

## **Operations Report for**

# **PRODIGY GOLD INCORPORATED**

## Horizontal Aero-Magnetic Gradient & XDS VLF-EM Survey

BLOCK C PROJECT Wawa Area, ON

August 16, 2012

Report #: B-383C

Requested by: Mr. Tom Pollock VP Exploration

Prepared by: Charles Barrie, Managing Partner *Terraquest Ltd.* 

1

## Table of Contents

1.	INTI	RODUCTON	4
1	.1.	EXECUTIVE SUMMARY	4
-	.2.	LOCATION	
2.	SUR	VEY SPECIFICATIONS	6
r	.1.	LINES AND DATA	
	.1.	SURVEY KILOMETRAGE	
_		NAVIGATION SPECIFICATIONS	
	.4.	FLIGHT PLAN (shown with Digital Terrain Model)	
	.5.	TOLERANCES – REFLIGHT	
_	1.	Traverse Line Interval	
	2.	Terrain Clearance:	
	<u> </u>	Diurnal Variation:	
	4.	GPS Data:	
	5.	Radio Transmission:	
	6.	Sample Density:	
2	.6.	NAVIGATION	8
3.	AIRI	BORNE GEOPHYSICAL EQUIPMENT	9
2		SURVEY AIRCRAFT	
	.1. .2.	EQUIPMENT OVERVIEW	
	.2.	EQUIPMENT OVERVIEW	
3	.s. 1.	Agnetics:	
	1. 2.	Data Acquisition & Magnetic Compensation System	
	2. 3.	Navigation System	
	3. 4.	Real-Time Correction GPS Receiver	
	 5.	XDS VLF-EM System	
	5. 6.	Tri-Axial Fluxgate Magnetic Sensor	
	о. 7.	Radar Altimeter	
	8.	Barometric Altimeter	
4.	BAS	E STATION EQUIPMENT	
	.1.	BASE STATION MAGNETOMETER / GPS RECEIVER	
5.		rs and calibrations	
-	.1.	MAGNETIC FIGURE OF MERIT	
5	.2.	MAGNETIC LAG	
6.	LOG	ISTICS	
6	.1.	PERSONNEL	
-	.2.	FIELD OPERATIONS REPORTING	
	.3.	BASE OF OPERATIONS	
7.		A PROCESSING	16
	.1.	DATA QUALITY CONTROL	
	.2.	FINAL MAGNETIC DATA PROCESSING.	
	.3.	FINAL ELECTROMAGNETC DATA PROCESSING	
7	.4.	LIST OF FINAL PRODUCTS	
8.	SUM	MARY	

9.	Α	PPENDICES	24
9	.1.	APPENDIX I - CERTIFICATE OF QUALIFICATION	
9			
9	.3.		
9	.4.	APPENDIX IV – README FILE	

# 1. INTRODUCTON

## **1.1. Executive Summary**

This report describes the specifications and parameters of an airborne geophysical survey carried out for:

### PRODIGY GOLD INCORPORATED

1205 – 700 West Pender Street Vancouver, BC V6C 1G8

Attention: Mr. Tom Pollock, VP Exploration Phone: 604-688-9006 x231 Email: tom.pollock@prodigygold.com

The survey was performed by:

### TERRAQUEST LTD.,

2-2800 John Street, Markham ON, Canada L3R 0E2

Phone: 905-477-2800 ext. 22 Email: hb@terraquest.ca.

The purpose of the survey of this type is to collect geophysical data that can be used to prospect directly for economic minerals that are characterized by anomalous magnetic or conductive responses. Secondly, the geophysical patterns can be used indirectly for exploration by mapping the geology in detail including faults, shear zones, folding, alteration zones and other structures. The data are carefully processed and contoured to produce grid files and maps that show distinctive patterns of the geophysical parameters.

To obtain this data, the area was systematically traversed by aircraft carrying geophysical equipment along parallel flight lines. The lines are oriented to intersect the geology and structure so as to provide optimum contour patterns of the geophysical data.

## 1.2. Location

The survey area is located in parts of Riggs and Jacobson Townships, Algoma, Ontario approximately 50 kilometres northeast of Wawa, 7 kilometres northwest of the Hamlet of Missanabie (Highway #651), 1.5 kilometres south of the train hamlet of Lochalsh, and along the northwest side of Dog Lake. Godin Lake lies near the middle of the Block. A power line runs through the survey area. The survey area is accessible by bush roads from the southwest.

The survey outline is rectangular with the north-south dimension of 4.1 kilometres and the eastwest dimension of 12.9 kilometres. The centre of the area is approximately 48 degrees 19 minutes north and 84 degrees 16 minutes.





# 2. SURVEY SPECIFICATIONS

## 2.1. LINES AND DATA

Parameter	Specification	Instrument Precision
Aircraft Speed	51.7 m/sec 186 km/hr	
Sampling Interval	5-6 m (10Hz)	
Flight-line Interval	75 m	+/- 3m
Flight-line Direction	000/180 degrees	
Control-line Interval	1030 m	+/- 3m
Control-line Direction	090/270 degrees	
Aircraft MTC	75.2 m	+/- 5m
Mag Sensor MTC	75.2 m	+/- 5m

## 2.2. SURVEY KILOMETRAGE

Block C	
172 Lines	782.5 km
5 Tie	66.4 km
182 Total	848.9 km

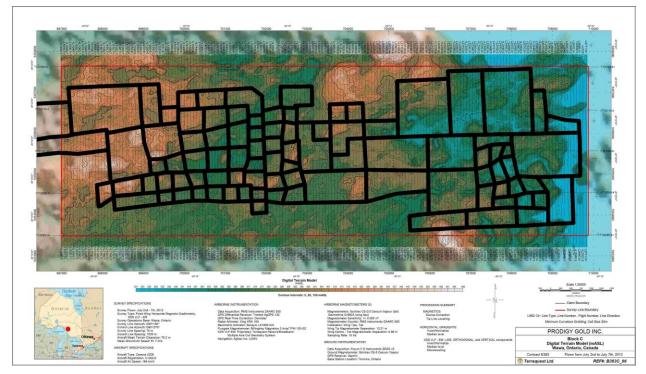
## 2.3. NAVIGATION SPECIFICATIONS

The following is the navigation parameter file for the survey lines and include the survey corner coordinates in NAD83 projection zone 16N, line spacing, line direction, master line and other navigational parameters.

0	C_	TRAV	
1	ΙI	272	

1	0273		
2	696997	5353500	AREA CORNER 1
2	696989	5357644	AREA CORNER 2
2	709875	5357644	AREA CORNER 3
2	709875	5353500	AREA CORNER 4

3 696997 5353286 COR1 WAYPOINT 1
4 172 NUMBER OF LINES
5 75.0 SPACING, m
8 75 MAX CROSS TRACK, m
9 0 0 0 DELTA X/Y/Z
10 1 LOG FPR EVERY 1 SECS
11 0.9996000000 0.0 0.0 K0, X/Y SHIFT
14 200 LINES EXTENDED BEYOND AREA
16 1000 FIRST LINE NUMBER
17 696997.0 5353286.0 0.0 MASTER POINT, HEADING
18 696789.0 5357623.0 270.0 TIE LINE MASTER POINT, HEADING
19 1030.0 200 TIE LINE SPACING, LINE EXTENSION, m
20 WGS-84 6378137.0 298.257223563 22 ELLIPSOID
21 0 NO EQUATORIAL CROSSING, N HEMISPHERE
30 20 9600 N 1 8 RS-232 PORT 2 INCOMING FORMAT
31 20 9600 N 1 8 RS-232 PORT OUTGOING FORMAT
38 0 METRIC SYSTEM
41 0.00 SYSTEM LAG, Secs.
80 0.00 PLANNED ALTITUDE, m
83 0 GPS ALTITUDE FOR VERTICAL BAR
84 0.00 0.00 ALTITUDE COEFFICIENT, OFFSET
85 100 MAX VERTICAL BAR SCALE
102 UTM UTM X/Y SCALE



## 2.4. FLIGHT PLAN (shown with Digital Terrain Model)

## 2.5. TOLERANCES – REFLIGHT

### 1. Traverse Line Interval

Re-flights would take place if the flight line separation of the final differentially corrected flight path is greater than 1.25 of the intended line separation over a distance greater than 1 kilometre.

### 2. Terrain Clearance:

By contract the aircraft mean terrain clearance (MTC) was to be maintained ideally at 70 metres in a drape mode; the actual mean terrain clearance flown was 75.2 metres. Re-flights were done if the final differentially corrected altitude deviated from the specified flight altitude by +/-10m over a distance of 3 kilometres or more if, in the pilot's opinion, it was safe to do so.

### 3. Diurnal Variation:

Diurnal activity in the survey was limited to 10 nT deviations from 10 minute chord.

### 4. GPS Data:

GPS data included at least 4 satellites for navigation and flight path recovery. There were no significant gaps in any of the digital data including GPS and magnetic data.

### 5. Radio Transmission:

The aircraft pilot makes no radio transmission that interferes with magnetic response.

### 6. Sample Density:

A reflight is required if the sample density along one or more of the survey lines exceeds 10 metres over a cumulative total of 1000 metres.

## 2.6. NAVIGATION

The satellite navigation system was used to ferry to the survey sites and to survey along each line. The survey coordinates were supplied by the client and were used to establish the survey boundaries and the flight lines. The flight path guidance accuracy is variable depending upon the number and condition (health) of the satellites employed. With Omnistar real time correction the accuracy was for the most part better than 3 metres.

# 3. AIRBORNE GEOPHYSICAL EQUIPMENT

## 3.1. SURVEY AIRCRAFT

The survey aircraft was a Cessna U206, registration C-GGLS, owned and operated by Terraquest Ltd. under full Canadian Ministry of Transport approval and certification for specialty flying including airborne geophysical surveys. The aircraft is maintained at base operations by a regulatory AMO facility, Leggat Aviation Inc.

The aircraft has been specifically modified with long-range fuel cells to provide up to 7 hours of range, outboard tanks, tundra tires, cargo door, and avionics as well as an array of sensors to carry out airborne geophysical surveys.



## **3.2. EQUIPMENT OVERVIEW**

The primary airborne geophysical equipment includes three high sensitivity cesium vapour magnetometers and an XDS VLF-EM system. Ancillary support equipment includes a tri-axial fluxgate magnetometer, radar altimeter, barometric altimeter, GPS receiver with a real-time correction service, and a navigation system. The navigation system comprises a left/right

indicator for the pilot and a screen showing the survey area, planned flight lines, and the real time flight path. All data were collected and stored by the data acquisition system. The following is a summary of the equipment specifications:

Aircraft	Cessna U206 / C-GGLS
Equipment:	
Magnetometers	Scintrex CS-2&3 Cesium Vapour
3-axis Fluxgate Magnetometer	Billingsley TFM100-LN
VLF-EM	Terraquest XDS VLF-EM
Low Frequency EM	Terraquest power monitor
GPS Receiver	Trimble AgGPS132
Radar Altimeter	King KRA 10A
Barometric Altimeter	Sensym LX18001AN
Acquisition	RMS Instruments DAARC 500
Navigation	AgNav Inc. P151 Linav system
Specifications:	
Lateral Sensor separation	13.2 metres
Longitudinal Sensor separation	8.9 metres
FOM	<1.2 nT
Sensitivity	0.001 nT

The 13.75 volts aircraft power is converted to 27.5 volts DC for the geophysical equipment by an ABS power supply.

## 3.3. EQUIPMENT SPECIFICATIONS

### 1. Magnetics:

Three high-resolution cesium vapour magnetometers, manufactured by Scintrex, were mounted in a tail stinger and two wing tips extensions; the transverse separation was 13.2 metres and the longitudinal separation was 8.9 metres.

Cesium Vapour Magnetometer	(mounted in tail stinger and wing tip extensions)
Manufacturer	Scintrex
Models	CS-2, CS-3
Resolution	0.001 nT counting at 0.1 per second
Sensitivity	+/- 0.005 nT
Dynamic Range	15,000 to 100,000 nT
Fourth Difference	0.02 nT

### 2. Data Acquisition & Magnetic Compensation System

DAS & Compensation	Combined
Model	DAARC 500
Manufacturer	RMS Instruments
Operating System	QNX 6.3 or greater
Time	104 MHz temperature compensated crystal clock

Front End Magnetic	Resolution 0.32pT; system noise <0.1pT; sample rate 160,
Processing	640, 800m or 1280 Hz
Front End Eluygoto	I/F module; oversampling, self-calibrating 16 bit A/D
Front End - Fluxgate	converter
Compensation	Improvement Ratio (total field) 10-20 typical
Input Serial	8 isolated RS232 channels; ASCII & Binary formats
Input Analog	16 bit, self-calibrating A/D conv.
Input Events	Four latched event inputs
Raw Data Logging	At front end sampling rate, 1 MB buffer
	Rate 10, 20 or 40 Hz; Serial up to 115.2 kbps; Recording
Output/Recording	media 1 GB Flash; 80 GB Hard Drive; Flash disk via USB;
	Display
Front Panel Indicators	8 LEDs for mag input; 2 LEDs for Front End status

### 3. Navigation System

Navigation System	
Model	P151
Manufacturer	AgNav Inc.
Operating System	Linex
Microprocessor	CPU Pentium based
Ports	RS232 for all devices
Graphic Display	Colour Screen
Pilot Display	P202: position, left/right, navigational info

### 4. Real-Time Correction GPS Receiver

GPS Differential Receiver						
Model	AgGPS132					
Manufacturer	Trimble					
Serial Number	02240-02249					
Output	NMEA string, PPS					
Channels	12 Channel DPGS, internal L-band					
Position Update	0.5 second for navigation					
Correction Service	Real time correction service subscription – Omnistar					
Sample Rate	Up to 10hz					
Broadcast Services	Omnistar Correction Service (AMSC) L band Broadcast (1557.845 MHz satellite band)					

### 5. XDS VLF-EM System

The XDS VLF-EM System is a recently developed VLF system. It uses 3 orthogonal coils mounted in the pod of the tail stinger, and coupled with a receiver-console, tuned to a half power bandwidth of 22-26 kHz which includes Cutler Maine (NAA) frequency 24 kHz, La Moure North Dakota (NML) frequency 25.2 kHz and Seattle, WA (NLK) frequency 24.8 kHz. Recorded parameters are the separate X, Y and Z coils.

VLF / EM	
Model	XDS
Manufacturer	Terraquest Ltd.
Primary Source	Magnetic field component radiated from government VLF
rimary source	radio transmitters
<b>Parameters Measured</b>	X, Y and Z components, absolute field
Frequency Range	Half power 22.0 - 26.0 kHz
Gain	Constant gain setting
Filtering	No filtering

### 6. Tri-Axial Fluxgate Magnetic Sensor

The fluxgate tri-axial magnetometer was mounted in the tail stinger cabin to monitor aircraft manoeuver and magnetic interference. This was used to compensate the high sensitivity data in real time.

Tri-Axial Fluxgate Magnetic Sensor	(for compensation, mounted in mid-section of tail stinger)
Model	TFM100-LN
Manufacturer	Billingsley Magnetics
Description	Low noise miniature triaxial fluxgate magnetometer
Axial Alignment	> Orthogonality $>$ +/- 0.5 degree
Accuracy	< +/- 0.75% of full scale (0.5% typical)
Field Measurement	+/- 100,000 nanotesla
Linearity	< +/- 0.0035% of full scale
Sensitivity	100 microvolt/nanotesla
Noise	< 14 picotesla RMS/–Hz @ 1 Hz

### 7. Radar Altimeter

Radar Altimeter	
Model	KRA-10A
Manufacturer	King
Serial Number	071-1114-00
Accuracy	5% up to 2,500 feet
Calibrate Accuracy	1%
Output	Analog for pilot, converted to digital for data acquisition

### 8. Barometric Altimeter

<b>Barometric Altimeter</b>	
Model	LX18001AN
Manufacturer	Sensym Inc.
Source	Coupled to aircraft barometric system

# 4. BASE STATION EQUIPMENT

## 4.1. BASE STATION MAGNETOMETER / GPS RECEIVER

A high sensitivity magnetometer (identical to the aircraft magnetometers) was used for the base station as follows:

Magnetometer Type	Cesium Vapour
Model	CS-2
Manufacturer	Scintrex Ltd.
Sensitivity	+/- 0.005 nT
Resolution	0.001 nT counting at 0.1 per second
Dynamic Range	15,000 – 120,000 nT
GPS model	Universal 12 channel
GPS manufacturer	Deluo
Computer Logger	Archer handheld

# 5. TESTS AND CALIBRATIONS

## 5.1. MAGNETIC FIGURE OF MERIT

Compensation calibration tests were performed to determine the magnetic influence of aircraft maneuvers and the effectiveness of the aircraft compensation method. The aircraft flew a square pattern in the four survey directions at a high altitude over a magnetically quiet area and perform pitches ( $\pm$  5°), rolls ( $\pm$  10°) and yaws ( $\pm$ 5°). The sum of the maximum peak-to-peak residual noise amplitudes in the total compensated signal resulting from the twelve maneuvers is referred to as the FOM. The FOM values for this survey were 1.16 nT, 1.22 nT and 0.53 nT for the left, right and tail sensors respectively (see Appendix).

## 5.2. MAGNETIC LAG

The magnetic lag was determined by examining discrete anomalies in the survey data, from line to line flown in opposite directions.

# 6. LOGISTICS

Pilot

Operator

Manager

Geophysicist

**Final Processing** 

## 6.1. PERSONNEL

The contractor supplied the following properly qualified and experienced personnel to carry out the survey and to reduce, compile and report on the data:

Field: Office: Kevin Sant Ali Allam France Belly-Biswas France Belly-Biswas Charles Barrie

## 6.2. FIELD OPERATIONS REPORTING

The aircraft and crew arrived in Wawa on June 29, 2012. The base station was set up at the airport and an FOM was flown on June 30<sup>th</sup> but the FOM failed due to excessive wind conditions. Diurnal conditions grounded the aircraft on the morning of July 1<sup>st</sup> but a successful FOM was flown in the afternoon. The survey was flown successfully in 6 flights (3-8) over a period of 6 days from July 2<sup>nd</sup> to 7<sup>th</sup> 2012; 4 days were allotted to survey production, 1.5 days to scheduled aircraft maintenance and 1 day to weather. Portions of Block A were flown during the last three fights. (see Appendix 3 for daily log). The crew stayed at the Wawa Motor Inn.

## 6.3. BASE OF OPERATIONS

The base of operations was at the Wawa airport. The base station (combined high sensitivity magnetic and GPS) was set up in a quiet area at airport.



# 7. DATA PROCESSING

## 7.1. DATA QUALITY CONTROL

The field data were examined in the evening after each flight by a geophysicist to inspect the data for quality control and tolerances. All data were approved and checked for continuity and integrity. Raw magnetic data were gridded to produce preliminary plots. The XDS VLF-EM data were subjected to median leveling and grid stacking to produce preliminary plots.

## 7.2. FINAL MAGNETIC DATA PROCESSING

### Adjustment of Diurnal Data:

n/a (Base station data was spotless)

### Adjustment of Total Field values on all three sensors:

Diurnal corrected the Total Field (Total Field – Diurnal) + Diurnal average Lag correction

### **Total Field Tie Line Leveling:**

Used Geosoft leveling system:

-Deleted all suspicious intersections during leveling of survey lines -Made adjustments on remaining out of level lines using the RTF as a guide

### **Total Field Micro-Levelling:**

No micro-levelling done on this block C, to conserve details in the South-East and in the North-West of the block.

### **Calculated Vertical Derivative:**

Derivative in Z with order of differentiation as 1 on the total field of the tail sensor channel Derivative in Z with order of differentiation as 2 on the total field of the tail sensor

channel.

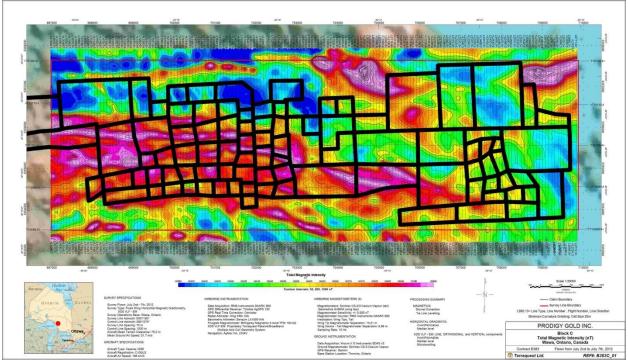
In the final correction process, the compensated tail sensor magnetic data was corrected with standard tie-line intersection leveling, and with adjustments on traverse lines out of level, using the RTF as a guide. The vertical magnetic gradients were calculated from the final processed total magnetic channel (originating from the Tail Sensor). The first and Second vertical derivatives of the Total Magnetic Intensity were calculated from the Total Magnetic Intensity. The finalized datasets were gridded with minimum curvature procedure with a cell size of 20 metres without the need for smoothing.

### Horizontal Gradients:

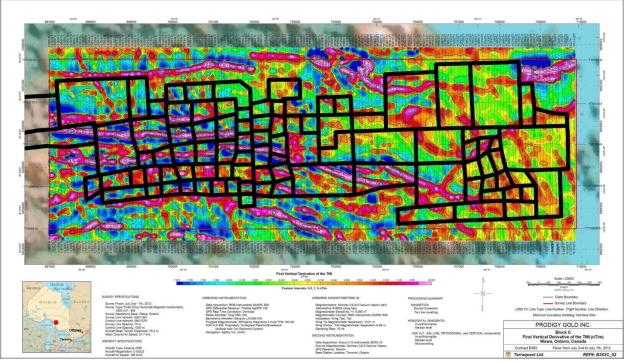
The transverse magnetic gradient was calculated by subtracting the left wing sensor reading from the right wing sensor reading and dividing the resulting value by the tip-to-tip separation (13.21 metres), yielding the measurement expressed as nT/m. The long line gradient was calculated as the along-line measured gradient by subtracting successive readings from the leveled tail sensor and dividing by the distance travelled in that time interval. Both horizontal gradients were converted from aircraft-centric to survey grid orientation by selectively inverting (multiplying by -1) in the south directions. The horizontal long line gradient was lag corrected. The horizontal lateral gradient was "DC shifted" by subtracting the median value on a line-by-line basis. The lateral and longitudinal gradients were gridded with minimum curvature procedure with a cell size of 20 metres.

### Reconstructed Total Magnetic Intensity:

The total magnetic intensity was calculated using the measured gradient data based on the method developed by Nelson.

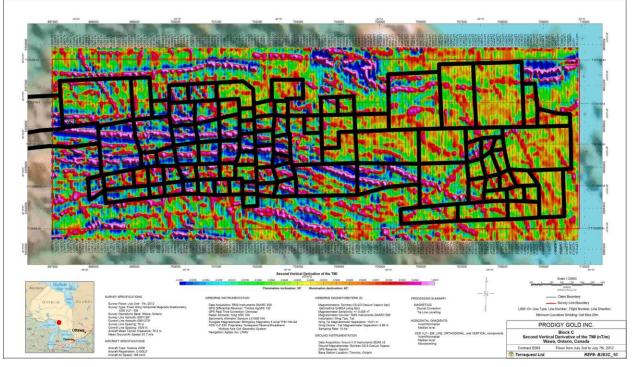


### **Total Magnetic Field**

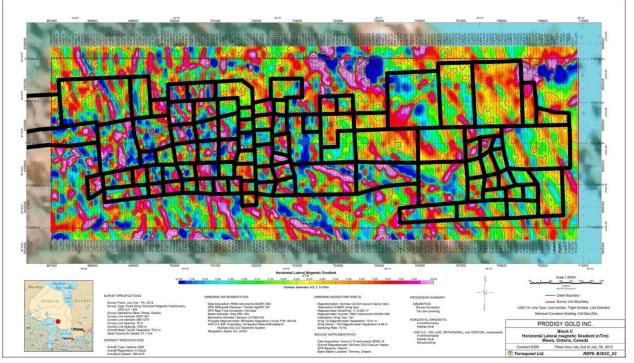


### Calculated 1st Vertical Magnetic Derivative

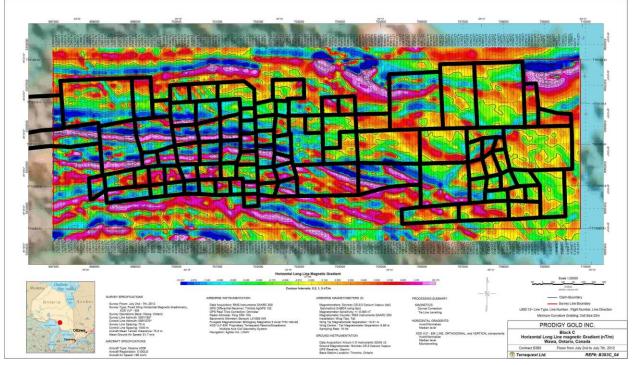
### **Calculated 2nd Vertical Magnetic Derivative**



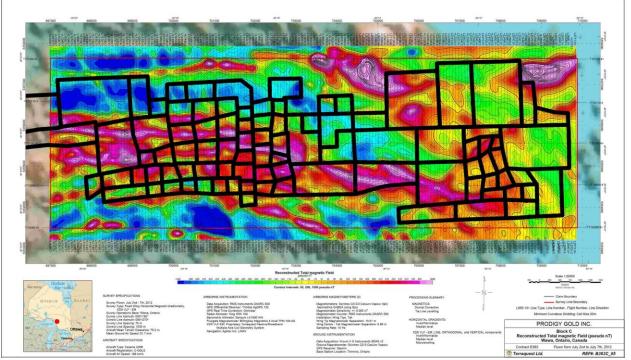




**Along Line Magnetic Gradient** 



### **Reconstructed Total Field**



## 7.3. FINAL ELECTROMAGNETC DATA PROCESSING

The x, y and z components of the XDS VLF-EM data in the half power range of 22.0 to 26.0 kHz (which include Cutler, North Dakota and Seattle transmitter signals), were low pass filtered, and median levelled. The data were presented as contour plots of the a) Line Field (Vcx) coil, b) Ortho Field (Vcp) coil and c) Vertical Field (Hcp) coil. Unfortunately, the Ortho coil was not functional on the first flight (along eastern part of block).

XDS\_line processing:

Polynomial filter order 0 Low-pass filter of 4 points Grid stacking Microlevelling with a limit at 0.00301 mV

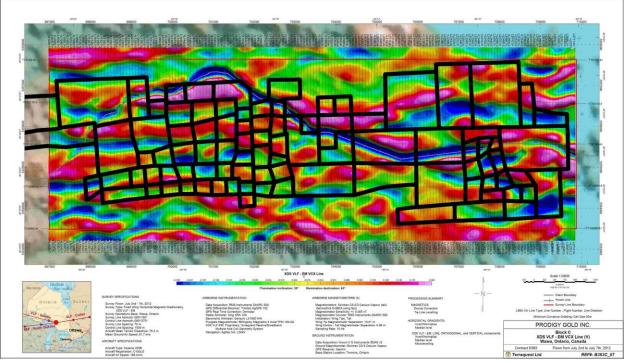
XDS\_Ortho processing:

Polynomial filter order 0 Low-pass filter of 5 points Grid stacking

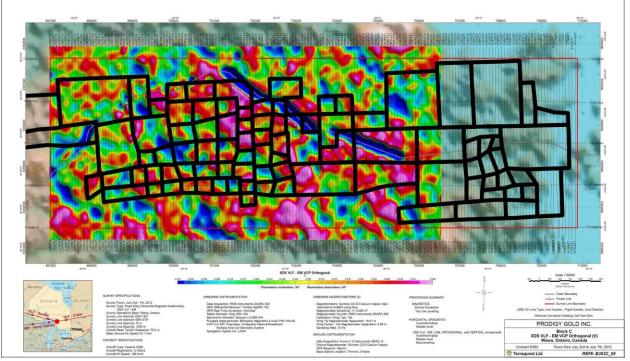
XDS\_Vert processing: Polynomial filter

Polynomial filter order 0 Low-pass filter of 3 points Grid stacking

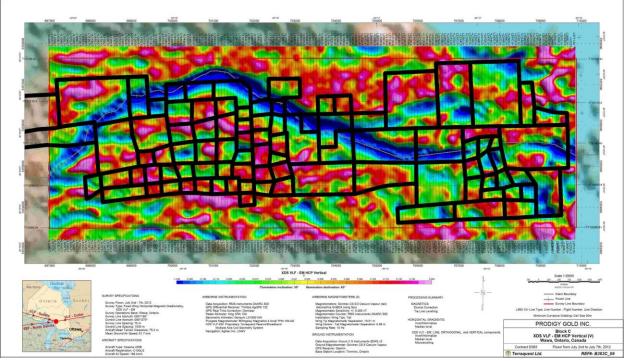
### XDS VLF-EM Line Field Coil (Vcx)



### XDS VLF-EM Ortho Field Coil (Vcp)



### **XDS VLF-EM Vertical Field Coil (Hcp)**



## 7.4. LIST OF FINAL PRODUCTS

Two copies of the following colour maps were produced at 1:20,000 scale with a topographic underlay as follows:

- 1. Total Magnetic Intensity (TMI) (nT)
- 2. Calculated first vertical derivative of measured total magnetic intensity (nT/m)
- 3. Measured Lateral Magnetic Gradient (nT/m)
- 4. Along Track Magnetic Gradient (nT/m)
- 5. Reconstructed Total Field (RTF) (pseudo nT)
- 6. Digital Terrain Model (m)
- 7. XDS VLF-EM LINE component (volts)
- 8. XDS VLF-EM ORTHO component (volts)
- 9. XDS VLF-EM VERTICAL component (volts)
- 10. Calculated second vertical derivative of measured total magnetic intensity (nT/m)

The following digital products are archived DVD:

- Digital Profile Archives in XYZ, GEOSOFT GDB and GBN (compatible with 4.1 or higher)
- All GEOSOFT GRID and MAP files used to generate the above listed final maps
- High quality JPEG and PDF format of maps
- Operations Report in PDF format

# 8. SUMMARY

An airborne high sensitivity, horizontal gradient magnetic and XDS VLF-EM survey was performed over Block C located in Algoma, Ontario approximately 50 km northeast of Wawa, in parts of Riggs and Jacobson Townships along the northwest side of Dog Lake. Survey parameters were 75.2 metre mean terrain clearance, 75 metre line intervals, 1030 metre tie line intervals, aircraft speed of 51.7 metres per second, and with data sample points at 10 Hz to provide equivalent ground samples at approximately 5-6 metres along the flight lines. The base of operations was at Wawa airport. A high sensitivity magnetic and a GPS base station located at the airport recorded the diurnal magnetic activity and reference GPS time during the survey.

The data were subjected to final processing to produce colour digital images at 1:20,000 scale as follows:

- a) **Magnetics**: Total Magnetic intensity of tail sensor, calculated first vertical derivative, calculated second vertical derivative, along track magnetic gradient, lateral magnetic gradient, Reconstructed Total magnetic Field (RTF)
- b) **XDS VLF-EM**: Line, Ortho and Vertical Fields
- c) Digital Terrain Model

All data have been archived as Geosoft database (GDB and GBN) and XYZ formats; all Geosoft MAP and GRID files used to make the maps; JPEG and PDF formats, and this report in PDF format are included in the archive.

Respectfully Submitted,

Charles Barrie, M.Sc. Vice President Terraquest Ltd.

## 9. **APPENDICES**

## 9.1. APPENDIX I - CERTIFICATE OF QUALIFICATION

I, Charles Barrie, certify that I:

- 1) am registered as a Fellow with the Geological Association of Canada, as P.Geo with Association of Professional Geoscientists of Ontario (APGO) and work professionally as a geologist,
- 2) hold an Honours degree in Geology from McMaster University, Canada, obtained in 1977,
- 3) hold an M.Sc. in Geology from Dalhousie University, Canada, obtained in 1980,
- 4) am a member of the Prospectors and Developers Association of Canada,
- 5) am a member of the Canadian Institute of Mining, Metallurgy and Petroleum,
- 6) have worked as a geologist for over thirty years,
- 7) am employed by and am an owner of Terraquest Ltd., specializing in high sensitivity airborne geophysical surveys, and
- 8) have prepared this operations and specifications report pertaining to airborne data collected by Terraquest Ltd.

Markham, Ontario, Canada

Signed



Charles Q. Barrie, M.Sc. Vice President, Terraquest Ltd.

## 9.2. APPENDIX II – MAGNETIC FIGURE OF MERIT (FOM)

	FOM INDEX :GLS- FLIGHT GLS001 30June2012 / Wawa, ON														
						FOM	TEST #1								
	MAG 1														
DIR	TRAV	LINE	PIT	СН	RO	LL	YA	W		Р	R	Y	SUM		
	FLG		MAX	MIN	MAX	MIN	MAX	MIN							
N	*	9010	0.07	-0.07	0.04	-0.07	0.05	-0.06		0.14	0.11	0.11	0.36		
E		9020	0.07	-0.05	0.04	-0.09	0.04	-0.04		0.12	0.13	0.08	0.33		
S	*	9030	0.03	-0.06	0.04	-0.05	0.04	-0.04		0.09	0.09	0.08	0.26		
W		9040	0.02	-0.03	0.04	-0.05	0.03	-0.04		0.05	0.09	0.07	0.21		
									SUM	0.4	0.42	0.34	1.16		
									FOM	1.16					
							FOM TRAVERSE ONLY 0.62 (X2 : 1.24 )						)		

						М	AG 2						
DIR	TRAV	LINE	PIT	СН	RO	LL	YAW			Р	R	Y	SUM
	FLG		MAX	MIN	MAX	MIN	MAX	MIN					
N	*	9010	0.07	-0.06	0.08	-0.06	0.06	-0.06		0.13	0.14	0.12	0.39
E		9020	0.02	-0.06	0.06	-0.06	0.03	-0.06		0.08	0.12	0.09	0.29
S	*	9030	0.04	-0.04	0.04	-0.05	0.03	-0.03		0.08	0.09	0.06	0.23
W		9040	0.05	-0.04	0.05	-0.05	0.05	-0.07		0.09	0.10	0.12	0.31
									SUM	0.38	0.45	0.39	1.22
									FOM	1.22			
							FC	M TRAVE	RSE ONLY	(x2 :	1.24	)	

						М	AG 3						
DIR	TRAV	LINE	PIT	СН	RO	ROLL YAW				Р	R	Y	SUM
	FLG		MAX	MIN	MAX	MIN	MAX	MIN					
N	*	9010	0.03	-0.02	0.01	-0.02	0.02	-0.01		0.05	0.03	0.03	0.11
E		9020	0.03	-0.03	0.03	-0.03	0.02	-0.03		0.06	0.06	0.05	0.17
S	*	9030	0.03	-0.05	0.02	-0.02	0.01	-0.01		0.08	0.04	0.02	0.14
w		9040	0.03	-0.02	0.01	-0.01	0.02	-0.02		0.05	0.02	0.04	0.11
									SUM	0.24	0.15	0.14	0.53
									FOM	0.53			
				-			FC	FOM TRAVERSE ONLY 0.25 (x2 : 0					)

## 9.3. APPENDIX III – FIELD OPERATIONS DAILY LOG

					QUES	ST SUF	RVEYS	: Dail	у Оре	erations Report					
			DLD INCORPO				WAWA - TI								
	DATE	1-Jul-12	REPO				ORIZONTAL GRADIENT MAG; XDS/VLF								
	AIRCRAFT	GLS	GEOPHYS	SICAL PLAT	FORM	HORIZONT			S/VLF						
							CI	REW							
		GROUND							AIR CREW		4				
	d Manager / Lo physicist/Proc		France Biswa France Biswa				ot 1 ot 2	Kevin Sant			-				
	physicist/Proci		FIGILE DISWA	15			rator 1	Ali Allam			-1				
000	Support	200012					rator 2	/ ur / undirit							
						A	ME				1				
							DAILY OF	ERATIONS							
		SVY	WX	MAINT	EQP	SETUP	MOB	HIATUS							
Y CLAS	SIFICATION		0.5			0.5			1						
NDTNS	Calibration (F	OM) was reflo	own												
LIGHT	2	Temp	20.0 °C	Altimeter	10,000 ft	Wind	30 knots	Obs							
LIGHT		Temp		Altimeter		Wind		Obs							
LIGHT		Temp		Altimeter		Wind	<u> </u>	Obs							
								FORMATIO							
Flight	Take-Off	Land	Prod Start	Prod End	Flight	Survey	KMS	KMS	KMS		Remarks				
lumber	(UTC)	(UTC)	(UTC)	(UTC)	Hours	Hours	Production	Reflights	Rejected						
2	14:56:00	16:30:00			1:34:00										
	<u> </u>														
						1	GEOPHYS	SICAL DATA							
VERAG	F I						02011110								
TEI UIO	-	Full													
		Partial							Reflight						
JRNAL			TION						COMPLIANO	CE/OBSERVATIONS					
	Station 1			Unsettled i	n the morni	ng; Active in	the afternoor	1 I							
	Station 2														
GNETC	S														
DIOMET	RICS	Rep TL		Pre-Smp		Post-Smp		Res Chk							
DIONEI	100	Tup Tu		The omp		1 Ost Onp		They offic							
					GEN	ERAL COM	MENTS / MSC	ELLANEO	US OBSERV	/ATIONS					
ather de	layed the calit	pration flight to	9:55 am. The	calibration	FOM was s	uccessful. H	ligh diurnal a	ctivity (14 n1	per 10 mini	utes chord) prevented production fli	ght in the afternoon.				
											~				
						CUI	<b>IULATIVE SI</b>	IDVEV CU							
			S	urvev Davs	_	CUI		Hours	2:46						
				Weather, etc	c) Davs	1.5		/ey Hours	2.40						
				itenance Da		1.5	Total Produ								
				(Equipment			Total Ref								
			- analy	Setup	/_~/~	0.5	Total Reje								
			M	ob / Demob		1.0				Report prepared by :					
			H	liatus Days			(Total Pr		2144.6	France Biswas	1-Jul-12				
				fotal Days		3.0									

			TE	RRA	QUES	ST SUF	RVEYS	: Dail	y Ope	erations Report	
	CLIENT	PRODIGY GO	LD INCORPO	RATED		PROJECT	WAWA - TI	MMINS			
	DATE	2-Jul-12	REPOR			TQ PROJEC			883		
	AIRCRAFT	GLS	GEOPHYS	SICAL PLAT	FORM	HORIZONT			S/VLF		
							CI	REW			
		GROUND							AIR CREW		
	I Manager / Lo physicist/Proc		France Biswas France Biswas				ot 1 ot 2	Kevin Sant			
	physicist/Proc		FTarice biswa	5			ator 1	Ali Allam			
000	Support	233012					ator 2	/ di / di di li			
							ME				
							DAILY OF	PERATIONS			
		SVY	WX	MAINT	EQP	SETUP	MOB	HIATUS			
	SIFICATION	0.5				0.5					
		radar) and proc									
FLIGHT	3	Temp	20.0 °C	Altimeter		Wind	calm	Obs			
FLIGHT	4	Temp	20.0 °C	Altimeter		Wind Wind	calm	Obs Obs			
FLIGHT		Temp		Altimeter		vvind	FLIGHT IN	FORMATIO	N		
Flight	Take-Off	Land	Prod Start	Prod End	Flight	Survey	KMS	KMS	KMS		Remarks
Number	(UTC)	(UTC)	(UTC)	(UTC)	Hours	Hours	Production	Reflights	Rejected		(churks
3	12:30:00	17:05:00	12:54:09		4:35:00	3:48:51	200.0	9.1		2 lines reflown because the plane wa	as not on survey mode; power line in the
4	20:51:21	21:18:20			0:26:59					radar calibration	
							GEOPHYS	SICAL DATA	4		
OVERAGE	E	Full	44 survey line	s flown in bl	lock C						
		Partial							Reflight	2 lines in block C (2700, and 2710)	
IURNAL		DURA							COMPLIAN	CE/OBSERVATIONS	
	Station 1	11:42:59	17:16:33	quiet							
ACHETO	Station 2										
AGNETCS		Data aceptabl	e								
								Res Chk			
ADIOMET	RICS	Rep TL		Pre-Smp		Post-Smp		Res Chk			
					GEN	ERAL COMM	IENTS / MSC		JS OBSER	VATIONS	
adar Calibi	ration succes	sful; mean altit	ude above the	e ground dur	ing flight 3	: 95 m					
							IULATIVE S				
				urvey Days		0.5		Hours	7:48		
			Neather, etc		1.5		vey Hours	3:48			
				tenance Day				uction KMS	200.0		
			Standby (	(Equipment) Setup	Days	1.0		light KMS ected KMS	9.1	4	
			Mc			1.0	Percent (		0 22%	Peport prepared by :	
				ob / Demob iatus Days		1.0	Percent ( (Total Pr	Complete	9.33% 2144.6	Report prepared by : France Biswas	2-Jul-12

			TE	RRA	QUES	ST SUF	RVEYS	: Dail	v Ope	rations Report	
	CLIENT	PRODIGY GO	LD INCORPO	RATED		PROJECT	WAWA - TI	MINS			
	DATE	3-Jul-12	REPO			TQ PROJEC			83		
	AIRCRAFT	GLS	GEOPHYS	SICAL PLAT	FORM	HORIZONT	AL GRADIEN		S/VLF		
							CI	REW			-
		GROUND							AIR CREW		
	d Manager / L		France Biswa				ot 1	Kevin Sant			_
	physicist/Proc physicist/Proc		France Biswa	s			ot 2 ator 1	Ali Allam			_
Oeu	Support	65501.2					ator 2	All Allam			-
	oupport						ME				_
							DAILY OF	PERATIONS			
		SVY	WX	MAINT	EQP	SETUP	MOB	HIATUS			
DAY CLAS	SIFICATION		1.0								
CONDTNS	fog in the mo	prning and low	ceiling through	nout the day							
FLIGHT		Temp		Altimeter		Wind		Obs			
FLIGHT		Temp		Altimeter		Wind		Obs			
FLIGHT		Temp		Altimeter		Wind		Obs			
					-			FORMATIO			
Flight	Take-Off	Land	Prod Start (UTC)	Prod End	Flight Hours	Survey	KMS	KMS Reflights	KMS Rejected		Remarks
Number	(UTC)	(UTC)	(010)	(UTC)	Hours	Hours	Production	Renights	Rejected		
-											
							GEOPHYS	SICAL DATA			
COVERAG	E	Full									
		Full									
		Partial							Reflight		
DIURNAL		DURA	TION						COMPLIANC	CE/OBSERVATIONS	
	Station 1										
MAGNETC	Station 2										
MAGINETC	0										
RADIOMET	TRICS	Rep TL		Pre-Smp		Post-Smp		Res Chk			
					051	ERAL COM				ATIONS	
					GEN	IERAL COMIN		ELLANEOU	IS UBSERV	ATIONS	
						CUN	IULATIVE S	URVEY SUM	IMARY		
		_	S	urvey Days		0.5		Hours	7:48		
				Veather, etc	.) Days	2.5	Total Sun	vey Hours	3:48		
Maintenance Days Total Production KMS 200.0											
			Standby	(Equipment	) Days		Total Ref		9.1		
				Setup		1.0	Total Reje				
				ob / Demob		1.0	Percent (		9.33%	Report prepared by :	
				iatus Days otal Days		5.0	(Total Pr	UJ LININS)	2144.6	France Biswas	3-Jul-12

			TE	RRA	QUES	ST SUF	RVEYS	: Dail	v Ope	rations Report		
	CLIENT	PRODIGY GO			~~	PROJECT			<b>,</b>			
	DATE	4-Jul-12	TQ PROJEC									
					HORIZONT	AL GRADIE	T MAG; XD	S/VLF				
							С	REW				
		GROUND							AIR CREW			
	l Manager / L		France Biswa				ot 1	Kevin Sant				
	physicist/Proc		France Biswa	s			ot 2					
Geo	physicist/Proc	cessor 2					rator 1	Ali Allam			_	
Support			Operator 2 AME				-					
								PERATIONS				
		SVY	WX	MAINT	EQP	SETUP	MOB	HIATUS				
Y CLAS	SIFICATION	1.0										
NDTNS												
IGHT	4	Temp		Altimeter	310 ft	Wind	calm	Obs				
IGHT	5	Temp		Altimeter	310 ft	Wind	calm	Obs				
IGHT		Temp		Altimeter		Wind		Obs				
								IFORMATIO				
light	Take-Off	Land	Prod Start	Prod End	Flight	Survey	KMS	KMS	KMS		Remarks	
mber	(UTC)	(UTC)	(UTC)	(UTC)	Hours	Hours	Production	Reflights	Rejected			
4	12:01:00											
5	19:10:00	23:10:00	19:29:45	22:48:31	4:00:00	3:18:46	195.5	4.5		went off track by 30 m		
							CEODHY	SICAL DATA				
<b>ERAG</b>	-		1									
		Full	Flight 4: 39 tra	averse lines	and 5 tie li	ines in block (	C; Flight 5: 4	3 survey line	s in block C			
		Partial							Reflight	1 line (1480) in block C		
RNAL		DURA	TION					(	COMPLIAN	CE/OBSERVATIONS		
	Station 1	11:20:29	23:19:49	quiet								
	Station 2											
GNETC	S											
		Flight 4 and 5:	data acceptat	ole								
		-										
DIOMET	RICS	Rep TL		Pre-Smp		Post-Smp		Res Chk				
	1400	TROPTE	I	T to-omp		1 Ost-omp	I	Thes offic				
					GEN	ERAL COMN	MENTS / MS	CELLANEOU	JS OBSER	/ATIONS		
ht 4 mea	an elevation a	above the group	nd 95 m: fliaht	5 mean ele	vation abo	ve the around	1: 93.6 m					
		5	, 5			5						
						CUB	<b>IULATIVE S</b>		MADY			
			C.	Irvey Days		1.5		Hours	10:32			
Standby (Weather, etc.) Days						2.5		Hours vev Hours	16:32			
Maintenance Days					2.5		uction KMS	637.2				
Standby (Equipment) Days Setup							light KMS	13.6				
					1.0		ected KMS	10.0				
Mob / Demob					1.0		Complete	29.71%	Report prepared by :			
			Н	iatus Days				oj LKMS)	2144.6	France Biswas	4-Jul-12	
			т	otal Days		6.0				France Diswas	4-Jul-12	

27

			TE	RRA	QUES	ST SUF	RVEYS	: Dail	v Ope	rations Report			
	CLIENT   PRODIGY GOLD INCORPORATED						PROJECT  WAWA TIMMINS						
	DATE					TQ PROJEC			83				
AIRCRAFT GLS GEOPHYSICAL PLATFORM HORIZONTAL GRADIENT MAG; XDS/VLF													
		GROUND					C	REW					
							AIR CREW		-				
Field Manager / Logistics France Biswas Geophysicist/Processor 1 France Biswas						Pilot 1 Kevin Sant Pilot 2					-		
	Geophysicist/Processor 2				ator 1	Ali Allam							
000	Support						ator 2	/ ur / uncertr					
							ИE						
							DAILY OF	PERATIONS			-		
			WX	MAINT	EQP	SETUP	MOB	HIATUS					
	SIFICATION			0.5									
		flight in the mo	prning and fern										
FLIGHT	6	Temp		Altimeter	310 ft	Wind	strong	Obs Obs					
FLIGHT FLIGHT		Temp Temp		Altimeter		Wind Wind		Obs					
FLIGHT	1	Temp		Aumeter		Wind	FUGHTIN	FORMATIO	N				
Flight	Take-Off	Land	Prod Start	Prod End	Flight	Survey	KMS	KMS	KMS		Remarks		
Number	(UTC)	(UTC)	(UTC)	(UTC)	Hours	Hours	Production	Reflights	Rejected		(Churks		
6	13:00:00	16:10:00	13:22:58	15:57:54	3:10:00	2:34:56	132.1						
							GEOPHYS	SICAL DATA	1				
COVERAG	E	Full	Flight 6: 24 tra	averse lines	in block C	and 5 tie line	s in block A						
	Partial								Reflight				
DIURNAL		DURA							COMPLIANC	CE/OBSERVATIONS			
	Station 1	12:14:05	16:24:48	quiet									
MACHETO	Station 2												
MACINETO	data acceptable												
RADIOMET	RICS	Rep TL		Pre-Smp		Post-Smp		Res Chk					
						- eer ernp							
					GEN	ERAL COMN	IENTS / MSC	CELLANEOU	JS OBSERV	ATIONS			
Block C me	an elevation	above the grou	nd 92.8 m; Blo	ick A mean	elevation a	above the gro	und: 94.9 m						
						CUN	IULATIVE S	URVEY SUM	IMARY				
	Survey Days							Hours	19:42				
1	Standby (W					2.5		vey Hours	13:42				
1				tenance Da				uction KMS 769.3					
1				Equipment Setup	) Days	1.0		light KMS ected KMS	13.6				
			Me	ob / Demob		1.0		Complete	35.87%	Report prepared by :			
	Hiatus					1.0		oj LKMS)	2144.6		5 1.1 40		
				otal Days		7.0	(	,,		France Biswas	5-Jul-12		

			TE		QUES	ST SUF	RVEYS	: Dail	v Ope	erations Report	
	CLIENT	PRODIGY GC	OLD INCORPO	RATED	<u> </u>	IPROJECT	WAWA - TI	MMINS	<b>y -</b> r-	autono nopert	
	DATE	6-Jul-12 REPORT # REP008			TQ PROJEC	CT REF	B				
AIRCRAFT GLS GEOPHYSICAL PLATFORM					HORIZONT	AL GRADIEN		S/VLF			
							C	REW			
		GROUND							AIR CREW		
Field Manager / Logistics France Biswas						lot 1	Kevin Sant				
Geophysicist/Processor 1 France Biswas Geophysicist/Processor 2						lot 2 rator 1	Ali Allam			-1	
000	Support	23301 2					rator 2	All Alldin			
						AME					
								PERATIONS			
		SVY	WX	MAINT	EQP	SETUP	MOB	HIATUS			
	SIFICATION			1.0	L						
CONDTNS FLIGHT		Temp	T	Altimeter	,	Wind	т	Obs	1		
FLIGHT		Temp	+	Altimeter	<u> </u>	Wind		Obs			
FLIGHT		Temp	+	Altimeter	1	Wind	-	Obs			
			<u></u>				FLIGHT IN	FORMATIO	N		
Flight	Take-Off	Land	Prod Start	Prod End		Survey	KMS	KMS	KMS		Remarks
Number	(UTC)	(UTC)	(UTC)	(UTC)	Hours	Hours	Production	Reflights	Rejected		
			+	<b>↓</b>	<b> </b>			-			
		_			<u> </u>		GEOPHY	SICAL DAT			
COVERAGE		Full					020	510/AL 2.1.1.			
		Partial							Reflight		
DIURNAL			ATION							CE/OBSERVATIONS	
	Station 1										
MAGNETCS	Station 2										
MAGINETC	>										
RADIOMET	RICS	Rep TL	4	Pre-Smp	L	Post-Smp		Res Chk			
	GENERAL COMMENTS / MSCELLANEOUS OBSERVATIONS										
					GEN	ERAL COMIN	IENTS / MSG	CELLANEO	JS OBSERV	ATIONS	
in Geraldtor	1 for 50 h insp	ection of the a	aircraft								
						CUN	MULATIVE S	URVEY SU	MARY		
				urvey Days		2.0		Hours	19:42		
Standby (Weather, etc.) Days					2.5		vey Hours	13:42			
				tenance Day		1.5 Total Product		uction KMS 769.3 hight KMS 13.6			
				(Equipment) Setup	Days	1.0		Total Reflight KMS Total Rejected KMS			
			M	ob / Demob		1.0		Complete	35.87%	Report prepared by :	
				liatus Days			(Total Pr	oj LKMS)	2144.6		6-Jul-12
				Fotal Days	_	8.0				France Biswas	6-JUI-12

					<u></u>				-				
					QUES	ST SUF	RVEYS	: Dail	у Оре	erations Report			
	CLIENT	ENT PRODIGY GOLD INCORPORATED					PROJECT WAWA - TIMMINS						
	DATE				TQ PROJEC		B3						
ARCRAFT GLS GEOPHYSICAL PLATFORM HORIZONTAL GRADIENT MAG; XDS/VLF CREW													
			0000			-	C						
		GROUND			0.1			AIR CREW					
Field Manager / Logistics France Biswas Geophysicist/Processor 1 France Biswas					Pilot 1 Kevin Sant Pilot 2								
	physicist/Proc		Tance biswa	5		Operator 1		Ali Allam					
000	Support					Operator 2		7 47 7 46411					
						A							
							DAILY O	PERATIONS					
		SVY	WX	MAINT	EQP	SETUP	MOB	HIATUS					
	SIFICATION	1.0											
CONDTNS													
FLIGHT	7	Temp		Altimeter	310 ft	Wind	light	Obs					
FLIGHT	8	Temp		Altimeter	310 ft	Wind Wind	strong	Obs Obs					
FLIGHT		Temp	I	Annueter		vvind	FLIGHTIN	FORMATIO	V				
Flight	Take-Off	Land	Prod Start	Prod End	Flight	Survey	KMS	KMS	KMS		Remarks		
Number	(UTC)	(UTC)	(UTC)	(UTC)	Hours	Hours	Production	Reflights	Rejected		Actual KS		
7	12:10:00	17:00:00			4:50:00			rtongrito	Tiejeetea				
8	19:10:00	22:05:00	19:22:21		2:55:00		139.0						
							GEOPHY	SICAL DATA	1				
COVERAGE Full Flight 7: 22 traverse lines in block C, 29 traverse lines in block A; Flight 8: 3 tie lines in block B, 29 traverse ines in block A													
						, 20 0010100							
DIURNAL		Partial DURA	TION						Reflight	CE/OBSERVATIONS			
DIURNAL	Station 1	11:27:50		Quiet					JUMPLIAN	CE/OBSERVATIONS			
	Station 2	11.21.00	22.10.00	GRUICE									
MAGNETC				1									
Flight 7 and 8: Data acceptable													
riigiti / anu o. Data acceptable													
D I DI OLIT													
RADIOMET	RICS	Rep TL		Pre-Smp		Post-Smp		Res Chk					
					GEN	ERAL COMM	IENTS / MS	CELLANEOU	JS OBSER\	/ATIONS			
Flight 7: mean elevation above the ground of 93.4 m for block C, 94 m for block A; Flight 8: mean elevation above the ground of 94.1 for block A, 94.6 m for blockB													
······································													
						011							
	CUMULATIVE SURVEY SUMMARY Survey Days 3.01 Total Hours 27.27												
Standby (Weather, etc.) Days					3.0		Hours vev Hours	27:27					
				tenance Da				uction KMS					
				(Equipment		1.5		light KMS	13.6				
				Setup		1.0		ected KMS					
				ob / Demob		1.0		Complete	53.19%	Report prepared by :			
				iatus Days			(Total Pr	oj LKMS)	2144.6	France Biswas	7-Jul-12		
				otal Dave		9.0							

## 9.4. APPENDIX IV – README FILE

Terraquest Ltd. B383 Prodigy Gold Inc. High Resolution Aeromagnetic / Horizontal gradiometer / XDS VLF-EM Survey DATA ARCHIVE FOR **BLOCK C** CONTENTS-----\_\_\_\_\_ 1.1 /DATABASE 1.2 /GRIDS 1.3 /MAPS 1.4 /JPEGs 1.5 /PDFs 1.6 /B383 C ReadMe.docx 1.1 / DATABASE B383 BlockC.gdb B383 BlockC.gbn B383 BlockC.xyz 1.2 /GRIDS B383 C TMI.grd, .gi Total magnetic intensity, levelled, microlevelled Calculated 1<sup>st</sup> vertical derivative of the TMI B383\_C\_TMI\_1VD1.grd, .gi B383 C HX.grd, .gi Horizontal Lateral gradient B383 C HY.grd, .gi Horizontal Long Line gradient B383\_C\_RTF.grd, .gi Reconstructed Total Field B383\_C\_DTM.grd, .gi Digital terrain model B383 C XDS\_Line.grd, .gi XDS VLF-EM Line B383 C XDS Ortho.grd, .gi XDS VLF-EM Orthogonal B383\_C\_XDS\_vert.grd, .gi B383\_C\_TMI\_2VD1.grd, .gi XDS VLF-EM vertical component Calculated  $2^{\rm nd}$  vertical derivative of the  ${\rm TMI}$ 1.3 /MAPs B383\_C\_TMI.map, .xml Total magnetic intensity, levelled, microlevelled, SRTM underlay B383 C TMI 1VD1.map, .xml Calculated 1st vertical derivative of the TMI, SRTM underlay B383 C HX.map, .xml Horizontal Lateral gradient, SRTM underlay B383 C HY.map, .xml Horizontal Long Line gradient, SRTM underlay B383 C RTF.map, .xml Reconstructed Total Field, SRTM underlay B383\_C\_DTM.map, .xml B383\_C\_XDS\_Line.map, .xml Digital terrain model, SRTM underlay XDS VLF-EM Line, SRTM underlay B383 C XDS Ortho.map, .xml XDS VLF-EM Orthogonal, SRTM underlay B383\_C\_XDS\_vert.map, .xml XDS VLF-EM vertical component, SRTM underlay Calculated  $2^{nd}$  vertical derivative of the B383 C TMI 2VD1.map, .xml TMI, SRTM underlay 1.4 /JPEGs (high quality) B383 C TMI.jpg Total magnetic intensity, levelled, microlevelled, SRTM underlay B383\_C\_TMI\_1VD1.jpg Calculated 1<sup>st</sup> vertical derivative of the TMI, SRTM underlay B383 C HX.jpg Horizontal Lateral gradient, SRTM underlay B383 C HY.jpg Horizontal Longitudinal gradient, SRTM underlay B383 C RTF.jpg Reconstructed Total Field, SRTM underlay B383 C DTM.jpg Digital terrain model, SRTM underlay B383 C XDS Line.jpg XDS VLF-EM Line, SRTM underlay B383\_C\_XDS\_Ortho.jpg XDS VLF-EM Orthogonal, SRTM underlay B383 C XDS vert.jpg XDS VLF-EM vertical component, SRTM underlay Calculated 2<sup>nd</sup> vertical derivative of the B383 C TMI 2VD1.jpg TMI, SRTM underlay

1.5 /PDFs B383\_C\_TMI.pdf

> B383\_C\_TMI\_1VD1. pdf TMI, SRTM underlay B383\_C\_HX. pdf B383\_C\_HY. pdf B383\_C\_RTF. pdf B383\_C\_DTM. pdf B383\_C\_XDS\_Line. pdf B383\_C\_XDS\_ortho. pdf B383\_C\_XDS\_vert. pdf B383\_C\_TMI\_2VD1. pdf TMI, SRTM underlay

Total magnetic intensity, levelled, microlevelled, SRTM underlay Calculated 1<sup>st</sup> vertical derivative of the

Horizontal Lateral gradient, SRTM underlay Horizontal Long Line gradient, SRTM underlay Reconstructed Total Field, SRTM underlay Digital terrain model, SRTM underlay XDS VLF-EM Line, SRTM underlay XDS VLF-EM Orthogonal, SRTM underlay XDS VLF-EM vertical component, SRTM underlay Calculated 2<sup>nd</sup> vertical derivative of the

1.6 /B383\_C\_ReadMe.docx

B383\_BlockC.xyz channel list

\_\_\_\_\_

\*\*Note- Traverse lines in the databases are denoted with an L, Tie lines with a  $T^{**}$ 

The Magnetics/VLF data files for Block C contain the following channels:

LAT LON TIME RADAR_ALT VMX VMY VMZ TF1UNC TF2UNC TF3UNC TF1CMP TF2CMP TF3CMP TM_FINAL	Latitude WGS84 (Decimal Degrees) Longitude WGS84 (Decimal Degrees) UTC Time (seconds after midnight) Calibrated radar altimeter (mAGL) Fluxgate X component Fluxgate Y component Uncompensated Magnetic intensity - left wing sensor(nT) Uncompensated Magnetic intensity - right wing sensor (nT) Uncompensated Magnetic intensity - tail sensor (nT) Compensated Magnetic intensity - left wing sensor(nT) Compensated Magnetic intensity - tail sensor (nT) Total Magnetic Intensity (nT), diurnal corrected, levelled,
micro-levelled TMI_1VD TMI_2VD RTF HX_Final HY_Final XDS_Line XDS_Ortho XDS_Vert NAD83_X NAD83_Y GPS_ALT DIURNAL DTM	Calculated 1 <sup>st</sup> vertical derivative of TMI (nT/m) Calculated 2 <sup>nd</sup> vertical derivative of TMI (nT/m) Reconstructed Total Field (pseudo nT) Horizontal Lateral gradient (nT/m) Horizontal Long Line gradient (nT/m) XDS Line component (mV) XDS Orthogonal component (mV) XDS Vertical component (mV) NAD 83 X Easting UTM zone 17 north NAD 83 Y Northing UTM zone 17 north GPS Altitude (mASL) Diurnal magnetic sensor (nT) Digital terrain model (mASL)