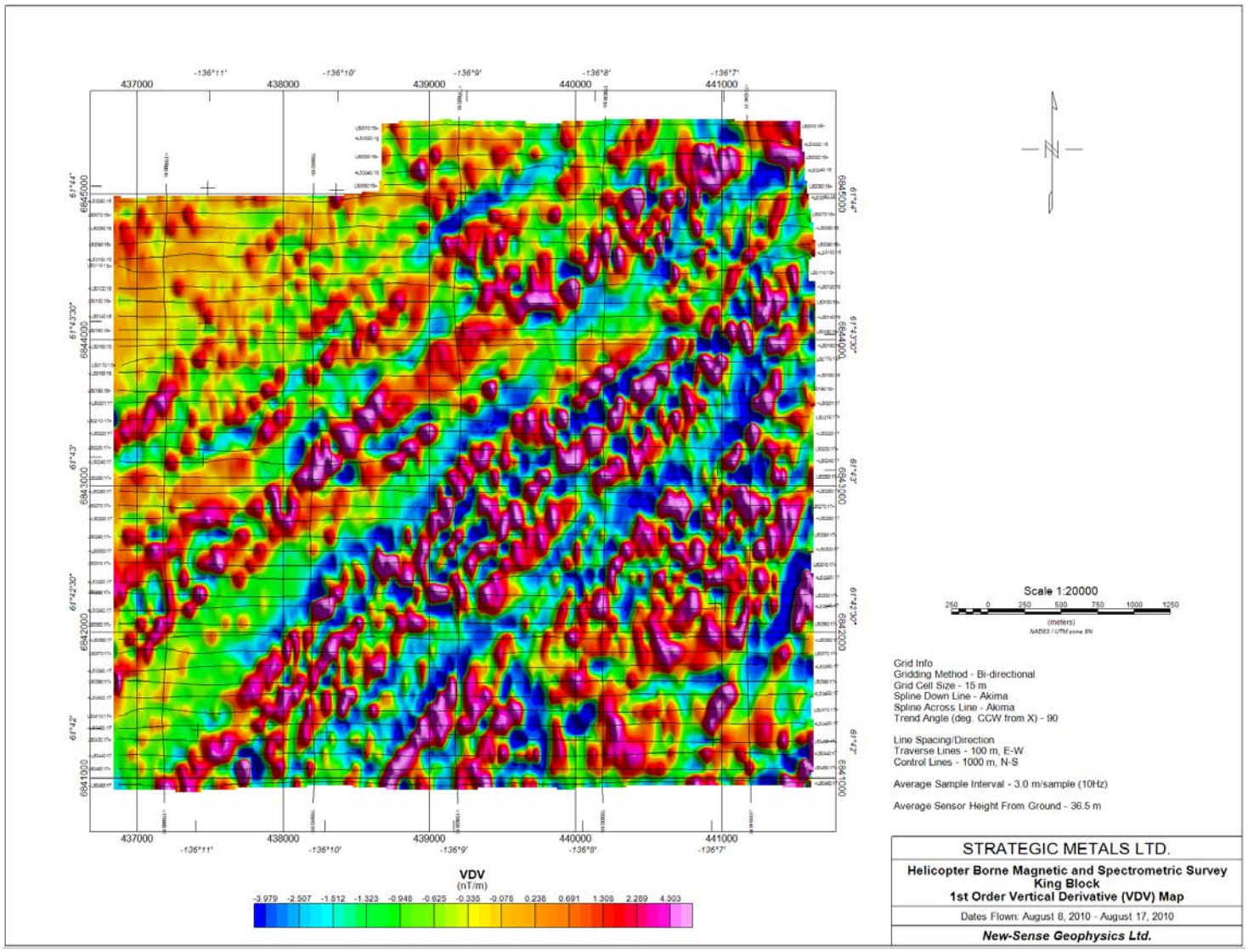
Average Sensor Height From Ground - 39.2 m

STRATEGIC METALS LTD.
Helicopter Borne Magnetic and Spectrometric Survey Meloy Block Ternary Image Map
Dates Flown: August 8, 2010 - August 17, 2010
New-Sense Geophysics Ltd.

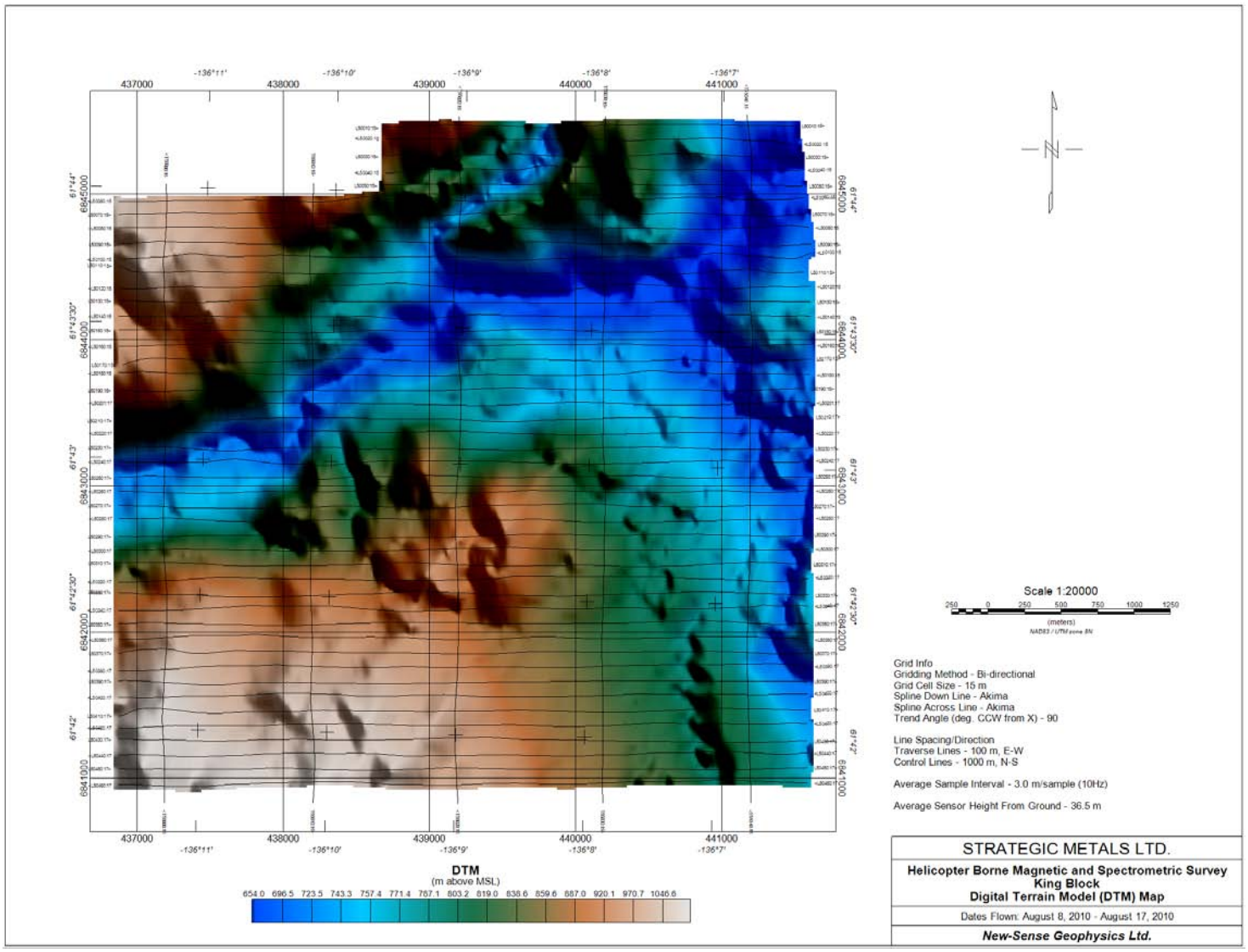
King Block Image of TMI FINAL Map



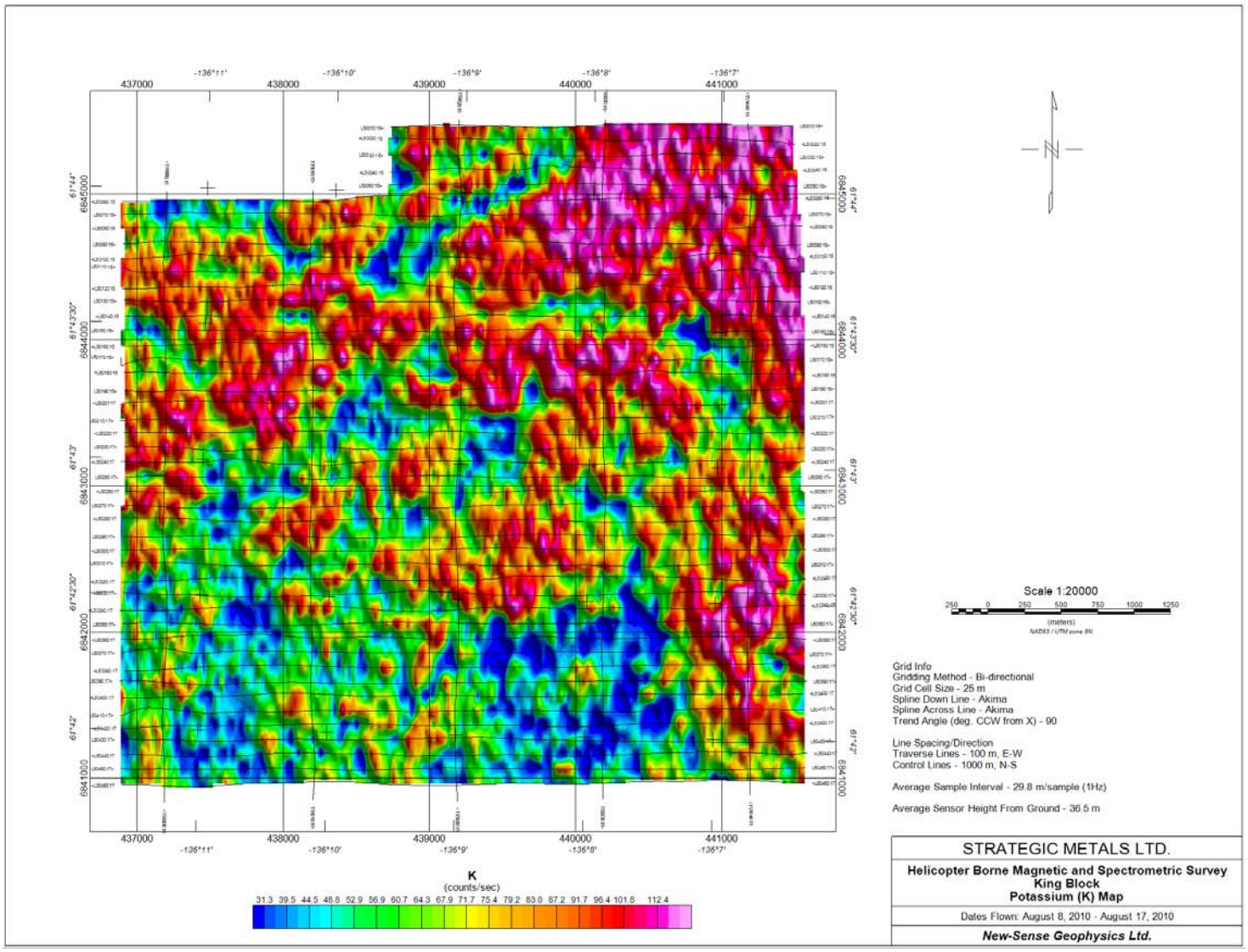
King Block Image of VDV Map



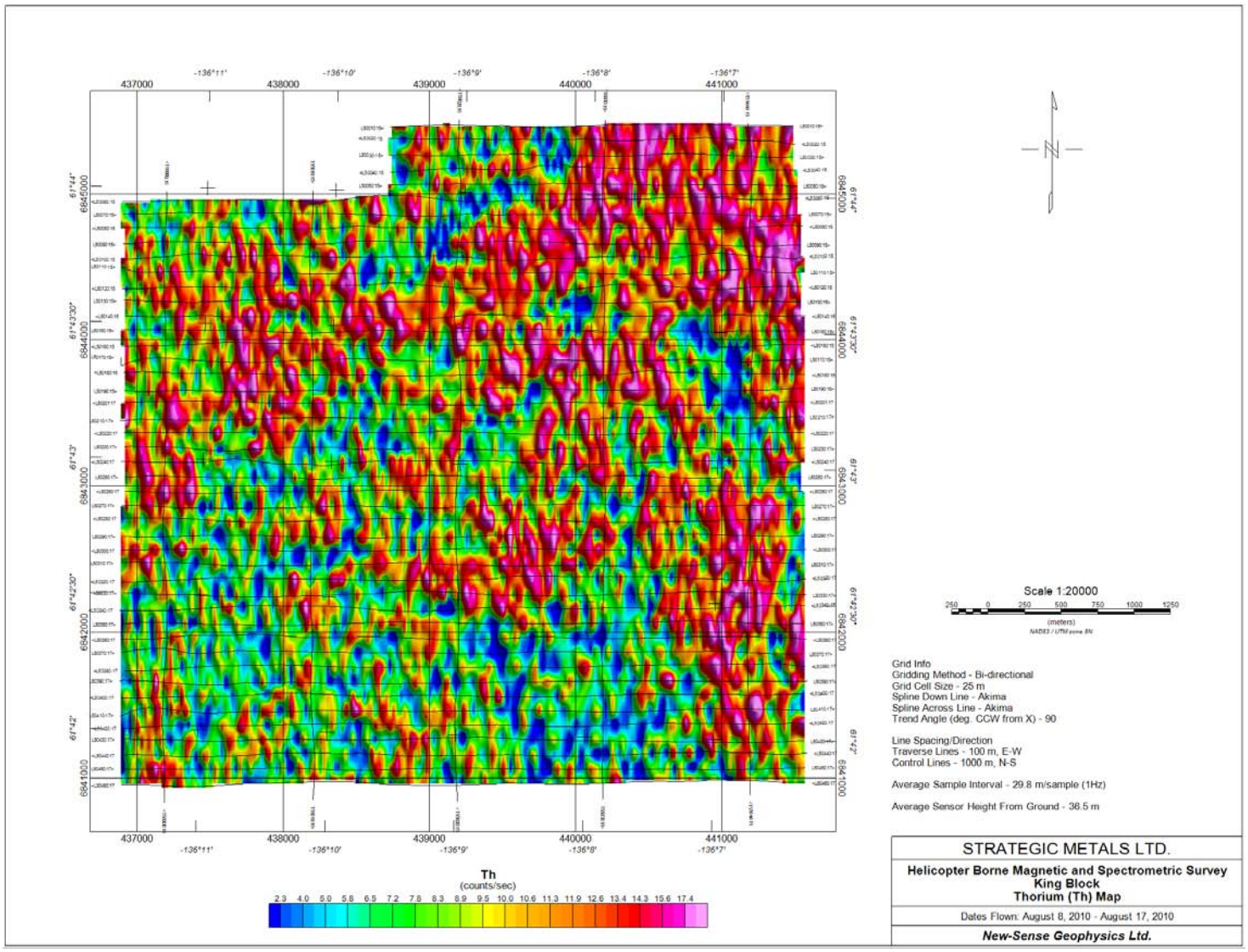
King Block Image of DTM Map



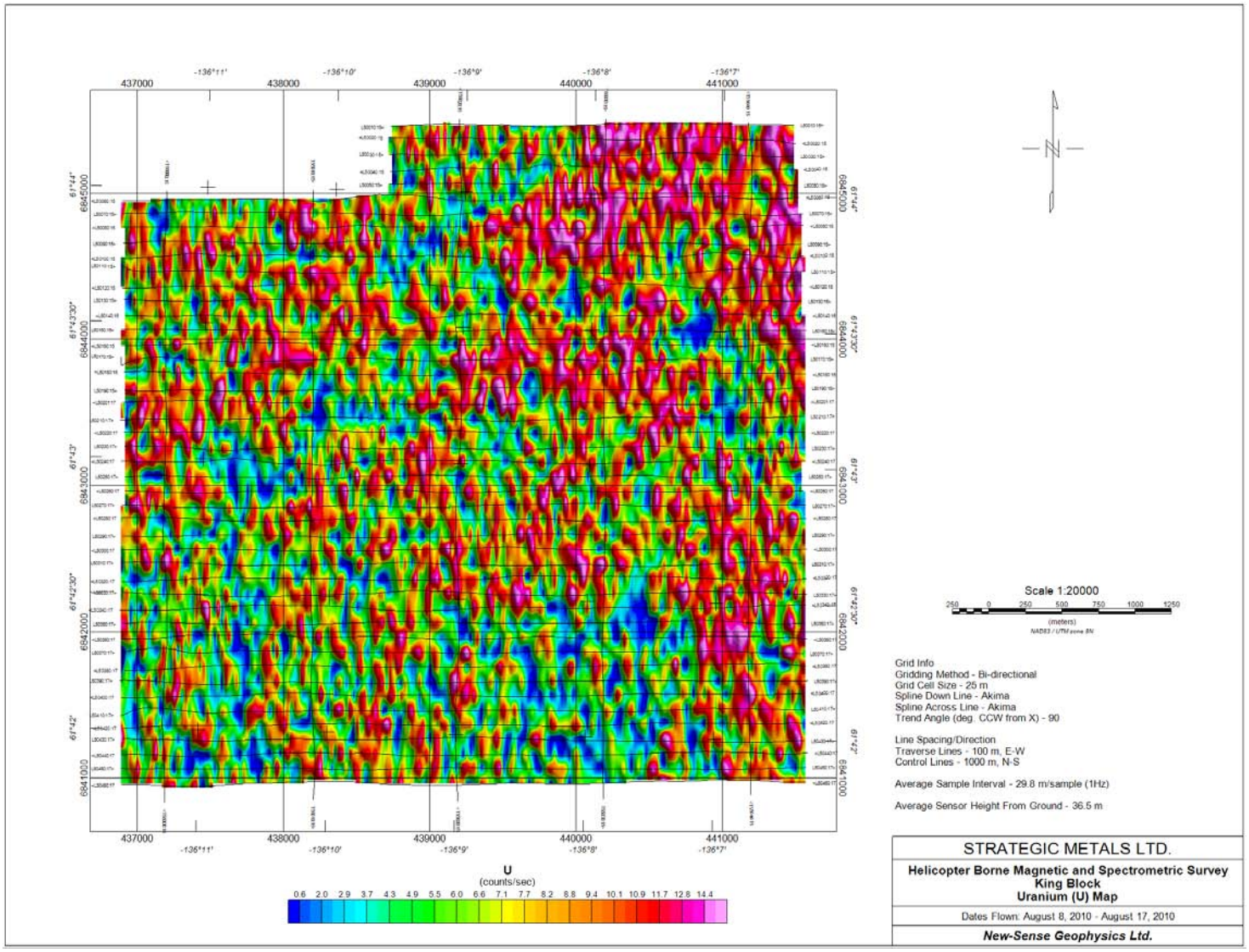
King Block Image of Potassium Map



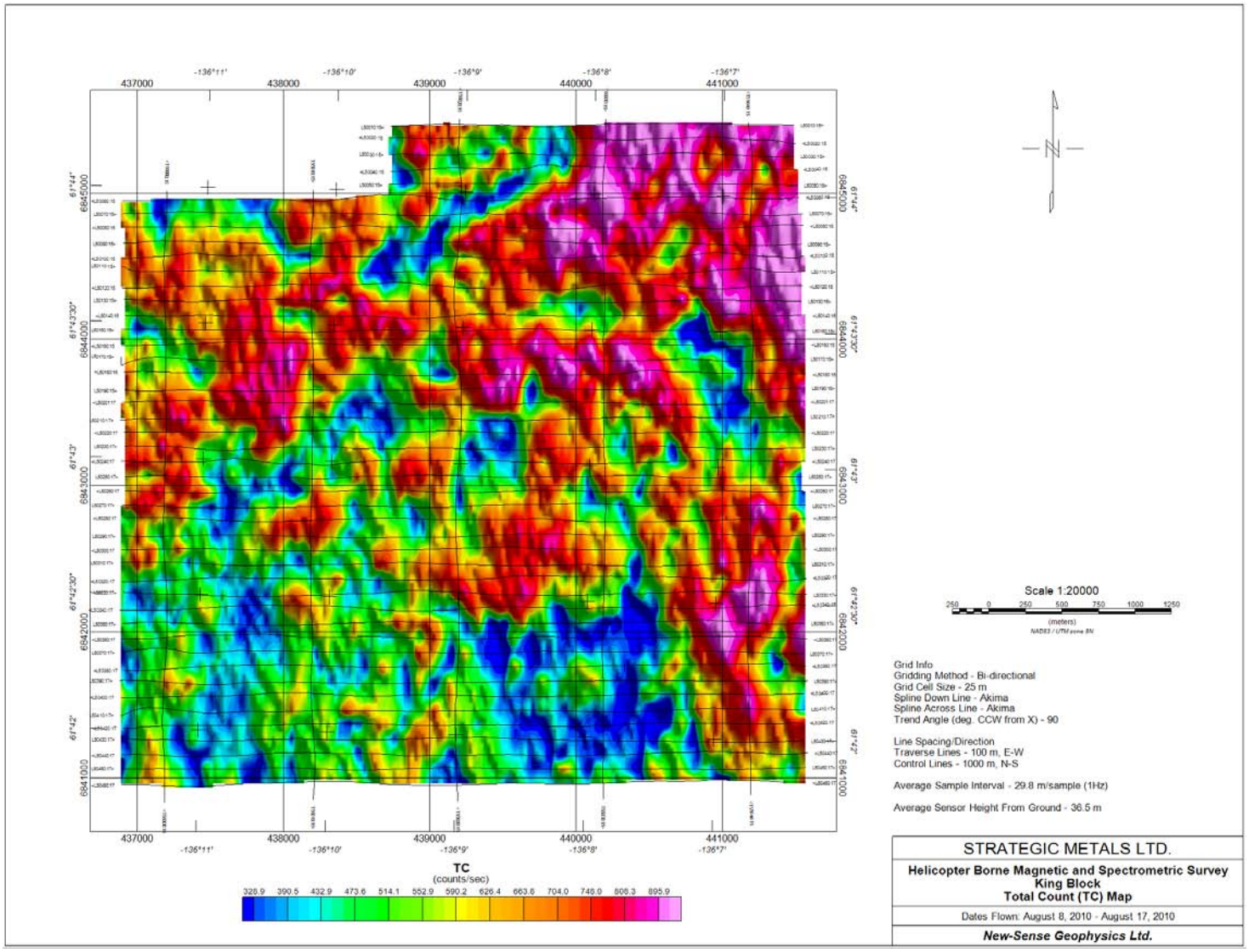
King Block Image of Thorium Map



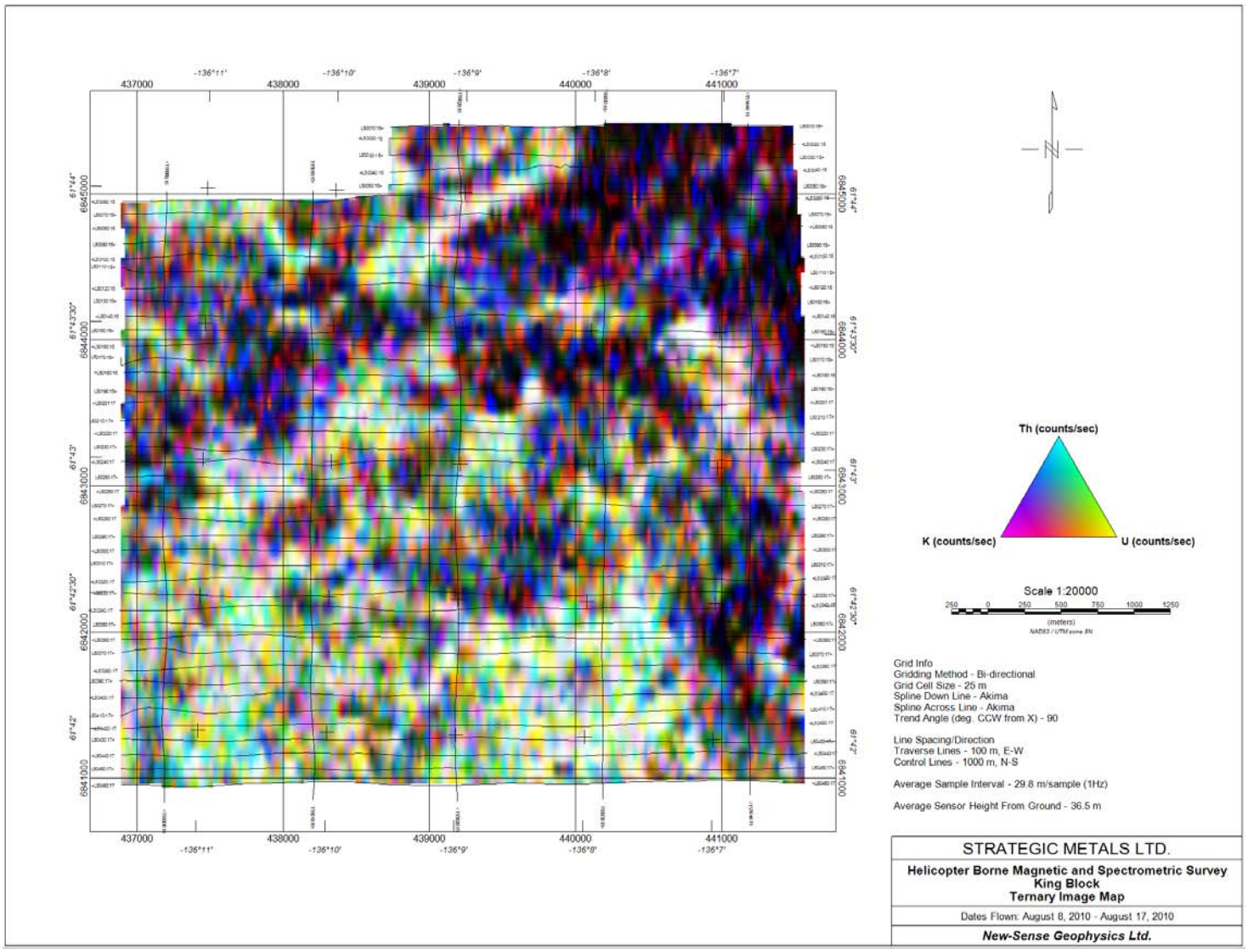
King Block Image of Uranium Map



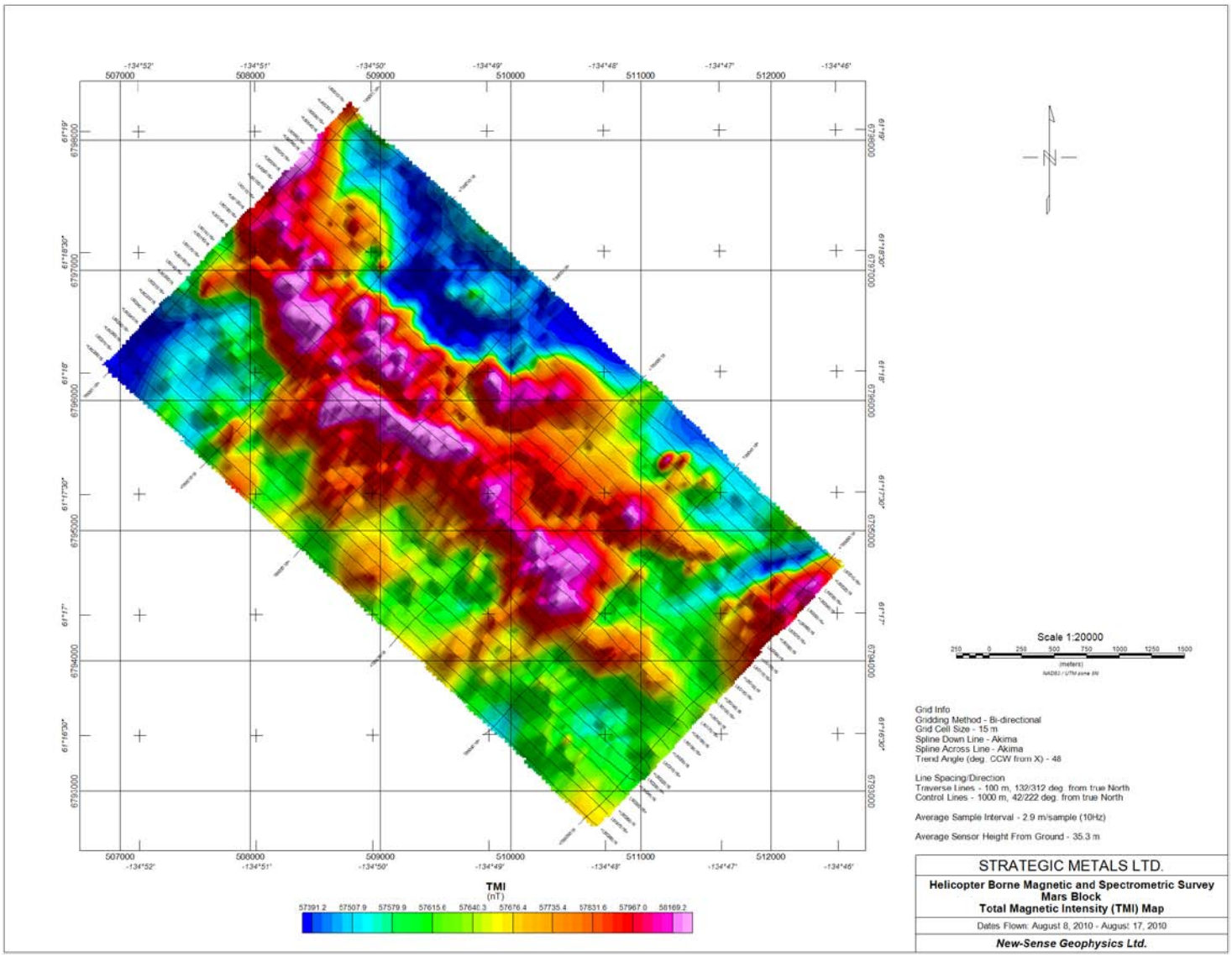
King Block Image of Total Count Map



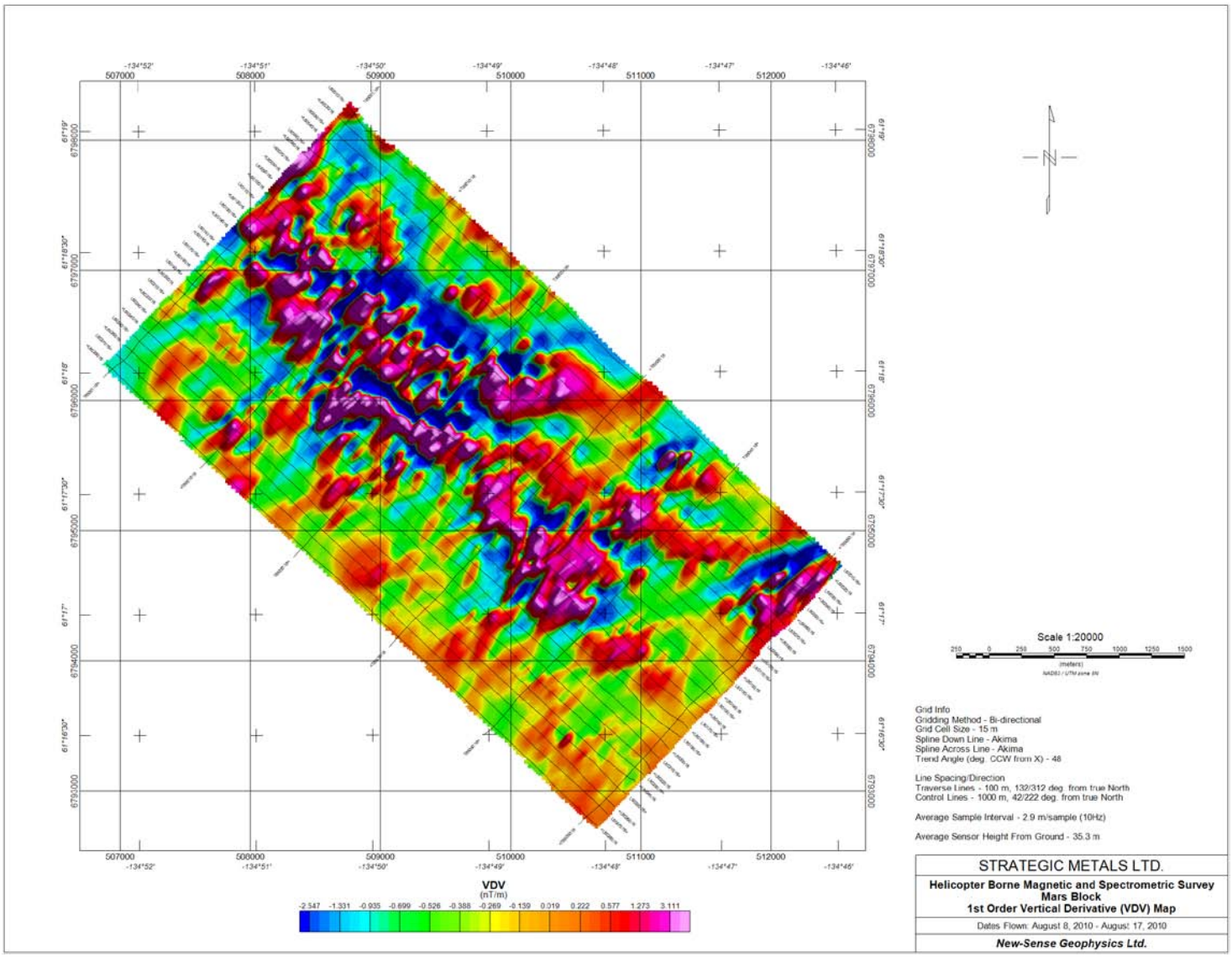
King Block Image of Ternary Map



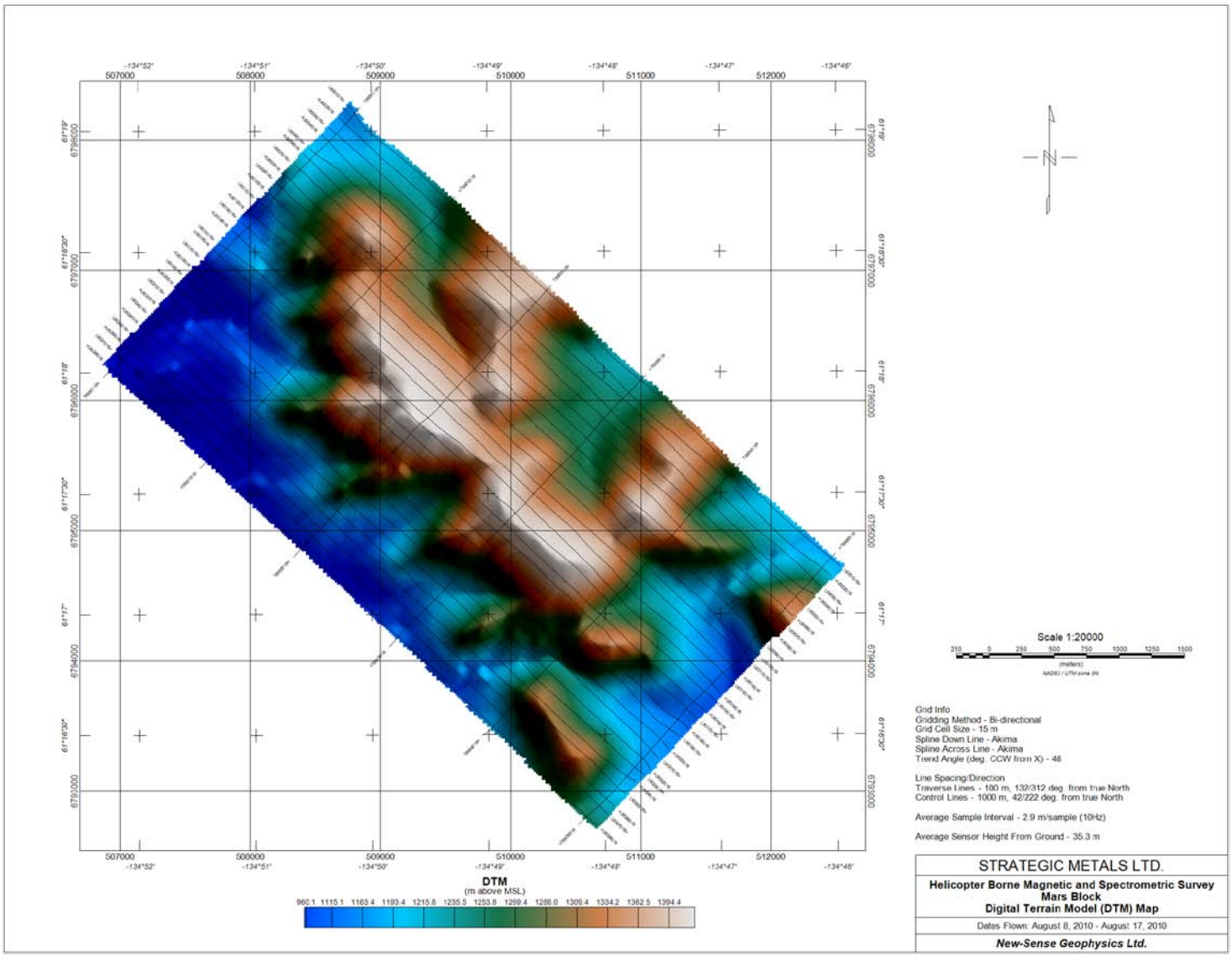
Mars Block Image of TMI FINAL Map



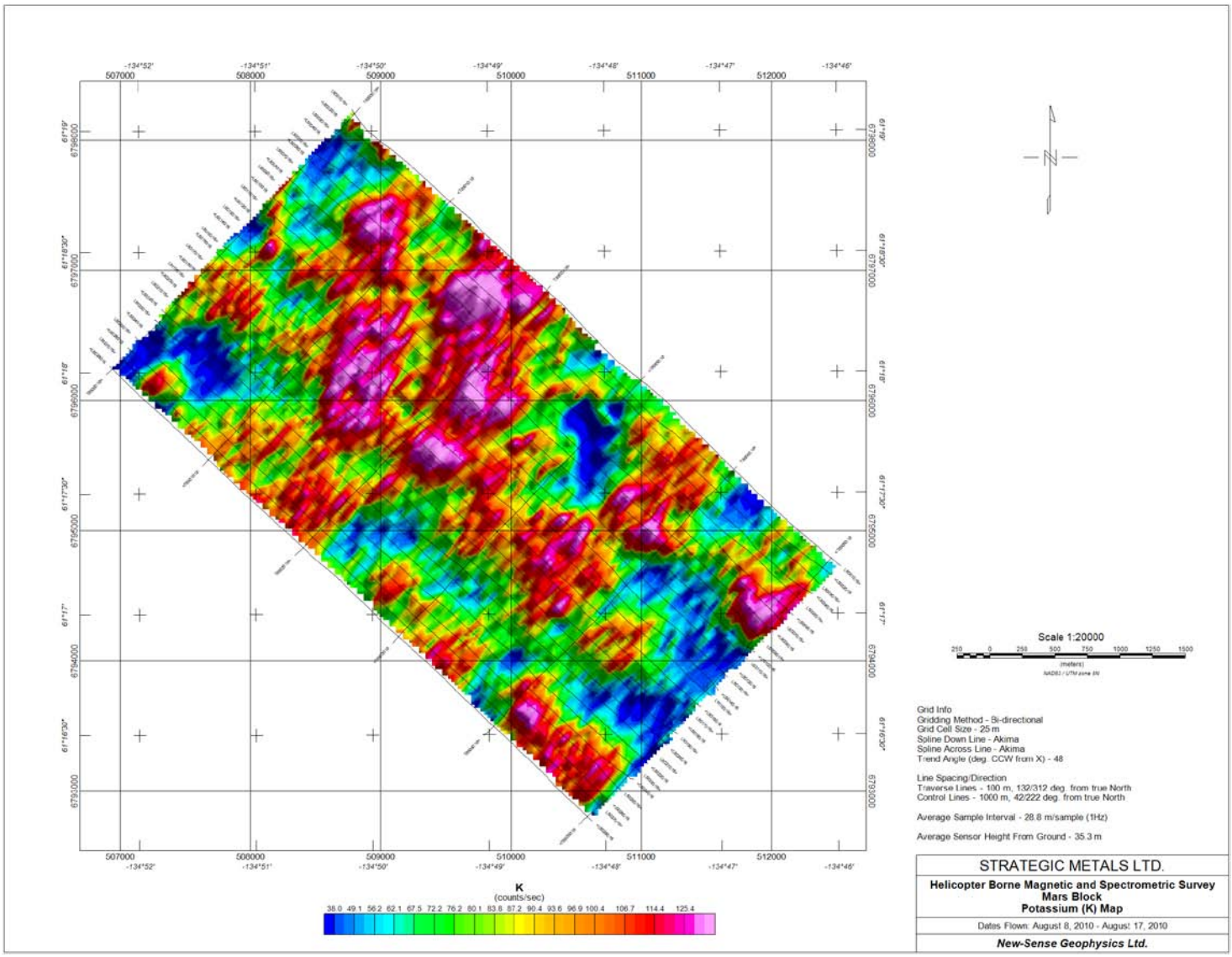
Mars Block Image of VDV Map



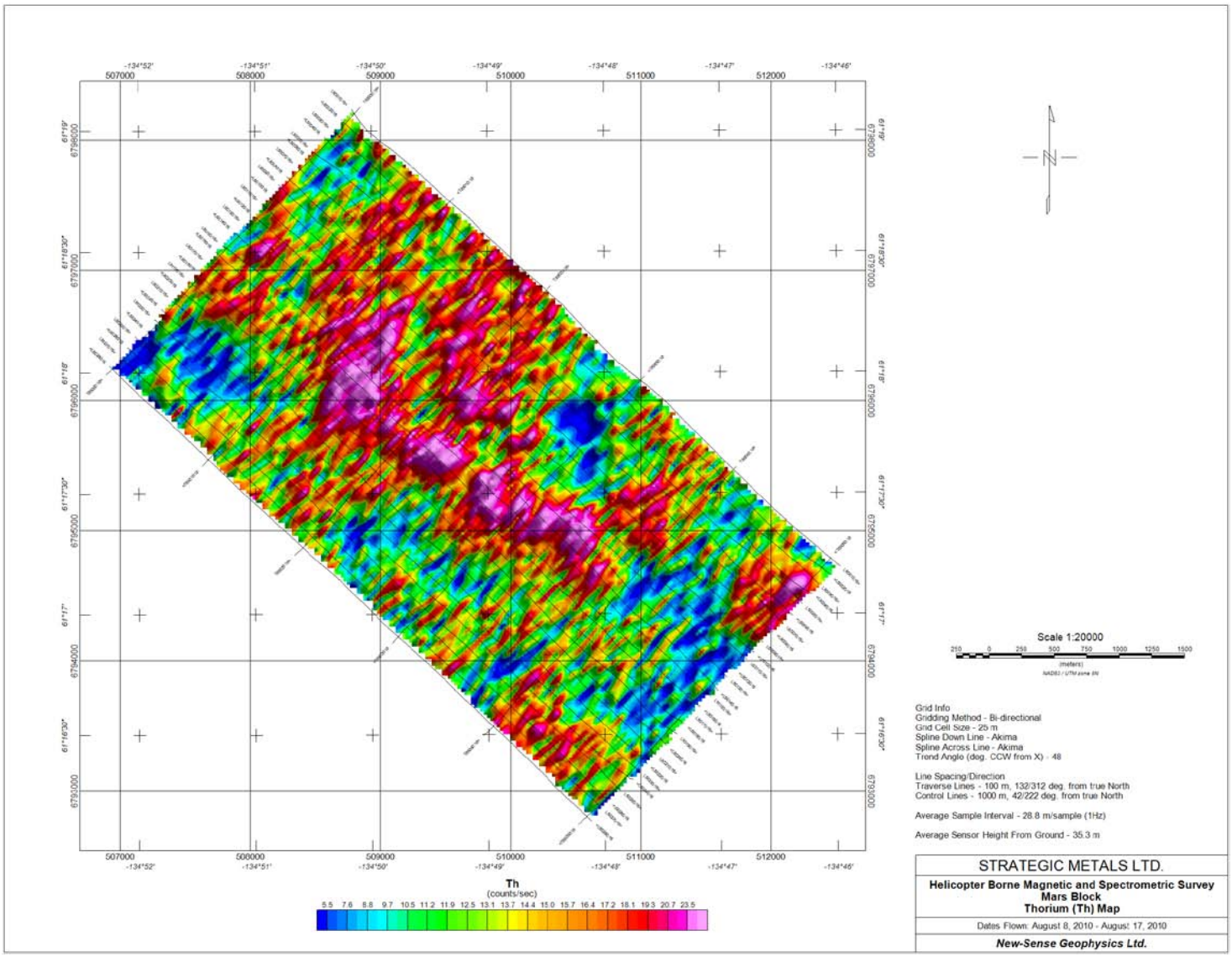
Mars Block Image of DTM Map



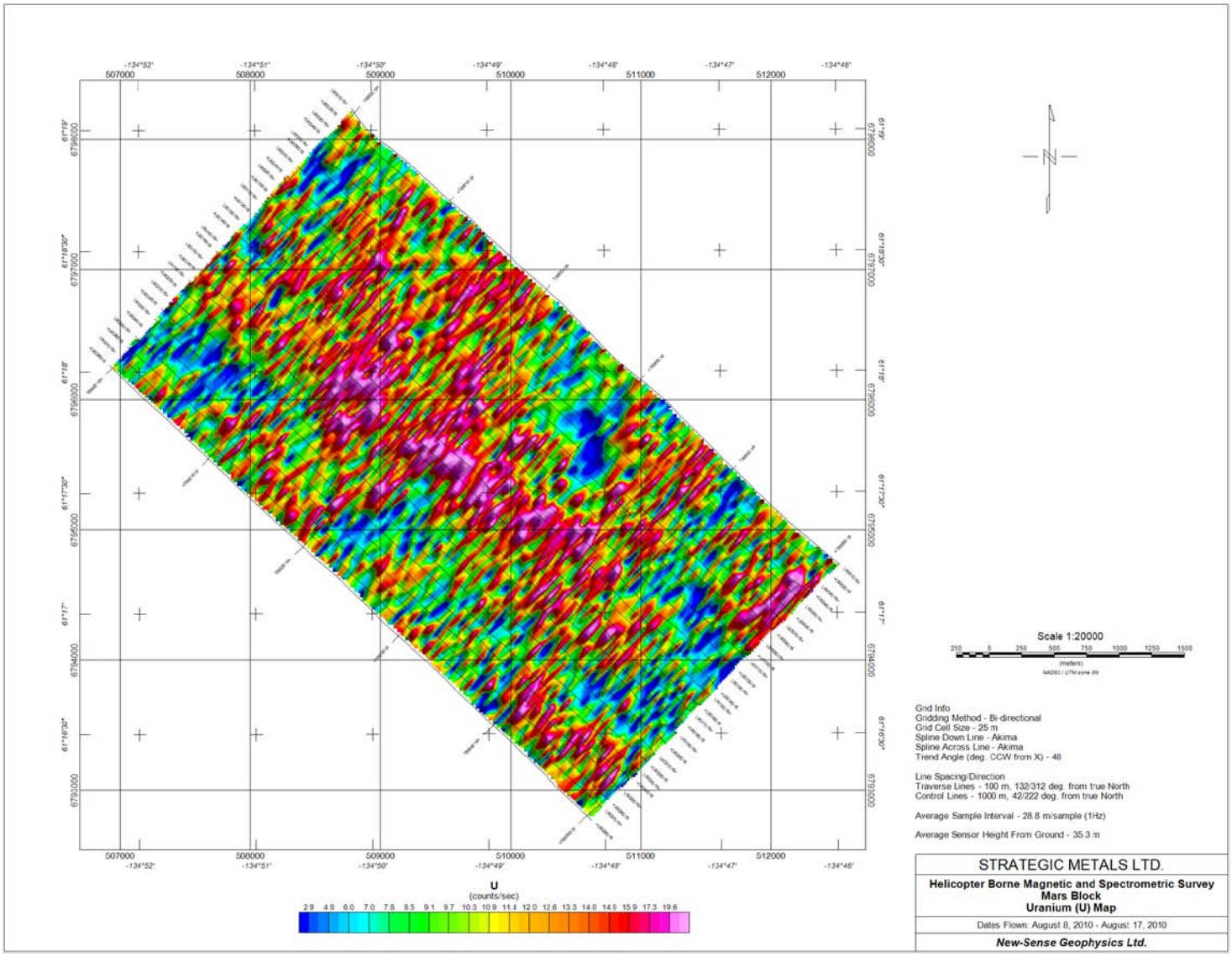
Mars Block Image of Potassium Map



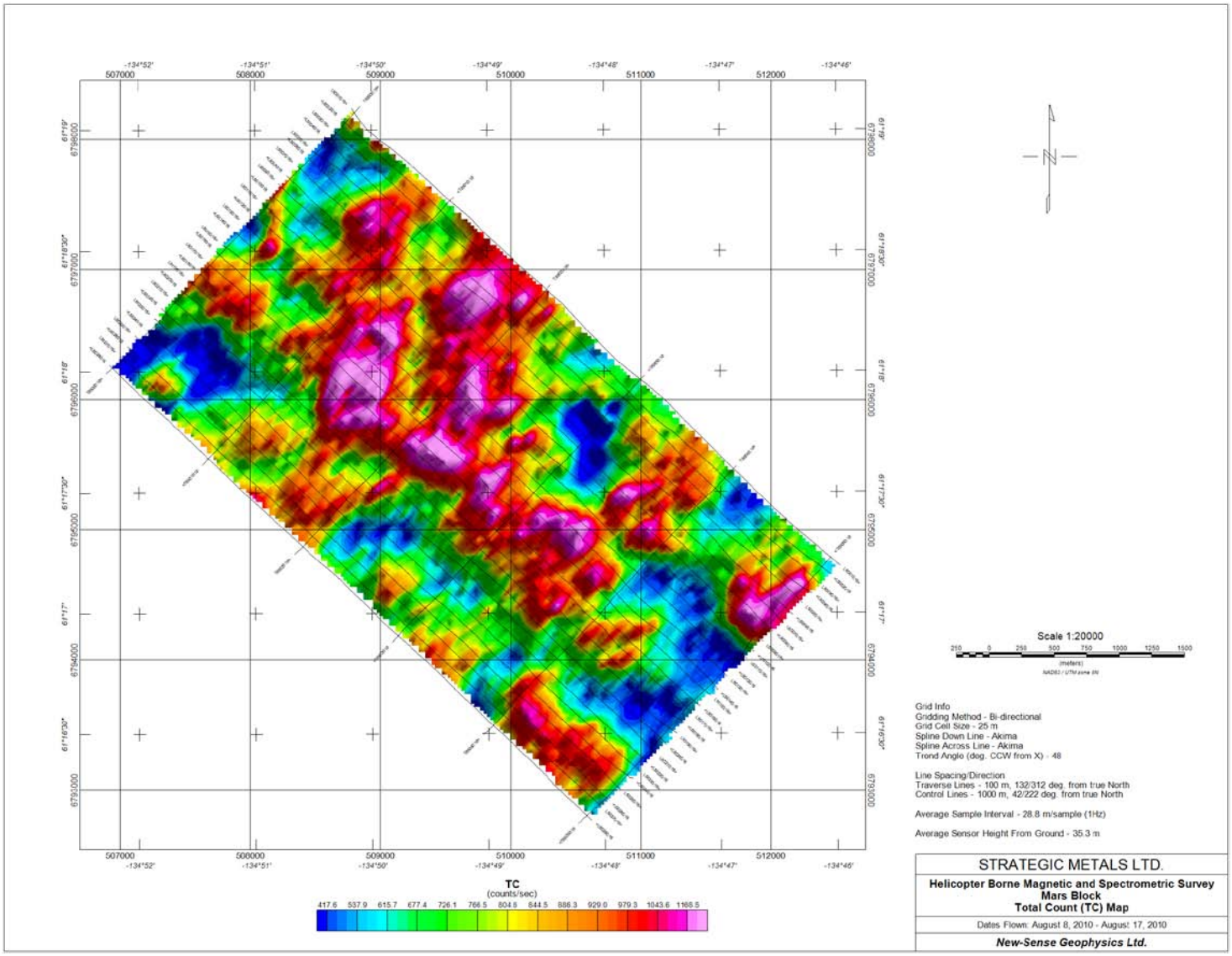
Mars Block Image of Thorium Map



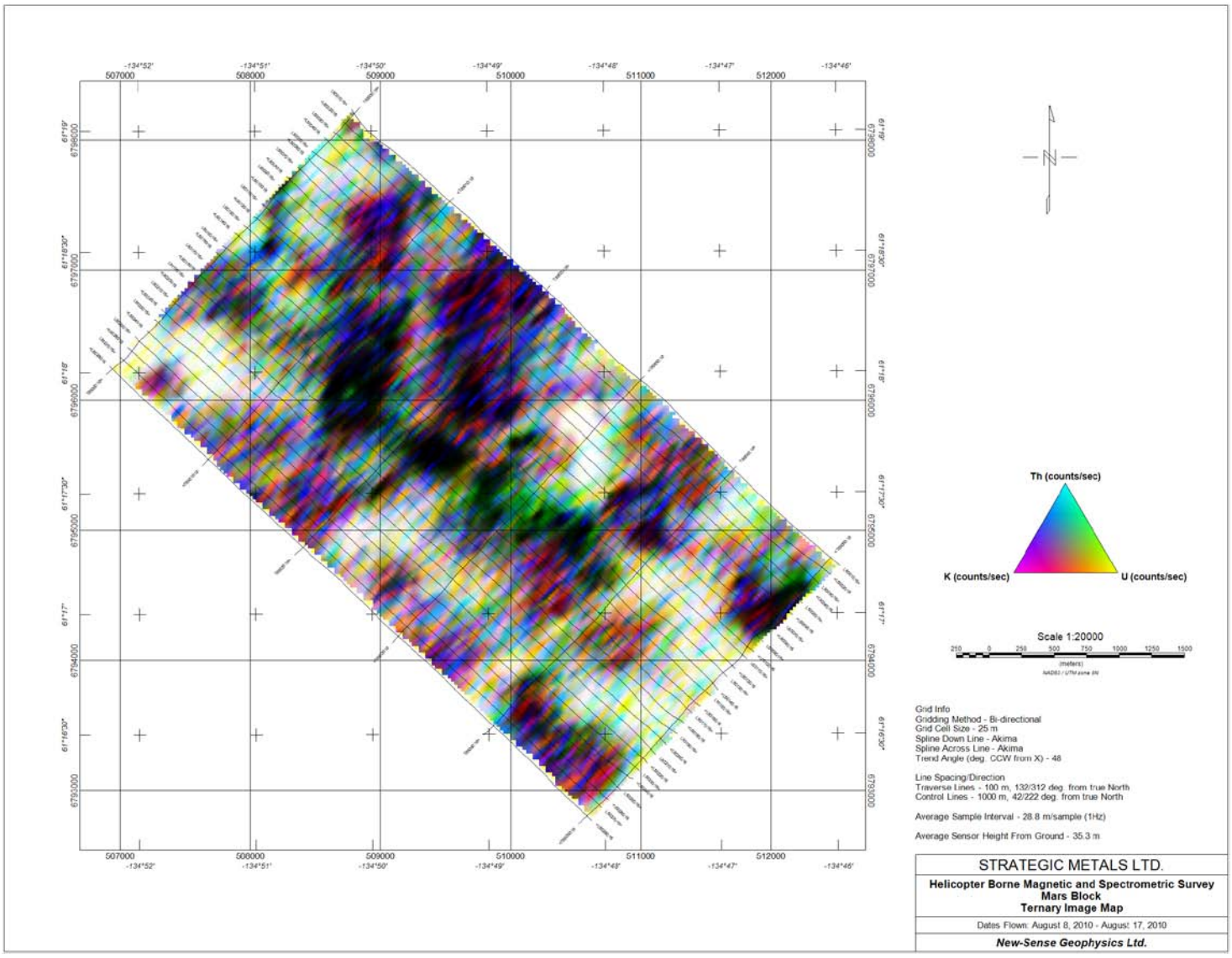
Mars Block Image of Uranium Map



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 micro-levelling which removes any low-amplitude component of flight line noise still remaining in airborne survey data after tie line levelling. Micro-levelling 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, wheras 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 inter-sections.

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 * 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.

QW28611

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 DDH 1-16 and Stars 1-34 mineral claims on Claim Sheet 105E/7 is accurate.

Joan Mariacher

Sworn before me at Vancouver, B.C.

this 27th day of September 2010.

Barrister & Solicitor

IAN J. TALBOT
Barrister & Solicitor
281 East 5th Street
North Vancouver
British Columbia
Canada V7L 1L8

Statement of Expenditures
Stars1-34 and DDH 1-16 Mineral Claims
September 27, 2010

Contract ZTEM Survey and Support

New-Sense Geophysics Limited	$22,927.84
Truck rental and fuel	2,250.13
	$25,177.97

New-Sense
Geophysics Limited

Invoice – 2

Job ID: HMR100806

August 9th, 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 - 4/85.57
King - 4/85.56
Mars - 4/85.57
Meloy - 4/85.56
Mint - 4/85.57
Nikki - 4/85.57

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 Mobilization (20% contract value):	**CAD $ 26,203.24**
GST 5%	**CAD $ 1,310.16**
Total due on this invoice:	**CAD $ 27,513.40**

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**

Corky - 4367.21
Mars - 4367.20
Meloy - 4367.20
Mint - 4367.21
King - 4367.21
Nikki - 4367.21

Andrei Yakovenko
Vice President
New-Sense Geophysics Limited

New-Sense
Geophysics Limited

Invoice – 3

Job ID: HMR100806

August 17th, 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
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: 1,180 km @ CAD $104.59 /km: CAD $ 123,416.20 Mobilization/Demobilization: CAD $ 7,600.00	**CAD $ 131,016.20**
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**

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

Andrei Yakovenko
Vice President
New-Sense Geophysics Limited