HELIBORNE HIGH RESOLUTION AEROMAGNETIC SURVEY

Eastmain Mine & Ruby Hill East Properties
James Bay area, Quebec

For:

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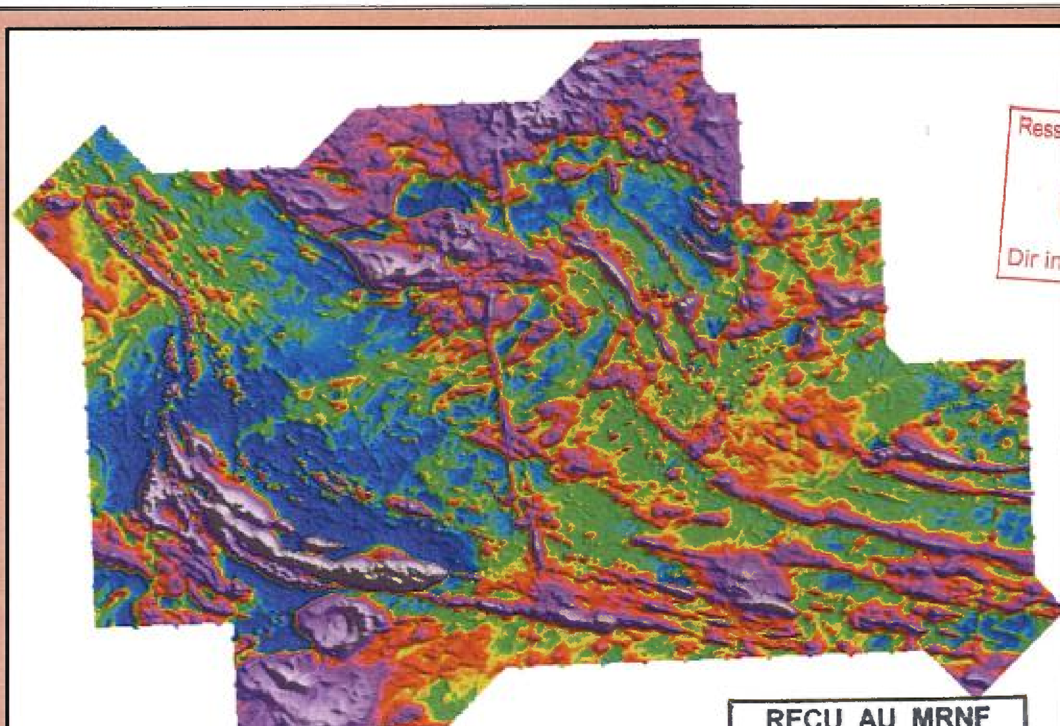
Project Ref.: P13-010 **Final Technical Report**

September 2013



EASTMAIN RESOURCES INC.

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FINAL TECHNICAL REPORT

September 2013

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1.0 INTRODUCTION

On August 7th, 2013, **Geo Data Solutions GDS Inc (GDS)** was awarded project P13-010 by **Eastmain Resources Inc.** The project entailed **GDS** to carry out a high-resolution helicopter borne magnetic survey on two contiguous blocks (**Eastmain Mine** and **Ruby Hill East** properties) located in the James Bay area, Quebec.

The base of operations was set up at the Eastmain Mine Camp (Lat.: 52° 17' 45"N, Long.: 72° 04' 48"), which is directly located inside the survey area (figure 1). A magnetic base station was set up in a quiet environment near the base of operation.

Table 1 presents survey specifications, and tables 2 and 3 the block co-ordinates. Lengths of any traverse or tie-line were adjusted to a minimum of 2.5 km.

The **GDS**'s survey was executed from August 9th to 20th, 2013. Excluding calibration and test flights, 14 production flights were needed to cover the requested areas. Total number of line-km flown was 5 483.

Stable weather conditions were observed during the data acquisition period.

In terms of altitude, topography in the survey area is classed as gentle (figures 2), ranging from 460 to 690 metres. Both blocks were flown following a pre-defined flight surface having a rate of climb and descent of 20% and a minimum ground clearance of 30 metres. Altitude was ultimately controlled at the discretion of the helicopter pilot with safety held in priority consideration.

The magnetometer sensor was mounted in a stinger fixed to the helicopter (figure 3).

This report describes survey procedures and data verification, which were carried out in the field, and data processing, which followed at the office.

Table 1: Flight path specifications

Area	Traverse Line			Tie Line			Total
	Azimuth	Line-km	Spacing	Azimuth	Line-km	Spacing	
Ruby Hill East	N045°E	1 931	25 m	N135°E	99	500 m	**2 030**
Eastmain Mine	N045°E	3 284	25 m	N135°E	169	500 m	**3 453**
					TOTAL		**5 483**

Table 2: Ruby Hill East Coordinates - WGS84 UTM zone 18				
Vertex	**Latitude**	**Longitude**	**X (UTM)**	**Y (UTM)**
1	52º 15' 00" N	72º 12' 00" W	691 130	5 792 538
2	52º 16' 00" N	72º 12' 00" W	691 058	5 794 392
3	52º 16' 00" N	72º 14' 00" W	688 784	5 794 304
4	52º 19' 30" N	72º 14' 00" W	688 536	5 800 791
5	52º 19' 30" N	72º 14' 30" W	687 968	5 800 769
6	52º 20' 00" N	72º 14' 30" W	687 933	5 801 696
7	52º 20' 00" N	72º 11' 30" W	691 339	5 801 827
10	52º 20' 00" N	72º 11' 00" W	691 907	5 801 849
11	52º 20' 00" N	72º 10' 00" W	693 042	5 801 893
12	52º 17' 00" N	72º 10' 00" W	693 260	5 796 333
13	52º 17' 00" N	72º 09' 00" W	694 396	5 796 378
14	52º 16' 30" N	72º 09' 00" W	694 433	5 795 451
15	52º 16' 30" N	72º 07'30" W	696 138	5 795 519
16	52º 16' 00" N	72º 07' 30" W	696 175	5 794 592
17	52º 16' 00" N	72º 07' 00" W	696 743	5 794 615
18	52º 15' 30" N	72º 07' 00" W	696 780	5 793 688
19	52º 15' 30" N	72º 09' 00" W	694 506	5 793 598
20	52º 15' 00" N	72º 09' 00" W	694 542	5 792 672

Table 3: Eastmain Mine Coordinates – WGS84 UTM zone 18				
Vertex	**Latitude**	**Longitude**	**X (UTM)**	**Y (UTM)**
1	52º 20' 00" N	72º 10' 00" W	693 042	5 801 893
2	52º 20' 30" N	72º 10' 00" W	693 006	5 802 820
3	52º 20' 30" N	72º 06' 30" W	696 978	5 802 977
4	52º 21' 00" N	72º 06' 30" W	696 941	5 803 904
5	52º 21' 00" N	72º 05' 00" W	698 644	5 803 972
6	52º 20' 30" N	72º 05' 00" W	698 681	5 803 045
7	52º 20' 30" N	72º 04' 30" W	699 249	5 803 068
8	52º 19' 30" N	72º 04' 30" W	699 324	5 801 215
9	52º 19' 30" N	72º 02' 30" W	701 595	5 801 308
10	52º 18' 00" N	72º 02' 30" W	701 708	5 798 528
11	52º 18' 00" N	72º 00' 30" W	703 980	5 798 621
12	52º 15' 30" N	72º 00' 30" W	704 172	5 793 988
13	52º 15' 30" N	72º 07' 00" W	696 780	5 793 688
14	52º 16' 00" N	72º 07' 00" W	696 743	5 794 615
15	52º 16' 00" N	72º 07' 30" W	696 175	5 794 592
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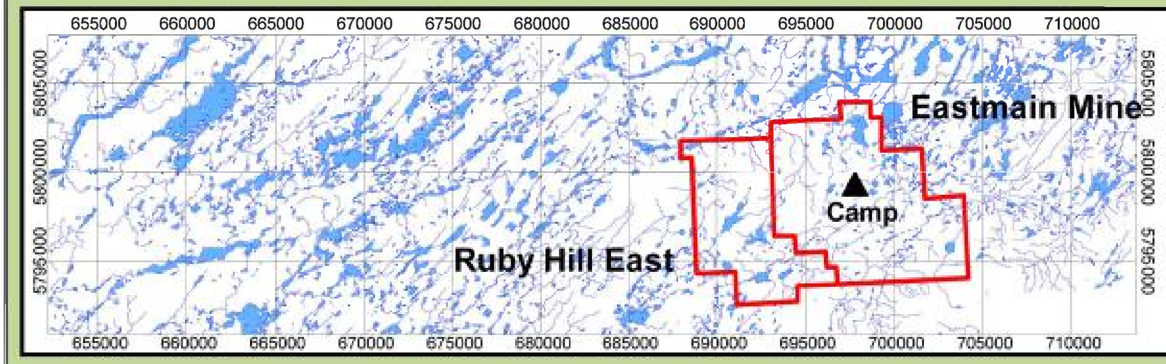


Figure 1: Survey Blocks and Base of Operations

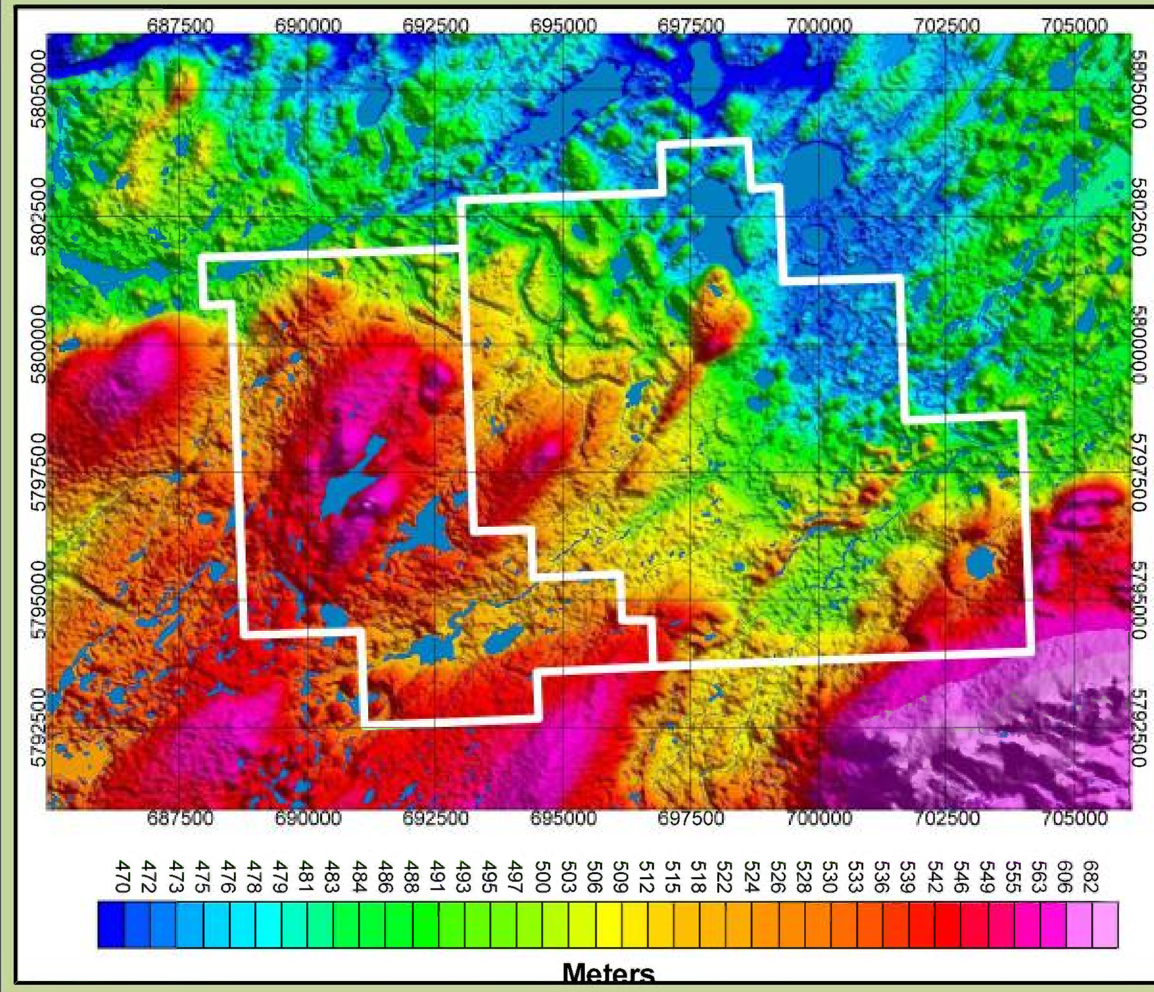


Figure 2: Ruby Hill East & Eastmain Mine Blocks with Topographic Relief

2.0 GEOLOGICAL CONTEXT

(From Eastmain Resources Inc.)

2.1 Geology

The project is underlain by the Upper Eastmain River Greenstone Belt which extends for 100 km in a north-northeast direction. The lower third of this belt has developed a southeasterly branch that extends for about 36 km. The Upper Eastmain belt consists of one or more cycles of mafic to felsic volcanics and metasedimentary rocks surrounded by granite and granite gneiss. A key geological marker comprised of ultramafic volcanic rocks (komatiite flows) can be traced across the belt. Widespread rock geochemical anomalies in nickel-copper, nickel-chromium, copper-zinc and gold suggest that these rocks are highly prospective for both gold and nickel-copper-platinum deposits similar to those found elsewhere in Canada, and Western Australia. The three gold zones discovered at the Eastmain Mine are spatially associated with a strongly altered ultramafic volcanic unit (komatiitic flows) intercalated with narrow lenses of felsic volcanic rocks within a thicker sequence of mafic volcanic flows. The gold ores are siliceous stratabound units containing 10 to 30% pyrrhotite, pyrite and minor amounts of chalcopyrite.

2.2 Mineralization

The Eastmain Mine property hosts a high-grade gold-copper-silver deposit originally discovered by Placer Dome. The Eastmain Mine property is located in James Bay, Quebec immediately north of the Otish Mountains and 320 kilometres north of Chibougamau (NTS 33A07 and 33A08). The property includes 1 mining lease (132 hectares) and 152 mining claims (7 882 hectares). The property is contiguous with the 100% owned Ruby Hill East property which includes another 88 mining claims (4 622 hectares).

The Eastmain gold deposit contains 255 750 ounces of gold and 4.1 million pounds of copper, including measured resources of 91 500 tons grading 0.268 ounces/ton gold and indicated resources of 786 600 tons at 0.294 ounces/ton gold (Campbell, 2004 Annual Report, available on SEDAR at www.sedar.ca). These historical estimates may not be NI43-101 compliant.
The gold deposit includes an A, B and C zones covering an area of approximately 1.7 km. The A and B zones were partially developed underground via a ramp access into the A zone and an underground drift extending to the B Zone. The mine horizon has been traced for approximately 10 km outwards from the deposit.

In the A Zone, hole 83-4 intersected 17.7 g/t Au, 25.1 g/t Ag and 0.61% Cu across 4.8 metres in the A Zone, 280 metres vertical depth. The B Zone consists of five separate lenses which have been traced for 480 metres down-dip and averages 3.0 metres in thickness. The deposit is open down-dip and there is significant surface exploration potential on the property.

2.3 Exploration Works

In 2005, **Eastmain** completed 3 200 line-km of VTEM and magnetic airborne geophysical surveys at 100-metre line spacing over the Ruby Hill East and Ruby Hill West claim blocks and the Eastmain Mine property. The VTEM surveys clearly outlined the A, B and C gold zones on the Eastmain Mine property. Magnetic survey data also outlined the key ultramafic marker unit on the mine property.

In 2009 **Eastmain** completed soil geochemical surveys, prospecting and geological mapping on the Eastmain Mine property. Anomalous gold ranging from 4.38 g/t to 43.6 g/t Au were detected in rock sampling over a six km strike-length, coinciding with the mine trend northwest of the Eastmain Gold Deposit. There is no outcrop southeast of the deposit within the property boundaries.

In 2010 **Eastmain** completed forty-six diamond drill holes totaling 14 584 metres to expand the known limits of the A, B and C zones laterally and vertically within the deposit and to test the favourable mine trend that has been delineated for more than 10 km across the property.

In 2011, Eastmain completed 13 062 metres of drilling in 28 holes to test the depth extension of the A, B and C Zones. Highlights from the program include an intersection of 5.78 g/t Au over 6.5 metres from the main horizon of the A Zone in hole EM11-52 and 9.10 g/t Au over 3.0 metres in hole EM11-65 within the B Zone.

3.0 SURVEY SPECIFICATIONS

Airborne survey and noise specifications were as follows:

a) Number of line-km flown, traverse spacing and direction
   - Table 1 presents the number of line-km flown and traverse/tie-line spacing and directions.

b) Nominal terrain clearances
   - A smooth drape surface was followed with a minimum ground clearance of 30 metres and a rate of climb of 20%. Figure 7 presents the histogram of the helicopter ground clearance.

c) Nominal Speed
   - The helicopter average speed was approximately 163 km/hr. Under these conditions, the distance between samples along survey lines is typically 4.5 m. Figure 7 presents the histogram of the helicopter speed.

d) magnetic diurnal variation
   - A maximum tolerance of 3 nT (peak to peak) deviation from a long chord equivalent to a period of 30 seconds at the magnetometer base station was respected during all the survey period.

e) magnetometer noise envelope
   - in-flight noise envelope did not exceed 0.5 nT, for straight and level flight.
   - base station noise envelope did not exceed 0.2 nT.

f) Re-flights and turns
- line-spacing did not vary by more than 50 % from the nominal spacing over a distance of more than 1.0 km. The minimum length of any survey line was 2.5 km.
- all reflights of line segments intersected at least two control lines.

4.0 HELICOPTER, EQUIPMENT AND PERSONNEL

4.1 Helicopter

Figure 3 presents the Astar 350 BA+ helicopter technical specifications and capacity.

Type	ASTAR 350 BA+
Power	650 shp
Empty weight	1 295 kg
Maximum charge	2 667 kg
Ceiling	6 090 m
Rate of climb (oblique)	7.8 m/sec
Survey speed	35 m/sec
Fuel type	Jet Fuel
Fuel consumption	160 litres/hr
Oil consumption	Negligible

Figure 3: The AS-350 BA+ Helicopter

4.2 Equipment

Magnetometer:

A Geometrics G822 Cesium split-beam total field magnetic sensor was installed at the end of a stinger fixed to the helicopter (figure 3).

The Geometrics G822 sensor is a versatile and highly sensitive means of accurately measuring the Earth's total magnetic field intensity. Based upon the principle of optical pumping and monitoring, the cesium sensor is capable of resolving millisecond variations as small as 0.005 nT (gamma) or 1 part in 10,000,000 of the Earth's magnetic field. This unique process involves the interaction of the magnetic moment and angular momentum of the valence electron of cesium with the ambient magnetic field to produce an oscillation whose frequency is dependent on the magnetic field intensity. The sensor, operating on an atomic process, contains no moving parts and is inherently simple, rugged, and accurate. Table 4 presents the magnetometer characteristics.

Table 4: The G-822A Magnetometer	
Item	**Specifications**
Manufacturer	Geometrics
Type and Model	Cesium G-822A
Serial Number	75464 / C2424
Ambient Range	20 000 - 100 000 nT
Sensitivity	± 0.005 nT
Absolute Accuracy	± 10 nT
Noise Envelope	0.10 nT
Sampling Rate	10 Hz
Sampling Interval	3.5 m
Heading effect	<2.0 nT

Magnetometer Base Station:

A GEM GSM-19 Overhauser magnetometer base station (figure 4), along with a dual frequency GPS receiver, measured the total intensity of the earth's magnetic field in units of 0.01 nT at intervals of 1 second, within a noise envelope of 0.10 nT. Records, including GPS time, were dumped digitally on a PC. The magnetic base station was set up at magnetic noise-free locations, away from magnetic objects, vehicles and DC electrical power lines. The base station data were merged with airborne data and plotted daily. Co-ordinates and averaged magnetic field values measured at the magnetometer base station were:

Mean value: 56 142.0 nT
Coordinates: Lat.: 52.3025559°N   Long.: 72.0860994°W

Figure 4: Base station magnetometer and console

Magnetic Compensator and Data Acquisition System (figure 5):

The magnetic field generated by the aircraft was compensated using a RMS DAARC500 Automatic Aeromagnetic Digital Compensator system. The DAARC500 is an instrument used to compensate or correct in real time for the magnetic interference caused by the aircraft itself and aircraft manoeuvring in the Earth's magnetic field, when using inboard-mounted high sensitivity magnetometers. The compensation accounts for the effects of permanent magnetism, induced magnetism, Eddy currents and also heading errors caused by the sensor themselves. It provides a frequency bandwidth of DC to 0.9 Hz, frequencies of most interest to the geophysicist. Other bandwidths are optionally available. Signals from magnetometers are digitized faithfully without aliasing or phase distortion.

The DAARC500 is based on many years of research and development on automatic aeromagnetic compensation by the National Aeronautical Establishment (NAE), a division of the National Research Council of Canada. Following the transfer of technology, RMS Instruments continued with the development resulting in an instrument which is extremely reliable, capable of accepting the Larmor frequencies of up to four high sensitivity magnetometers, and is based on a sophisticated compensation algorithm which is extremely robust.

The DAARC500 incorporate a sophisticated and flexible data acquisition system. Geophysical instruments and sensors may be directly connected to the DAARC500, via 8 Outputs and Inputs high speed RS232 digital ports, 16 analogic Inputs ports and an Ethernet port. Incoming data are real time processed. All acquired data are synchronized through a GPS receiver pulse-per-second (PPS).

Figure 5: Magnetic compensator and Data Acquisition System

GPS and Navigation System:

Table 5 describes the airborne GPS system, which provided both real-time navigation and flight-path recovery (figure 6).

Table 5: The GPS Navigation System	
Item	**Specifications**
GPS Manufacturer	Novatel
Model	DL-V3 Dual-freq L1/L2
Serial Number	NBV07400024
Sampling Rate	1 hertz
Number of Channels	12
Navigation System	AGNAV (LiNAV)

Figure 6: Novatel GPS receiver and AGNAV Linav navigation system

Radar Altimeter

A frequency-modulated radio altimeter was used for measuring accurately distances between helicopter and ground. Table 6 presents its technical characteristics.

Table 6: The Radio Altimeter Specifications	
Item	**Specifications**
Manufacturer	Free Flight
Model	TRA 3000
Minimum range	0 to 800 metres
Accuracy:	5 %
Sensitivity:	10 mV/m
Digital resolution:	0.1 metre

Ancillary Equipment

Ancillary equipment included Computer workstation, complement of spare parts and test instruments.

4.3 Personnel

The general management of the project was monitored offsite by Mr. Mouhamed Moussaoui, **GDS**'s President. Mrs Celine Larderaz was responsible for the field data quality control to ensure that the work was carried out according to contractual specifications. Final data evaluation and processing were performed at the Laval **GDS**'s office by Mr Carlos Cortada and Mr Mouhamed Moussaoui. Survey crew and office personnel are listed in table 7.

Table 7: Field and Office Crew	
Position	**Name**
Project Manager	Mr Mouhamed Moussaoui, Ing.
Data quality control	Mrs Celine Larderaz
Field Operator	Mr Pierre Filion
Pilot	Mr Christophe Zarragoza
Final Processing	Mr Carlos Cortada; Mr Mouhamed Moussaoui
Survey Report	Mr Camille St-Hilaire, P.Geo

5.0 SURVEY SCHEDULE

The survey was flown over two contiguous blocks with flight line bearing selected to run perpendicular to the average trend of the local geological structures.

Survey steps were:

Mobilization to the Eastman Mine Camp:	August 8th, 2013
Production flights:	August 9th to 20th, 2013
Demobilization:	August 21st, 2013

Preliminary results were delivered to **Eastmain Resources Inc.** on September 9th while final maps and data were sent early on October, 2013.

6.0 DATA ACQUISITION

The following tests were performed before or after survey production.

FOM Magnetometer Test:

Effects of helicopter manoeuvres (roll, pitch and yaw) are determined by a FOM test (Figure of Merit). The test is performed over a magnetically quiet zone, at high altitude. It consists of flying $\pm 10^{o}$ rolls, $\pm 5^{o}$ pitches and $\pm 5^{o}$ yaws peak to peak along North, South, East and West headings over periods of 4-5 seconds. The compensation Figure of Merit (FOM) for the helicopter is calculated by summing up the peak-to-peak amplitudes of these 12 magnetic signatures. The FOM test results are presented in appendix A.

Quality Control

After data acquisition, profiles were examined as a preliminary assessment of the noise level on the recorded data. Altimeter deviations from the prescribed flying altitudes were also closely examined as well as the magnetic diurnal activity, as recorded on the base station.

All digital data were verified for validity and continuity. Data from helicopter and base station were transferred to a PC's hard disk. Basic statistics were generated for each parameter recorded. These included minimum, maximum, mean values, standard deviation, and any null values were located. Editing of all recorded parameters for spikes or datum shifts was done, followed by final data verification via an interactive graphic screen with on-screen editing and interpolation routines.

Quality of GPS navigation was controlled by recovering the helicopter flight path.

Checking all data for adherence to specifications was carried out before crew and aircraft demobilization.

7.0 DATA COMPILATION AND PROCESSING

7.1 Base maps

The base map of the survey area (hydrographic and topographic information) was plotted from the CanVec Geobase at a scale of 1:50 000.

Projection description

Datum:	NAD83
Projection:	UTM Zone 18N
False Easting:	500 000
False Northing:	0
Scale Factor:	0.9996

7.2 Processing of Base Station data

Recorded magnetic diurnal data from the magnetometer base station were reformatted and loaded into the OASIS database. After initial verification of the integrity of the data from statistical analysis, the appropriate portion of the data was selected to correspond to the exact start and end time of the flight. Data were then checked and corrected for spikes using a fourth difference editing routine. Following this, interactive editing of the data was done, via a graphic editing tool, to remove events caused by man-made disturbances. A small low pass noise filter (30 seconds) was then applied. The average value of the Total Field Magnetic Intensities measured at the base stations was 56 142.0 nT. Its co-ordinates were:

Lat.: 52.3025559° N   Lon.: 72.0860994° W

7.3 Processing of the Positioning Data (GPS)

The raw GPS data were recovered and corrected from spikes. The resulting corrected latitudes and longitudes were then converted to the local map projection and datum (Nad83). A point-to-point speed calculation was then done from the final X, Y coordinates and reviewed as part of the quality control. The flight data were then cut back to the proper survey line limits and a preliminary plot of the flight path was done and compared to the planned flight path to verify the navigation.

Post-flight correction of the raw GPS data was done using the Natural Resources Canada online GPS processing service CSRS-PPP (Canadian Spatial Reference System - Precise Point Positioning).

7.4 Processing of the Altimeter data

The altimeter data, which includes radar altimeter and GPS elevation values were checked and corrected for spikes using a fourth difference editing routine. A small low pass filter of 2 seconds was then applied to the data. Following this, a digital terrain trace was computed by subtracting the radar altimeter values from the corrected GPS elevation values. All resulting parameters were then checked, in profile form, for integrity and consistency, using a graphic viewing editor.

7.5 Processing of Magnetic data

The airborne magnetic data were reformatted and loaded into the OASIS database. After initial data verification by statistical analysis, positions were adjusted for system lag. Data were then checked and corrected for any spikes using a fourth difference editing routine and inspected on the screen using a graphic profile display. Interactive editing was done at this stage.

The long wavelength component of the diurnal was subtracted from the data as a pre-levelling step. Preliminary grids of the total field and first vertical derivative were created and verified for obvious problems, such as errors in positioning or bad diurnal. Appropriate corrections were then applied to data, as required.

An altitude correction was applied to the total field magnetic intensity by using the vertical gradient pre-filtered with a 2-sec. low-pass filter. This correction was done by downward or upward continuation of the field around the drape surface. Histogram of the ground clearance is shown on figure 7.

For both blocks, a standard micro-levelling was applied in order to removes minor imperfections visible on shadow images (clipping ±5 nT, low-pass filter: 8 s). A clipping of ±8 nT was used in few localized areas. This produced a grid of exceptional aesthetic quality with no degradation of the high frequency content of the data.

The International Geo-Reference Field (IGRF) was removed from the Total Magnetic Field Intensity. The model used was 2010, date August 14th 2013, elevation 548 metres.

A Geosoft database was created with channels described in appendix B.

7.6 First Vertical Derivative Grids

The first vertical derivative of the total magnetic field was computed to enhance small and weak near-surface anomalies and as an aid to delineate geologic contacts having contrasting susceptibilities. The calculation was done in the frequency domain, using Win-Trans and Geosoft FFT algorithms.

8.0 FINAL PRODUCTS

The following parameters were processed:

- Total Magnetic Field data
- Calculated First Vertical Derivative of the Total Magnetic Field data
- Digital Elevation Model data
-

8.1 Grids:

- Cell size: 6.25 metres

8.2 Maps:

GDS made the base map from information present on published topographic maps. Each map was produce at a scale of 1:25 000 (a single map for both block) and 1:20 000 (one maps for each block) displaying base-map features, flight path and UTM co-ordinates. Three paper copies of the following final maps were delivered to **Eastmain Resources Inc.**:

- Shaded Residual Total Magnetic Field (contour and colour interval)
- Shaded Magnetic First Vertical Derivative (colour interval)

All final map products were also delivered in PDF and Geotiff formats at resolution suitable to accurately reproduce plotted products.

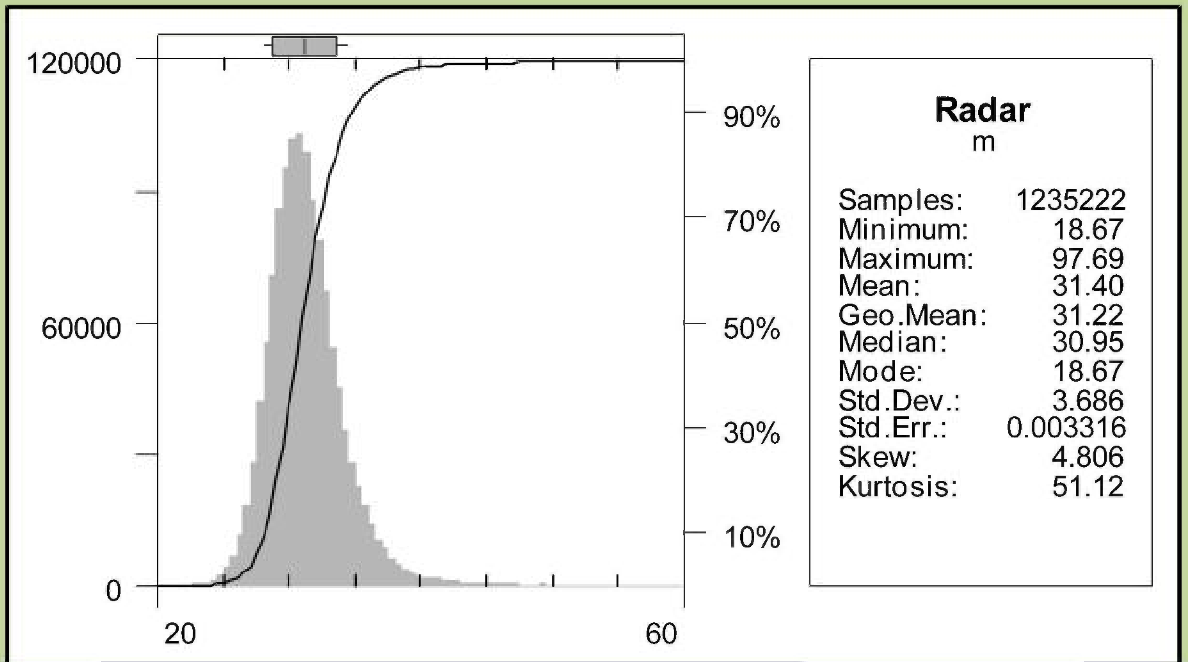
8.3 Final digital archive of line data:

GDS produced three copies of a CD-ROM containing digital archives and maps (PDF and Geotiff formats). Digital archives, described in Appendix B, contain the Geosoft database of all survey data. The database is referenced to the standard UTM co-ordinates for the area.

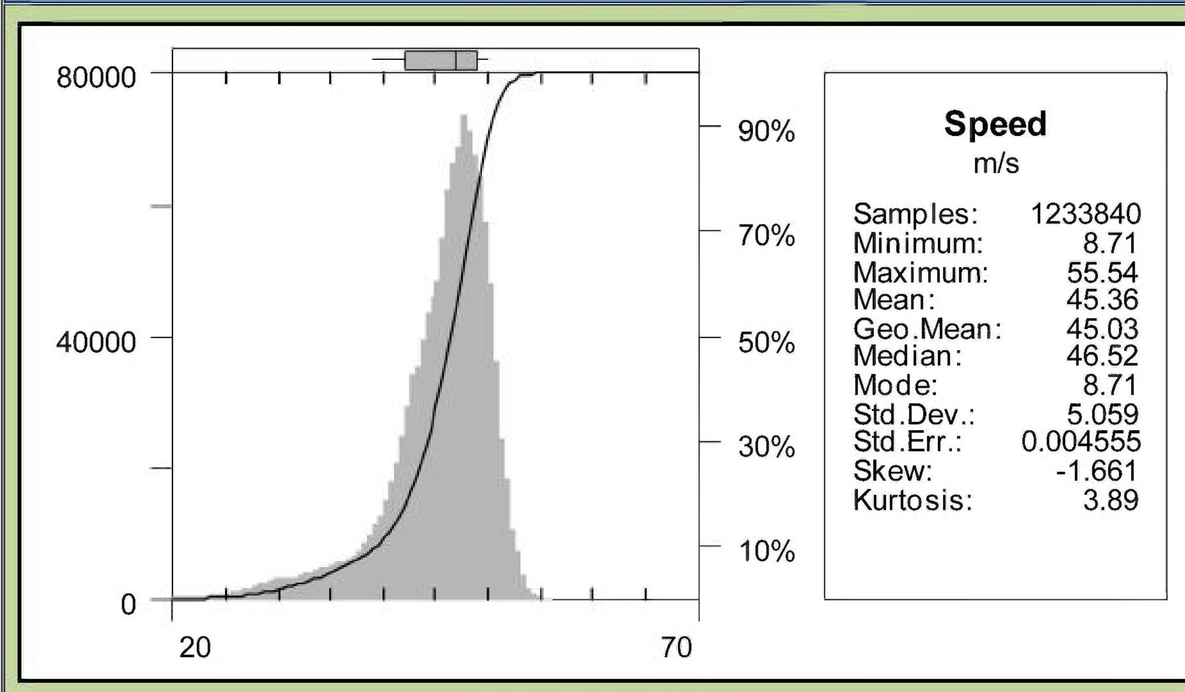
GDS stores a copy of the digital archive for one year after production of final products. On request by **Eastmain Resources Inc.**, **GDS** will supply raw data from the survey with survey products. Otherwise, **GDS** will store raw data with copy of the digital archive.

8.4 Miscellaneous

Three paper copies of this technical report, with the corresponding digital PDF file, have been produced and delivered to **Eastmain Resources Inc.**



Ground Clearance



Helicopter Speed

Figure 7: Histogram of the Helicopter Ground Clearance and Speed

9.0 CONCLUSIONS

Flown over two contiguous blocks (**Ruby Hill East** & **Eastmain Mine**) from August 9th to 20th, 2013 by **Geo Data Solutions GDS Inc.**, the helicopter borne aeromagnetic survey was completed inside the estimated time frame.

All airborne and ground-based records were of excellent quality. Magnetic data acquisition was done in good diurnal conditions.

GPS results proved to be of high quality. The flight path was surveyed accurately and speed checks showed no abnormal jumps in data.

It is hoped that information presented in this report, and on the accompanying products, will be useful both in planning subsequent exploration efforts and in the interpretation of related exploration data.

Respectfully Submitted,

Camille St-Hilaire, M.Sc.A.
P.Geo. 339

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APPENDIX A

TESTING AND CALIBRATION

GEODATA SOLUTIONS GDS INC.
FOM TEST

Configuration:	Front Stinger	Date:	July 3rd, 2013
Altitude:	3 000 m	Helicopter:	Astar 350 BA+
Operator:	Pierre Filion	Location :	Eastmain, HQ

North (360°)	**Uncompensated mag (nT)**	**Compensated mag (nT)**	**Improv. Ratio**
PITCH	4,039	0,082	49,256
ROLL	8,854	0,075	118,053
YAW	2,406	0,057	42,211
TOTAL	**15,299**	**0,214**	**71,491**
East (90°)	**Uncompensated mag (nT)**	**Compensated mag (nT)**	**Improv. Ratio**
PITCH	0,911	0,059	15,441
ROLL	6,937	0,053	130,887
YAW	2,940	0,037	79,459
TOTAL	**10,788**	**0,149**	**72,403**
South (180°)	**Uncompensated mag (nT)**	**Compensated mag (nT)**	**Improv. Ratio**
PITCH	1,846	0,095	19,432
ROLL	9,814	0,087	112,805
YAW	4,875	0,094	51,862
TOTAL	**16,535**	**0,276**	**59,909**
West (270°)	**Uncompensated mag (nT)**	**Compensated mag (nT)**	**Improv. Ratio**
PITCH	1,975	0,089	22,191
ROLL	9,875	0,065	151,923
YAW	4,310	0,067	64,328
TOTAL	**16,160**	**0,221**	**73,122**
RESULTS	**Uncomp. mag (nT)**	**Comp. Mag (nT)**	**Improv. Ratio**
	58,782	**0,860**	**68,351**

APPENDIX B

PROFILE DATABASE ARCHIVE AND CHANNEL/FILE DESCRIPTION

Channel List & Description

Channel	Description	Sampling	Unit	Format
date	Flight date	10Hz	yyyy/mm/dd	d11.0
flt	Flight number	10Hz		s5.0
line	Line number	10Hz		d6.0
UTC	UTC time in second after midnight	10Hz	second	d8.1
lon	Post-processed longitude, Nad83	10Hz	dd.dddddd	d14.6
lat	Post-processed latitude, Nad83	10Hz	dd.dddddd	d13.6
x	Post-processed easting UTM, Nad83, Zone 18N	10Hz	meters	d9.2
y	Post-processed northing UTM, Nad83, Zone 18N	10Hz	meters	d10.2
z	Post-processed GPS elevation – orthometric MSL	10Hz	meters	d7.2
raltlc	Corrected radar altimeter	10Hz	meters	d8.2
drape	Drape surface used for height navigation	10Hz	meters	d7.2
DTMc	Digital Terrain Model	10Hz	meters	d7.2
basea	Main base mag	10Hz	nanoteslas	d10.3
mfluxX	Fluxgate X component	10Hz	nanoteslas	d13.3
mfluxY	Fluxgate Y component	10Hz	nanoteslas	d13.3
mfluxZ	Fluxgate Z component	10Hz	nanoteslas	d13.3
MBu	Raw uncompensated mag	10Hz	nanoteslas	d10.3
MBul	Lagged uncompensated mag	10Hz	nanoteslas	d10.3
MBc	Raw compensated mag	10Hz	nanoteslas	d10.3
MBclc	Lagged and despiked compensated mag	10Hz	nanoteslas	d10.3
drift_LF	Low-frequency diurnal correction	10Hz	nanoteslas	d10.3
magbc	Magnetic field, diurnally corrected (TMI)	10Hz	nanoteslas	d10.3
coralt	Altitude correction	10Hz	nanoteslas	d10.3
magalt	Magnetic field, corrected by altitude	10Hz	nanoteslas	d10.3
cormicro	Micro-levelling correction	10Hz	nanoteslas	d10.3
magmicro	Micro-levelled mag	10Hz	nanoteslas	d10.3
IGRF	International Geo-Referenced Field *	10Hz	nanoteslas	d10.3
magres	Mag IGRF removed (residual)	10Hz	nanoteslas	d10.3

* model 2010, August 14, 2013, Z= 548m

Files list and descriptions
(Database and grids are in Geosoft format)

Files list description.pdf	This file
GDS_P13010_Eastmain_Rap_Tech.pdf	Technical report

\Database

RubyHillEast_EastmainMine_DB.gdb	Database of magnetic data
Channels list description.pdf	Database channels description

\Grids

RHE_EMine-TMI.grd	Total magnetic field grid
RHE_EMine-RMI.grd	Residual magnetic field grid
RHE_EMine-FVD.grd	First vertical derivative of the magnetic field grid

\Maps (all maps are available in PDF and GeoTiff format)

RMFEAS-EM-20	Residual Magnetic Field – 1:20000 Eastmain Mine
1VDEAS-EM-20	First vertical derivative of the magnetic field – 1:20000 Eastmain Mine
RMFEAS-RU-20	Residual Magnetic Field – 1:20000 Ruby Hill East
1VDEAS-RU-20	First vertical derivative of the magnetic field – 1:20000 Ruby Hill East
RMFEAS-RE-25	Residual Magnetic Field – 1:25000 Both blocks
1VDEAS-RE-25	First vertical derivative of the magnetic field – 1:25000 Both blocks