

GM 63352

REPORT ON A HELICOPTER-BORNE IMPULSE SYSTEM ELECTROMAGNETIC, RADIOMETRIC AND MAGNETIC SURVEY, NORTH RAE PROJECT

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Énergie et Ressources
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Québec 

**Report on a Helicopter-Borne
IMPULSE System Electromagnetic
Radiometric & Magnetic Survey**



Aeroquest Job # 07031
North Rae Project,
Kangiqsualujjuaq area, northern Québec
NTS 024105,06,11,12

For

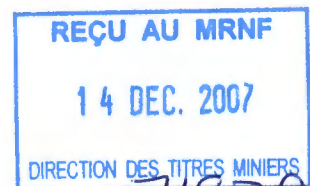


by

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Report Date: November 2006

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Report on a Helicopter-Borne IMPULSE System Electromagnetic Radiometric and Magnetic Survey

Aeroquest Job # 07031
North Rae Project,
Kangiqsualujjuaq area, northern Québec
NTS 024105,06,11,12

For



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by

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Map 3: Radiometrics (Natural Air Absorption Dose Rate) - coloured with line contours and EM Anomalies

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2. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Northwestern Mineral Ventures Inc. on their North Rae Project, northern Québec. The principal geophysical sensor is Aeroquest's IMPULSE helicopter borne, six frequency electromagnetic system which is employed in conjunction with two high-sensitivity cesium vapour magnetometers in a transverse horizontal gradient configuration. The second principal sensor was the Aeroquest's Airborne Gamma Ray Spectrometer (AGRS) system, which utilizes four downward looking NaI crystals used as the main gamma-ray sensors and one upward looking crystal for monitoring non-geologic sources. Ancillary equipment includes a real-time differential GPS navigation system, radar altimeter, video recorder, and a base station magnetometer.

The total survey coverage is 2788.3 line-km. Line spacing was 100m and flying azimuth was E-W (88°). The survey flying described in this report took place from August 16th – 21st, 2006. This report describes the survey logistics, the data processing, presentation, and provides the specifications of the survey.

3. SURVEY AREA

The project area is located in the eastern part of Québec's Ungava peninsula (Figure 1). It is located 160km northeast of Kuujjuak and 30 km southeast of the Ungava Bay shore. The Québec-Labrador boundary lies 100km to the east. The closest settlement to the project is Kangiqsualujjuaq just to its south.

Project terrain is somewhat hilly with lakes, rivers and wetlands in the area. The project is accessed by helicopter only.

The project is made up of two blocks, the western Block AB at almost 390 km² and Block C at just over 110 km². There are over 700 mining claims in the area with various owners (Figure 2).

The crew and geophysical equipment were based at George River, just to the west of Block AB.



Figure 1. Location map of the project area (taken from Northwestern Mineral Ventures website www.northwestmineral.com)

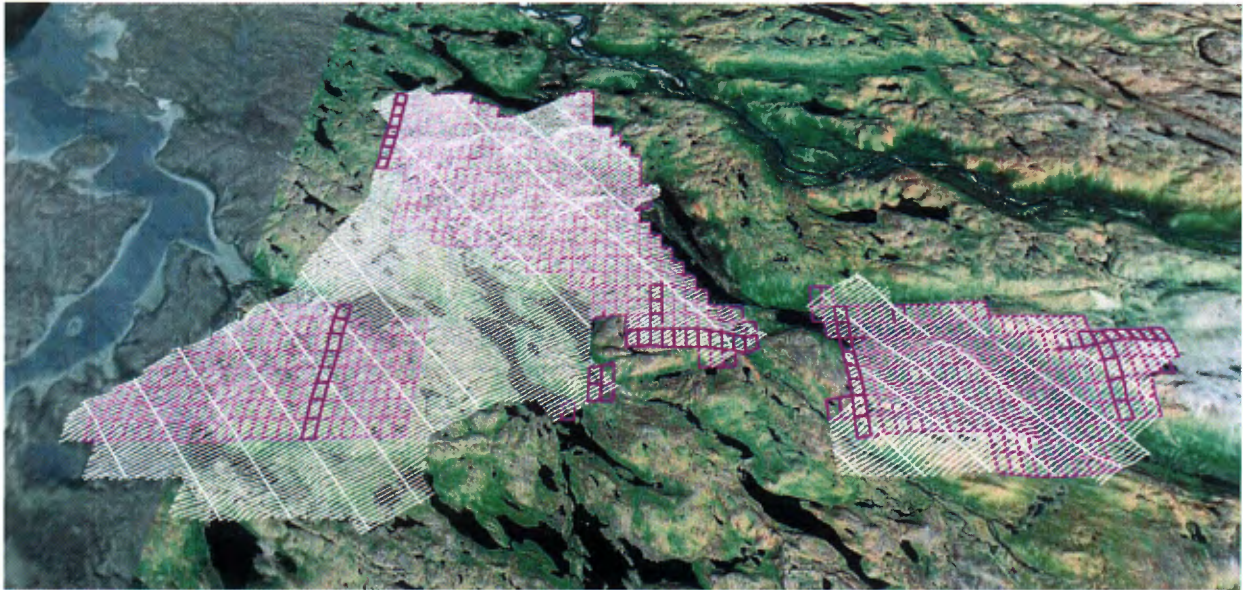


Figure 2. Project flight path and mining claims superimposed on Google Earth imagery

4. SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Project Name	Line Spacing (m)	Line direction	Survey Coverage (line-km)	Dates Flown
Block AB	100	NE-SW (55°)	2179.1	August 27-30, 2006
Block C	100	NE-SW (45°)	609.2	August 30 – September 1, 2006

The survey coverage was calculated by adding up the along-line distance of the survey lines and control (tie) lines in the final Geosoft database. The database was windowed to the survey block outline prior to this calculation. The survey was flown with a line spacing of 100 m. The control (tie) lines were flown perpendicular to the survey lines with a spacing of 1000 m.

The magnetometer sensors were mounted as 2 lateral booms on the EM bird 30m (100ft) below the helicopter. Nominal survey speed was 120km/hr or 60 knots. Scan rates for data acquisition was 10Hz (10 times per second) for the electromagnetics and magnetometer, and 5Hz for the altimeter and GPS determined position. This translates to a geophysical reading about every 3.3 metres along flight track but ground speed does vary depending on the strength of the prevailing wind and topographic relief.

Navigation is carried out using a GPS receiver, an AGNAV2 system for navigation control, and an RMS DGR-33 data acquisition system which records the GPS coordinates. The x-y-z position of the

aircraft, as reported by the GPS, is recorded at 0.2 second intervals.

The operator was responsible for ensuring the instrument was properly warmed up prior to departure and that the instruments operated properly throughout the flight. He also maintained a detailed flight log during the survey noting the times of the flight as well as any unusual geophysical or topographic features. High altitude zero calibration lines were flown at regular intervals during the flight.

The magnetics base station was located such that it could be continuously monitored. The mag sensor and GPS antenna were installed on poles located metres away from any potential magnetic interference or any obstructions to the GPS signals (sensor location – lat/long). The magnetics data was logged internally in the magnetometer and in real time on a laptop computer and transferred to the field processing station daily.

On return of the aircrew to the helicopter base, the RMS DGR-33 acquisition system survey data was transferred to Compact Flash Disks and then downloaded onto the field data processing work station. In-field processing included data archiving and flight path reconstruction, quality control checks and preliminary processing of EM and magnetic data. Generation of a Geosoft GDB database and production of preliminary EM, magnetic contour, and flight path maps were done on the field data processing computer. Any data exhibiting either poor flight control or technical problems with the control or geophysical instrumentation were rejected. In those events the lines were re-flown.

Survey lines which show excessive deviation from the intended flight path are re-flown. Any line or portion of a line on which the data quality did not meet the contract specification was noted and re-flown.

5. AIRCRAFT AND EQUIPMENT

5.1. Aircraft

A Eurocopter (Aerospatiale) AS350BA "A-Star" helicopter - registration C-GVDE was used as survey platform. The helicopter was owned and operated by Wendake Helicopter Inc., Wendake, Québec. Installation of the geophysical and ancillary equipment was carried out by Aeroquest Limited at St.-Siméon, QC and the system was ferried to the survey area. The survey aircraft was flown at a nominal terrain clearance of 220 ft (65 m).



Figure 3. Helicopter Registration number C-GVDE

5.2. Magnetometer

The Aeroquest IMPULSE airborne survey system employs two Geometrics G-823A cesium vapour magnetometer sensors in a horizontal gradient configuration mounted on the EM bird. The sensors are mounted in two stringers orthogonal to the flight path, 6.54 metres apart. The sensitivity of the magnetometer is 0.001 nanoTesla at a 0.1 second sampling rate. The nominal ground clearance of the magnetometer bird is 30 metres. The magnetic data is recorded at 10 Hz by the RMS DGR-33.

5.3. Electromagnetic System

The electromagnetic system employed was an Aeroquest IMPULSE 6 channel frequency domain towed bird system. This wideband frequency-domain system utilises a single computer-controlled, high-output transmitter driver to power a single horizontal coplanar and vertical coaxial transmitter coils, producing a total of six frequencies (three in each coil orientation). These frequencies are given following:

Coaxial 870 Hz
Coaxial 4,350 Hz
Coaxial 21,750 Hz
Coplanar 930 Hz
Coplanar 4,650 Hz
Coplanar 23,250 Hz



The common coil approach used in IMPULSE has the potential to minimise system baseline drift and the inconsistent performance of the many superimposed coil sets found in traditional frequency-domain systems. The IMPULSE system uses a larger diameter tubular coil platform (30'' as opposed to the traditional 20'') which permits the system to generate larger dipole moments, thereby resulting in an improved signal-to-noise ratio.

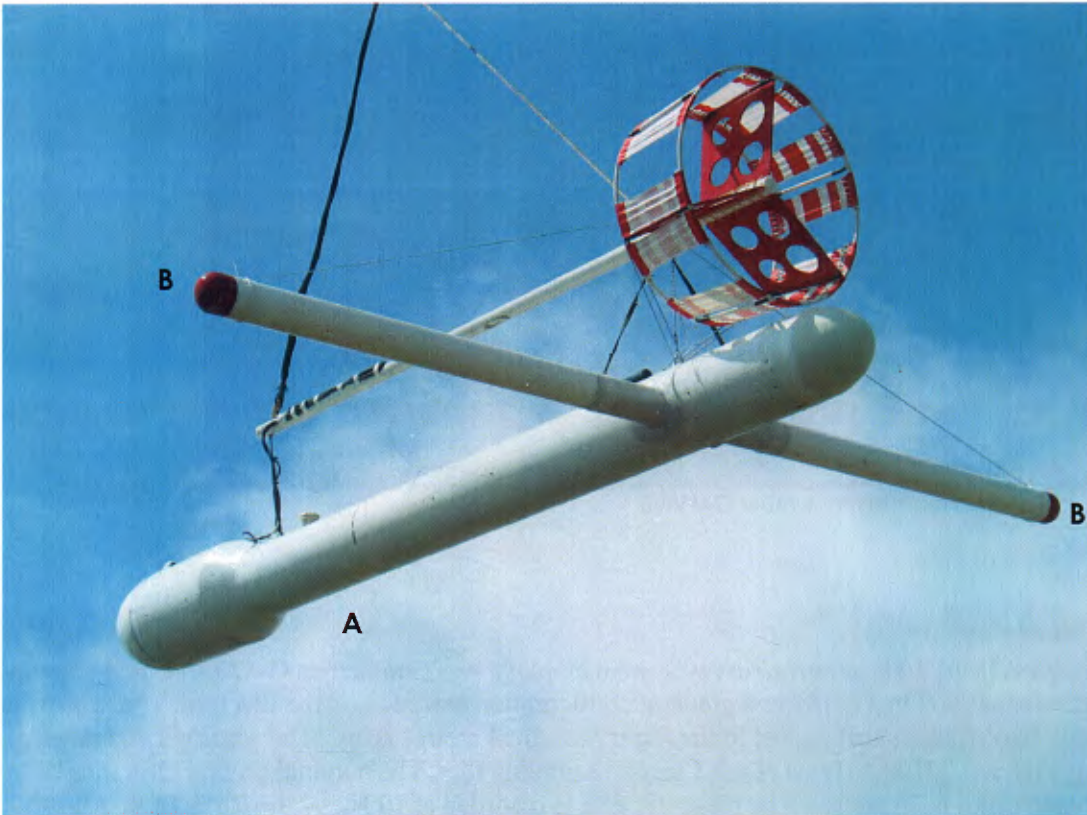


Figure 4. The Impulse bird (A) and Magnetometer Sensors (B)

Calibration of the IMPULSE system conforms to the 4:1 convention for coplanar to coaxial response. The coil separations of the coplanar and coaxial coils are 6.32 and 6.68 metres respectively, but the responses are calibrated to give the equivalent response of a 6.5 metre coil separation.

Calibration of the system is conducted with an external coil which when placed at a certain distance from the bird gives rise to an anomaly of known amplitude. The gain of the system is then adjusted such that the measured response in both the analog and digital records matches the known quantity.

The calibration and phasing were checked with the external coils and ferrite bar respectively in Grand Falls, Windsor prior to the start of the survey to ensure the system was properly set-up. Further checking of the system gain is carried out with an internal "Q-coil" mounted in the bird itself. The operator will close the internal coils at regular intervals, e.g. the start, mid-point, and end

of each flight, which produces an anomalous response of known amplitude. Consistent response amplitude indicates the system is working correctly.

5.4. Spectrometer

A GRS10-5 Intelligent Gamma Ray Spectrometer system manufactured by Pico Envirotec Inc. was used to record radiometric data. The system employs NaI detectors with individual peak detection processors and unique software to help eliminate the problems of zero base shift and deadtime correction. A natural peak detection algorithm enables fast system stabilization and temperature calibration. Individual detector tracking enables linearity correction coefficients to be calculated real time. This linearity is then used to provide a better fit for the individual spectra, maximizing the resolution of the entire spectrum and increasing the sensitivity of lower energy windows.

Technical specifications:

- Downward looking crystal volume: 16.8 Litres (1024 cu. in)
- Upward looking crystal volume: 4 Litres (256 cu. in.)
- Sample interval: 1.0 seconds (0.5 optional)
- Channels: 256 (512 optional) – channel width: 11.71keV
- Sensor location: Left rear of helicopter cabin (nominal ground clearance – 70 metres)
- Total counts window: 295keV to 3000keV
- Potassium counts window: 1306keV to 1588keV
- Uranium counts window: 1588keV to 1841keV
- Upward looking Uranium counts window: 1588keV to 1841keV
- Thorium counts window: 2376keV to 2847keV
- Cosmic counts: 3000keV to 6000keV
- Barometric and temperature sensor type: Honeywell transducer model HPB100
- Barometric and temperature sensor location: aircraft landing skid
- Anticoincidence: simultaneous pulses recorded on all sensors stored in channel 0
- Spectra Tracking: fully automatic
- Stabilization time: 30 sec. on ground, 3 minutes in air @ 100m altitude
- Spectra Correction: automatic, system to be calibrated once per year
- Data Acquisition System: PicoEnvirotec AGIS - with GPS synchronization

Digital data was recorded at 1 Hz intervals and stored on a compact flash disk.

5.5. Magnetometer Base Station

The base magnetometer was a Geometrics G-859 cesium vapour magnetometer with a built in GPS receiver and external GPS antenna. Data logging and UTC time synchronisation was carried out within the magnetometer, with the GPS providing the timing signal. The data logging was configured to measure at 1.0 second intervals. Digital recording resolution was 0.001 nT. The sensor was placed on a tripod in an area of low magnetic gradient and free of cultural noise sources. A continuously updated display of the base station values was available for viewing and regularly monitored to ensure acceptable data quality and diurnal variation.

5.6. Radar Altimeter

A Terra TRA 3500/TRI-30 radar altimeter is used to record terrain clearance. The antenna was mounted on the outside of the helicopter beneath the cockpit. Therefore, the recorded data reflect the height of the helicopter above the ground. The Terra altimeter has an altitude accuracy of +/- 1.5 metres.

5.7. Video Tracking and Recording System

A high resolution digital colour 8mm video camera is used to record the helicopter ground flight path along the survey lines. The video is digitally annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.

5.8. GPS Navigation System

The navigation system consists of an Ag-Nav Incorporated AG-NAV2 GPS navigation system comprising a PC-based acquisition system, navigation software, a deviation indicator in front of the aircraft pilot to direct the flight, a full screen display with controls in front of the operator, a Mid-Tech RX400p WAAS-enabled GPS receiver mounted on the instrument rack and an antenna mounted on the magnetometer bird. WAAS (Wide Area Augmentation System) consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations, located on the east and west coasts, collect data from the reference stations and create a GPS correction message. This correction accounts for GPS satellite orbit and clock drift plus signal delays caused by the atmosphere and ionosphere. The corrected differential message is then broadcast through one of two geostationary satellites, or satellites with a fixed position over the equator. The corrected position has a published accuracy of under 3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 metres and for z under 1.5 metres over a two-hour period.

Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84 [World] using the UTM zone 20N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 s intervals.

5.9. Digital Acquisition System

The RMS Instruments DGR-33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 12 channel EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128Mb capacity FlashCard. The RMS output was also directed to a thermal chart recorder for on-board real-time QA/QC.

6. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Field Data Processor: Chris Brown
- Field Operator: Duncan Wilson

- Data Interpretation and Reporting: Gord Smith, Marion Bishop

The survey pilot, Steve Labranche was employed directly by the helicopter operator – Wendake Helicoptere.

7. DELIVERABLES

The report includes a set of four geophysical maps plotted at a scale of 1:20,000. The survey is divided into three map sheets.

Map 1: Horizontal Gradient Enhanced TMI (IGRF removed) colour grid with line contours and EM Anomalies

Map 2: IMPULSE Mid-Frequency CX (4350 Hz) and CP (4,650 Hz) Profiles with EM Anomalies

Map 3: Radiometrics (Natural Air Absorption Dose Rate) - coloured with line contours and EM Anomalies

Map 4: Radiometrics (Uranium/Thorium Ratio) - coloured with line contours and EM Anomalies

Map 5: Resistivity 4650Hz - coloured with line contours and EM Anomalies

All the maps show flight path trace and skeletal topography. The magnetic field data is presented as superimposed line contours with a minimum contour interval of 5 nT. Bold contour lines are separated by 250nT.

The geophysical profile data is archived digitally in a Geosoft GDB binary format database. A description of the contents of the individual channels in the database can be found in Appendix 2. A copy of this digital data is archived at the Aeroquest head office in Milton.

8. DATA PROCESSING AND PRESENTATION

All in-field and post-field data processing was carried out using Aeroquest proprietary data processing software and Geosoft Oasis montaj software. Maps were generated using 36-inch wide Hewlett Packard ink-jet plotters.

8.1. Base Map

The geophysical maps accompanying this report are based on positioning in the NAD27 datum. The survey geodetic GPS positions have been projected using the Universal Transverse Mercator projection in Zone 18 north. A summary of the map datum and projection specifications is given following:

- Ellipse: Clarke 1866
- Ellipse major axis: 6378206.4m eccentricity: 0.08227185422
- Datum: North and Central America - Canada; Cuba; Mexico; United States (USA)
- Datum Shifts (x,y,z) : 22,-160,-190 metres

- Map Projection: Universal Transverse Mercator Zone 18 (Central Meridian 75°W)
- Central Scale Factor: 0.9996
- False Easting, Northing: 500,000m, 0m

For reference, the latitude and longitude in WGS84 are also noted on the maps. The background vector topography supplied by the client and the background shading was derived from NASA Shuttle Radar Topography Mission (SRTM) 90m resolution DEM data.

8.2. Flight Path & Terrain Clearance

The position of the survey helicopter was directed by use of the Global Positioning System (GPS). Positions were updated five times per second (5Hz) and expressed as WGS84 latitude and longitude calculated from the raw pseudo range derived from the C/A code signal. The instantaneous GPS flight path, after conversion to UTM co-ordinates, is drawn using linear interpolation between the x/y positions. The terrain clearance was maintained with reference to the radar altimeter. The raw Digital Terrain Model (DTM) was derived by taking the GPS survey elevation and subtracting the radar altimeter terrain clearance values. The calculated topography elevation values are relative and are not tied in to surveyed geodetic heights.

Each flight included at least two high elevation ‘background’ checks. During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

8.3. Electromagnetic Data

A two stage digital filtering process was used to reject major sferic events and to reduce system noise in the IMPULSE electromagnetic system.

Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events. The filter used was a 0.4 sec non-linear filter.

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 2 seconds. This filter is referred to as a 20 point linear filter.

The EM channels have been levelled to remove the residual zero offset by the use of a short background line at the beginning, middle and end of each flight. The background line is flown at high altitude (>1000ft), theoretically far enough away from any ground conductivity response. Any residual response is therefore a system offset and can be removed from the on-line response by virtue of linear interpolation between the start and end of flight checks. If any non-linear drift remains in the data, then artificial local levelling lines were employed. Any remaining long wavelength response of around 1 ppm or less may be considered background or low amplitude error and may be disregarded.

During the high elevation checks, an internal (Q-Coil) calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

The EM profiles were examined and any discernable bedrock anomalies were noted as picked anomalies. Surficial conductors are ubiquitous and typically feature a very strong broad quadrature response and a poor or negligible inphase response. These anomalies are often found over shallow lakes and swamps.

8.4. Gamma-Ray Spectrometer Data

All radiometric processing was completed using the International Atomic Energy Agency (IAEA - 1991) guidelines. The Individual detector processors in the GRS10-5 spectrometer and intelligent peak detection software has virtually eliminated the problem of system drift (and subsequent levelling) and the need for deadtime corrections.

Data Quality Assurance and Control

The spectrometer data are referenced to the other data sets using a GPS time stamp. Merging of the various recorded data sets is done post flight using proprietary Aeroquest software. Preliminary ROI channels are generated and profiles are then plotted from the digital data to check for any missing data, spikes or data corrupted by other noise sources. Where necessary, the data are corrected or flagged for re-flight depending on the severity or duration of the noise.

Spectral Calibration

When calibrated (with thorium source about once a year) linearity of the each detector is measured and linearity correction coefficients are calculated. When operating in real time (collecting data), the linearity of each detector is mathematically corrected for each measurement. Individual detector tracking (tuning) and linearity correction provide better fit of the individual spectra that are being summed and therefore a sharper (better resolution) spectrum is obtained.

Calibration of the 5 detectors was carried out on April 27, 2005 as follows:

Crystal	S/N	Cs resolution (%)
1	SAM359	7.9
2	SAM358	8.4
3	SAM355	8.4
4	SAM357	8.4
5	SAM356	9.1

Spectra Windowing

The Gamma-Ray spectra were recorded in a 256 channel array at a sample rate of 1 Hz. The standard windows for the GRS10-5 detector are as follows:

- Total counts window: 295keV to 3000keV (channels 25 to 255)
- Potassium counts window: 1306keV to 1588keV (channels 111 to 135)
- Uranium counts window: 1588keV to 1841keV (channels 135 to 165)
- Thorium counts window: 2376keV to 2847keV (channels 202 to 242)
- Cosmic counts: 3000keV to 6000keV (channel 256)

Data Pre-Filtering

The following raw channels were low-pass filtered prior to further processing:

Filter widths:

- Total counts : 4 seconds
- Potassium counts : 5 seconds
- Uranium counts : 7 seconds
- Thorium counts : 7 seconds
- Cosmic counts : 35 seconds
- Radar altimeter : 3 seconds

Filtering to Prepare for Background Corrections

The radar altimeter data are filtered in order to ensure that no noise sources from the altimeter data are introduced to the radiometric data processing. The upward looking data are also filtered to improve the count statistics. A typical filter width ranges from 10 to 20s. In order to establish radon background levels from the upward-looking detector data, temporary heavily filtered upward and downward looking uranium and downward looking thorium data are utilized. The original unfiltered data are, of course, retained

Standard Pressure and Temperature corrections

Radar altimeter data are used in adjusting the stripping ratios for altitude and to carry out the height attenuation corrections. They are then converted to effective height (he) at STP by the expression $he = (h * 273.15)/(T + 273.15) * (P/1013)$, where h is the observed radar altitude; T is the temperature in degrees C; and P is the barometric pressure in mbars

LiveTime (DeadTime) corrections

No LiveTime corrections were required for this survey. The GRS10-5 does not generally require corrections for system deadtime. This correction is only applied where the total count rates are extremely high. Dead-time correction is made to each window using the expression $N=n/(1-T)$ where N is the corrected count; n is the raw recorded count; and T is the dead-time. It is estimated that the system deadtime is less than 10 microseconds per pulse.

Cosmic and Aircraft Background

Cosmic and aircraft background expressions are determined for each spectral window as described in chapter 4 of the IAEA Technical Report 323. The general form of these expressions is $N = a + bC$, where N is the combined cosmic and aircraft background for each window; a is the aircraft background in the window; C is the cosmic channel count; and b is the cosmic stripping factor for the window.

The expressions are evaluated for each ROI window for each sample and used as a subtractive correction for the data.

Radon Background

Correction of the data for variations in background due to radon is a multi-step process. First, test flights at various elevations over water are carried out in the field to establish the contribution of atmospheric radon to the ROI windows. A least squares analysis of the data from these test flights yields the constants for equations 4.9 to 4.12 (IAEA Report 323). Second, the response of the upward looking detector to radiation from the ground is established. Here a departure from the IAEA Report has been recommended by Grasty and Hovgaard (1996). The expression for the radon component in the downward looking uranium window is given by $U_r = (u - a_1U - a_2T + a_2b_T - b_u) / (a_u - a_1 - a_2a_T)$ (see Eq. 4.3 – IAEA 323) where, U_r is the radon background detected in the downward U window; u is the measured count in the upward uranium window; U is the measured count in the downward uranium window; T is the measured count in the downward thorium window; a_1 , a_2 , a_u and a_T are proportionality factors; and b_u and b_T are constants determined experimentally. Using a_1 or a_2 (see above) in this equation will result in a good estimate of U_r permitting correction of the other ROI windows.

Survey altitude test data were collected and used to establish atmospheric background and calibrate the upward and downward looking detector systems. Variations in count rates due to soil moisture content and altimeter variations can largely be overcome by a normalization procedure using the thorium count. The procedure correlates the thorium count to the uranium count assuming the contribution to each ROI from the ground is proportional.

Compton Stripping

Readings from pure Uranium, Thorium and Potassium sources can be seen in other ROI's or Regions of Interest (windows). This spectral overlap must be corrected for. The stripping ratios a , b and g are determined during tests over calibration pads. The principal ratios a , β and g should be adjusted for temperature, pressure and altitude (above ground) before stripping is carried out. These stripping ratios are used to remove the contribution in each of the three ROI windows from higher energy sources, leaving only the contribution from potassium, uranium and thorium.

Altitude Attenuation Corrections

The altitude attenuation correction corrects the data in each of the ROI windows for the effects of altitude. The count rates decrease exponentially with altitude and therefore the counts are corrected to a constant altimeter datum at the nominal survey height of 30m.

Apparent Radioelement Concentrations

The corrected count rate data can be converted to estimate the ground concentrations of each of the three radioelements, potassium, uranium and thorium. The procedure assumes an infinite horizontal slab source geometry with a uniform radioelement concentration. The calculation assumes radioactive equilibrium in the U and Th decay series. Therefore the U and Th concentrations are assigned as equivalent concentrations using the nomenclature eU and eTh. An estimate of the air absorbed dose rate can be made from the apparent concentrations, K%, eU ppm and eTh ppm.

Computation of Radioelement Ratios

Standard rationing of the three radioelements (eU/eTh, eU/K and eTh/K) can be carried out and presented in profile or plan map form. In order to ensure statistical confidence in generating these ratios, we generally take the following precautions:

1. Reject all data point where the apparent potassium concentration is less than 0.25% as these measurements are likely taken over water.
2. Carry out cumulative summing along the survey line of each radioelement, rejecting areas where the summation does not exceed a certain threshold value (no lower than 25 counts for both numerator and denominator).
3. Compute the ratios using the cumulative sums.

8.5. Magnetic Data

Prior to any levelling the magnetic data was subjected to a lag correction of -0.1 seconds and a spike removal filter. The filtered aeromagnetic data were then corrected for diurnal variations using the magnetic base station and the intersections of the tie lines. Corrections for the regional reference field (IGRF) were applied on a point-by-point basis. The corrected profile data were interpolated on to a grid using a bi-directional grid technique with a grid cell size of 30 metres. The final levelled grid provided the basis for threading the presented contours which have a minimum contour interval of 5.0 nT.

Respectfully submitted,

Gord Smith
Aeroquest Limited
November, 2006

DÉCLARATION SUR LA QUALITÉ ET LA CONFORMITÉ DES TRAVAUX

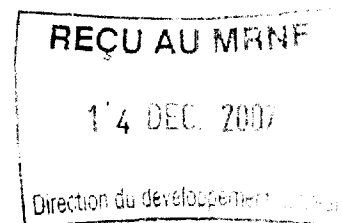
Je, Camille St-Hilaire, membre de l'Ordre des Géologues du Québec, et demeurant au 732 rue Gohier, Ville St-Laurent (Québec), H4L 3J1, après analyse des documents suivants :

- Report on a Helicopter-Borne Impulse System Electromagnetic Radiometric & Magnetic Survey, North Rae Project, Kangiqsualujjuaq area, northern Quebec, 2006; Aeroquest Job no.07031; for NorthWestern Mineral Ventures Inc;
- Cartes et données faisant partie du rapport ci haut mentionné ;
- Interpretation Memorandum, North Rae Uranium Project, Ungava Area (Quebec); NorthWestern Minerals Limited. By Jeremy S, Brett, M.Sc., P.Geo., MPH Consulting Limited, July 14th, 2007;
- Cartes et données faisant partie du rapport ci haut mentionné;
- Cartes de localisation des travaux et des titres miniers;
- Facturation et coûts des travaux.

Déclare être satisfait de la qualité des données et de la conformité de l'information présentée dans ces documents. C'est donc à titre de géologue professionnel faisant partie de l'Ordre des Géologues du Québec, que je recommande le dépôt de ces travaux au Centre de Gestion des Titres Miniers du Ministère des Ressources Naturelles et de la Faune du Québec.



Camille St-Hilaire, P.Géo. OGQ no.339



718794

APPENDIX 1: Survey Boundaries

The Otish project has boundaries which are defined in the following table. All geophysical data presented in this report have been windowed to this outline. Positions are in UTM Zone 20 – NAD27.

Block AB

X	Y
339319.11	6508861.41
341816.09	6510514.21
342407.39	6509623.71
344461.29	6509540.21
344424.19	6508612.91
345872.58	6508555.21
345835.78	6507627.72
346792.88	6507590.42
346792.77	6507690.22
349288.17	6509350.01
350736.26	6509294.01
350629.36	6506511.72
351595.46	6506474.72
351560.06	6505547.32
352043.26	6505528.93
352007.97	6504601.42
352491.26	6504583.02
352456.06	6503655.63
352939.46	6503637.33so
352869.45	6501782.33
353836.65	6501745.94
353801.86	6500818.54
352481.16	6499939.64
352799.36	6499927.54
352764.37	6499000.05
353248.26	6498981.74
353213.36	6498054.35
353697.46	6498036.14
353662.65	6497108.75
354146.86	6497090.65
354112.26	6496163.15
354596.55	6496145.05
354561.95	6495217.66
355046.45	6495199.65
355011.95	6494272.17
355496.55	6494254.26
355462.26	6493326.66
356431.55	6493290.96
357844.45	6491164.86
355344.85	6489505.87
354632.06	6490571.77
351964.16	6490671.37
352034.36	6492526.27
350580.07	6492581.66
350494.36	6490337.97
351582.67	6488721.18
349138.08	6486992.18
348436.87	6488020.38
346841.78	6488082.69
344505.89	6486410.19

Block AB (contd)

X	Y
344431.29	6484461.89
344955.09	6483675.9
342455.49	6482016.9
342000.09	6482702.49
335609.42	6482964.19
335687.22	6484818.89
331801.12	6484983.78
331880.82	6486838.38
330424.23	6486901.28
330484.43	6488279.18
333905.52	6491574.27
333968.72	6491505.06
337568.71	6494958.86
340241.10	6501045.94
340492.70	6507084.92

Block C

X	Y
361764.23	6495239.3
362628.63	6493996.74
363249.71	6493975.03
363220.08	6493105.87
363259.53	6493046.04
367094.89	6492913.61
367063.32	6491986.14
370941.93	6491856.14
370911.31	6490928.62
373821.03	6490833.65
373761.16	6488978.51
372267.64	6487599.24
372214.79	6486243.12
371067.17	6485198.29
371266.28	6484972.85
369049.12	6482951.93
368525.38	6483580.94
359491.74	6483893.00
359591.51	6486675.41
360596.43	6487591.85
360694.59	6490350.61
361161.00	6490774.04
360826.47	6491274.04
360242.74	6491295.47
360271.83	6492108.99
359543.22	6493216.5

APPENDIX 2:

Geosoft Database Channel Description:

COLUMN	UNITS	DESCRIPTOR
X	m	UTM Easting (NAD27 Zone 20)
Y	m	UTM Northing (NAD27 Zone 20)
fid		
AltG	m	Aircraft GPS Altitude (relative to NAD83 ellipsoid Zone 20)
AltR	m	Aircraft Radar Altimeter
AltR_Bird	m	Terrain clearance of EM bird and mag sensors
basemag	nT	Base Station magnetic field
cp123250F	ppm	Levelled 23250Hz Coplanar inphase
cp14650F	ppm	Levelled 4650Hz Coplanar inphase
cp1930F	ppm	Levelled 930Hz Coplanar inphase
cpq23250F	ppm	Levelled 23250Hz Coplanar quadrature
cpq4650F	ppm	Levelled 4650Hz Coplanar quadrature
cpq930F	ppm	Levelled 930Hz Coplanar quadrature
cxi21750F	ppm	Levelled EM 21750Hz Coaxial inphase
cxi4350F	ppm	Levelled EM 4350Hz Coaxial inphase
cxi870F	ppm	Levelled EM 870Hz Coaxial inphase
cxq21750F	ppm	Levelled EM 21750Hz quadrature
cxq4350F	ppm	Levelled EM 4350Hz Coaxial quadrature
cxq870F	ppm	Levelled EM 870Hz Coaxial quadrature
DTMF	m	Digital Terrain Model
hgrad	nT/m	Measured Magnetic Horizontal Gradient
TC	cps	Raw Radiometrics (Total counts)
TCCORR	uGy/h	Radiometrics (Natural Air Absorption Dose Rate)
K	cps	Raw Radiometrics (Potassium counts)
KCORR	%k	Radiometrics (percent potassium)
U	cps	Raw Radiometrics (Uranium counts)
UCORR	eU ppm	Radiometrics (equivalent uranium)
TH	cps	Raw Radiometrics (Thorium counts)
THCORR	eTH ppm	Radiometrics (equivalent thorium)
lat	dd.mm.ss.s	Latitude (WGS84)
long	dd.mm.ss.s	Longitude (WGS84)
magP	nT	Diurnally corrected Total Magnetic Intensity (port)
magS	nT	Diurnally corrected Total Magnetic Intensity (starboard)
TCEXP	uR/h	Radiometrics (Exposure Rate)
TFmag	nT	Final levelled Total Magnetic Intensity
TFmag_igrfcorr	nT	Final levelled Total Magnetic Intensity (IGRF corrected)
utctime	hh.mm.ss.s	
THKRATIO		Radiometric ratio
UKRATIO		Radiometric ratio
UTHRATIO		Radiometric ratio
RES4650F	ohm-m	Apparent Resistivity (4650 Hz)

APPENDIX 3: AeroTEM Anomaly Listing

Block AB Anomalies

Line	Anomaly	Grade	fid	cpi4650F	cpq4650F	cXi4350F	cXq4350F	RES4650F	x	y	utctime
10130	A	4	3237.2	275.3	69.4	44.1	11	59.25	344042.58	6509056.33	16:06:32
10140	A	2	3551.4	60.8	20.1	7.6	1.9	259.3	344208.27	6508958.06	16:11:46
10530	A	2	1331.4	40	61.5	11.7	14.6	188.15	337520.28	6494729.35	11:36:13
10540	A	4	2545.9	37.6	72.1	24.6	16.9	175.31	337714.62	6494617.57	11:56:28
10550	A	2	2838	44.1	13.5	10.7	3.2	150.18	338098.52	6494656.54	12:01:20
10560	A	3	4063.7	25.4	8.8	11.9	2.9	20.91	338022.36	6494358.69	12:21:46
10560	B	3	4257.9	108.6	112.5	27.7	20.3	119.94	334257.87	6491697.85	12:25:00
10560	C	3	4277.5	29.3	20.5	12	9	88.74	333832.23	6491435.25	12:25:19
10570	A	2	4500.6	32.4	41.3	11	10.6	152.28	333592.11	6491012.87	12:29:02
10570	B	4	4513.5	106.2	89.3	41.1	28.7	68.46	333928.62	6491225.5	12:29:15
10570	C	3	4532.2	34.9	44.5	11.5	9.2	123.21	334320.78	6491525.45	12:29:34
10580	A	3	6068.9	45.5	58.9	22.6	17.1	125.63	334311.77	6491273.42	12:55:11
10590	A	4	6752.8	220.8	83.9	47.4	15.1	27.3	343694.44	6497608.49	13:06:35
10600	A	6	7525.8	607.9	40.3	120.7	15	3.77	343763.21	6497398.68	13:19:28
10600	B	3	7942.5	64.3	67.5	13.3	17.4	110.56	334457.59	6490884.64	13:26:24
10610	A	3	8422.9	67.5	57.2	22.3	15.2	60.1	334523.65	6490697.53	13:34:25
10610	B	4	8770	159.7	72.7	43.3	10.6	36.62	343799.74	6497182.59	13:40:12
10610	C	5	8776.9	291.1	74.1	94.7	17.9	12.49	343982.89	6497330.08	13:40:19
10620	A	4	9531.6	57.9	21.2	41.7	7.4	11.7	344090.83	6497131.65	13:52:54
10620	B	4	9539.7	172.5	63.1	44.7	9.2	37.09	343873.79	6497006.98	13:53:02
10620	C	4	9953	80	55.2	35.1	18.9	77.22	334563.77	6490478.56	13:59:55
10630	A	2	1303.8	19.3	18.2	10.2	6.5	160.69	334649.74	6490280.68	15:11:16
10630	B	4	1645.5	113	54.9	35.6	7.4	31.06	343969.76	6496817.5	15:16:58
10630	C	5	1653.9	151.9	57.3	66	15.1	9.65	344214.98	6496983.09	15:17:06
10640	A	5	2385.6	150.5	60.8	89.8	19.2	8.34	344326.85	6496824.37	15:29:18
10640	B	5	2397.6	191.8	52.7	57.5	9	26.53	344025.1	6496630.34	15:29:30
10650	A	2	3212.6	17.9	26.6	4.9	5.6	196.72	334966.3	6490012.88	15:43:05
10650	B	2	3346.1	20.9	13.2	9	6	815.38	338340.12	6492391.29	15:45:18
10650	C	4	3553.9	73.2	37.1	25.3	6.3	27.34	344131.01	6496425.44	15:48:46
10650	D	5	3565.6	160.8	70.4	65.7	15.5	11.52	344460.07	6496656.46	15:48:58
10660	A	5	4301.5	217.8	54.9	89.6	11.8	4.75	344584.84	6496503.44	16:01:14
10660	B	4	4309.6	210.5	71.1	50.6	19.2	7.95	344400.61	6496378.34	16:01:22
10660	C	5	4312.9	210.1	64.1	59.9	17.7	3.26	344329.95	6496328.03	16:01:25
10660	D	5	4319	148.8	86.8	57.4	16.8	26.83	344207.34	6496238.82	16:01:31
10660	E	4	4751.6	134.1	111.4	36.6	22.9	47.29	335132.45	6489906.75	16:08:44
10670	A	3	5260.6	22.6	17.8	12.5	6.7	77.41	335283.96	6489746.34	16:17:13
10670	B	3	5579.1	71.4	23.5	20.7	5.1	27.63	344305.26	6496061.06	16:22:31
10670	C	4	5588.5	99.1	60	36.8	18.5	17.14	344558.24	6496243.57	16:22:41
10670	D	5	5594.4	184	83.5	78.7	26	12.19	344705.48	6496356.18	16:22:47
10680	A	4	6342.3	91.2	35.5	46.1	9.8	12.33	344809.52	6496163.28	16:35:15
10680	B	5	6348.8	174.2	97.6	50.4	28.6	15.71	344647	6496063.18	16:35:21
10680	C	4	6360.9	73.3	60.2	30.5	9.7	91.77	344369.61	6495874.14	16:35:33

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10680	D	4	6773.9	25.6	28.8	27.4	10.1	75.16	335393.08	6489595.25	16:42:26
10680	E	2	6827.4	15.9	16	8.3	7.2	160.92	334436.74	6488912.01	16:43:20
10690	A	3	7091.3	42.5	29.6	23.2	11.4	112.65	334543.41	6488752.14	16:47:44
10690	B	4	7130.7	103.9	57.6	47.1	15.4	62.9	335509.49	6489415.34	16:48:23
10690	C	3	7439.3	103.2	35.6	20.4	6.2	26.73	344478.49	6495708.32	16:53:32
10690	D	4	7448.8	117.8	58.8	37.4	18.9	13.65	344776.77	6495913.26	16:53:41
10690	E	4	7454	97.5	41.8	42.6	10.2	30.42	344931.04	6496024.67	16:53:46
10690	F	2	7680.4	40.8	56.5	11.6	16.6	233.41	351058.67	6500310.42	16:57:33
10700	A	4	7875.2	157.4	92.3	35.8	21.8	59.17	351479.25	6500347.28	17:00:48
10700	B	2	7889.3	33	61.6	8.2	17.7	170.91	351196.08	6500171.16	17:01:02
10700	C	5	8171	128.4	55	63.1	12.5	30.39	345058.24	6495854.32	17:05:43
10700	D	5	8176.4	246.1	97.7	67.6	27.6	9.96	344926.1	6495776.2	17:05:49
10700	E	4	8192.5	113.8	90.4	39.5	21.2	73.12	344563.39	6495520.03	17:06:05
10700	F	2	8603.9	15.4	28	6.8	5.7	303.04	335617.27	6489253.04	17:12:56
10700	G	4	8647.3	74.4	42.5	36	14.7	74.13	334643.68	6488585.03	17:13:40
10710	A	5	9037.7	254.4	104.4	83.6	24.5	5.01	334859.25	6488487.28	17:20:10
10710	B	3	9071.6	22.3	25.4	13.8	6.8	146.94	335778.11	6489116.64	17:20:44
10710	C	4	9372.1	99.4	36.1	32.8	8.1	52.53	344682.21	6495371.89	17:25:44
10710	D	4	9385.7	178.7	78.9	46.2	21.8	9.23	345078.34	6495629.87	17:25:58
10710	E	3	9597.1	65.8	75.4	17.9	19.5	112.37	351198.88	6499934.62	17:29:29
10710	F	3	9611.4	77.6	29.3	17.6	7	33.18	351589.77	6500194.43	17:29:44
10720	A	5	1150.9	273.2	127	59.1	23.3	9.2	335016.68	6488356.26	18:44:55
10720	B	3	1166.1	101	102.4	21.3	16.2	50.47	335431.25	6488637.57	18:45:10
10720	C	3	1180.2	29.4	26.4	14.2	8.1	104.9	335864.8	6488931	18:45:24
10720	D	4	1489.4	183.6	47.9	42.7	7.7	21.18	344739.91	6495152.8	18:50:34
10720	E	4	1504.9	151.9	57.4	44.8	19	8.31	345207.68	6495484.86	18:50:49
10720	F	5	1716.9	266.9	140.7	61.8	31.7	40.15	351324.91	6499784.11	18:54:21
10730	A	4	1939	104.8	88.5	27.7	21.7	35.24	351481.45	6499622.56	18:58:03
10730	B	4	2227.7	150.5	82.1	51.9	25.3	11.39	345324.5	6495298.77	19:02:52
10730	C	5	2247	273.2	55	82.7	9.8	8.34	344866.64	6494979.81	19:03:11
10730	D	3	2681.6	35.2	29.1	19.9	15.5	55.53	335520.32	6488433.75	19:10:26
10730	E	3	2699.8	31.2	36.6	16.6	9.2	143.03	335089.14	6488155.98	19:10:44
10740	A	3	3007.5	62.7	75.9	24.8	14.1	181.17	335229.04	6488015.22	19:15:52
10740	B	4	3024.3	151.8	68.4	31.1	12.7	11.97	335696.32	6488315.41	19:16:09
10740	C	4	3355.4	92.1	35.9	32.7	6.4	24.78	345001.11	6494830.09	19:21:40
10740	D	4	3371.1	116.7	60.5	37	18.9	13.29	345432.53	6495180.26	19:21:55
10740	E	3	3586.7	24.9	32.4	13.3	9.8	207.57	351490.95	6499391.47	19:25:31
10750	A	3	3820.5	83.1	69.7	21.2	17.2	90.36	351584.82	6499193.55	19:29:25
10750	B	4	4096.2	141.6	64.7	43.3	21.9	10.93	345592.26	6494999.63	19:34:00
10750	C	4	4117.8	161.2	84.4	51.5	13.6	31.73	345105.67	6494676.39	19:34:22
10750	D	5	4551.3	167.6	80	53.3	14.6	18.09	335821.96	6488196.72	19:41:36
10760	A	5	5419.1	215.4	61.4	55.2	13.1	16.1	345215.92	6494512.61	19:56:03
10760	B	4	5440.7	80.8	38.7	32.4	10.3	56.88	345821.31	6494934.33	19:56:25
10760	C	3	5658.6	49.5	71.4	23.1	18.6	199.59	351639.36	6499018.26	20:00:03
10770	A	5	5760.6	327.2	212.3	76.6	45.2	27.43	352282.01	6499195.68	20:01:45
10770	B	3	5795.7	125.9	101.6	21.9	16.9	94.41	351776.77	6498869.77	20:02:20
10770	C	4	6064	130.8	63.5	38.4	16.2	10.64	345815.81	6494688.88	20:06:48

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10770	D	5	6077.3	454.8	359.1	98.6	61.2	13.04	345517.28	6494462.15	20:07:02
10770	E	5	6087.3	287.3	133.2	67.2	21.1	42.8	345279.46	6494304.16	20:07:12
10780	A	4	7172.8	144.3	36.4	43.2	8.2	43.12	345339.72	6494111.87	20:25:17
10780	B	6	7182.4	477.6	169.3	115.2	43.4	6.08	345597.95	6494292.61	20:25:27
10780	C	6	7186.7	531.6	151.6	130.3	34.1	4.97	345718.44	6494366.84	20:25:31
10780	D	4	7195.9	164.8	53.3	38	15.1	5.98	345973.07	6494544.35	20:25:40
10780	E	4	7418.1	145.3	85	44.5	22.1	28.19	351962.88	6498734.38	20:29:22
10780	F	3	7432.3	44.2	13.9	15.3	7.5	35.8	352355.59	6499015.36	20:29:37
10790	A	5	7491.8	307	110.7	69.8	25.1	6.93	352515.53	6498889.2	20:30:36
10790	B	5	7518.4	358.9	86.6	75.2	21.3	13.38	352076.52	6498569.37	20:31:03
10790	C	4	7801.6	174.3	54.8	38.1	11.1	8.15	346109.52	6494397.69	20:35:46
10790	D	6	7815.3	1107.5	215.6	242.7	41.7	0.97	345793.78	6494177.52	20:36:00
10790	E	6	7831.2	402.3	108.7	118.1	20.7	20.1	345424.98	6493921.47	20:36:15
10800	A	4	8974.6	197.5	63.9	37.1	14.2	9.77	345278	6493595.38	20:55:19
10800	B	5	8982.5	212.9	59.6	57.6	13.5	3.79	345511.05	6493780.59	20:55:27
10800	C	6	8998.9	960.8	193.1	238.4	32.5	0.55	345973.81	6494085.42	20:55:43
10800	D	4	9007.9	180	79.3	41.9	12.3	27.74	346222.6	6494244.13	20:55:52
10800	E	6	9222	527.2	129.5	121.2	23.5	17.17	352234.27	6498433.57	20:59:26
10800	F	4	9239.4	97.4	31.7	28.7	10.9	9.38	352663.52	6498728.74	20:59:44
10810	A	4	9312.8	56.1	51	27.7	17	45.9	352704.24	6498517.38	21:00:57
10810	B	4	9328.7	231	44.3	47.5	17.3	7.49	352375.1	6498340.56	21:01:13
10810	C	6	9623.6	589.6	90.5	136	23.3	0.72	345970.14	6493819.4	21:06:08
10810	D	6	9631.7	1313.4	333.3	307.5	75.2	1.4	345782.08	6493679.79	21:06:16
10810	E	5	9648.2	205.5	63.3	47.4	14.9	3.53	345390.66	6493417.02	21:06:33
10820	A	6	2070.4	487.9	106.5	118.5	21.2	2.59	345479.64	6493225.33	17:17:50
10820	B	5	2076.4	209.2	93.9	65	20.7	5.97	345668	6493357.67	17:17:56
10820	C	6	2083.7	523	118.8	129.4	27.2	2.38	345892.58	6493517.76	17:18:04
10820	D	6	2092.1	502.2	87.5	129.2	23.9	0.92	346132.56	6493676.72	17:18:12
10820	E	4	2330.3	106.2	113.1	35.9	23.5	96.03	352414.82	6498049.4	17:22:10
10820	F	5	2334.1	194.3	47.6	59.6	16.6	5.9	352511.25	6498124.16	17:22:14
10820	G	4	2352.1	89.3	45.5	25.4	12.5	28.41	352943.62	6498421.15	17:22:32
10830	A	4	2407.2	149	77	40.5	19.9	27.33	353023.46	6498279.11	17:23:27
10830	B	6	2430.3	566.5	55.1	122.7	14.6	1.08	352687.17	6498034.5	17:23:50
10830	C	5	2443.9	219.4	184.1	57.8	30.8	82.74	352458.52	6497877.48	17:24:04
10830	D	6	2732.8	1220.2	336.3	303	61.4	1.94	346013.16	6493364.69	17:28:53
10830	E	6	2749.3	739.6	48.4	152.7	10.4	0.4	345602.89	6493082.9	17:29:09
10840	A	5	3717	366	99.8	91.4	17.4	8.72	345545.43	6492792.37	17:45:17
10840	B	5	3722.8	306.3	60.7	83.9	10.7	0.98	345711.58	6492897.71	17:45:23
10840	C	6	3730.9	458.8	82.3	110.1	23	1.63	345957.42	6493057.87	17:45:31
10840	D	5	3739.3	355.7	70.8	92.5	14.8	1.41	346216.69	6493237.5	17:45:39
10840	E	6	3746.3	493.5	89.7	125	20.7	0.97	346432.25	6493408.28	17:45:46
10840	F	5	3973.8	245.9	209.8	57.3	40.2	68.34	352532.61	6497681.04	17:49:34
10840	G	6	3981.9	828.7	238.8	181	50.4	4.43	352741.86	6497823.9	17:49:42
10840	H	4	3998.2	63.1	45.6	27.7	12.1	46.25	353141.89	6498087.09	17:49:58
10850	A	4	4039	143.7	94.3	42.9	18.1	25.54	353217.45	6497932.24	17:50:39
10850	B	6	4067.5	476.1	206.8	126.4	42.9	5.89	352771.07	6497598.86	17:51:07
10850	C	6	4339.7	472.7	109.1	124.2	18.5	1.35	346542.79	6493250.87	17:55:40

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10850	D	6	4349.2	664.1	125.1	161.3	22.9	0.79	346324.57	6493092.03	17:55:49
10850	E	5	4361.4	377.4	86.9	81.4	17.2	1.28	346020.28	6492881.86	17:56:01
10850	F	5	4370.8	147.9	41.8	52.4	9.4	2.73	345796.24	6492717.69	17:56:11
10850	G	4	4375.7	147.3	69.7	45.3	11.8	35.1	345681.46	6492634.58	17:56:16
10860	A	4	5470.9	188	39.4	44.8	10.3	6.36	345910.7	6492564.67	18:14:31
10860	B	5	5481	491.1	74.8	94.2	16.5	1.13	346199.49	6492755.19	18:14:41
10860	C	6	5487	565.9	200	129.6	43.6	2.37	346365.42	6492862.43	18:14:47
10860	D	5	5497.7	279.8	71.1	76.9	14.2	1.96	346679.82	6493079.55	18:14:58
10860	E	6	5718.4	795.9	255.5	157.6	55.4	16.88	352696.36	6497295.39	18:18:38
10860	F	6	5723.6	564.8	130.9	138.9	30.3	1.5	352831.85	6497389.04	18:18:44
10860	G	4	5743.9	141.5	57.1	40.2	13.9	10.67	353292.71	6497720.55	18:19:04
10870	A	5	5811.8	400	192.5	73.5	32	15.58	353321.17	6497486.86	18:20:12
10870	B	6	5838.6	426.5	136.9	116.6	31.6	5.26	352880.05	6497186.59	18:20:39
10870	C	5	6110.3	253.8	58.7	61.2	11	3.51	346769.81	6492927.44	18:25:10
10870	D	5	6123.2	307.3	89.6	76.4	19.8	5.14	346464.96	6492705.64	18:25:23
10880	A	4	7057.7	157.3	54.2	49.7	14.5	4.09	346159.59	6492232.92	18:40:58
10880	B	4	7076.5	212	52.1	46.5	13.9	3.56	346677.73	6492610.56	18:41:16
10880	C	5	7311.9	247.4	173	63.7	39.9	15.6	352901.73	6496960.03	18:45:12
10880	D	5	7333.4	235.3	66.9	55.6	20.2	7.24	353424.42	6497308.4	18:45:33
10890	A	6	7390	524.8	116.8	132.9	34.1	2.23	353521.05	6497134.97	18:46:30
10890	B	5	7423.6	246.5	95.9	70	27.4	4.44	352998.78	6496782.22	18:47:04
10890	C	5	7720	241.6	50	60.7	11	3.45	346317.49	6492102.12	18:52:00
10900	A	6	8731.6	447.5	182.7	115.2	26.9	16.01	346149.21	6491738.23	19:08:52
10900	B	5	8986.5	219.5	45.9	53.9	13	2.97	353115.68	6496594.28	19:13:06
10900	C	4	9008	126.3	24.6	36.2	10.1	6.5	353634.68	6496977.37	19:13:28
10910	A	6	9068.1	503.1	112.2	107.7	31.1	10.64	353747.94	6496810.55	19:14:28
10910	B	5	9094.8	316.7	62.1	94.2	17.4	1.97	353219.02	6496479.39	19:14:55
10910	C	6	9396.5	810.7	119.1	177.5	29.5	12.95	346177.01	6491506.72	19:19:56
10920	A	6	2245.3	802.4	214.2	175.5	45.7	5.02	346337.98	6491391.25	20:50:53
10920	B	5	2488	247.1	53	65.2	17.5	6.14	353373.64	6496316.72	20:54:56
10920	C	4	2507.3	115.7	37.1	34.1	11.6	10.54	353881.54	6496678.71	20:55:15
10930	A	5	2569.5	273.6	108.4	74.9	27.3	17.22	353970.03	6496484.25	20:56:17
10930	B	6	2592.9	784.6	250.3	181.3	59.9	5.35	353520.26	6496174.52	20:56:41
10930	C	6	2902.9	938.9	166	199.2	35.9	1.5	346513.17	6491254.81	21:01:51
10940	A	4	3458.3	62.7	14	30.7	3.9	120.56	336628.51	6484105.27	21:11:06
10940	B	6	3824.7	707.9	107.2	176	17.6	0.61	346644.9	6491108.53	21:17:13
10940	C	5	4073.4	321.2	107.1	91.7	28.1	2.91	353677.1	6496027.68	21:21:21
10940	D	6	4092.2	442.3	169.1	113.4	33.2	8.89	354111.24	6496343.77	21:21:40
10950	A	5	4196.9	373.7	157.9	76.1	29.3	9.06	354140.58	6496131.24	21:23:25
10950	B	6	4222	449.7	138.1	119.4	33.6	2.7	353724.43	6495826.26	21:23:50
10950	C	5	4226.2	490.6	298.4	106.3	53	47.3	353637.47	6495768.41	21:23:54
10950	D	6	4519.6	1128.1	118.4	260.9	21.1	0.28	346761.64	6490952.46	21:28:48
10960	A	6	5465	752.6	96	186.2	17.5	0.35	346846.33	6490782.69	21:44:33
10960	B	5	5711.9	239.3	88.2	65.2	19.7	20.56	353761.77	6495607.66	21:48:40
10960	C	5	5715.5	262	70.8	80.8	20.9	2.14	353857.89	6495678.69	21:48:43
10960	D	4	5728.8	74.4	30.7	32.4	10.7	12.94	354191.51	6495893.65	21:48:57
10970	A	5	5954.4	182.7	102.1	58.1	21.6	13.34	354238.96	6495699.47	21:52:42

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10970	B	6	5968.8	630.1	230.7	159.2	51	2.52	353952.11	6495507.93	21:52:57
10970	C	5	5974.9	482.2	151.2	90.9	32.5	8.79	353838.44	6495416.76	21:53:03
10970	D	6	6281.9	921.5	112.3	199.3	24.1	6.19	346884.94	6490546.89	21:58:10
10980	A	2	6847.9	10.5	13.9	6.3	2.7	267.36	336978.81	6483367.98	22:07:36
10980	B	4	7224.7	160.5	45	42.1	8.4	64.79	346983.48	6490389.94	22:13:53
10980	C	6	7478.9	470.5	97.7	119.9	31	2.19	354011.68	6495289.74	22:18:07
10980	D	5	7488	226	109.6	56.3	17.1	21.87	354240.04	6495453.51	22:18:16
10990	A	4	7558.6	121.2	40.4	30.2	6.6	7.46	354257.4	6495227.1	22:19:27
10990	B	5	7566.4	292.4	58.5	79.6	16.5	3.16	354084.61	6495106.07	22:19:34
10990	C	2	7869.3	9.5	12.9	9.6	4.3	454.45	347131.54	6490236.7	22:24:37
10990	D	3	8319.5	64.9	38.9	18.5	10	335.54	336969.65	6483124.75	22:32:07
11000	A	2	8376.8	17.1	9.7	8.8	2.5	1082.74	337055.43	6482938.45	22:33:05
11000	B	5	9038.4	238.7	49	54.8	13.1	3.62	354161.34	6494919.24	22:44:06
11000	C	5	9043	172.3	62.9	71	17.4	3.97	354284.58	6495004.65	22:44:11
11010	A	5	9118.2	251.6	86.5	81.4	20.6	3.05	354296.72	6494768.49	22:45:26
11010	B	5	9123.1	327.2	81.9	66.8	21.8	6.14	354189.85	6494711.51	22:45:31
11020	A	4	10515.6	152.3	61.4	45.2	22.4	8.5	354234.74	6494488.14	23:08:44
11030	A	4	5004.5	97.5	33.8	28.4	13.5	13.01	354293.08	6494275.16	13:08:42
11040	A	3	3568.4	85.1	57.5	24.3	18.1	28.77	354386.44	6494122.18	12:44:46
11050	A	4	2906.2	124.8	27.4	42	8.7	6.37	340441.83	6484082.11	12:33:44
11050	B	4	3202.3	264.5	135.6	52.5	25	52.71	347552.35	6489056.19	12:38:40
11050	C	3	3484.4	59.7	38.7	20.3	10.6	46.07	354500.74	6493930.72	12:43:22
11060	A	4	2146.9	62.8	52.4	26.7	11.5	98.01	354591.74	6493738.46	12:21:05
11060	B	5	2438.1	134.1	55.4	49.8	8.8	21.26	347535.37	6488799.18	12:25:56
11060	C	6	2719.4	937.9	118.5	175.7	26	18.84	340504.31	6483894.25	12:30:37
11070	A	2	1493.5	7.1	7.1	3.6	2	217.83	340697.01	6483780.95	12:10:11
11070	B	5	1768.3	465.5	53.8	102.1	11.8	0.91	347618.91	6488618.73	12:14:46
11070	C	5	2043.1	274.9	213.2	79.3	46.1	57.67	354700.58	6493567.88	12:19:21
11080	A	5	5113.7	245.8	128.5	58.4	25.9	8.16	354843.67	6493431.79	13:10:31
11080	B	6	5416.7	534.8	99.3	115.7	22.8	1.73	347673.65	6488402.99	13:15:34
11080	C	5	5687.7	455.5	170.8	93.1	33.5	39.66	340784.77	6483603.3	13:20:05
11090	A	3	1618	40.3	19.8	13.4	6	25.57	354903.34	6493228.21	16:08:36
11095	A	5	8468.5	299.3	65.8	78.1	14.3	2.42	347787.89	6488244.21	14:06:26
11095	B	4	8482	220.2	39.6	50.4	9.4	5.9	348153.93	6488506.09	14:06:40
11096	A	4	5790.4	231.5	62.2	45.6	12.6	198.13	340519.15	6483170.65	13:21:48
11100	A	3	1719.9	59.4	43.2	21.4	12.4	43.84	355017.25	6493050.13	16:10:18
11105	A	5	8731	277.9	44.6	63.6	8.4	1.22	348236.09	6488319.15	14:10:49
11105	B	6	8746.8	621.5	70	133.9	14.6	2.43	347835.18	6488058.45	14:11:05
11106	A	3	6101.4	45.5	11.5	13.8	4.2	39.72	341004.81	6483271.71	13:26:59
11106	B	6	6120.9	605.5	70.9	129.8	12.8	4.55	340583.6	6482970.01	13:27:19
11110	A	2	2007.3	22.7	16.9	9.4	4.2	68.73	355118.93	6492889.66	16:15:05
11115	A	4	8782.9	121.7	35	46.8	8.2	3.34	348291.62	6488116.97	14:11:41
11115	B	4	8791.5	166.5	35.2	38.4	8	8.91	348517.32	6488269.11	14:11:49
11116	A	5	6167	274	24.8	53.4	6.2	2.43	340691.61	6482794.69	13:28:05
11116	B	3	6185.3	98.3	21.9	19.6	6.4	15.49	341144.42	6483104.93	13:28:23
11120	A	3	2145	39.9	34.7	16.1	10.7	72.22	355186.39	6492705.66	16:17:23
11120	B	2	2149.5	8.5	11	10	11.3	238.87	355086.28	6492629.78	16:17:27

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11125	A	4	9014.9	131.3	17.2	28.5	4.9	6.55	348650.73	6488127.82	14:15:33
11125	B	5	9022.9	293.6	45.9	62.2	8.5	1.2	348436.08	6487976.82	14:15:41
11126	A	2	6465.5	26.9	7.8	8	3	20.12	341205.39	6482925.86	13:33:03
11130	A	2	2416.2	16.4	30.6	8.9	11.7	459.19	355218.57	6492468.75	16:21:54
11130	B	3	2420.7	26	35.5	14.7	9.5	122.74	355316.08	6492532.92	16:21:58
11135	A	4	9055.7	139.9	51.3	39.8	9	92.61	348806.46	6488012.41	14:16:13
11140	A	3	2528.4	44.9	46.3	17.2	14.2	124.82	355889.98	6492691.84	16:23:46
11140	B	3	2557.5	38.1	42.7	22.6	10.9	115.89	355418.69	6492390.67	16:24:15
11145	A	4	9272.8	139.5	39	42.2	9.3	3.6	348856.98	6487774.7	14:19:51
11150	A	3	2800.6	29.9	25.9	13.9	6.8	103.58	355560.33	6492236.59	16:28:18
11150	B	5	2822.7	256.3	50.4	79.4	11.7	9.18	355948.72	6492503.13	16:28:41
11155	A	4	9308.3	172.7	28.4	46.6	7.7	1.55	348945.88	6487594.5	14:20:26
11160	A	4	2910.8	111.6	18.5	29.9	6	3.77	356062.01	6492332.34	16:30:09
11160	B	3	2932.4	48.6	49.4	18	12.4	124.05	355646.88	6492059.42	16:30:30
11165	A	4	9511	132.3	33	38.8	7.5	5.26	349080.78	6487457.33	14:23:49
11170	A	3	3131.6	39.5	70.2	19.6	25.1	179.82	355697.9	6491840.33	16:33:49
11170	B	3	3136.3	44.8	57	23.6	23.1	81.71	355806.98	6491915.88	16:33:54
11170	C	4	3158	86.2	17.5	24.4	4.9	2.69	356196.24	6492175.19	16:34:16
11175	A	4	9546	109.4	43.4	33.2	8.8	7.86	349166.55	6487278.55	14:24:24
11180	A	5	3244.8	199.2	37.3	56.2	10.7	3.13	356204.9	6491947.05	16:35:43
11180	B	3	3260.1	40.1	50.9	17.2	17.4	104.21	355919.97	6491750.75	16:35:58
11185	A	4	9674.3	156	64.9	35.1	13.7	38.24	351029.76	6488335.34	14:26:32
11187	A	4	9744.6	162.3	31.7	32.5	6.3	3.41	349254.47	6487087.7	14:27:42
11188	A	4	9674.3	155.3	66.2	35.3	14.2	38.24	351029.76	6488335.34	14:26:32
11188	B	4	9744.6	160.6	31.2	32	6.4	3.41	349254.47	6487087.7	14:27:42
11190	A	3	3437.6	25.6	23.9	13.2	7.7	121.34	356051.81	6491585.05	16:38:55
11190	B	5	3453.9	201.4	31	61.3	7.1	0.94	356341.69	6491817.4	16:39:12
11200	A	4	3549.6	92.4	20.8	31.6	5.3	3.02	356414.73	6491598.63	16:40:47
11200	B	4	3558.8	55.4	29.5	32.8	8.4	35.38	356248.23	6491514.81	16:40:57
11210	A	5	3718	182.2	86.2	63.7	25.8	11.56	356466.72	6491376.8	16:43:36
11220	A	3	3815.7	49.5	29.3	22.8	9.5	34.45	356562.48	6491209.99	16:45:14
11230	A	5	3989.5	121.1	77.3	56.9	20.7	20.12	356785.25	6491131.58	16:48:07
11240	A	4	4080.4	68.3	64.3	32.7	17.3	48.31	356820.96	6490901.5	16:49:38
11250	A	4	4246.5	85.2	59.7	49.2	21.9	47.49	356862.9	6490731.47	16:52:24
11250	B	4	4252.8	97	41.9	45.4	16.9	13.3	356990.73	6490788.21	16:52:31
19080	A	3	1322.4	111.6	109.5	20.1	16.8	87.04	346110.12	6491429.38	15:17:24
19080	B	3	1428	35.7	45.8	13.8	10.4	210.93	347918.82	6488863.88	15:19:09
19080	C	4	1442.1	233	44.1	49.8	11.1	8.25	348158.27	6488519.54	15:19:23
19080	D	5	1451.9	246	34.4	56.4	7.9	2.03	348310.37	6488266.22	15:19:33
19080	E	5	1461.3	252.6	64.6	53.8	10.6	2.16	348470.01	6488039.76	15:19:42
19080	F	4	1468.8	162.3	36.8	39	7.9	3.73	348600.86	6487861.67	15:19:50
19080	G	4	1480	158.4	46.3	38.1	10.4	5.18	348789.81	6487604.17	15:20:01
19080	H	4	1490.3	135.4	50.9	29.8	9.1	6.94	348956.46	6487359.85	15:20:12
19130	A	3	1304.5	99.8	74.4	19.2	12.4	76.84	333869.61	6491454.15	20:35:12
19130	B	3	1349.6	98	86.5	19.3	14.4	67.42	334615.09	6490410.81	20:35:58
19130	C	1	1372.4	20.8	31.6	4.9	6.2	265.16	334997.75	6489875.53	20:36:20
19130	D	4	1424.8	96.8	76.7	30.2	15.2	33.15	335795.28	6488694.66	20:37:13

Block C Anomalies

Line	Anomaly	Grade	cpi4650F	cpq4650F	cxix4350F	cxqx4350F	res4650F	x	y	utctime
30240	A	2	16.3	42.6	5.4	11.7	548.17	360873.5	6488427.3	12:27:53
30250	A	3	64.3	51.4	17.6	10.1	156.07	361056.6	6488330.8	12:28:45
30260	A	4	64.3	32.8	35.6	12.9	96.49	361354.3	6488256.7	12:37:38
30270	A	2	31.2	39.5	11.2	11.6	124.53	361523.2	6488160.5	12:42:00
30280	A	3	54.2	27.7	13.1	4.3	145.77	361911.3	6488175.4	12:50:21
30280	B	4	92.5	70.6	29.7	12.9	91.61	361834.3	6488110.3	12:50:27
30280	C	4	61.9	60.5	33.2	19.2	70.85	361673.3	6488015.9	12:50:36
30280	D	4	33.1	13.2	25.3	6.7	176.28	361386.3	6487796.5	12:50:49
30280	E	3	72.8	81.1	21.4	27.9	116.89	360007.3	6486826.2	12:51:49
30290	A	3	60.7	106.8	22.4	25	108.7	360118.5	6486677	12:52:57
30290	B	2	8.4	9.6	10.9	11.3	136.2	360491	6486921	12:53:12
30290	C	2	13.4	8.1	6	3	42.81	361625.7	6487710.2	12:54:07
30290	D	3	33.5	23.4	15.2	7.1	183.74	362160.4	6488110.6	12:54:29
30300	A	4	39.5	56.4	25	21.3	139.63	362291.4	6487960.4	13:03:20
30300	B	3	55.5	60.5	23	21.1	128.81	362232.1	6487907.7	13:03:25
30300	C	3	26.3	16.1	17.2	6	47.82	361769.5	6487575.3	13:03:50
30300	D	3	33.4	34.5	13.3	10.7	121.8	360204	6486467.9	13:05:06
30310	A	5	120.1	96.8	52.6	29.7	65.73	360315.7	6486321.9	13:06:32
30310	B	2	31.6	31.6	7.4	7.4	236.57	361302.2	6487011	13:07:14
30310	C	2	29.6	26.9	9.2	4.9	86.37	361934.9	6487455.4	13:07:41
30310	D	1	8	13.1	4.6	7.1	236.26	362488.6	6487849.5	13:08:03
30320	A	3	22.9	25.4	18.3	14	160.27	362617.2	6487703.7	13:17:36
30320	B	5	129.9	121	58.5	45.4	106.48	362477.1	6487605.4	13:17:43
30320	C	2	22	34.5	11.2	10.9	208.69	362148.3	6487371.5	13:17:58
30320	D	4	81.2	32.9	27.4	9.9	35.49	360423.3	6486147.1	13:19:32
30320	E	4	46.8	46.2	34.7	21.9	313.97	360333.6	6486080.3	13:19:38
30330	A	4	89.3	33.9	39.1	8	21.16	360611.4	6486023.7	13:21:16
30330	B	4	83.5	57.1	27.4	14.3	105.23	362805.8	6487577.3	13:22:52
30340	A	3	55.2	47.1	24.1	15.6	91.41	362939.4	6487483.8	13:32:26
30340	B	4	102.3	26.9	31.4	6.3	18.13	360802.2	6485917.1	13:34:06
30340	C	3	68.2	43.1	24.8	12.2	115.77	360620.2	6485795	13:34:14
30350	A	4	211	43.3	49.1	7.3	23.49	360970	6485802.4	13:36:21
30350	B	2	28.2	23.8	9.2	8.8	126.73	363148	6487324.1	13:37:48
30360	A	3	40	36.3	20	10.7	176.72	363322.4	6487204.7	13:49:52
30360	B	4	110.8	30.7	40	11.1	27.05	361428	6485871.3	13:51:12
30370	A	3	35.6	32.4	16	9.4	106.33	361015.9	6485352.9	13:53:56
30370	B	4	79.5	29.5	38.4	10.3	20.03	361620.1	6485743.1	13:54:28
30370	C	2	32.8	37.3	7.8	9.2	194.42	363533.5	6487126.5	13:55:46
30370	D	3	189	61.7	24.8	9.5	72.33	363918.4	6487373.4	13:56:00
30380	A	3	36.6	56.9	13.3	21.1	2489.97	365006.7	6487916.5	14:04:40
30380	B	5	235.3	73.2	53.3	13.5	57.68	364092.1	6487272.3	14:05:18
30380	C	4	60.7	35.2	34.8	9.7	24.2	361724.9	6485584.3	14:06:58
30380	D	3	26.8	26.9	12.6	10.4	120.41	361136.9	6485181.9	14:07:24

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30390	A	4	105.5	84.4	48.3	22.4	59.39	361342.2	6485066.6	15:26:52
30390	B	4	71.9	36.5	28.4	9.2	31.42	361618	6485279.4	15:27:06
30390	C	5	123.5	42.9	51.6	10.1	18.88	361848.1	6485435.4	15:27:20
30390	D	2	34	32.6	6.4	7	108.03	363809.8	6486819	15:28:43
30390	E	3	71.1	100.2	14.6	19.9	117.47	364285.6	6487138	15:28:59
30390	F	2	5.6	6.4	8.7	5.1	1740.95	365173.1	6487754.6	15:29:29
30400	A	5	79.1	24.9	71.6	14.3	593.12	365248	6487593.5	15:37:44
30400	B	3	35.9	34.5	13.5	12.8	172.14	364894.6	6487354	15:38:00
30400	C	3	91.1	28.9	19.2	8	70.33	364408	6486985.9	15:38:21
30400	D	4	216.1	68.7	44	17.5	122.39	363969.4	6486679.4	15:38:42
30400	E	5	103.3	64.3	51.9	15.9	23.45	361967.7	6485290.1	15:40:19
30400	F	3	23.4	12.4	13.4	5.5	28.27	361755.4	6485138.6	15:40:29
30400	G	4	68.9	49.6	29.4	16.9	50.57	361480.4	6484927.3	15:40:42
30410	A	5	257.9	49.1	62.2	11.2	8.1	361766.4	6484879.9	15:43:02
30410	B	4	46.5	41.4	48.2	10.4	26.99	362113.7	6485119.6	15:43:25
30410	C	3	33.3	14.1	12.1	5	126.96	364883.9	6487069.2	15:45:15
30410	D	2	6.7	9.2	7.2	3.4	402.34	365349.8	6487392.9	15:45:31
30420	A	3	43.3	32.4	13.7	8.9	225.81	365429.3	6487218.4	15:53:22
30420	B	5	73.1	26.1	55.5	10.5	16.21	362255.3	6484997.1	15:55:50
30420	C	5	209.4	37.6	52.8	9	4.34	361960.5	6484767.4	15:56:07
30420	D	4	53.4	39	27.2	16.1	178.1	361695.9	6484585.8	15:56:18
30430	A	6	453.5	71.5	100.6	15.6	3.47	362127.1	6484635.6	15:58:09
30430	B	4	115.8	34.9	48	7	16.35	362484.2	6484901.3	15:58:38
30430	C	2	48.7	35.1	7.2	4.6	754.93	371144.3	6490978.5	16:03:57
30440	A	3	22	38.1	12.3	9.6	512.86	371294.6	6490873.4	16:04:30
30440	B	4	192.5	71.2	42.2	13.7	70.08	364991.6	6486407.3	16:08:59
30440	C	4	73	34.3	26.6	8.1	17.95	362654	6484780.2	16:10:41
30440	D	4	85.4	50.3	37.5	20	15.82	362126.8	6484411.2	16:11:06
30450	A	4	94.1	53.3	26.1	12.4	29.38	362202.9	6484213.3	16:14:56
30450	B	5	176.5	43.6	67.4	11.9	4.89	362466.9	6484405.9	16:15:07
30450	C	4	83.3	35	35.7	7.8	13.44	362584.1	6484490.1	16:15:13
30450	D	5	306.9	103.4	96.3	21.1	14.16	362810.1	6484643.3	16:15:26
30450	E	5	480.6	154.8	97.7	25.3	10.26	362922.1	6484712.9	16:15:32
30450	F	4	66.5	29.4	27.8	7.3	440.87	363224.4	6484919.5	16:15:45
30450	G	4	182	107.3	28.7	18.9	35.03	365343.3	6486419.2	16:17:01
30460	A	3	48.2	110.3	23.6	28.8	100.5	365667.1	6486405.3	16:27:16
30460	B	3	67.5	21.4	22.9	6.5	135.92	363379.5	6484800	16:28:55
30460	C	4	69.3	22.6	32.2	7.9	24.64	363155	6484637.4	16:29:04
30460	D	4	75.4	36.7	27.7	15.6	12.58	362707.3	6484321.7	16:29:26
30460	E	4	100.7	31.7	40.6	8.1	6.07	362484.1	6484177	16:29:37
30460	F	5	189.5	118.6	60	34.2	95.55	362292.4	6484037.3	16:29:46
30470	A	4	120.6	90.1	38.7	20.2	36.93	362468.5	6483929.7	16:30:34
30470	B	4	115.5	25.7	40.3	7.6	5.75	362625.2	6484033	16:30:40
30470	C	4	113.7	37.3	41.3	11.9	15.21	362933.4	6484226.5	16:30:56
30470	D	4	118.7	36	34.5	8.5	21.67	363386.9	6484570.5	16:31:22
30470	E	4	167.1	34.4	45.4	7.9	48.11	363579.6	6484705.1	16:31:29
30470	F	4	154.5	110.5	34.3	21.1	47.4	365913.2	6486326.4	16:32:49

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30470	G	2	18.2	40.3	9.8	12.6	1590.34	370147.5	6489289.5	16:35:29
30480	A	2	4.8	5	6.5	6	466.51	372562.5	6490763.3	16:37:51
30480	B	5	95	125.2	50	34.2	596.97	370200.9	6489092.6	16:39:58
30480	C	6	448.2	158.4	127.4	32.9	70.28	366166.5	6486270.5	16:42:58
30480	D	4	158.3	57.5	48	16.5	100.93	363959.8	6484722	16:44:38
30480	E	5	175.3	35.8	58	8.3	17.15	363903.7	6484678.8	16:44:41
30480	F	5	205.2	32.5	64	8.8	3.78	363828.3	6484622.7	16:44:44
30480	G	4	115.1	29.8	37	5.1	10.17	363711.3	6484539.5	16:44:49
30480	H	6	405.3	148.8	124.7	31.9	10.72	363100.4	6484109.1	16:45:21
30480	I	5	254	119.4	78	41.3	17.79	362631.2	6483799	16:45:43
30490	A	6	467	54.6	107.1	11.5	2.85	363339.1	6484033.1	16:46:36
30490	B	5	239	52.4	57.8	10.8	2.65	364122.4	6484594.8	16:47:06
30490	C	5	229.2	51.3	53	11.3	86.35	364213.3	6484666.3	16:47:09
30490	D	5	231	180.8	54.9	38.7	131.97	364549.9	6484902.7	16:47:20
30490	E	4	66.3	102.8	29	26	147.06	366394.8	6486181.6	16:48:27
30490	F	4	71.2	59.3	33.5	15	327.54	370252.6	6488898	16:50:52
30500	A	3	36.2	31.2	17.3	8	132.51	370333.1	6488698	16:55:53
30500	B	2	10.7	14.2	11.1	11.8	479.38	366696.3	6486121	16:58:48
30500	C	5	446.6	69.4	91.4	14.6	60.17	364822.5	6484845	17:00:21
30500	D	5	277.8	49.1	50.5	6.2	13.99	364601.9	6484695.6	17:00:30
30500	E	5	260	84.6	76.5	16.8	4.79	364383.7	6484535	17:00:40
30500	F	6	508	141.3	102.2	20.4	4.51	364253.3	6484447.2	17:00:45
30500	G	4	66.1	49.1	33	15.8	22.09	364074.9	6484299.7	17:00:54
30500	H	3	40.1	30.9	21.9	10.8	35.35	363924.1	6484187.7	17:01:01
30500	I	6	466.6	39.3	102.6	9.2	1.79	363527.7	6483932.7	17:01:17
30510	A	6	588.4	68.5	121.2	12.2	1.35	363710.5	6483826.9	17:02:05
30510	B	4	88.4	29.4	26.2	6.7	7.71	363927.5	6483967.3	17:02:12
30510	C	3	66.7	45	20	11.8	25.91	364159.6	6484105.9	17:02:19
30510	D	6	454.7	108.7	104.2	21.7	5.16	364604.4	6484418.3	17:02:34
30510	E	5	332.8	65.2	65.7	10.2	1.99	364920.8	6484669.2	17:02:45
30510	F	1	4	4.6	3.9	2.7	634.93	366878.3	6486025.3	17:03:55
30510	G	4	69.5	62.2	33.2	15.9	132.3	370397.3	6488494.7	17:06:09
30520	A	2	11.6	33.1	11.7	14.1	733.1	373242	6490244.3	17:09:19
30520	B	3	24.6	13.4	14.5	3.8	102.61	370489.1	6488310.9	17:11:27
30520	C	3	27	17	17	11.7	406.16	367025	6485908.2	17:14:07
30520	D	6	655.5	117	138.4	23.7	30.59	365329.6	6484684.5	17:15:43
30520	E	6	575.4	111.3	117.7	19.2	1.62	364992.4	6484472.9	17:15:58
30520	F	6	628.8	148.7	137.6	30.3	6.2	364836	6484356.3	17:16:05
30520	G	3	44.4	38	20.1	11.7	66.8	364528.4	6484134.2	17:16:19
30520	H	5	202	30.6	53.5	5.4	10.24	364224.6	6483911.7	17:16:32
30520	I	6	789.4	110	157.7	19.3	7.59	364073.3	6483807.3	17:16:39
30520	J	6	609.6	74.7	117.7	11	1.8	363945.3	6483728.4	17:16:45
30530	A	5	268.5	68.9	70.7	15.8	11.09	364415.1	6483849.8	17:17:19
30530	B	4	212.5	38.5	46	10.1	5.25	365260	6484393.4	17:17:45
30530	C	5	352.5	101.7	77.7	18.3	135.24	365535	6484597.9	17:17:55
30530	D	4	112.9	38.6	26.5	8.9	16.62	370653.9	6488168.9	17:21:07
30540	A	2	22.3	4.9	6.6	1.6	15.25	370845.3	6488074.9	17:28:19

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30540	B	5	144.6	62.4	55.2	13.8	39.82	365789	6484531.7	17:32:35
30540	C	5	345.4	95.6	81.5	16.1	120.59	365538.1	6484357.2	17:32:47
30540	D	5	313.7	51.3	87	11.6	4	365396.5	6484256.4	17:32:54
30540	E	4	57.3	32.6	26.4	14.6	75.15	365101.3	6484047.5	17:33:07
30540	F	5	370.2	99.4	88.4	18.1	9.08	364670.9	6483750.8	17:33:26
30550	A	4	97.5	49.6	29.3	14.8	39.95	365394.9	6484019.2	19:57:34
30550	B	5	351.6	68.1	68.1	13.9	19.49	365741	6484261.4	19:57:46
30550	C	4	168	38.2	38.3	6.2	6.94	366008.3	6484438.6	19:57:54
30550	D	3	30.1	13.7	16.3	3.5	13.66	370980.3	6487929	20:00:59
30560	A	2	16.8	5.7	11.3	2.8	13.89	371086.1	6487757.6	20:05:40
30560	B	5	310.3	72.1	68.6	13.9	3.38	366106.4	6484271.4	20:09:21
30560	C	4	97.5	32.1	28.5	6.1	10.18	365672.3	6483978.7	20:09:40
30560	D	6	399	64.9	110.6	11.6	2.93	365152.8	6483601.2	20:10:03
30570	A	4	114.3	68.9	43.1	18.5	14.68	365818.7	6483814.8	20:10:43
30570	B	4	113.7	42.3	39.9	9.5	6.99	365972.6	6483935.5	20:10:49
30570	C	5	214.7	53.1	81.7	19.1	3.07	366117.3	6484031.1	20:10:54
30570	D	4	152.2	35.6	44	7.4	2.41	366259.2	6484132.5	20:10:59
30570	E	5	287.8	104.2	62.8	21	332.74	366515.6	6484306.4	20:11:07
30570	F	2	10.7	4.5	9.5	2.4	25.28	371216.1	6487593.9	20:13:56
30580	A	2	42.2	41.6	10.2	12	1031.26	373499.3	6488961.6	20:16:25
30580	B	2	7.3	2.2	5.7	1	32.46	371344.7	6487455.2	20:18:06
30580	C	5	287.9	65.1	79	13.1	3.73	366403.7	6483988.7	20:21:41
30580	D	5	198.9	53.1	95.3	18.3	2.33	366273.2	6483886.6	20:21:47
30580	E	5	247	67.4	85.3	14.2	3.85	366177.5	6483826.3	20:21:51
30590	A	5	253.6	52.3	75.8	10	3.28	366348.1	6483736.1	20:22:42
30590	B	5	220.5	57.5	69.4	11.7	3.67	366431.5	6483787.8	20:22:45
30590	C	4	118.6	62.9	35.6	11.7	10.17	366595.6	6483895.3	20:22:51
30590	D	1	23.1	57.7	4.6	9.4	1344.81	368949.9	6485527.2	20:24:14
30590	E	3	16.5	14.9	12.7	5.1	48.95	371466.8	6487304.1	20:25:46
30600	A	2	11.7	6.9	6.8	2.8	85.91	371573.9	6487119.8	20:28:02
30600	B	3	21	46.7	16.6	14.3	410	369238.5	6485510.3	20:29:45
30600	C	4	175.7	104.4	25	15.8	1288.24	367237.7	6484075.6	20:31:10
30600	D	5	261	149.9	53.8	22.8	237.29	367055.7	6483949.2	20:31:18
30600	E	6	670.3	97.8	124	17.1	21.98	366873.6	6483819.8	20:31:25
30600	F	5	231.3	58.9	76.8	10.8	3.99	366673.1	6483709.5	20:31:33
30600	G	5	177.7	54.7	62.5	11.8	3.99	366582.5	6483649.7	20:31:37
30610	A	4	221.6	44.3	41.1	8.2	88.6	367052.9	6483740	20:32:07
30610	B	4	181.9	45.6	42.4	9.4	4.22	367257.8	6483864.7	20:32:14
30610	C	3	119.8	46.5	23.7	8.5	108.23	369501.5	6485430.2	20:33:30
30610	D	2	65.3	50.6	11.4	10.2	1323.25	369819.4	6485646.9	20:33:41
30610	E	3	42.3	40.8	21.9	12.4	106.92	371741.2	6486963	20:34:44
30620	A	3	25.1	24.8	13.4	12.4	119.41	371857.4	6486832.8	17:32:37
30620	B	2	16.8	22.4	8.1	6.2	295.32	370002.4	6485500.8	17:33:51
30620	C	4	200.4	36.6	38	8.2	41.75	369775.9	6485371.2	17:33:59
30620	D	4	118	40.6	35.4	8.6	9.98	367510.5	6483755.9	17:35:30
30620	E	5	105.8	46.9	55.8	17.1	78.02	367342	6483652.4	17:35:37
30630	A	3	103	49.9	19.7	9.9	15.34	367659.4	6483661.7	17:28:52

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30630	B	5	285.6	111.6	57.8	23.6	52.39	370177.9	6485414.1	17:30:30
30630	C	5	166.3	118.7	65.5	28	65.61	372034.2	6486698.5	17:31:44
30640	A	4	58.9	56.3	27.1	14.3	142.68	372102.6	6486507.1	17:21:09
30640	B	5	346.6	88.9	65.7	19.3	8.51	370432.8	6485335.3	17:22:22
30650	A	2	51	78.4	11.5	15.7	191.89	370647.7	6485256.6	17:19:32
30650	B	2	45.9	55.4	9.4	14.6	613.56	371828.8	6486065.4	17:20:17
30650	C	4	86.5	126.2	31.6	21.1	122.34	372272	6486366.5	17:20:36
39020	A	4	157.7	50.6	31.1	11.1	6.42	362580.6	6484027	14:13:00
39020	B	5	304.7	42.5	57.2	10.4	3.53	362129.2	6484632.4	14:13:19
39020	C	2	15.5	14.4	7.3	5.3	56.96	361259.3	6485889.3	14:14:04
39030	A	4	161.2	70.2	49.6	16.8	20.02	365026.8	6483780.3	17:37:42
39030	B	5	289.2	68.5	55.5	13.6	5.11	364588.7	6484426.8	17:38:10
39030	C	4	111.1	44.4	38.5	8.6	5.9	364486.1	6484558	17:38:15
39030	D	2	56.8	74.3	10.3	12.9	350.35	362783.7	6487021	17:40:00
39040	A	3	64	25.9	22.5	10.2	*	360332.1	6493789.9	16:59:01
39040	B	2	65.5	29.1	8.8	4.4	136.53	364927.3	6487254.5	17:02:56
39040	C	4	92.3	125.3	29.7	34.7	55.28	365514.7	6486439.4	17:03:23
39040	D	6	515.3	105.2	122.3	23.7	7.33	367346.7	6483818	17:05:04

IMPULSE Helicopter Electromagnetic (HEM) System

The IMPULSE EM is a digital helicopter-borne frequency-domain electromagnetic system developed by Aeroquest and introduced into the commercial geophysical survey market at the beginning of 1997. This innovative wideband frequency-domain system utilizes a single computer-controlled, high-output transmitter driver to power single horizontal coplanar and vertical coaxial transmitter coils, producing a total of six frequencies (three in each coil orientation). This differs significantly from conventional multi-frequency systems currently used in the industry in that the conventional systems use a multitude of independent coils (e.g., a separate and independent coil set for each frequency). As a result, the IMPULSE approach can avoid many of the pitfalls associated with a plethora of coils, all interacting with each other. Furthermore, the common coil approach used in IMPULSE has the potential to minimize system baseline drift and the often seen disparate performance of the many superimposed coil sets found in traditional frequency-domain systems. In addition, the IMPULSE system uses a larger diameter tubular coil platform (30" as opposed to the traditional 20") which permits the system to generate larger dipole moments, thereby resulting in an improved signal-to-noise ration...all of which quickly translates to better integrity of the measured inphase and quadrature data and an improved depth of exploration.

Number of operation Frequencies: 6 total (3 coaxial, 3 coplanar)

Typical operation frequencies (Frequencies are selectable):

Coaxial: 870Hz - 150 Am² peak.
4350Hz - 150 Am² peak.
21750Hz - 15 Am² peak.

Coplanar: 930Hz -200 Am² peak.
4650Hz - 100 Am² peak.
23250Hz - 15 Am² peak

Outputs: 6 inphase and 6 quadrature channels calibrated in ppm

Noise Levels: Less then 1 ppm rms under ideal conditions

Base-Line Drift: Less then 15 ppm per hour after initial warm-up

Output time: constant rate of 0.033 seconds

Output sample rate: 30 per second

System Power: 30 Amps maximum at 22-28 VDC

Tow Cable: 40 metres long with Kevlar strain member and weak-link

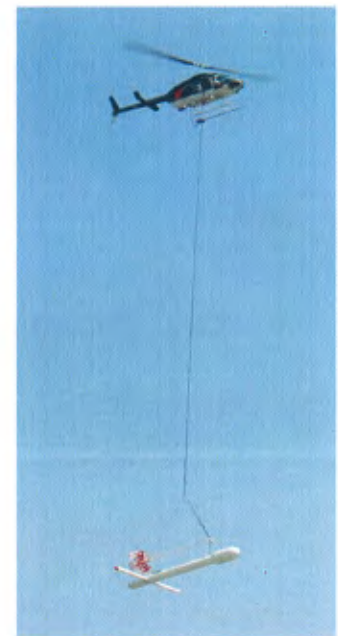
Temperature range: -30 to +35 degrees Celsius

Overall bird dimensions: 76 cm diameter, 7m length

Overall bird weight: 200 kg.

Tel: +1 905 876-2574. Fax: +1 905 876-0193.

Email: sales@aeroquestsurveys.com



**INTERPRETATION MEMORANDUM
NORTH RAE URANIUM PROJECT
UNGAVA AREA, QUEBEC
NORTHWESTERN MINERALS LIMITED**

**Jeremy S. Brett, M.Sc., P.Geo.
MPH CONSULTING LIMITED
July 14th, 2007**

OVERVIEW

A total of 2788 line-km of helicopter-borne magnetic, frequency-domain electromagnetic and radiometric data were acquired by Aeroquest Ltd. over the Northwestern Mineral Ventures "North Rae" property, and examined by this author. A total of 87 priority uranium targets were identified, out of the 179 itemized discrete uranium anomalies. These priority targets are highly recommended for follow-up via geological prospecting and mapping during the 2007 summer field season. The targets conform to an idealized model for structurally controlled pegmatite-type mineralization, and two larger target areas are interpreted as prospective for Rossing-type mineralization..

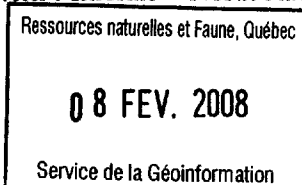
DATA VERIFICATION

Magnetic, frequency-domain electromagnetic and radiometric data were supplied to this author directly from Aeroquest Limited. It is the opinion of this author that the data is of industry standard quality and has been quality control checked and processed to a degree that meets industry standards for magnetic, electromagnetic and radiometric data. It is this author's opinion that data is sufficient for property assessment for uranium mineralization, as detectible by airborne geophysical surveys, and an analysis of controlling structures from the magnetic and electromagnetic data.

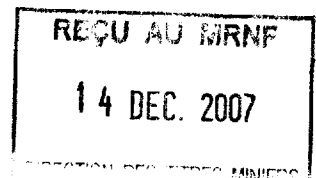
DISCUSSION

Uranium responses on the North Rae property ranged up to 13 ppm, with a mean for the radiometric database of 0.16 ppm. Uranium anomalies were isolated from background via a linear colour bar which emphasized values above 1.4 ppm. Priority targets (A and

MPH Interpretation Memorandum
Northwestern Minerals – North Rae Project



GM 6 3 3 5 2



718794

B+ ranked) were selected based on the best peak uranium values. Structural controls were noted separately, as inferred from the magnetic and EM data and noted below.

The property exhibited a strong ~ NW-SE (315 degrees) shearing, observable in both the magnetic and electromagnetic data. Basement shearing(?) is ubiquitous, making the isolation of discrete specific structural controls awkward. Cross-structures are not obvious in the magnetic and EM data, though there is some evidence for faulting at ~000, 020, 090, 110, 315, as well as other trends that appear to be anastomosing trends related to the main regional shearing.

Known showings were plotted over the airborne geophysical data, as provided by IOS. Many of these showings are reported as pegmatitic and are coincident with some airborne uranium anomalies, but it is suggested by this author that these recorded showings be used as a guide for further field follow-up. The causative bodies for the uranium anomalies could correspond to pegmatite showings, but other sources/models should be considered. The 'footprint' of the Aeroquest radiometric system is approximately 120m, and thus averages all sources within this cone of detection beneath the aircraft (within a 60-100m radius).

Although the thorium component in the radiometric data was variable over the identified targets, and though several targets exhibited low thorium counts, it must be considered that the aircraft footprint averages together rocks within a large radius relative to pegmatites, veins or small outcrops. The use of thorium and the uranium/thorium ratio is not strongly encouraged, here, without feedback from the field investigations. The targets with uranium responses that are coincident with low thorium responses should be given some priority, however, targets with a thorium response should certainly not be disregarded.

Thorium and potassium can be useful identifiers for granitic and pegmatitic rocks, however, where most of the footprint is within the same rock unit. This probably occurs for targets 158, 159 and 166, where the probably granite bedrock exhibits strong thorium and potassium signatures, with localized uranium highs.

The association of uranium anomalies with magnetic highs and lows is noted in the target ranking, and may be relevant to target ranking for follow-up. Magnetic lows may be related to alteration zones and uranium mineralization and magnetic highs may be indicative of mafic horizons within the property assemblage, which could provide reducing horizons for uranium deposition. Both relationships should be noted and examined. Further, many targets are noted as being on the 'edge' of a magnetic high and low, which could indicate a possible structural control for mineralization.

Similarly, the association of uranium anomalies with resistivity lows, inferred by the EM data, could relate to alteration zones. Uranium anomalies that appear coincident with contacts or areas of sharp contrast in the apparent resistivity may be associated with faults or lithological contacts, which again may relate to possible structural controls for mineralization.

Linear trends in uranium anomalies were noted, exhibited by both (i) roughly shearing-parallel 'solid' linear trends in the uranium data and (ii) linear trends of point-source uranium anomalies. It is suggested by this author that the linear trends have a higher priority for examination in the field if the available time is limited, but that point source anomalies should not be disregarded.

Several of the uranium peaks are coincident with uranium bearing field samples, such as portions of targets 43 and 63 (supplied by IOS in 2006), and many later sampling sites exhibit a similar coincidence. A thorough examination and discussion of all coincident samples is recommended.

Target rankings and UTM (NAD27, Zone 18N) locations are listed in the June 12th, 2007 NAG Uranium targets list (revised), attached with this interpretation memorandum.

CONCLUSIONS AND RECOMMENDATIONS

The top 87 uranium targets identified out of the 179 itemized discrete uranium anomalies are recommended for field follow-up during the 2007 summer field season. The targets should be assessed on the ground by geological teams equipped with hand-held scintillometers or spectrometers. The prospecting of areas within a ~75m radius of the target centres is recommended, with attention paid to possible uraniferous boulders, or outcrop. Mapping, scintillometer /spectrometer prospecting, sampling and assaying of prospective rocks is highly encouraged, and the integration of this data back into the geophysical interpretation, post-field season, is highly recommended to refine the interpretation and assign ranks to secondary targets or linear anomaly trends.

Respectfully submitted,
MPH Consulting Limited

Jeremy S. Brett, M.Sc., P.Geo.
Senior Geophysical Consultant

/ NORTHWESTERN MINERALS						
/ NORTH RAE PROPERTY						
/ URANIUM TARGET LIST						
/ UTM Coordinates: NAD27, Zone 18N						
/ X	Y	TARGET	U Rank	U/Th	MAG	EM
/ BLOCK AB						
340894.8	6509320	1				
341152.8	6508926	2				
340107.2	6508315	3 B+			Low	
340093.6	6507813	4 B+			Edge	
340772.6	6508261	5				
344126.5	6508899	6			Low	
345891.7	6508397	7 B+	B+			
346136.2	6507079	8 B+			Low?	
349109.9	6508722	9				
350114.7	6509171	10 A-	B+		Low?	U anom 4.9ppm
349978.9	6507174	11 A-	B+		Edge	U anom 4.8ppm
341845.3	6505409	12				
343461.2	6506794	13			Low?	
344085.8	6506170	14			Low	
344506.7	6505762	15 B+			Low?	
345443.6	6504594	16				
345796.7	6505138	17				
346258.4	6505545	18 B+	B+			
346231.2	6506170	19 B+				
346991.6	6506640	20 B+	B+			
350019.7	6504757	21			Edge	
350454.2	6506278	22			Low	
350644.3	6505857	23 B+	B+		High	
351649.1	6505110	24 B+	A-		High	
351676.3	6504527	25			High	
351296.1	6503983	26	B			
342537.8	6502626	27			High	
341560.1	6501471	28				
341994.6	6501444	29			Edge	
342578.5	6501159	30			Low	
343176	6501349	31				



344262.3	6502408	32							
346462.1	6503983	33	B+	B+		Low			
346176.9	6503250	34		B+					
346312.7	6502517	35		B+					
347086.7	6502503	36	B+			Low			
349802.4	6503332	37	B+	B+	Low	Low			
351581.2	6503169	38			Low				
352599.6	6503318	39							
351323.2	6502693	40							
352382.4	6502422	41	B+		High	Low			
352233	6501852	42							
349761.7	6502069	43	B+			Edges			
346204.1	6501050	44	B+	A-		Low			
344751.1	6500209	45			Low				
346421.3	6500236	46				Low			
346978	6500534	47	B+	B+		Low?			
349625.9	6500616	48				Edge			
349951.8	6500046	49	A-	B+		Edge	U anom 4.9ppm		
353034.2	6500657	50	B+		Edge				
344126.5	6499489	51		B+	Edge				
342008.2	6498864	52	B+		Low	Low			
342687.2	6497792	53				Low			
343434	6497900	54	B+		Low	Low			
344099.4	6498158	55			Edge				
344452.4	6498932	56							
344873.3	6498294	57	B+						
347236	6497085	58				Edges			
347711.3	6497764	59	A-	B+		Edges	6ppm at centre of anomaly		
349571.6	6498470	60	A	A-	Low	Low	NW-SE Linear U anom, 6ppm peak at N end. 4.45ppm in centre		
350060.4	6498335	61			High				
350630.7	6498104	62			High	Low?			
352015.8	6499258	63	A	B+	Low	Low	U anom up to 6ppm		
352531.9	6497247	64				Low			
353131.9	6496269	65			Edge	Low			
353905.6	6495495	66			High	Low			
353779.2	6494942	67				Low			
354142.4	6494563	68		B		Low			

343911	6496632	69		Low	Low	
344526.8	6496000	70 B+			Low	
346074.1	6496316	71	B			
348758.3	6495290	72		Low		
346610.9	6495432	73			Edge	
340642.6	6495732	74				
338574.2	6494737	75		Edge	Edge	
341874.2	6495100	76		High		
342411	6494847	77				
343374.2	6494390	78				
344621.5	6494090	79			Edge	
347274.1	6493995	80 B+	B	Edge	Edge	
347889.9	6494232	81		Edge	Low	
342490	6494090	82				
337184.8	6493790	83 B+			Low	
337737.4	6493205	84 B+	B+		Low	
338416.3	6493158	85 B+	B+		Low	
338826.9	6492779	86 B+	B+		Low	
339032.1	6493474	87 B+				
339521.6	6492258	88			Edge	
339126.9	6491721	89			Low	
344005.7	6492448	90 A-	B+		Edge	U anom 4.1ppm
344953.1	6492337	91 B+				
345300.4	6492116	92 B+				
345584.6	6491563	93 B+				
345884.6	6491074	94 B+				
348332	6491579	95				
349310.9	6490853	96				
353416.1	6492937	97			Low	
354126.6	6493221	98				
354742.4	6493221	99		High	Low	
356130.7	6490482	100		Low		
356542.9	6491483	101	B+	High	Low	
357367.3	6491228	102 A-	B+	Low?	Edges	U anom 5.45ppm
334705.2	6491285	103 A-	B+	Low	Low	U anom 3.75ppm
333095.9	6490384	104		Low?	Low	
332838.4	6489966	105		Low		

335027	6490738	106			Low	Low														
334962.6	6490078	107				Low														
337086.8	6490690	108	B+																	
337827.1	6490062	109																		
338229.4	6490626	110	B+			Low														
338663.9	6490191	111				Low														
340015.7	6488823	112	B+																	
341383.5	6488920	113				High														
343877.9	6490062	114																		
345503.2	6487874	115																		
345986	6487922	116																		
346661.9	6489403	117																		
346967.6	6489129	118																		
347595.2	6488469	119																		
348303.3	6489306	120	B+			Low														
348914.8	6489821	121																		
350282.7	6489531	122	B+																	
349735.5	6488308	123	B+																	
335090.7	6488405	124	A			A														
337872.7	6488549	125	A-			A-														
339272.6	6488890	126	B+																	
335072.7	6487077	127	B+																	
334821.5	6485731	128				Low														
336939.3	6486826	129				High														
337603.4	6487203	130				High														
339990.5	6487669	131																		
341067.4	6487077	132																		
341749.5	6486485	133																		
342664.8	6485480	134	B+																	
336813.7	6485641	135				Low														
336598.3	6485139	136				Low														
336508.6	6484313	137	B+			Edges														
337190.6	6484187	138				Low														
337639.3	6484044	139				Low														
338339.3	6483128	140																		
339021.3	6482805	141																		
340546.9	6483111	142	A-			B														

U anom 3.6ppm

NW-SE Linear U anom, up to 13ppm peak

L'ours Polar Anomalie, up to 3.3ppm

U anom 3.9ppm

U anom 5.35ppm

340798.2	6483613	143	B+		Edges	Low	
340475.1	6485731	144				Low	
341731.5	6485121	145					
342126.4	6484834	146	B+				
342754.5	6484205	147					
343472.5	6484205	148	B+	B			
343903.2	6483882	149	B+				
344531.4	6483541	150	B+				
343275	6482931	151	B+				
/ BLOCK C							
360255.5	6492889	152	B+	B+	Low	Edges	
362328.2	6493381	153			Low	Edges	
363206.5	6493258	154		B+	Low		
364295.6	6493029	155	B+				
363241.7	6491975	156				Edges	
364418.6	6491940	157	B+				
366702.1	6492362	158	A		High?		K and Th responses indicating granitic rocks?
369512.6	6490517	159	A-	A-	High?	Lows?	U peaks: 5.45 to 8.60ppm: Rossing model? K,Th ind. granites?
373113.5	6490623	160	B+			Low	
373851.3	6490693	161	B+				
365033.3	6490904	162		B+		Edges	
361081.1	6490096	163	A-	B+	High		
361485.1	6489586	164	B+	B+	High		
361151.3	6489095	165			High		
363926.7	6490166	166	A-	A-	High?	Lows?	Peaks ranging from 4.75 to 7.50ppm: Rossing model?
367229.1	6487830	167				Edge	
369407.2	6487531	168	A-	A-			
370566.5	6486899	169	A-				
371234	6486390	170	B+		Low		
371058.4	6486091	171	B+	B+	Low	Low	
372094.7	6486196	172				Low	
368493.8	6484457	173			Low		
360659.5	6487321	174			Low	Low	
359869	6486583	175			High?	Low	
360764.9	6486512	176			Low	Low	
359711	6485792	177	B+			Edge	
360378.5	6485898	178	B+				

361133.8	6485459	179 A-	B+	High?	Low														
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