# MAR 20070029: ST. PAUL PEGASUS

Received date: Dec 07, 2007

Public release date: Jan 20, 2009

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# 2006 Mineral Exploration Activities on the St. Paul Project, **East-central Alberta**

An Assessment Report Prepared for 1197313 ALBERTA LTD.

Permit Numbers:

9304050835, 9305121219 - 9305121225

Location:

NTS:

73E/13,14 & 73L/03,04

ATS:

Tp 55-60, Rg 8-13, W4

Authors:

Karen-Jane Weir, MSc.

David Clarke, M.Sc., P. Geol.

Date:

19 October 2006

Confidentiality Report End Date:

December 8, 2008

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## **Summary**

The St. Paul Project area is located in east-central Alberta, Canada, approximately 150 km northeast of Edmonton. The permit falls between 53.77° – 54.24°N latitude and 111.89° - 111.06°W longitude on NTS map sheets 73E/13,14 and 73L/03/04. Diamondex Resources Ltd. entered in to an option agreement with 1197313 ALBERTA LTD. to potentially acquire a 100% interest in the permit. The St. Paul Project is comprised of 8 contiguous permits, covering a combined area of 71,431 hectares.

The St. Paul Project 2006 field program was conducted between January through June 2006. The field program consisted of a 10,867 line-km fixed-wing high resolution airborne magnetics (HRAM) survey, a single ground magnetics geophysical survey, and limited indicator mineral sampling of beach sands. The field program was completed between January – June 2006. No kimberlite prospective anomalies were returned from the field program. Diamondex Resources Ltd. currently has no further work planned for the St. Paul Project.

Expenditures for the 2006 exploration program total \$197,872.69.

## Introduction

This report is a summary of the exploration activities undertaken by Diamondex Resources Ltd on the contiguous permits 93040508035 and 9305121219-9305121225, collectively referred to as the St. Paul Project. Exploration activities included a fixed-wing high-resolution airborne magnetics survey, a ground magnetics geophysical survey and limited indicator mineral sampling. This exploration program was completed between January and June 2006, and focussed on locating prospective kimberlite anomalies within the project area.

## Location

The St. Paul Project is located in east-central Alberta. The permits are located on NTS map sheet 73E/13,14 and 73L/03,04. The legal locations of the permits are Tp 55-60, Rg 8-13, West of the 4<sup>th</sup> Meridian. The coordinates that encompass the permits are 53.77 - 54.24°N latitude and 111.89 - 111.06°W longitude (Figure 1,2).

The project area is accessible by road and air. The airborne geophysical survey was based out of Calgary and Bonnyville, AB.

## **Work Performed and Results**

## **Fixed-wing Airborne Geophysics**

A high-resolution, high-sensitivity aeromagnetics survey (HRAM) was completed over the St. Paul Project area between 13 January and 12 February 2006 and between 22 May 2006 and 25 June 2006. A total of 10,867 line-kilometers of high resolution magnetics were flown over the project area (Figure 3). The fixed-wing survey was flown with a Piper PA-31 Navajo aircraft by Firefly Aviation Ltd., with field operations based out of Bonnyville, AB. The survey line-spacing was 100m, flown at an average altitude of 60m above ground. Survey details and parameters are contained in Appendix A. Survey results are contained in Appendix B.

### Airborne Geophysical Survey Results

No high-priority kimberlite prospective anomalies were obtained from the airborne geophysical survey completed over the Cold Lake Project area. A total of 15 low priority and 1 moderate priority anomalies were found with the survey, and are located in Appendix C (Figure 4). These low priority anomalies are not considered to be indicative of kimberlite by Diamondex Resources' geophysicists, hence no further work on these anomalies is currently planned.

### **Ground Geophysics Survey**

A single moderate priority airborne geophysical anomaly was selected for follow-up with a ground magnetics geophysical survey in June 2006. Anomaly 2386 is characterized as a small isolated magnetic high (Figure 5).

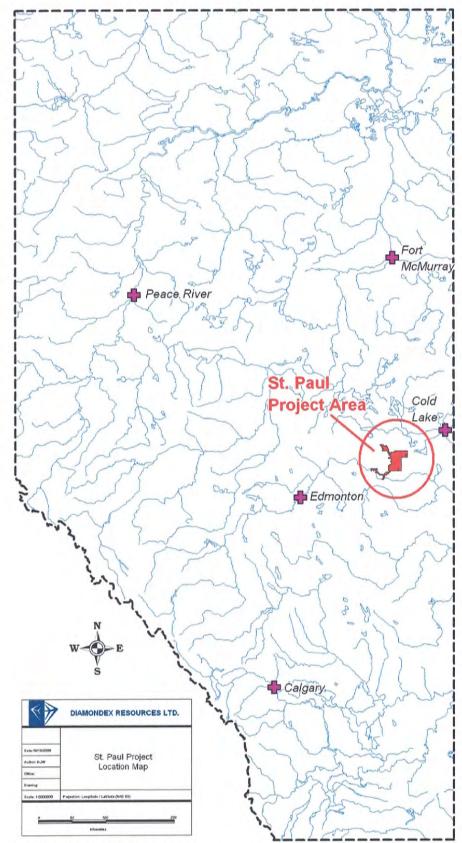


Figure 1: St. Paul Project Location Map

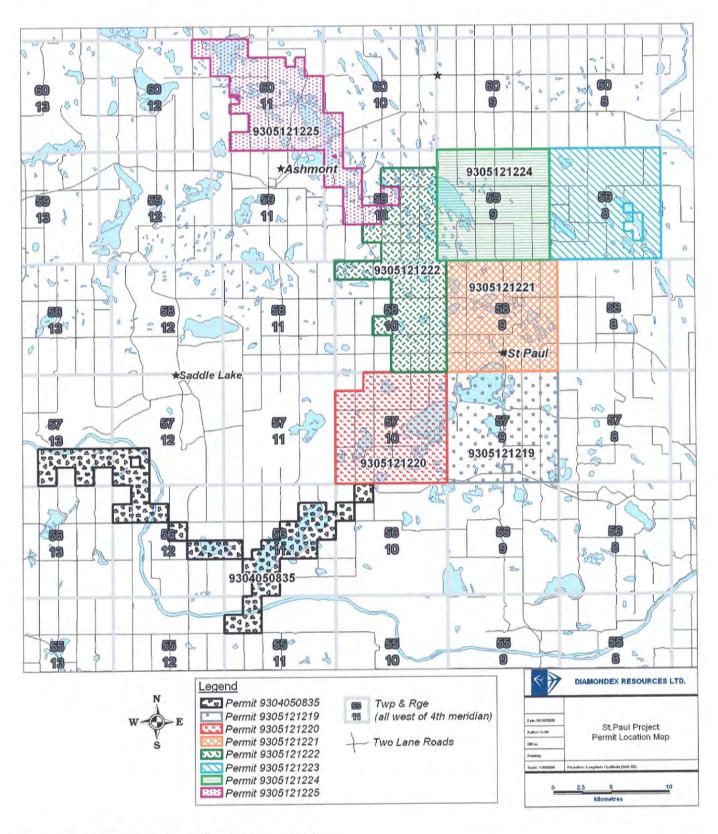


Figure 2: St. Paul Project Permit Location Map

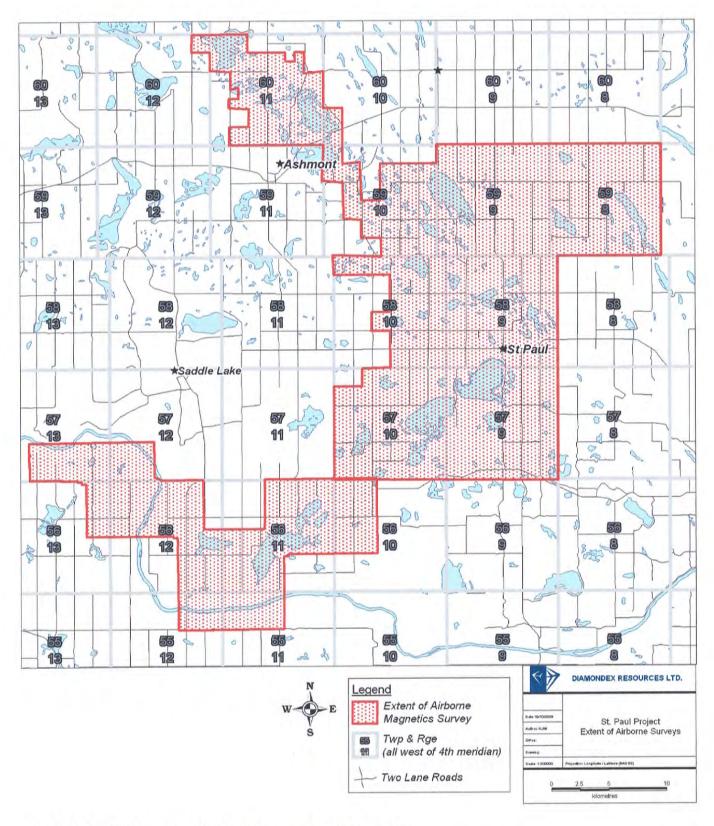


Figure 3: St. Paul Project Airborne Magnetics Survey Extent

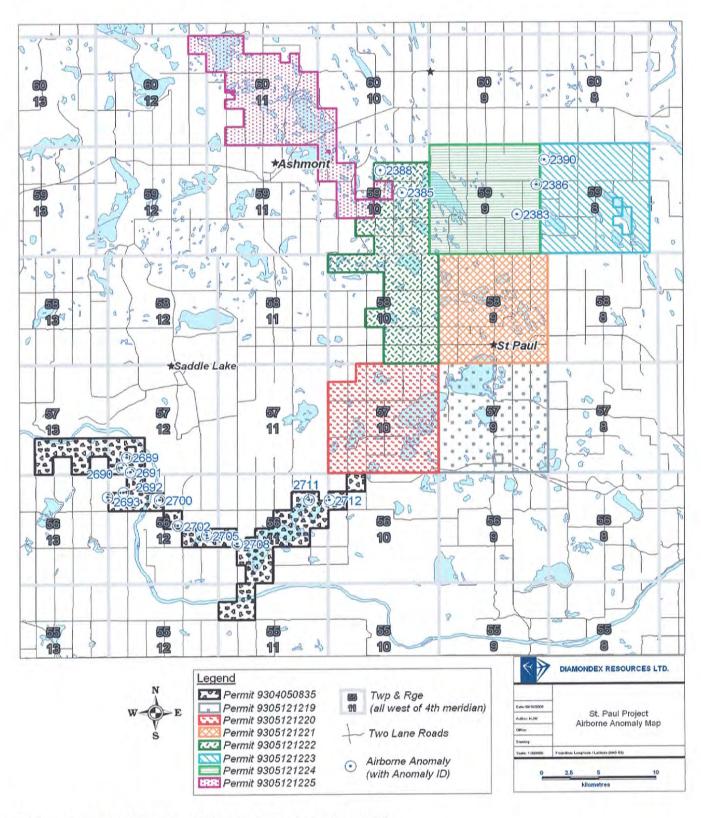


Figure 4: St. Paul Project Airborne Anomaly Location Map

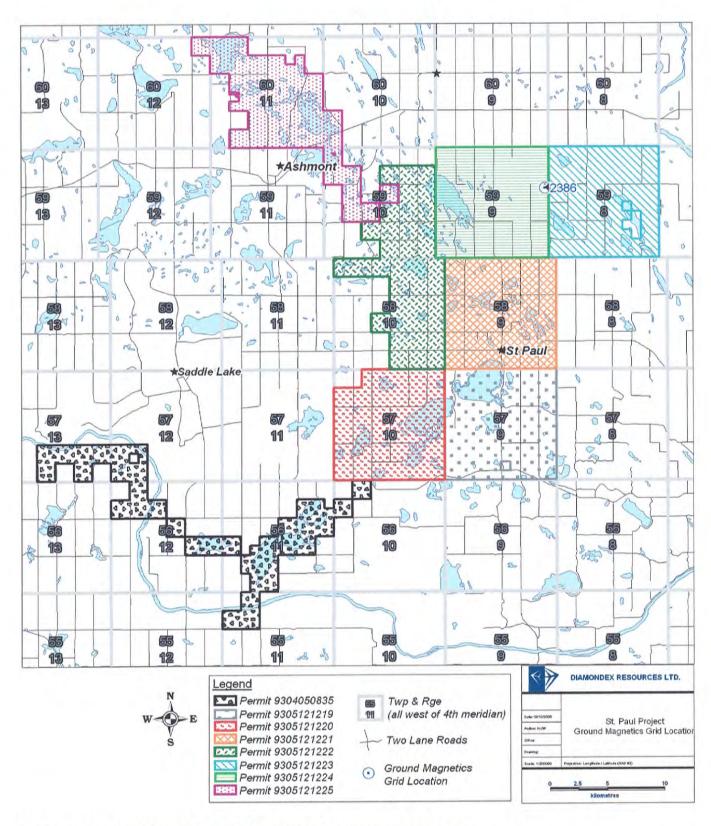


Figure 5: St. Paul Project Ground Geophysical Survey Location Map

**Ground Geophysical Survey Results** 

Due to the similarity in position and dimensions it appears that the same source is responsible for the airborne and ground anomalies. The anomaly amplitude is above the background noise level with a peak amplitude of approximately 15 nT.

The anomaly may be part of a larger feature and appears isolated due to the cross-cutting linear low. If the anomaly is isolated, the source is suspected to be of limited depth extent (estimated at 15 - 30 m). Measured dimensions of the anomaly are approximately 200 m N-S and 180 E-W.

The anomaly is not strongly characteristic of kimberlite but given the poor geologic constraints this conclusion can not be eliminated. Based on these data the anomaly source appears to be multiple bodies or a single body of heterogeneous magnetic susceptibility. The anomaly should be considered of some limited interest with moderate follow-up priority. Expansion of the ground survey to the NW may assist in determining if the anomaly is isolated.

### **Indicator Mineral Sampling**

Two indicator mineral samples were obtained from the St. Paul Project area in June 2006. The samples consisted of ~4 kg each of garnet-rich beach sand from the northern shore of Lower Therien Lake. The samples were sieved in the field at the sample site using a 2mm screen. Garnet-rich layers at the sample site were preferentially collected for the sample. Once collected, the samples were sealed in plastic pails and shipped to Saskatchewan Research Council's (SRC) laboratory in Saskatoon for processing. Due to the high abundance of garnet in the samples, the sample was halved prior to processing, with only a fraction of the returned heavy mineral concentrates observed for kimberlitic indicator minerals. In-house staff of Diamondex Resources Ltd. observed the sample concentrate for pyrope, picroilmenite, chromite, chrome-rich diopside and olivine.

### **Indicator Mineral Sampling Results**

Within the observed fraction of the heavy mineral concentrates, only grains of picroilmenite and chrome diopside were identified.

Sample ID	Easting NAD83	Northing NAD83	Pyrope	Picroilmenite	Chromite	Chrome Diopside	Olivine
89401	478,097	5,978,371	0	1	0	1	0
89402	478,092	5,978,373	0	3	0	0	0

## **Conclusions**

Exploration to date for kimberlite prospective targets on the St. Paul Project has been consisted of a fixed-wing aeromagnetics survey (HRAM) geophysical survey evaluation, a single ground magnetics survey and sparse indicator mineral sampling. No kimberlite prospective targets were generated from this exploration program. No further work is planned at this time for the St. Paul Project area.

## References

Evans, B.T. (2006): Pegasus Project Bonnyville-St. Paul Area, Alberta. High resolution aeromagnetic survey (HRAM) Logistical Report. Prepared for Diamondex Resources Ltd.

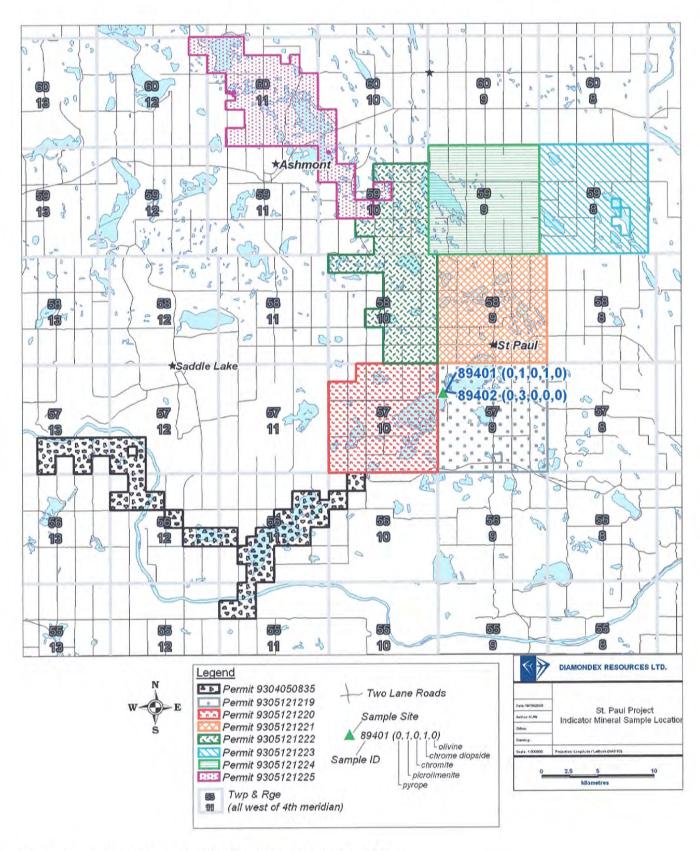


Figure 6: St. Paul Project Indicator Mineral Sample Map

## STATEMENT OF QUALIFICATIONS - DAVID B. CLARKE

- I, David B. Clarke, of 1410-650 West Georgia Street, Vancouver, V6B 4N8 in the Province of British Columbia, do hereby certify:
- a) I am presently employed as Vice President of Exploration by Diamondex Resources Ltd., 1410-650 West Georgia St., Vancouver, B.C., V6B 4N8.
- b) I am a graduate of the University of Alberta, Edmonton, Alberta, with a B.Sc. in Geology (1990), and of Queen's University, Kingston, Ontario with a M.Sc. in Mineral Exploration (1996). I have been employed in the mineral exploration industry since 1991 and have practiced my profession since graduation. I am a registered licensee with the Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories.
- c) I most recently visited the subject project area in November 2005.
- d) K-J Weir and myself are responsible for the preparation and compilation of all sections of this report.
- e) I have been involved with the project since 2005.

Dated "18 October 2006" D.B.Clarke P.Geol. Signed "David Clarke"

Signed "David Clarke"

LICE

APPENDIX A Airborne Geophysical Survey Logistics Report

# PEGASUS PROJECT BONNYVILLE - ST. PAUL AREA, ALBERTA

# HIGH RESOLUTION AEROMAGNETIC SURVEY (HRAM) LOGISTICAL REPORT

For

# DIAMONDEX RESOURCES LTD.

April 2006

By

Bruce T. Evans, P.Geol. Firefly Aviation Ltd. Calgary, Alberta, Canada

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PROJECT AREA LOCATION

APPENDIX

#### 1.0 INTRODUCTION

This report describes the specifications and operations of an airborne geophysical survey carried out for Diamondex Resources Ltd. by Firefly Aviation Ltd., during January to March 2006. The Firefly Aviation Ltd. Offices are located at Unit #4 550 Hurricane Drive, Springbank Airport, Calgary, Alberta T3Z 3S8. Telephone (403) 246-8083, fax (403) 202-1493.

The purpose of a survey of this type was to acquire high resolution, high sensitivity aeromagnetic data over an area located west of Bonnyville, Alberta. The end result of the HRAM data processing was to provide detailed data to assess the area for anomalies and magnetic features pertaining to their relevance in the local geology.

To achieve this purpose, the survey area was systematically traversed by an aircraft carrying geophysical instruments along parallel flight lines (traverses) spaced 100 meters apart in a north south alignment. Tie lines were flown normal to the traverses spaced at 1000 meters. The nominal flying height was a best–fit draped 60 meters above the terrain surface. Between 13 January 2006 and 15 February 2006 the total number of line kilometres flown and accepted are

#### 2.0 SURVEY AREA

The survey area is located in St. Paul - Bonnyville area, approximately 30 kilometres west of the town of Bonnyville, Alberta. The survey was conducted over an area as defined by Diamondex Resources Ltd. The area of the survey is outlined by the co-ordinates included in the appendices of this report.

#### 3.0 EQUIPMENT SPECIFICATIONS

#### 3.1 AIRCRAFT

The survey was carried out using a Piper PA-31 Navajo aircraft, registration C-GCMD, configured with a specially designed rigid-mount tail boom for geophysical survey operations. The aircraft is equipped with a high sensitivity magnetometer and a full on-board real time compensation recording computer, and related equipment. It is a single engine aircraft with full avionics, including real time differential 3D GPS navigation.

The aircraft has been modified to conduct airborne geophysical surveys. Considerable effort has been made to remove all ferruginous materials near the sensor and to ensure that the aircraft electrical systems do not create any noise.

The following table lists the relevant aircraft flight parameters for conducting HRAM surveys.

TYPE	Registration	TSOH	FUEL	CRUISE	SURVEY ENDURANCE
		HOURS	CAPACITY	(kts)	
Piper	C-GCMD	~985.0	240 gallons,	175 knots	7.5 hours
PA-31		hours	AVGAS	Survey:	
			100/130	155 kts	
}					

Normal Climb/Descent Gradient

1,000 FPM \*\*

Survey Fuel Consumption

~ 34.0 gph

TSOH = Time Since Overhaul

\*\* This is best rate of climb at SL at gross weight as indicated in the PA-31 pilots' operating manual; short duration rate of climb is much higher, dependent on outside temperature.

#### AIRBORNE GEOPHYSICAL EQUIPMENT 3.2

The airborne geophysical system has one high sensitivity, cesium vapor magnetometer. Ancillary support equipment include tri-axial fluxgate magnetometer, radar altimeter, barometric altimeter, GPS receiver and a navigation system which includes a left/right indicator and a screen showing the survey area with real time flight path. All data are collected and stored by the data acquisition system. The following provides the detailed equipment specifications.

### Cesium Vapor Magnetometer:

Manufacturer

Geometrics

Model

G-822

Resolution

0.001 nT counting @ 0.1 per second

Sensitivity

+/-0.005 nT

Dynamic Range

15,000 to 100,000 nT

Fourth Difference

0.02 nT

Tri-Axial Magnetic Field Sensor (for compensation, mounted in the tail boom proximal to the CS-2 pod):

Manufacturer

Billingsley Magnetics

Model

TFM 1000

Internal Noise

at 1 Hz - 1 kHz; 0.6 nT rms

Bandwidth

0 to 1 kHz maximally flat, -12 dB/octave roll off beyond 1 kHz

Frequency Response

1 HZ - 100 Hz: +/- 0.5%

100 Hz - 500 Hz: +/- 1.5% 500 Hz - 1 kHz: +/- 5.0%

Calibration Accuracy:

+/- 0.5%

Orthogonality

+/- 0.5% worst case

Package Alignment

+/- 0.5% over full temperature range

Scaling Error

absolute: +/- 0.5%

between axes: +/- 0.5%

#### Radar Altimeter:

Manufacturer

King

Model

KRA-10A

Accuracy

5% up to 2,500 feet

Calibrate Accuracy

Output

Analog for pilot; Converted to digital for data acquisition

### Differential 3D GPS Receiver

Manufacturer

Novatel

Model

ProPack LB Plus

Differential Source

**CDGPS** 

Туре

Continuous tracking, L1 frequency, C/A code (SPS), 12 channel

(independent)

**Position Sensitivity** 

twice per second

Accuracy

position (differentially corrected) ~1.0 meter

position (SA implemented) 100 meters, position (no SA) 30 m,

velocity 0.1 knot, time recovery 1 pps, 100 nsec pulse width

Data Recording

all GPS data and positional data logged by onboard DGR33A on

compact flash

Navigation Interface (with pilot and operator readouts):

Manufacturer

AG-NAV Inc.

Model

P141

Data Input

Real time processing of GPS output data

Pilot Readout

Left/Right indicator / forward line projection screen

Operator ReadoutScreen modes: map, survey and line

Data Recording

All data recorded in real time on Compact Flash disk via DGR33A

#### Data Acquisition System:

Manufacturer

**RMS** Instruments

Model

DGR33A with Chart Recorder

Operating System Microprocessor

MS-DOS

RMS4183A

Memory Clock

On board up to 128 MB, via SCSI Compact Flash Interface real time; hardware implementation of MC14618 in the integrated

peripherals controller

I/O Slots

5 AT and 3 PC compatible slots

Display

Electro – luminescent 640x400 pixels

Graphic Display

Scrolling analog chart simulation with up to 5 windows operator

selectable; freeze display capability to hold image for inspection

Recording Media

128 MB SCSI Compact Flash Drive

Sampling

Programmable. Rate for this program set at 1 Hz.

Inputs

32 differential analog inputs

Serial Ports

2 RS-232/RS422

Parallel Ports

4 channel Serial I/O; 4 channel ARINC

### Magnetometer Processor

Manufacturer

Geometrics

Model

Input Range

20,000 - 100,000 nT

Resolution

0.001 nT

Bandwidth

0.7, 1 or 2 Hz

Input Signal

TTL, CMOS, Open collector compatible or sine wave with decoupler

Input Impedance

TTL>1K Ohm

Magnetic compensation for aircraft and heading effects is done in real time. Raw magnetic values are also stored and thus if desired, compensation with different variables can be run at a later time.

#### Magnetic Compensation System:

Manufacturer

**RMS Instruments** 

Model

**AADCII** 

Operating System

MS-DOS

Inputs

1 to 4 high sensitivity magnetometers

Input Frequency Range Magnetic Field Range

70khz to 350khz 20,000 to 100,000 nT Front End Counter

100 MHz

Resolution

1 pT

Compensation Perf.

Improvement ratio 10 to 20 typical for total field

Accuracy of Compens.

0.035 nT standard deviation for the entire aircraft flight envelope in the

bandwidth 0 to 1 hz typical

Data Output Rate Internal System Noise 10 hz maximum less than 1 pT

Vector Magnetometer

3-Axis Fluxgate over sampled, 16 bit resolution 3 Serial RS232C ports, max rate 19.2 Kbaud

Outputs

Magnetometer data output Direct Interface with GR33A

Parallel output port, 16 bit with full handshaking

4 Analog outputs with 12 bit resolution.

### Power Supplies:

Power Distribution Unit manufactured by Analytic Systems Ltd. interfaces with the 1) aircraft power and provides filtered and continuous power at 27.5 VDC to all components.

#### MAGNETOMETER BASE STATION 3.3

High sensitivity base station data are provided by a GEM GSM-19 Overhauser magnetometer, data logging onto a dedicated PC module.

Magnetic Sensor:

**GEM** 

**GSM-19** 

Magnetic Processor:

Manufacturer

**GEM** 

Model Input Range GSM-19 Overhauser Mag 15,000 - 100,000 nT

Resolution

0.1 nT

Bandwidth

1 or 2 Hz

Input Signal

TTL, CMOS, Open collector compatible or sine wave with decoupler

Input Impedance

TTL>1K Ohm

### Logging Software:

Logging software by GEM-Terraplus Ltd. Compatible to PC with RS 232 input; supports real time graphics, automatic startup, compressed data storage, selectable start/stop times, automatic disk swapping, plotting of data to screen or printer at user selected scales, and fourth digital difference and diurnal quality flags set by user.

#### **GPS BASE STATION** 3.4

Ground GPS data was collected to perform any required post-flight differential correction to the flight path. The ground GPS base station equipment is described below:

Manufacturer

Novatel

Model

Novatel OEM2 Card

Type

Continuous tracking, L1 frequency, C/A code (SPS), 10 channel

WAAS Enabled

Position Update

once per second

Accuracy

with SA implemented 100 meters, no SA 30 meters, velocity 0.1 knot,

time recovery 1 pps, 100 nsec pulse width

Data Recording

all GPS raw and positional data logged by PC based data logger

#### 4.0 SURVEY SPECIFICATIONS

#### 4.1 LINES AND DATA

Survey area coverage

A total of 19,072 survey line kilometers were collected.

Traverse Line Direction

270 and 090 degrees true azimuth.

Line Interval

100 m

Tie Line Interval

1000 m flown orthogonal to survey lines.

Terrain Clearance Average ground speed 60 meters drape mode.

60 meters/second

Data point interval: Magnetic: 6.0 meters relative ground spacing per sample point.

#### 4.2 **TOLERANCES**

a) Line spacing: At no point did the traverse or control lines deviate more than one third of the designated flight line spacing over a period of one kilometer of line flown.

b) Terrain clearance: All flight lines were within tolerance of the planned drape surface.

c) Diurnal magnetic variation: As per spec, with data not acquired during magnetic storms or short term disturbances which exceeded survey spec.

d) Missing data: Any lines with channels or portions of channels missing from the database were reflown.

#### 4.3 NAVIGATION AND RECOVERY

The satellite navigation system was used to ferry to the survey site and to survey along each line using UTM coordinates. The survey coordinates of the survey outline for navigation purposes and flight path recovery were calculated from the project area coordinates listed above.

The navigation accuracy is variable depending on the number and condition of the satellites, however with use of the real time differential 3D GPS navigation it is generally less than five meters and typically in the 1 to 3 meter range. Post-flight differential correction of the flight path, which corrects for satellite range errors, improves the accuracy of the flight path recovery to approximately within one to three meters.

#### **OPERATIONAL LOGISTICS** 4.4

The main base of operations for the Pegasus Project HRAM survey was the community of Bonnyville (CYBF). The base station magnetometer and GPS equipment were located in a magnetically quiet location at the airport.

Fuel for the aircraft was purchased on site from the Bonnyville Flying Club. Accommodations for the field crew were secured in Bonnyville.

The field crew consisted of:

David Fenwick - Survey Pilot

Travis Reed/Adam Harmer - Equipment Operator

Jeremy Weber - Field Data Processor

The processing crew was:

Bruce Evans - Project Manager

Jeremy Weber - Senior Processor, Quality Control

Christopher Campbell (Intrepid Geophysics) - Final Processing and

Map Production.

Field operations were conducted at the Pegasus project between 13 January 2006 and 15 February 2006. The aircraft and crew mobilized to the project on 13 January 2006, and conducted initial calibration and compensation flights 16 January 2006. The aircraft and crew demobilized from the project on 16 February 2006 and arrived back at the Calgary base the same day. The final acquisition flight was completed on 15 February 2006. There were a total of 17 accepted survey flights, including ferry and survey flights, compensation, and reflights. Unacceptable mission data flights are not included in this total.

#### 5.0 DATA PROCESSING

After each mission the flight data was fully field processed and quality-checked. Each line of data was viewed on-screen, displaying raw mag, compensated mag, ground mag, noise, radar altitude, Lat./Long, flight path, and in-grid/out-of-grid. These, with the digital review, were the basis for the data QC. Any flight lines that exceeded the survey specifications due to aircraft positioning, diurnal variations or noise were noted for reflight, and forwarded to the flight crew for re-collection.

The generalized processing procedure during the survey consisted of the following:

- 1) Import all flight and base data into Geosoft.
- Edit DIURNAL channel to remove any uncharacteristic spikes and linearly interpolate across any gaps.
- Establish table of mean terrain clearances at intersection locations from tie line data to provide elevation guidance for survey line navigation. Grid differences in elevations at intersections of tie and survey lines to provide quality check on elevation control and tag any for reflight.
- 4) Edit flight path channels to remove any false spikes and linearly interpolate gaps.
- 5) Edit RAWMAG channel to remove any false spikes and linearly interpolate gaps.
- 6) Create new channel as MAGDC = (MAG1 BASEMAG) + base constant (59656).
- 7) Perform lag correction and heading correction to MAGDC channel.
- 8) Perform tie line leveling using all the survey line data to level the tie lines.
- Perform preliminary survey line leveling using the leveled tie lines; preliminary leveled channel is labeled MAG PRELEV.
- All data were viewed on the screen on a line-by-line basis using the interactive Geosoft Oasis Montaj database to inspect for quality, required tolerances and data integrity.
- 11) Produce preliminary flight path map and gridded magnetic intensity map including shadowing.
- 12) Plot survey line and tie line flight paths and profiles for quality control inspection.

#### 5.1 DATA PRODUCTS

For the purposes of the Diamondex Resources Ltd. Pegasus Project Firefly has been contracted to provide a complete data set which includes final micro-leveling, processing and plotting. Plotted products include a) Total Magnetic Intensity b) Calculated 1<sup>st</sup> Vertical Derivative and c) Flightpath.

Survey data has been provided on CD-ROM in a Geosoft Oasis Montaj XYZ database format.

#### 6.0 SUMMARY

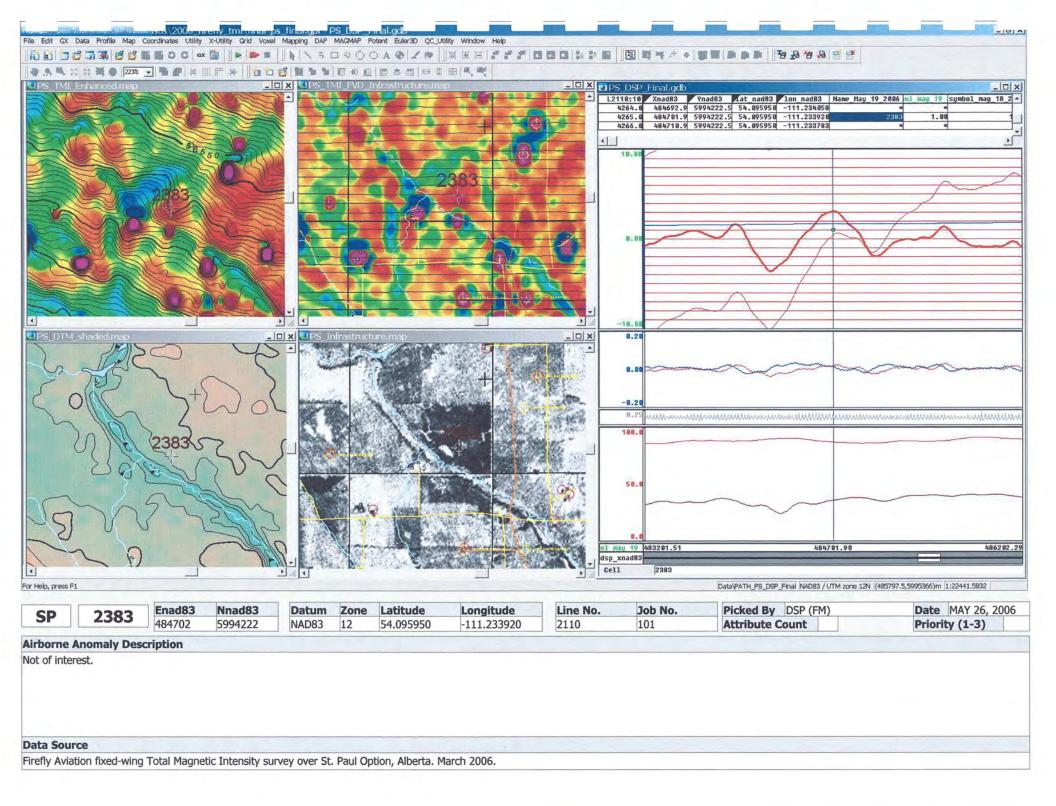
An airborne high sensitivity, high-resolution magnetic survey has been carried out at 60 meter drape mode elevation, 100 meter line intervals and with data sample stations at ~6.0 meters along the lines. Tie lines were spaced at 1000 meters. A high sensitivity base magnetic station recorded the diurnal activity throughout the survey and a base GPS station was used to correct range errors in the GPS flight path recovery. Airborne recorded data included one fully compensated magnetometer located in a tail boom mounted pod, radar altimeter and all attendant GPS data. The magnetic data have been processed, gridded and provided on CD-ROM.

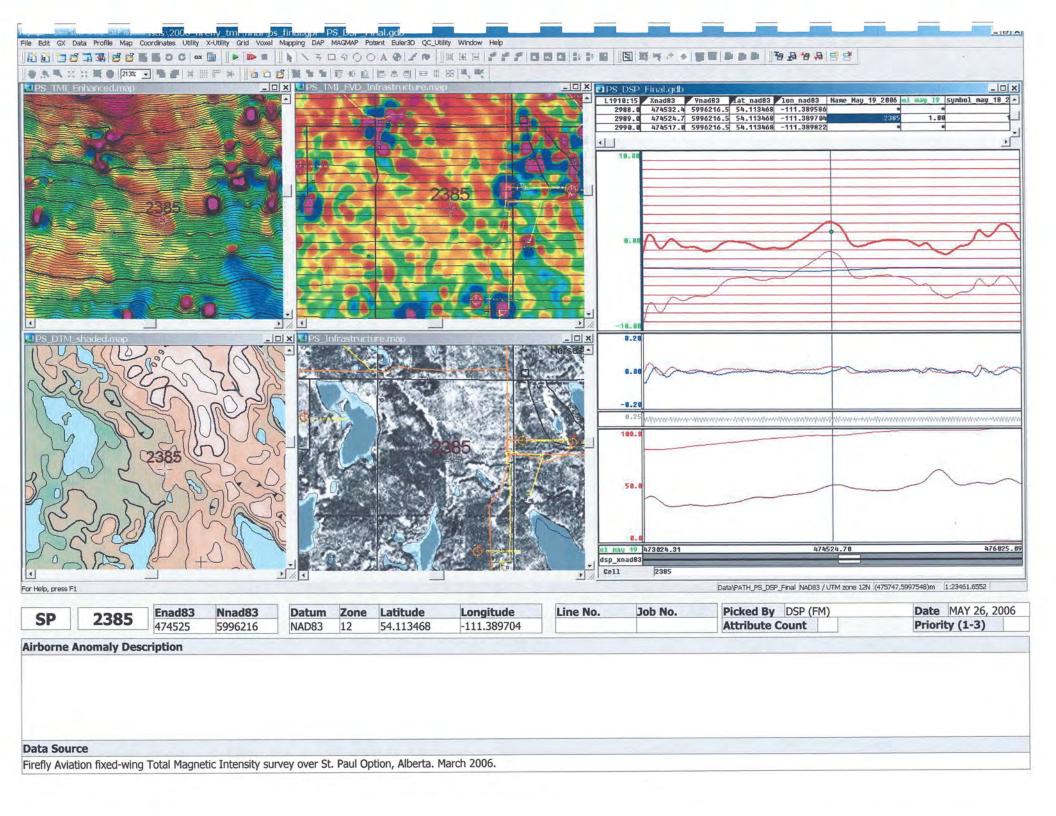
FIREFLY AVIATION LTD.

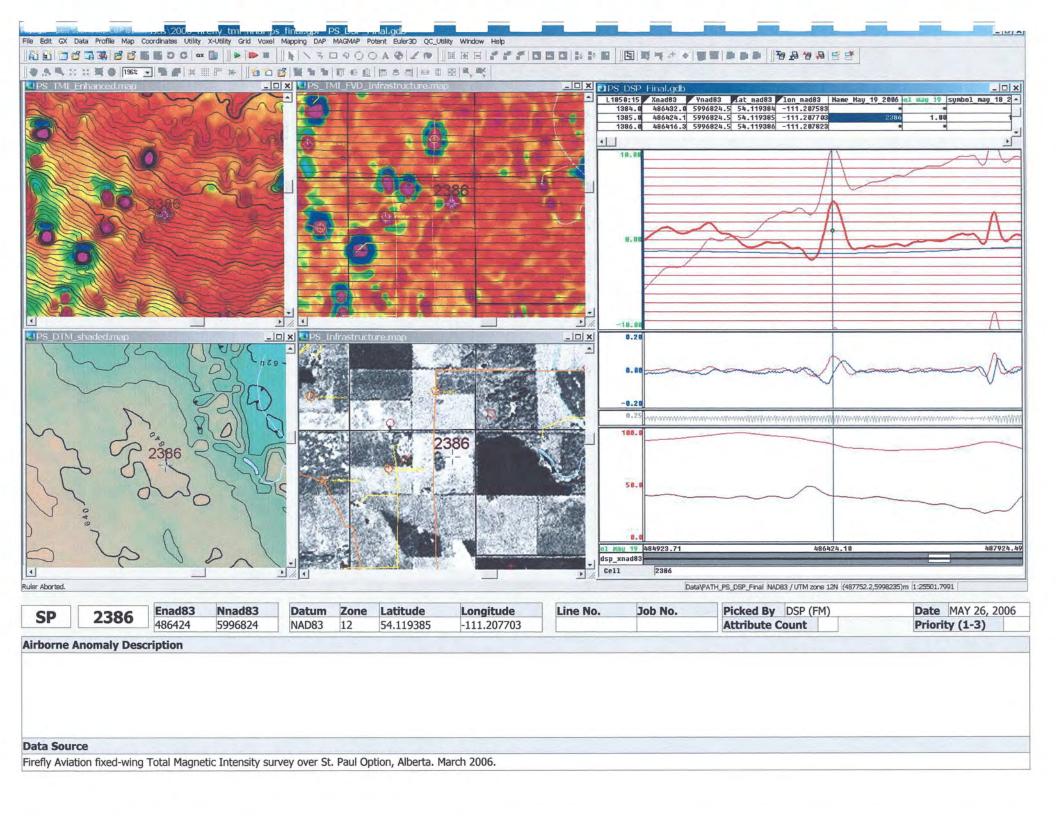
Bruce T. Evans, P.Geol. 15 April 2006

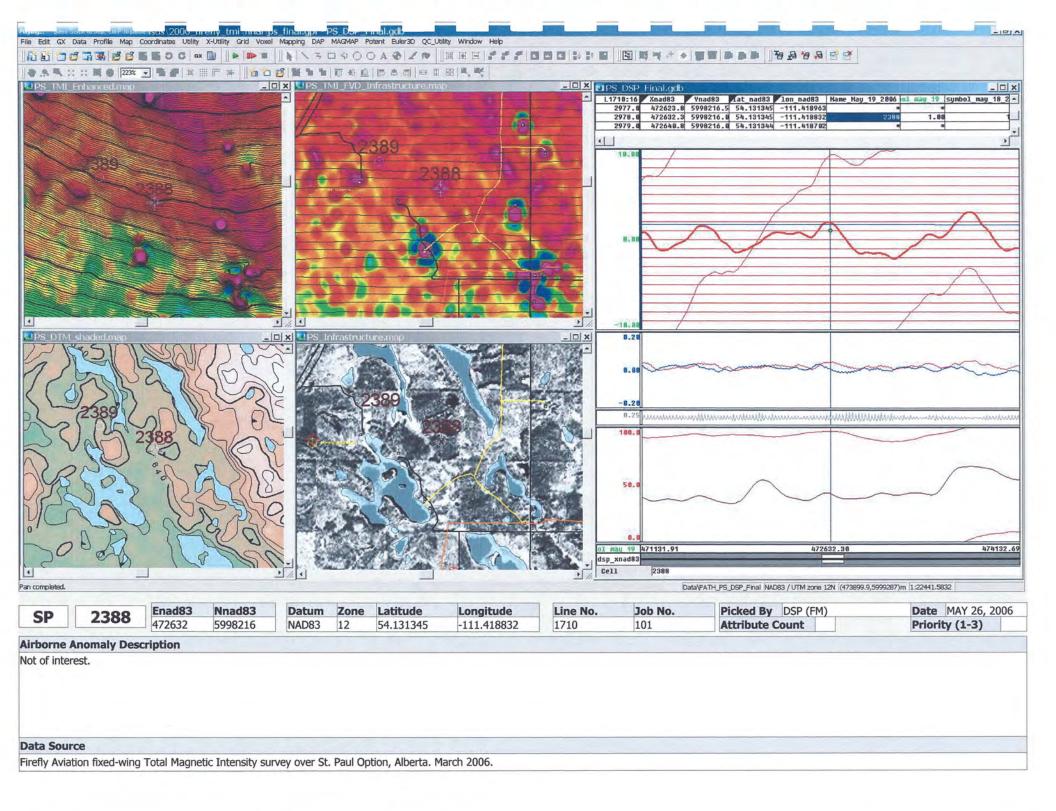
# APPENDIX B: Airborne Geophysical Survey Data

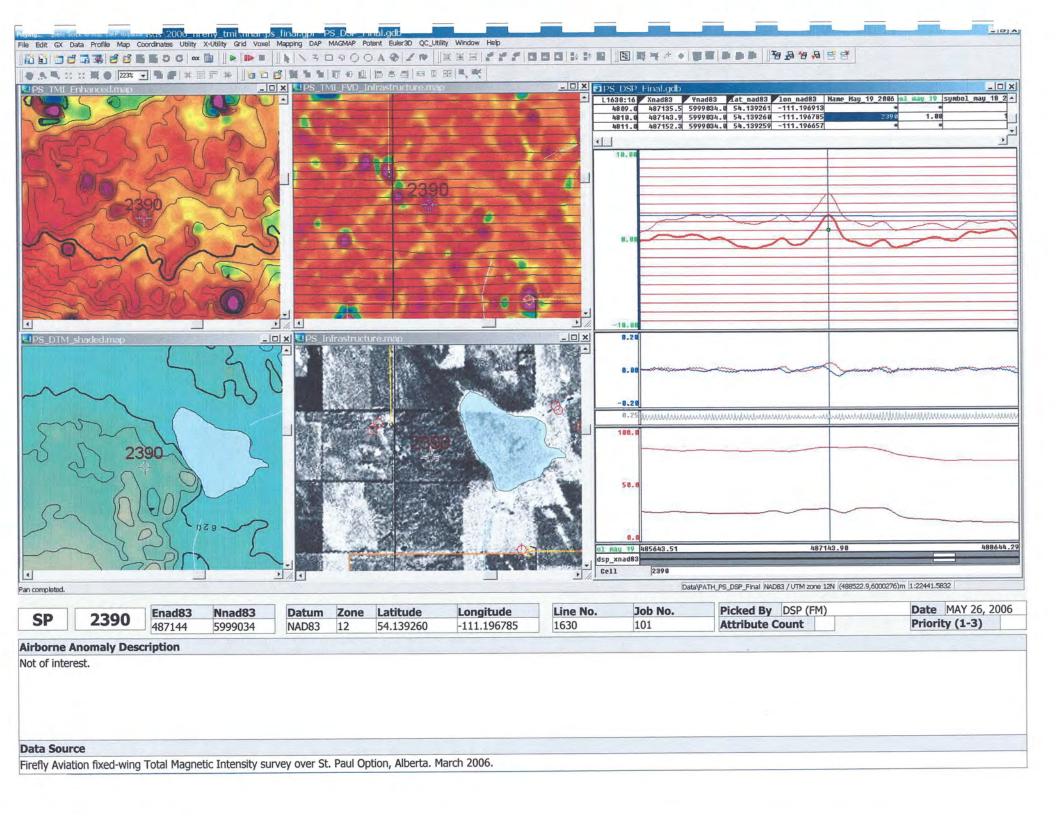
# APPENDIX C: Airborne Geophysical Anomalies

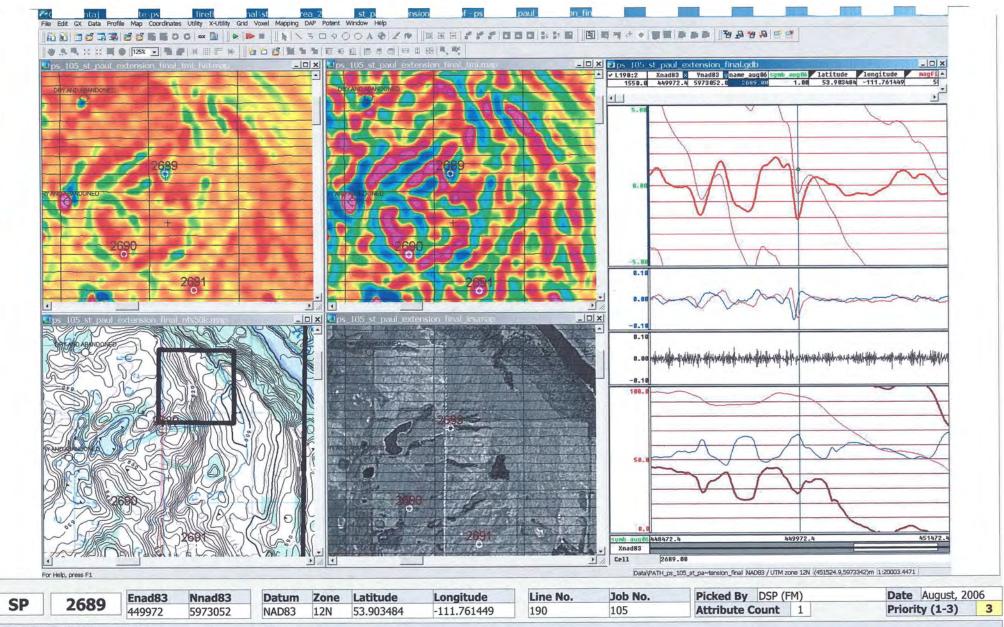










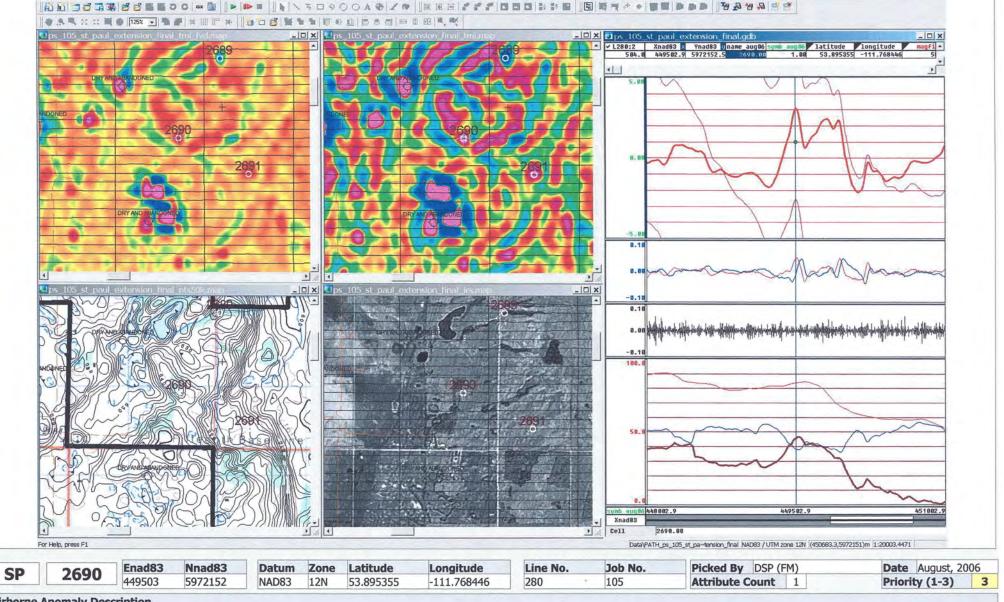


Mag low -3 nT. Appears on single line as sharp negative anomaly in area of moderate gradient. Correlates across up to six lines with diminished amplitude. Topo = coincident with topo low (stream channel?). Infrastructure = Immediately adjacent to road and stream. Suspect infrastructure where bridge and stream intersect / topography.

ST. PAUL OPTION

#### **Data Source**

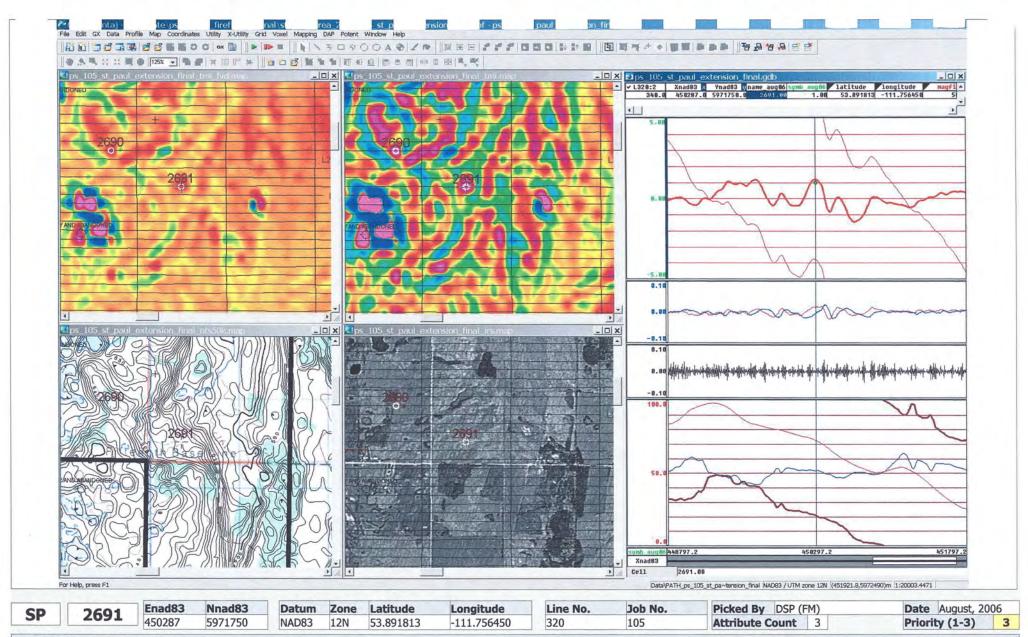
Pegasus Project, Phase 2 Airborne Survey, St. Paul Extension, Final Data, ps\_105\_st\_paul\_extension\_final.gdb



Mag high ~ +3 nT. Slightly dipolar. Broad high coincident with broad topo high. Higher frequency section of the broad high is anomalous. May be interaction of surface feature and topography. Topo = broad, sharp topo high. Suspect culture/topographic

ST. PAUL OPTION

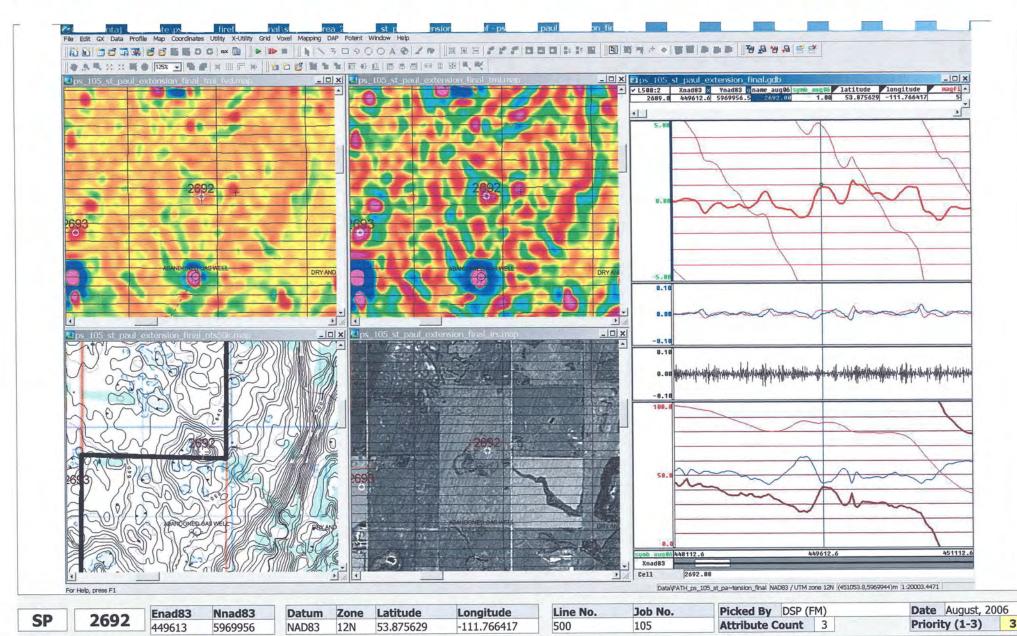
#### **Data Source**



Mag high 1.5 nT. Weak, rounded. Isolated (3 lines). Topography = middle of significant but gentle slope dipping to the E. Infrastructure = road 230 m S. and 390 m W. Structures indicated 430 m NNW and 850 m

ST. PAUL OPTION

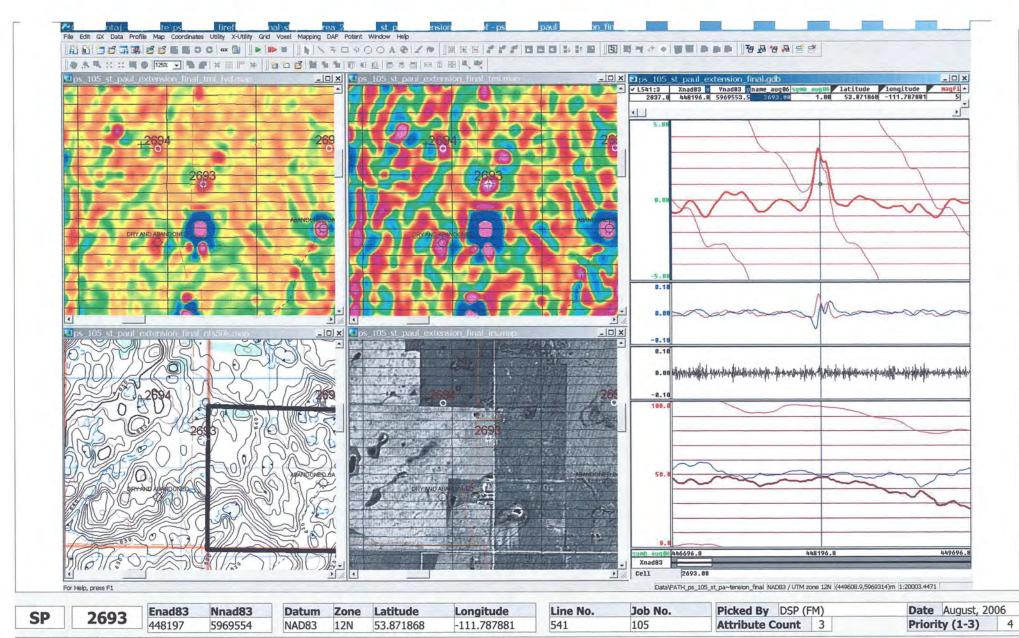
#### **Data Source**



Mag high +1.5 nT. Isolated (3 lines). Coincident with topographic high and corresponding decrease in aircraft clearance. Suspect topography. Outside St. Paul option area.

PEGASUS (DSP), outside option areas

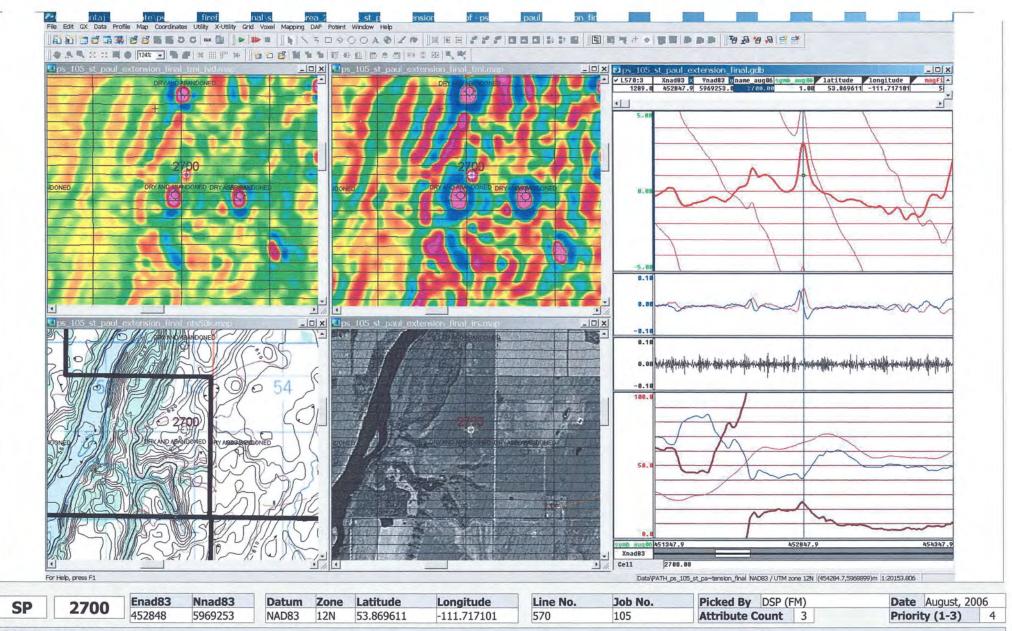
#### **Data Source**



Mag high + 3.5 nT. Isolated (3 lines, possibly truncated by cultural response to the S and N). Doublet high suggests near surface source. Topography = flat. Infrastructure = LP pipe 150 m W and N. Roadway 50 m E. Structures > 500 m to SW and NE. Suspect culture. Outside St. Paul option area.

PEGASUS (DSP), outside option areas

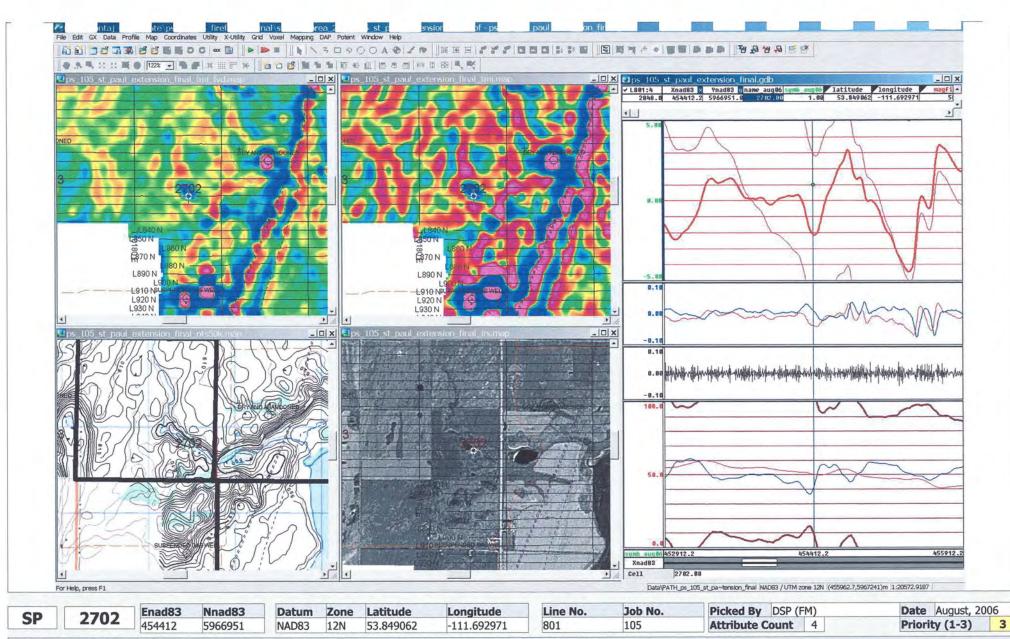
#### **Data Source**



Mag high +3 nT. Sharp. Isolated (sharp 1 line, weak rounded 2 further lines to the NE). Topo = on peak of small approximately 1 km E of edge of river bank. Infrastructure = dry and abandoned well 250 m to the SW, road 280 m to the E. Likely cultural.

ST. PAUL OPTION

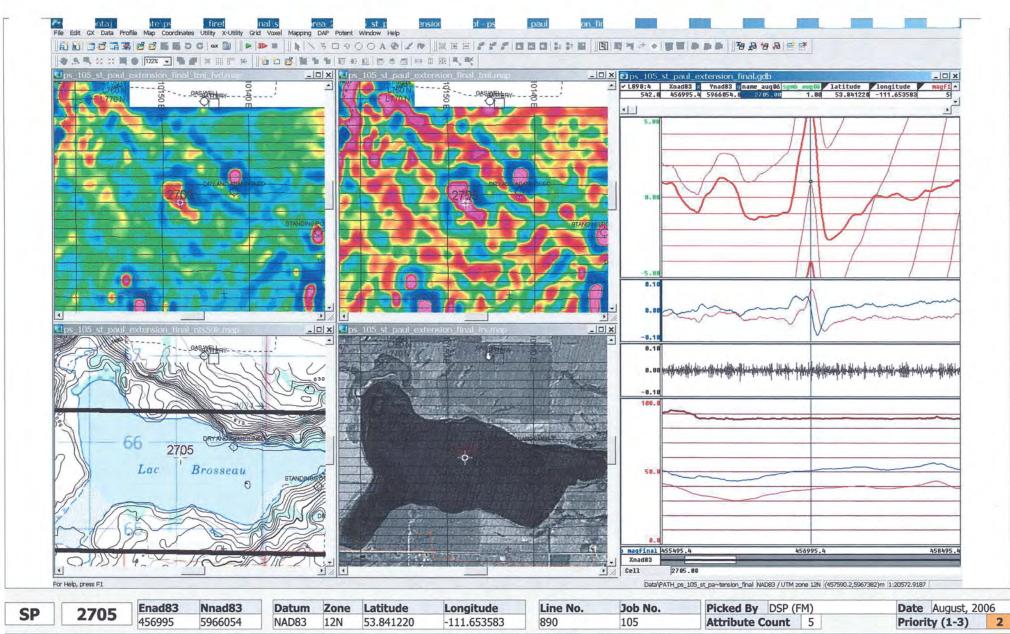
### **Data Source**



Mag low -2 nT. Coincident with stream channel including stike of anomaly. Well isolated (3 lines). Infrastructure = Structure located 130 m E. Topo = roughly coincident with river channel. Anomaly is offset slightly to the E. Likely topographic.

ST. PAUL OPTION

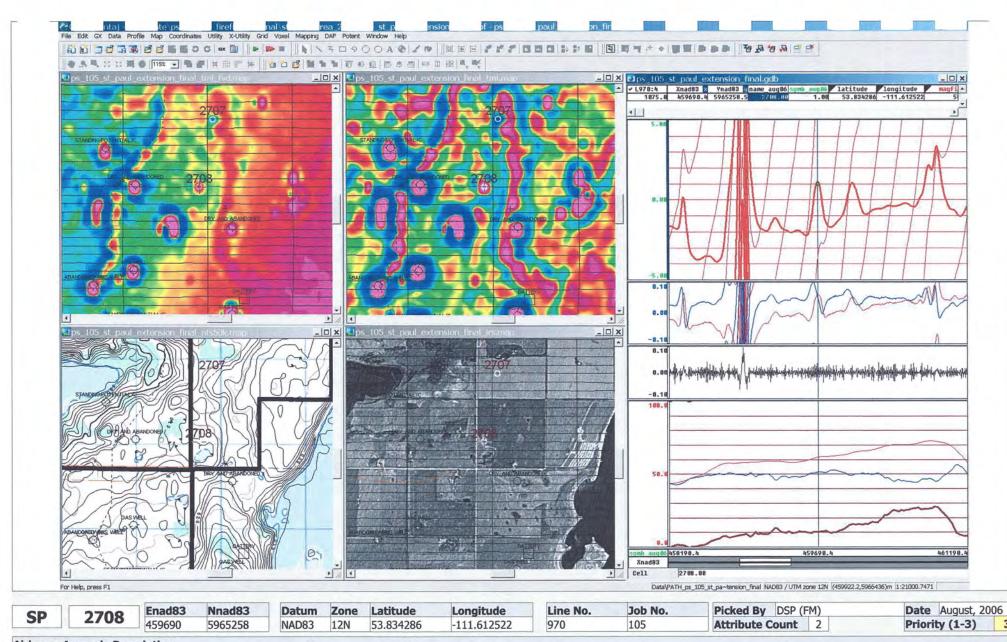
### **Data Source**



Mag high +7 nT. Elongated with strike along 130 deg. Well isolated (5 lines). Dimensions = 250 m x 600 m. Anomaly is somewhat asymmetical with character somewhat variable line to line (see shape of horizontal derivative profile). Topo = In Lac Brosseau. Topography and "straight" edges on lake suggest possible structural control. Lake has been noted as shallow by local contact. Modelling suggests near surface source. Response is not characteristic of other lakes in the option area.

#### ST. PAUL OPTION

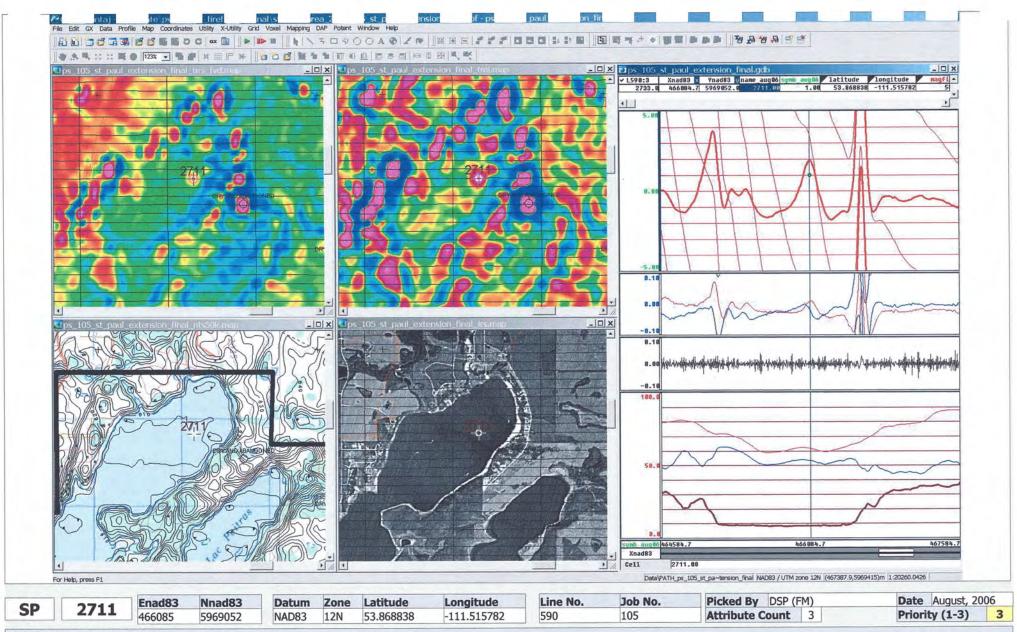
### **Data Source**



Mag high + 3 nT. Sharp. Possibly continues with diminished amplitude to the N (may not be isolated). Topo = flat. Infrastructure = Area may be disturbed. Road 70 m W. seasonal lake 100 m SE, house 250 m S on other side of lake at junction of roads. Outside St. Paul Option area.

PEGASUS (DSP), outside option areas

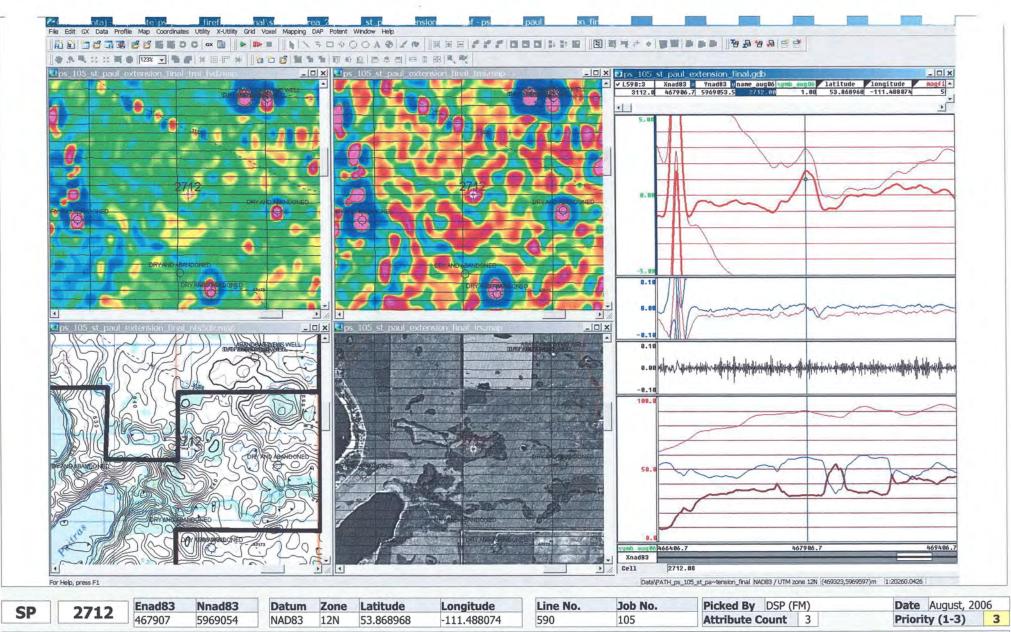
#### **Data Source**



Mag high + 4 nT. Isolated (two lines). Dimensions = 125 m x 200 m. Topo = In middle of northern bay of Lac Sante. Nearest shore 300 m SE. Infrastructure = Lake is surrounded by roads, houses in this area.

ST. PAUL OPTION

### **Data Source**



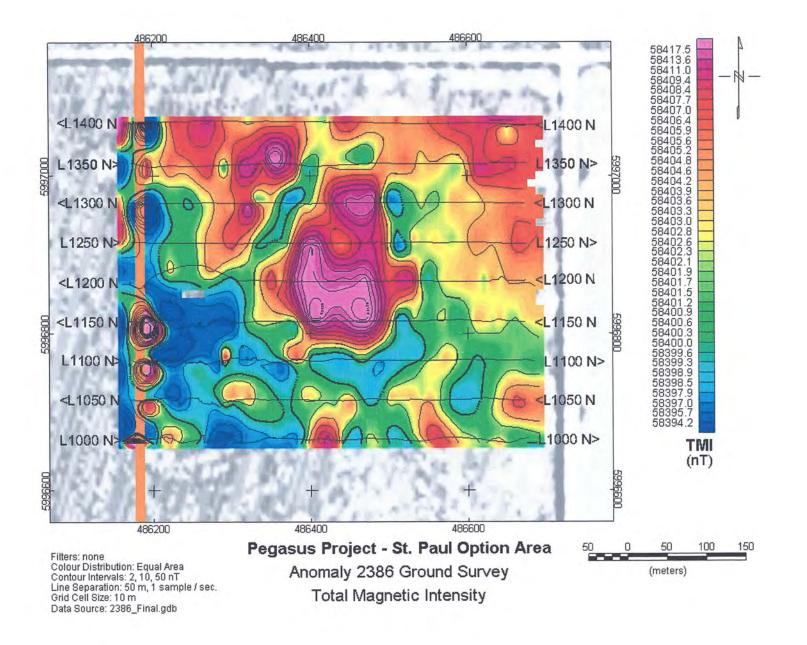
Mag high + 2.5 nT. Isolated. Weak - only slightly above background. Ragged. Slightly assymetric. Topo = in small lake, treed area. Infrastructure = road 160 m E, structure 300 m E.

ST. PAUL OPTION

### **Data Source**

# APPENDIX D: Ground Geophysical Data

# APPENDIX E: Ground Geophysical Map



# APPENDIX F: Expenditures

# 2007 Mineral Exploration Activities on the St. Paul Project

Assessment Report Prepared by 1197313 Alberta Ltd.

Permit Numbers 9304050835, 9305121219- 9305121225

Location:

NTS:

73E/13, 14 & 73L/03, 04

ATS:

Twp. 55-60 Rg. 8-13, W4

Author:

R. Jalbert

Date:

November 30, 2007

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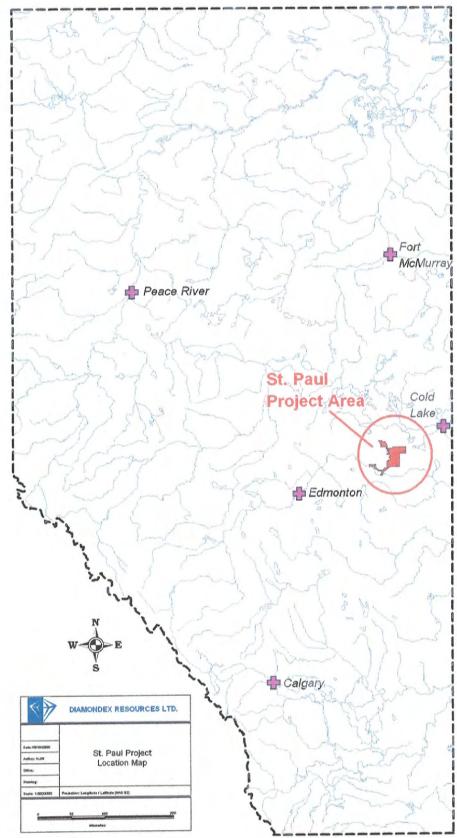


Figure 1: St. Paul Project Location Map

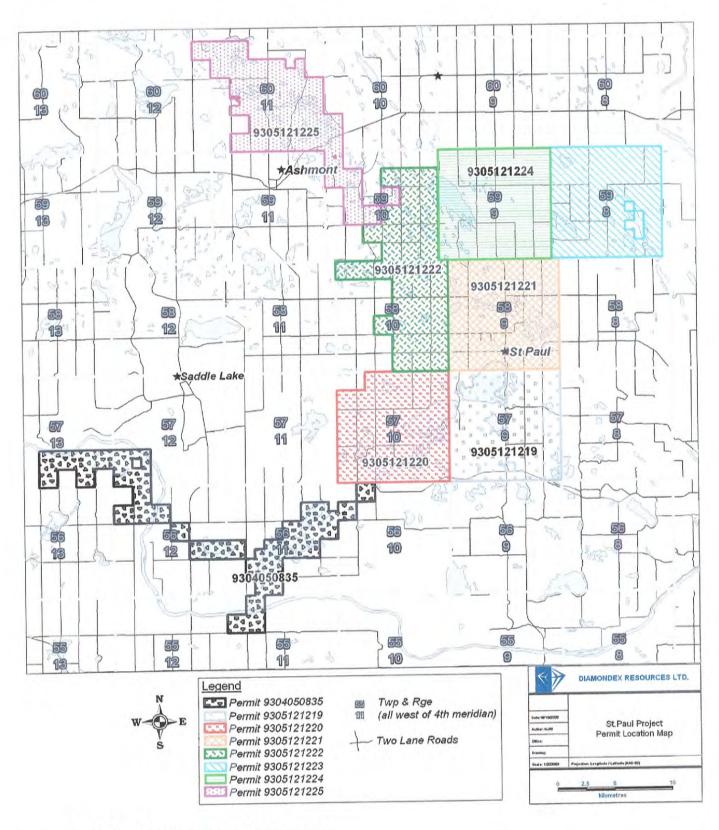


Figure 2: St. Paul Project Permit Location Map

### Summary

After the return of the property know as Pegasus by the Diamondex Corporation The shareholders of 1197313 Alberta Ltd. carried out additional work on an area of interest located six miles north of Ashmont, Alberta on the west side of a north south country road at North 54 degrees 12 minutes and 24.2 seconds, and West 111 degrees 34 minutes and 42.6 seconds.

The work consisted of a test hole completed with a rotary water well rig to test the soil gas anomaly and magnetometer high at this location. The total expenditure of this additional work was \$ 9,309.34

### Report:

On July 23, 2007 a water-well drilling rig was mobilized from Vermilion, Alberta and arrived at 9:30 a.m. at the site indicated, that is located on the west side of a north south county road. The hole was drilled in the ditch adjacent to the county road. This location was chosen based on ground mag. (see attachments of soil gas hydrocarbons and ground mag.) The test hole was drilled at the centre of the soil gas circle. The subsurface layers consisted of interbedded glacial till with sand and gravel layers. Basement consisting of shale was encountered at 240 feet (77.4 meters). The tub was cleaned at this time and samples from each ten foot interval were collected in five gallon pails. The test hole was terminated at 300 feet (97 meters) still in shale. Samples of the last section to the bottom of the hole where collected into plastic bags and forwarded to Activation Labs in Ontario to determine, if possible, why no Kimberlite was intersected. At the time of this report preparation, the Activation Lab results have not as yet been received.

Conclusion: Based on this one test of the soil gas method, results would indicate that the method has much refinement to go before being totally proven and should be used in conjunction with other geophysical methods whenever possible.

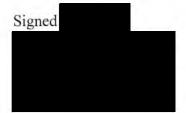
# COST SUMMARY TO DATE

Morton Well Drilling	\$7	\$7,779.34	
Geolink (Ground Mag.)	\$	530.00	
Yarlo Resources	\$1	,000.00	
Total	\$9	,309.34	

### Statement of Qualifications

- I, Ray Jalbert of in the Province of Alberta hereby certify as follows:
- 1. That I graduated from the Northern Alberta Institute of Technology in 1978 with a diploma in the Earth Resources Program (Minerals Option)
- 2. That I am a member of the Alberta Society of Engineering Technologist, now retired (C.E.T.)
- 3 That I have done Mineral Exploration since 1979 in Alberta, Saskatchewan, British Colombia, Northwest Territories and the northern part of the United States.
- 4. That I have experience in the Petroleum Exploration Industry.
- 5. That I have worked for the Geophysical Consulting Company, Cosmic Ventures doing various geophysical surveys.
- 6. That I have done Diamond Prospecting in Alberta and Saskatchewan for the last eight years and have specialized in Soil Gas Forensic Surveys for the last two years.

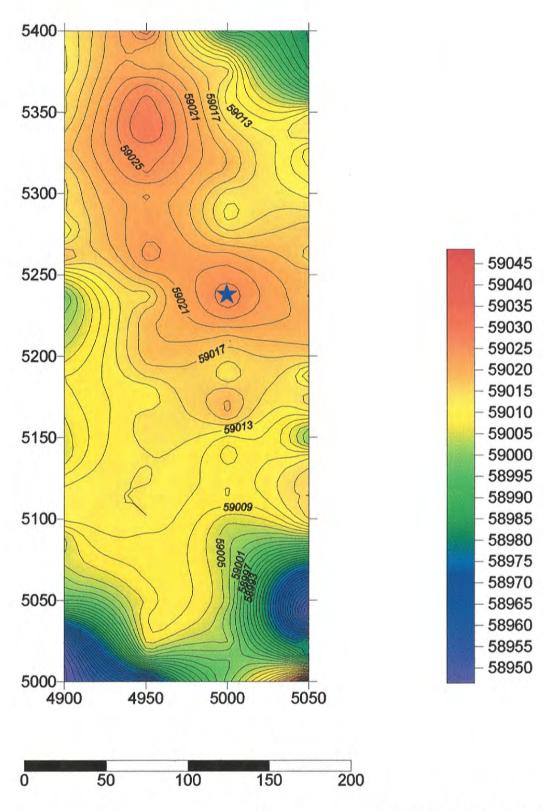
Dated this 1 day of January, 2008 at St. Paul in the Province of Alberta, Canada



# Appendix

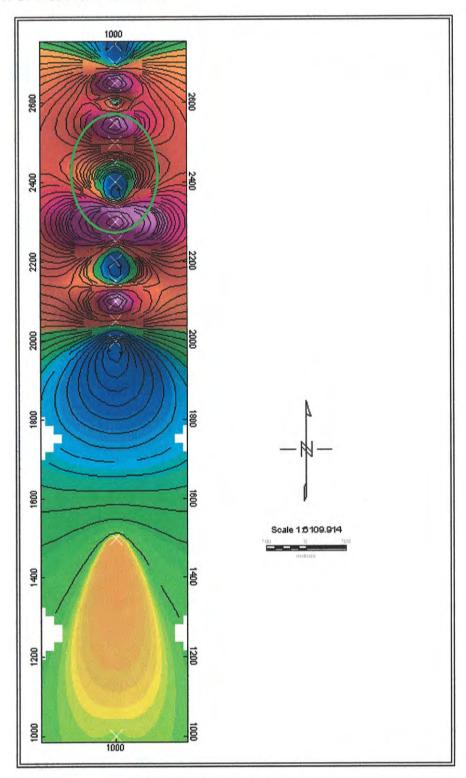
# **ASHMONT DYKE**







## SGH Evaluation of Results A05-1740



**Activation Laboratories Ltd.** 



## SGH Evaluation of Results A05-1740

