### **GEOPHYSICAL REPORT**

PHOENIX 1 - 49 CLAIMS DAVE 1 - 50 CLAIMS DAVE 1 - 50 CLAIMS DALE 1 - 20 CLAIMS

> P 46297 - P 46397 P 46415 - P 46484 P 46516 - P 46565

NTS: 115 N/ 09

LAT: 63° 35'N

LONG: 140° 06'W

### **DAWSON MINING DISTRICT**

### **AUTHOR OF REPORT: SHAWN RYAN**

WORK PERFORMED: MARCH 1 – 21, 2009

DATE OF REPORT: APR 25, 2009

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# Summary

A total magnetic field survey was conducted on the Twenty Mile Creek placer property to identify the location of potential auriferous pay channels. The property is located 65km Southwest of Dawson City on the Twenty Mile Creek which is a tributary of the lower Sixty Mile River. (NTS: 115N09)

The survey was conducted by Ryanwood Exploration with a three man crew from March 1 to March 21, 2009. The property was accessed by snowmobile from Dawson City. A grid totalling 85 line-km was created for the survey. It was established using handheld GPS units, being flagged a frequency of 12.5m and grid stations with written flags every 50m. The grid consists of 181 lines perpendicular to the creek centerline, with a spacing of 50m between lines. The magnetic field survey was conducted along all grid lines in 'walk mode', with a GPS tagged reading being recorded three times per second.

The survey has identified several distinct anomalous magnetic lineaments that warrant follow sampling.

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## **1.0 Introduction**

Ryanwood Exploration was contracted by Joel Spurlock to conduct a ground total magnetic field survey on the Twenty Mile placer property. A grid totalling 85 line-km was established and ground magnetic survey conducted on the property between March 1 and March 21, 2009. The purpose of the exploration program was to identify potential gold bearing, magnetite rich placer channels on the Twenty Mile property. The survey was conducted by: Isaac Fage, Joe McCann and Kyle MacDougall.

#### Personnel:

Isaac Fage	Joe McCann	Kyle MacDougall
Box 1058	Box 1173	General Delivery
Dawson, YT	Dawson, YT	Dawson, YT
Y0B 1G0	Y0B 1G0	Y0B 1G0

### 2.0 Location and Access

The Twenty Mile placer property is located within the lower Sixty Mile drainage system in central Yukon Territory. It is centered at: 63° 35'N, 140° 06'W, on NTS mapsheet: 115N09. See Figure 1. The property is located 65km Southwest of Dawson City on the Twenty Mile Creek which is currently accessible in winter via the Yukon and Sixty Mile rivers by snowmobile, and accessed by helicopter in summer. The neighbouring Ten Mile Creek placer mine is currently accessed from Dawson City by barge on the Yukon River to the mouth of the Sixty Mile River (70km) and then by road to the Ten Mile Creek mine (12km).

### 3.0 Property

The Twenty Mile property consists of 218 contiguous placer creek claims on the Twenty Mile Creek. *See Figure 2* 

Claim Number	Owner
P 46297 - P 46397	Joel Spurlock (100%)
P 46415 - P 46484	Joel Spurlock (100%)
P 46516 - P 46565	Joel Spurlock (100%)

The footprint of the magnetic survey relative to the claim block is illustrated in Figure 2.







7048000

Scale 1:35000

NAD83, UTM Zone 7

JOE 17

**JOE** 18

## 4.0 Physiology and Geology

The Twenty Mile property is located within the Yukon Tanana Terrane. Locally, the landscape is composed of moderately sloped, tree covered hills ranging in elevations from 1200 to 5000 feet. The area experiences typical climatic conditions for central Yukon Territory with short, warm and dry summers and cold winters. Temperatures range from -20°C to -60°C in the winter and +10°C to +30°C in the summer.

The Twenty Mile property is located within the Yukon Tanana Terrane, being underlain by an Upper Cretaceous Carmacks Volcanics unit from the mouth of the Twenty Mile Creek to 8km upstream, and a Devonian Shist for remaining upstream portion of the property. *See Figure 3.* 

# **5.0 Regional Magnetics**

An overlay of the GSC Stewart River airborne magnetic survey identifies a significant structural lineament represented as a magnetic low that cuts across the ground survey. This structural feature is also manifested as a linear magnetic low in the ground survey. Non-linear Magnetic highs identified in the downstream portion of the ground survey correlate well with moderate magnetic highs in the airborne regional magnetics and are not attributed to the existence of placer magnetite deposits. Numerous magnetic high lineaments have been identified in the ground survey that are not observable in the regional airborne. These local anomalies are more suitable targets for placer magnetite channels. *See Figure 4.* 



### UPPER CRETACEOUS



#### uKC: CARMACKS

a volcanic succession dominated by basic volcanic strata (1), but including felsic volcanic rocks dominantly (?) at the base of the succession (2) and locally, basal clastic strata (3) (70 ma approx)

- augite olivine basalt and breccia; hornblende feldspar porphyry andesite and dacite flows; vesicular, augite phyric andesite and trachyte; minor sandy tuff, granite boulder conglomerate, agglomerate and associated epiclastic rocks (Carmacks Gp., Little Ridge Volcanics, Casino Volcanics)
- acid vitric crystal tuff, lapilli tuff and welded tuff including feeder plugs and necks; felsic volcanic flow rocks and quartz feldspar porphyries; green and purple massive tuff-breccia with feldspar phyric fragments (Carmacks Gp., Donjek Volcanics, some rocks formerly mapped as Mt. Nansen Gp.; the felsic part of the Carmacks Gp. is difficult to distinguish from similar Tertiary and mid-Cretaceous (Mt. Nansen) felsic volcanic strata)

### DEVONIAN, MISSISSIPPIAN AND(?) OLDER

DMN
DMN2

#### DMN: NASINA

graphitic quartzite and muscovite quartz-rich schist (1), (3)-(5), and(?) (6) with interspersed marble (2) and probable correlative successions (7) - (9)

 quartzite, micaceous quartzite, quartz muscovite (+/-chlorite; +/feldspar augen) schist, and minor metaconglomerate and metagrit as in (1), but may locally include significant Nisling Assemblage

Legend for Figure 3. Regional Geology



## 6.0 Gridding Procedure

The survey grid is oriented perpendicular to the Twenty Mile Creek centerline. The grid lines were planned to be 600m in length (300m on either side of the centerline). Lines that proved to be too steep to ascend on snowshoes were shortened as needed. All grid lines are spaced at 50m. Line Numbers ascend as the grid proceeds upstream. Line stations originate (000) at the right edge (looking upstream) of the claim boundary and are followed by the cardinal direction of the line. The bearing of the grid was periodically adjusted to cross the centerline at 90° as the grid proceeded upstream.

The grid was established using handheld GPS units, being flagged a frequency of 12.5m and grid stations with written flags every 50m. It consists of 181 grid lines totalling 85 line-km.

## 7.0 Magnetic Field Survey

### 7.1 Personnel and Equipment

The survey was conducted by: Joe McCann (Magnetometer operator), Isaac Fage and Kyle MacDougall (Gridders). Equipment necessary to complete the survey consisted of:

Magnetometer Field Unit:	GEM Systems GSM-19T Proton Magnetometer
Base Station:	GEM Systems GSM-19T Proton Magnetometer
Data Processing:	Laptop Computer
Software:	GEM Systems proprietary magnetometer upload, download software, MapInfo mapping software, Oziexplorer for grid planning and GPS interface.
Transportation:	Skidoo Skandik 800, Skidoo Tundra II
Grid Establishment:	Garmin 76map GPS (x3) Snowshoes, Machete, Flagging, Marker
Camp Equipment:	Full winter camp setup for 3 persons

### 7.2 Survey Specifications

The magnetometer survey was conducted according to the following specifications:

Field Magnetometer Observation Frequency: 3 readings per second.

<u>Base Station Magnetometer</u>: Set to record an observation every 20 seconds for the duration of the survey.

Levelling: None required

## 7.3 Magnetic Field Theory Applied to Placer Exploration

In a placer setting, magnetite derived from bedrock weathering is concentrated in the main channel of a creek or river where the water flow has the highest velocity and the greatest turbulence. As a result, minerals with high specific gravity (magnetite, ilmenite, gold, etc.) are preferentially concentrated in this region of the stream be as material with lower specific gravity in winnowed from the sediment. High concentrations of "black sand" (magnetite, ilmenite, chromite) are often recorded in auriferous pay streaks where the stream bed has remained relatively immobile fro some period, permitting hydraulic concentration to build up a significant volume of these materials.

The materials comprising black sand are magnetically susceptible. Magnetite has a very high magnetic susceptibility of 1200-19200 x 10<sup>-3</sup> SI units, ilmentie ranges from 300-3500 x 10<sup>-3</sup> SI units, and chromite measures from 3-1100 x 10<sup>-3</sup> SI units. Average magnetic susceptibilities for sedimentary, igneous (excluding ultramafic) and metamorphic rocks are: 0-10, 3-160 and 0-70 x 10<sup>-3</sup> SI units respectively. Fluvial sediments register magnetic susceptibility in the range of 0-2 x 10<sup>-3</sup> SI units. There is consequently a significant susceptibility contrast between gravels enriched with black sand and average gravels/ underlying bedrock.

## 8.0 Results

The survey is comprised of a total of 217,987 georeferenced magnetometer readings. Digital results of the magnetometer survey accompany this report in dBase format (.dbf). All points are projected to NAD83, UTM Zone 7N

Field	Definitions:	

X -	UTM Easting
Y -	UTM Northing
Elevation -	Elevation
NT -	Uncorrected Field Unit Reading (Unit: Nano-Tesla)
SQ -	Noise Reading
SAT -	Number of Satellites Available to Magnetometer GPS
TIME -	Time of Magnetometer Reading
COR_NT -	Corrected Field Unit Reading (Unit: Nano-Tesla)
COR_METH -	Correction Method





545,000 mE

547,000 mE







### Inset 1:

Lines 1 through 60 are dominated by responses from the underlying bedrock geology, masking any subtle placer channel signatures that may be present. A magnetic low trough that runs generally parallel to grid lines 41 to 46 is observable and is coincident to a magnetic low on the regional airborne magnetic survey (figure 4).

#### Inset 2:

Anomaly A -A distinct linear anomaly running parallel to the creek is observable from L59-150S to L80-350S. Total running length of this anomaly is approximately 1000m.

Anomaly B- A smaller anomaly is seen at L92-000 to L-92-150S, coincident to a pup draining into the Twentymile creek from the northwest.

#### Inset 3:

A magnetic low lineament running North-South, is present from L102-000 to L112-300S. This anomaly is not observed on the regional airborne magnetics. It may be fault related is not likely associated to the presence of placer magnetite.

#### Inset 4:

Anomaly C- A magnetic high lineament running parallel to the creek is observed from L127-400S to L140-175S.

Anomaly D- A magnetic high lineament from L140-600S to L152-150S. This anomaly runs from the north side of the creek valley diagonally to the south side of the valley.

Anomaly E- A subtle magnetic high linear feature tracing from Line 159-800E to L152-400S

Anomaly F - A magnetic high lineament running along the west side of the creek valley from L160-000 to L180-100S

# Appendix B: Statement of Expenditures

Mobe/Demobe 3 crew @ \$330 x 2 days	<b>\$</b> 1,980.00
<b>Snowmobile</b> 2 Snowmobiles @ \$125 x 21 days	<b>\$</b> 5,250.00
Food 3 crew @ \$35 x 21 days	<b>\$</b> 2,205.00
<b>Camp</b> 3 crew @ \$25 x 21 days	<b>\$</b> 1,575.00
<b>Grid</b> 85km x \$150	<b>\$</b> 12,750.00
Magnetic Survey 85km x \$250	<b>\$</b> 21,250.00
Report	<b>\$</b> 1,000.00

**Total Project Expenses** 

\$46,010.00

# **Appendix B: Property Photos**



Twentymile Creek- from mouth, looking upstream (southwest)



Twentymile Creek- looking upstream at main junction



Twentymile Creek – Looking upstream near L120

## QUALIFICATION

I Shawn Ryan located in Dawson City, Yukon work as a professional prospector. I run a small exploration company located in Dawson City. I have worked in the exploration business for the last 25 years. I worked the first 12 years as a contractor working on numerous projects in the NWT, Ontario, Quebec and the Yukon. I have worked the last 12 years as a local prospector for myself. I have been trained to run various geophysical instruments and surveys such as magnetic surveys, max-min surveys, induce polarity surveys and VLF surveys.

I have overseen the work reported on the Twentymile property.

Dated the 30th of April 2009 in Dawson City, Yukon.

Respectfully submitted,

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Shawn Ryan