

**FIRESTONE VENTURES INC.**

**GEOPHYSICAL SURVEYS AT  
THE SONORA GULCH PROPERTY,  
SOUTHWESTERN YUKON TERRITORY**

Mike Power, M.Sc. P.Geoph.

Location: 62° 38' N 138° 0' W  
NTS: 115 I 12 & 115 J 09  
Mining District: Whitehorse, YT  
Date: 05 May 2006

## SUMMARY

The Sonora Property is located in the Whitehorse Mining District approximately 105 km NW of Carmacks, YT. The property consists of 110 Quartz Claims staked over Hayes creek and Klines and Sonora Gulches. The property is underlain by Devonian Pelly Gneiss intruded by a small outlier of Cretaceous Whitehorse Suite quartz feldspar porphyry. Economic mineralization consists of quartz vein-hosted auriferous sulphides and sub-economic gold mineralization disseminated within the quartz feldspar porphyry.

The fall 2005 exploration program consisted of line cutting, ground total magnetic field, VLF-EM and induced polarization and resistivity (IP) surveys. All work was helicopter supported, staging from Minto Landing on the Yukon River. The crews worked from a winter camp on Hayes Creek. The surveys were conducted over a 10.5 line-km cut grid consisting of 7 lines trending  $20^{\circ}$ , oriented to cross the main axis of the quartz feldspar intrusive body upon which it was centred. The geophysical surveys were conducted over 9.3 line-km of wing-lines on this grid.

The total magnetic field surveys were conducted at a 12.5 m station spacing with three proton precession magnetometers employing a synchronized base station magnetometer. All data was corrected for temporal geomagnetic variation by linear interpolation and data was leveled between operators. The VLF-EM survey was conducted using the Jim Creek, Wa station at an apparent azimuth of  $160^{\circ}$ . The IP survey was conducted using a pole-dipole array, reading a 0.125 Hz time domain signal using 25 m dipoles spaced from the first to the sixth separation.

The total magnetic field response is characterized by a strong total field high in the north end of the grid, interpreted to be caused by mafic metamorphic rocks. The VLF-EM survey identified two weak SE-NW trending conductors. The IP survey mapped a zone of elevated chargeability roughly coincident with the mapped extent of the quartz feldspar porphyry and containing zones of higher chargeability embedded within it. The resistivity data indicates the presence of intermittent permafrost and contains a number of bedrock resistivity lows of potential economic interest. Additional geophysical surveys to complete the mapping of the mineralized quartz feldspar porphyry are recommended.

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## 1.0 INTRODUCTION

Aurora Geosciences Ltd. was retained by Firestone Ventures Inc. to perform induced polarization and resistivity (IP), total magnetic field and very low frequency electromagnetic (VLF) surveys at the Sonora Gulch Property north of Carmacks, Yukon Territory. The survey was conducted to locate the source of gold geochemical anomalies on the property. This report describes the survey, data processing and results, and contains an interpretation of the data.

## 2.0 LOCATION AND ACCESS

The property is centred at approximately 62° 38' N 138° 0' W and straddles the boundary between NTS 115 I 12 and 115 J 09 (Figure 1). The property is located 105 km northwest of Carmacks. The property is accessible by helicopter and the nearest readily accessible staging point is Minto Landing, 60 km east of the property.

## 3.0 MINERAL PROPERTY

The Sonora Property consists of 110 un-surveyed Quartz Claims staked under the Yukon Quartz Mining Act in the Whitehorse Mining District. The claims are owned 100% by Firestone Ventures Inc. and claim information<sup>1</sup> is summarized below:

Grant Number	Claim Name	Claim #	Expiry Date	NTS Map
YC26225	S	13	12/22/2010	115J09
YC26217	S	5	12/22/2010	115J09
YC26229	S	117	12/22/2010	115J09
YC26228	S	16	12/22/2010	115J09
YC26223	S	11	12/22/2010	115J09
YC26221	S	9	12/22/2010	115J09
YC26226	S	14	12/22/2010	115J09
YC26219	S	7	12/22/2010	115J09
YC26224	S	12	12/22/2010	115J09
YC26227	S	15	12/22/2010	115J09
YC26230	S	118	12/22/2011	115J09
YC26220	S	8	12/22/2011	115J09
YC26218	S	6	12/22/2011	115J09
YC26216	S	4	12/22/2011	115J09
YC26222	S	10	12/22/2011	115J09
YC26213	S	1	12/22/2011	115J09
YC26214	S	2	12/22/2011	115J09

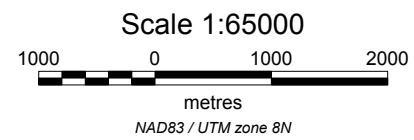
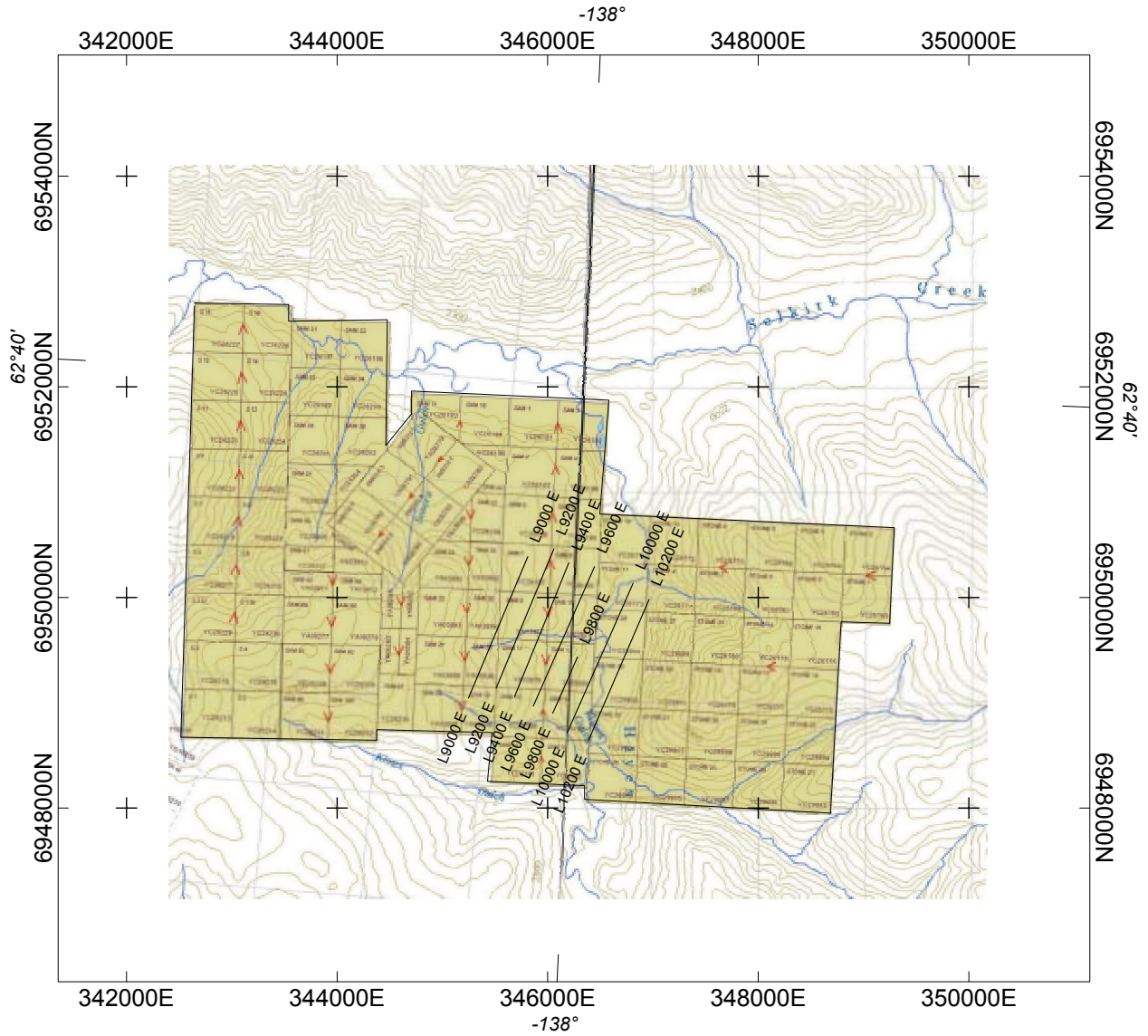
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<sup>1</sup>Claim information provided by the Whitehorse Mining Recorder ([www.yukonminingrecorder.ca](http://www.yukonminingrecorder.ca)) on April 27, 2006

YC26215	S	3	12/22/2011	115J09
YA03891	SAM	23	12/22/2009	115J09
YA03892	SAM	24	12/22/2009	115J09
YA03878	SAM	10	12/22/2010	115J09
YA08283	SAM	95	12/22/2010	115J09
YA08284	SAM	96	12/22/2010	115J09
YA03910	SAM	42	12/22/2010	115J09
YA03879	SAM	11	12/22/2010	115J09
YA08277	SAM	89	12/22/2010	115J09
YA03877	SAM	9	12/22/2010	115J09
YA08278	SAM	90	12/22/2010	115J09
YA03895	SAM	27	12/22/2010	115J09
YA03894	SAM	26	12/22/2010	115J09
YA03893	SAM	25	12/22/2010	115J09
YA03896	SAM	28	12/22/2010	115J09
YA08281	SAM	93	12/22/2010	115J09
YA03912	SAM	44	12/22/2010	115J09
YA03898	SAM	30	12/22/2010	115J09
YA03880	SAM	12	12/22/2010	115J09
YC26206	SAM	40	12/22/2010	115J09
YA08282	SAM	94	12/22/2010	115J09
YA03911	SAM	43	12/22/2010	115J09
YA03897	SAM	29	12/22/2010	115J09
YA03889	SAM	21	12/22/2010	115J09
YC26200	SAM	34	12/22/2011	115J09
YC26197	SAM	31	12/22/2011	115J09
YC26187	SAM	7	12/22/2011	115J09
YC26185	SAM	5	12/22/2011	115J09
YC26196	SAM	22	12/22/2011	115J09
YC26182	SAM	2	12/22/2011	115J09
YC26204	SAM	38	12/22/2011	115J09
YC26190	SAM	14	12/22/2011	115J09
YC26189	SAM	13	12/22/2011	115J09
YC26186	SAM	6	12/22/2011	115J09
YC26203	SAM	37	12/22/2011	115J09
YC26191	SAM	15	12/22/2011	115J09
YC26181	SAM	1	12/22/2011	115J09
YC26207	SAM	41	12/22/2011	115J09
YC26212	SAM	100	12/22/2011	115J09
YC26210	SAM	97	12/22/2011	115J09
YC26202	SAM	36	12/22/2011	115J09
YC26201	SAM	35	12/22/2011	115J09
YC26188	SAM	8	12/22/2011	115J09
YC26184	SAM	4	12/22/2011	115J09
YC26211	SAM	99	12/22/2011	115J09
YC26208	SAM	91	12/22/2011	115J09
YC26198	SAM	32	12/22/2011	115J09
YC26195	SAM	20	12/22/2011	115J09
YC26192	SAM	16	12/22/2011	115J09

YC26209	SAM	92	12/22/2011	115J09
YC26183	SAM	3	12/22/2011	115J09
YC26193	SAM	17	12/22/2011	115J09
YC26194	SAM	18	12/22/2011	115J09
YC26199	SAM	33	12/22/2011	115J09
YC26205	SAM	39	12/22/2014	115J09
YC29895	STONE	23	12/22/2010	115I12
YC29900	STONE	28	12/22/2010	115I12
YC29902	STONE	30	12/22/2010	115I12
YC29894	STONE	22	12/22/2010	115I12
YC29905	STONE	33	12/22/2010	115I12
YC29904	STONE	32	12/22/2010	115I12
YC29896	STONE	24	12/22/2010	115I12
YC29897	STONE	25	12/22/2010	115I12
YC29906	STONE	34	12/22/2010	115I12
YC29901	STONE	29	12/22/2010	115I12
YC29899	STONE	27	12/22/2010	115I12
YC29898	STONE	26	12/22/2010	115I12
YC29893	STONE	21	12/22/2010	115I12
YC29903	STONE	31	12/22/2010	115I12
YC26166	STONE	4	12/22/2011	115I12
YC26167	STONE	5	12/22/2011	115I12
YC26165	STONE	3	12/22/2011	115I12
YC26164	STONE	2	12/22/2011	115I12
YC26163	STONE	1	12/22/2011	115I12
YC26177	STONE	17	12/22/2011	115I12
YC26180	STONE	20	12/22/2011	115I12
YC26176	STONE	16	12/22/2011	115I12
YC26178	STONE	18	12/22/2011	115I12
YC26174	STONE	12	12/22/2011	115I12
YC26175	STONE	15	12/22/2011	115I12
YC26173	STONE	11	12/22/2011	115I12
YC26172	STONE	10	12/22/2011	115I12
YC26170	STONE	8	12/22/2011	115I12
YC26169	STONE	7	12/22/2011	115I12
YC26168	STONE	6	12/22/2011	115I12
YC26179	STONE	19	12/22/2011	115I12
YC26171	STONE	9	12/22/2011	115I12
YA03780	SWEDE	2	12/22/2010	115J09
YA03782	SWEDE	4	12/22/2010	115J09
YA03779	SWEDE	1	12/22/2010	115J09
YA03784	SWEDE	6	12/22/2010	115J09
YA03781	SWEDE	3	12/22/2010	115J09
YC26162	SWEDE	5	12/22/2011	115J09

Claim locations and the survey grid described in this report are shown in Figure 2.



<b>FIRESTONE VENTURES INC.</b>	
<b>SONORA PROPERTY</b>	
<b>Figure 2 - Claim and grid locations</b>	
NTS: 115   12 / J 09	District: Whitehorse
Datum: NAD83	Projection: UTM Zone 8N
Job: FVI-05-01-YT	Date: 01 May 06
<b>AURORA GEOSCIENCES LTD.</b>	

#### 4.0 PHYSIOGRAPHY & CLIMATE

The physiography and climate in the property area are described by Schulze (2004) and Davidson (2000). The Sonora Property is located in the Dawson Range of the central Yukon Territory. Elevations on the property range from 760 to 1280 m and topography in the area consists of rounded hills with wide valleys, locally incised by creeks. The area did not experience Pleistocene glaciation and soil profiles are consequently well developed and outcrop is scarce. Permafrost is ubiquitous on north facing slopes which are consequently steeper than the south facing slopes which are generally thawed. Tree line occurs at about 1300 m and vegetation consists of black spruce, dwarf birch, alders and willow on north facing slopes with stands of poplar on south facing slopes. The climate consists of short cool summers and long, often very cold winters with annual temperatures ranging from  $-40^{\circ}$  C to  $+25^{\circ}$  C. Precipitation is generally light and the general area is prone to forest fires during the June through August period.

#### 5.0 PROPERTY GEOLOGY & ECONOMIC MINERALIZATION

The regional geology in the area of the Sonora Property is summarized by Gordey & Makepeace (1999) and in Schulze (2004). Figure 3, modified after Gordey & Makepeace (1999) illustrates the geology in the property area. The property is located in the Yukon Tanana Terrane, southwest of the Tintina Fault. The property area is underlain by Devonian Pelly Gneiss (DMPW) and lies north of the Cretaceous Dawson Range Batholith (mKgD). The property lies near the truncation of the NW trending Big Creek Fault by the EW trending Hootcheekoo Fault. The area in which the work described in this report was conducted covers a small Cretaceous quartz-porphyry outlier from the Dawson Range Batholith which straddles the Big Creek Fault and appears to be the locus of mineralization in the area. Mineralization located to date consists of vein-hosted auriferous disseminated sulphides proximal to the intrusion. Structural trends in the area are dominated by the Big Creek Fault ( $110-130^{\circ}$ ) and its subsidiary splays ( $045-060^{\circ}$ ). Individual veins are narrow (typically less than 1 m) but anomalous gold mineralization in the range of 300 to 600 ppb occurs in the surrounding wall rocks.

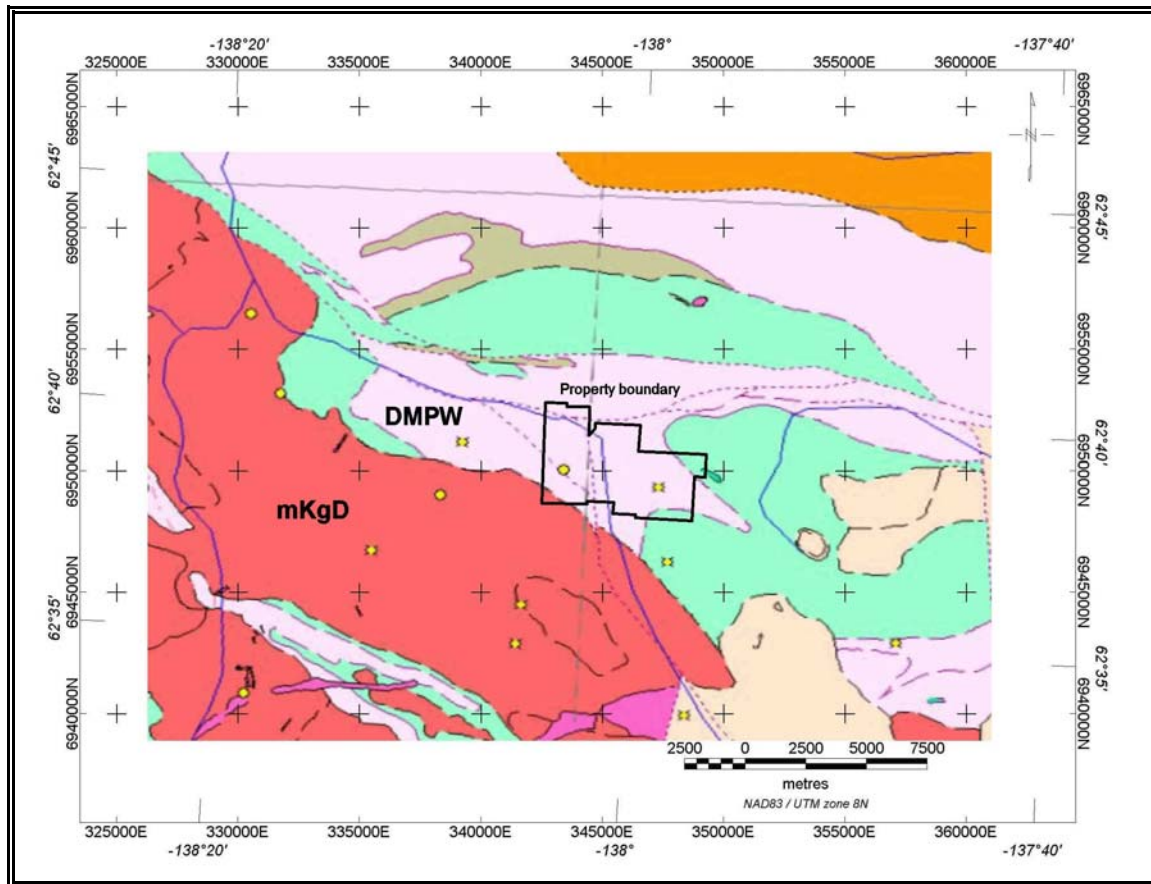


Figure 3. Regional geology in the area of the Sonora Property after Gordey & Makepeace (1999).

## 6.0 GRID

The geophysical surveys were conducted over a grid cut in November 2005. The location of the survey grid is shown in Figure 4. The grid was installed according to the following specifications:

<u>Cutting standard:</u>	IP: lines 1.5 m wide, cleared to ground level and brushed.
<u>Line azimuth:</u>	20°

<u>Station spacing:</u>	25 m
<u>Chainage:</u>	Base line: Slope corrected Survey lines: Straight chained
<u>Station marking:</u>	Bush pickets, flagged and tagged with scribed metal tags stapled to the picket.
<u>Registration:</u>	Ends of lines and base line intersections were recorded with non-differential GPS receivers. All data was registered to NAD 27 (Canada Mean) Zone 8N UTM coordinates.

## 7.0 PERSONNEL AND EQUIPMENT

The line cutting was conducted by the following personnel:

Larry Breault	Foreman / lead cutter
David Germaine	Lead cutter
Morris Skukum	Brusher
Mitch Smaaslet	Brusher

The survey was conducted by the following personnel:

Franz Dziuba, P.Geoph	Crew chief / geophysicist
Jeannette Walker B.Sc	Junior geophysicist
Dave Sloan	Technician (4-14 Nov 05)
Andy Sewap	Technician (14 Nov - 04 Dec 05)
Matt Olsen	Helper

The crew was equipped with the following instruments and equipment:

<u>IP Receiver</u>	1 - IRIS Elrec Pro 1 - IRIS Elrec 6
<u>IP Transmitters</u>	1 - GDD Tx II - 3.6 kW 1 - Honda 5kVA gas generator
<u>VLF:</u>	2 - Geonics EM 16
<u>Magnetometers:</u>	3 - GEM 19T proton precession magnetometers
<u>Other:</u>	1 - Repair tools (electrical / light mechanical) 1 - IP repair tools 1 - Globalstar satellite phone 4 - Handheld radios 1 - base camp radio w/Yaegi antenna 1 - 4 man winter camp 5 km IP wire 3 geo-reel winders 5 geo-reel spools 2 speedy winders
<u>Camp:</u>	2 - 14'x16' tents, frames, & oil stoves 4 - cots / foamies 1 - kitchen set (4 man): stove, cooking gear, tables chairs 1 - 1KW gas generator, light string
<u>Data processing:</u>	1 - Pentium 4 laptop 1 - Geosoft Oasis 6.0.1 with IP package

Instrument specifications are in Appendix B.

## 8.0 SURVEY SPECIFICATIONS

The IP survey was conducted according to the following specifications:

Final total coverage: 9.25 line-km

<u>IP Array:</u>	Pole-dipole. Direction of survey was grid north, with the current electrode to the south of the potential electrodes for the entire survey.
<u>Dipole spacing:</u>	25 m
<u>Separations:</u>	n=1 to 6.
<u>Tx:</u>	Time domain: 0.125 Hz, 50% duty cycle, reversing polarity
<u>Parameters read:</u>	M - total chargeability Mi - 10 semi-logarithmically spaced time slice channels V <sub>p</sub> - primary voltage Sp - self-potential voltage I - current Rs - electrode (contact) resistance Err - standard deviation of stacked readings
<u>Stacks, repeats:</u>	At least 15 stacks were taken at each station. Stations that were noisy (error > 5 mV/V) had extra readings taken to ensure repeatability.

The VLF survey was conducted according to the following specifications

<u>Final total coverage:</u>	9.3 line-km
<u>Station spacing</u>	25 m
<u>Direction of readings</u>	all readings were taken with the operators facing grid north.
<u>VLF station</u>	NLK (24.8 Khz) (apparent station azimuth - 160 <sup>0</sup> )

The mag survey was conducted according to the following specifications

<u>Final total coverage:</u>	9.4 line-km
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<u>Station spacing</u>	12.5 metres
<u>Base station</u>	Installed near camp and cycled at a 15 second interval. The base station magnetometer and field magnetometers times were synchronized prior to surveying.
<u>Corrections</u>	Temporal geomagnetic variation was removed by linear interpolation of drift from the base station magnetometer.

## 9.0 SURVEY NOTES

The survey log in Appendix C describes survey operations including production. The line cutting crew was on the property from October 28 to November 11, 2005. The IP crew was on the property from November 14 to December 3, 2005. Weather conditions hampered the project, varying from freezing rain early in the program to very cold (-35<sup>o</sup>) weather late in the program. Ground conditions on some of the side hill slopes were consequently quite treacherous. Production was further hampered by the lack of daylight.

Ground conditions for the IP survey were surprisingly good, largely because the surface frost was not too deep. This, coupled with quiet geomagnetic conditions allowed the crew to collect good quality data.

## 10.0 DATA PROCESSING

The total magnetic field data was processed in the following manner:

1. Data was dumped and archived; raw data files contained in the attached archive are unedited.
2. The rover magnetometer data was corrected for temporal geomagnetic variation using the synchronized base station total magnetic field data. The drift from a constant reference datum of 58000 nT was calculated for each rover magnetometer measurement using linear interpolation based on the measurement times at each of the rover and base station magnetometer. The variation from the datum was removed from the rover field.

3. The corrected rover data was levelled between operators. Both operators surveyed a common section of line and the average difference and standard variation in the difference were calculated. If the average difference between the operators, within the bounds of standard deviation, was non-zero, the data was levelled to a common datum by calculating a constant static shift between operator and adjusting the data to a common datum.
4. The final data was despiked and low pass filtered. Single station excursions of more than 10 nT were removed by despiking. The 5-point moving average filter was applied to the data to remove high spatial frequency total magnetic field response.
5. The total magnetic field data was plotted in shaded contour map format (Figure 4 - back pocket). The field was illuminated from  $45^{\circ}$  with an inclination of  $45^{\circ}$ .

The VLF-EM data was processed in the following manner:

1. The VLF-EM in-phase and quadrature readings were transcribed to a Geosoft data base file.
2. The in-phase data was plotted in Fraser-filtered format with negative values suppressed (Figure 5 - back pocket).

The IP data was processed in the following manner:

1. *Data review.* The IP data was reviewed and edited prior to preparing pseudosections. Duplicate readings were averaged to leave only a single reading at each station and separation. Readings with large errors which did not repeat within 10% were deleted from the data base.
2. *Pseudosection plotting.* Pseudosections of the apparent resistivity, and chargeability are displayed in stacked section format.

## 11.0 RESULTS

The final data is plotted in the following figures:

Figure 5.	Shaded colour contoured total magnetic field.
Figure 6.	Fraser filtered VLF-EM
Figure 7.	Stacked chargeability pseudosections
Figure 8.	Stacked resistivity pseudosections

Final digital data is appended to this report on a CD-ROM in the back pockets. The archive is organized as follows:

Raw	Un-edited dump files in separate directories for IP and magnetic field data
Final	Final corrected IP, magnetic field and VLF-EM data in Geosoft (Oasis 6.0) and ASCII format is filed in directories by method.
Report	PDF copy of the report and all figures

The total magnetic field survey detected a persistent high across the north boundary of the grid and generally subdued magnetic response over the quartz feldspar porphyry on which the grid is centred. The VLF-EM survey detected two conductors extending across the grid. From west to east, the northernmost conductor extends from 9800N to 10100N while the southernmost conductor extends from 9500N to 9200N. The resistivity sections show a number of flat lying resistivity highs from  $n=1$  to  $n=3$  which are likely caused by discontinuous permafrost. Chargeability is strongest and widest in the eastern portion of the grid over the widest portion of the quartz feldspar porphyry and narrows to the west. There are a number of discrete zones of elevated chargeability embedded within a broader zone of elevated chargeability largely conformable with the inferred location of the quartz feldspar porphyry.

## 12.0 CONCLUSIONS

The results of the geophysical surveys at the Sonora Property support the following conclusions:

- a. The geophysical surveys appear to be accurately mapping the limits of the quartz felspar porphyry intrusion. The chargeability data appears to be particularly useful here.

## 13.0 RECOMMENDATIONS

The following recommendations are based on the conclusions:

- a. The survey grid should be extended both east and west to cover the inferred extent of the quartz feldspar porphyry and total magnetic field, VLF-EM and IP survey coverage should be extended over this area.

Respectfully submitted,  
**AURORA GEOSCIENCES LTD.**

Mike Power M.Sc. P.Geoph.  
Geophysicist

## REFERENCES

- Davidson G.S. (2000). Summary Report on the Sonora Gulch Property.  
Unpublished report for Engineer Mining Corporation.
- Gordey, S.P. and A.J. Makepeace (1999) Yukon Digital Geology, Open File D3826.  
Geological Survey of Canada: CD-ROM.
- Schulze, C. (2004). Summary and Preliminary Exploration Report on the Sonora Gulch Property, Dawson Range, Yukon. Technical report submitted to comply with NI 43-101 ([www.firestoneventures.com/i/pdf/SonoraTechReport.pdf](http://www.firestoneventures.com/i/pdf/SonoraTechReport.pdf)).

## APPENDIX A. CERTIFICATE

I, Michael Allan Power, M.Sc. P.Geo., P.Geoph., with business and residence addresses in Whitehorse, Yukon Territory do hereby certify that:

1. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (registration number 21131) and a professional geophysicist registered by the Northwest Territories Association of Professional Engineers, Geologists and Geophysicists (licensee L942).
2. I am a graduate of the University of Alberta with a B.Sc. (Honours) degree in Geology obtained in 1986 and a Masters Degree in Geophysics obtained in 1988.
3. I have been actively involved in mineral exploration the Northern Cordillera since 1988.
4. I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, in Firestone Ventures Inc. or any of its properties.

Dated this 5<sup>th</sup> day of May 2006 in Whitehorse, Yukon.

Respectfully Submitted,

Michael A. Power M.Sc. P. Geoph. P.Geo.

## APPENDIX B. INSTRUMENT SPECIFICATIONS

## ANNEX 7: SPECIFICATIONS

### *Technical:*

- Input impedance: 10 Mohm
- Input overvoltage protection up to 1000V
- Automatic SP bucking with linear drift correction
- Internal calibration generator for a true calibration on request of the operator
- Internal memory: 3200 dipoles reading
- Automatic synchronization and re-synchronization process on primary voltages signals whenever needed
- Proprietary intelligent stacking process rejecting strong non-linear SP drifts
- Common mode rejection: more than 100 dB (for  $R_s = 0$ )
- Self potential (Sp) : range: -15V - +15V  
: resolution: 0.1 mV
- Ground resistance measurement range: 0.1 - 100 kohms
- Primary voltage : range: 10 $\mu$ V - 15V  
: resolution: 1 $\mu$ V  
: accuracy: typ. 0.3%
- Chargeability : resolution: 10 $\mu$ V/V  
: accuracy: typ. 0.6%

### *General:*

- Dimensions: 31x21x25 cm
- Weight (with the internal battery): 9 kg
- Operating temperature range: -30°C - 70°C
- Case in fiber-glass for resisting to field shocks and vibrations

## Instrumentation GDD



## The Induced Polarization Transmitter

### TxII-1800 and TxII-3600 Models

For Fast, High-Quality  
Induced Polarization Surveys  
in All Field  
Conditions

Flyers high / low resolution [TxII/1 \(63 KB\)](#) / [TxII/2 \(1 MB\)](#)

At Last, a High-Quality  
Affordable IP Transmitter

**TxII-1800 Model, 1800 watts**

Its high power, up to 10 amperes, combined with its light weight and a 21 kg/2000W Honda generator makes it particularly suitable for dipole-dipole Induced Polarization surveys.

#### Features

- Protection against short circuits even at zero (0) ohms
- Output voltage range: 150 V to 2400 V / 14 steps
- Power source: 120 V, Optional: 220 V / 50/60 Hz
- Operates from a light backpackable standard 120 V generator
- Up to three years warranty

#### CONTENTS

- TxII-1800/TxII-3600 IP transmitter
- Specifications
- Purchase - Rental



This backpackable 1800 watts induced polarization (I.P.) transmitter works from a standard 120 V source and is well adapted to

rocky environments where a high output voltage of up to 2400 V is needed. Moreover, in highly conductive overburden, at 150 V, the highly efficient TxII-1800 watts transmitter is able to send a current of up to 10 amperes. By using this I.P. transmitter, you obtain fast and high-quality I.P. readings even in the most difficult conditions.

### **TxII-3600 Model, 3600 watts**

Its high power, up to 10 amperes, combined with a Honda generator makes it particularly suitable for pole-dipole Induced Polarization surveys.

#### **Features**

- **Protection against short circuits even at zero (0) ohms**
- **Output voltage range: 150 V to 2400 V / 14 steps**
- **Power source: 220 V, 50/60 Hz**
- **Operates from a standard 220 V generator**
- **Up to three years warranty**

This 3600 watts induced polarization (I.P.) transmitter works from a standard 220 V source and is well adapted to rocky environments where a high output voltage of up to 2400 V is needed. Moreover, in highly conductive overburden, at 150 V, the highly efficient TxII-3600 watts transmitter is able to send a current of up to 10 amperes. By using this I.P. transmitter, you obtain fast and high-quality I.P. readings even in the most difficult conditions.

#### **Specifications**

General		
Size	TxII-1800	21 x 34 x 39 cm
Size	TxII-3600	21 x 34 x 50 cm
Weight	TxII-1800	approx. 20 kg
Weight	TxII-3600	approx. 35 kg

Operating temperature	-40°C to 65°C
Electrical	
Used for time-domain IP	2 sec. ON 2 sec. OFF
Time Base	1-2-4-8 sec.
Output current range	0.005 to 10 A
Output voltage range	150 to 2400 V
Power source TxII-1800	Recommended motor/generator set: Standard 120 V / 60 Hz backpackable Honda generator Suggested Models: EU1000iC, 1000 W, 13.5 kg. or EU2000iC, 2000 W, 21.0 kg.
Power Source TxII-3600	Recommended motor/generator set: Standard 220 V, 50/60 Hz Honda generator Suggested Models: EM3500XK1C, 3500 W, 62 kg or EM5000XK1C, 5000 W, 77 kg
Controls	
Power	ON/OFF
Output voltage range switch	150 V, 180 V, 350 V, 420 V, 500 V, 600 V, 700 V, 840 V, 1000 V, 1200 V, 1400 V, 1680 V, 2000 V, 2400 V
Displays	
Output current LCD	reads to $\pm 0,001$ A
Very cold weather	standard LCD heater on readout
Protection	Total protection against short circuits even at zero (0) ohms
Indicator lamps  (in case of overload)	- High voltage ON-OFF - Output overcurrent - Generator over or undervoltage - Overheating - Logic failure - Open loop protection

## Purchase and Rental Info

Interested by the TxII-1800 W IP or the TxII-3600 W IP transmitter?

It is simple. You can rent it or purchase it. The choice is yours. Here is some information you

**APPENDIX C. SURVEY LOG**



**AURORA GEOSCIENCES LTD.**  
**JOB FVI-05-01-YT**  
**FIRESTONE VENTURES INC.**  
**SONORA PROPERTY**

**Period:** 28 Oct 2005 - 04 Dec 2005

**Personnel:**

<u>Line cutting foreman:</u>	Larry Breault 108 Gold Road, Whitehorse, YT Y1A 2W3
<u>Lead cutter:</u>	David Germaine 108 Gold Road, Whitehorse, YT Y1A 2W3
<u>Brusher:</u>	Morris Skukum 108 Gold Road, Whitehorse, YT Y1A 2W3
<u>Brusher:</u>	Mitch Smaaslet 108 Gold Road, Whitehorse, YT Y1A 2W3
<u>IP crew chief:</u>	Franz Dziuba 3502 Raccine Road, Yellowknife, NT X1A 2J3
<u>Technician:</u>	Jeannette Walker 108 Gold Road, Whitehorse, YT Y1A 2W3
<u>Helper</u>	Dave Sloan 3502 Raccine Road, Yellowknife, NT X1A 2J3
<u>Helper</u>	Andy Sewap 108 Gold Road, Whitehorse, YT Y1A 2W3

Helper

Mitch Olsen  
 108 Gold Road,  
 Whitehorse, YT Y1A 2W3

**Line cutting**

<b>TOTALS:</b>				
	<b>11.0</b>	<b>0</b>	<b>0</b>	
<b>Date</b>	<b>Linecutting (line-km)</b>	<b>IP survey (line-km)</b>	<b>Status (W/S/T)</b>	<b>Description</b>
28-Oct-05	0.0		Travel	Mobe to Sonora Gulch
29-Oct-05	0.0		Work	Finish camp construction
30-Oct-05	1.0		Work	Line cutting
31-Oct-05	1.0		Work	Line cutting
1-Nov-05	1.0		Work	Line cutting
2-Nov-05	1.0		Work	Line cutting
3-Nov-05	1.0		Work	Line cutting
4-Nov-05	1.0		Work	Line cutting
5-Nov-05	1.0		Work	Line cutting
6-Nov-05	1.0		Work	Line cutting
7-Nov-05	1.0		Work	Line cutting
8-Nov-05	1.0		Work	Line cutting
9-Nov-05	1.0		Work	Line cutting
10-Nov-05	0.0		No charge	Crew not working
11-Nov-05	0.0		No charge	Crew demobes

AURORA GEOSCIENCES LTD.

Date	Survey / standby	Rx	Tx	Current	Cables	Weather	Lines	From	To	Line-km	Remarks
14-Nov-05	mobe										Helidynamics 206 used to mobe to camp. We run out of daylight, 4 more trips are required.
15-Nov-05	mobe										Poor flying weather, we are lucky to complete mobe.
16-Nov-05	Survey	FD	JW	MO	DS	Snow all day	10200E	9100	10025	0.925	
17-Nov-05	Survey	FD	JW	MO	DS	Cloudy, warming	10200E	10025	10850	0.825	Survey slowed by snow covered difficult terrain.
18-Nov-05	Survey	JW	DS	FD	MO	Cloudy, warming	10000E	9325	9675	0.35	Spent A.M attempting to survey beginning of line 10000E. Forced to NR due to poor contacts and safety. C2 broken by a marten. Problems with potential cables caused by melting snow.
19-Nov-05	Survey	JW	DS	FD	MO	Sunny, above freezing	10000E	9675	10775	1.1	Warm temperatures caused ice to melt over creeks. MO breaks through the ice three times.
20-Nov-05	Survey	DS	JW	FD	MO	Overcast, freezing	9800E	9200	9775	0.575	Wind up wire remaining on line 10000E before starting survey.
21-Nov-05	Survey	DS	JW	FD	MO	Cloudy, warming	9800E	9800	10225	0.425	Could not survey past 10225N due to frozen scree - unstable footing and non existant contacts.
22-Nov-05	Survey	JW	DS	MO	FD	Cloudy, freezing	9600E	9200	9950	0.75	Everything ran smoothly.
23-Nov-05		Standby								0	Due to a back injury and sore knees crew took day off to recuperate.
24-Nov-05	Survey	JW	DS/AS	MO	FD	Warm	9600E	9950	10675	0.725	Andy Sewap arrives, Dave Sloan leaves.
25-Nov-05	Survey	AS	JW	FD	MO	Warm	9400E	9200	9975	0.775	Everything ran smoothly.
26-Nov-05	Survey	as	JW	FD	MO	COLD	9400E	9975	10600	0.625	Wind up wire and set up on line 9200 before dark.
27-Nov-05	Survey	JW	MO	FD	AS	Very Cold	9200E	9200	10250	1.05	No moisture in cables due to colder weather
28-Nov-05	Survey	JW	MO	FD	AS	Extremely Cold	9200E	10275	10675	0.4	Receiver screen froze due to the extreme cold.
29-Nov-05	Survey	AS	JW	FD	MO	Extremely Cold	9000E	9000	9375	0.375	Switch to RX Elrec6. Frozen rocky ground difficult contacts.
30-Nov-05	Survey	AS	JW	FD	MO	Extremely Cold	9000E	9400	10500	1.1	finished ip survey grid still very cold
1-Dec-05									TOTAL	10	Crew switches to Mag and VLF
Date	Survey / standby	Mag 1	Mag2	VLF 1	VLF 2	Weather	Lines	From	To	Line-km	Remarks
1-Dec-05	mag/VLF	JW	MO	AS	FD	overcast still cold					All mag data lost due to base mag malfunton. ( it crapped out after 40 minutes)
2-Dec-05	mag/VLF	JW	MO	AS	FD	sunny periods, still cold				10	Complete mag and VLF survey
3-Dec-05	demobe					warms to -34 C					break camp, sling 4 net loads to Minto, then all personnel demobe to Whitehorse.

**APPENDIX D. STATEMENT OF EXPENDITURES**

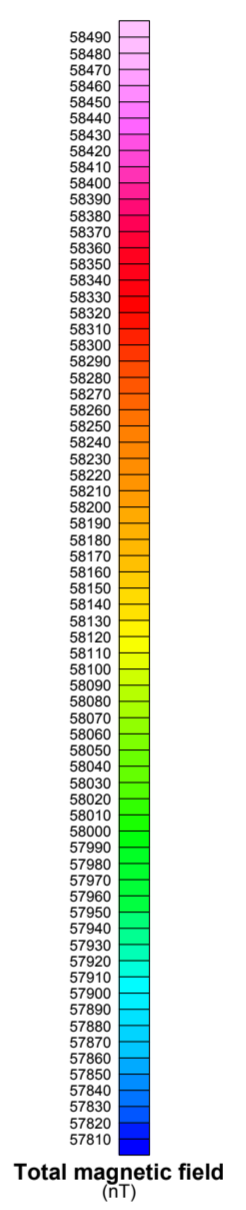
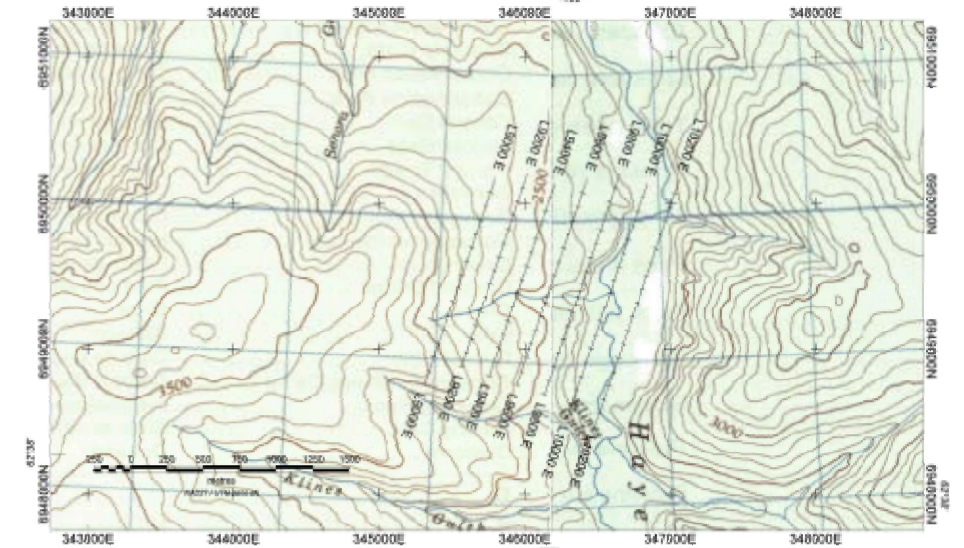
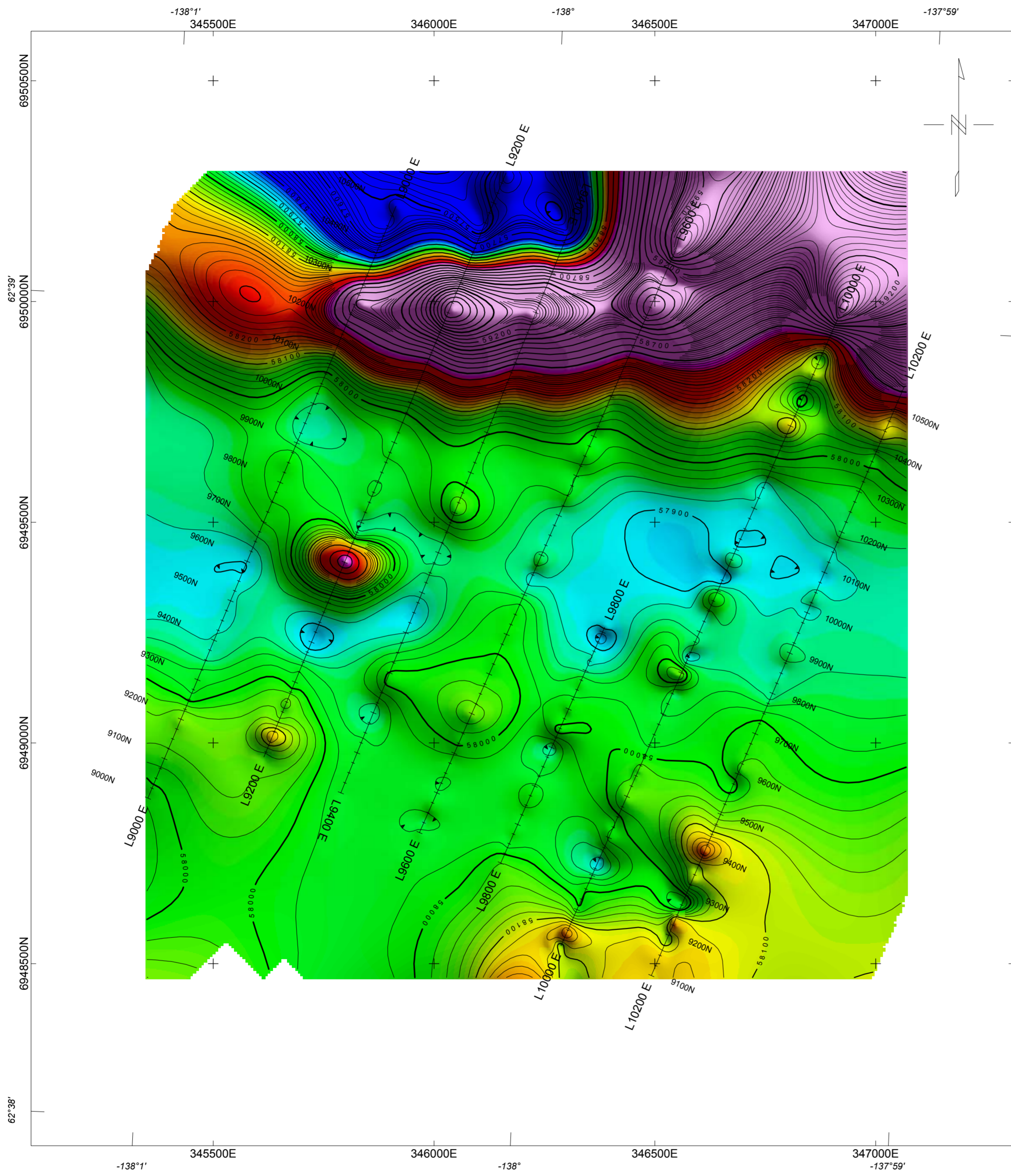
**FVI-05-01-YT SONORA PROPERTY  
LINE CUTTING / IP / TOTAL MAGNETIC FIELD / VLF**

**PROJECT EXPENDITURES**

<b>Line cutting</b>		
Crew mobe / demobe	\$5,625.00	
Line cutting: 12 days @ \$1420	\$17,040.00	
<i>Total line cutting costs</i>	<i>\$22,665.00</i>	<i>\$22,665.00</i>
<b>Geophysical surveys</b>		
Crew mobe / demobe	\$5,625.00	
IP/ mag / VLF survey: 17 days survey @ \$2,140	\$36,380.00	
IP / VLF / mag survey: 1 standby day @ 1,920	\$1,920.00	
VLF rental	\$1,375.00	
<i>Total geophysical survey costs</i>	<i>\$45,300.00</i>	<i>\$45,300.00</i>
<b>Project support</b>		
Helicopter	\$46,858.00	
Camp rental: 32 days @ \$120	\$3,840.00	
Groceries: 100 man days	\$3,735.70	
Fuel: Jet-B, diesel, gas & oil	\$5,844.63	
Field supplies	\$1,242.78	
Cargo	\$97.74	
Expediting: Truck & driver	\$2,630.00	
Contractors administration	\$1,092.09	
<i>Total project support costs</i>	<i>\$53,482.94</i>	<i>\$53,482.94</i>
<b>Report</b>		
Data processing, plotting & assessment report	\$2,500.00	\$2,500.00
<b>TOTAL PROJECT COSTS</b>		<b>\$135,804.94</b>

I certify that these expenditures are true to the best of my knowledge.

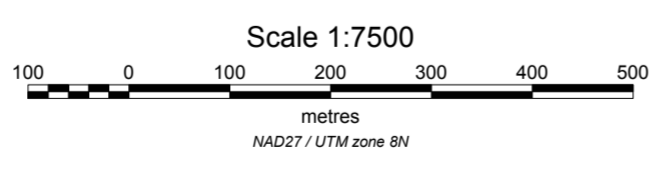
Michael A. Power, M.Sc., P.Geoph.



**LEGEND**  
**TOTAL FIELD MAGNETICS**  
**CONTOUR INTERVALS (nT)**

—	20	—
—	100	—
—	500	—

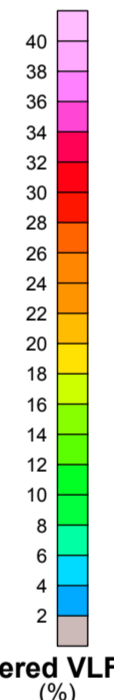
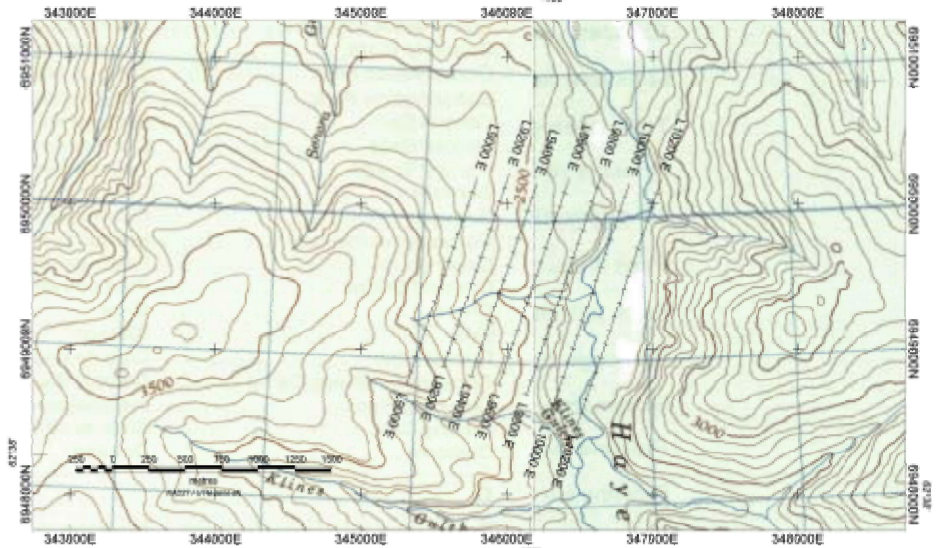
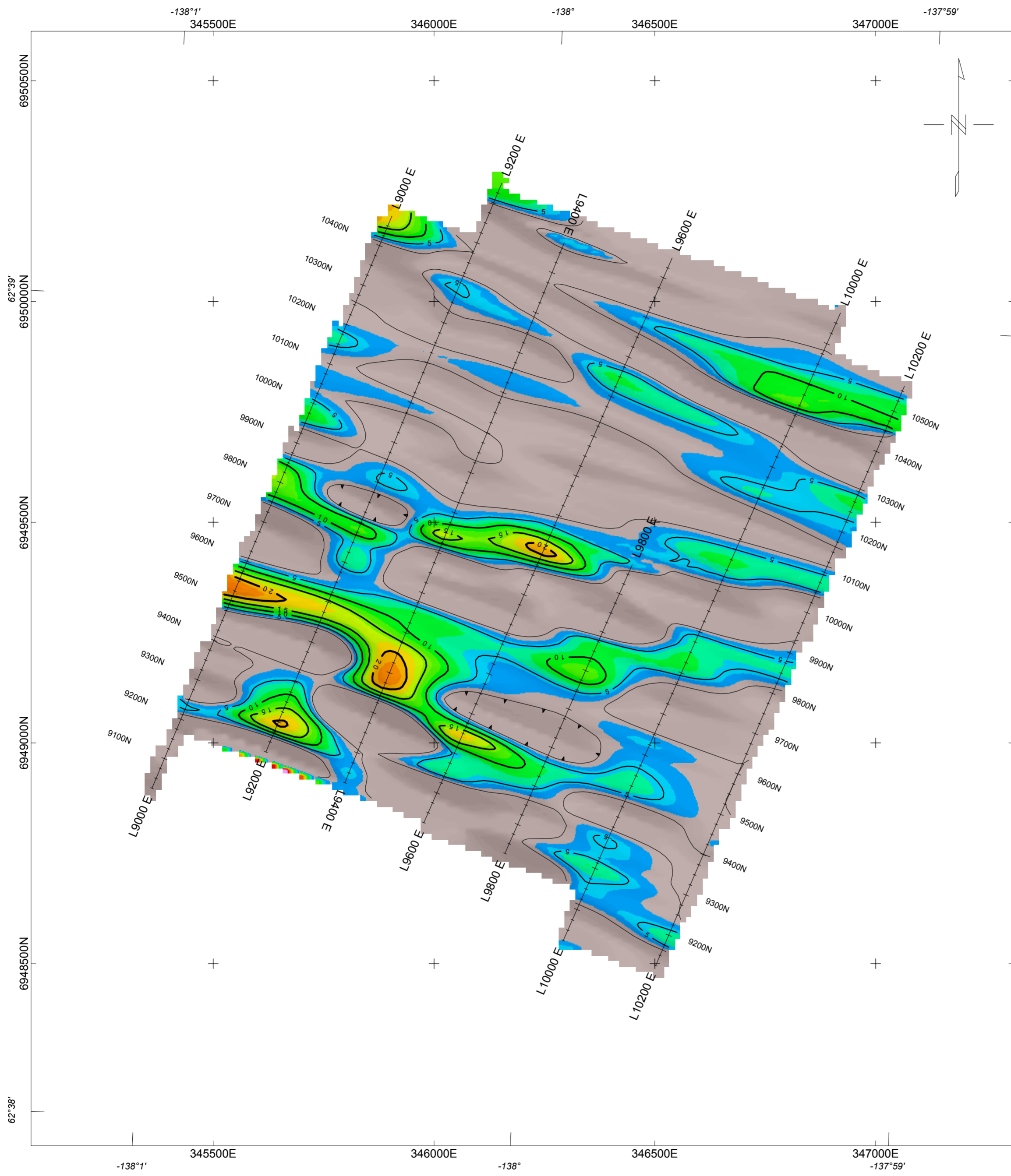
REFERENCE FIELD : 58,000 nT  
 INSTRUMENT : GEM GSM-19T  
 GRIDDING ALGORITHM : MINIMUM CURVATURE  
 GRID CELL SIZE : 6.5 m  
 FILTER : Despike / Bandpass  
 FILTER SPECS : 10 nT / 5 fid  
 STATION SEPARATION : 12.5 m  
 LINE-KM SURVEYED THIS SHEET : 9.30 km  
 SURVEY DATE : 11 - 30 Nov 2005



**FIRESTONE VENTURES INC.**  
**SONORA PROPERTY**  
**Total Magnetic Field Survey**  
**Figure 5 - Total magnetic field contour map**

NTS: 115   12 & J 09	District: Whitehorse, YT
Datum: NAD1927	Projection: UTM Zone 8N
Job: FVI-05-01-YT	Date: 27 Apr 06

**AURORA GEOSCIENCES LTD.**



Fraser filtered VLF in-phase (%)

### LEGEND

#### VLF-EM SURVEY

CONTOUR INTERVALS (%)

5

INSTRUMENT : EM-16

Facing direction: Grid North

GRIDDING ALGORITHM : BI-DIRECTIONAL

GRID CELL SIZE : 12.5 m

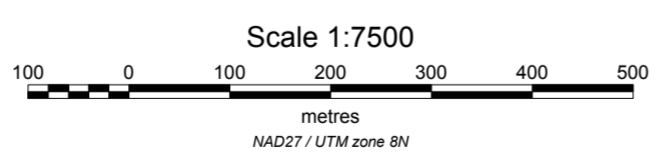
FILTER : Fraser (5 point)

FILTER SPECS : South to North (+ to -)

STATION SEPARATION : 25 m (12.5 near anomalies)

LINE-KM SURVEYED THIS SHEET : 9.30 km

SURVEY DATE : 11 - 30 Nov 2005



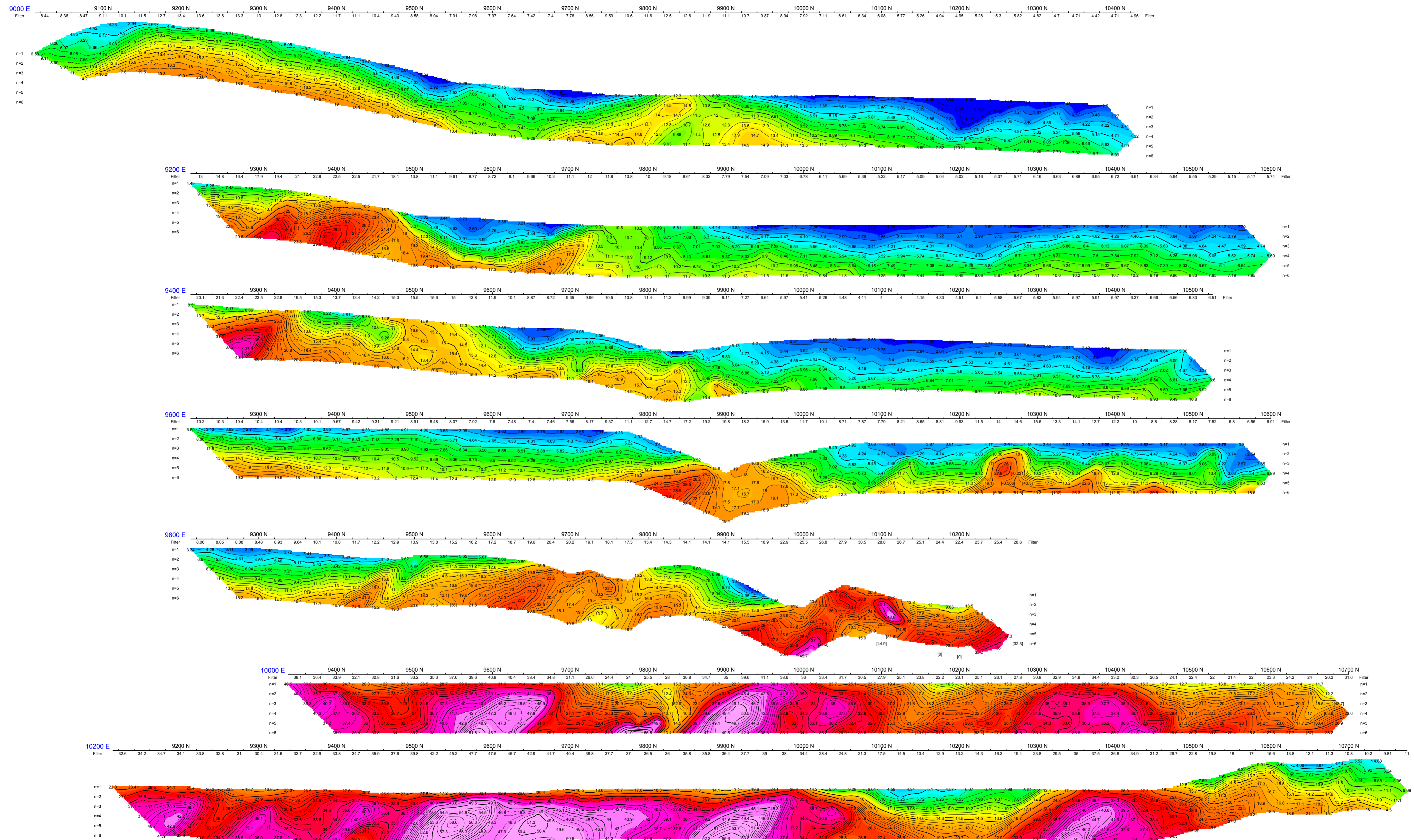
**FIRESTONE VENTURES INC.**

**SONORA PROPERTY  
VLF-EM Survey  
Figure 5 - Fraser Filtered in-phase contour map**

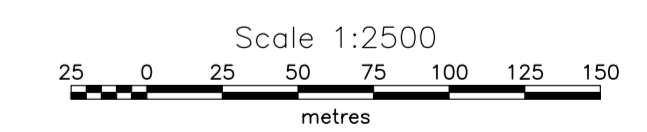
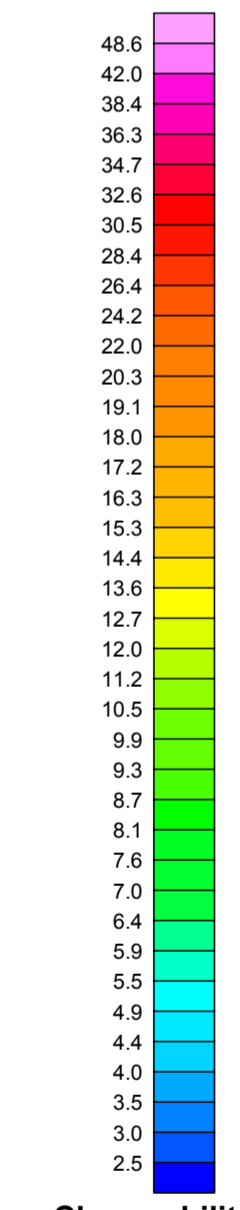
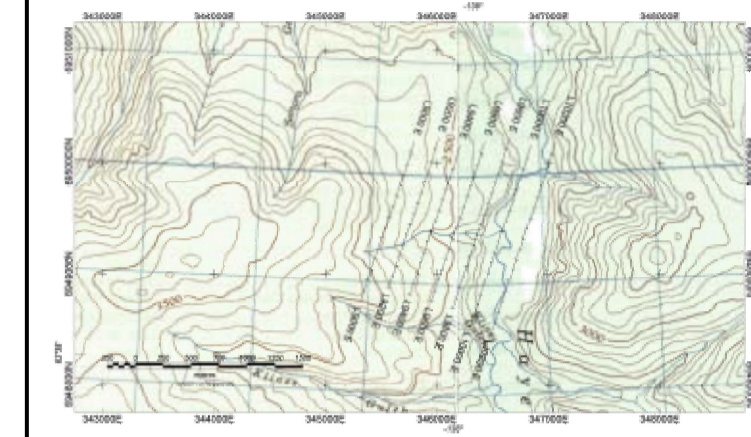
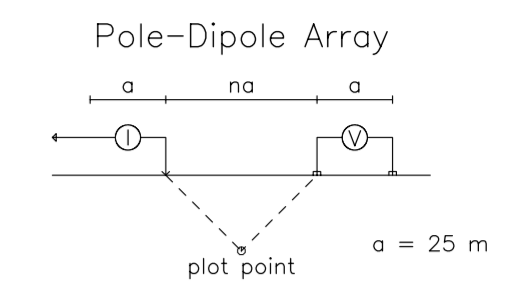
NTS: 115 | 12 & J 09  
Datum: NAD1927  
Job: FVI-05-01-YT

District: Whitehorse, YT  
Projection: UTM Zone 8N  
Date: 27 Apr 06

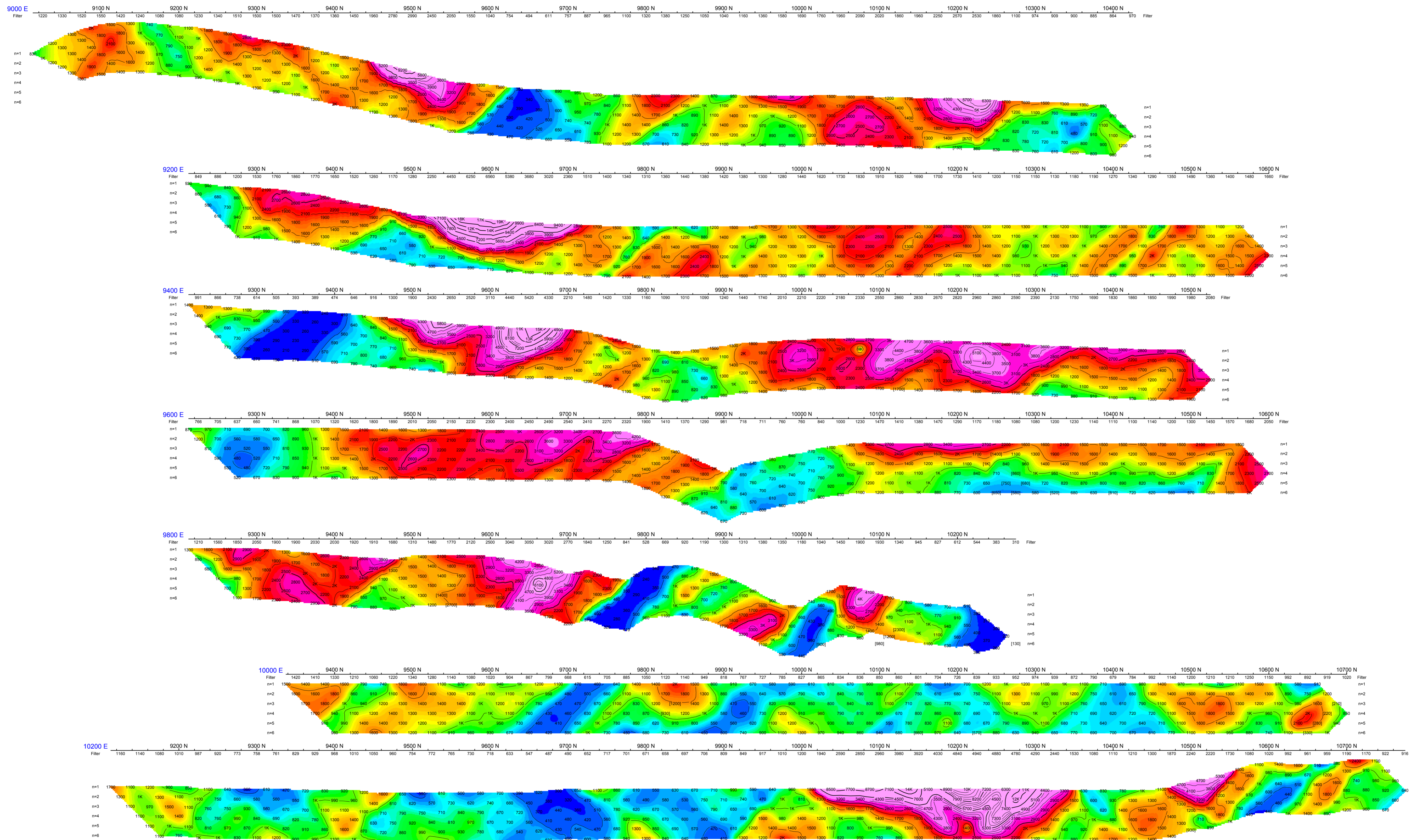
**AURORA GEOSCIENCES LTD.**



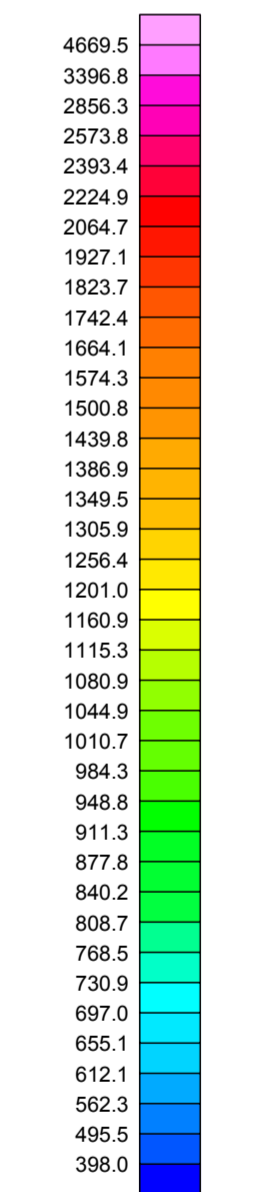
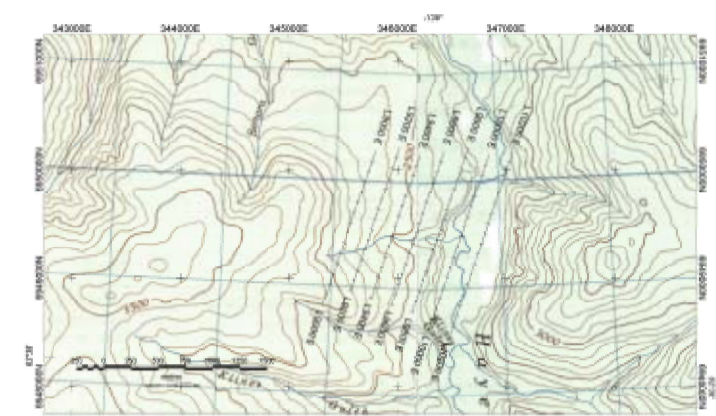
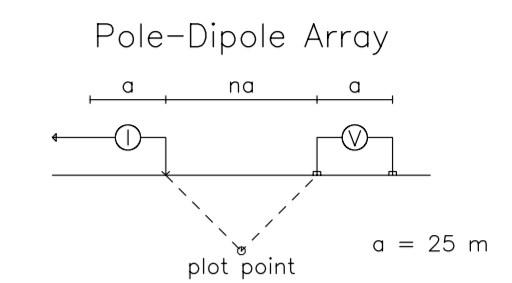
Stacked Section Map  
**IP\_Avg**



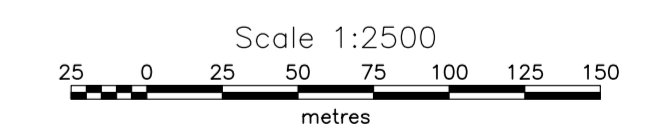
**Firestone Ventures Inc**  
**Sonora Property**  
 INDUCED POLARIZATION SURVEY  
 Figure 7. Stacked Chargeability sections  
 NTS: 115 I 12 / J 09 District: Whitehorse  
 Job: FVI-05-01-YT 27 APR 06  
**Aurora Geosciences Ltd.**



Stacked Section Map  
**ResCalc**



Chargeability (mV/V)



**Firestone Ventures Inc**  
**Sonora Property**  
 INDUCED POLARIZATION SURVEY  
 Figure 8 - Stacked resistivity pseudosections  
 NTS: 115 I 12 / J 09 District: Whitehorse  
 Job: FVI-05-01-YT Date: 27 Apr 06  
**Aurora Geosciences Ltd.**