Report on a Helicopter-Borne Magnetic Gradiometer & VLF-EM

Project Name: Rabbitt & Redbird
Project Number: 2008-010

Client: DISCOVERY VENTURES INC.

Contractor: CMG Airborne

Date: October 6th, 2008

2 SOW'S

Tennant, Meg EMPR:EX

From: MT.online@gov.bc.ca
Sent: Wednesday, October 15, 2008 8:48 PM
To: EMPR MTB MTO-SOW
Subject: SOW-M (4241615) 2008/OCT/15 20:47:56 Mineral Titles Online, Transaction event, Email confirmation

Event Number: 4241615
Event Type: Exploration and Development Work / Expiry Date Change

Work Type Code: T

Required Work Amount: 27389.79

Total applied to claims $97000.70

Total Work Amount: 21199.46

Total Amount Paid: 1667.81

PAC Name: Chris Dyakowski

PAC Debit: 6190.33

Tenure Number: 531472
- Tenure Type: M
- Tenure Subtype: C
- Claim Name: RABBITT GOLD MINE
- Old Good To Date: 2008/nov/30
- New Good To Date: 2012/oct/01
- Tenure Required Work Amount: 13248.37
- Tenure Submission Fee: 804.55

Work Dates July 31 - Sept 15/08

Tenure Number: 531477
- Tenure Type: M
- Tenure Subtype: C
- Claim Name: BEAR CREEK
- Old Good To Date: 2008/nov/30
- New Good To Date: 2012/oct/01
- Tenure Required Work Amount: 10596.04
- Tenure Submission Fee: 643.48

Tenure Number: 531506
- Tenure Type: M
- Tenure Subtype: C
- Claim Name: RABBITT MINE ROAD
- Old Good To Date: 2008/nov/30
- New Good To Date: 2012/oct/01
- Tenure Required Work Amount: 3178.86
- Tenure Submission Fee: 193.05

Tenure Number: 563616
- Tenure Type: M
- Tenure Subtype: C
- Claim Name: DJ
- Old Good To Date: 2009/jul/25
- New Good To Date: 2012/oct/01
- Tenure Required Work Amount: 366.52
- Tenure Submission Fee: 26.73

Your technical work report is due in 90 days as per Section 33 of the Mineral Tenure Act and Section 16 and Schedule A of the Mineral Tenure Act Regulation. Please attach a copy of your confirmation page to the front of your report.

Tennant, Meg EMPR:EX

From: MT.online@gov.bc.ca
Sent: Tuesday, September 30, 2008 4:32 PM
To: EMPR MTB MTO-SOW
Subject: SOW-M (4239220) 2008/SEP/30 16:31:58 Mineral Titles Online, Transaction event, Email confirmation

Event Number: 4239220
Event Type: Exploration and Development Work / Expiry Date Change

Work Type Code: T

Required Work Amount: 69610.91

Total Work Amount: 53800.54

Total Amount Paid: 5143.04

PAC Name: Chris Dyakowski

PAC Debit: 15810.37

Tenure Number: 567136
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 1
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 4406.34
Tenure Submission Fee: 321.06

Tenure Number: 567137
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 2
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 550.79
Tenure Submission Fee: 40.13

Tenure Number: 567139
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 3
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 4406.54
Tenure Submission Fee: 321.08

Tenure Number: 567140
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 4
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 1652.65
Tenure Submission Fee: 120.42

Tenure Number: 567142
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 5
Old Good To Date: 2008/oct/01

New Good To Date: 2013/jul/15
Tenure Required Work Amount: 4958.52
Tenure Submission Fee: 361.30

Tenure Number: 567143
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 6
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 5508.17
Tenure Submission Fee: 401.35

Tenure Number: 567147
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 7
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 6609.87
Tenure Submission Fee: 481.62

Tenure Number: 567150
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 9
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 1653.21
Tenure Submission Fee: 120.46

Tenure Number: 569050
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD NORTH 1
Old Good To Date: 2008/nov/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 3218.06
Tenure Submission Fee: 236.43

Tenure Number: 569051
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD NORTH 2
Old Good To Date: 2008/nov/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 11264.08
Tenure Submission Fee: 827.57

Tenure Number: 569055
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD NORTH 3
Old Good To Date: 2008/nov/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 8045.27
Tenure Submission Fee: 591.09

Tenure Number: 569056
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD NORTH 4
Old Good To Date: 2008/nov/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 3753.91
Tenure Submission Fee: 275.80

Tenure Number: 569070
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD NORTH 8
Old Good To Date: 2008/nov/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 536.28
Tenure Submission Fee: 39.40

Tenure Number: 586490
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 2
Old Good To Date: 2009/jun/18
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 8639.84
Tenure Submission Fee: 684.20

Tenure Number: 567149
Tenure Type: M
Tenure Subtype: C
Claim Name: RED BIRD 8
Old Good To Date: 2008/oct/01
New Good To Date: 2013/jul/15
Tenure Required Work Amount: 4407.38
Tenure Submission Fee: 321.14

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There are no external receivers for this event.

Server Name: PRODUCTION

BRITISH COLUMBIA

Ministry of Energy & Mines
Energy & Minerals Division
Geological Survey Branch

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]	TOTAL COST
Report on a Helicopter-Borne Magnetic Gradiometer & VLF-EM	$80,000

AUTHOR(S) Sean Scrivens SIGNATURE(S) [signature]

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) 4241615, 4239220 YEAR OF WORK 2008

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) [redacted]

PROPERTY NAME Rabbitt / Redbird

CLAIM NAME(S) (on which work was done) RED BIRD 1, RED BIRD 2, RED BIRD 3, RED BIRD 4, RED BIRD 5, RED BIRD 6, RED BIRD 7, RED BIRD 9, RED BIRD NORTH 1, RED BIRD NORTH 2, RED BIRD NORTH 3, RED BIRD NORTH 4, RED BIRD NORTH 8, RED BIRD 2, RED BIRD 8, RABBITT GOLD MINE, BEAR CREEK, RABBITT MINE ROAD, DJ

COMMODITIES SOUGHT Sulphide – Gold – Silver

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN 092HNE013/014/020/021/069/122

MINING DIVISION Similkameen NTS 092H10

LATITUDE 59 ° 18 ' 48 " LONGITUDE 129 ° 27 ' 55 " (at centre of work)

OWNER(S)

1) Kress
Javorsky, David

2) Billingsley, Richard

MAILING ADDRESS

818 – 470 Granville St.
Vancouver, BC V6C 1V5

11114 – 147A Street
Surrey, BC V3R 3W2

OPERATOR(S) [who paid for the work]

1) Discovery Ventures Inc.

2)

MAILING ADDRESS

3750 West 49th Ave.
Vancouver, BC V6N 3T8

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Triassic Nicola Group of volcanic/sediments, intruded by Tulameen ultramafic body and coast intrusions of Jurassic age of Otter Lake intrusions of tertiary age. Pt/Pd occurs in veins and with ultramafic rocks and Au occurs in quartz veins with Nicole group volcanics / sediments.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS 07954, 10063, 15723, 15850, 19825

(OVER)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne	425 line km	All Claims	$80,000
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST	$75,000

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1.0 Introduction

Canadian Mining Geophysics Ltd (CMG) has flown a helicopter-borne magnetic gradiometer & VLF-EM survey for Discovery Ventures Inc. near Cassiar, BC.

The survey, consisting of 425 line-kilometers (l-km), was started on August 15th, 2008 and was completed on August 16th, 2008.

The survey was flown using the WGS-84 Datum and UTM Projection, Zone 10 North. The final database was converted to the NAD-83 Datum and UTM Projection, Zone 10 North using Geosoft Oasis Montaj. All map products were processed and are presented in the NAD-83 Datum.

The CMG magnetic gradiometer consists of three (3) potassium magnetometer sensors separated approximately three (3) meters (m) apart. Measured gradients include the vertical and transverse (cross-line) horizontal. The parallel (in-line) horizontal gradient is calculated and is possible because of the close separation of the magnetometer readings (~3 m) along the flight line.

The CMG system also records two VLF-EM measurements from approximately orthogonal VLF transmitting stations – normally Cutler, Maine and Jim Creek, Seattle, both in the United States.

This report describes the Survey Area in Section 2, Survey Procedures & Personnel in Section 3, Equipment in Section 4, Deliverables in Section 5, Processing in Section 6, and Interpretation in Section 8.

Appendix A provides a Statement of Qualification of the author.

Appendix B contains a list of the survey outline points in NAD-83, Zone 10 N.

Appendix C contains a list of the digital database columns, the database of which is included with this report to Discovery Ventures Inc.

Appendix D contains a list of tenure numbers, owners and expiry dates of each claim within the survey area.

2.0 Survey Area

In the vicinity of the Rabbitt Mine, the rocks comprise volcanoclastic, volcanic and sedimentary rocks. To the west and south of the Rabbitt Mine adit, drill core has shown the presence of a heterolithic volcanic breccia to be dominant. All of the volcanic units have been altered to a greenschist facies, with hydrothermal alteration being superimposed on the above units near the quartz vein systems. Structural disturbance is evident in the area of the Rabbitt Mine. Drilling revealed mineralization is comprised of free gold, chalcopyrite, minor pyrite, sphalerite and galena in quartz veins. (Hunter, 1989)

The property topography is steep in nature, ranging in elevation from about 850 to 1400 meters above sea level.

The Rabbitt-Redbird survey area (Figure 1) is located approximately 5 km west of Tulameen, BC and is easily accessible via Lawless Creek road which runs NW-SE through the property. The survey area is centered at latitude 59° 18′ 48″ & longitude 129° 27′ 55″.

The survey polygons covered a number of mineral claims which are contiguous (Figure 2). The property claims (See Appendix D) are held by the following owners:

Kress, Richard Billingsley & David Javorsky

818 – 470 Granville Street
Vancouver, BC V6C 1V5

And

11114 – 147A Street
Surrey, BC V3R 3W2

The base of operations was a building rented by a private owner in Tulameen, BC which was located just on the edge of the Rabbitt-Redbird survey areas. The aircraft was fueled out of a mobile slip tank provided by VIH helivopters.

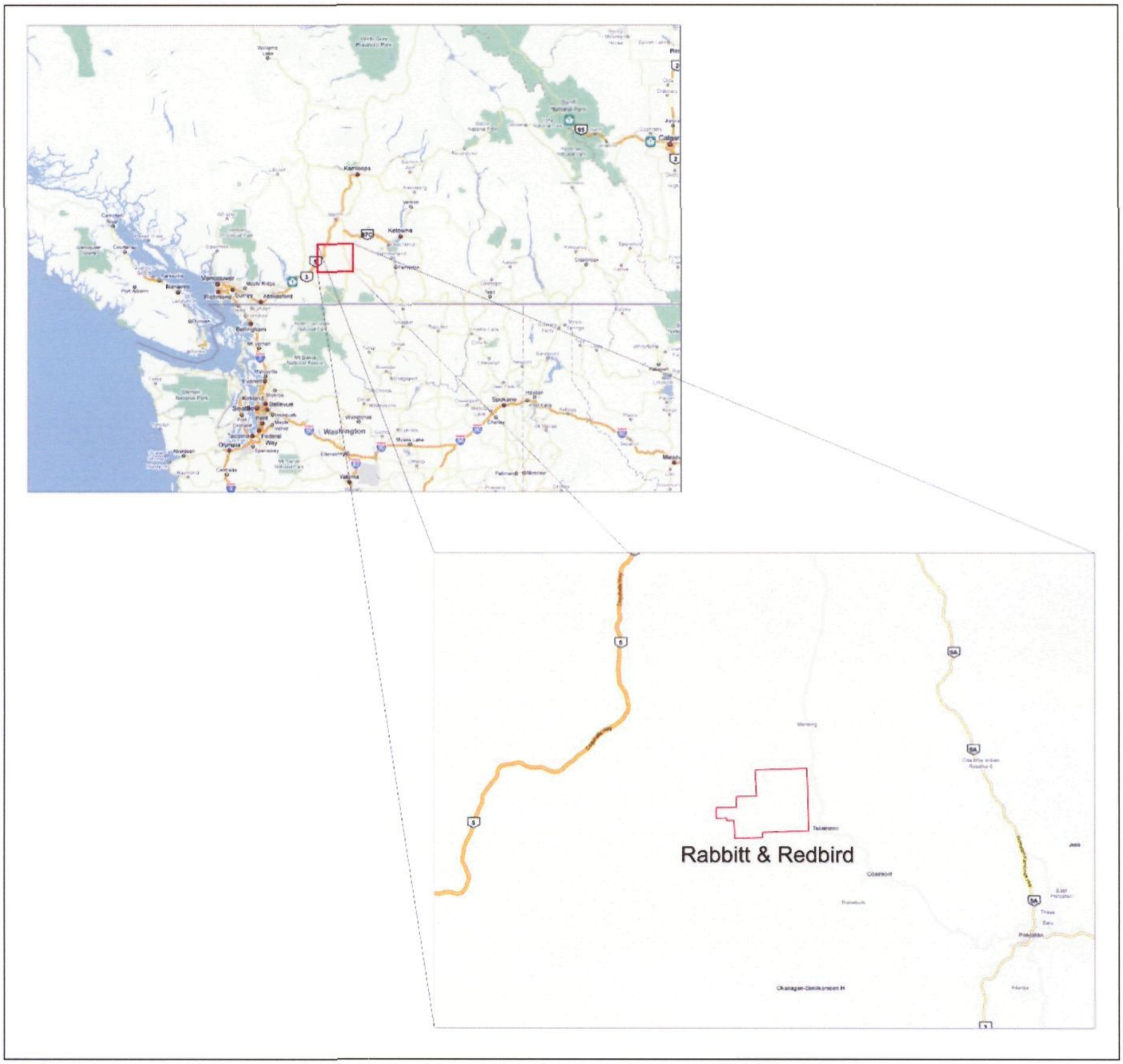

Figure 1 - Regional location of the Rabbitt-Redbird survey area.

Figure 2 - Survey area showing flight path, topographic contours and mineral claims.

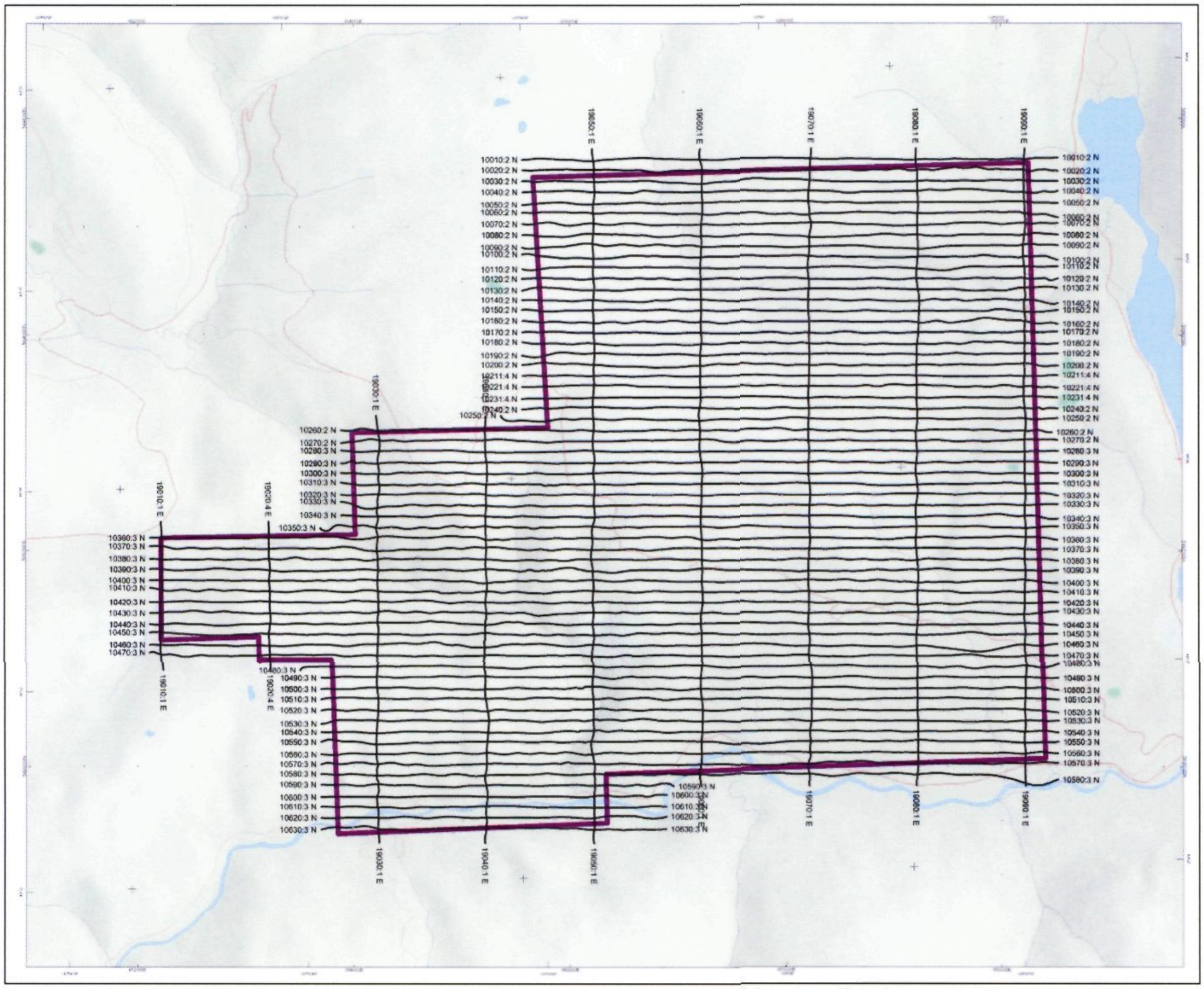

Figure 3 - Actual flight path & claim outline of the Rabbitt-Redbird survey area.

3.0 Survey Procedures & Personnel

The survey was flown according to the specifications outlined in Table One. The survey lines (as flown) were trimmed within a Geosoft database to the survey polygon plus 100m. This resulted in the number of l-km as described in Table One.

Nominal bird height was 60 m. In some cases the bird height was higher, especially in areas where the cliffs made it difficult to climb and descend quickly. Over flatter areas, the bird height was closer to 40 m.

Nominal survey speed was approximately 100 km/hr. Sampling of all data, including GPS, occurred at a 10 Hz rate. Therefore the approximate lateral distance between readings was 2.5-3.0 m.

Real-time helicopter navigation was possible using the AgNav system. GPS sensor positioning was provided using a Novatel 10-channel receiver set to the CD-GPS mode (western zone). This mode is considered the most accurate in Canada and provides real-time accuracy of ~ 1-5 m. The GPS antenna was installed on top of the gradiometer bird, near the center (length-wise) of the housing.

A radar altimeter was connected to the skid gear of the helicopter and provided a measurement of distance above ground for the pilot to navigate by. Inside the helicopter the radar altimeter had a digital readout attached to the dash board.

Approximately one hour before the survey began, the base station magnetometer initialized and a VLF sensor attached. All transmitting VLF stations were scanned and the two stations with the strongest signal selected. The selected stations were then relayed to the operator who set them in the helicopter data system for recording during flight. The base station was turned off after the crew landed and contacted the processor.

(Table 2 provides a listing of all personnel involved in the project, their respective positions and a brief description of their roles and responsibilities throughout the survey.

Final data processing was carried out under the supervision of:

Sean Scrivens
Canadian Mining Geophysics Ltd.
Manager of Processing & Interpretation
7696 Fairhurst Dr.
Kemptville, Ontario
Canada, K0G 1J0.

Table 1 - Survey Area Specifications

Area	Line Direction	Line Spacing	Number of km
Rabbitt / Redbird	N90°E	100 m lines	384 km
	N0°E	1000 m lines	41 km

Table 2 - List of Survey Personnel

Individual	Position	Description
Kerslake McLeod	Pilot	Flew the helicopter.
Kenny Pyne	Aircraft Mechanic	Ensure helicopter maintenance is performed.
Dan LeBlanc	Operator	In-flight quality control & maintenance of the system and ancillary equipment.
Pawel Starmach	Processor	On-site data processing.
Sean Scrivens	Final Processing, Reporting & Interpretation	Integration of field data into Geosoft database and generation of grids, profiles, map products and logistics report write-up.
Steve Balch	Interpretation	Final review of data interpretation write-up and recommendations
Chris Dyakowski	Client Representative	President & CEO of Max Investments on behalf of Pacific Bay Minerals Ltd.

4.0 Equipment

4.1 The Helicopter

The helicopter used was a Eurocopter AStar Aerospatial 350 B2 with registration C-GPHQ, owned and operated by Vancouver Island Helicopters (VIH). An AStar B2 is shown in Figure 4.

Installation of the ancillary equipment was performed at VIH's hangar in Prince George, BC. Two short test flights were performed to ensure the system was operational. The bird was then towed to the Tulameen, BC region where surveying commenced immediately.

Figure 4 - The survey used an AStar B2 as shown above.

The gradiometer system was attached to the helicopter by a 30 m long tow cable. The tow cable contains a Kevlar strength member and a weak link. The tow cable also contains the power and signal wires.

4.2 The Gradiometer

The CMG magnetic gradiometer (Figure 5) is based on GEM System potassium magnetometers. These sensors are preferred over the cesium optically pumped sensors because they have a lower effective noise level (better for gradient measurements) and a much lower heading error (less absolute correction required from line to line).

Three sensors are also preferred over the normal four sensor arrays featured on systems that measure all three magnetic gradients. CMG measures the vertical gradient from the top sensor and the average of the two bottom sensors located 2.95 m apart and the cross-line (or transverse) gradient from the two side sensors located 3.45 m apart. The in-line gradient is actually calculated from successive measurements of the average of the two side sensors given the fact that measurements along the flight line are acquired at approximately the same distance as the sensor separation of the bird.

Computing the in-line gradient as opposed to measuring it directly using an additional sensor has some important advantages. Firstly, and most importantly, by having only three magnetometer sensors, they can all be placed at the front of the bird and the magnetically noisy electronics (including the tow cable) can all be placed at the back of the bird so that the distance between sensors and electronics is maximized. Secondly, the computed in-line measurement has effectively no heading error (the readings are measured from the same sensors and are constant across such a short distance), and is relatively free from diurnal variations in the magnetic field, given the short time interval (0.1 sec) between readings.

Figure 5 - The CMG tri-axial magnetic gradiometer.

Table 3 - Specifications for the CMG Magnetometer Section

Sensitivity:	+/- 0.001 nT
Absolute accuracy:	+/- 0.5 nT over operating range maximum
Sample rate:	10 Hz (0.1 sec)
Dynamic range:	30,000 to 90,000 nT, 5,000 nT/m gradient
Heading error:	+/-0.15 nT maximum for all sensor orientations
Operating temperature:	-32° C to +40° C normally
Tuning method:	Dynamic re-starting at 30,000 nT
Volume of sensor:	70 mm^3

The magnetometer data is collected at a rate of 10 Hz. The frequency from each sensor is counted separately within the digital electronic section located approximately 4.5 m away from the sensors in the middle of the bird. The combined data stream (including mag, gps, vlf and radar information) is then sent up the tow cable to the data acquisition system in the helicopter. Specifications for the magnetometer sensors are given in Table 3.

4.3 The Magnetometer Bird

The magnetometer frame is constructed from fiberglass and the sensor housings are made from Kevlar. The horizontal displacement between magnetometer sensors is 3.45 m. The vertical separation is 2.95 m. The length of the bird is 5.3 m and weighs approximately 180 kg. The bird can be separated into two sections and the magnetometer arms removed for easy transportation.

4.4 The VLF-EM System

The CMG gradiometer contains two VLF (very low frequency) EM receivers that can be tuned to any of the operational VLF transmitters worldwide. In general, two orthogonal stations are chosen such as Cutler Maine (24.0 kHz) and Jim Creek Seattle (24.8 kHz).

Measurements of the in-phase, quadrature-phase and total field are taken at a 10 Hz sample rate. The in-phase measurement is easily affected by variations in the sensor orientation and may not be useful in areas of rugged topography or where bird movement is significant. The quadrature-phase measurements are dependent on bird direction so alternating lines are sign inverted. The results can be gridded and provide the locations of weak conductors, given the high relative frequency of the transmitter station.

The measured VLF components are converted into a digital signal and then appended to the data string in the main magnetometer console. This entire data string is then transmitted up the tow cable to the data acquisition system in the helicopter.

4.5 The Magnetometer Base Station

A GSM-19 base station was used to record variations in the earth's magnetic field and referenced into the master database using GPS time stamp. This system is based on the Overhauser principle and records total magnetic field to within +/- 0.02 nT at a one (1) second time interval.

The GSM-19 is portable and can be placed in a remote location without the need for extra batteries or cabling. On this survey the unit was positioned at a magnetically quiet location at the mine site.

4.6 The Radar Altimeter

The CMG system uses two radar altimeters, both modulated frequency radio versions manufactured by Free Flight. The radar altimeter in the helicopter is used by the pilot to estimate terrain. The second altimeter, mounted directly on the bird, provides an accurate measurement of bird height. The approximate accuracy of these devices is +/- 2 m.

4.7 GPS Navigation

CMG uses the AgNav Incorporated (AgNav-2 version) GPS navigation system for real-time locating while surveying. The AgNav unit is connected to a Tee-Jet GPS system receiver that uses the WAAS system – considered to be a standard in aircraft navigation and accurate throughout a large portion of Canada.

4.8 Data Acquisition System

Data is collected by the main magnetometer console in the gradiometer bird and includes GPS timing and positional information, magnetometer readings, VLF readings, and radar altimeter. This information is digitized inside the console, all at a rate of 10 Hz. The resulting data string is transmitted in digital format along the tow cable into a laptop computer inside the helicopter that is running the GEM Systems DAS software. All data is stored on the hard-drive in ASCII format using a simple column by row format.

5.0 Deliverables

From the survey, a number of deliverable products are generated including a set of hard-copy maps, a final report (this document), and a digital archive of the data with digital copies of map products.

5.1 Hardcopy Products

Hardcopy map products are provided at 1:20,000 scale and include a topographic back-drop. Each map contains a scale bar, north arrow, coordinate outlines (easting & northing), flight lines with line number and direction and geophysical data.

The survey block consisted of 1 map plate customized to fit within the boundaries of a 42" plotter.

Each map contains a technical summary of specifications and a colour bar that describes the geophysical data.

5.2 Digital Products

The geophysical data is provided in a Geosoft GDB database. At the Client's request an xyz archive of the same database in ASCII format can also be provided.

The contents of the database are described more fully in Appendix C.

A copy of the GDB database is kept by CMG as a courtesy to the Client but can be deleted at the Client's request.

In addition to the GDB file database, copies of all geophysical grids are provided as GRD files (also in Geosoft format). The cell size used for gridding is nominally 1/5 of the flight line spacing.

Map files in Geosoft MAP format are also provided as deliverables. The Client can use a free viewer available from Geosoft Limited (www.geosoft.com) for viewing and plotting map files, but not for editing or changing them.

5.3 Delivered Products

The following map products were delivered in hard-copy and digital format:

- Colour shaded, total magnetic field (TMI) with flight lines and contours over topographic backdrop
- Colour shaded, analytical signal (ASIG) with contours and flight lines over topographic backdrop

- Colour shaded, measured in-line horizontal field derivative (MI-HMG) with contours and flight lines over topographic backdrop
- Colour shaded, calculated magnetic tilt derivative (TDR) with contours and flight lines over topographic backdrop
- Colour shaded, VLF total field component (VLF-TF) with contours and flight lines over topographic backdrop

The following map products were delivered in digital format only (in addition to those above):

- Colour shaded, calculated vertical magnetic field derivative (C-VMG) with contours and flight lines over topographic backdrop
- Colour shaded, measured cross-line horizontal magnetic field derivative (MC-VMG) with contours and flight lines over topographic backdrop
- Colour shaded, measured vertical magnetic field derivative (M-VMG) with contours and flight lines over topographic backdrop
- Digital Terrain Model (DTM) Geosoft grid
- VLF In-Phase and Quadrature component Geosoft grids

The following additional products were delivered in digital format:

- Copy of this report in .pdf format
- Geosoft database GDB of all collected data
- Geosoft grid files of selected geophysical data (listed above)

6.0 Processing

Preliminary data processing is performed using CMG proprietary methods. This includes calculation of the magnetic gradients from the three sensors (MAG1, MAG2 and MAG3), digital terrain model, bird height, and merging of the base station magnetic data (sampled at 1.0 sec) with the survey data (sampled at 0.1 sec).

6.1 Base Maps

All base maps are presented in the Datum and Projection defined in the Introduction of this report. All map coordinates refer to projected easting and northing in meters. All maps contain the actual flight paths as recorded during surveying and have been clipped to the survey polygon with a 100m extension.

The topographic vector data has been obtained from Natural Resources Canada.

Topographic shading has been derived from 90 m resolution digital elevation model (DEM) data provided by the NASA Shuttle Radar Topography Mission (SRTM) and shaded at an inclination and declination of 45°.

6.2 Flight Path

The helicopter used "ideal" flight lines as guidance during surveying as displayed on the real-time AgNav system with the aid of a helicopter mounted GPS. A separate GPS mounted to the bird was used to record actual position. The sample rate of the GPS was 10 Hz, the same as all the other data collected in flight.

The GPS outputted both latitude and longitude values and easting and northing values, all in the WGS84 Datum, using the UTM Projection Zone 10 North. There has been no interpolation of the positional data, nor has there been any filtering of the data.

6.3 Terrain Clearance

Two radar altimeters recorded data during the course of the survey: one located on the skid gear of the helicopter and the other on the base of the bird. The helicopter mounted radar altimeter was used to maintain terrain clearance by the pilot. A digital indicator was mounted on the dashboard of the helicopter. This work was performed by a licensed helicopter engineer provided by VIH.

The digital terrain model (DTM) was derived by subtracting the bird mounted radar altimeter value from the GPS z position (mean point above sea level). The DTM values were further corrected for a lag value of 1.0 sec. The DTM values are to be considered relative as they have not been tied into any surveyed geodetic point.

6.4 Magnetic Data Processing

The magnetic data were collected without any lag time, therefore a lag time correction was not applied. In areas where one magnetometer sensor has become unlocked, the total magnetic field values for that sensor were replaced with a dummy value ("*"). The lock and heater settings are both used for QC measures so it is easy to find the areas where one or more sensors lost lock or were not heating correctly. Locking errors occur almost entirely on turn-arounds.

The raw ASCII survey data files and basemag ASCII data files are imported into separate Geosoft databases. A QC check of the basemag data is made on a day to day basis, exported as a Geosoft Table file (TBL) and merged with the active database using built-in Geosoft routines.

Diurnal magnetic corrections were applied only to the channel that was used to generate a total magnetic field map. The MAG1, MAG2, and MAG3 sensor values were used to generate the gradients and do not require diurnal correction. The base station data was linearly interpolated from a 1.0 sec sample rate to 0.1 sec to correspond to the flight data.

The horizontal gradients are sensitive to line direction. Positive polarity is defined as to the north and east. On south- and/or west-facing lines the horizontal gradients are multiplied by -1.

The magnetic data from the individual sensors as well as the computed total magnetic intensity have no filtering applied. The computed gradients are lightly filtered to remove high frequency noise common in areas of rough terrain or flying conditions. The magnetic data grids were tie line-leveled and the resulting grids micro-leveled.

6.5 VLF-EM Data Processing

The VLF data is strongly affected by motion of the bird (during ascent and descent during surveying) and by rough topography. The in-phase component (and hence the total field) is most affected. For this project the in-phase, quadrature-phase and total field components were processed, but only the total field used in the interpretation.

The VLF data is directional therefore alternate flight lines are inverted for polarity. The positive direction is considered north and east. Due to occasional data spikes and high frequency noise, a 5-pt non-linear filter and light low pass filter were applied to the VLF channels. Trends are easily recognized in the gridded VLF quadrature-phase and filtering makes little difference to the gridded data.

7.0 Results

The total magnetic field (TMI) is shown in Figure 6. The TMI has been color shaded with a sun angle of 45° inclination and 90° declination to enhance regions of high gradient. The profile data was tie-line leveled and then the grid was further micro-leveled (both processes were performed using Geosoft).

The measured vertical magnetic gradient (M-VMG) is shown in Figure 7. The M-VMG image is shaded with a sun angle of 45° inclination and 90° declination.

The calculated vertical magnetic gradient (C-VMG) is shown in Figure 8. The C-VMG image is shaded with a sun angle sun angle of 45° inclination and 90° declination.

The measured in-line horizontal magnetic gradient (MI-HMG) is shown in Figure 9. The MI-HMG image is shaded with a sun angle of 45° inclination and 90° declination.

The measured cross-line horizontal magnetic gradient (MC-HMG) is shown in Figure 10. The MC-HMG image is shaded with a sun angle of 45° inclination and 90° declination.

The calculated magnetic analytical signal (ASIG) is shown in Figure 11. The ASIG image is shaded with a sun angle of 45° inclination and 90° declination.

The digital terrain model (DTM) is shown in Figure 12 shaded with a sun angle of 45° inclination and 90° declination, but with the "elevation" color transform. A lag of 1.0 sec was applied to the profile data before the grid was generated.

The VLF total field data from station #2 (24.8 kHz) is shown in Figure 13 is shown shaded with a sun angle of 45° inclination and 90° declination.

8.0 Interpretation

In the current survey, CMG has acquired high resolution magnetic gradiometer data and VLF EM profiles. The vertical magnetic gradient provides a more accurate estimate of magnetic boundaries. The cross-line horizontal gradient highlights structures that may be oriented sub-parallel to the flight direction. The vector sum of the three magnetic gradients – known as the analytic signal – produces highs directly over magnetic sources that are independent of the direction of the earth's magnetization vector. The VLF-EM data is sensitive to weakly conductive geologic units and sub-vertical structures that may have acted as pathways for gold emplacement or remobilization.

8.1 Background Geology (from Hunter, 1989)

The lawless Creek area is underlain by volcanic and subordinate sedimentary rocks of the Nicola Group, ultramafic to felsic rocks of the Tulameen Ultramafic Complex (formerly Lodestone Intrusions), intrusive phases of the Coast Intrusions (Eagle granodiorite), and intrusive phases of the Otter Intrusion (Red granite).

The majority of the Nicola rocks in the area have not been closely identified and have been termed greenstones. Possibly andesitic in composition, they include lavas, flow breccias, pyroclastics, greywacke, and mixed phyroclastics and greywacke. Interbedded with the greenstones are bands of dacite, rhyolite, fine grained dark sediments, sedimentary schists, limestone and minor conglomerate.

The Tulameen Ultramafic Complex is an "Alaskan or Uralian type" zoned ultramafic-gabbro complex which was emplaced in the rocks of the Nicola group during a late Triassic deformation period that folded the rocks about a north to northwest trending axis. The complex displays an imperfect concentric zonal structure with its core consisting of dunite and minor peridotite. Its peripheral phase consists of olivine clinopyroxenite, hornblende clinopyroxinite, syenogabbro and syenodiorite. Pyroxenite, clinopyroxenite, and hornblendite are subordinate units. Dunite forms about one-tenth of the total area of the complex. It is not a layered intrusion of the Merensky or Stillwater type. Chromite and platinum are randomly distributed within the dunite core. The Tulameen complex is conformable with regional structural trend. It forms an elongate body with a steep westerly dip and a southeast plunge. This suggests that the feeder zone is to be found toward the north (upper) end of the complex, possibly near Grasshopper Mountain. The Eagle granodiorite underlies a large area on the west slopes of Grasshopper Mountain. The principal minerals are quartz, feldspar and biotite. A stock of red granite intrudes Nicola rocks in a hill east of Lawless Creek and south of Pioneer Creek.

8.2 Showings (from MINFILE records)

Of the 7 MINFILE records for the area, 6 are located within the block boundary and 1 occurs just outside the north edge. The showings can be used as an aid to identify mineralized structures that appear in the magnetic data. Below is a list of each showing identified in Figure 14:

Showing #1 – MINFILE 092HNE014

Location: 654152 E 5491276 N

Description: This Rabbitt mine deposit consists of two intersecting veins hosted in chloritized and sheared greenstone. The main vein strikes 000 to 010 degrees for 100 metres and dips vertically to steeply west for at least 35 metres. The vein is 0.30 to 3 metres wide and is accompanied by a quartz vein stockwork along its hangingwall. The vein is comprised of porcelaneous quartz and ankerite mineralized with chalcopyrite and pyrite, as blebs and scattered grains. The second vein strikes 040 to 045 degrees and intersects the main vein at the south end of the mine workings, where it is up to 1 metre wide. Sulphide mineralization consists of chalcopyrite and pyrite, with traces of galena and sphalerite.

Showing #2 – MINFILE 092HNE013

Location: 654671 E 5489993 N

Description: The Sunrise showing lies on the east flank of Grasshopper Mountain and is underlain by various metasediments and metavolcanics. These rocks strike north to northwest and dip steeply west. A quartz vein strikes 160 to 170 degrees for 150 metres and dips 30 to 65 degrees west and varies from 0.03 to 1.5 metres wide and is displaced successively eastward by a series of crossfaults. Mineralization is sparse and consists of pyrite and chalcopyrite and a little galena, sphalerite and native gold.

Showing #3 – MINFILE 092HNE020

Location: 658724 E 5493076 N

Description: The Red Bird prospect outcrops along the east flank of Mount Rabbitt. Individual mineralized zones strike 135 to 155 degrees, dip gently west and are 1 to 4 metres thick. Mineralization consists mostly of pyrite, with lesser chalcopyrite and minor sphalerite and galena. Secondary minerals include chalcocite, malachite, azurite and hematite. The sulphides are massive to poorly banded to disseminated or as stringers, in a gangue of sericite schist and massive to blebby quartz. Chalcopyrite, sphalerite and galena occur interstitially or as blebs.

Showing #4 – MINFILE 092HNE021

Location: 657558 E 5492363 N

Description: The Lloyd George showing consists of a quartz vein hosted in greenstone of the Upper Triassic Nicola Group. The vein strikes 040 degrees and dips 65 degrees southeast. It has been traced along strike for 38 metres and varies from 0.9 to 1.8 metres in width. The quartz is locally mineralized with chalcopyrite and pyrite. Small amounts of pyrite and chalcopyrite are also found in the enclosing greenstone.

Showing #5 – MINFILE 092HNE122

Location: 657935 E 5495989 N

Description: The South Copper prospect consists of a shallow dipping, undulating sulphide horizon, possibly of volcanogenic origin, hosted in andesitic fragmental volcanics. The horizon strikes 131 to 154 degrees and dips 10 to 30 degrees west, parallel to flow banding in the volcanics. It has been traced by diamond drilling and trenching over a strike length of 150 metres and a dip length of 150 metres. The horizon consists of a zone of pyritized, chloritized, silicified, bleached and sheared andesite (greenstone). The zone is 1.0 to 3.0 metres thick, and averages 1.5 metres in thickness. A halo of hematite and epidote alteration surrounds this pyritic horizon.

Showing #6 – MINFILE 092HNE019

Location: 658106 E 5492904 N

Description: The Hilltop showing is a horizon of massive sulphides, 0.2 to 0.6 metre thick, is hosted in strongly sheared and fractured andesite of the Upper Triassic Nicola Group. Trenching in the immediate vicinity of the deposit indicates a very limited strike length. The horizon is comprised of pyrite and lesser chalcopyrite.

Showing #7 – MINFILE 092HNE069

Location: 653969 E 5489911 N

Description: The Bonanza Queen prospect is hosted in greenstone of the Upper Triassic Nicola Group, just north of the contact with clinopyroxenite of the Early Jurassic Tulameen Ultramafic Complex. A quartz vein striking 020 degrees and dipping 70 to 90 degrees southeast has been traced up the south slope of Grasshopper Mountain for 200 metres, over a vertical elevation of 137 metres. The vein is 0.15 to 0.76 metre thick in the north and 0.25 to 1.07 metres wide in the south.

8.3 Magnetics

In general, the magnetic dataset is very complex with features ranging from faults, veins and fractures to intrusive bodies. The signatures themselves range considerably in amplitude and character suggesting the presence of both deep and shallow bodies. The primary targets of interest, based on the geological findings in the area, are vein-like structures that have the potential to host economic mineralization. Magnetic data can be primarily used to identify these structures by analyzing subtle differences in the background geological magnetic signature and the veins themselves. This is a necessary approach when the veins do not host any magnetic material.

A total magnetic intensity grid is illustrated in Figure 14 with various known showings that occur within the general area of the survey. Each showing has been depicted by a yellow cross, label and general orientation (if provided). The showings were acquired from MINFILE reports provided by the BC government. As each showing has been identified within vein structures, the characteristics of each vein have been labeled by red lines (strike angle) and arrows (dip direction).

The magnetic analytic signal (ASIG) is a product that is produced by calculating the vector sum of all three magnetic gradients to produce a grid that ignores the effect of orientation of subsurface bodies. Typically, the orientation of a magnetic target can produce a positive or negative response in the total magnetic field relative to its orientation. The ASIG grid in Figure 15 shows a variety of magnetic features within the property along with known mineralization locations. Three zones have been identified in this figure as possible intrusive events: INT-01, INT-02, and INT-03. The first two appear as deeper structures with a large extent, whereas INT-03 may have been the result of multiple localized intrusions. Many of the known mineralized showings occur on or near the edge of these units.

The INT-01 intrusion is defined by a southeast striking, southeast dipping magnetic high that shows an abrupt transition along strike and suggesting the unit is shallow to the northeast and dips gently to the southwest. UTM coordinates 657058 E & 5494349 W and 658045 E & 5493726 W mark the most likely portions of the intrusion that are closest to surface. Two profiles across the intrusion, one extending from 656611 E & 5493897 W to 657451 E & 5494750 W and the other from 657598 E & 5493270 W to 658442 E & 5494115 W using a ground magnetometer, may provided detailed information in order to verify the exact position as a place for possible contact mapping and/or sampling (See Figure 20)

The in-line horizontal magnetic gradient (MI-HMG), a useful product that emphasizes subtle magnetic features perpendicular to the line direction, reveals a number of undulating features extending at various azimuths throughout the survey area (Figure 16). These may be the result of veins or fracture zones that contain relocated magnetic mineralization derived from the intrusion units. To detect even more subtle structures in the magnetic data, a tilt derivative of the total magnetic intensity was produced (Figure 17). This has identified a few more structures that were not as apparent in the previous grid. In addition, the cross line gradient (MC-HMG), a product which emphasizes structures parallel to the flight lines, identified two additional features that resemble faults more than veins due to their cross-cutting nature and linear appearance. Showings Redbird and Hilltop appear to occur right along the edge of one of these faults as it cross-cuts several vein-like features (Figure 18).

The Rabbit and Sunrise showings occur within a magnetic low but anomalous magnetic field. As seen by the analytic signal, the Rabbit and Sunrise showings occur at or near the transition from low to high anomalous magnetic field. This suggests these showings are along a geologic contact rather than within a fracture opening. The Bonanza Queen showing occurs within an anomalous magnetic low and along a northeast striking magnetic linear suggesting that this showing is associated with later structures.

In general, the Bonanza Queen, Lloyd George and Hilltop appear to be related to northeast striking magnetic linear features while the Sunrise, Rabbit, Red Bird (and possibly South Copper) appear to correlate with southeast trending magnetic features. A review of these two groups of showings should be undertaken to determine whether high grades of mineralization are intersected along structures or along contacts.

8.4 VLF

VLF-EM signal is strongly affected by topography. There is a close correlation between some of the topographic features and the noted VLF response. There will also be a relationship between topography and geology and it is difficult to separate out these effects.

The total field of the VLF-EM signal from the Jim Creek transmitter reveals a few interesting, yet very subtle structures (Figure 19). One of these features is parallel to the general geologic trend of the area whereas the others cross-cut it. These features do not appear to correlate with topographic features; therefore, it is assumed that they are a result of near surface conductors such as sulphide bearing faults or veins. Due to the a close correlation between the Rabbitt, Sunrise and Lloyd George showings and the VLF features, it is possible these vein networks may extend further along their strike directions.

In particular, a northeast VLF trend appears to correspond with a northeast trending, discontinuous, magnetic linear that intersects the Lloyd George showing (See Figure 19). As these trends seem to offset the main magnetic source (defined as INT-01) it suggests they are younger and could represent fracture openings through which gold-carrying sulphides (or oxides) accumulated.

Overall the strongest VLF features were almost certainly a result of topography. The less noticeable features may be of interest, although ground follow-up should confirm this.

9.0 Recommendations

1) Ground follow up of the of the various showings will confirm whether or not they extend in the direction which the data suggests.

2) Ground follow up of intrusion INT-01 based on the suggested profiles.

3) The magnetic and VLF trends identified in this report should be correlated with the known geology and any interesting trends ground-checked.

4) A high resolution EM survey may further contribute to identifying massive sulphide deposition with hydrothermal environments such as this.

5) Digital products from this report should be made available in either MapInfo or ArcView format as registered tiff files for integration into a GIS compilation.

Respectively Submitted,

Sean Scrivens P.Geo.
Canadian Mining Geophysics Ltd.
October, 2008

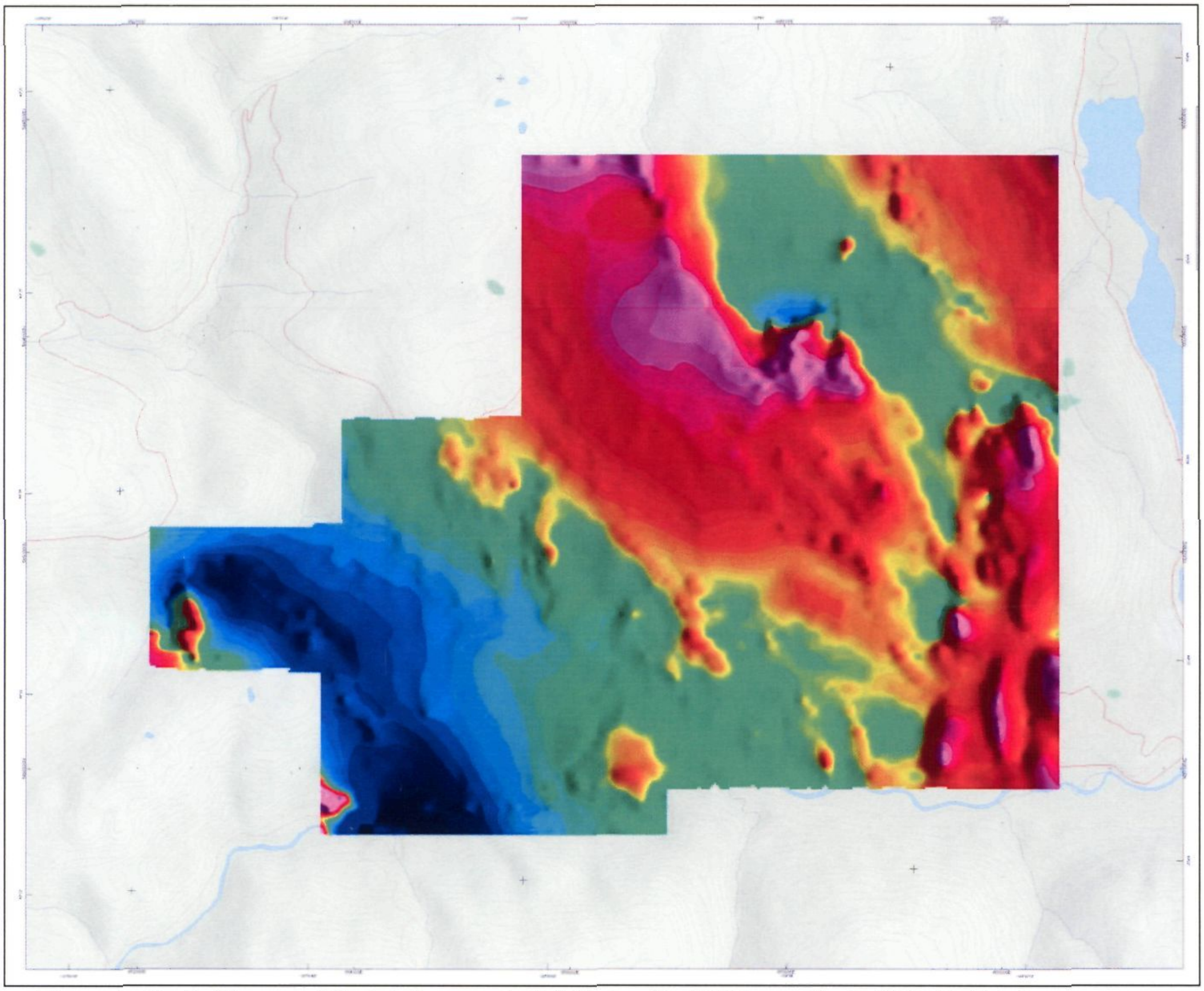

Figure 6 - Shaded image of the total magnetic field intensity (TMI) over the Rabbitt-Redbird survey area.

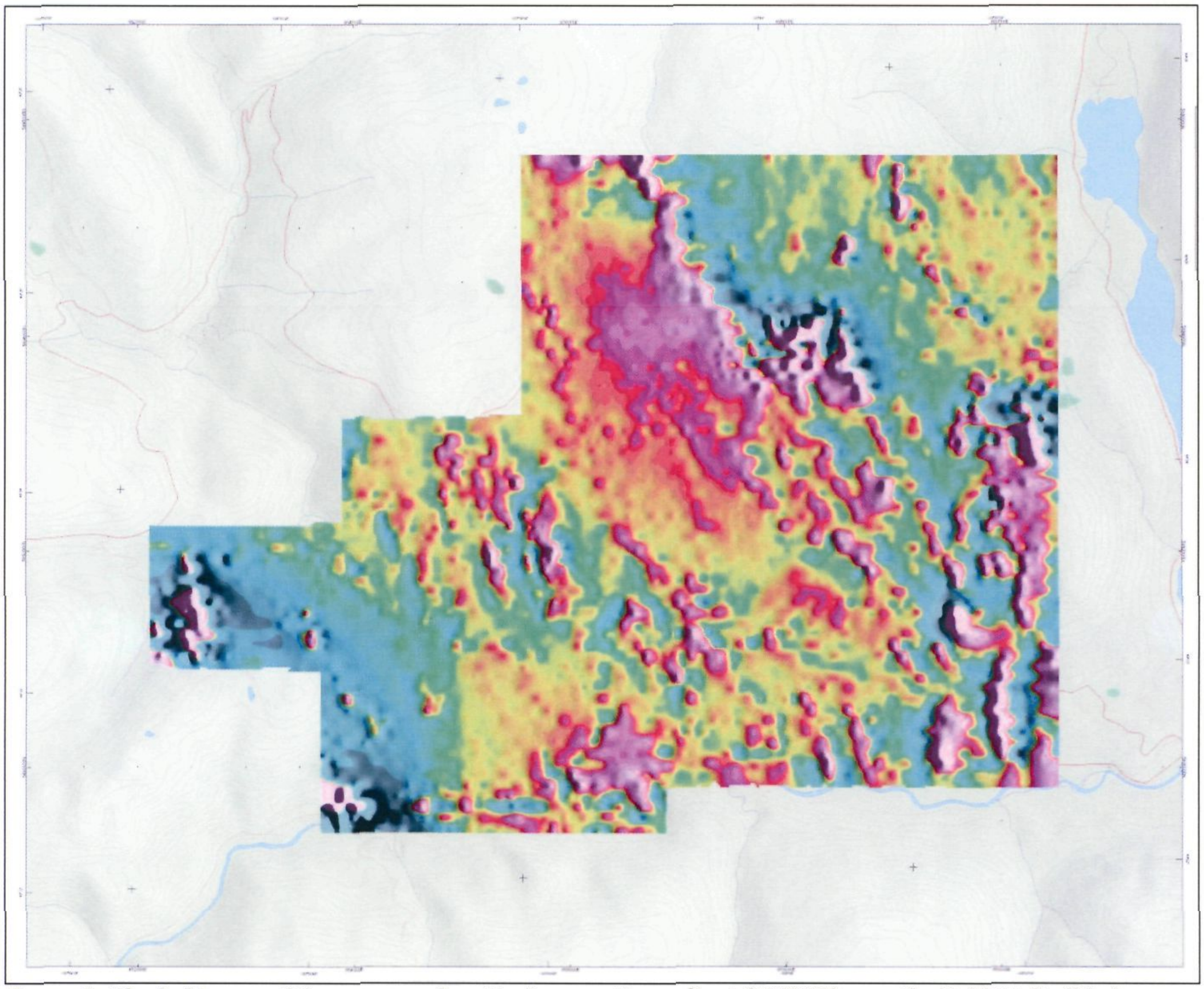

Figure 7 - Shaded image of the measured vertical magnetic gradient (M-VMG) over the Rabbitt-Redbird survey area.

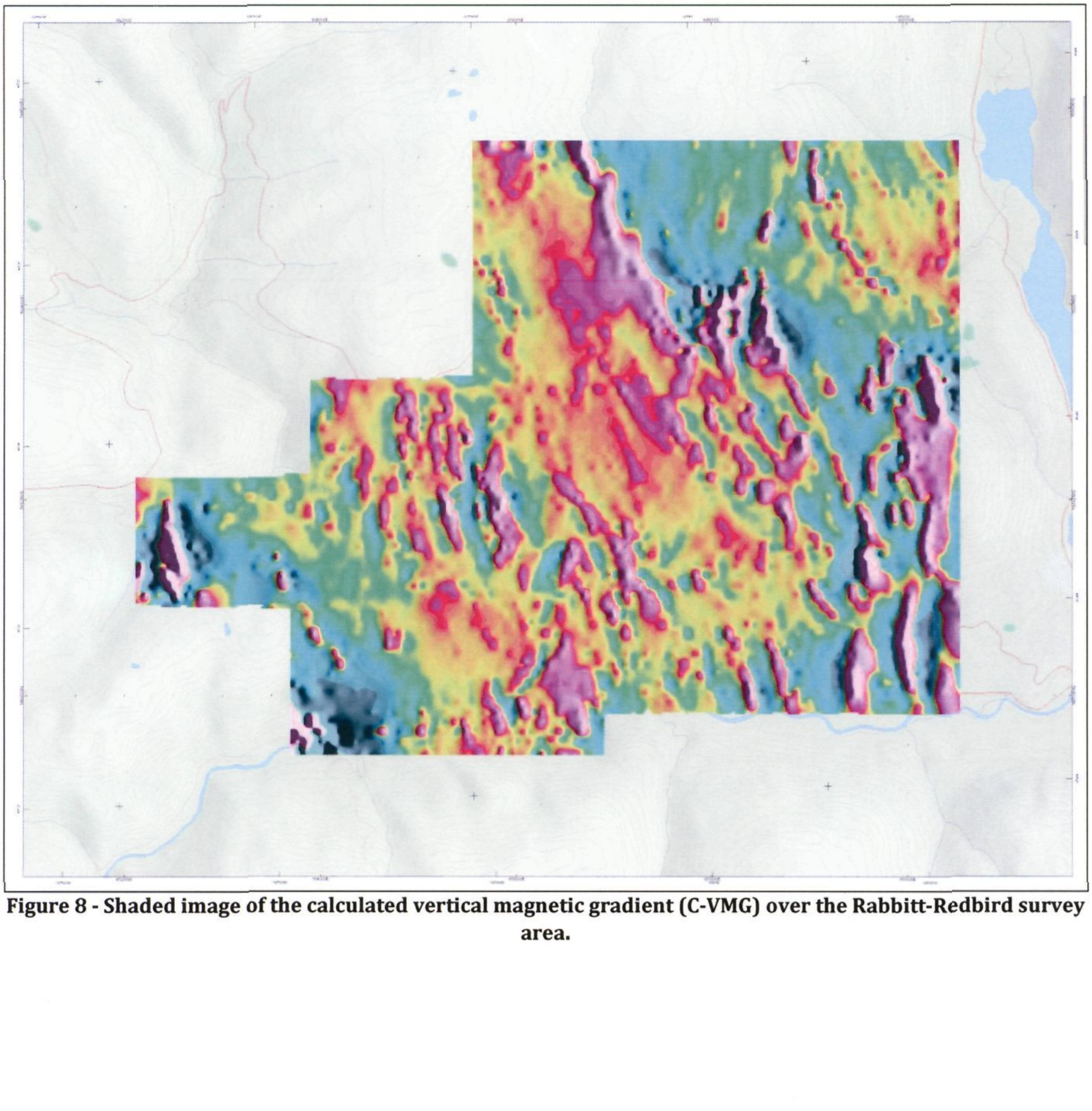

Figure 8 - Shaded image of the calculated vertical magnetic gradient (C-VMG) over the Rabbitt-Redbird survey area.

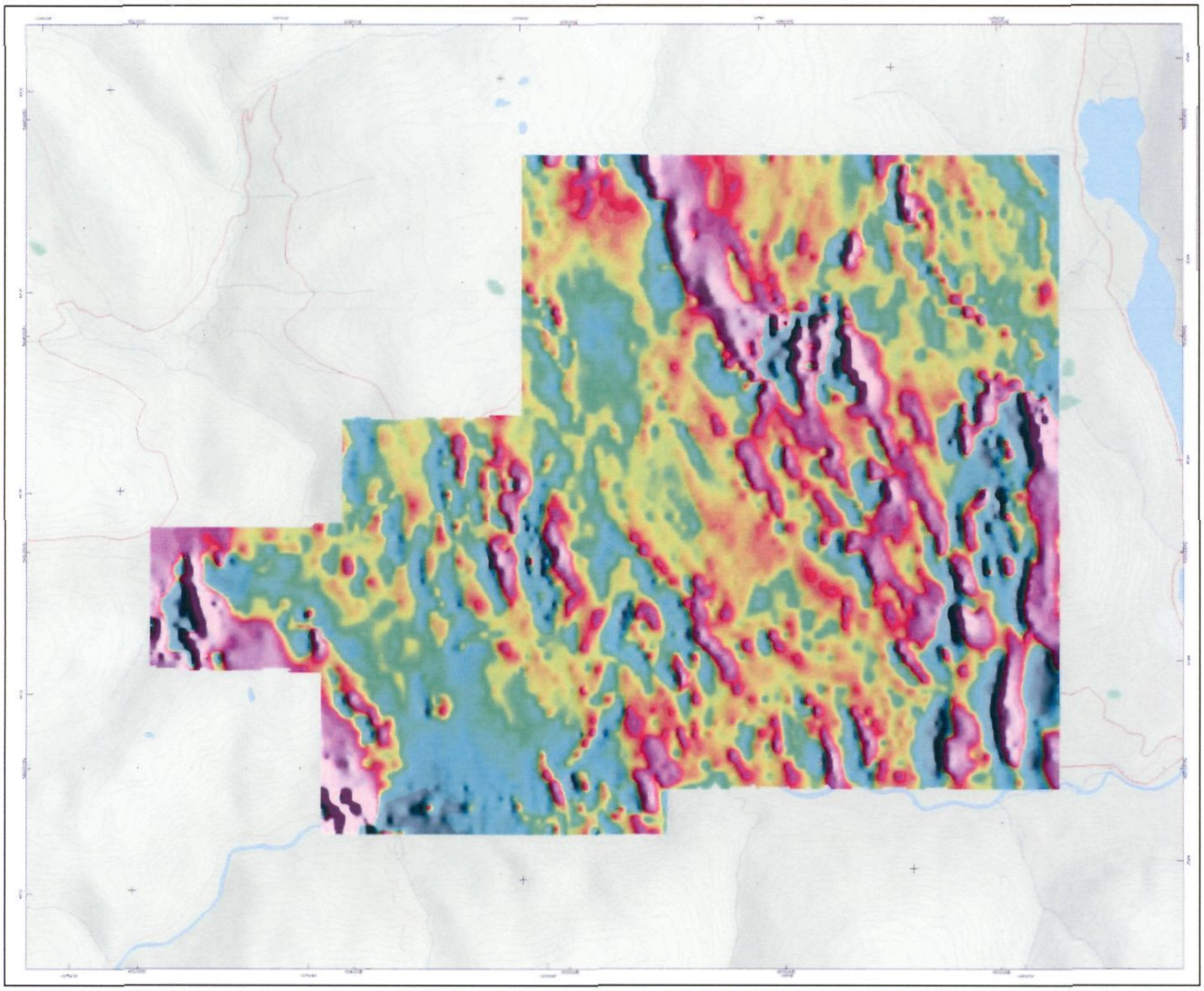

Figure 9 - Shaded image of measured in-line horizontal magnetic (MI-HMG) over the Rabbitt-Redbird survey area.

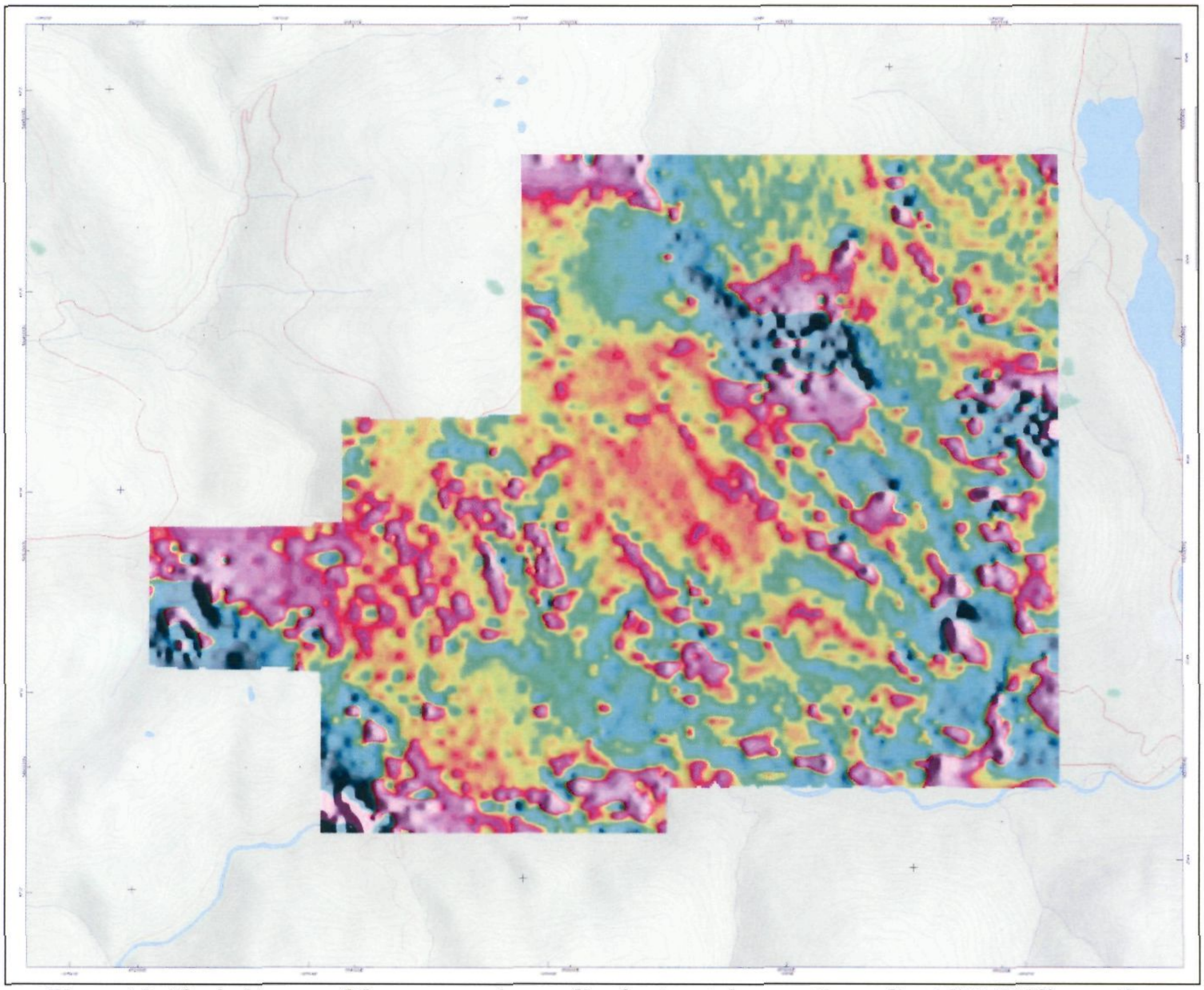

Figure 10 - Shaded image of the measured cross-line horizontal magnetic gradient (MC-HMG) over the Rabbitt-Redbird survey area.

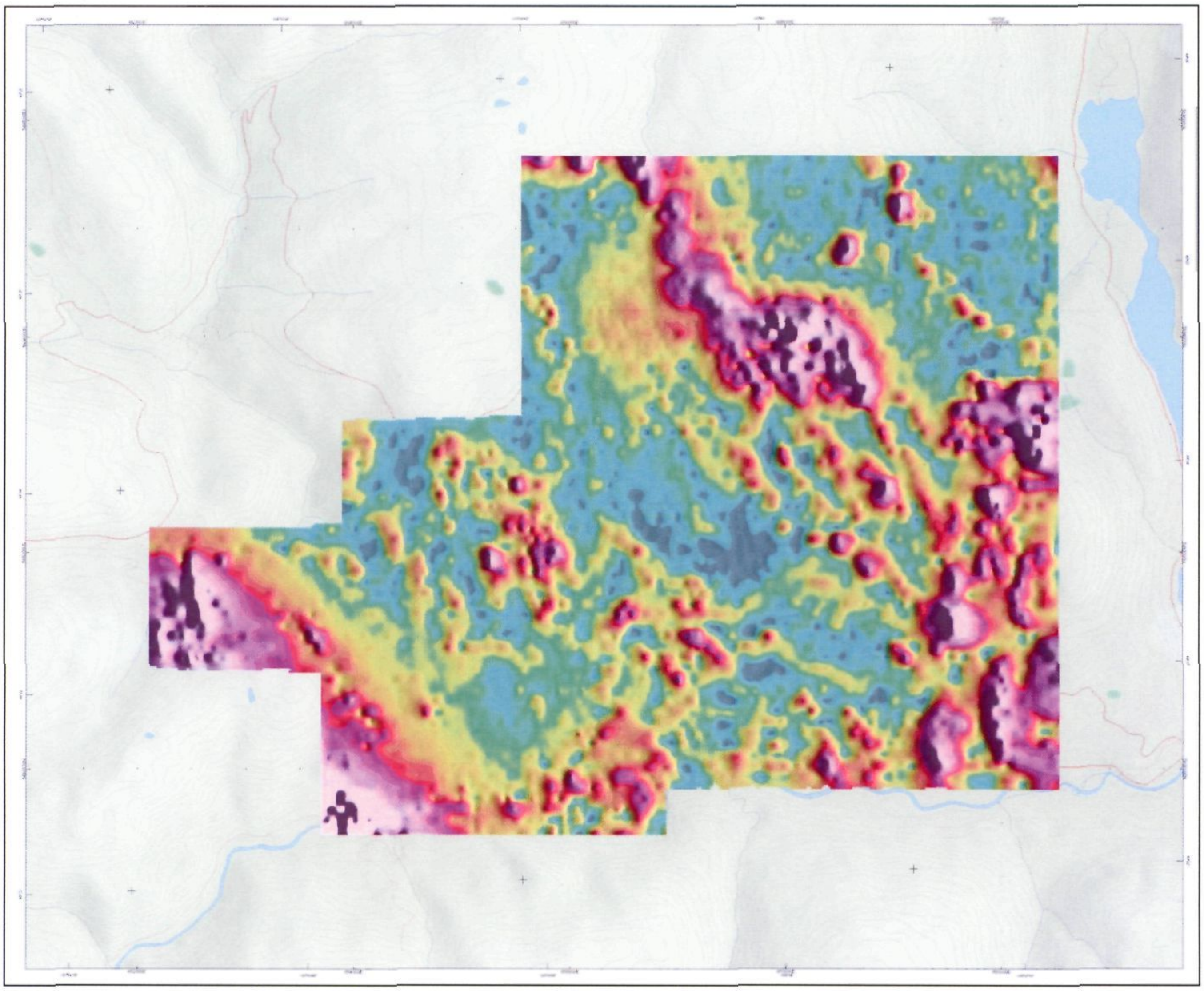

Figure 11 - Shaded image of the magnetic analytical signal (ASIG) over the Rabbitt-Redbird survey area.

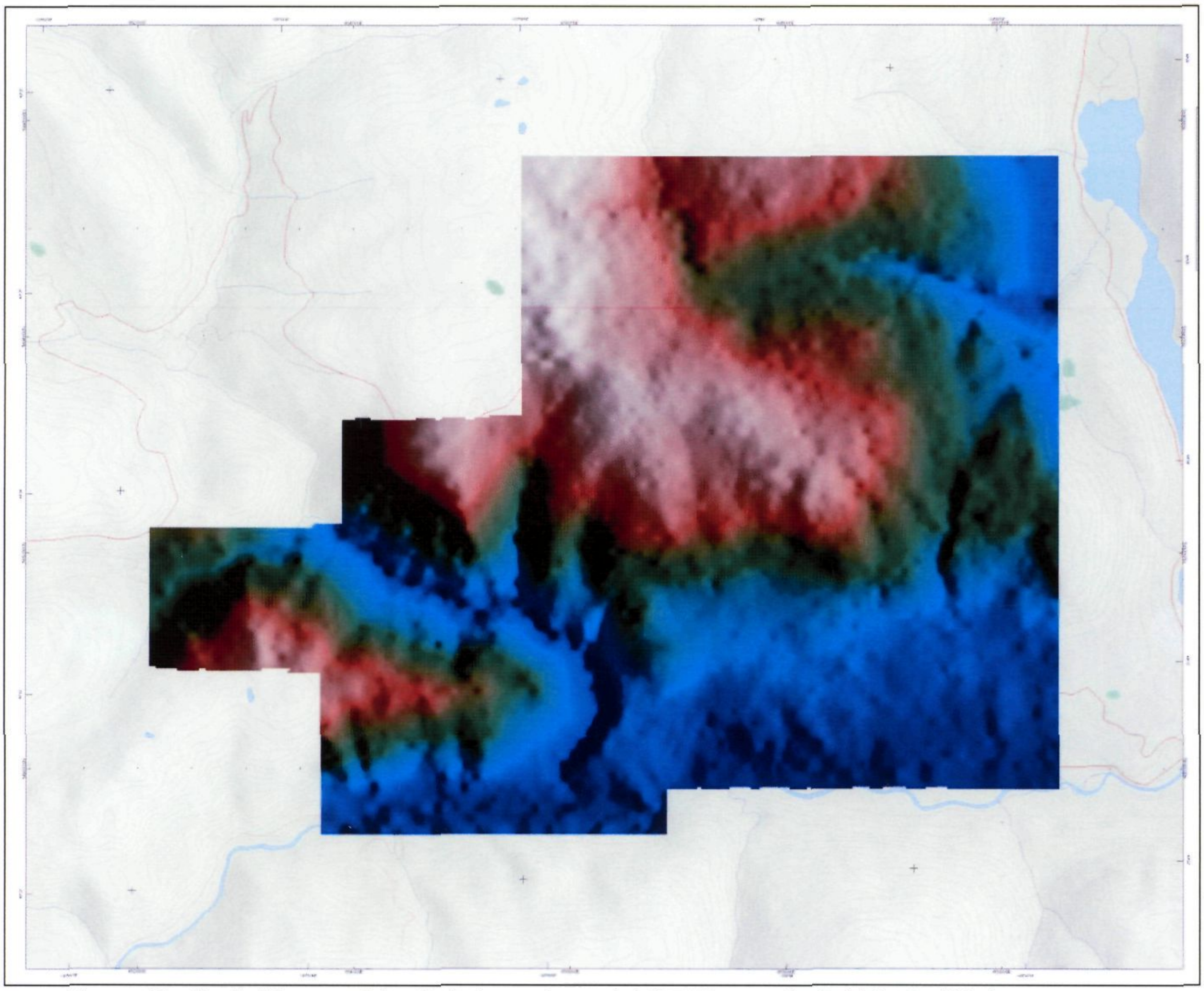

Figure 12 - Shaded image of the digital terrain model (DTM) over the Rabbitt-Redbird survey area.

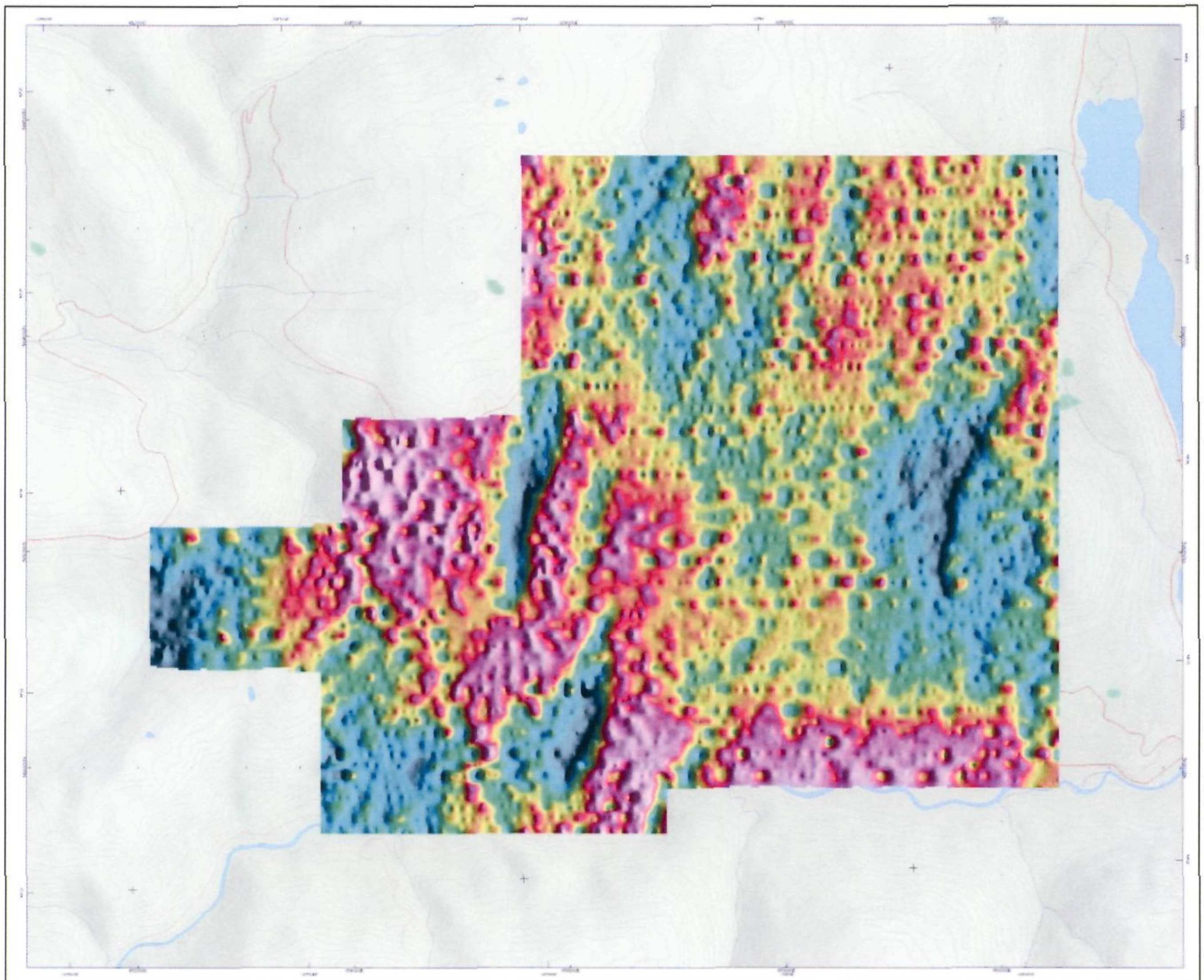

Figure 13 - Shaded image of the VLF-EM total field of station #2 (24.8 kHz) over the Rabbitt-Redbird survey area.

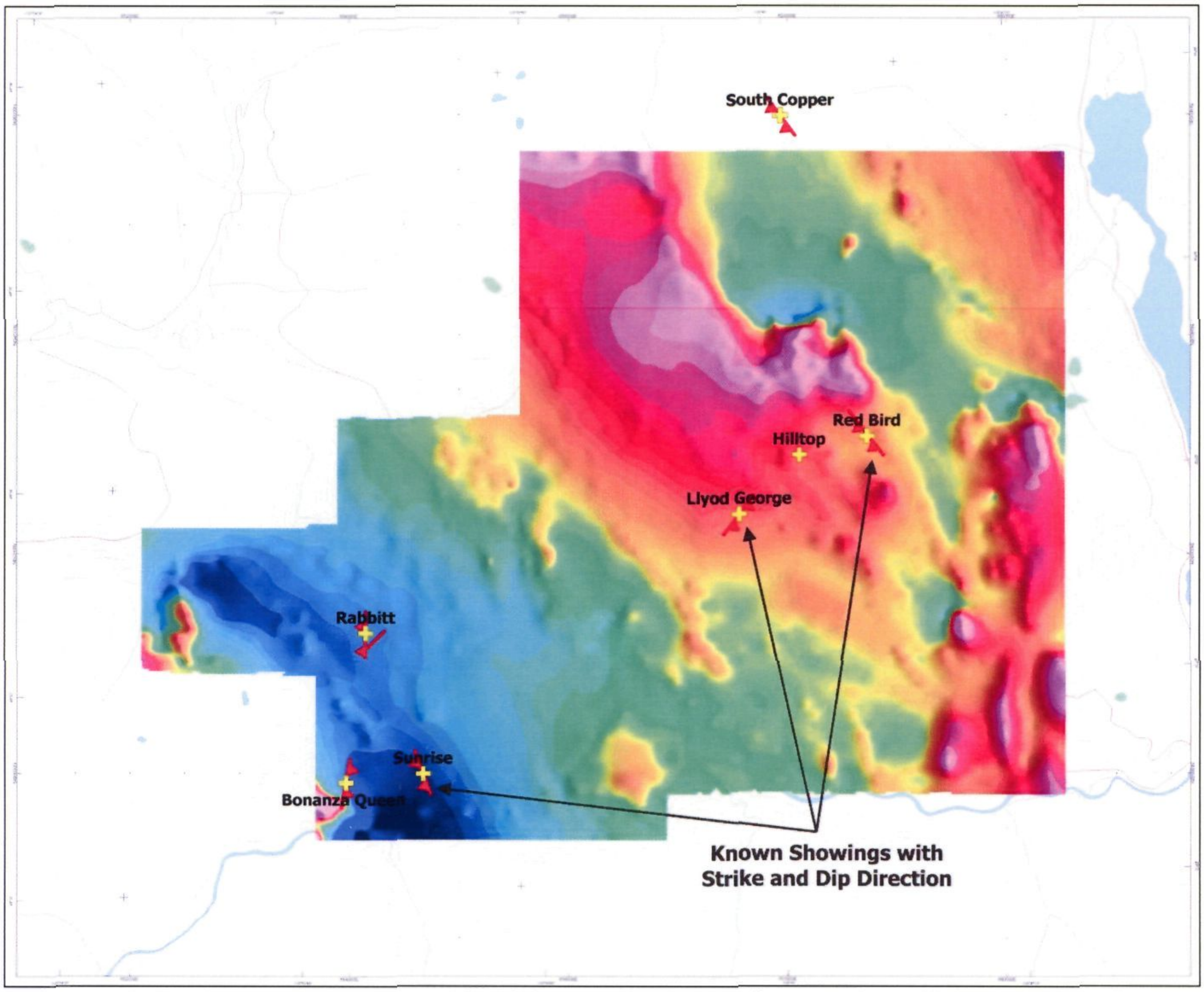

Figure 14 –Total magnetic Intensity grid with known showings with respective strike and dip directions.

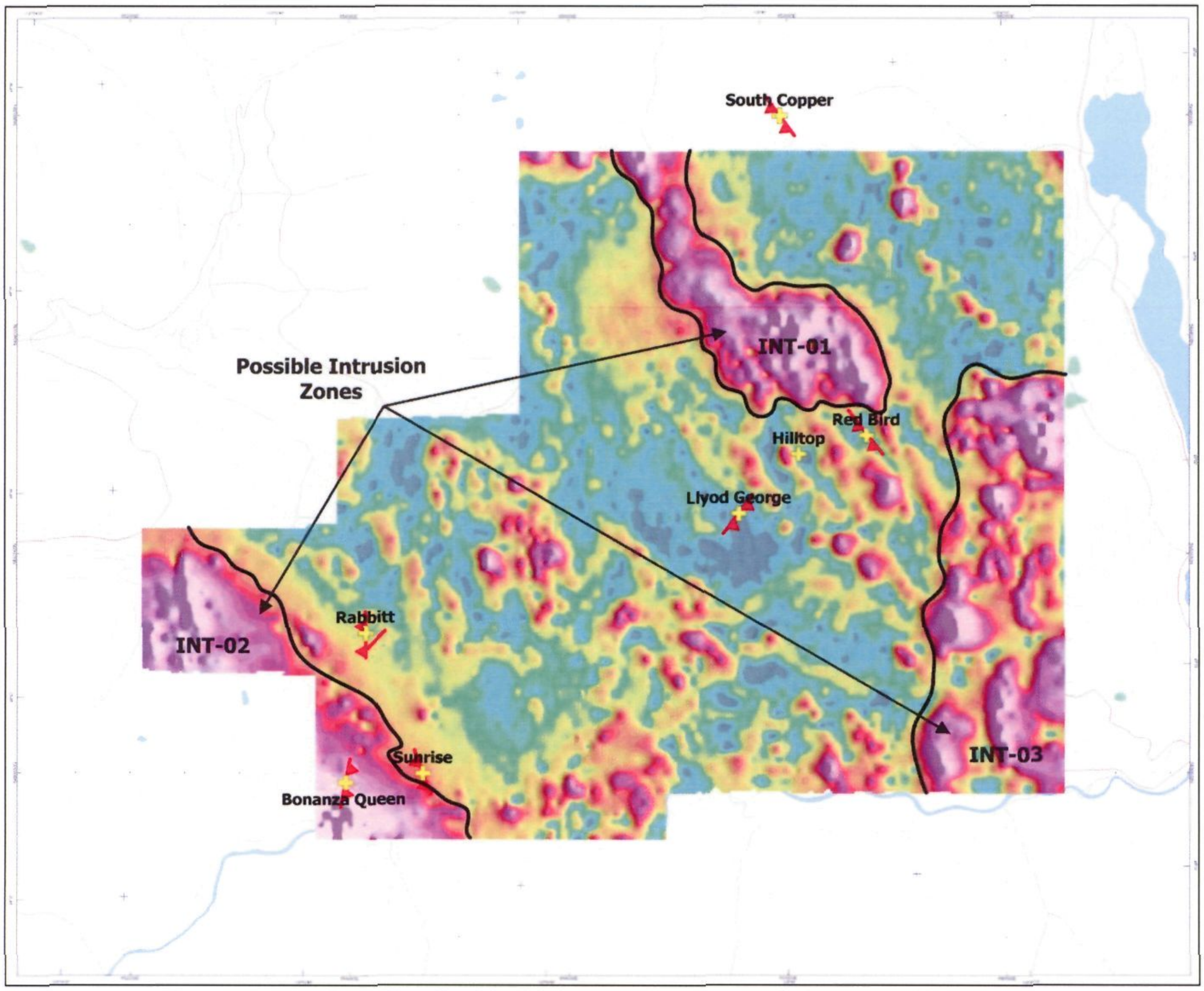

Figure 15 - Analytic Signal grid with known showings and interpreted intrusions.

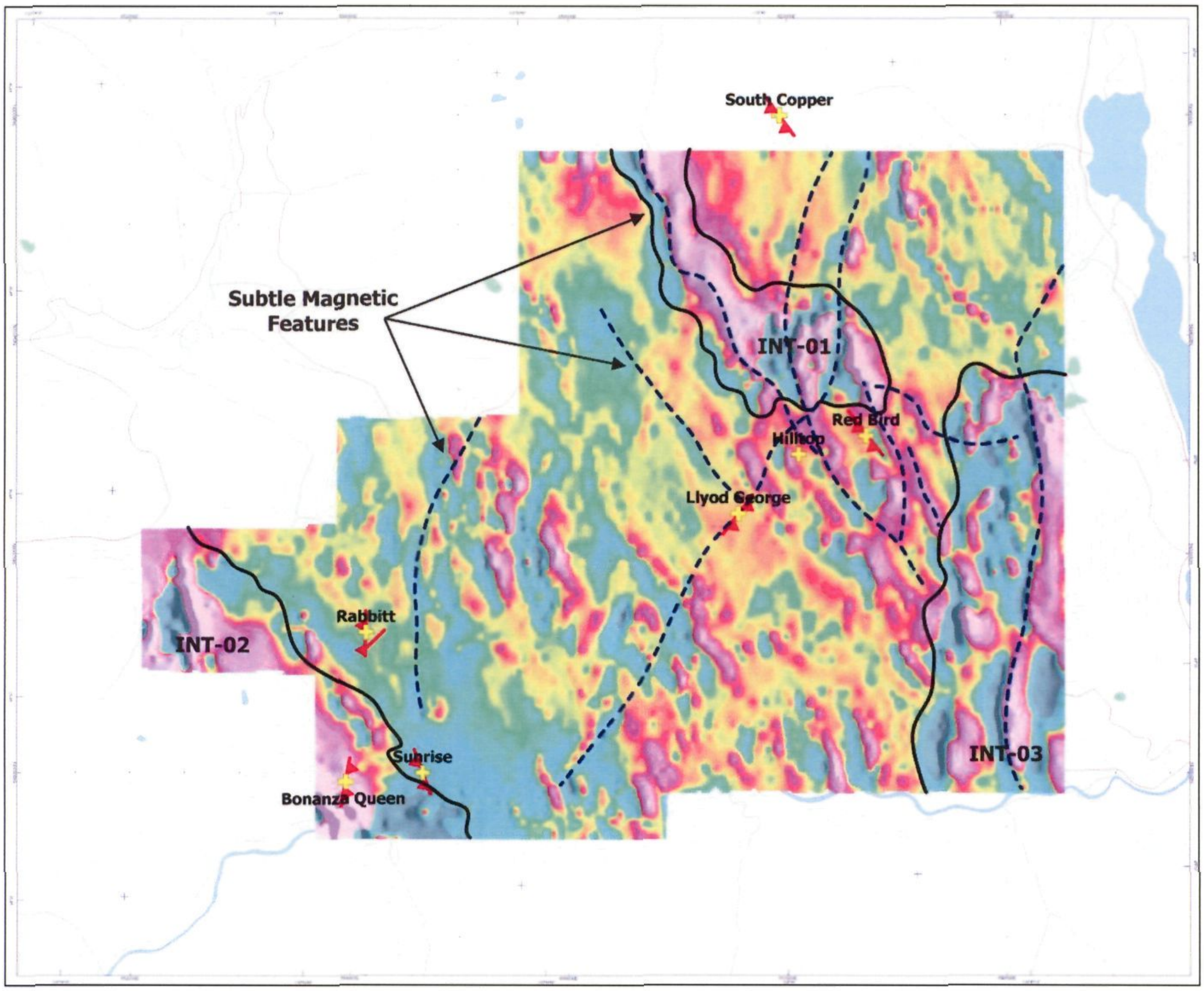

Figure 16 – Inline gradient grid identifying several vein-like occurrences.

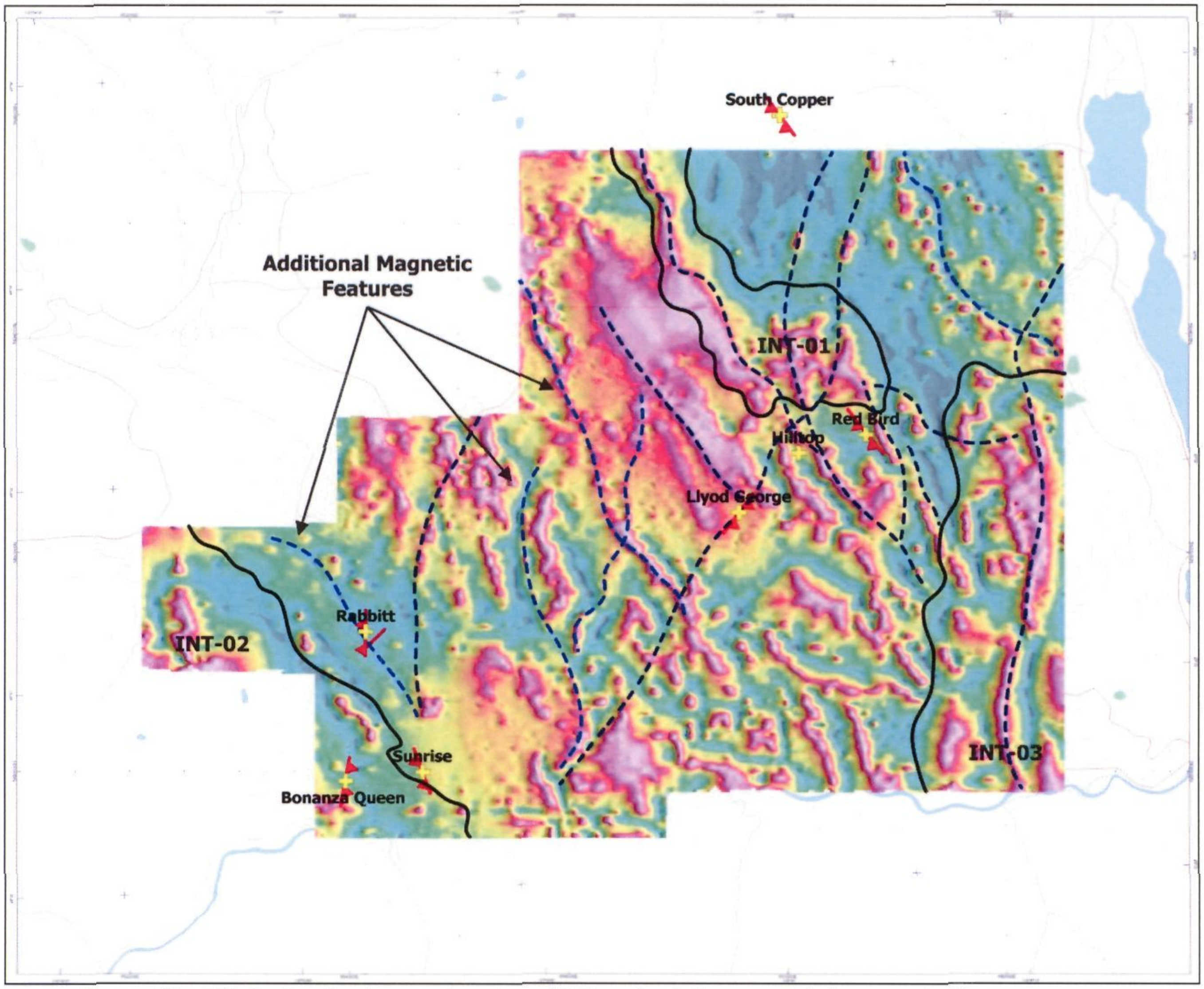

Figure 17 - Tilt derivative image showing additional subtle magnetic features in the survey area.

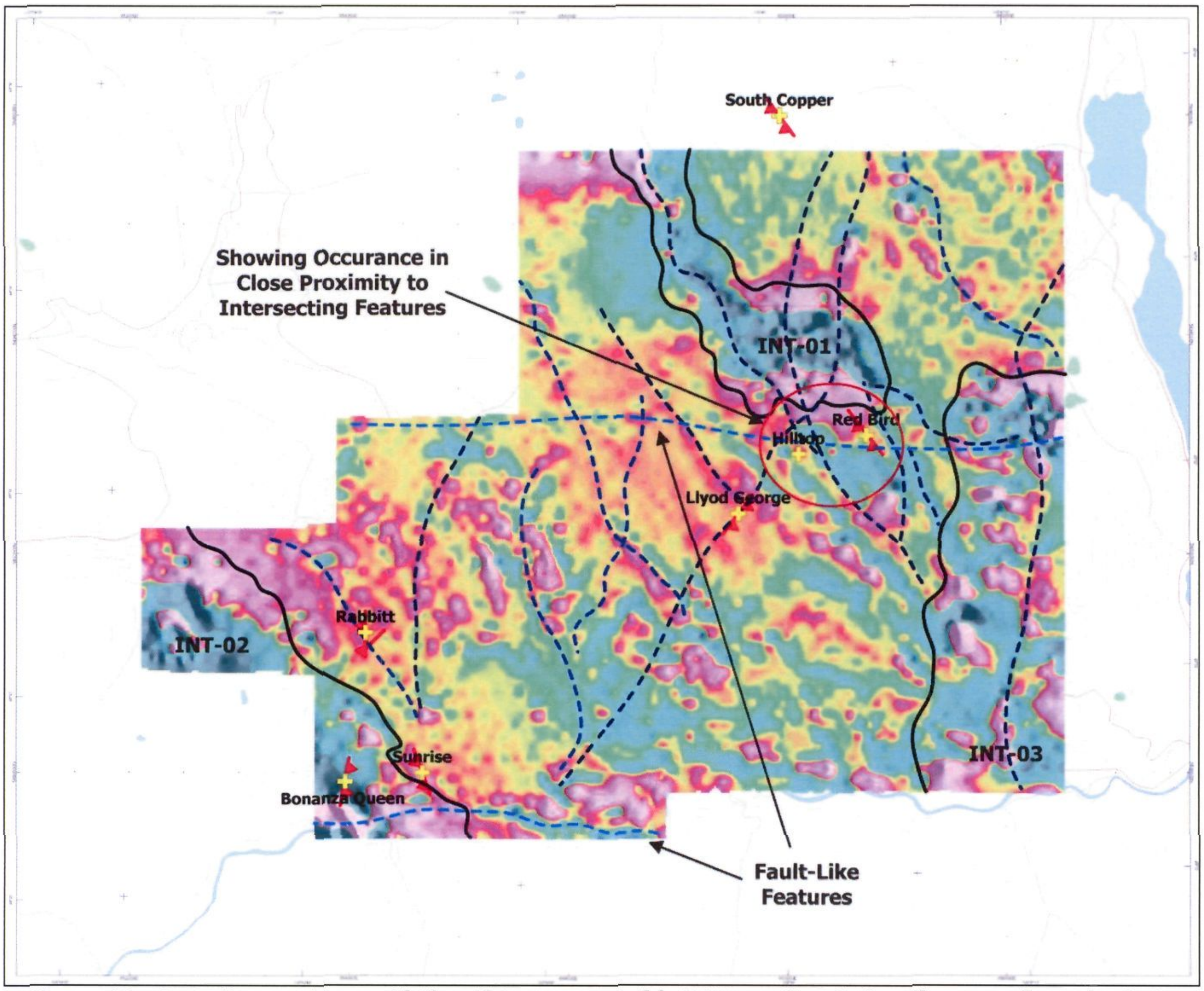

Figure 18 - Cross line gradient grid identifying two possible E-W trending faults. The area where the fault cross-cuts several veins is identified in red.

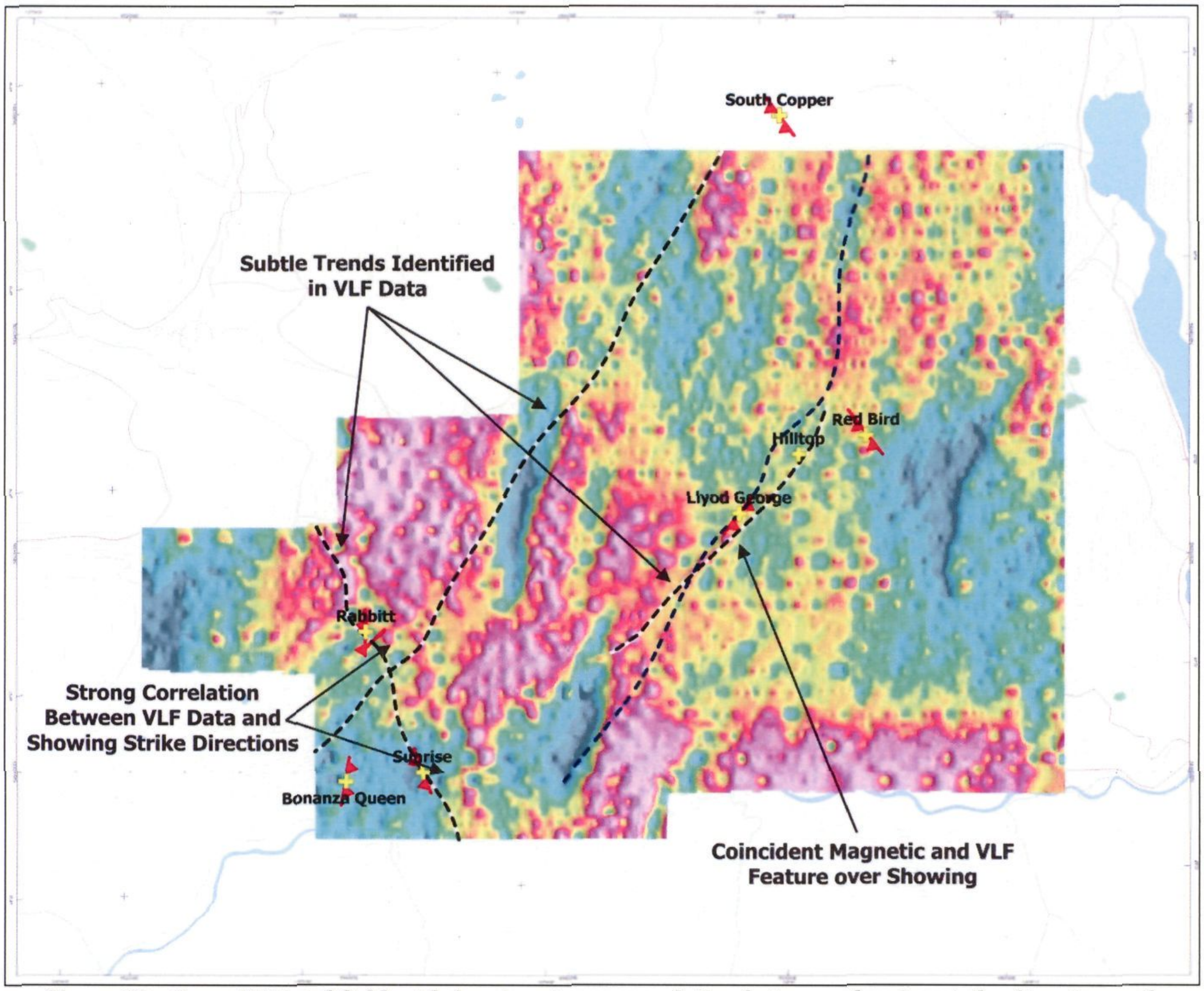

Figure 19 - Cross VLF total field grid showing strong correlation between showing strike direction and interpreted structures

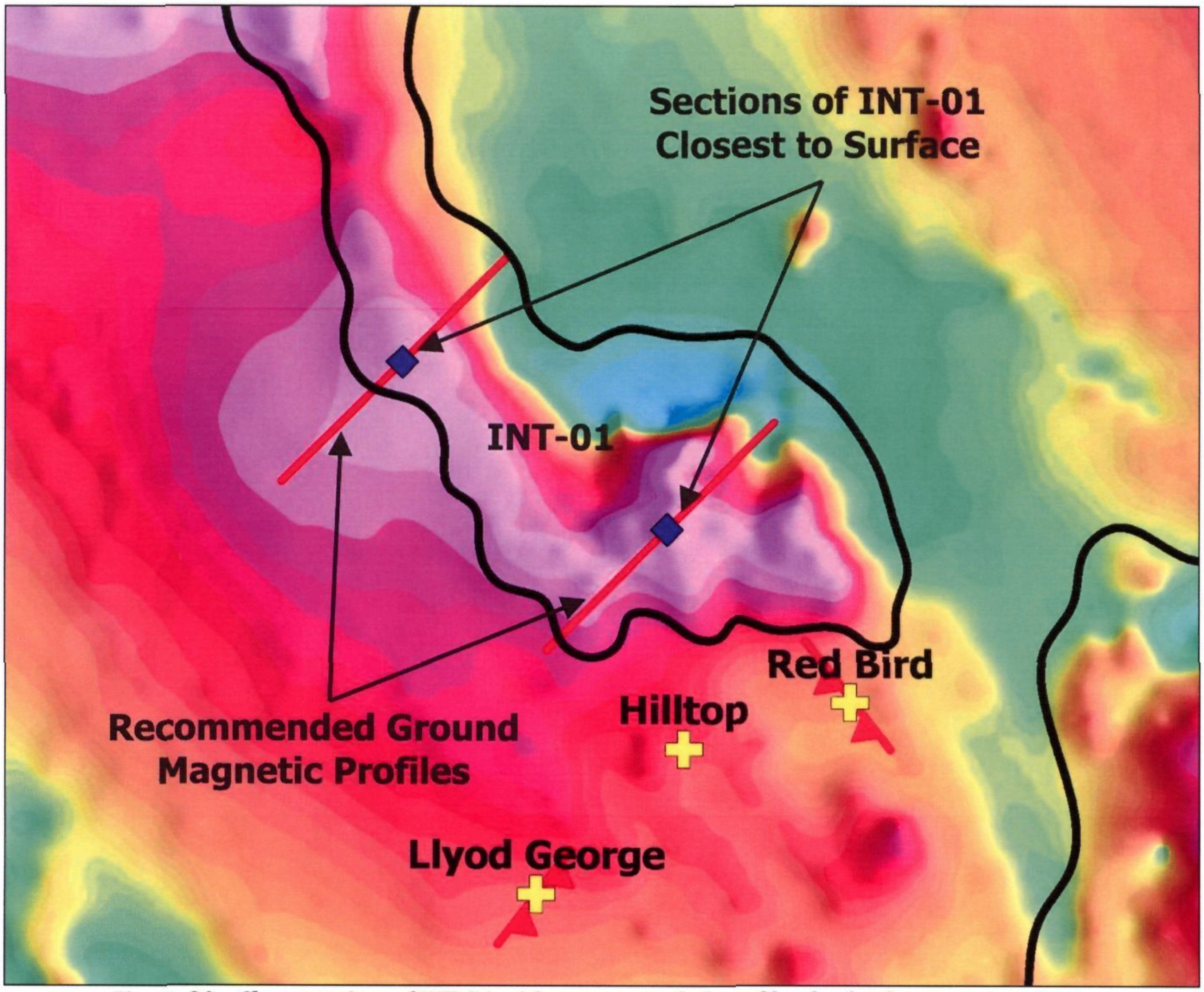

Figure 20 – Close up view of INT-01 with recommended profiles for further target analysis

APPENDIX A
STATEMENT OF QUALIFICATION

Certificate of Author

I, Sean Scrivens do hereby certify that:

I am a graduate of the Carleton University and hold a BSc (with honors) in Computational Geophysics (2004).

I have been a practicing geophysicist since 2003, as a Field Geophysicist (2003-2005), as a Staff Geophysicist (2005-2007), and as a Project Manager (2008) along with various consulting projects (2008)

I am a member of the Association of Professional Geoscientists of Ontario (Registration # 1623).

I am currently the Manager of Processing and Interpretation for Canadian Mining Geophysics Ltd.

I live at 7696 Fairhurst Dr., Kemptville, ON, K0G 1J0.

I was responsible for the acquisition, supervision of the data collected, and interpretation for this technical report.

Dated at Kemptville, Ontario this 6th day of October, 2008.

APPENDIX B
LIST OF SURVEY OUTLINE POINTS

The following survey polygon was produced by CMG and approved by the Client.

The Datum is NAD-83.

The Projection is UTM, Zone 10 North.

Rabbit & Redbird

Easting	Northing
660528	5495726
655558	5495726
655558	5493262
653884	5493262
653884	5492272
652116	5492272
652116	5490893
653695	5490893
653695	5489293
656892	5489293
656892	5489820
660528	5489820

APPENDIX C
LIST OF DATABASE COLUMNS (GEOSOFT GDB FORMAT)

Channel Name	Description
x	X positional data (metres – NAD83, UTM zone 10 north)
y	Y positional data (metres – NAD83, UTM zone 10 north)
lon_wgs84	Longitude data (degree – WGS84)
lat_wgs84	Latitude data (degree – WGS84)
Line	Line number
Date	Flight date
gpstime	Coordinated Universal Time (UTC) measurement
radalt	Bird height above ground (metres – AGL)
DTM	Digital Terrain Model (metres – ASL)
Basemag	Base station magnetic diurnal (nT)
Mag1	Sensor 1 - Total Magnetic field data (nT)
Mag2	Sensor 2 - Total Magnetic field data (nT)
Mag3	Sensor 3 - Total Magnetic field data (nT)
TMI	Leveled Total Magnetic field data (nT)
ASIG	Magnetic analytical signal (nT)
C_VMG	Calculated Vertical Magnetic Gradient
MC_HMG	Measured Cross-Line Horizontal Magnetic Gradient
MI_HMG	Measured In-Line Horizontal Magnetic Gradient
M_VMG	Measured Vertical Magnetic Gradient
VLF_TF	VLF Total Field (24.8 khz)
VLF_QD	VLF Quadrature(24.8 khz)
VLF_IP	VLF In-Phase (24.8 khz)

APPENDIX D
LIST OF MINERAL TITLES

Tenure #	Claim Name	Owner	Map No.	Area	Expiry Date
567136	RED BIRD 1	146911 (100%)	092H	167.603	July 15, 2013
567137	RED BIRD 2	146911 (100%)	092H	20.95	July 15, 2013
567139	RED BIRD 3	146911 (100%)	092H	167.61	July 15, 2013
567140	RED BIRD 4	146911 (100%)	092H	62.861	July 15, 2013
567142	RED BIRD 5	146911 (100%)	092H	188.606	July 15, 2013
567143	RED BIRD 6	146911 (100%)	092H	209.513	July 15, 2013
567147	RED BIRD 7	146911 (100%)	092H	251.417	July 15, 2013
567150	RED BIRD 9	146911 (100%)	092H	167.642	July 15, 2013
569050	RED BIRD NORTH 1	146911 (100%)	092H	62.883	July 15, 2013
569051	RED BIRD NORTH 2	139085 (100%)	092H	125.652	July 15, 2013
569055	RED BIRD NORTH 3	139085 (100%)	092H	439.815	July 15, 2013
569056	RED BIRD NORTH 4	139085 (100%)	092H	314.134	July 15, 2013
569070	REB BIRD NORTH 8	139085 (100%)	092H	146.574	July 15, 2013
586490	RED BIRD 2	139085 (100%)	092H	20.94	July 15, 2013
567149	RED BIRD 8	139085 (100%)	092H	419.577	July 15, 2013
531472	RABBITT GOLD MINE	113058 (100%)	092H	524.02	October 1, 2012
531477	BEAR CREEK	113058 (100%)	092H	419.111	October 1, 2012
531506	RABBITT MINE ROAD	113058 (100%)	092H	125.735	October 1, 2012
563616	DJ	113058 (100%)	092H	20.955	October 1, 2012