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Report of Work

On the

Gervais Property

Bristol Township, Ontario

Porcupine Mining Division

# Claims: 3016548 3016549 3016550 3012033 3012034

For

Big Red Diamond Corporation

March 2006 Timmins, Ontario Matthew Johnston Consulting Geophysicist 1226 Gatineau Blvd. Timmins, Ont. P4R 1E3

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Total Field Magnetic Survey - Contours and Posted Data	1:5000
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#### 1.0 Introduction

The Gervais property of Big Red Diamond Corporation consists of 5 unpatented mining claims numbered 3016548, 3016549, 3016550, 3012033 and 3012034 located in Bristol Township. During March 2006, a program of line cutting and geophysical surveys was conducted over a portion of this claim group. The geophysical program consisted of total field magnetic surveying. Georgex, from Timmins, Ontario carried out the linecutting and the magnetometer survey was surveyed by Kevin Cool.

#### 2.0 Location and Access

The Gervais Property is located approximately 15 kilometres west of the City of Timmins. The claim group straddles the Bristol / Godfrey Township line. Access to the property is via highway 101 west from Timmins for approximately 15 kms., then West along a major logging road (Mallette Road) for approximately 6km. A trail off of the main logging road served to access the North-West part of the grid (see figures 1 and 2).

#### 3.0 Summary of 2006 Geophysical and Line Cutting Program

The line-cutting on the Gervais Property grid totalled 11.9 kilometres, which consisted of a 1.6 km. long baseline cut at an azimuth of 0 degrees. Grid lines were cut and picketed as shown on the grid map and ranged in length from 800 metres on the south end of the property to 1200 metres in the central areas. The grid lines were chained every 25 metres with pickets chained at 25-meter intervals along all lines.

The geophysical program consisted of total field magnetic surveying. The total magnetic field survey, using a Geometrics G-856 magnetometer, totaled 7.5 kilometers with readings collected every 25 meters along all lines.

The geophysical data has been presented on plan maps at a scale of 1:5000, showing the contours and postings of the magnetic data (see maps in pocket).

A description of the instrument and survey method can be found in appendix A.





#### 4.0 Discussion of Results

The magnetic survey on the Gervais grid indicates a relatively moderate magnetic background with magnetic values ranging between 56848 and 57801 nT. The background magnetic field strength is 57097 nT. The overall magnetic pattern is disrupted by several linear to ellipsoidal shaped anomalous magnetic highs located between lines 800N and 1200N and are clearly evident on the contour map. These anomalies are easily identified on the contour map and have been labeled as magnetic anomalies A, B, and C. The anomalies display magnetic amplitudes of approximately 450 nT above background. These magnetic anomalies may reflect underlying mafic lithology which often gives rise to this type of magnetic anomaly. Anomalies A and B may also reflect diabase dikes which are prevalent in this area. No other significant magnetic anomalies were mapped over the Gervais grid.

#### 5.0 Conclusions and Recommendations

The magnetic survey over the Gervais grid was successful in mapping magnetic anomalies that may be prospective for further mineral exploration. It may be possible to test these anomalies with a program of trenching or prospecting in order to determine their source lithology.

It is possible that a program of induced polarization surveying would aid in better defining any mineralized zones, which may have disseminated accumulations of sulphide or graphitic minerals. These zones are often prospective for gold deposits. A limited program of either dipole-dipole or pole-dipole IP surveying with an 'a' spacing of 25 meters and reading levels of n=1 to 6 is recommended in order to further evaluate the Gervais property if sufficient other geological evidence exists to support continued exploration of the Gervais claims.

Any existing geological or geochemical information for the surveyed grid will aid in further assessing any geophysical anomalies and should be incorporated into an overall assessment of the property prior to further exploration.

Respectively Submitted,

Maller

Matthew Johnston Consulting Geophysicist

# Statement of Qualifications

This is to certify that: MATTHEW JOHNSTON

I am a resident of Timmins; province of Ontario since June 1, 1995.

I am self-employed as a Consulting Geophysicist, based in Timmins, Ontario.

I have received a B.Sc. in geophysics from the University of Saskatchewan; Saskatoon, Saskatchewan in 1986.

I have been employed as a professional geophysicist in mining exploration, environmental and other consulting geophysical techniques since 1986.

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Signed in Timmins, Ontario, this March 23, 2006

Appendix A

# **Survey Theory - Total Field Magnetics**

Magnetic Survey

#### Theory:

The magnetic method is based on measuring alteration in the shape and magnitude of the earth's naturally occurring magnetic field caused by changes in the magnetization of the rocks in the earth. These changes in magnetization are due mainly to the presence of the magnetic minerals, of which the most common is magnetic, and to a lesser extent illuminate, pyrrhotite, and some less common minerals. Magnetic anomalies in the earth's filed are caused by changes in two types of magnetization: (1) Induced, caused by the magnetic field being altered and enhanced by increases in the magnetic susceptibility of the rocks, which is a function of the concentration of the magnetic minerals. (2) Remanent magnetism is independent of the earth's magnetic field, and is the permanent magnetization of the magnetic particles (magnetite, etc.) in the rocks. This is created when these particles orient themselves parallel to the ambient field when cooling. This magnetization may not be in the same direction as the present earth's field, due to changes in the orientation of the rock or the field. The **unit** of measurement (variations in intensity) is commonly known as the Gamma which is equivalent to the nanotesla (nT).

### Method:

The magnetometer, **a Geometrics G-856**, with a proton precession sensor measures the **Total Magnetic Field** (TFM) perpendicular to the earth's field (horizontal position in the polar region). The unit has no moving parts, produces an absolute and relatively high resolution measurement of the field and displays the measurement on a digital lighted display and is recorded (to memory). Initially, the tuning of the instrument should agree with the nominal value of the magnetic field for each particular area. The procession magnetometer collected the data with a **0.2 nanoTesla accuracy.** The operator read each and every line at a **25 m** intervals with the sensor attached to the top of four (56cm), aluminum tubing sections. The readings were corrected for changes in the earth's magnetic field (diurnal drift) with a similar Geometrics G-856 magnetometer, acting as a stationary base station which automatically read and stored the readings at every 30 seconds. The data from both units was then downloaded to PC and base corrected values were computed.



# Portable Proton Magnetometer Model G-856AX

- # 0.1 nT resolution and sensitivity
- # Designed for ease of use by non-skilled personnel
- # Digital memory 12,500 readings
- # Manual data recall, or down load to a PC
- **#** Versatile, total field, gradiometer or base station use.
- **#** Rugged weatherproof construction.

The G-856 provides a reliable, low cost solution for a variety of magnetic search and mapping applications. Single key stroke operation means the G-856AX can be operated by non-technical field personnel or used in teaching environments. The G-856AX uses the established proton precession method, allowing accurate measurements to be made with virtually no dependence upon variables such as sensor orientation, temperature, or location. The



G-856AX Arctic Survey



G-856AX Electronic/Battery Console

unit provides a repeatable absolute total field magnetic reading, traceable to the National Bureau of Standards, unlike other magnetic field measurement processes which measure only a single component of the field.

# **Applications:**

The G-865AX is ideal for mapping geological structures, for mineral exploration, magnetic search for industrial, environmental or archaeological targets. The optional gradiometer attachment gives greater resolution and noise immunity for conducting searches in industrial or high cultural noise environments. Simple operation, large digital data storage capability, and the inclusion of MagMap 96 data transfer and editing software provides a system well suited for both teaching and survey applications.

The automated cycling option with long sensor cable and external power connection allows use of the G-856AX as a Basestation unit for the measurement of diurnal changes in the earth's magnetic field. Diurnal correction data is then downloaded by MagMap96 and can be applied to other 856, 858 or Airborne data.

#### Superior Data Editing Software.

MagMap 96 allows rapid down load of the data form the G-856AX to a PC. Data can be diurnally corrected, profile lines and positions diplayed and edited, noisy readings filtered and QC plots of profiles, 2D contour and 3D surface plots made. Data can be exported to Surfer or Geosoft for more sophisticated final maps and analysis. The software requires Windows 95, 98 or NT operating systems.



MagMap96 Display Screen

A thoroughly well proven design (over 2,000 units sold), excellent performance and the lowest price professional system are key features of the G-856AX. Combined with the ease of use, user friendly download/editing software, and readily available commercial contouring programs, the G-856AX represents a complete magnetic surveying package generating high quality data for budget conscious users.



G-856AX Desert Survey in Tibet

# Contingtion

Specificatio	ons:				
<b>Resolution</b> :	0.1 nT				
Accuracy :	0.5 nT				
Clock:	Julian date, accuracy 5 sec per				
	month.				
Tuning:	Auto or manual, range 20,000 to				
	90,000 nT				
Gradient Tol	erance: 1000 nT/meter				
Cycle time:	3 sec to 999 sec standard , can be				
	manually selected as fast as 1.5				
	sec cycle time.				
Read:	Manual, or auto cycle for base				
	station use.				
Memory:	5700 field or 12500 base station				
	readings				
Display:	Six digit display of field/time,				
	three digit auxiliary display of line				
	number, day				
<b>Digital Outp</b>	ut: RS-232, 9600 baud.				
Input:	Will accept external cycle				
	command.				
<b>Physical</b> :	Console: 7 x 10.5 x 3.5 inches,				
	(18 x 27 x 9 cm) 6 lbs (2.7 kg)				
	Sensor: 3.5 x 5 inches (9 x 13				
	cm) 4 lbs (1.8 kg				
Environmen	tal: Meets specifications within				
	0° to 40°C (32° to 105°F)				
	Will operate satisfactorily from				
	-20° to 50°C (-4° to 122°F)				
Power:	9 each 1.5 "D" Cells				
Standard Ac	cessories:				
	Sensor, Staff, Chest Harness,				
	Two sets of batteries, RS-232				
	cable, Operations manual,				
	Applications manual, MagMap96				
	software				
<b>Options</b> :	Gradiometer attachment. External				
	Power/sensor cable, External				
	power/RS-232/sensor cable,				
	rechargeable battery and charger				
	set.				

#### For More information contact:



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