#### **BUD DAVIS**

### TOTAL MAGNETIC FIELD SURVEY VICTORIA CREEK, PEANUT PROPERTY WHITEHORSE MINING DISTRICT, YUKON TERRITORY

# Phil Jackson AURORA GEOSCIENCES LTD.

#### <u>CLAIMS</u>

PEANUT 1 - 10 P47458 - P47467

Formerly Placer Prospecting Lease IW00217

Location: 62° 6' 42" N, 137° 9' 33"W

NTS: 115 I/03

Mining District: Whitehorse Date: October 1, 2006

#### SUMMARY

A total magnetic field survey was conducted on the Peanut Property for Bud Davis, in order to locate detrital magnetic concentrates associated with placer gold deposits. The survey area is located along Victoria Creek, 50 km W of Carmacks, Yukon. The survey was conducted on a flagged grid with survey control aided by nondifferential GPS navigation. The survey was conducted on June 28th and June 29th. A total of 4.735 line-km was surveyed on 30m line spacing. A subtle magnetic feature is identified trending NS and exhibits characteristics of detrital or weak dipole clusters. It is recommended that the NS trending feature be test pitted at the southern end of Grid A to test for concentrations of gold that may be associated with magnetite in the area. If favourable results occur, further pitting and testing for gold should be continued to the north, as the subtle feature likely continues across the boundary seen at L300N. An expansion of the magnetics survey towards the west on grid A is also recommended to confirm the boundary of the strong magnetic anomaly as well as to test for the possibility of a splay to the NW.

# **TABLE OF CONTENTS**

1.0	INTRODUCTION	1
2.0	LOCATION AND ACCESS	1
3.0	PROPERTY	1
4.0	PHYSIOLOGY & REGIONAL GEOLOGY	1
5.0	SURVEY GRID	3
6.0	PERSONNEL AND EQUIPMENT	3
7.0	SURVEY SPECIFICATIONS	4
8.0	MAGNETIC FIELD THEORY	4
9.0	RESULTS	4
10.0	DISCUSSION & RECOMMENDATONS	5
REFE	RENCES CITED	6
APPE	NDIX A. CERTIFICATE	7
APPE	NDIX B. SURVEY LOG	9
APPE	NDIX C. STATEMENT OF EXPENDITURES	1
APPE	NDIX D. INSTRUMENT SPECIFICATIONS	3
LIST	OF FIGURES	
Figure	e 1. Property location Following page	1
Figure	e 2. Grid location Following page	1
Figure	e 3. Regional Geology Following page	2
Figure	e 4. Total magnetic field contour map Back pock	et

#### 1.0 INTRODUCTION

Aurora Geosciences Ltd. was retained by Bud Davis to conduct a ground total magnetic field survey on the Victoria Creek, Peanut Placer Property. A total of 4.735 line-km were surveyed. The surveys were conducted on June 28th and 29th, 2006 to locate magnetite bearing pay streaks along Victoria Creek. This report describes the surveys performed, data, results and an interpretation.

#### 2.0 LOCATION AND ACCESS

The Peanut Property is located along Victoria Creek West of Carmacks, Yukon. and is centered at 62E 6' 42" N 137 E 9' 33" W (Figure 1). The surveyed area runs along a swampy valley hemming-in Victoria creek, the crew was mobilized to camp via 4x4 truck from Whitehorse. The property is located approximately 50 km West of Carmacks.

#### 3.0 PROPERTY

The Peanut Placer Property consists of the following claims staked under the Yukon Placer Mining Act in the Whitehorse Mining District<sup>1</sup>. Claim information is summarized below:

Claim Name	Grant Number	<u>Owner</u>	Expiry Date
PEANUT 1-10	P47458 - P47467	David (Bud) Davis	July 14, 2007

Claim locations as shown on government claim maps are shown in Figure 2. Ground checks have shown the current government claim map to be incorrect. The grid location on all figures is correct, however it should be noted that the grid lies entirely within the Peanut claims, with the south end of Grid A positioned at the south end of the Peanut 1 claim.

#### 4.0 PHYSIOLOGY AND REGIONAL GEOLOGY

The property and survey grid area are in the Mount Nansen area at elevations ranging from 4200 to 5200 feet. The area is subject to continental climatic conditions with short, hot, generally dry summers and cold winters. Temperatures range from -20 to -55<sup>E</sup>C during the winter and from 10 to 30<sup>E</sup>C during the in the summer.

<sup>&</sup>lt;sup>1</sup> Claim information from <u>www.yukonminingrecorder.ca</u> on Oct. 1, 2006

The Peanut Property is located in the northern Cordillera. The regional geology is shown in Figure 3 and rock unit lithologies are briefly summarized in Table 1. (Gordey et al., 2003).

Table 1. Stratigraphy

Rock unit	Lithology
Mount Nansen Group mKN	massive aphyric or feldspar-phyric andesite to dacite flows, breccia and tuff, massive, heterolithic, quartz and feldspar-phyric, feldspar lapilli tuff, flow banded quartz phyric rhyolite and quartz feldspar porphyry plugs, dykes, sills and breccia (Mount Nansen GP., Byng Creek Volcanics, Hutshi Gp.)
Whitehorse Suite - mKyW	hornblende syenite, grading to granite or granodiorite (Whitehorse Suite)
Prospector Mountain Suite - LKqP	quartz monzonite, biotite quartz-rich granite; porphyritic alaskite and granite with plagioclase and quartz-eye phenocrysts; biotite and hornblende quartz monzodiorite, granite, and leucocratic granodiorite with local alkali feldspar phenocrysts (Prospector Mountain Suite, Carcross Pluton)
Long Lake Suite - EJyL	resistant, dark weathering, massive, coarse- to very coarse- grained and porphyritic, mesocratic hornblende syenite; locally sheared, commonly fractured and saussuritized; locally has well developed layering of aligned pink K-feldspar tablets (Big Creek Syenite)

#### 5.0 SURVEY GRID

Three separate grids were established using a hipchain and magnetic compass. The grids are orientated with the base line having the same azimuth as the associated creeks. Grid A tracks along Victoria Creek at an azimuth of 350°, Grid B follows Liberty Creek at 43° and Grid C follows a nameless creek at the south end of Grid A with the baseline tracking 265°. Survey lines are orthogonal to the baselines, line separation on all grids is 30 meters and stations along the lines were marked with flagging tape at ten meter intervals. Data from all three grids has been merged to form a single database and plotted as a single map. Control for the magnetic survey was maintained with nondifferential GPS navigation. The operator's track was recorded then matched with the magnetic data through the time stamp and interpolation.

#### 6.0 PERSONNEL AND EQUIPMENT

The survey was conducted by the following personnel:

Gabriel Fortin Crew chief, Junior Geologist

Cody Woodman Field technician

The crew were equipped with the following instruments and equipment:

Field magnetometer: 2 - Gem GSM-19T proton precession magnetometer.

Base magnetometer: 1 - Gem GSM-19T proton precession magnetometer.

Data processing: P-1.2GHz laptop with Oasis Montaj software package.

Other equipment: 1 - satellite phone

2 - Garmin 72 non-differential GPS receivers

The geophysical crew spent a total of 4 man-days on the property. The geophysical survey log is attached as Appendix B.

#### 7.0 SURVEY SPECIFICATIONS

The magnetometer survey was conducted according to the following specifications:

Station spacing: 5 m nominal, location of each station matched to GPS

position through the track time stamp and interpolation.

Base station magnetometer: Installed on the survey grid at 387753E, 6888057N near

the camp and cycled at 5 s. Variations exceeding 10 nT

over the 5s interval were rejected.

Syncronization: Base and rover mags were synchronized daily to GPS

time (UTC).

#### 8.0 MAGNETIC FIELD THEORY

Magnetic field theory is well described in standard texts (eg. Telford *et. al.* 1990). In a placer setting, magnetite derived from bedrock weathering is concentrated in the main channel of a creek or river (thalweg) where the water flow has the highest velocity and greatest turbulence. As a result, minerals with high specific gravity (magnetite, ilmenite, gold, etc.) are preferentially concentrated in this region of the stream bed as material with lower specific gravity is 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 for some period, permitting hydraulic concentration to build up a significant volume of these minerals.

The materials comprising black sand are magnetically susceptible. Magnetite has a very high magnetic susceptibility of 1200-19200x10<sup>-3</sup> SI units, ilmenite ranges from 300-3500x10<sup>-3</sup> SI units. Average magnetic susceptibilities for sedimentary, igneous (excluding ultramafic) and metamorphic rocks are 0-18, 3-160 and 0-70 x10<sup>-3</sup> SI units and the magnetic susceptibility of fluvial sediments is in the range 0-2x10<sup>-3</sup> SI units. There is consequently a significant susceptibility contrast between gravels with elevated concentrations of black sand and both bedrock and average gravels.

#### 9.0 RESULTS

Digital data is appended to this report on CDROM. The magnetic field data is in the following format:

Line Station UTME\_WGS84 UTMN\_WGS84 Rawmag Corr\_mag Final

"Rawmag" is the raw total magnetic field reading from the rover unit, "Corr\_mag" is the reading after the diurnal correction has been applied and "Final" is the final data set after all levelling required for day to day and operator to operator level shifts. A plot at 1:2000 is appended to this report in the back pocket:

Figure 4. Total magnetic field contour map

#### 10.0 DISCUSSION & RECOMMENDATIONS

The total magnetic field survey identified several significant features on the property. Data collected was levelled with 57000 nT as the datum. The total field ranges from 56698 nT to approximately 58100 nT, with areas of magnetic high over 57700 nT. A large magnetic high is seen on the southern half of Grid A, a change in lithology and/or faulting is interpreted at L300N, within the magnetic high a more subtle magnetic feature trends from the southern end of the baseline on Grid A through to L300N, the trend is indicated in Figure 4 and may continue past L300N as it is hidden by the stronger lithologic change. The feature can be traced as seen in Figure 4 and exhibits characteristics of detrital or weak dipole clusters.

It is recommended that the NS trending feature be test pitted at the southern end of Grid A to test for concentrations of gold that may be associated with magnetite in the area. If favourable results occur, further pitting and testing for gold should be continued to the north, as the subtle feature likely continues across the boundary seen at L300N. An expansion of the magnetics survey towards the west on grid A is also recommended to confirm the boundary of the strong magnetic anomaly as well as to test for the possibility of a splay to the NW. The subtle feature as traced on Figure 4 is currently shown as open to the south and north with the possibility of a splay to the northwest, it should also be noted that features seen past the end the survey lines, particularly at the west side of L60N on Grid A appear large and open due to artifacts created by the minimum curvature gridding algorithm.

Respectfully	submitted,
--------------	------------

Phil Jackson, P.Geoph. Geophysicist

#### **References Cited**

- Telford, W.M., L.P. Geldart and R.E. Sheriff (1990) <u>Applied Geophysics (2<sup>nd</sup> Edition)</u> New York: Cambridge University Press.
- Gordey, S.P., Makepeace, A.J., 2003: Yukon digital geology, version2.0, S.P. Gordey and A.J. Makepeace (comp.), Geological Survey of Canada, Open File 1749, and Yukon Geological Survey, Open File 2003-9(D)

# **APPENDIX A. CERTIFICATE**

#### STATEMENT OF QUALIFICATIONS

I, Phil Jackson, of the City of Whitehorse, Yukon, Canada,

#### **HEREBY CERTIFY:**

That my address is 75 Walnut Cresent, Whitehorse, YT Y1A 5C7.

That I am a graduate of Concordia University in Geology / Physics: B.Sc. - Concordia University, Montreal, Quebec, 1996

That I have been a practising Geophysicist since 1997:

January 1997 to present Aurora Geosciences Ltd.

Yellowknife, N.W.T.

Geophysicist

That I am registered as a Professional Geophysicist by The Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (Registration #1667).

That I am entitled to practice as a Professional Geophysicist in the Northwest Territories and Nunavut.

That I have no direct or indirect interest in the Peanut Property.

Dated this 5th	day of _	October	, 20 <u>06</u> at Whitehorse, YT
Phil Jackson, P.	Geoph.		

**APPENDIX B. SURVEY LOG** 



# AURORA GEOSCIENCES LTD. JOB BUD-06-01-YT BUD DAVIS MAG SURVEY

Period: June 28<sup>th</sup> - June 29<sup>th</sup>, 2006

**Personnel:** Gabriel Fortin Crew Chief / Geologist

Cody Woodman Helper

Wed 28 June/06 Mobe & Survey

Mobe to camp from Whitehorse and survey part day.

Wx: rain and cool Production 2.0 km

Thu 29 June/06 Survey & Demobe

Suveyed remainder of grid and de-mobe to next job via Dawson City.

Wx: Cloudy and warm. Production: 2.735 km

AURORA GEOSCIENCES LTD.
-------------------------

**APPENDIX C. STATEMENT OF EXPENDITURES** 

Crew charges - 2 person for 2 days	1460.00
Job Prep and phone & computer rental	400.00
Magnetometer rental 3 units for 2 days	480.00
Truck rental 2 days @ \$100	200.00
Supplies (fuel, flagging/pickets, groceries, etc)	86.43
Report - lump sum cost	2200.00
General administration fees	12.94
GST on Exploration services and admin.	290.35

Total project expenses \$5129.50

I certify that these expenses are correct to the best of my knowledge.

Phil Jackson, P.Geoph. Geophysicist

APPENDIX D. INSTRUMENT SPECIFICATIONS