Report on a Helicopter-Borne

AeroTEM System Electromagnetic & Magnetic Survey

Aeroquest Job # 11023

Pickle Crow Property

Pickle Lake, Ontario
NTS052O08

For

PC Gold Inc.

Suite 304, 555 Legget Drive, Tower A
Kanata, Ontario K2K 2X3

by

7687 Bath Road,
Mississauga, ON, L4T 3T1
Tel: (905) 672-9129
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Report Date: April 2011

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EM – AeroTEM off-time profiles Z3-Z13 and EM anomaly symbols.

INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of PC Gold Inc. over their Pickle Crow Property near Pickle Lake, Ontario. The survey comprised a single block.

The principal geophysical sensor was Aeroquest's exclusive AeroTEM IV ('Papa' System) helicopter time domain electromagnetic system which was employed in conjunction with a high-sensitivity caesium vapour magnetometer. Ancillary equipment included a real-time differential GPS navigation system, radar altimeter, video recorder, and a base station magnetometer. Full-waveform streaming EM data was recorded at 36,000 samples per second. The streaming data comprises the transmitted waveform and the X component and Z component of the resultant field at the receivers. All of the above were recorded by the AeroDAS acquisition system.

The total survey coverage for the Pickle Crow block was 881.4 line-km; the limits of this project area are defined in Appendix 1. The survey was flown at 50 metres line spacing with a 140º/320º flight line direction. The survey flying described in this report took place from February 21st-25th, 2011. This report describes the survey logistics, data processing, presentation, and provides a brief overview of the results.

SURVEY AREA

The Project area is located 6 km northeast of Pickle Lake in northern Ontario, approximately 350 km north of Thunder Bay. The project was made up of a single block situated over the Pickle Crow mine site with an area of 31 km². The project terrain is low lying and wooded with numerous lakes and rivers in the vicinity.

The base of survey operations and crew accommodation was Pickle Lake.

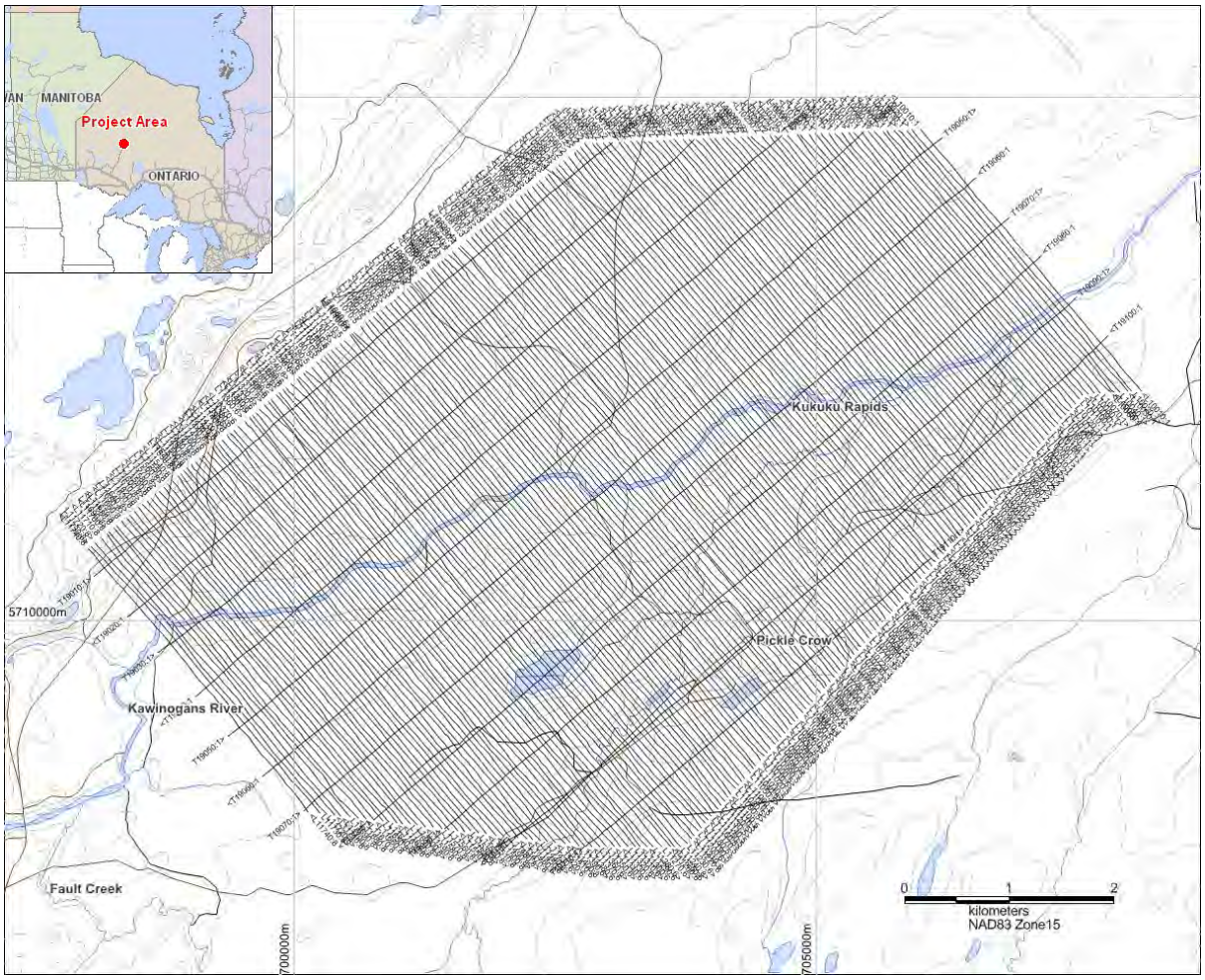


Figure 1: Project Location and Flight Path.

SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Project Name	Line Spacing (metres)	Line Direction	Survey Coverage (line-km)	Dates flown
Pickle Crow	50	140º/320º	882	February 21-25, 2011

Table 1: Summary of Survey Specifications.

The survey coverage was calculated by combining the along-line distance of the survey lines and control (tie) lines as presented in the final Geosoft databases. The survey was flown with a line spacing of 50 metres. The control (tie) lines were flown perpendicular to the survey lines with a spacing of 500 metres.

The nominal terrain clearance of the EM bird was 30 metres. The magnetometer sensor was mounted in a smaller bird connected to the tow rope 33.2 metres above the EM bird and 17.1 metres below the helicopter (Figure 3). Nominal survey speed over relatively the flat terrain was

75 km/h. Scan rates for ancillary data acquisition were 10Hz for the magnetometer and altimeter, and 5Hz for the GPS-determined position. The EM data stream was acquired at a rate of 36,000 samples per second and was processed to generate final data at 10 samples per second. The 10 samples per second translate to a geophysical reading about every 1.5 to 2.5 metres along the flight path.

NAVIGATION

Navigation was carried out using a GPS receiver, an AGNAV2 system for navigation control, and the AeroDAS data acquisition system to record positional data. The x-y-z position of the aircraft, as reported by the GPS, was recorded at 0.2 second intervals. The system has a published accuracy of less than 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.

SYSTEM DRIFT

Unlike frequency domain electromagnetic systems, the AeroTEM IV system has negligible drift due to thermal expansion. The operator is responsible for ensuring the instrument is properly warmed up prior to departure and that the instruments are operated properly throughout the flight. The operator maintains a detailed flight log during the survey noting the times of the flight and any unusual geophysical or topographic features. 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.

FIELD QA/QC PROCEDURES

Each time the aircraft returned to base the AeroDAS streaming EM data and ancillary data were carried on removable hard drives and transferred to the data processing work station. At the end of each day, the base station magnetometer data were retrieved on a flash card from the base station unit.

Preliminary data verification and quality control included a comparison of the acquired GPS data with the flight plan; verification of the base station magnetometer data and conversion to ASCII format XYZ data; and loading, processing and conversion of the steaming EM data from the removable hard drive. All data were then merged to an ASCII XYZ format file which was then imported to an Oasis database for further QA/QC and for the production of EM, magnetic contour, and flight path maps.

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 reflown.

AIRCRAFT AND EQUIPMENT

AIRCRAFT

A Eurocopter AS350 B3 "A-Star" helicopter - registration C-FFKA was used as the survey platform. The helicopter was owned and operated by V. Kelner Helicopters of Thunder Bay, Ontario. Installation of the geophysical and ancillary equipment was carried out by Aeroquest Surveys personnel in conjunction with a licensed aircraft engineer. The survey aircraft was flown at a nominal terrain clearance of 82 metres.

Figure 2. Eurocopter AS350 B3 "A-Star" helicopter used as the survey platform.

MAGNETOMETER

The Aeroquest airborne survey system employs a Geometrics G-823A caesium vapour magnetometer sensor installed in a two metre towed bird airfoil attached to the main tow line, 17 metres below the helicopter (Figure 3). The sensitivity of the magnetometer is 0.001 nanoTesla at a 0.1 second sampling rate. The nominal ground clearance of the magnetometer bird was 63.2 metres. The magnetic data was recorded at 10 Hz by the AeroDAS system.

ELECTROMAGNETIC SYSTEM

The electromagnetic system is an Aeroquest AeroTEM IV time domain towed bird system (Figure 3). The current AeroTEM IV transmitter dipole moment is 247 kNIA. The AeroTEM bird was towed 50.3 metres below the helicopter. Further technical details of the system can be found in Appendix 5.

The wave-form is triangular with a symmetric transmitter on-time pulse of 1940 µs and a base frequency of 90 Hz (Figure 4). The current alternates polarity every on-time pulse. During every Tx on-off cycle (180 per second), 200 contiguous channels of raw X and Z component (and a transmitter current monitor, itx) of the received waveform are measured. The channel time widths are defined in Section 0 below. This 200 channel data is referred to as the raw streaming data. The AeroTEM data acquisition system (AeroDAS) records the full EM waveform (Figure 5).

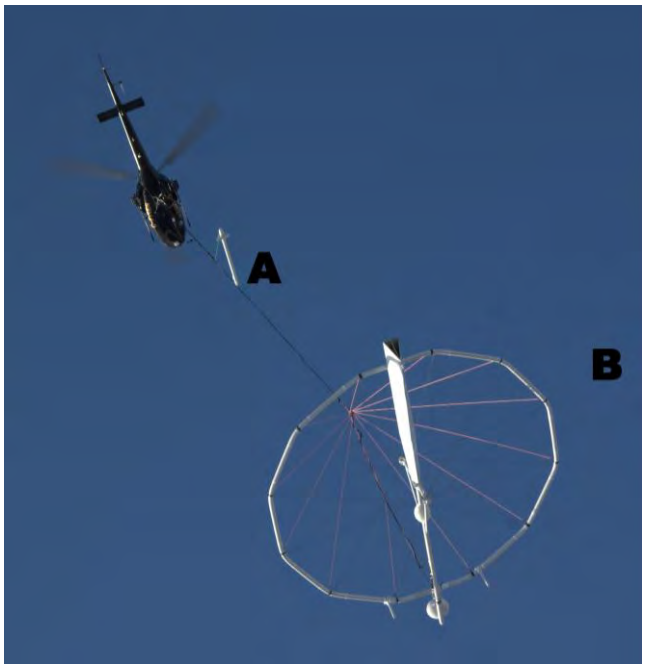


Figure 3.The magnetometer bird (A) and AeroTEM IV EM bird (B)

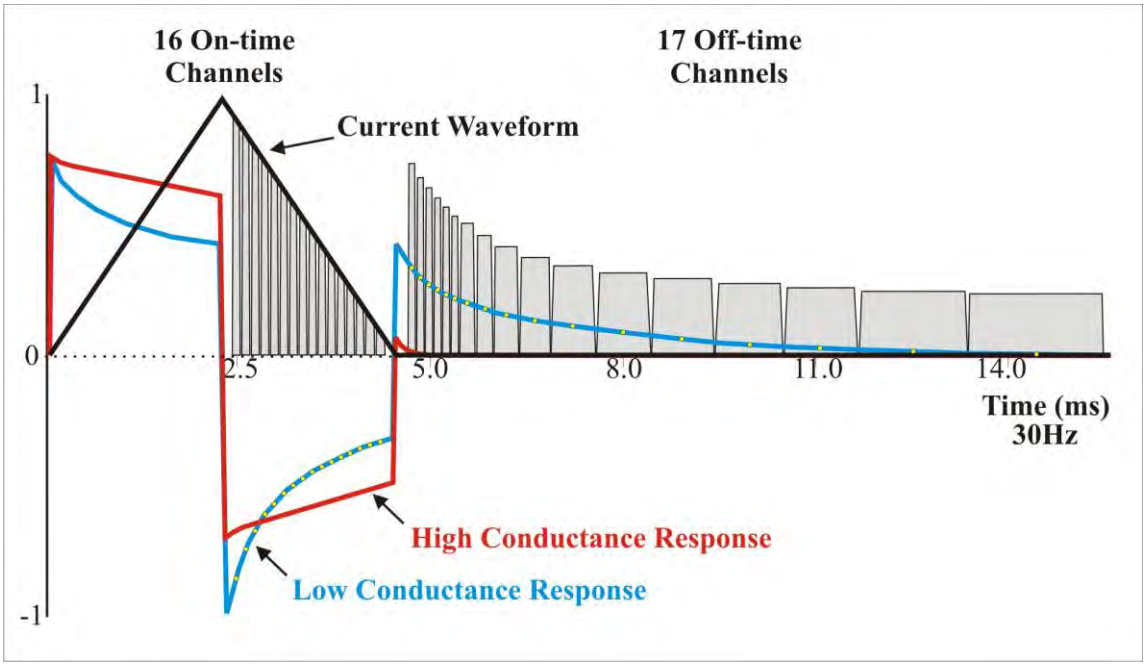


Figure 4. Schematic of Transmitter and Receiver waveforms

AERODAS ACQUISITION SYSTEM

200 channels of raw streaming EM data, as well as magnetic, position and altitude data are recorded by the AeroDAS acquisition system onto a removable hard drive. Six channels of real-time-processed off-time EM decay in the Z direction and one in the X direction can be viewed on a color monitor on board the helicopter (Figure 5). These channels are derived by a binning, stacking and filtering procedure run on the raw streaming data. The primary use of the displayed EM data (Z1 to Z6, X1) is to provide for real-time QA/QC while airborne.

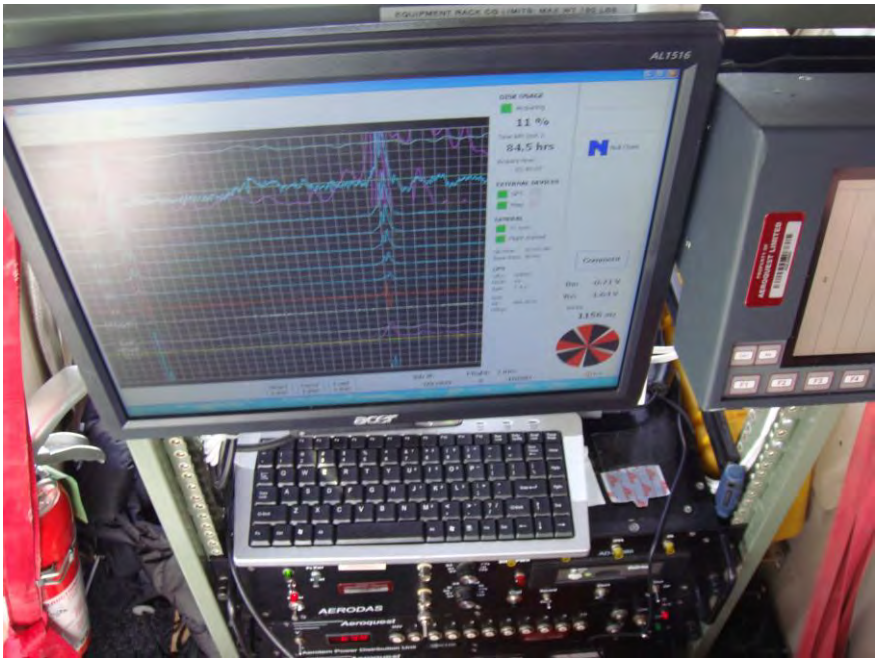


Figure 5. AeroTEM IV Instrument Rack

The streaming data are processed post-survey to yield 33 stacked and binned on-time and off-time channels at a 10 Hz sample rate. The timing of the final processed EM channels is described in the following table:

```
Average TxOn       -24.2636 us
Average TxSwitch   984.2452 us
Average TxOff      1916.1739 us
Average TxPeak     399.3490 A


[Channel Data]
Channel   Sample Range   Time Width (us)   Time Center (us)    Time After TxOn (us)
    On1          4 - 4              27.8               97.2                   121.5
    On2          5 - 5              27.8              125.0                   149.3
    On3          6 - 6              27.8              152.8                   177.0
    On4          7 - 7              27.8              180.6                   204.8
    On5          8 - 8              27.8              208.3                   232.6
    On6          9 - 9              27.8              236.1                   260.4
    On7       10 - 10               27.8              263.9                   288.2
    On8       11 - 11               27.8              291.7                   315.9
    On9       12 - 12               27.8              319.4                   343.7
   On10       13 - 13               27.8              347.2                   371.5
   On11       14 - 14               27.8              375.0                   399.3
   On12       15 - 15               27.8              402.8                   427.0
   On13       16 - 16               27.8              430.6                   454.8
   On14       17 - 17               27.8              458.3                   482.6
   On15       18 - 18               27.8              486.1                   510.4
   On16       19 - 19               27.8              513.9                   538.2

Channel   Sample Range   Time Width (us)   Time Center (us)   Time After TxOff (us)
   Off0       71 - 71               27.8             1958.3                    42.2
   Off1       72 - 72               27.8             1986.1                    69.9
   Off2       73 - 73               27.8             2013.9                    97.7
   Off3       74 - 74               27.8             2041.7                   125.5
   Off4       75 - 75               27.8             2069.4                   153.3
   Off5       76 - 76               27.8             2097.2                   181.0
   Off6       77 - 79               83.3             2152.8                   236.6
   Off7       80 - 82               83.3             2236.1                   319.9
   Off8       83 - 85               83.3             2319.4                   403.3
```

Off9	86 - 88	83.3	2402.8	486.6
Off10	89 - 93	138.9	2513.9	597.7
Off11	94 - 98	138.9	2652.8	736.6
Off12	99 - 104	166.7	2805.6	889.4
Off13	105 - 114	277.8	3027.8	1111.6
Off14	115 - 128	388.9	3361.1	1444.9
Off15	129 - 150	611.1	3861.1	1944.9
Off16	151 - 185	972.2	4652.8	2736.6

MAGNETOMETER BASE STATION

The base magnetometer was a Geometrics G823-A sensor recorded by a Trimble Recon PDA with an internal GPS antenna. Data logging and UTC time synchronisation were carried out by the PDA. 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.

RADAR ALTIMETER

A Terra TRA 3500/TRI-30 radar altimeter was 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 terrain. The Terra altimeter has an accuracy of 5% within the typical survey height envelope.

VIDEO TRACKING AND RECORDING SYSTEM

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

Figure 6. Digital video camera typical mounting location

GPS NAVIGATION SYSTEM

The navigation system consisted 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 less than 3 metres.

Survey co-ordinates were set up prior to the survey and the information was fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84 [World] using the UTM zone 15N projection. The real-time differentially-corrected GPS positional data were recorded by the AeroDAS system in geodetic coordinates (latitude and longitude using WGS84) at 0.2 s intervals.

DIGITAL ACQUISITION SYSTEM

The received waveform was sampled during on- and off-time at 200 channels per decay, 180 times per second, and logged by the proprietary AeroDAS data acquisition system. The channel sampling commenced at the start of the Tx cycle and the width of each channel is 27.78 µs. In addition the positional and secondary geophysical data, (i.e. magnetic, radar altimeter, and UTC time) were recorded on a removable hard drive and later backed up onto DVD-ROM from the field processing computer.

PERSONNEL

The following Aeroquest personnel were involved in the project:

Manager of Operations: Lee Harper

Field Data Processors: Geoff Plastow, Edward You

Field Operator: Rafal Starmach

Data Processing and Reporting: Geoff Plastow, Vid Thayalan, Chris Kahue, Marion Bishop, Andrea Ngui

The survey pilot, Max Lavoie, and AME Ben Lambert, were employed directly by the helicopter operator – V. Kelner Helicopters.

DELIVERABLES

HARDCOPY DELIVERABLES

The report includes maps at a scale of 1:10,000. The survey areas are covered by individual map sheet and three geophysical data products are delivered as listed below:

TMI – Coloured Total Magnetic Intensity (TMI) with contours EM anomaly symbols.

Z2-OFF – AeroTEM Z2 Off-time with contours and EM anomaly symbols.

EM – AeroTEM off-time profiles Z3-Z13 and EM anomaly symbols.

The coordinate/projection system for the maps is NAD83 – UTM Zone 15N. For reference, the latitude and longitude in WGS84 are also noted on the maps.

All the maps show flight path trace, skeletal topography, and conductor picks represented by an anomaly symbol classified according to calculated on-time conductance. The anomaly symbol is accompanied by postings denoting the calculated off-time conductance, a thick or thin classification and an anomaly identifier label. The anomaly symbol legend is given in the margin of the maps. The magnetic field data is presented as superimposed line contours with a minimum contour interval of 20nT.

DIGITAL DELIVERABLES

Final Database of Survey Data (.GDB)

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.

Geosoft Grid files (.GRD)

Levelled Grid products used to generate the geophysical map images. Cell size for all grid files is 10 metres.

Total Magnetic Intensity (*mag_PcGold.grd*)
AeroTEM OFFTIME Channel (*zoff2_PcGold.grd*)

Digital Versions of Final Maps (.MAP, .PDF)

Map files in Geosoft .map and Adobe PDF format.

Google Earth Survey Files (.kmz)

Flight navigation lines, EM anomalies, EM Profiles, geophysical grids and contours in Google earth KMZ format. Double click to view flight lines in Google Earth.

Free Viewing Software (.EXE)

Geosoft Oasis Montaj Viewing Software
Adobe Acrobat Reader
Google Earth Viewer

Digital Copy of this Document (.PDF)

Adobe PDF format of this document.

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.

BASE MAP

The geophysical maps accompanying this report are based on positioning in the NAD83 datum. The survey geodetic GPS positions have been projected using the Universal Transverse Mercator projection in Zone 15 North. A summary of the map datum and projection specifications is given following:

Ellipse: GRS 1980

Ellipse major axis: 6378137m eccentricity: 0.081819191

Datum: North American 1983 - Canada Mean

Datum Shifts (x,y,z) : 0, 0, 0 metres

Map Projection: Universal Transverse Mercator Zone 15 (Central Meridian 93ºW)

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 was sourced from Natural Resources Canada 1:50000 National Topographic Database data and the background shading were derived from NASA Shuttle Radar Topography Mission (SRTM) 90 metres resolution DEM data.

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 (5 Hz) 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. These high elevation checks are to ensure that the gain of the system remained constant and within specifications.

ELECTROMAGNETIC DATA

The raw streaming data, sampled at a rate of 36,000 Hz (200 channels, 180 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Surveys. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, levelled and split up into the individual line segments. Further base level adjustments may be carried out at this stage.

The final field processing step was to merge the processed EM data with the other data sets into a Geosoft GDB file. The EM fiducial is used to synchronize the two datasets. The processed channels are merged into 'array format; channels in the final Geosoft database as Zon, Zoff, Xon, and Xoff

The filtering of the stacked data is designed to remove or minimize high frequency noise that cannot be sourced from the geology. Apparent bedrock EM anomalies were interpreted with the aid of an auto-pick from positive peaks and troughs in the on-time Z channel responses correlated with X channel responses. The auto-picked anomalies were reviewed and edited by a geophysicist on a line by line basis to discriminate between thin and thick conductor types. Anomaly picks locations were migrated and removed as required. This process ensures the optimal representation of the conductor centres on the maps.

At each conductor pick, estimates of the off-time conductance have been generated based on a horizontal plate source model for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. Some of the EM anomaly picks do not display a Tau

value; this is due to the inability to properly define the decay of the conductor usually because of low signal amplitudes. Each conductor pick was then classified according to a set of seven ranges of calculated off-time conductance values. For high conductance sources, the on-time conductance values may be used, since it provides a more accurate measure of high-conductance sources. Each symbol is also given an identification letter label, unique to each flight line. Conductor picks that did not yield an acceptable estimate of off-time conductance due to a low amplitude response were classified as a low conductance source. Please refer to the anomaly symbol legend located in the margin of the maps.

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. No corrections for the regional reference field (IGRF) were applied. The corrected profile data were interpolated on to a grid using bi-directional gridding with a grid cell size of 10 metres. The final levelled grid provided the basis for threading the presented contours which have a minimum contour interval of 20nT.

GENERAL COMMENTS

The survey was successful in mapping the magnetic and conductive properties of the geology throughout the survey area. Below is a brief interpretation of the results. For a detailed interpretation please contact Aeroquest Surveys.

MAGNETIC RESPONSE

The magnetic data provide a high resolution map of the distribution of the magnetic mineral content of the survey area. This data can be used to interpret the location of geological contacts and other structural features such as faults and zones of magnetic alteration. The sources for anomalous magnetic responses are generally thought to be predominantly magnetite because of the relative abundance and strength of response (high magnetic susceptibility) of magnetite over other magnetic minerals such as pyrrhotite.

EM ANOMALIES

The EM anomalies on the maps are classified by conductance (as described earlier in the report) and also by the thickness of the source. A thin, vertically orientated source produces a double peak anomaly in the z-component response and a positive to negative crossover in the x-component response (Figure 7). For a vertically orientated thick source (say, greater than 10 metres), the response is a single peak in the z-component response and a negative to positive crossover in the x-component response (Figure 8). Because of these differing responses, the AeroTEM system provides discrimination of thin and thick sources and this distinction is indicated on the EM anomaly symbols (N = thin and K = thick). Where multiple, closely spaced conductive sources occur, or where the source has a shallow dip, it can be difficult to uniquely determine the type (thick vs. thin) of the source (Figure 9). In these cases both possible source types may be indicated by picking both thick and thin response styles. For shallow dipping conductors the ‘thin’ pick will be located over the edge of the source, whereas the ‘thick’ pick will fall over the downdip ‘heart’ of the anomaly.

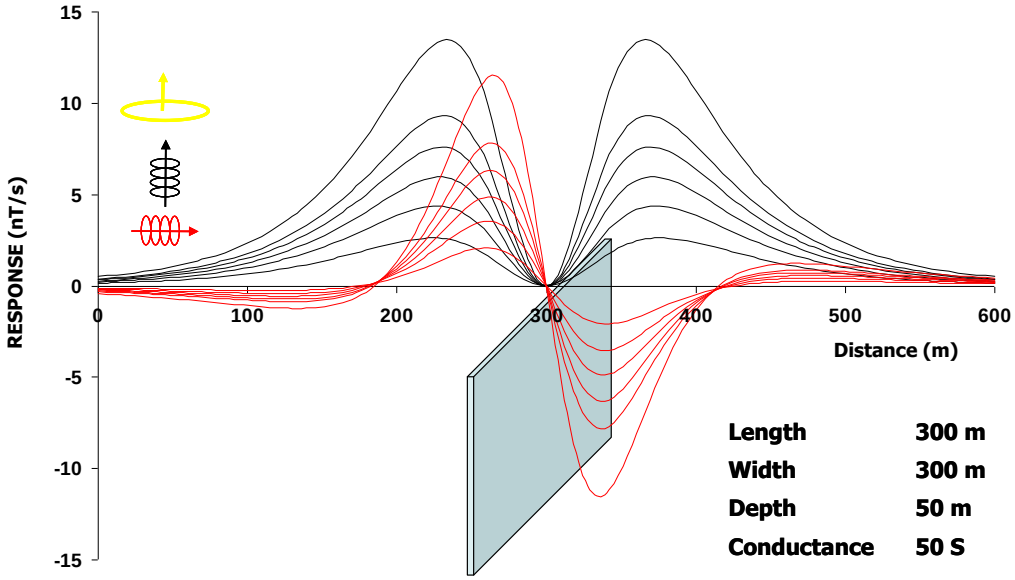


Figure 7. AeroTEM response to a 'thin' vertical conductor

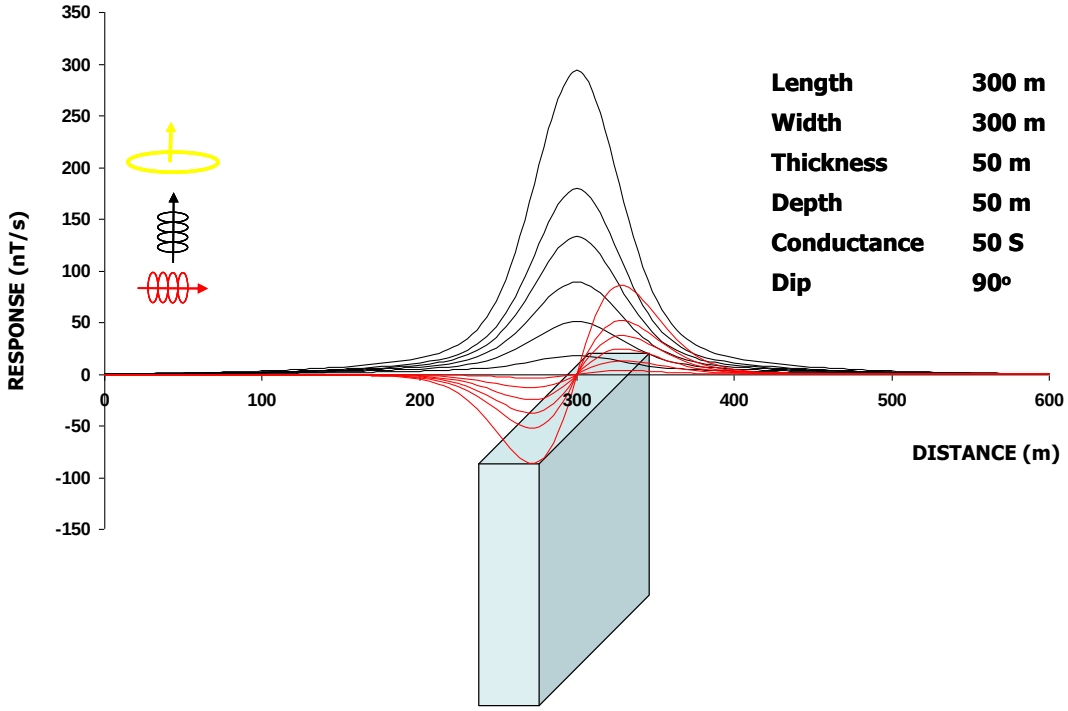


Figure 8. AeroTEM response for a 'thick' vertical conductor

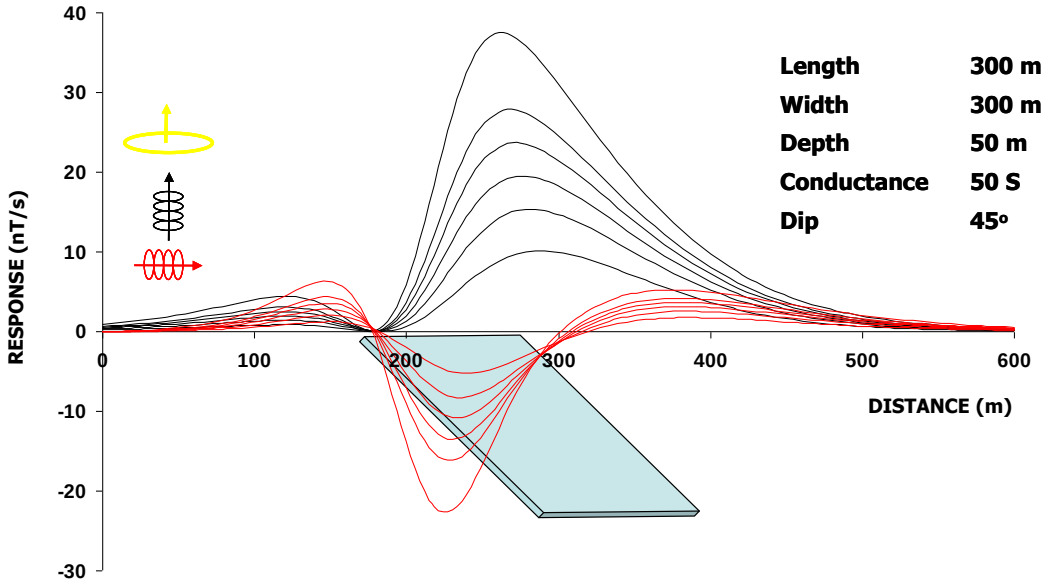


Figure 9. AeroTEM response over a 'thin' dipping conductor

All cases should be considered when analyzing the interpreted picks and prioritizing for follow-up. Specific anomalous responses which remain as high priority should be subjected to numerical modeling prior to drill testing to determine the dip, depth and probable geometry of the source.

APPENDIX 1: SURVEY BOUNDARIES

The following table presents the Pickle Crow block boundaries. All geophysical data presented in this report have been windowed to 100m outside these outlines. X and Y positions are in NAD83 UTM Zone 15.

X	Y
698080.76	5710592.66
702825.84	5714457.66
706087.08	5714595.82
708018.71	5712293.83
707508.03	5712265.59
703691.06	5707941.76
702791.12	5707941.76
700012.36	5708290.66

APPENDIX 2: DESCRIPTION OF DATABASE FIELDS

The GDB file is a Geosoft binary database. In the database, the Survey lines and Tie Lines are prefixed with an "L" for "Line" and "T" for "Tie".

COLUMN	UNITS	DESCRIPTOR
Line		Line number
Flight		Flight #
Emfid		AERODAS Fiducial
Utctime	hh:mm:ss.ss	UTC time
X	m	UTM Easting (NAD83, Zone 15)
Y	m	UTM Northing (NAD83, Zone 15)
Galt	m	GPS altitude of Mag bird
Bheight	m	Terrain clearance of EM bird
Ralt	m	Radar altitude
Dtm	m	Digital Terrain Model
basemag	nT	Base station total magnetic intensity
Mag	nT	Final levelled total magnetic intensity
Zon	nT/s	Processed Streaming On-Time Z component Channels 1-16
Zoff	nT/s	Processed Streaming Off-Time Z component Channels 0-16
Xon	nT/s	Processed Streaming On-Time X component Channels 1-16
Xoff	nT/s	Processed Streaming Off-Time X component Channels 0-16
Pwrline		powerline monitor data channel
Grade		Classification from 1-7 based on conductance of conductor pick
Anom_labels		Alphanumeric label of conductor pick
Anom_ID		Anomaly Character (K= thicK, N = thiN)
Off_AllCon	S	Off-time conductance
Off_AllTau	µs	Off-time decay constant
TranOff	s	Transmission turn-off time
TranOn	µs	Transmission turn-on time
TranPeak	A	Transmission peak current
TranSwitch	µs	Transmission peak current time
Off_con	S	Off-time conductance
Off_Tau	µs	Off-time decay constant

APPENDIX 3: AEROTEM ANOMALY LISTING

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10010	A	N	31.0	394.1	1	16:11:10	39.1	707778.0	5712582.1
10010	B	K	32.1	408.4	1	16:11:35	38.8	707389.9	5713035.9
10020	A	N	43.8	558.2	1	16:16:11	40.5	707731.1	5712534.0
10030	A	N	45.8	583.6	1	16:17:59	40.4	707685.4	5712523.7
10040	A	N	38.6	491.5	1	16:24:45	41.1	707645.0	5712488.1
10050	A	N	43.3	550.8	1	16:52:44	40.4	707607.2	5712473.3
10050	B	N	15.3	195.4	1	16:54:44	43.3	705749.0	5714672.5
10060	A	N	44.2	563.3	1	16:26:11	45.9	707570.6	5712443.1
10060	B	N	30.6	389.1	1	16:28:07	46.1	705720.6	5714622.4
10070	A	N	11.2	142.4	1	16:55:46	48.2	705703.2	5714587.0
10070	B	N	40.7	518.4	1	16:57:49	43.0	707428.5	5712514.3
10070	C	N	35.2	447.8	1	16:57:55	36.6	707507.2	5712422.1
10080	A	N	23.2	295.6	1	16:29:09	39.1	705676.1	5714529.7
10080	B	N	30.4	386.5	1	16:31:07	35.3	707382.7	5712490.9
10080	C	N	26.4	335.6	1	16:31:13	33.6	707464.6	5712397.7
10090	A	N	35.4	450.1	1	16:59:17	43.9	707340.1	5712469.6
10090	B	N	29.7	378.0	1	17:00:57	44.2	705648.9	5714492.5
10100	A	N	30.7	390.7	1	16:32:32	40.6	707307.1	5712435.6
10100	B	N	23.1	293.9	1	16:34:17	41.2	705614.0	5714440.9
10110	A	N	19.7	251.0	1	17:02:13	45.7	705585.6	5714398.3
10110	B	N	20.0	254.2	1	17:04:01	42.1	707260.2	5712418.6
10120	A	N	31.1	395.4	1	16:35:37	38.3	705552.9	5714369.3
10120	B	N	13.2	167.8	1	16:37:33	38.9	707212.1	5712385.9
10130	A	N	14.2	180.7	1	17:05:30	53.9	707164.6	5712364.2
10130	B	N	33.8	430.1	1	17:07:06	46.0	705508.8	5714329.0
10140	A	N	29.7	378.4	1	16:39:02	44.2	707121.4	5712344.2
10140	B	N	15.4	196.5	1	16:40:41	44.2	705486.3	5714290.6
10150	A	N	10.4	132.1	1	17:08:30	42.9	705460.0	5714250.0
10150	B	N	22.2	282.6	1	17:10:14	37.0	707079.2	5712309.3
10150	C	N	33.1	421.2	1	17:10:20	38.9	707163.7	5712202.8
10160	A	N	14.5	185.0	1	16:42:19	47.0	705426.1	5714199.1
10160	B	K	13.2	167.6	1	16:43:53	44.5	706833.6	5712513.2
10160	C	N	33.9	431.9	1	16:44:13	36.6	707132.9	5712177.4
10170	A	N	50.7	645.7	1	17:11:39	51.5	707012.2	5712225.2
10170	B	K	26.0	330.8	1	17:11:52	46.3	706794.3	5712484.5
10170	C	N	47.1	599.5	1	17:13:16	42.7	705384.1	5714174.6
10180	A	N	45.4	577.5	1	16:45:43	51.4	706976.7	5712199.9

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10180	B	K	36.3	462.0	1	16:45:56	52.7	706759.1	5712460.3
10180	C	N	48.3	614.9	1	16:47:23	40.9	705349.2	5714141.4
10190	A	N	37.3	474.9	1	17:14:57	52.1	705319.9	5714090.2
10190	B	N	49.4	629.2	1	17:16:47	38.2	707031.6	5712069.5
10200	A	N	45.7	582.1	1	16:49:06	44.7	705280.3	5714066.0
10200	B	N	38.9	495.8	1	16:50:57	35.9	706899.1	5712141.1
10200	C	N	47.0	598.5	1	16:51:03	32.3	706990.3	5712036.9
10210	A	N	46.0	585.9	1	17:18:13	44.4	706862.8	5712099.3
10210	B	N	40.4	514.8	1	17:19:53	38.5	705251.8	5714018.0
10220	A	N	35.6	453.4	2	18:22:11	42.3	705226.9	5713959.0
10220	B	N	41.1	523.6	2	18:23:55	37.1	706831.1	5712064.8
10230	A	N	42.3	539.1	2	19:38:50	42.5	705199.4	5713924.5
10230	B	N	46.2	587.8	2	19:40:32	45.5	706785.7	5712038.2
10240	A	N	41.6	529.3	2	18:25:24	47.5	706746.1	5712016.5
10240	B	K	43.5	553.6	2	18:26:38	41.6	705407.7	5713596.3
10240	C	K	42.8	544.6	2	18:26:48	43.7	705225.2	5713819.0
10250	A	N	43.1	548.3	2	19:42:01	49.1	706714.8	5711967.7
10250	B	K	45.5	578.8	2	19:43:21	36.6	705375.8	5713573.4
10250	C	K	47.1	599.6	2	19:43:32	41.3	705182.4	5713807.5
10260	A	K	54.8	697.5	2	18:29:03	45.3	705145.4	5713757.8
10260	B	K	56.1	714.7	2	18:29:17	42.8	705336.5	5713525.4
10260	C	N	8.8	112.1	2	18:29:56	49.9	705931.6	5712814.9
10260	D	K	44.6	567.7	2	18:30:36	45.8	706527.3	5712107.2
10260	E	N	42.3	538.2	2	18:30:46	46.5	706679.3	5711931.2
10270	A	K	58.3	742.4	2	19:45:49	46.1	705110.8	5713721.5
10270	B	K	50.8	646.6	2	19:46:01	47.3	705300.7	5713479.5
10270	C	K	11.9	151.6	2	19:46:39	45.5	705878.7	5712809.1
10270	D	K	42.6	541.8	2	19:47:16	47.9	706488.7	5712076.2
10270	E	N	50.6	643.9	2	19:47:25	55.2	706648.9	5711894.0
10280	A	N	45.1	574.2	2	18:32:14	42.0	706611.6	5711868.7
10280	B	K	41.9	533.7	2	18:32:23	42.7	706454.7	5712048.9
10280	C	K	18.1	230.2	2	18:32:57	38.7	705829.0	5712784.5
10280	D	K	47.8	608.8	2	18:33:27	40.2	705260.0	5713454.1
10280	E	K	48.9	622.6	2	18:33:37	41.2	705067.3	5713691.1
10290	A	N	48.1	612.4	2	19:48:58	44.1	706583.1	5711819.5
10290	B	K	47.6	605.4	2	19:49:08	48.1	706425.6	5712010.1
10290	C	K	49.0	623.6	2	19:50:19	44.5	705238.2	5713402.9
10290	D	K	48.0	611.3	2	19:50:31	47.0	705041.1	5713650.4
10300	A	K	53.1	676.1	2	18:36:07	46.0	705022.6	5713597.3

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10300	B	K	45.6	581.0	2	18:36:19	46.0	705212.6	5713364.4
10300	C	K	46.0	585.6	2	18:37:36	37.3	706398.3	5711966.1
10300	D	N	49.1	624.8	2	18:37:47	38.5	706549.7	5711784.1
10310	A	K	52.6	669.2	2	19:53:08	50.2	704991.5	5713545.7
10310	B	K	47.8	608.2	2	19:53:19	51.0	705172.1	5713345.5
10310	C	K	41.4	527.1	2	19:54:32	41.3	706352.6	5711933.7
10310	D	N	41.9	533.5	2	19:54:41	47.9	706507.4	5711751.4
10320	A	N	38.0	483.3	2	18:39:23	41.1	706465.3	5711718.6
10320	B	K	42.9	546.8	2	18:39:31	42.7	706323.2	5711880.8
10320	C	K	38.3	487.4	2	18:39:39	43.0	706173.7	5712065.4
10320	D	K	46.0	585.9	2	18:40:44	40.7	705064.2	5713399.4
10320	E	K	56.7	721.7	2	18:40:50	41.2	704949.8	5713525.7
10330	A	N	41.8	531.5	2	19:56:10	45.4	706432.5	5711681.9
10330	B	K	44.8	570.3	2	19:56:19	45.7	706298.1	5711849.8
10330	C	K	46.7	594.2	2	19:56:28	39.6	706134.3	5712049.9
10330	D	K	51.6	657.5	2	19:57:34	38.4	705022.1	5713366.1
10340	A	N	49.9	635.5	2	18:43:35	50.2	704899.2	5713441.9
10340	B	K	55.3	704.5	2	18:43:44	50.4	705035.9	5713272.0
10340	C	K	48.8	620.9	2	18:44:56	39.0	706105.5	5711996.2
10340	D	N	38.5	490.3	2	18:45:16	37.8	706398.2	5711648.3
10350	A	N	49.9	635.4	2	20:00:26	41.4	704869.5	5713410.3
10350	B	K	50.4	641.8	2	20:00:36	39.2	705013.0	5713234.3
10350	C	K	48.8	621.3	2	20:01:43	41.1	706076.4	5711957.8
10350	D	K	42.3	538.6	2	20:02:00	42.5	706328.2	5711651.0
10350	E	N	40.3	512.6	2	20:02:08	45.3	706450.5	5711498.6
10360	A	N	44.0	559.6	2	18:46:54	48.9	706408.8	5711473.6
10360	B	K	46.6	593.8	2	18:47:05	43.3	706235.3	5711694.5
10360	C	K	46.5	592.1	2	18:48:22	36.4	704952.4	5713194.8
10360	D	N	47.8	608.7	2	18:48:28	37.5	704841.3	5713337.6
10370	A	N	43.2	549.6	2	20:03:29	47.6	706374.4	5711450.0
10370	B	K	47.0	598.3	2	20:03:39	45.5	706201.6	5711636.7
10370	C	K	42.2	537.6	2	20:04:52	36.8	704921.1	5713172.6
10370	D	N	34.8	442.4	2	20:05:53	50.2	703755.7	5714560.1
10380	A	N	39.1	497.5	2	18:50:17	54.0	703722.7	5714506.9
10380	B	K	50.9	647.5	2	18:51:33	39.1	704802.0	5713229.5
10380	C	N	43.3	551.7	2	18:51:42	35.6	704935.1	5713070.9
10380	D	K	40.2	511.2	2	18:53:04	48.8	706131.1	5711626.8
10380	E	N	30.1	383.1	2	18:53:17	47.6	706327.5	5711408.9
10390	A	N	38.3	487.0	2	20:06:48	39.8	703697.2	5714477.1

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10390	B	K	52.4	666.5	2	20:08:02	39.7	704785.0	5713174.5
10390	C	N	45.6	581.1	2	20:08:10	39.1	704907.9	5713029.4
10390	D	K	48.4	616.5	2	20:09:26	44.8	706108.8	5711592.2
10390	E	N	41.6	529.9	2	20:09:38	48.8	706292.3	5711380.0
10400	A	N	43.5	553.3	2	18:54:48	44.2	706255.8	5711341.8
10400	B	N	37.0	471.4	2	18:54:59	40.0	706070.5	5711557.1
10400	C	N	39.8	506.4	2	18:56:10	45.6	704877.2	5712984.3
10400	D	K	49.1	625.3	2	18:56:18	41.6	704738.7	5713152.1
10400	E	N	43.9	558.4	2	18:57:21	46.4	703640.8	5714450.0
10410	A	K	32.9	419.3	2	20:11:10	48.8	706147.1	5711389.4
10410	B	N	44.6	567.9	2	20:11:15	43.8	706068.5	5711488.4
10410	C	N	48.4	616.0	2	20:12:26	39.2	704848.3	5712937.2
10410	D	K	57.7	734.8	2	20:12:34	41.1	704709.9	5713106.8
10410	E	N	46.4	590.3	2	20:13:38	41.6	703606.5	5714428.3
10420	A	N	39.8	507.0	2	18:58:28	41.4	703576.9	5714390.5
10420	B	N	48.2	614.3	2	18:59:41	33.8	704651.9	5713090.9
10420	C	N	38.8	493.9	2	18:59:53	40.9	704826.4	5712882.4
10420	D	K	35.7	454.4	2	19:01:18	54.8	706081.3	5711383.9
10430	A	N	45.6	580.4	2	20:14:49	46.6	703530.5	5714359.8
10430	B	K	41.0	522.6	2	20:17:30	47.2	706060.1	5711341.1
10440	A	K	35.7	454.0	2	19:02:58	52.5	706022.6	5711312.8
10440	B	N	40.7	518.0	2	19:05:25	44.8	703481.9	5714338.8
10450	A	K	41.9	533.3	2	20:19:06	49.6	705989.8	5711281.5
10450	B	N	49.8	634.3	2	20:21:40	48.4	703423.9	5714319.2
10460	A	N	36.8	468.3	2	19:06:42	34.5	703405.6	5714278.2
10460	B	K	41.2	525.0	2	19:09:35	50.4	705957.5	5711232.9
10470	A	N	38.1	484.8	2	20:22:54	48.4	703231.6	5714414.7
10470	B	N	45.0	572.8	2	20:23:05	43.1	703377.3	5714234.3
10470	C	K	33.6	428.0	2	20:25:46	49.1	705927.7	5711195.2
10480	A	K	33.3	423.8	2	19:11:15	54.2	705878.2	5711161.1
10480	B	N	45.5	578.9	2	19:13:50	42.6	703165.1	5714389.7
10490	A	K	34.7	441.6	2	20:27:28	51.0	705818.6	5711157.4
10500	A	K	32.9	418.5	2	19:18:04	49.9	705761.7	5711136.0
10510	A	N	40.0	509.4	2	20:35:51	59.0	705766.4	5711066.6
10520	A	N	33.2	422.2	2	19:19:47	46.1	705742.6	5711009.6
10530	A	N	31.8	404.6	2	20:37:37	42.6	705702.0	5710984.8
10540	A	N	9.8	124.4	2	19:23:47	40.5	703189.1	5713911.5
10540	B	N	24.3	310.0	2	19:26:22	50.7	705665.8	5710962.2
10550	A	N	25.7	327.4	2	20:41:49	37.5	703129.5	5713886.8

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10550	B	K	32.6	414.5	2	20:44:02	38.8	705167.7	5711484.2
10550	C	N	30.3	385.8	2	20:44:32	36.9	705626.6	5710919.9
10560	A	N	39.7	505.2	2	19:28:04	40.6	705592.2	5710877.1
10560	B	K	49.3	627.8	2	19:28:33	44.4	705116.9	5711464.5
10560	C	N	41.0	521.8	2	19:30:24	47.5	703093.2	5713863.3
10570	A	N	40.1	511.1	2	20:46:21	46.8	705502.8	5710910.5
10570	B	K	43.7	556.3	2	20:46:47	44.2	705084.9	5711430.9
10570	C	N	25.6	326.1	2	20:47:41	34.1	704210.4	5712463.9
10570	D	N	38.2	486.2	2	20:48:47	41.7	703065.1	5713823.2
10580	A	N	41.5	527.8	3	13:18:50	38.3	703025.5	5713772.9
10580	B	N	38.0	483.2	3	13:20:16	45.8	704157.4	5712432.2
10580	C	K	39.4	502.1	3	13:21:21	43.9	705039.4	5711393.4
10580	D	N	34.4	438.4	3	13:21:44	40.5	705341.0	5711031.1
10580	E	N	45.2	575.8	3	13:21:55	39.5	705471.5	5710871.7
10590	A	N	42.1	535.5	3	14:19:06	49.2	702999.7	5713736.6
10590	B	N	17.7	225.3	3	14:20:35	42.6	704133.4	5712404.7
10590	C	K	40.0	508.8	3	14:21:39	38.4	704990.6	5711375.6
10590	D	N	31.6	401.7	3	14:22:04	47.2	705300.4	5710997.1
10590	E	N	31.7	403.0	3	14:22:15	44.1	705435.8	5710842.2
10600	A	N	50.8	646.2	3	13:23:51	47.1	705382.3	5710821.3
10600	B	N	38.9	494.7	3	13:23:59	53.7	705252.7	5710982.8
10600	C	K	26.1	332.7	3	13:24:17	46.5	704925.9	5711370.9
10600	D	N	35.5	451.8	3	13:26:06	38.5	702967.4	5713715.8
10610	A	N	33.3	424.2	3	14:24:11	36.9	705343.3	5710793.2
10610	B	K	8.2	104.8	3	14:24:36	47.5	704890.8	5711349.1
10610	C	N	22.4	285.3	3	14:26:24	51.5	702921.9	5713675.9
10620	A	N	28.5	362.4	3	13:27:48	42.3	702770.2	5713783.6
10620	B	N	24.5	311.7	3	13:27:58	40.1	702906.6	5713615.9
10620	C	N	37.6	478.1	3	13:31:07	43.6	705297.9	5710764.0
10630	A	N	25.8	328.9	3	14:28:04	43.0	702740.7	5713736.9
10630	B	N	22.8	290.2	3	14:28:14	42.5	702891.4	5713563.6
10630	C	K	43.5	553.9	3	14:30:54	58.8	705207.8	5710802.4
10640	A	K	42.4	539.8	3	13:33:09	51.9	705161.9	5710782.6
10640	B	N	10.4	132.3	3	13:35:21	44.8	702852.1	5713532.8
10640	C	N	14.7	187.5	3	13:35:29	49.7	702716.2	5713697.8
10650	A	K	44.7	568.6	3	14:33:05	48.2	705120.9	5710753.1
10650	B	K	49.7	632.2	3	14:34:22	43.5	703760.0	5712365.1
10650	C	N	24.2	307.6	3	14:35:12	41.0	702830.3	5713484.2
10650	D	N	26.5	337.3	3	14:35:20	41.8	702681.8	5713652.8

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10660	A	N	30.0	381.3	3	13:37:05	49.6	702654.9	5713590.5
10660	B	N	25.5	324.4	3	13:37:14	47.6	702788.2	5713435.6
10660	C	N	43.3	551.6	3	13:38:26	43.6	703771.4	5712270.7
10660	D	K	29.1	370.1	3	13:40:08	41.5	705079.4	5710712.5
10670	A	N	28.0	356.7	3	14:36:59	42.9	702635.2	5713552.5
10670	B	N	27.1	345.2	3	14:37:08	40.8	702780.4	5713386.7
10670	C	N	39.1	497.8	3	14:38:12	36.5	703745.6	5712253.9
10670	D	K	26.5	336.9	3	14:39:28	50.5	704844.3	5710919.6
10670	E	N	28.2	358.7	3	14:39:46	40.3	705097.1	5710616.7
10680	A	N	39.0	496.6	3	13:42:14	41.9	705058.9	5710593.7
10680	B	K	36.5	465.2	3	13:42:29	48.8	704795.8	5710905.6
10680	C	N	37.5	477.2	3	13:43:33	44.1	703677.9	5712234.0
10680	D	N	13.0	165.4	3	13:44:27	39.5	702736.5	5713354.9
10680	E	N	27.7	352.5	3	13:44:34	39.8	702610.4	5713503.9
10690	A	N	26.7	339.7	3	14:41:43	46.2	705028.1	5710553.6
10690	B	K	15.6	198.3	3	14:42:04	52.3	704660.3	5711000.4
10690	C	N	39.6	503.9	3	14:43:04	41.1	703644.7	5712206.8
10690	D	N	14.0	178.6	3	14:44:04	42.9	702573.3	5713480.0
10700	A	N	25.7	326.9	3	13:46:17	45.0	702551.8	5713406.0
10700	B	N	36.6	466.5	3	13:47:32	44.4	703626.3	5712147.0
10700	C	K	26.7	339.3	3	13:48:46	40.7	704618.5	5710963.0
10700	D	N	25.6	325.5	3	13:49:13	44.2	704969.4	5710542.0
10710	A	N	13.6	173.4	3	14:45:44	49.6	702521.4	5713373.2
10710	B	N	21.7	275.7	3	14:46:59	36.8	703576.2	5712124.3
10710	C	N	15.9	202.5	3	14:47:09	43.0	703721.1	5711948.9
10710	D	K	34.3	436.6	3	14:48:09	48.2	704580.8	5710935.1
10710	E	N	28.1	358.0	3	14:48:35	42.0	704930.3	5710506.4
10720	A	K	35.8	455.5	3	13:51:35	47.0	704536.2	5710900.5
10720	B	N	39.1	497.7	3	13:52:25	37.2	703692.5	5711907.1
10720	C	N	13.8	175.9	3	13:53:35	39.4	702497.2	5713327.3
10730	A	N	39.4	501.7	3	14:51:03	42.3	704475.3	5710908.7
10730	B	N	44.5	566.0	3	14:51:50	40.1	703666.9	5711863.7
10730	C	N	10.8	137.0	3	14:52:59	45.8	702455.4	5713294.9
10740	A	N	13.4	170.7	3	13:55:26	40.0	702434.5	5713261.9
10740	B	N	11.9	151.3	3	13:56:15	38.1	703133.2	5712429.3
10740	C	N	18.5	235.7	3	13:56:30	40.3	703329.5	5712193.0
10740	D	N	33.6	428.3	3	13:56:53	41.2	703644.2	5711819.9
10740	E	N	11.7	149.3	3	13:57:54	42.1	704446.8	5710857.5
10750	A	N	32.7	416.5	3	14:54:46	52.7	702404.8	5713210.8

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10750	B	N	21.7	276.7	3	14:55:36	43.1	703110.0	5712373.2
10750	C	N	30.4	387.5	3	14:55:51	48.1	703303.3	5712152.1
10750	D	N	36.5	464.8	3	14:56:15	48.6	703608.5	5711784.7
10750	E	N	10.3	130.7	3	14:57:13	63.2	704408.2	5710818.5
10760	A	N	10.8	137.0	3	14:00:50	47.2	704368.5	5710791.9
10760	B	N	29.1	370.5	3	14:01:37	41.6	703580.7	5711734.0
10760	C	N	38.5	490.1	3	14:01:57	47.3	703262.1	5712119.3
10760	D	N	12.2	155.6	3	14:02:07	45.2	703085.6	5712330.8
10760	E	N	38.2	486.2	3	14:02:48	36.3	702360.8	5713182.4
10770	A	N	26.9	342.8	3	15:00:02	36.6	704510.8	5710526.7
10770	B	N	29.2	371.2	3	15:00:14	42.7	704327.9	5710755.9
10770	C	N	12.8	163.0	3	15:01:00	38.4	703575.7	5711666.0
10770	D	N	12.7	161.6	3	15:01:31	40.8	703061.4	5712287.3
10770	E	N	11.5	146.8	3	15:02:13	41.2	702333.5	5713145.5
10780	A	N	37.4	475.7	3	14:04:38	41.7	702289.1	5713106.9
10780	B	N	42.5	541.1	3	14:05:31	44.9	703034.4	5712234.6
10780	C	N	26.6	338.6	3	14:06:11	40.7	703555.3	5711604.4
10780	D	N	30.6	390.1	3	14:07:06	40.3	704301.7	5710710.9
10780	E	N	30.6	389.6	3	14:07:20	36.4	704493.0	5710485.7
10790	A	N	31.2	397.1	3	15:04:02	47.8	702264.2	5713065.0
10790	B	N	23.2	295.2	3	15:04:54	45.7	703020.0	5712172.8
10790	C	N	26.1	332.6	3	15:05:30	38.7	703534.0	5711551.4
10790	D	N	13.5	172.2	3	15:06:22	41.2	704250.9	5710689.6
10790	E	N	30.0	381.7	3	15:06:34	37.4	704428.5	5710479.5
10800	A	N	28.3	360.0	3	14:09:51	52.6	704630.5	5710176.8
10800	B	N	37.5	477.8	3	14:10:05	52.8	704366.3	5710469.2
10800	C	N	44.5	566.6	3	14:10:55	42.8	703519.1	5711499.8
10800	D	N	21.5	274.0	3	14:11:25	39.3	702981.2	5712141.5
10800	E	N	41.2	524.4	3	14:12:07	39.6	702217.6	5713040.1
10810	A	N	14.1	179.9	3	15:09:06	46.4	704611.1	5710133.5
10810	B	N	39.6	504.4	3	15:09:21	33.6	704328.7	5710449.3
10810	C	N	34.7	441.9	3	15:10:09	36.0	703517.9	5711440.3
10810	D	N	34.7	441.9	3	15:10:41	36.0	702986.3	5712056.1
10810	E	N	34.7	441.9	3	15:10:42	36.1	702962.1	5712084.6
10810	F	N	43.7	556.4	3	15:11:27	45.3	702196.2	5713000.2
10820	A	N	42.8	544.4	4	16:18:08	37.3	702161.8	5712943.2
10820	B	N	20.8	264.7	4	16:19:10	41.7	702913.6	5712048.3
10820	C	N	31.5	401.4	4	16:19:58	46.3	703489.6	5711383.7
10820	D	N	28.7	365.1	4	16:21:02	37.8	704302.4	5710417.4

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10820	E	N	43.3	551.1	4	16:21:08	42.3	704390.5	5710313.6
10820	F	N	35.8	455.7	4	16:21:22	48.4	704578.7	5710100.3
10830	A	N	40.5	516.1	4	16:35:33	38.3	704541.7	5710041.9
10830	B	N	39.2	499.0	4	16:35:42	45.5	704411.0	5710205.0
10830	C	N	31.4	400.1	4	16:35:51	40.0	704244.7	5710397.1
10830	D	N	36.4	463.6	4	16:36:38	41.6	703475.0	5711313.9
10830	E	N	39.3	500.1	4	16:37:56	47.4	702131.0	5712915.6
10840	A	N	41.5	528.0	4	16:23:44	50.5	704515.1	5710012.1
10840	B	N	32.2	410.5	4	16:23:53	57.8	704371.4	5710177.5
10840	C	N	22.4	285.2	4	16:24:01	55.6	704213.6	5710345.6
10840	D	N	13.2	168.5	4	16:24:46	39.6	703460.5	5711240.1
10840	E	N	33.2	423.0	4	16:26:09	46.0	702107.2	5712860.9
10840	F	N	34.7	441.9	4	16:26:18	43.0	701947.1	5713048.4
10850	A	N	18.7	237.6	4	16:39:47	39.6	701919.1	5713004.8
10850	B	N	29.4	374.0	4	16:39:59	41.3	702072.2	5712820.7
10850	C	N	34.8	442.4	4	16:41:49	49.7	703446.9	5711189.2
10850	D	N	32.4	412.4	4	16:42:48	45.2	704204.9	5710313.3
10850	E	N	38.4	488.7	4	16:42:59	44.2	704340.4	5710154.1
10850	F	N	43.1	549.1	4	16:43:10	40.8	704477.5	5709984.0
10860	A	N	33.1	421.9	4	16:28:04	46.4	701887.8	5712974.1
10860	B	N	11.8	150.4	4	16:28:17	44.2	702042.0	5712790.8
10860	C	K	28.4	361.6	4	16:30:02	53.3	703362.9	5711221.1
10860	D	N	22.4	284.7	4	16:31:03	58.5	704162.3	5710291.1
10860	E	N	40.6	516.9	4	16:31:15	47.8	704317.2	5710112.0
10860	F	N	45.0	572.3	4	16:31:25	42.0	704438.5	5709951.5
10870	A	N	41.9	533.7	4	16:45:34	48.7	704381.4	5709919.0
10870	B	N	39.2	499.4	4	16:45:41	52.2	704259.3	5710077.6
10870	C	N	9.3	118.5	4	16:47:51	50.2	702001.4	5712766.1
10870	D	N	22.0	280.1	4	16:47:59	47.0	701852.0	5712945.2
10880	A	N	33.0	420.5	5	19:10:36	52.9	701812.4	5712903.7
10880	B	N	10.0	127.2	5	19:10:47	42.3	701976.2	5712702.4
10880	C	N	33.2	423.2	5	19:13:08	35.6	704227.7	5710023.6
10880	D	K	37.3	474.4	5	19:13:15	37.0	704337.7	5709892.2
10880	E	N	15.6	198.6	5	19:13:29	39.2	704544.3	5709642.1
10890	A	N	36.8	468.9	5	20:21:05	40.9	701773.5	5712857.7
10890	B	N	16.8	214.4	5	20:21:15	37.7	701939.1	5712674.5
10890	C	N	18.2	231.3	5	20:23:11	41.0	703669.1	5710618.6
10890	D	N	41.3	525.3	5	20:23:41	38.2	704188.1	5709996.2
10890	E	N	41.9	533.5	5	20:23:49	43.3	704320.4	5709837.6

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10890	F	N	37.0	470.5	5	20:24:02	39.7	704516.2	5709601.7
10900	A	N	41.5	527.9	5	19:15:14	35.6	704485.2	5709577.6
10900	B	N	39.6	504.3	5	19:15:28	32.8	704285.2	5709816.8
10900	C	N	8.3	105.9	5	19:15:42	43.2	704066.8	5710058.4
10900	D	N	18.9	240.6	5	19:16:09	39.8	703619.0	5710594.6
10900	E	N	15.7	199.8	5	19:17:22	41.5	702467.3	5711945.9
10900	F	N	30.0	381.9	5	19:18:07	43.8	701750.7	5712814.8
10910	A	N	36.4	463.3	5	20:25:39	43.1	704461.6	5709526.5
10910	B	K	38.7	493.1	5	20:25:53	33.2	704241.8	5709778.5
10910	C	N	67.7	861.6	5	20:26:07	38.8	704021.6	5710041.3
10910	D	N	19.8	251.6	5	20:26:35	44.1	703583.3	5710562.2
10910	E	N	32.3	411.2	5	20:27:50	42.7	702443.5	5711917.5
10910	F	N	30.0	381.5	5	20:28:33	44.2	701703.4	5712812.3
10920	A	N	22.5	285.9	5	19:19:45	41.3	701683.9	5712760.2
10920	B	N	17.0	217.0	5	19:20:31	56.7	702419.9	5711881.0
10920	C	N	29.5	375.7	5	19:21:43	42.6	703563.3	5710513.1
10920	D	K	37.9	481.9	5	19:22:20	38.5	704199.0	5709735.3
10920	E	N	21.4	272.8	5	19:22:35	47.2	704440.1	5709457.8
10930	A	N	24.7	315.1	5	20:30:14	40.2	701654.2	5712717.0
10930	B	N	11.2	142.2	5	20:31:02	49.5	702384.4	5711835.5
10930	C	N	34.2	436.0	5	20:32:52	34.2	704194.5	5709668.2
10930	D	N	30.0	382.3	5	20:33:05	41.8	704408.0	5709419.7
10940	A	N	42.6	542.4	5	19:24:17	43.8	704370.4	5709397.1
10940	B	N	44.0	559.7	5	19:24:31	38.6	704141.0	5709653.0
10940	C	N	52.9	674.0	5	19:24:37	44.6	704030.9	5709778.0
10940	D	K	52.2	664.7	5	19:25:11	45.2	703499.0	5710430.4
10940	E	K	45.3	576.3	5	19:26:05	45.2	702683.1	5711394.1
10940	F	N	18.5	235.8	5	19:26:30	40.0	702308.4	5711848.8
10940	G	K	49.7	633.1	5	19:27:01	39.8	701829.6	5712418.6
10940	H	N	32.5	413.6	5	19:27:14	40.2	701628.8	5712654.7
10950	A	N	42.0	534.7	5	20:34:42	38.2	704340.9	5709354.6
10950	B	N	35.8	455.2	5	20:34:57	33.4	704116.8	5709624.0
10950	C	N	38.4	489.3	5	20:35:04	40.9	704009.7	5709748.6
10950	D	K	28.9	367.5	5	20:35:41	44.0	703463.2	5710401.4
10950	E	N	44.7	568.9	5	20:36:32	46.0	702616.8	5711391.2
10950	F	N	12.6	160.4	5	20:36:53	41.6	702253.9	5711826.0
10950	G	N	29.6	376.7	5	20:37:32	42.9	701593.1	5712618.0
10960	A	N	37.8	480.6	5	19:28:57	43.8	701561.6	5712578.9
10960	B	N	44.1	561.0	5	19:30:06	42.1	702600.0	5711322.2

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
10960	C	K	32.3	411.0	5	19:31:00	44.5	703432.9	5710348.2
10960	D	N	53.2	676.9	5	19:31:34	46.4	703963.7	5709713.5
10960	E	N	36.2	461.0	5	19:31:41	35.3	704072.3	5709585.9
10960	F	N	55.4	705.6	5	19:31:57	41.7	704305.8	5709306.1
10970	A	N	25.6	326.2	5	20:39:15	45.7	701535.5	5712538.1
10970	B	K	47.7	607.3	5	20:40:24	45.6	702615.0	5711248.2
10970	C	K	35.7	454.9	5	20:41:14	48.7	703392.3	5710316.4
10970	D	N	34.7	441.4	5	20:41:46	46.6	703925.9	5709687.0
10970	E	N	50.1	637.9	5	20:41:52	43.1	704037.8	5709556.1
10970	F	K	54.5	694.4	5	20:42:07	41.2	704293.4	5709251.8
10980	A	K	49.8	634.5	5	19:33:47	35.6	704264.4	5709219.4
10980	B	N	43.8	557.4	5	19:34:02	32.7	704044.7	5709481.6
10980	C	N	38.4	488.7	5	19:34:12	41.1	703898.6	5709657.8
10980	D	K	29.3	373.2	5	19:34:46	42.0	703382.1	5710257.2
10980	E	N	31.2	397.5	5	19:35:30	39.5	702740.1	5711022.0
10980	F	K	42.7	543.3	5	19:35:42	42.8	702565.0	5711225.5
10980	G	K	8.9	113.3	5	19:36:33	35.4	701759.3	5712190.3
10980	H	N	34.1	434.6	5	19:36:50	36.5	701504.1	5712500.8
10990	A	K	57.8	735.6	5	20:43:42	37.8	704239.5	5709154.8
10990	B	N	45.8	583.4	5	20:43:58	36.5	704012.9	5709430.9
10990	C	N	34.8	443.2	5	20:44:08	39.0	703865.3	5709602.2
10990	D	K	38.6	491.2	5	20:44:40	37.5	703380.6	5710181.3
10990	E	N	42.7	543.5	5	20:45:23	37.9	702698.6	5711005.3
10990	F	K	50.8	647.3	5	20:45:33	39.9	702535.4	5711202.2
10990	G	N	39.2	499.1	5	20:45:56	39.1	702165.8	5711640.3
10990	H	K	9.3	118.9	5	20:46:23	38.5	701723.2	5712159.4
10990	I	N	36.3	462.7	5	20:46:38	38.6	701470.7	5712454.7
11000	A	N	36.8	468.9	5	19:38:31	45.6	701447.2	5712421.7
11000	B	N	34.8	443.2	5	19:39:16	47.2	702120.8	5711605.6
11000	C	K	52.6	669.6	5	19:39:40	37.7	702498.1	5711150.1
11000	D	N	37.0	470.6	5	19:39:49	36.5	702644.6	5710976.6
11000	E	N	30.3	385.8	5	19:40:31	41.5	703316.6	5710172.7
11000	F	N	29.7	378.1	5	19:41:02	51.3	703839.4	5709552.7
11000	G	N	48.3	615.4	5	19:41:11	40.5	703981.5	5709390.0
11000	H	K	55.0	700.3	5	19:41:26	42.2	704218.8	5709104.3
11010	A	N	36.7	467.6	5	20:48:30	46.8	701426.1	5712363.4
11010	B	K	50.3	640.4	5	20:48:49	44.3	701708.6	5712004.1
11010	C	N	35.6	452.6	5	20:49:13	43.1	702073.1	5711576.9
11010	D	K	50.6	643.8	5	20:49:38	39.7	702468.6	5711111.6

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11010	E	N	43.4	552.0	5	20:49:48	41.5	702612.0	5710950.9
11010	F	N	35.2	448.0	5	20:50:30	44.2	703278.6	5710145.2
11010	G	N	40.1	510.2	5	20:50:53	52.1	703677.7	5709669.8
11010	H	N	45.6	581.1	5	20:51:00	48.4	703788.7	5709527.3
11010	I	N	48.0	610.8	5	20:51:10	42.5	703951.4	5709337.2
11010	J	K	54.9	699.0	5	20:51:24	39.8	704184.2	5709066.0
11020	A	K	52.9	674.0	5	19:43:06	44.0	704141.4	5709038.5
11020	B	N	46.7	594.0	5	19:43:21	41.5	703923.4	5709311.3
11020	C	N	35.7	454.6	5	19:43:32	46.1	703761.0	5709505.2
11020	D	N	33.9	431.0	5	19:43:40	41.6	703636.0	5709653.6
11020	E	N	31.2	397.1	5	19:44:03	48.2	703308.3	5710045.5
11020	F	N	42.0	534.8	5	19:44:53	39.4	702552.2	5710928.2
11020	G	K	41.5	528.0	5	19:45:49	44.2	701681.2	5711957.8
11020	H	N	34.8	443.2	5	19:46:08	42.7	701386.7	5712326.1
11030	A	K	54.8	697.6	5	20:52:47	41.1	704112.2	5708980.8
11030	B	N	47.4	604.0	5	20:53:02	31.9	703884.2	5709264.7
11030	C	N	40.5	515.0	5	20:53:13	46.3	703724.0	5709460.9
11030	D	N	42.5	540.8	5	20:53:22	38.3	703584.6	5709632.4
11030	E	N	42.5	540.8	5	20:53:43	39.6	703268.9	5710004.0
11030	F	K	46.6	593.5	5	20:54:29	41.5	702504.7	5710912.3
11030	G	K	39.7	505.0	5	20:55:16	41.7	701654.7	5711929.2
11030	H	N	31.8	405.3	5	20:55:36	44.9	701352.4	5712292.5
11040	A	N	32.6	415.6	5	19:52:20	40.7	701325.4	5712248.5
11040	B	K	41.9	532.8	5	19:52:40	42.9	701620.8	5711893.6
11040	C	N	47.6	606.0	5	19:53:24	41.1	702241.3	5711149.3
11040	D	K	43.2	549.7	5	19:53:41	41.2	702490.6	5710847.8
11040	E	N	28.2	359.6	5	19:54:32	41.8	703238.1	5709958.1
11040	F	N	38.4	489.5	5	19:54:52	55.0	703544.0	5709594.7
11040	G	N	48.2	613.2	5	19:55:02	46.9	703683.8	5709427.6
11040	H	N	45.6	581.0	5	19:55:14	40.1	703853.8	5709225.2
11040	I	K	46.3	589.6	5	19:55:30	48.2	704087.9	5708941.7
11050	A	N	20.9	266.0	5	20:57:24	40.5	701301.5	5712202.2
11050	B	N	42.1	536.3	5	20:57:43	47.4	701593.9	5711845.8
11050	C	N	16.4	208.2	5	20:58:09	42.5	702016.5	5711328.6
11050	D	N	67.0	852.8	5	20:58:20	41.0	702200.7	5711118.9
11050	E	K	44.1	561.3	5	20:58:36	44.4	702463.3	5710824.4
11050	F	N	26.0	330.7	5	20:59:15	48.9	703073.3	5710065.6
11050	G	N	42.3	539.1	5	20:59:41	44.7	703514.0	5709546.4
11050	H	N	40.9	520.5	5	20:59:49	46.8	703651.1	5709386.7

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11050	I	N	45.9	583.8	5	20:59:59	41.8	703824.4	5709182.5
11050	J	K	43.7	556.0	5	21:00:14	48.6	704048.7	5708913.9
11060	A	K	44.7	569.1	5	19:57:03	41.1	703997.4	5708888.4
11060	B	N	49.3	628.2	5	19:57:18	34.4	703780.2	5709159.2
11060	C	N	42.1	536.4	5	19:57:29	38.8	703612.1	5709356.9
11060	D	N	41.9	533.9	5	19:57:39	35.5	703465.9	5709529.4
11060	E	K	9.8	124.5	5	19:57:54	38.3	703221.8	5709825.1
11060	F	N	18.7	237.9	5	19:58:06	50.9	703044.6	5710048.4
11060	G	K	43.0	547.6	5	19:58:47	45.7	702395.7	5710810.1
11060	H	N	39.2	498.9	5	19:59:03	41.1	702154.4	5711094.2
11060	I	N	25.2	320.5	5	19:59:14	42.2	701979.8	5711301.6
11060	J	N	42.7	543.6	5	19:59:44	43.9	701488.9	5711885.1
11060	K	N	11.6	148.0	5	19:59:58	42.5	701260.3	5712157.3
11070	A	K	47.5	605.0	5	21:01:32	37.5	704005.4	5708803.4
11070	B	N	43.4	552.2	5	21:01:50	42.3	703748.4	5709127.6
11070	C	N	37.8	481.4	5	21:02:00	46.4	703579.5	5709319.4
11070	D	N	42.1	536.4	5	21:02:09	37.0	703434.1	5709495.0
11070	E	N	29.1	370.0	5	21:02:22	41.8	703219.8	5709755.0
11070	F	N	11.2	143.0	5	21:02:36	48.8	703017.4	5709992.3
11070	G	K	42.1	536.5	5	21:03:19	42.6	702349.8	5710790.1
11070	H	N	47.2	600.6	5	21:03:34	45.2	702113.5	5711062.9
11070	I	N	31.6	402.4	5	21:03:45	48.3	701930.3	5711276.8
11070	J	N	42.2	537.3	5	21:04:11	41.9	701519.7	5711788.3
11070	K	N	16.4	208.1	5	21:04:29	42.9	701215.5	5712144.4
11080	A	N	25.8	327.9	5	20:02:06	44.3	701465.1	5711763.7
11080	B	N	15.2	193.9	5	20:02:34	42.5	701895.3	5711247.3
11080	C	N	28.4	361.9	5	20:02:46	46.2	702088.9	5711017.7
11080	D	N	35.0	445.8	5	20:02:59	44.0	702304.1	5710761.7
11080	E	N	12.1	154.2	5	20:03:41	52.8	702991.7	5709944.6
11080	F	N	12.1	154.1	5	20:03:54	43.0	703196.7	5709700.5
11080	G	N	37.0	470.6	5	20:04:06	52.5	703403.1	5709459.4
11080	H	N	33.6	428.2	5	20:04:15	60.2	703546.9	5709283.2
11080	I	K	44.0	560.3	5	20:04:27	41.4	703734.2	5709056.8
11080	J	N	31.1	395.6	5	20:04:46	38.6	704007.6	5708715.8
11090	A	N	26.0	330.9	5	21:06:30	47.8	701427.8	5711754.6
11090	B	N	13.4	170.7	5	21:06:59	44.4	701845.7	5711230.7
11090	C	N	33.0	419.7	5	21:07:12	46.3	702044.6	5710988.7
11090	D	N	34.3	436.5	5	21:07:24	44.6	702246.9	5710750.4
11090	E	N	14.8	188.3	5	21:08:04	49.5	702939.3	5709928.2

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11090	F	N	39.3	499.7	5	21:08:27	55.4	703367.3	5709430.3
11090	G	N	37.0	470.6	5	21:08:37	59.0	703519.2	5709248.8
11090	H	K	46.6	593.4	5	21:08:49	44.0	703682.6	5709023.5
11090	I	N	48.3	615.1	5	21:09:07	43.3	703982.4	5708676.7
11100	A	K	45.0	572.5	5	20:06:26	37.9	703663.0	5709001.4
11100	B	N	38.7	493.1	5	20:06:38	43.3	703477.9	5709222.0
11100	C	N	34.1	434.6	5	20:06:45	39.5	703362.9	5709353.8
11100	D	N	12.3	156.1	5	20:07:14	46.2	702910.8	5709884.5
11100	E	N	30.3	385.5	5	20:07:55	46.5	702275.8	5710645.7
11100	F	N	33.1	421.6	5	20:08:11	40.0	702025.1	5710956.8
11100	G	N	13.1	167.1	5	20:08:26	39.7	701791.4	5711220.7
11100	H	K	28.5	363.2	5	20:08:53	39.2	701361.4	5711739.1
11110	A	K	49.7	632.4	5	21:10:17	39.8	703926.5	5708603.8
11110	B	K	46.9	597.6	5	21:10:36	43.4	703642.6	5708948.6
11110	C	N	33.2	423.0	5	21:10:48	48.9	703461.6	5709169.1
11110	D	N	42.2	537.7	5	21:10:56	39.8	703317.8	5709329.8
11110	E	K	21.6	274.7	5	21:11:11	42.9	703062.2	5709625.5
11110	F	K	18.6	236.6	5	21:11:20	46.2	702930.2	5709787.9
11110	G	N	14.2	180.2	5	21:12:04	41.2	702201.2	5710655.3
11110	H	N	29.9	380.6	5	21:12:18	43.6	701983.7	5710929.3
11110	I	N	9.4	120.2	5	21:12:32	41.3	701738.7	5711218.4
11110	J	N	38.3	487.8	5	21:12:57	36.6	701323.4	5711702.0
11120	A	N	34.9	443.7	5	20:11:20	54.7	701303.8	5711665.5
11120	B	N	31.6	402.0	5	20:12:02	41.7	701936.6	5710893.7
11120	C	K	51.2	652.0	5	20:13:04	41.7	702894.7	5709754.3
11120	D	N	37.2	473.7	5	20:13:25	46.4	703225.4	5709351.0
11120	E	N	39.0	496.3	5	20:13:37	51.6	703412.8	5709122.5
11120	F	K	47.0	598.4	5	20:13:50	42.2	703615.6	5708903.1
11120	G	N	49.6	630.9	5	20:14:12	42.3	703924.5	5708505.9
11130	A	N	36.6	465.8	5	21:15:09	42.8	701253.2	5711646.3
11130	B	N	36.5	465.1	5	21:15:48	46.8	701895.4	5710854.8
11130	C	K	45.9	584.7	5	21:16:44	46.7	702860.4	5709719.1
11130	D	N	46.0	585.8	5	21:17:05	48.0	703191.4	5709316.7
11130	E	N	40.0	508.8	5	21:17:16	52.0	703379.0	5709095.2
11130	F	N	47.8	609.1	5	21:17:26	44.0	703534.5	5708911.2
11130	G	N	38.8	494.4	5	21:17:49	45.5	703926.7	5708430.3
11140	A	N	44.9	571.3	5	20:15:26	36.0	703897.1	5708393.1
11140	B	N	45.2	575.3	5	20:15:53	37.2	703495.2	5708888.8
11140	C	N	28.9	367.3	5	20:16:03	44.0	703337.5	5709074.4

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11140	D	N	35.0	445.6	5	20:16:15	34.4	703143.5	5709307.1
11140	E	N	39.1	497.2	5	20:16:28	34.9	702957.2	5709536.9
11140	F	N	37.9	482.2	5	20:17:44	35.6	701824.5	5710857.1
11140	G	N	42.5	541.6	5	20:18:24	44.0	701213.8	5711591.7
11150	A	N	48.1	612.0	5	21:18:58	45.7	703846.5	5708390.8
11150	B	N	43.2	550.1	5	21:19:23	39.6	703455.6	5708847.5
11150	C	N	36.0	458.0	5	21:19:34	40.6	703295.9	5709040.3
11150	D	N	36.5	464.9	5	21:19:46	33.8	703105.9	5709265.5
11150	E	N	44.4	564.9	5	21:19:59	46.6	702918.0	5709494.2
11150	F	N	29.7	378.0	5	21:21:08	44.4	701783.4	5710832.0
11150	G	N	41.2	524.3	5	21:21:41	50.8	701182.5	5711553.2
11160	A	N	33.5	426.2	5	21:23:55	44.8	701114.8	5711571.6
11160	B	N	31.9	405.7	5	21:24:35	38.1	701725.6	5710820.7
11160	C	N	25.0	318.4	5	21:25:53	41.9	702904.1	5709412.8
11160	D	N	14.5	184.3	5	21:26:03	47.9	703063.7	5709235.5
11160	E	N	23.0	293.0	5	21:26:15	58.3	703250.6	5709010.2
11160	F	N	39.1	497.2	5	21:26:26	44.9	703423.8	5708806.8
11160	G	N	34.4	437.3	5	21:26:52	46.0	703838.4	5708302.6
11170	A	N	40.4	513.8	5	21:28:09	39.4	703797.7	5708282.1
11170	B	N	25.8	328.2	5	21:28:47	55.5	703192.8	5708977.3
11170	C	N	15.0	191.0	5	21:29:00	32.7	703008.7	5709216.8
11170	D	N	17.4	222.1	5	21:29:08	41.9	702874.8	5709384.6
11170	E	N	29.3	373.3	5	21:30:22	43.8	701685.3	5710800.8
11170	F	K	36.9	469.5	5	21:31:02	46.8	701036.5	5711560.6
11180	A	N	39.8	506.4	5	21:33:15	46.7	701029.1	5711502.4
11180	B	N	30.4	386.6	5	21:33:51	45.0	701650.8	5710760.2
11180	C	N	17.8	226.7	5	21:35:08	44.3	702975.0	5709175.2
11180	D	N	32.1	408.8	5	21:35:19	59.1	703166.5	5708951.4
11180	E	K	64.5	821.8	5	21:35:51	43.0	703735.4	5708282.5
11190	A	K	44.8	569.9	5	21:37:05	36.0	703668.4	5708291.4
11190	B	N	47.9	609.5	5	21:37:38	44.8	703126.1	5708896.1
11190	C	N	16.7	212.0	5	21:37:51	37.3	702927.3	5709150.2
11190	D	N	25.3	321.9	5	21:39:13	46.8	701597.1	5710734.4
11190	E	N	42.0	534.1	5	21:39:50	43.0	700983.1	5711474.4
11200	A	N	49.9	635.2	6	13:14:08	45.5	701014.7	5711364.2
11200	B	N	22.0	279.7	6	13:14:39	49.2	701566.7	5710694.9
11200	C	N	19.0	241.5	6	13:15:51	43.5	702891.7	5709109.3
11200	D	N	34.3	436.7	6	13:16:02	56.0	703109.4	5708860.7
11200	E	N	20.2	257.5	6	13:16:29	48.2	703661.9	5708216.8

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11210	A	N	54.8	697.1	6	13:40:06	38.7	703720.1	5708070.5
11210	B	N	42.6	542.5	6	13:40:12	38.2	703637.8	5708157.1
11210	C	N	35.7	454.4	6	13:40:56	44.3	703073.2	5708826.7
11210	D	N	16.0	203.6	6	13:41:14	38.4	702824.7	5709116.9
11210	E	N	14.6	186.3	6	13:42:47	51.1	701491.1	5710698.7
11210	F	N	35.3	449.9	6	13:43:26	40.5	700952.4	5711354.2
11220	A	N	46.5	592.3	6	13:17:50	37.5	703657.1	5708082.4
11220	B	N	48.2	613.8	6	13:18:38	48.1	703047.3	5708784.9
11220	C	N	25.9	329.1	6	13:20:41	48.3	701416.8	5710734.2
11220	D	N	30.4	386.6	6	13:21:19	41.7	700917.0	5711337.2
11230	A	N	35.5	451.5	6	13:45:57	49.2	700883.6	5711307.3
11230	B	N	22.5	286.4	6	13:46:24	49.2	701375.3	5710713.5
11230	C	K	45.7	582.4	6	13:47:55	55.5	703020.4	5708742.6
11230	D	K	54.2	689.9	6	13:48:30	40.5	703688.3	5707946.5
11240	A	N	22.8	290.8	8	17:29:31	54.5	700839.0	5711270.5
11240	B	N	13.9	177.3	8	17:30:00	46.9	701329.5	5710674.7
11240	C	N	35.3	449.1	8	17:31:32	56.5	703010.1	5708679.5
11240	D	K	24.3	308.8	8	17:31:47	44.5	703264.9	5708362.7
11240	E	K	57.5	731.6	8	17:32:09	54.5	703684.9	5707854.9
11250	A	N	42.0	534.8	6	13:49:52	33.9	703621.6	5707860.2
11250	B	K	58.1	739.8	6	13:50:25	40.7	703223.5	5708338.0
11250	C	N	50.2	639.1	6	13:50:46	47.0	702955.5	5708662.5
11250	D	N	40.2	512.3	6	13:52:55	43.2	701281.3	5710662.8
11260	A	K	58.5	744.2	6	13:28:13	42.6	703181.8	5708318.1
11260	B	K	50.0	637.2	6	13:28:31	52.3	702960.0	5708581.7
11260	C	N	11.1	141.7	6	13:30:43	46.6	701299.2	5710554.6
11260	D	N	27.0	343.8	6	13:31:48	38.2	700437.9	5711576.0
11270	A	N	23.3	296.0	6	13:55:56	43.5	700422.3	5711535.0
11270	B	N	12.7	161.5	6	13:56:41	52.4	701229.5	5710562.7
11270	C	K	52.6	669.4	6	13:58:11	55.7	702923.7	5708541.3
11280	A	N	25.3	321.8	6	13:35:04	45.2	700439.4	5711445.4
11280	B	N	15.0	191.5	6	13:35:46	55.0	701160.2	5710547.5
11280	C	N	35.2	448.1	6	13:37:25	57.1	702940.7	5708420.9
11290	A	N	49.8	633.8	6	14:00:29	39.8	702901.4	5708406.7
11290	B	N	29.1	370.4	6	14:00:43	36.2	702728.4	5708617.6
11290	C	N	11.0	139.5	6	14:02:50	49.1	701116.8	5710519.4
11290	D	N	14.6	186.0	6	14:03:45	42.1	700397.2	5711385.4
11300	A	N	48.0	610.6	6	14:51:36	51.1	702864.1	5708359.5
11300	B	N	38.6	491.8	6	14:51:50	44.2	702686.2	5708586.0

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11300	C	K	10.8	137.4	6	14:53:52	40.4	701004.9	5710585.4
11300	D	N	24.5	312.4	6	14:54:39	43.1	700386.7	5711336.1
11310	A	N	28.4	360.9	6	14:12:10	47.6	700339.5	5711340.0
11310	B	N	10.2	129.8	6	14:12:48	50.2	701033.3	5710489.1
11310	C	K	39.4	501.5	6	14:14:08	48.6	702546.7	5708679.1
11310	D	N	40.9	521.2	6	14:14:23	58.2	702847.7	5708321.6
11320	A	N	28.3	360.4	6	14:56:36	49.8	700286.2	5711308.5
11320	B	N	18.2	231.7	6	14:57:10	53.6	700928.9	5710528.6
11320	C	K	35.6	453.6	6	14:58:38	55.8	702533.2	5708638.1
11320	D	N	38.9	495.3	6	14:58:54	54.9	702830.9	5708271.1
11330	A	N	42.8	544.4	6	14:16:15	47.6	702823.5	5708187.4
11330	B	K	36.4	463.9	6	14:16:44	44.0	702444.1	5708652.7
11330	C	N	17.3	219.9	6	14:18:34	44.8	700848.3	5710542.0
11330	D	N	16.1	204.5	6	14:19:16	41.5	700225.9	5711292.2
11340	A	N	43.6	554.7	6	15:00:30	43.5	702826.8	5708103.3
11340	B	K	28.3	360.1	6	15:01:03	41.7	702386.2	5708624.2
11340	C	N	28.9	367.7	6	15:03:01	50.5	700788.7	5710520.6
11340	D	N	14.1	179.6	6	15:03:49	43.2	700168.0	5711268.8
11350	A	N	16.0	203.4	6	14:21:11	45.1	700146.8	5711245.2
11350	B	N	35.6	453.5	6	14:21:42	56.9	700752.7	5710495.0
11350	C	K	30.7	390.3	6	14:23:02	54.9	702341.0	5708615.4
11350	D	K	54.8	698.3	6	14:23:26	59.2	702785.4	5708075.1
11360	A	N	26.8	340.8	6	15:05:34	58.1	700097.8	5711219.8
11360	B	N	12.9	163.7	6	15:05:45	51.7	700292.1	5710979.1
11360	C	N	14.8	188.3	6	15:06:07	59.5	700693.6	5710491.0
11360	D	K	23.3	296.2	6	15:07:29	52.1	702287.1	5708605.8
11360	E	K	43.1	549.2	6	15:07:54	52.3	702763.4	5708017.4
11370	A	K	38.5	489.9	6	14:25:01	51.2	702718.5	5707988.8
11370	B	K	27.3	348.0	6	14:25:38	33.7	702223.6	5708599.4
11370	C	N	20.9	265.8	6	14:28:09	38.0	700199.0	5711007.3
11370	D	N	9.3	118.2	6	14:28:21	40.6	700037.1	5711206.7
11380	A	K	40.1	510.7	6	15:09:01	41.7	702682.4	5707968.7
11380	B	K	30.2	384.0	6	15:09:40	39.0	702171.9	5708557.7
11380	C	N	15.7	200.2	6	15:12:19	39.2	700218.0	5710904.8
11380	D	N	18.7	238.7	6	15:12:38	42.9	699981.6	5711183.1
11390	A	N	12.5	159.2	6	14:30:05	48.4	699942.2	5711136.9
11390	B	K	22.4	284.9	6	14:32:03	49.0	702156.4	5708519.9
11390	C	K	30.2	384.9	6	14:32:30	54.9	702648.8	5707943.2
11400	A	N	64.8	824.8	8	17:34:54	33.8	702225.1	5708374.7

Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
11400	B	N	64.8	824.8	8	17:37:51	42.3	700133.1	5710862.6
11400	C	N	27.3	347.1	8	17:38:08	43.3	699904.0	5711121.0
11410	A	K	38.1	485.0	6	14:33:55	40.7	702266.8	5708235.6
11410	B	K	73.7	937.8	6	14:34:01	37.6	702177.8	5708343.9
11410	C	N	16.1	205.6	6	14:36:32	45.8	700094.8	5710822.1
11410	D	N	23.6	300.8	6	14:36:48	39.4	699862.3	5711084.7
11420	A	K	42.0	535.0	6	15:20:49	41.8	702148.0	5708307.4
11420	B	N	10.2	129.6	6	15:23:40	39.0	700059.6	5710794.5
11420	C	N	32.7	415.8	6	15:23:58	44.7	699800.8	5711081.0
11430	A	N	13.0	166.1	6	14:38:42	48.4	699898.1	5710897.9
11430	B	K	13.2	167.5	6	14:40:41	51.6	702117.2	5708262.9
11440	A	N	28.8	366.9	8	17:41:26	51.1	699858.4	5710894.8
11440	B	K	11.2	142.6	8	17:43:29	50.2	702070.4	5708226.7
11450	A	N	62.1	790.9	6	14:45:13	43.2	699761.2	5710903.9
11460	A	N	55.2	702.6	6	15:32:09	43.3	699711.0	5710881.1
11560	A	N	14.4	183.1	8	16:47:05	51.1	699253.9	5710669.3
11481	A	N	14.5	185.0	8	18:07:22	43.5	699205.5	5710658.3
11580	A	N	37.8	481.2	8	16:52:38	52.6	699249.1	5710509.5
11590	A	N	13.9	176.6	8	18:13:10	43.9	699183.3	5710511.8
11600	A	N	24.8	316.0	8	16:59:48	44.8	699139.2	5710494.2
11592	A	N	10.5	134.1	8	18:15:02	56.3	698913.1	5710670.3
11620	A	N	13.8	175.7	8	17:05:17	51.1	698871.2	5710658.1
11594	A	N	23.5	298.9	8	18:20:29	50.1	698820.7	5710639.8
11640	A	N	13.5	171.8	8	17:06:53	60.9	698770.0	5710629.9
11596	A	N	20.5	260.7	8	18:22:03	50.6	698723.4	5710611.8
11660	A	N	38.7	493.1	8	17:12:19	49.6	698684.6	5710572.3
19010	A	K	27.1	345.5	1	14:50:57	50.2	698203.3	5710519.6
19020	A	K	33.4	425.8	1	14:57:11	52.3	703471.5	5714281.0
19020	B	K	42.4	539.4	1	14:57:40	41.0	702962.8	5713855.4
19020	C	K	25.1	319.3	1	14:58:08	43.2	702460.0	5713435.8
19020	D	N	28.3	360.4	1	14:58:46	45.7	701762.5	5712853.3
19020	E	K	27.9	354.9	1	14:58:58	43.3	701544.6	5712671.5
19030	A	N	12.7	161.9	1	15:04:38	45.4	700127.1	5710821.7
19030	B	K	12.7	161.9	1	15:04:49	42.8	700310.7	5710973.1
19030	C	N	12.7	161.9	1	15:04:51	42.0	700350.1	5711006.6
19030	D	K	27.0	344.1	1	15:04:54	40.9	700394.9	5711044.5
19030	E	K	48.5	617.5	1	15:05:24	43.1	700907.2	5711479.4
19030	F	K	36.5	464.8	1	15:05:31	39.5	701036.7	5711584.4
19030	G	K	55.8	710.2	1	15:05:57	39.6	701478.5	5711963.8

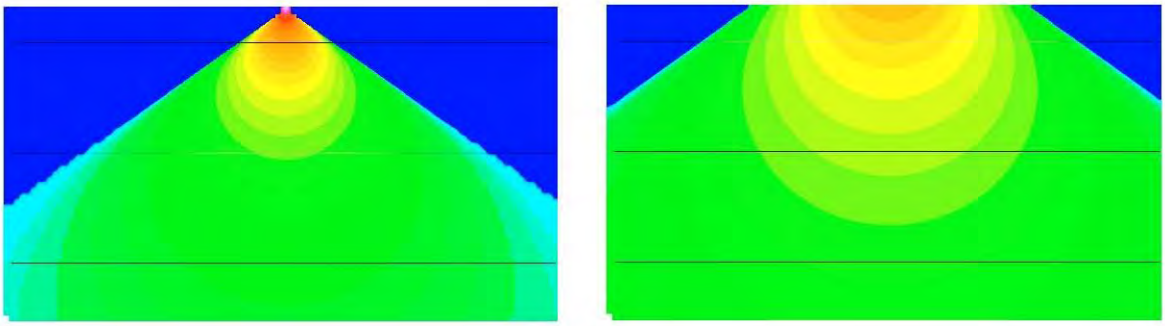
Line	Anom	ID	Cond (S)	Tau (µs)	Flight #	UTC Time	Bird height (m)	Easting (m)	Northing (m)
19030	H	N	9.4	119.8	1	15:06:09	40.4	701682.8	5712135.1
19030	I	K	9.4	119.8	1	15:06:13	37.7	701754.0	5712193.9
19030	J	K	31.3	398.0	1	15:06:39	40.3	702187.3	5712559.9
19050	A	N	16.2	206.4	1	15:19:41	44.0	701377.8	5710570.8
19050	B	N	32.0	407.8	1	15:19:50	43.1	701542.7	5710710.6
19050	C	K	15.7	200.4	1	15:20:40	41.0	702469.7	5711476.0
19050	D	K	45.6	579.9	1	15:21:23	36.4	703258.1	5712154.9
19050	E	K	50.2	638.8	1	15:23:00	38.2	705039.0	5713649.2
19060	A	K	38.1	485.3	1	15:27:07	43.9	704950.0	5712916.7
19060	B	N	25.7	327.5	1	15:28:19	43.0	703633.9	5711813.1
19060	C	N	31.0	394.8	1	15:29:16	37.2	702619.1	5710967.8
19080	A	K	28.6	363.5	1	15:43:15	38.9	703465.4	5710370.2
19080	B	K	37.6	479.3	1	15:43:19	36.7	703393.6	5710311.7
19080	C	K	39.9	507.8	1	15:43:24	36.1	703300.1	5710234.5
19080	D	N	13.1	166.5	1	15:43:43	38.3	702949.1	5709945.8
19090	A	K	28.8	366.5	1	15:47:37	45.8	702178.9	5708644.8
19090	B	N	32.1	408.8	1	15:49:39	30.1	704389.9	5710476.4
19090	C	N	32.2	409.8	1	15:50:09	41.2	704910.9	5710924.2
19090	D	N	47.5	605.2	1	15:51:21	50.7	706229.9	5712026.8
19090	E	K	26.9	342.0	1	15:51:50	48.4	706785.9	5712497.6
19100	A	K	40.5	515.5	1	15:53:39	32.0	707571.3	5712510.7
19100	B	K	45.1	573.7	1	15:54:10	33.1	707032.8	5712050.5
19100	C	K	48.3	614.9	1	15:54:37	46.8	706518.3	5711622.1
19100	D	K	35.2	448.7	1	15:55:04	47.2	706008.1	5711193.2
19100	E	K	37.7	479.8	1	15:55:11	43.4	705881.5	5711085.7
19100	F	N	37.7	479.4	1	15:56:44	35.0	704143.6	5709623.0
19100	G	N	44.8	569.7	1	15:57:47	44.2	702955.7	5708633.4
19110	A	K	41.0	522.3	1	16:00:53	42.7	704085.1	5708917.3

APPENDIX 4: AEROTEM DESIGN CONSIDERATIONS

Helicopter-borne EM systems offer an advantage that cannot be matched from a fixed-wing platform. The ability to fly at slower speed and collect data with high spatial resolution, and with great accuracy, means the helicopter EM systems provide more detail than any other EM configuration, airborne or ground-based. Spatial resolution is especially important in areas of complex geology and in the search for discrete conductors. With the advent of helicopter-borne high-moment time domain EM systems the fixed wing platforms are losing their *only* advantage – depth penetration.

Advantage 1 – Spatial Resolution

The AeroTEM system is specifically designed to have a small footprint. This is accomplished through the use of concentric transmitter-receiver coils and a relatively small diameter transmitter coil (5 m). The result is a highly focused exploration footprint, which allows for more accurate "mapping" of discrete conductors. Consider the transmitter primary field images shown in Figure 1, for AeroTEM versus a fixed-wing transmitter.



The footprint of AeroTEM at the earth's surface is roughly 50m on either side of transmitter

The footprint of a fixed-wing system is roughly 150 m on either side of the transmitter

Figure 1. A comparison of the footprint between AeroTEM and a fixed-wing system, highlights the greater resolution that is achievable with a transmitter located closer to the earth's surface. The AeroTEM footprint is one third that of a fixed-wing system and is symmetric, while the fixed-wing system has even lower spatial resolution along the flight line because of the separated transmitter and receiver configuration.

At first glance one may want to believe that a transmitter footprint that is distributed more evenly over a larger area is of benefit in mineral exploration. In fact, the opposite is true; by energizing a larger surface area, the ability to energize and detect discrete conductors is reduced. Consider, for example, a comparison between AeroTEM and a fixed-wing system over the Mesamax Deposit (1,450,000 tonnes of 2.1% Ni, 2.7% Cu, 5.2 g/t Pt/Pd). In a test survey over three flight lines spaced 100 m apart, AeroTEM detected the Deposit on all three flight lines. The fixed-wing system detected the Deposit only on two flight lines. In exploration programs that seek to expand the flight line spacing in an effort to reduce the cost of the airborne survey, discrete conductors such as the Mesamax Deposit can go undetected. The argument often put forward in favour of using fixed-wing systems is that because of their larger footprint, the flight line spacing can indeed be widened. Many fixed-wing surveys are flown at 200 m or 400 m. Much of the survey work performed by Aeroquest has been to survey in areas that were previously flown at these wider line spacings. One of the reasons for AeroTEM's impressive discovery record has been the strategy of flying closely spaced lines and finding all the discrete near-surface conductors. These higher resolution surveys are being flown within existing mining camps, areas that improve the chances of discovery.

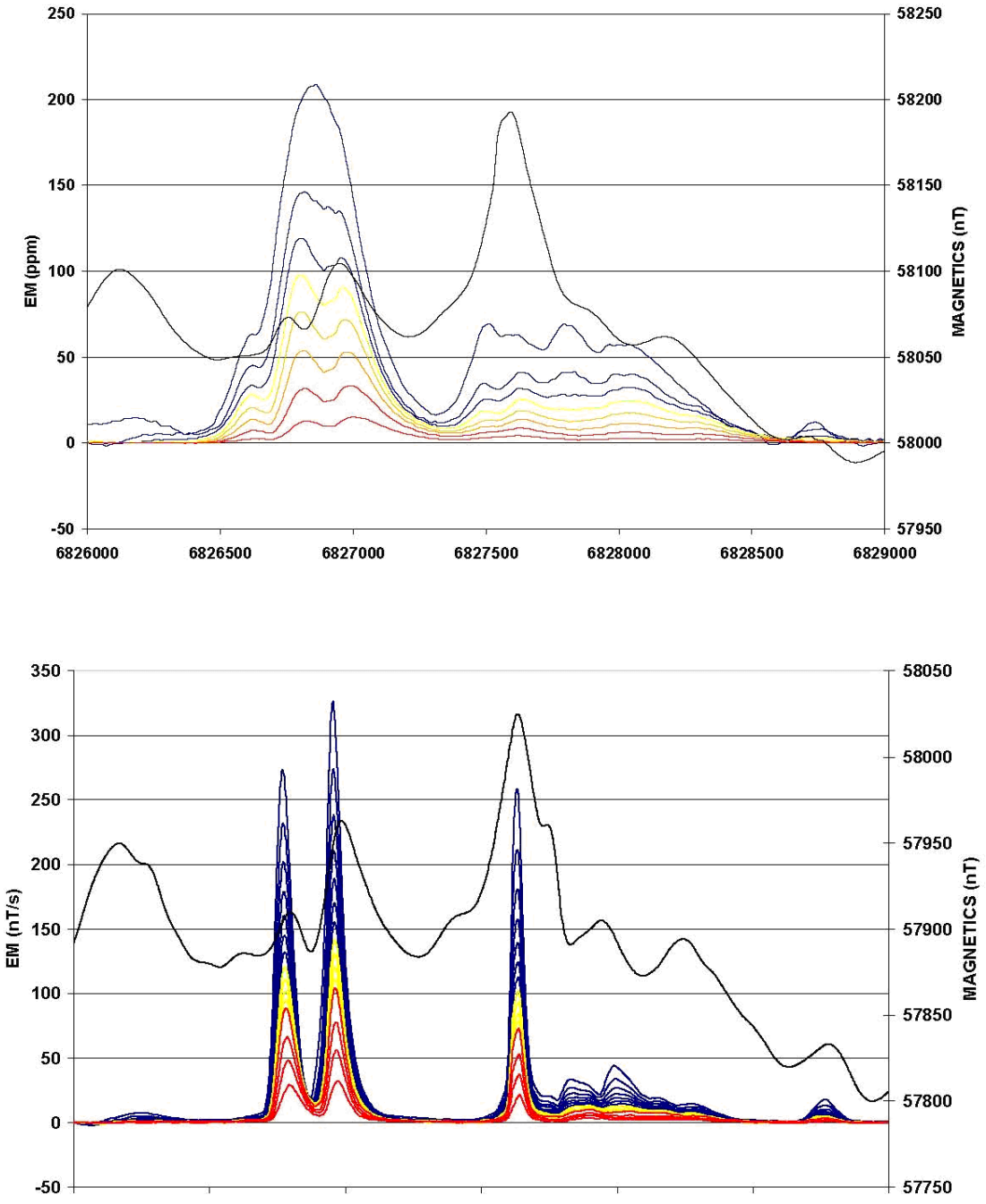


Figure 2. Fixed-wing (upper) and AeroTEM (lower) comparison over the eastern limit of the Mesamax Deposit, a Ni-Cu-PGE zone located in the Raglan nickel belt and owned by Canadian Royalties. Both systems detected the Deposit further to the west where it is closer to surface.

The small footprint of AeroTEM combined with the high signal to noise ratio (S/N) makes the system more

suitable to surveying in areas where local infrastructure produces electromagnetic noise, such as power lines and railways. In 2002 Aeroquest flew four exploration properties in the Sudbury Basin that were under option by FNX Mining Company Inc. from Inco Limited. One such property, the Victoria Property, contained three major power line corridors.

The resulting AeroTEM survey identified all the known zones of Ni-Cu-PGE mineralization, and detected a response between two of the major power line corridors but in an area of favorable geology. Three boreholes were drilled to test the anomaly, and all three intersected sulphide. The third borehole encountered 1.3% Ni, 6.7% Cu, and 13.3 g/t TPMs over 42.3 ft. The mineralization was subsequently named the Powerline Deposit.

The success of AeroTEM in Sudbury highlights the advantage of having a system with a small footprint, but also one with a high S/N. This latter advantage is achieved through a combination of a high-moment (high signal) transmitter and a rigid geometry (low noise). Figure 3 shows the Powerline Deposit response and the response from the power line corridor at full scale. The width of power line response is less than 75 m.

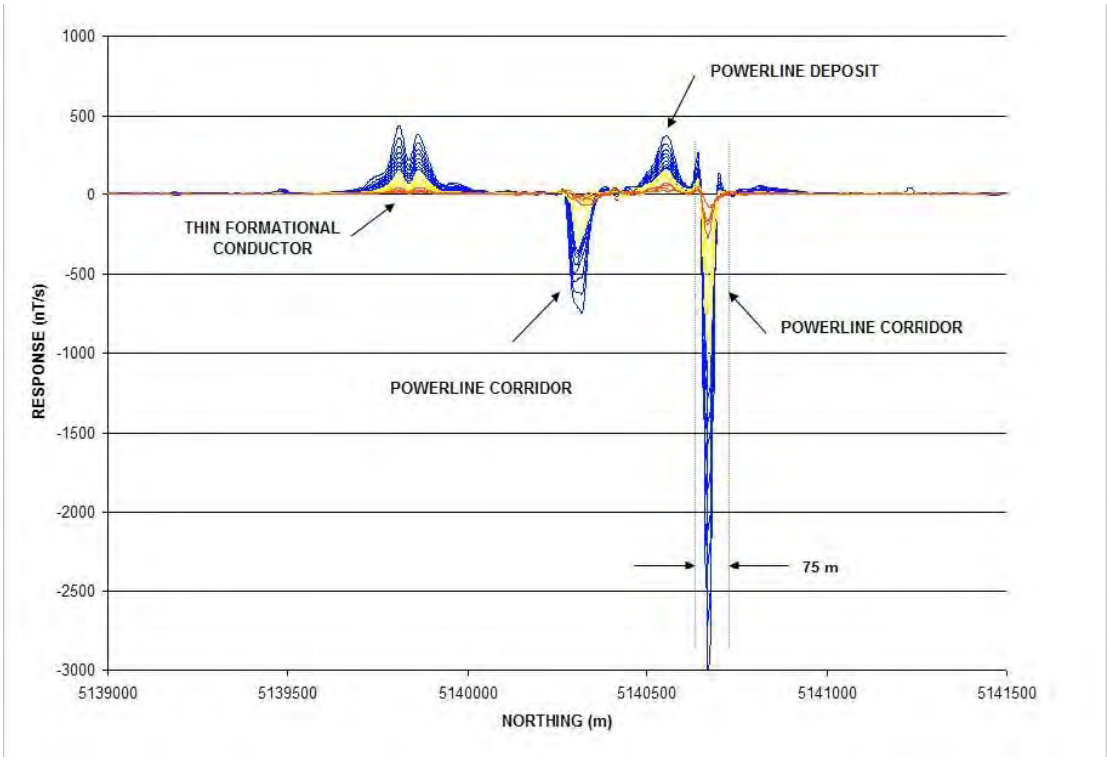


Figure 3. The Powerline Deposit is located between two major power line corridors, which make EM surveying problematic. Despite the strong response from the power line, the anomaly from the Deposit is clearly detected. Note the thin formational conductor located to the south. The only way to distinguish this response from that of two closely spaced conductors is by interpreting the X-axis coil response.

Advantage 2 – Conductance Discrimination

The AeroTEM system features full waveform recording and as such is able to measure the on-time response due to high conductance targets. Due to the processing method (primary field removal), there is attenuation of the response with increasing conductance, but the AeroTEM on-time measurement is still superior to systems that rely on lower base frequencies to detect high conductance targets, but do not measure in the on-time.

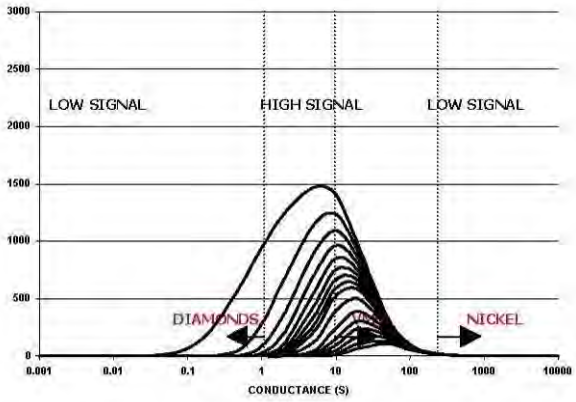
The peak response of a conductive target to an EM system is a function of the target conductance and the EM system base frequency. For time domain EM systems that measure only in the off-time, there is a drop in the peak response of a target as the base frequency is lowered for all conductance values below the peak system

response. For example, the AeroTEM peak response occurs for a 10 S conductor in the early off-time and 100 S in the late off-time for a 150 Hz base frequency. Because base frequency and conductance form a linear relationship when considering the peak response of any EM system, a drop in base frequency of 50% will double the conductance at which an EM system shows its peak response. If the base frequency were lowered from 150 Hz to 30 Hz there would be a fivefold increase in conductance at which the peak response of an EM occurred.

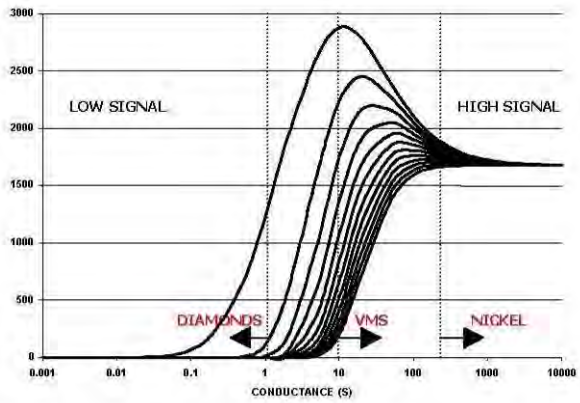
However, in the search for highly conductive targets, such as pyrrhotite-related Ni-Cu-PGM deposits, a fivefold increase in conductance range is a high price to pay because the signal level to lower conductance targets is reduced by the same factor of five. For this reason, EM systems that operate with low base frequencies are not suitable for general exploration unless the target conductance is more than 100 S, or the target is covered by conductive overburden.

Despite the excellent progress that has been made in modeling software over the past two decades, there has been little work done on determining the optimum form of an EM system for mineral exploration. For example, the optimum configuration in terms of geometry, base frequency and so remain unknown. Many geophysicists would argue that there is no single ideal configuration, and that each system has its advantages and disadvantages. We disagree.

When it comes to detecting and discriminating high-conductance targets, it is necessary to measure the pure in phase response of the target conductor. This measurement requires that the measured primary field from the transmitter be subtracted from the total measured response such that the secondary field from the target conductor can be determined. Because this secondary field is in-phase with the transmitter primary field, it must be made while the transmitter is turned on and the transmitter current is changing. The transmitted primary field is several orders of magnitude larger than the secondary field. AeroTEM uses a bucking coil to reduce the primary field at the receiver coils. The only practical way of removing the primary field is to maintain a rigid geometry between the transmitter, bucking and receiver coils. This is the main design consideration of the AeroTEM airframe and it is the only time domain airborne system to have this configuration.



The off-time AeroTEM response for the 16 channel configuration.



The on-time response assuming 100% removal of the measured primary field.

Figure 4. The off-time and on-time response nomogram of AeroTEM for a base frequency of 150 Hz. The on-time response is much stronger for higher conductance targets and this is why on-time measurements are more important than lower frequencies when considering high conductance targets in a resistive environment.

Advantage 3 – Multiple Receiver Coils

AeroTEM employs two receiver coil orientations. The Z-axis coil is oriented parallel to the transmitter coil and both are horizontal to the ground. This is known as a maximum coupled configuration and is optimal for detection. The X-axis coil is oriented at right angles to the transmitter coil and is oriented along the line-of-flight.

This is known as a minimum coupled configuration, and provides information on conductor orientation and thickness. These two coil configurations combined provide important information on the position, orientation, depth, and thickness of a conductor that cannot be matched by the traditional geometries of the HEM or fixed-wing systems. The responses are free from a system geometric effect and can be easily compared to model type curves in most cases. In other words, AeroTEM data is very easy to interpret. Consider, for example, the following modeled profile:

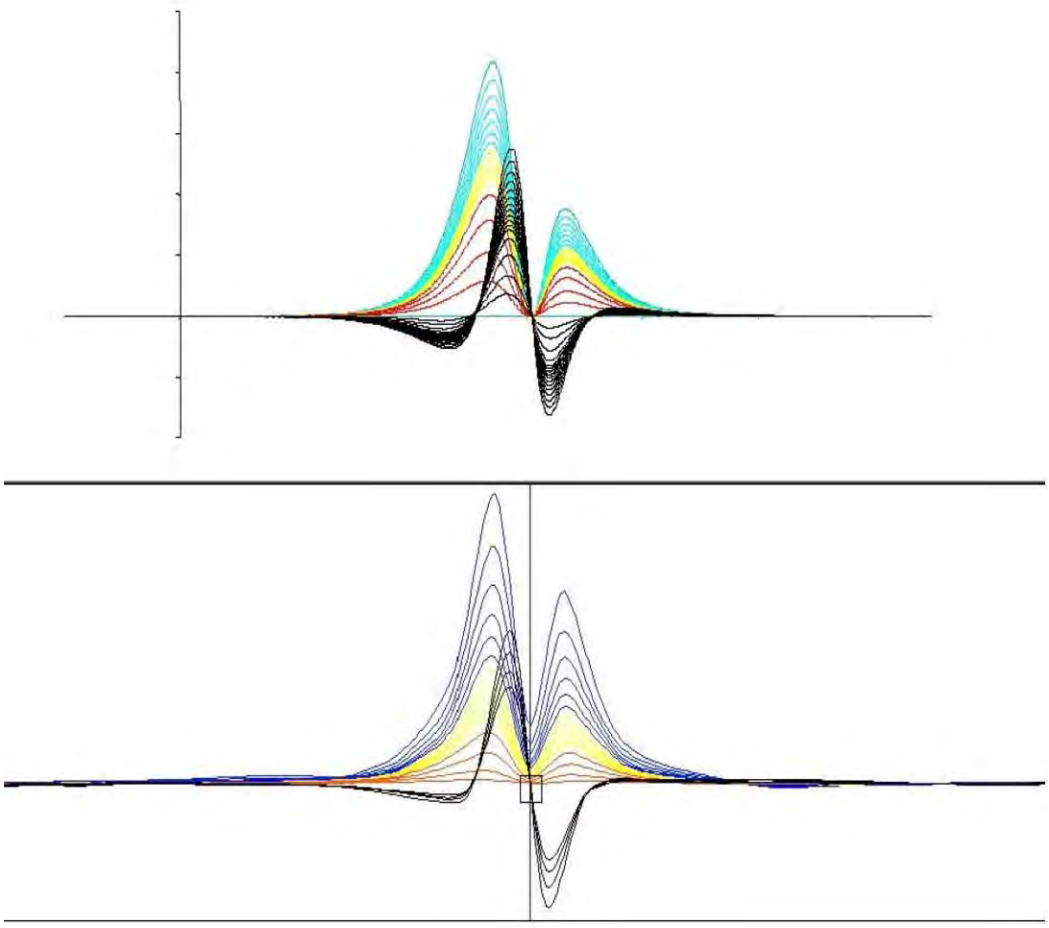


Figure 5. Measured (lower) and modeled (upper) AeroTEM responses are compared for a thin steeply dipping conductor. The response is characterized by two peaks in the Z-axis coil, and a cross-over in the X-axis coil that is centered between the two Z-axis peaks. The conductor dips toward the higher amplitude Z-axis peak. Using the X-axis cross-over is the only way of differentiating the Z-axis response from being two closely spaced conductors.

HEM versus AeroTEM

Traditional helicopter EM systems operate in the frequency domain and benefit from the fact that they use narrowband as opposed to wide-band transmitters. Thus all of the energy from the transmitter is concentrated in

a few discrete frequencies. This allows the systems to achieve excellent depth penetration (up to 100 m) from a transmitter of modest power. The Aeroquest Impulse system is one implementation of this technology.

The AeroTEM system uses a wide-band transmitter and delivers more power over a wide frequency range. This frequency range is then captured into 16 time channels, the early channels containing the high frequency information and the late time channels containing the low frequency information down to the system base frequency. Because frequency domain HEM systems employ two coil configurations (coplanar and coaxial) there are only a maximum of three comparable frequencies per configuration, compared to 16 AeroTEM off-time and 12 AeroTEM on-time channels.

Figure 6 shows a comparison between the Dighem HEM system (900 Hz and 7200 Hz coplanar) and AeroTEM (Z-axis) from surveys flown in Raglan, in search of highly conductive Ni-Cu-PGM sulphide. In general, the AeroTEM peaks are sharper and better defined, in part due to the greater S/N ratio of the AeroTEM system over HEM, and also due to the modestly filtered AeroTEM data compared to HEM. The base levels are also better defined in the AeroTEM data. AeroTEM filtering is limited to spike removal and a 5-point smoothing filter. Clients are also given copies of the raw, unfiltered data.

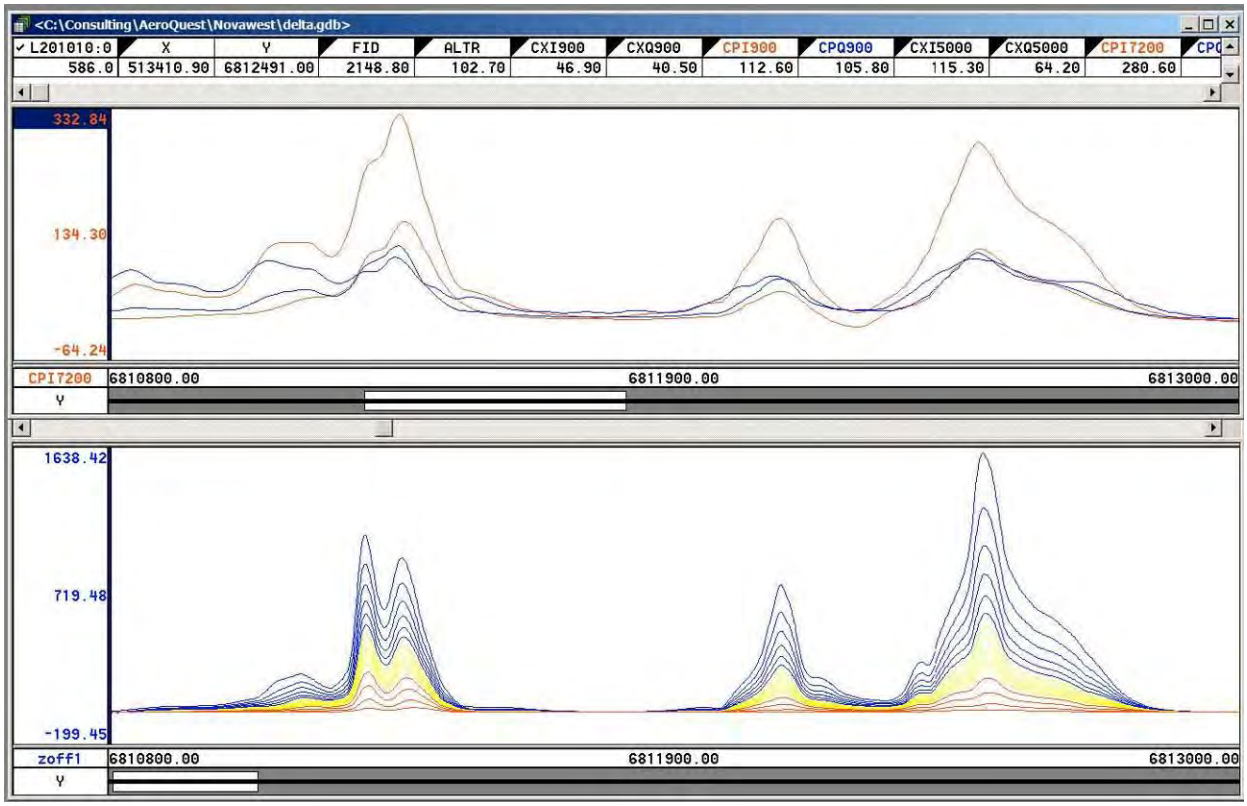


Figure 6. Comparison between Dighem HEM (upper) and AeroTEM (lower) surveys flown in the Raglan area. The AeroTEM responses appear to be more discrete, suggesting that the data is not as heavily filtered as the HEM data. The S/N advantage of AeroTEM over HEM is about 5:1.

Aeroquest Surveys is grateful to the following companies for permission to publish some of the data from their respective surveys: Wolfden Resources, FNX Mining Company Inc, Canadian Royalties, Nova West Resources, Aurogin Resources, Spectrem Air. Permission does not imply an endorsement of the AeroTEM system by these companies.

APPENDIX 5: AEROTEM INSTRUMENTATION SPECIFICATION SHEET

AEROTEM Helicopter Electromagnetic System

System Characteristics

- Transmitter: Triangular Pulse Shape Base Frequency 90 Hz
- Tx On Time – 1,900 (90 Hz) µs
- Tx Off Time – 3,600 (90 Hz) µs
- Loop Diameter - 12 m
- Peak Current - 410 A
- Peak Moment – 247,000 NIA
- Typical Z Axis Noise at Survey Speed = 10 nT/s peak to peak
- Sling Weight: 1200 lb
- Length of Tow Cable: 53 m
- Bird Survey Height: 30 m nominal

Receiver

- Two Axis Receiver Coils (x, z) positioned at a horizontal offset of 1m and 4.8 m from the centre of transmitter loop, respectively.
- Selectable Time Delay to start of first channel 28 , 55, or 83 ms

Display & Acquisition

- AERODAS Digital recording at 36000 samples per second (27.778 µs channel width)
- Recording & Display Rate = 10 readings per second.
- On-board display - six channels Z-component and 1 X-component

System Considerations

Comparing a fixed-wing time domain transmitter with a typical moment of 500,000 NIA flying at an altitude of 120 m with a Helicopter TDEM at 30 m, notwithstanding the substantial moment loss in the airframe of the fixed wing, the same penetration by the lower flying helicopter system would only require a sixty-fourth of the moment. Clearly the AeroTEM system with 230,000 NIA has more than sufficient moment. The airframe of the fixed wing presents a response to the towed bird, which requires dynamic compensation. This problem is non-existent for AeroTEM since transmitter and receiver positions are fixed. The AeroTEM system is completely portable, and can be assembled at the survey site within half a day.