Assessment Report on the

2011 AIRBORNE GEOPHYSICAL SURVEY

on the

HENDERSON PROPERTY, YUKON

YD64401-YD64430	Hendy 1 - Hendy 30	YD64953-YD64954	Hendy 553 - Hendy 554
YD64431-YD64446	Hendy 31 - Hendy 46	YD64955-YD65042	Hendy 555 - Hendy 642
YD64447-YD64466	Hendy 47 - Hendy 66	YD65043-YD65044	Hendy 643 - Hendy 644
YD64467-YD64473	Hendy 67 - Hendy 73	YD65045-YD65064	Hendy 645 - Hendy 664
YD64523-YD64524	Hendy 123 - Hendy 124	YD65065-YD65082	Hendy 665 - Hendy 682
YD64525-YD64538	Hendy 125 - Hendy 138	YD65083-YD65094	Hendy 683 - Hendy 694
YD64541-YD64582	Hendy 141 - Hendy 182	YD65097-YD65111	Hendy 697 - Hendy 711
YD64583-YD64598	Hendy 183 - Hendy 198	YD65113-YD65114	Hendy 713 - Hendy 714
YD64599-YD64618	Hendy 199 - Hendy 218	YD65115-YD65141	Hendy 715 - Hendy 741
YD64619-YD64650	Hendy 219 - Hendy 250	YE43959-YE43960	Hendy 695 - Hendy 696
YD64653-YD64674	Hendy 253 - Hendy 274	YE26755-YE26756	Hendy 251 - Hendy 252
YD64675-YD64712	Hendy 275 - Hendy 312	YE26704-YE26752	Hendy 74 - Hendy 122
YD64713-YD64838	Hendy 313 - Hendy 438	YE26753-YE26754	Hendy 139 - Hendy 140
YD64839-YD64840	Hendy 439 - Hendy 440	YE30982-YE31000	Hendy 452 - Hendy 470
YD64841-YD64850	Hendy 441 - Hendy 450	YE43957	Hendy 451
YD64901-YD64950	Hendy 501 - Hendy 550	YE43961 - YE43990	Hendy 471 - Hendy 500
YD64951-YD64952	Hendy 551 - Hendy 552	YE43991 - YE43992	Hendy 800 - Hendy 801

DAWSON MINING DISTRICT
Date(s) Worked: July 14 to July 17, 2011

NTS Map 115O05, 115O06, 115O11 and 115O12
UTM 581,000E; 7,045,000N (NAD 83 Zone 7)

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December 5, 2011

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SUMMARY

The Henderson property operated by Silver Quest Resources Ltd. (Silver Quest) contains historical placer workings along North Henderson Creek. A potential lode source for this placer remains unidentified. Silver Quest completed an airborne magnetic and radiometric geophysical survey that was carried out from July 14 to July 17, 2011, totalling 1,860 line km on the Henderson property. Henderson is located in west-central Yukon approximately 60 kilometres (km) south of Dawson City and approximately 80 km east of the Yukon-Alaska boarder (Figure 1).

INTRODUCTION

This report describes an airborne magnetic and radiometric geophysical survey conducted on the Henderson property from July 14 to July 17, 2011. Work on the Henderson property was completed for Silver Quest by Aeroquest Airborne of Mississauga, Ontario. The author was in the property site camp during the program and the Statement of Qualifications is contained within this report.

The objective of the airborne geophysical survey was to further evaluate the mineralized potential of the Henderson property by collecting magnetic and radiometric data to aid in geological and structural interpretation. In particular identifying magnetic signatures associated with high grade zones of placer gold on North Henderson Creek and applying these signatures to the greater property area.

Figure 1 – Location Map

CLAIM DATA AND OWNERSHIP

Silver Quest Resources Ltd. acquired the Hendy claims via staking in 2010 and 2011. Some of the claims were in the process of being transferred to Silver Quest at the time of writing. The Henderson property comprises 742 contiguous quartz claims and covers a total area of approximately 15,500 hectares (ha). The claim block centers on 581,000E; 7,045,000N (NAD 83, Zone 7) on NTS map sheet 115O05, 115O06, 115O11 and 115O12 as shown on (Figure 2, Appendix 1). Quartz claims are registered with the Dawson Mining Recorder. Claim data is listed below.

Table 1 – Claim Data

Grant Number	Claim Name	Registered Owner
YD64401-YD64430	Hendy 1 - Hendy 30	Conor O'Donovan
YD64431-YD64446	Hendy 31 - Hendy 46	Brandon Duncan
YD64447-YD64466	Hendy 47 - Hendy 66	Neil Chambers
YD64467-YD64473	Hendy 67 - Hendy 73	Declan O'Donovan
YD64523-YD64524	Hendy 123 - Hendy 124	Mark Hockley
YD64525-YD64538	Hendy 125 - Hendy 138	Conor O'Donovan
YD64541-YD64582	Hendy 141 - Hendy 182	Mark Hockley
YD64583-YD64598	Hendy 183 - Hendy 198	Neil Chambers
YD64599-YD64618	Hendy 199 - Hendy 218	Chad Niddery
YD64619-YD64650	Hendy 219 - Hendy 250	Conor O'Donovan
YD64653-YD64674	Hendy 253 - Hendy 274	Mark Hockley
YD64675-YD64712	Hendy 275 - Hendy 312	Chad Niddery
YD64713-YD64838	Hendy 313 - Hendy 438	Neil Chambers
YD64839-YD64840	Hendy 439 - Hendy 440	Jeffrey Bridge
YD64841-YD64850	Hendy 441 - Hendy 450	Declan O'Donovan
YD64901-YD64950	Hendy 501 - Hendy 550	Mark Hockley
YD64951-YD64952	Hendy 551 - Hendy 552	Jeffrey Bridge
YD64953-YD64954	Hendy 553 - Hendy 554	Chad Niddery
YD64955-YD65042	Hendy 555 - Hendy 642	Declan O'Donovan
YD65043-YD65044	Hendy 643 - Hendy 644	Mark Hockley
YD65045-YD65064	Hendy 645 - Hendy 664	Conor O'Donovan
YD65065-YD65082	Hendy 665 - Hendy 682	Brandon Duncan
YD65083-YD65094	Hendy 683 - Hendy 694	Chad Niddery
YD65097-YD65111	Hendy 697 - Hendy 711	Conor O'Donovan
YD65113-YD65114	Hendy 713 - Hendy 714	Chad Niddery
YD65115-YD65141	Hendy 715 - Hendy 741	Jeffrey Bridge
YE43959-YE43960	Hendy 695 - Hendy 696	Silverquest Resources Ltd
YE26755-YE26756	Hendy 251 - Hendy 252	Silverquest Resources Ltd
YE26704-YE26752	Hendy 74 - Hendy 122	Silverquest Resources Ltd
YE26753-YE26754	Hendy 139 - Hendy 140	Silverquest Resources Ltd

YE30982-YE31000	Hendy 452 - Hendy 470	Silverquest Resources Ltd
YE43957	Hendy 451	Silverquest Resources Ltd
YE43961 - YE43990	Hendy 471 - Hendy 500	Silverquest Resources Ltd
YE43991 - YE43992	Hendy 800 - Hendy 801	Silverquest Resources Ltd

PROPERTY DESCRIPTION

LOCATION

The Henderson property is located in the Henderson Creek area of west-central Yukon approximately 60 km south of Dawson City and approximately 80 km east of the Yukon-Alaska boarder (Figure 1).

CLIMATE AND GEOMORPHOLOGY

The Henderson property lies within the Dawson Range in an area of gentle undulating relief. Local elevations range from 515 to 1,200 metres (m) above sea level. The higher parts of the property are thinly vegetated with stunted, aspen and spruce trees, scrub brush and thin moss cover. Lower elevations support a mixture of aspen and spruce forest with thick brush, willows and moss-covered slopes.

The Dawson Range remained unglaciated during the Pleistocene making outcrops rare, the few outcrops that are present are located along sparsely vegetated ridges and in the main creek drainages. The property is drained by North Henderson, Henderson and Rosebute Creeks, which flow west into the Yukon River. Climate in the region is described as sub-arctic with short mild summers and long cold winters.

INFRASTRUCTURE

Access to the Henderson property in 2011 was via an A-Star 350BA helicopter operated by Abitibi Helicopters Ltd., of Calgary. This helicopter was based out of Silver Quest's 2011 Independence Camp located on Independence Creek, 75 km south of the property.

Due to the property's strong placer mining history, the area is easily accessible from Dawson City by dirt road. Road conditions in the area vary greatly depending on the season and the precipitation. Local placer miners use these roads most often and thus maintain the roads when they are working. At the time of work, a large placer mining operation was being conducted on

the lower North Henderson Creek in the southern portion of the property. Its associated camp is located on the property, with a nearby gravel airstrip under construction.

HISTORY

PREVIOUS WORK

There is no historic hard rock exploration work or Minfile occurrences recorded in public documents on the Henderson property. Henderson Creek and North Henderson Creek have historically been actively placer mined. Successful placer mining operations owned by Hayden Cowan continued throughout 2011.

RECENT HISTORY

Silver Quest hired Equity Exploration in 2010 to complete a reconnaissance soil sampling program on the Henderson property. A total of 1,056 soil samples were collect at 100 m spaced intervals along 500 m spaced lines. Seven regions were identified to have elevated gold and/or molybdenum (Baker, 2011).

GEOLOGICAL SETTING

REGIONAL GEOLOGY

The Henderson property is situated within the Yukon-Tanana Terrane in west-central Yukon. This area is characterised by various pericratonic terranes that were accreted to the ancestral continental margin of North America in the early Jurassic. During the mid-Cretaceous the pericratonic terranes were intruded by a northwest-southeast trending plutonic suite known as the Dawson Range plutonic belt (Hart et al. 2004). The Yukon Tanana Terrane consists mainly of a poorly exposed assemblage of poly-deformed metamorphic rocks derived from a variety of igneous and sedimentary protoliths (Jaworski, 2001).

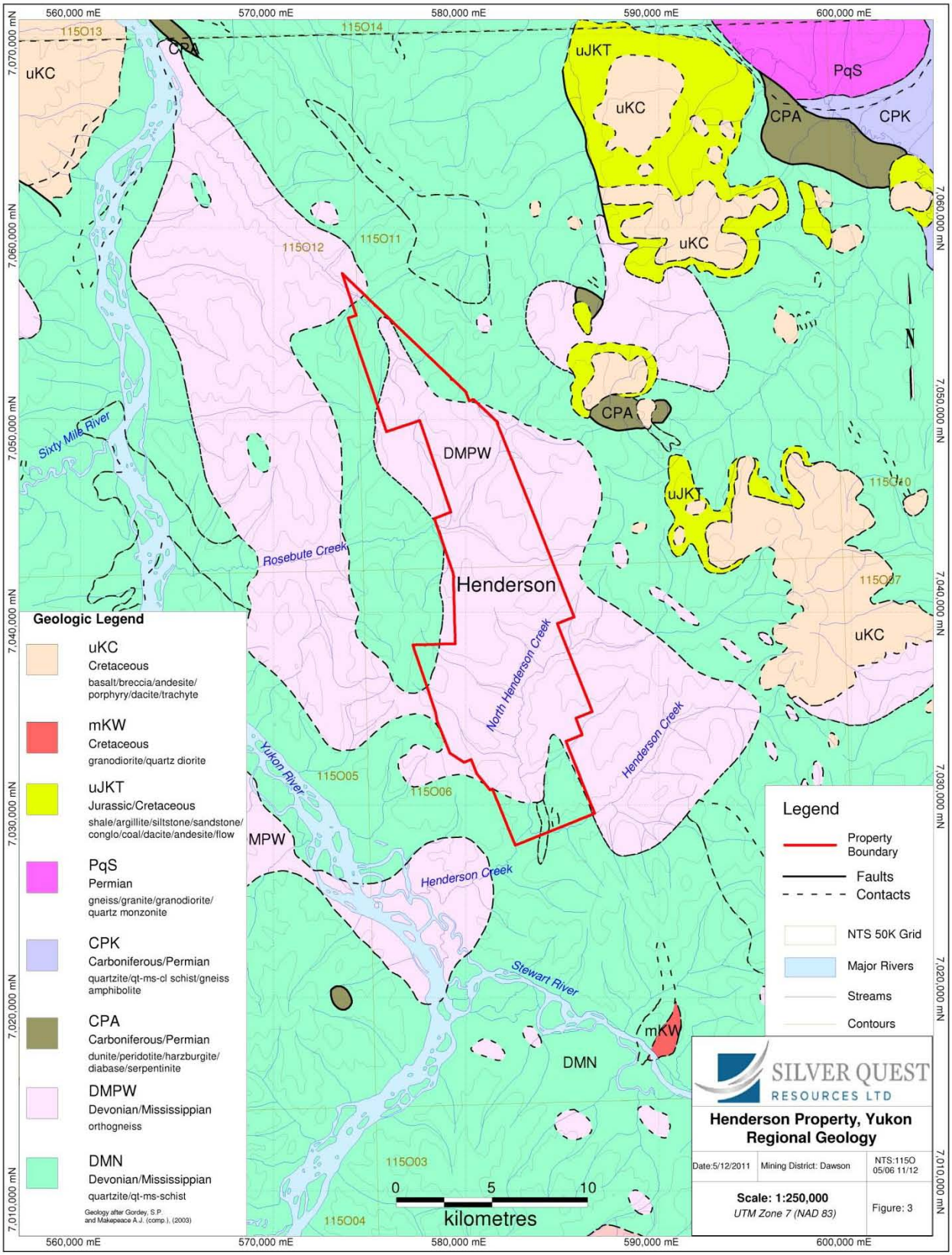


Figure 3 – Regional Geology

PROPERTY GEOLOGY

The Henderson property is generally underlain by deformed Late Devonian to Mississippian orthogneiss and potassium-feldspar granitic orthogneiss with lesser Devonian to Mississippian Nasina Group quartzite and quartz-muscovite schist (Gordey and Makepeace, 2003). Minor deformed sedimentary rocks, including marble, locally out crop on the property.

GEOPHYSICS

An airborne magnetic and radiometric geophysical survey was conducted on the Henderson property on behalf of Silver Quest by Aeroquest Airborne. An A-star 350BA Helicopter owned and operated by Abitibi Helicopters Ltd. of Calgary, Alberta and survey personnel were based at Silver Quest's 2011 Independence Camp, located on Independence Creek. The principle geophysical sensor was a helicopter stinger mounted caesium vapour magnetometer. The secondary sensor was Aeroquest's Airborne Gamma Ray Spectrometer (AGRS) system which was installed in the helicopters cabin (Areoquest Airborne, 2011).

The total survey coverage was 1,860 line km flown in 045/225 degrees of heading line direction. Survey flying took place from July 14 to July 17, 2011. A full report completed by Aeroquest describing survey logistics, data processing, presentation and specifications of the survey is provided in Appendix 2. The report is titled "Report on a Helicopter – Borne Magnetic and Radiometric Survey" dated August, 2011. Full survey data is provided in Appendix 3.

DISCUSSIONS AND CONCLUSIONS

The Henderson property is dominated by a north to northwest trending magnetic grain, likely representing the regional metamorphic fabric. Several prominent cross cutting, east-west trending magnetic highs are understood to represent late mafic dykes. A significant north-south magnetic break coincides with a similar trending section of North Henderson Creek. In conversation with Hayden Cowan during 2011, it is evident that this section of the creek contains substantial coarse placer gold. The relationship between the size and texture of the placer gold nuggets and the magnetic signatures within the area warrants further investigation.

Multiple structural breaks are evident throughout the magnetic data with a range of orientations of trends.

A further review of magnetic data and radiometric data together with ground truthing will allow geological interpretation and identification of favourable units for orogenic mineralization. Favourable units are determined and targeted from the nearby Golden Saddle deposit located 30 km to the south and JP Ross area to the east of Henderson, both operated by Kinross Gold Corporation. Gold mineralization and associated alteration on these properties are strongly controlled by rock type with more brittle and coherent quartzite and felsic gneiss units hosting much higher gold grades (MacKenzie etc al., 2010).

RECOMMENDATIONS

Further reconnaissance geochemical sampling, geological mapping and prospecting is recommended over the property. Interpretation of geophysical data together with geochemical results and geological mapping will allow follow-up testing of co-incident structural break/lineaments and anomalous geochemistry in more favourable coherent rock units exhibiting brittle deformation.

REFERENCES

Aeroquest Airborne, 2011, Report on a Helicopter-Borne Magnetic and Radiometric Survey, Prepared by Aeroquest Airborne for Silver Quest Resources Ltd. Internal Report.

Baker, D (2011), 2010 Geochemical, Report on the Henderson Property, Equity Exploration Consultants Ltd., Assessment Report.

Gordey, S.P. and Makepeace, A.J. (comp.) 2003. Yukon digital geology, version 2.0; Geological Survey of Canada Open File 1749 and Yukon Geological Survey Open File 2003-9(D)

Hart, J. R., Goldfarb, R., Lewis, L. L., and Mair, J. L. (2004), The northern Cordilleran mid-Cretaceous plutonic province: Ilmenite/ magnetite-series granitoids and intrusion-related mineralization: Resource Geology, v. 54, p. 253-280.

Jaworski, B.J. and Vanwermeskerken. M. 2001, Geological and geochemical report on the Rude Creek intrusion-related gold target, west central Yukon Territory / for Prospector International Resources Inc. Yukon Mines, Energy and Resources Assessment Report 094213

MacKenzie, D.J, Craw, D., 2010. Structural controls on hydrothermal gold mineralization in the White River area, Yukon, Yukon Exploration and Geology 2009, K.E. MacFarlane, L.H Weston and L.R. Blackburn (eds.), Yukon Geological Survey, p. 253-263.

STATEMENT OF QUALIFICATIONS

I, Ryan J. F. Congdon, BSc, of Suite 1605-1146 Harwood Street, Vancouver, British Columbia, hereby certify that:

I am a graduate of the Curtin University of Perth, Australia having obtained the degree of Bachelor of Science in Applied Geology, 2005.

I am a graduate of the Curtin University of Perth, Australia having obtained the degree of Bachelor of Science in Environmental Biology, 2005.

I am a member of the Australian Institute of Mining and Metallurgy.

I have been employed in the mineral exploration and mining industry in Western Australia every field season (November-February) between 2003 and 2005.

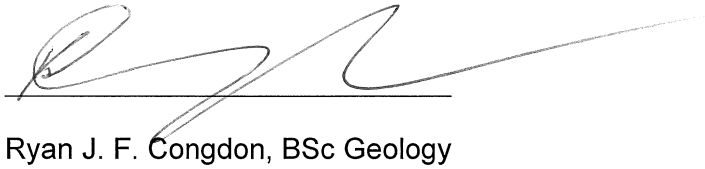
I have been continuously employed as a geologist in the mineral exploration and mining industry since 2006.

I am currently employed as a Geologist by Silver Quest Resources Ltd. Suite 1410-650 West Georgia Street, Vancouver, British Columbia, Canada, V6B 4N8.

I am the author of the report entitled "2011 Airborne Geophysical Survey on the Henderson Property Yukon" dated December 5, 2011.

I participated in the geological work reported herein.

Dated this 5th day of December, 2011.



Ryan J. F. Congdon, BSc Geology

STATEMENT OF EXPENDITURES

	Quantity	Rate		Cost
Airborne Geophysics (line KMs)	1860	$ 66.35		$ 123,408.72
Project manager day(s)	2.5	$ 600.00		$ 1,500.00
Geophysicist day(s)	4	$ 600.00		$ 2,400.00
Geophysical Technician day(s)	16	-		-
Camp Costs (per man day)	22.5	$ 450.00		$ 10,125.00
Expeditor Hour(s)	39	$ 135.00		$ 5,265.00
Helicopter Hour(s)	8.5	$ 1,550.00		$ 13,175.00
Helicopter Fuel (drum)	46	$ 700.00		$ 32,200.00
				$ 188,073.72
		Supervision:	12%	$ 22,568.85
		Total:		$ 210,642.57

Claims Worked:	742	**$**	**283.88**	per claim worked
Claims Grouped:	742	**$**	**283.88**	per claim grouped
Full Claim Years Renewed:	2,067.25	**$**	**206,725.00**	**Required Expenditure**

Dates Worked: July 14 - 17, 2011
Work done by: Silver Quest Resources Ltd. and Aeroquest Airborne

Appendix 1

Figure 2 - Claim Map

570,000 mE
580,000 mE
590,000 mE
7,050,000 mN
7,040,000 mN
7,030,000 mN
7,020,000 mN

115O12
115O11
115O05
115O06

Rosebute Creek
Yukon River
North Henderson Creek
Henderson Creek

N

0 2.5 5
kilometres

Legend
- Claims
- Project Boundary
- NTS 50K Grid
- Major Rivers
- Streams
- Contours

SILVER QUEST RESOURCES LTD

Hederson Property, Yukon
Claim Map

Date:5/12/2011	Mining District: Dawson	NTS: 115O 05/06/11/12
Scale: 1:50,000 *UTM Zone 7 (NAD 83)*		Figure: 2

Appendix 2

Airborne Geophysical Survey Report and Accompanying Maps

Report on a Helicopter-Borne Magnetic and Radiometric Survey

Aeroquest Job # 11-039

For

Silver Quest Resources Ltd.

by

7687 Bath Road,
Mississauga, ON, L4T 3T1
Tel: (905) 672-9129
Fax: (905) 672-7083
www.aeroquestairborne.com

Report date: August 2011

Report on a Helicopter-Borne Magnetic and Radiometric Survey

Aeroquest Job # 11-039

For

Silver Quest Resources Ltd.

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VANCOUVER, BC

V6B 4N8

by

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www.aeroquestairborne.com

Report date: August 2011

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LIST OF MAPS (1:25,000)

- TMI – Coloured Total Magnetic Intensity (TMI) with contours.
- 1VD – Calculated First Vertical Derivative of TMI colour grid with contours.
- TC – Gamma Ray Spectrometer Total Counts colour grid with contours.
- Th_K_Ratio – Gamma Ray Spectrometer Thorium-Potassium Ratio colour grid with contours.

1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Silver Quest Resources Ltd. on their Property in Yukon, Canada. The principal geophysical sensor was a helicopter stinger mounted caesium vapor magnetometer. The secondary sensor was Aeroquest's Airborne Gamma Ray Spectrometer (AGRS) system, which is installed in the helicopter cabin. The AGRS system utilizes four (4) downward looking NaI crystals used as the main gamma-ray sensors and one upward looking crystal for monitoring non-geologic sources. Ancillary equipment included a GPS navigation system, radar altimeter, digital video acquisition system, and a base station magnetometer.

The total survey coverage is 1860 km, of which 1787.27 line-km fell within the defined Henderson project area (Appendix 1), flown in 45/225 degrees of heading line direction. Survey flying described in this report took place on July 14th to July 17th, 2011. This report describes the survey logistics, the data processing, presentation, and provides the specifications of the survey.

2. SURVEY AREA

The project contains Henderson surveyed block located approximately 330km northwest of Whitehorse, Yukon (Figure 1). The detail description of Henderson block with line direction has been described in the table 1.

The survey block corner-coordinates are tabulated in Appendix 1. The base of survey operations was Boulevard camp in Yukon.

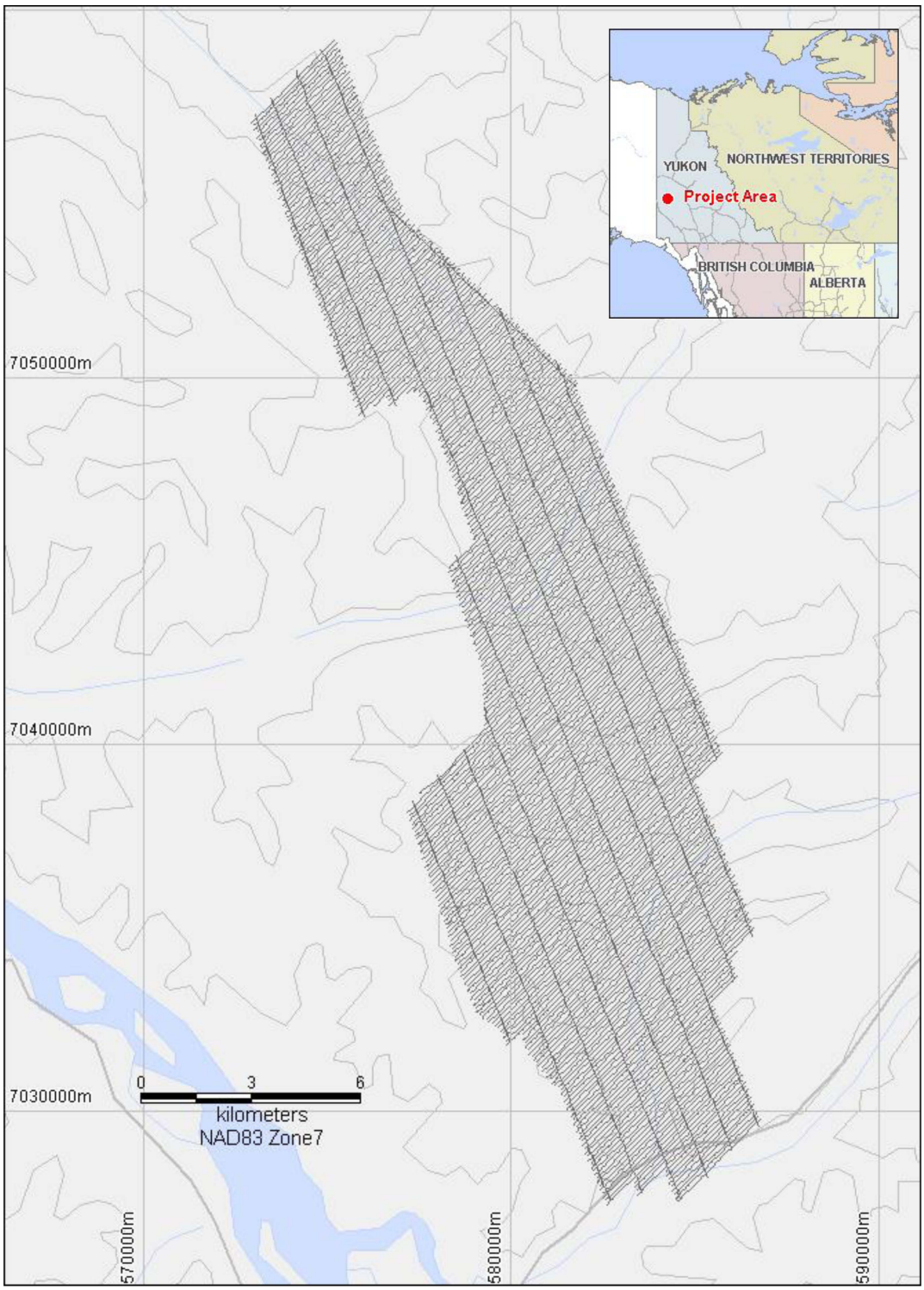


Figure 1. Henderson Survey block

3. SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Block name	Line Spacing (metres)	Line Direction	Tie Line Spacing (metres)	Tie Line Direction	Survey Coverage (line-km)	Dates flown
Henderson	100	45°/225°	900	158°/338°	1860	July 14th to July 17th, 2011

Table 1. Survey specifications summary

The survey coverage was calculated by adding up the survey and control (tie) line lengths as presented in the final Geosoft database.

The nominal helicopter stinger terrain clearance was 30 m but was periodically higher or lower over due to the rugged terrain and the capability of the aircraft. The scan rate of the helicopter stinger data acquisition was 0.10 seconds.

4. AIRCRAFT AND EQUIPMENT

This section provides a brief description of the geophysical and auxiliary instruments used to acquire the survey data:

4.1. Aircraft

An A-star 350BA helicopter – registration C-FXED was used as survey platform. The helicopter was owned and operated by Abitibi Helicopters Ltd. of Calgary, Alberta, Canada. The helicopter flew at an average airspeed of 70 knots per hour.

4.2. Magnetometer

The following magnetometer was installed inside the stinger:

Model: Geometrics G823A

Type: Airborne caesium-vapor magnetometer

Sensitivity: 0.01 nT

Sample rate: 10Hz

Magnetic Compensator:

The compensator employed was a RMS Data Acquisition & Adaptive Aeromagnetic Real-Time Compensator (DAARC500). Compensation is achieved by combining the frequency measurement from any continuous reading sensor (Cs, K, He) with the measurements of analog outputs of a tri-axial fluxgate magnetometer. A proprietary algorithm combines these measurements and eliminates most of the influence caused by airframe movement through the magnetic field – pitch, roll yaw and aircraft heading.

4.3. Magnetic Base Station

Model: Geometrics G823A

Type: portable Caesium magnetometer

Sensitivity: 0.01nT

Sample rate: 1Hz

A digital recorder is operated in conjunction with the base station magnetometer to record the diurnal variations of the earth's magnetic field. The clock of the base station is synchronized with that of the airborne system using GPS data to permit subsequent removal of diurnal drift.

4.4. Airborne Gamma Ray Spectrometer (AGRS) System

The Aeroquest AGRS system consists of an RSX-5 sensor pack, which is installed on the floor of the helicopter cabin and a DAARC500 acquisition system designed and manufactured by RMS Instruments Inc. (RMS).

The system has 4 downward looking NaI crystals (16.75 L) used as the main sensors and 1 upward looking crystal (4.18 L) for monitoring non-geologic sources. The system features automatic peak detection and real-time calibration to ensure spectrum stability and a high quality final product. The full spectrum is recorded (256 or 512 channels) to allow for subsequent noise reduction processing such as NASVD. The data are processed to produce the standard IAGA ROI channels – Total Count, Potassium, Uranium and Thorium. The dose rate, potassium percentage, equivalent uranium and thorium concentrations are also derived and ratios of these concentrations are computed to enhance the interpretation of the survey results.

4.5. Altimeters

Radar altimeter

Manufacturer: Terra

Type: TRA 3000 Radar Altimeter and TRI 40 Indicator

Sensitivity: 5% @200ft

Barometric altimeter

Manufacturer: Honeywell

Type: PPT

High Accuracy: Achieves +/0.05 Full-Scale, Including Temperature Effects over -40 to +85°C

4.6. Digital Data Acquisition System

Manufacturer: RMS Instruments

Model: DAARC 500 acquisition system (DAS & Adaptive Aeromagnetic Real-Time Compensator)

4.7. Video Tracking and Recording System

A wide angle Sanyo video camera was connected to Archos video recorder to provide the image. Using a video overlay board (Overland Technology Inc.) the GPS time is recorded continuously and is displayed on the margin of each image. This procedure ensures accurate correlation of digital data with respect to visible features on the ground.

4.8. GPS Navigation System

Navigation is carried out using a GPS receiver, an AGNAV GUIA system for navigation control, and DAARC500 data acquisition system which records the GPS coordinates. The x-y-z position of the aircraft, as reported by the GPS, is recorded at 0.1 second intervals. The system has a published accuracy of less than 3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of less than 0.6 metres and for z less than 1.5 metres over a two-hour period.

5. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Senior Project Manager: Troy Will
- Field Data Processor: Edward You
- Field Operator: Leonard Luke
- Office Data Processor: Asif Mirza / Chris Kahue
- Map Preparation and Reporting: Asif Mirza / Chris Kahue

The survey pilot, Joey Campbell was employed directly by the helicopter operator – Abitibi Helicopters Ltd.

6. DELIVERABLES

6.1. Hardcopy Deliverables

The report includes a set of 1:25,000 scale maps of Henderson block. The survey area is covered by one map plate for Henderson block, and four geophysical data products are delivered as listed below:

- TMI – Coloured Total Magnetic Intensity (TMI) with contours.
- 1VG – Calculated First Vertical Derivative of TMI colour grid with contours.
- TC – Gamma Ray Spectrometer Total Counts colour grid with contours.
- Th_K_Ratio – Gamma Ray Spectrometer Thorium-Potassium Ratio colour grid with contours.

The coordinate/projection system for the Henderson Block maps is NAD83 – UTM Zone 07N. For reference, the latitude and longitude in WGS84 are noted on the maps.

6.2. Digital Deliverables

6.2.1. Final Database of Survey Data (.GDB)

The geophysical profile data is archived digitally in Geosoft GDB binary database format. A description of the contents of the individual channels in the database can be found in Appendix 2.

6.2.2. Geosoft Grid files (.GRD)

Levelled Grid products used to generate the geophysical map images.

6.2.3. Digital Versions of Final Maps (.MAP, .PDF)

Map files in Geosoft .map and Adobe PDF format.

6.2.4. Free Viewing Software

- Geosoft Oasis Montaj Viewing Software
- Adobe Acrobat Reader

6.2.5. Digital Copy of this Document (.PDF)

7. DATA PROCESSING AND PRESENTATION

7.1. Base Map

The geophysical maps accompanying this report are based on positioning in the NAD83 datum. The survey geodetic GPS positions have been projected using the Universal Transverse Mercator projection in Zone 07 North. A summary of the map datum and projection specifications is given following:

- Ellipse: Clarke 1866
- Ellipse major axis: 6378137
- Inverse Flattening: 298.25722
- Datum: NAD83
- Map Projection: Universal Transverse Mercator Zone 07 North
- Central Scale Factor: 0.9996
- False Easting, Northing: 500,000m, 0m

For reference, the latitude and longitude in WGS84 are noted on the maps.

7.2. Radiometric Data

7.2.1. Equipment and General Adherence to IAEA Standards

Aeroquest Limited generally adopts the standards for airborne gamma-ray spectrometry (the radiometric method) as laid out in the IAEA Technical Report 323 – Airborne Gamma-Ray Spectrometry Surveying.

7.2.2. Spectral Calibration

When calibrated (with thorium source about once a year) linearity of the each detector is measured and linearity correction coefficients are calculated. When operating in real time (collecting data), the linearity of each detector is mathematically corrected for each measurement. Individual detector tracking (tuning) and linearity correction provide better fit of the individual spectra that are being summed and therefore a sharper (better resolution) spectrum is obtained.

Calibration of the 5 detectors was carried out on March 08th, 2011 as follows:

Crystal	S/N	Cs resolution (%)
1	5517UA	6.83
2	5517UB	7.06
3	5517UC	7.52
4	5517UD	6.99
5	5517DE	7.82

Results from Calibration Pad Test

Calibrations were performed by RSI at their Mississauga facility on March 08th, 2011.

Stripping Ratios	Spectrometer Unit	Ideal Values
Th into U (alpha)	0.276	0.250
Th into K (beta)	0.392	0.400
U into K (gamma)	0.765	0.810
U into Th (a)	0.045	0.060

7.2.3. Data Quality Assurance and Control

The spectrometer data are referenced to the other ancillary data sets using the RSI data acquisition system. After each flight, preliminary ROI channels are generated and profiles are then plotted from the digital data to check for any missing data, spikes or data corrupted by other noise sources. Where necessary, the data are corrected or flagged for re-flight depending on the severity or duration of the noise.

7.2.4. Live-time Correction

Generally, the radiometric data is acquired in units measured in counts per second. The instrumentation may require some time each second to process the incoming data, during this time period no counts are made. This time referred as Dead-time. Alternatively, some systems record the time during which the crystal is actually 'on' in which case the resulting value referred to as the live-time. The data was corrected by using Live-Time channels from the RSI spec pack.

$$N = n*10^{-3}/lt$$

Where:

N = Corrected counts in each second

n = raw recorded counts in each second

lt = equipment live time

7.2.5. Filtering to Prepare for Background Corrections

The radar altimeter data are filtered (low pass 5 fiducial) in order to ensure that no noise sources from the altimeter data are introduced to the radiometric data processing. The upward looking data are also filtered to improve the count statistics. In order to establish radon background levels from the upward-looking detector data, temporary heavily filtered (31 points mean filter) downward looking uranium and downward looking thorium data are utilized. The original unfiltered data are, of course, retained.

7.2.6. Cosmic and Aircraft Background

Cosmic and aircraft background expressions are determined for each spectral window as described in chapter 4 of the IAEA Technical Report 323. The general form of these expressions is N = a + bC, where N is the combined cosmic and aircraft background for each window; a is the aircraft background in the window; C is the cosmic channel count; and b is the cosmic stripping factor for the window.

The expressions are evaluated for each ROI window for each sample and used as a subtractive correction for the data.

7.2.7. Radon Background

Correction of the data for variations in background due to radon is a multi-step process. First, test flights at various elevations over water are carried out in the field to establish the contribution of atmospheric radon to the ROI windows. A least squares analysis of the data from these test flights yields the constants for equations 4.9 to 4.12 (IAEA Report 323). Second, the response of the upward looking detector to radiation from the ground is established. Here a departure from the IAEA Report has been recommended by Grasty and Hovgaard (1996). The expression for the radon component in the downward looking uranium window is given by Ur =(u – a1U – a2T + a2bT – bu)/(au – a1 – a2aT) (see Eq. 4.3 – IAEA 323) where, Ur is the radon background detected in the downward U window; u is the measured count in the upward uranium window; U is the measured count in the downward uranium window; T is the measured count in the downward thorium window; a1, a2, au and aT are proportionality factors; and bu and bT are constants determined experimentally. Using a1 or a2 (see above) in this equation will result in a good estimate of Ur permitting correction of the other ROI windows.

Survey altitude test data will be collected and used to establish atmospheric background and calibrate the upward and downward looking detector systems. Variations in count rates due to soil moisture content and altimeter variations can largely be overcome by a normalization procedure using the thorium count. The

procedure correlates the thorium count to the uranium count assuming the contribution to each ROI from the ground is proportional.

7.2.8. Computation of Effective Height above Ground Level

Radar altimeter data are used in adjusting the stripping ratios for altitude and to carry out the height attenuation corrections. They are then converted to effective height (he) at STP by the expression he = (h * 273.15)/(T + 273.15)* (P/1013), where h is the observed radar altitude; T is the temperature in degrees C; and P is the barometric pressure in mbars

7.2.9. Compton Stripping Correction

The stripping ratios α, β, γ, a, b and g are determined during tests over calibration pads. The principal ratios a, β and g should be adjusted for temperature, pressure and altitude (above ground) before stripping is carried out. These stripping ratios are used to remove the contribution in each of the three ROI windows from higher energy sources, leaving only the contribution from potassium, uranium and thorium.

7.2.10. Altitude Attenuation Correction

The altitude attenuation correction corrects the data in each of the ROI windows for the effects of altitude. The count rates decrease exponentially with altitude and therefore the counts are corrected to a constant altimeter datum at the nominal survey height of 30m.

7.2.11. Apparent Radioelement Concentrations

The corrected count rate data can be converted to estimate the ground concentrations of each of the three radioelements, potassium, uranium and thorium. The procedure assumes an infinite horizontal slab source geometry with a uniform radioelement concentration. The calculation assumes radioactive equilibrium in the U and Th decay series. Therefore the U and Th concentrations are assigned as equivalent concentrations using the nomenclature eU and eTh.

An estimate of the air absorbed dose rate can be made from the apparent concentrations, K%, eU ppm and eTh ppm using the following formula:

$$E = 13.08 * K + 5.43 * eU + 2.69 * eTh$$

where: E is the absorption dose rate in nG/h
K is the concentration of potassium (%)
eU is the equivalent concentration of uranium (ppm)
eTh is the equivalent concentration of thorium (ppm)

A description of how most of the constants were determined can be found in: Exploranium, I.A.E.A. Report, Airborne Gamma-Ray Spectrometer Surveying, Technical Report No. 323, 1991.

7.2.12. Computation of Radioelement Ratios

Standard ratioing of the three radioelements (eU/eTh, eU/K and eTh/K) can be carried out and presented in profile or plan map form. In order to ensure statistical confidence in generating these ratios, we generally take the following precautions:

- Reject all data point where the apparent potassium concentration is less than 0.25% as these measurements are likely taken over water.
- Carry out cumulative summing along the survey line of each radioelement, rejecting areas where the summation does not exceed a certain threshold value (usually 10 counts for both numerator and denominator).
- Compute the ratios using the cumulative sums.

7.3. Magnetic Compensation test

Test lines were flown to check the real time magnetic compensation, in four cardinal directions corresponding to the survey line direction. The compensation test was carried out near Prospector Mountain Camp, Yukon to ensure the sensor was completely removed of ground effect.

7.4. Total Field Magnetics

The total field aeromagnetic data are corrected for the diurnal variation, by subtracting the base station magnetic data (low pass filtered to remove spikes due to cultural interference). Then the line data was corrected for heading and any remaining small levelling errors. The geophysical data are interpolated onto a regular grid using bi-directional interpolation technique. The gridded data was micro-levelled to remove small amplitude, in between flight line, levelling errors. The resulting grid is suitable for generating contour maps of excellent quality.

APPENDIX 1: SURVEY BOUNDARIES

The following table presents the project block boundaries. All geophysical data presented in this report have been windowed to 100m outside these outlines.

X and Y positions are in NAD83 UTM Zone 07N.

Henderson Block

X		Y		X		Y
573004.7		7057074.8		580556.1		7031636.1
575138.3		7059191.6		580297.0		7032296.9
577116.8		7054188.2		579926.2		7031941.1
580383.6		7051056.6		579785.2		7032288.2
580800.7		7050688.3		579161.1		7032701.4
585169.9		7039596.5		578480.9		7034376.2
584808.3		7039225.0		578421.2		7034783.0
586558.1		7034899.9		577242.1		7038277.6
585853.7		7034199.0		579381.8		7040398.0
586061.1		7033691.2		579336.6		7042023.6
585368.6		7033009.5		578344.2		7044902.9
586708.1		7029693.1		579072.5		7045618.2
584594.9		7027583.5		578150.9		7048325.0
584198.0		7028566.9		577680.4		7049491.6
583504.5		7027873.6		577313.0		7049826.7
583340.2		7028272.2		576784.6		7049298.2
582657.5		7027580.4		576629.9		7049678.5
581341.0		7030827.4		575957.4		7049029.6
581231.5		7030788.8				

APPENDIX 2: DESCRIPTION OF DATABASE FIELDS

The GDB file is a Geosoft binary database. In the database, the Survey lines and Tie Lines are prefixed with an "L" for "Line" and "T" for "Tie".

Magnetic databases:

Column	Units	Description
X	m	UTM Easting (NAD83, Zone 07N)
Y	m	UTM Northing (NAD83, Zone07N)
Ralt	m	Radar Altitude
Galt	m a.s.l.	GPS Elevation
DTM	m a.s.l.	Digital Terrain Model using radar altimeter data
Lalt	m	Laser Altitude
UTCTime	HH:MM:SS.ss	UTC Time
BASEMAG	nT	Basemag value
Mag_raw	nT	Uncompensated raw magnetic data
Mag	nT	Diurnal Corrected compensated Magnetic data
Mag_heading	nT	Diurnal & Heading Corrected compensated Magnetic data
TMI	nT	Levelled Magnetic data

Radiometrics databases:

Column	Units	Description
Utc_time	hh:mm:ss.s	utc time
K_raw	Cps	Radiometrics – potassium
Th_raw	Cps	Radiometrics – Thorium
U_raw	Cps	Radiometrics – Uranium
TC_raw	Cps	Radiometrics – Total Counts
UpU_raw	Cps	Radiometrics - Uranium upward looking counts
Live Time	s	System Live Time
Ralt_stp	m	radar altitude at standard temperature and pressure
K_CPS	Cps	Radiometrics – corrected potassium
Th_CPS	Cps	Radiometrics – corrected Thorium
U_CPS	Cps	Radiometrics – corrected Uranium
TC_CPS	Cps	Radiometrics – corrected Total Counts
Cosmic_upUranium	Cps	Radiometrics - Cosmic Corrected Uranium upward looking counts
K_Percentage	%	Radiometrics – potassium (%K)
Th_ppm	ppm	Radiometrics – equivalent Thorium
U_ppm	ppm	Radiometrics – equivalent Uranium
Dose_Rate	uR/hr	Radiometrics – exposure rate
Th_K_Ratio		Thorium – Potassium Ratio
U_K_Ratio		Uranium – Potassium Ratio

Column	Units	Description
U_Th_Ratio		Uranium – Thorium Ratio
Down	counts per second	512 channel spectral data (Downward looking)
Up	counts per second	512 channel spectral data (Upward looking)
X	m	UTM Easting (NAD83, Zone 07N)
Y	m	UTM Northing (NAD83, Zone 07N)
Temperature	°C	temperature
Pressure	mbar	Barometric Pressure
Cosmic	Cps	Radiometric s– Cosmic

APPENDIX 3: RADIOMETRICS PROCESSING PARAMETERS

Aircraft Background and Cosmic Stripping Factors

COEFFICIENTS		
	Cosmic Stripping Factor (b)	**Aircraft Background Value** (a)
TC	1.0975	101.18
K	0.0597	12.7
U	0.0436	4.884
Th	0.0696	0.089
Uup	0.0153	0.6172

Altitude Attenuation Coefficients

COEFFICIENTS	
Element	Attenuation Coeff.
TC	-0.00532
K	-0.00618
U	-0.00512
Th	-0.00653

Sensitivity Factors

Sensitivity Factors	
Element	Sensitivity Factor at 30 m STP Height
K	64.59947 cps/%
U	7.29807 cps/ppm eU
Th	3.45573 cps/ppm eTh
Dose rate	20.81085 cps/nG/hr

Grid North
NAD83-Zone07

The topographic data base and inset data were sourced from 1:500000 NRC (Natural Resources Canada) NTDB data
Background shading derived from NASA SRTM data

This map accompanies the technical report entitled 'Report on a Helicopter-Borne Magnetic and Radiometric Survey, Yukon, Canada', by Aeroquest Airborne, August 2011.

575000E
580000E
585000E
-139°30'
-139°25'
-139°20'
-139°15'
7055000N
7050000N
7045000N
7040000N
7035000N
7030000N
63°35'
63°30'
63°25'
63°20'
63°15'

57253.0
57234.9
57224.8
57218.5
57212.9
57208.9
57206.1
57204.2
57202.5
57201.0
57199.6
57198.4
57197.4
57196.4
57195.4
57194.5
57193.5
57192.7
57191.8
57190.9
57189.9
57189.0
57187.9
57186.7
57185.4
57184.1
57182.5
57180.6
57178.2
57175.4
57172.6
57169.9
57167.0
57163.6
57159.9
57156.2
57150.0
57132.5

TMI
nT

Road
River
Wetland
Lake

TMI Contour Interval
5 nT
10 nT
50 nT
250 nT

SURVEY SPECIFICATIONS:
Survey flown: July 02 - July 07, 2011
Traverse / Tie line spacing: 100 / 900 metres
Traverse / Tie line direction: (45º/225º) / (158º/338º)
Aircraft: Aerospatiale A-Star 350BA (C-FXED)
Nominal aircraft height: 30 metres
INSTRUMENTATION:
Data acquisition: DAARC500
Magnetometer: Geometrics G-823A caesium vapour
Installation: mounted as stinger on belly of aircraft
Sensitivity: .02 nanoTesla
Compensator: DAARC500
Gamma Ray Spectometer: RSI AGRS RSX-5
Downward looking crystal vol. - 16.75L (1024cu in)
Upward looking crystal vol. - 4.18L (256cu in)
Sample Interval: 1.0 seconds
Channels: 512
Installation: In aircraft
NAVIGATION:
Navigation: Differential Global Positioning System (DGPS)
Navigation equipment: Ag-Nav Guia system
Radar Altimeter: Terra TRA3000/TRI-40
Laser Altimeter: Riegl LD90-3300HR
POSITIONING:
Datum: NAD83
Major Axis: 6378137
Inverse Flattening: 298.25722
MAP PROJECTION:
Projection: Universal Transverse Mercator
Central Meridian: 141°W (Zone 07)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m

scale 1:25,000
500 0 500 1000 1500
(meters)
NAD83 / UTM zone 7N

Yukon, Canada
Silver Quest Resources Ltd.

TOTAL MAGNETIC INTENSITY

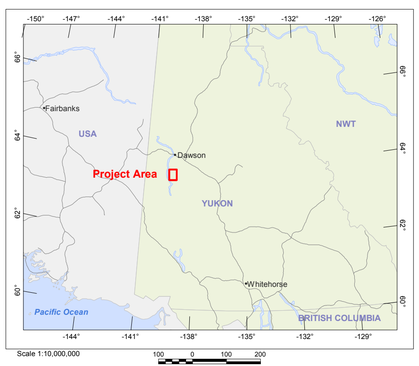
Henderson Block

NTS 115O05,06,11,12

Grid North
NAD83-Zone07

The topographic data base and inset data were sourced from 1:500000 NRC (Natural Resources Canada) NTDB data
Background shading derived from NASA SRTM data

This map accompanies the technical report entitled 'Report on a Helicopter-Borne Magnetic and Radiometric Survey, Yukon, Canada', by Aeroquest Airborne, August 2011.



8.5
7.8
7.4
7.1
6.9
6.8
6.6
6.5
6.3
6.2
6.1
6.0
5.9
5.9
5.8
5.7
5.6
5.5
5.5
5.4
5.3
5.3
5.2
5.1
5.0
5.0
4.9
4.8
4.8
4.7
4.6
4.5
4.4
4.3
4.2
4.0
3.9
3.6

Th/K

Th/K Contour Interval

- 0.02
- 0.04
- 0.20
- 1.00

- Road
- River
- Wetland
- Lake

SURVEY SPECIFICATIONS:
- Survey flown: July 02 - July 07, 2011
- Traverse / Tie line spacing: 100 / 900 metres
- Traverse / Tie line direction: (45°/225°) / (158°/338°)
- Aircraft: Aerospatiale A-Star 350BA (C-FXED)
- Nominal aircraft height: 30 metres

INSTRUMENTATION:
- Data acquisition: DAARC500
- Magnetometer: Geometrics G-823A caesium vapour
  - Installation: mounted as stinger on belly of aircraft
  - Sensitivity: .02 nanoTesla
  - Compensator: DAARC500
- Gamma Ray Spectometer: RSI AGRS RSX-5
  - Downward looking crystal vol. - 16.75L (1024cu in)
  - Upward looking crystal vol. - 4.18L (256cu in)
  - Sample Interval: 1.0 seconds
  - Channels: 512
  - Installation: In aircraft

NAVIGATION:
- Navigation: Differential Global Positioning System (DGPS)
- Navigation equipment: Ag-Nav Guia system
- Radar Altimeter: Terra TRA3000/TRI-40
- Laser Altimeter: Riegl LD90-3300HR

POSITIONING:
- Datum: NAD83
  - Major Axis: 6378137
  - Inverse Flattening: 298.25722

MAP PROJECTION:
- Projection: Universal Transverse Mercator
- Central Meridian: 141°W (Zone 07)
- Central Scale Factor: 0.9996
- False Easting/Northing: 500,000m/0m

scale 1:25,000

500 0 500 1000 1500
(meters)
NAD83 / UTM zone 7N

Yukon, Canada
Silver Quest Resources Ltd.

Th/K Ratio

Henderson Block

NTS 115O05,06,11,12

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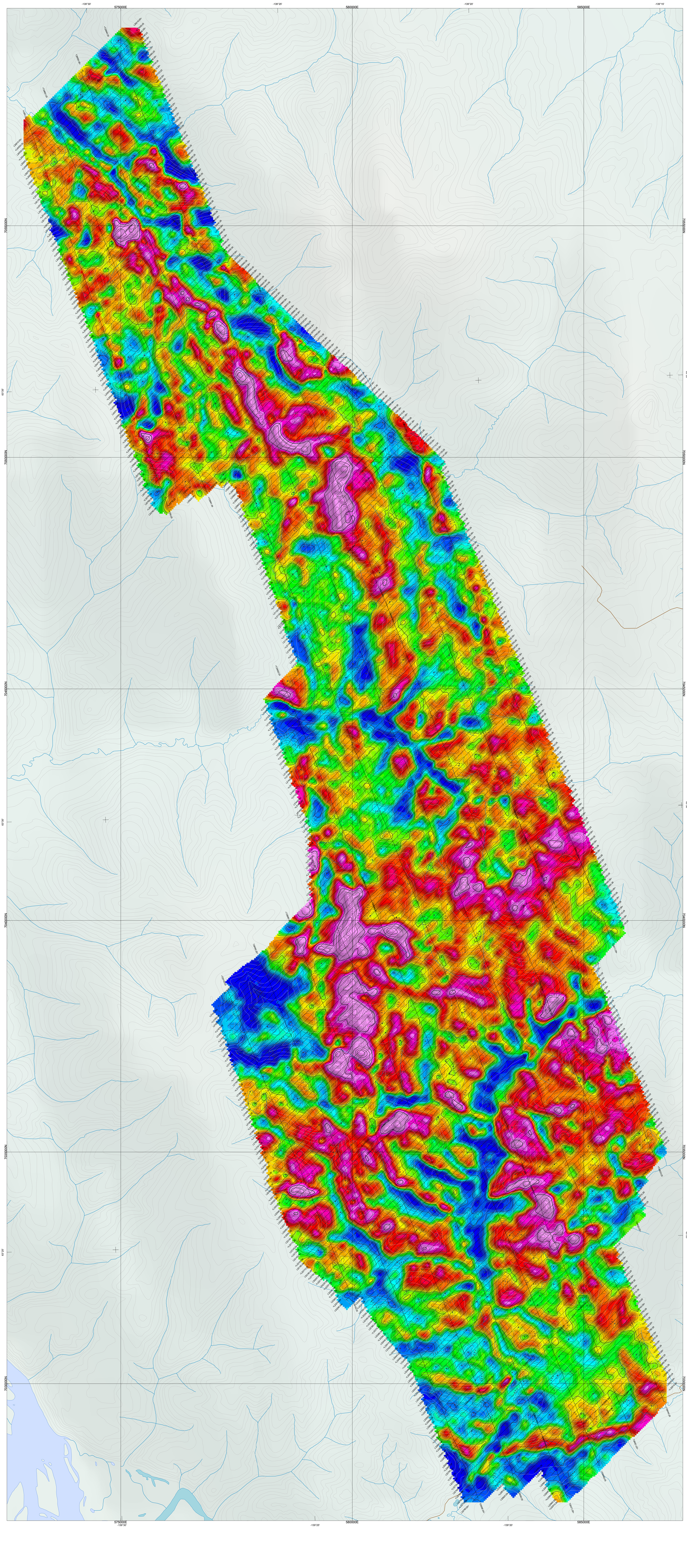
www.aeroquestairborne.com

August 2011

Th/K

Th_K_Ratio_25k_Henderson Block.map, AA Job no. 11039



Grid North
NAD83-Zone07

The topographic data base and inset data were sourced from 1:500000 NRC (Natural Resources Canada) NTDB data
Background shading derived from NASA SRTM data

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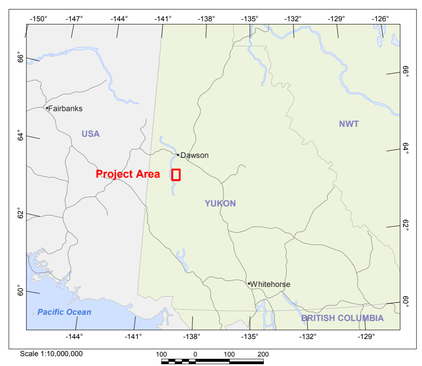

Scale 1:10,000,000

100 0 100 200
(kilometers)
NAD83 / UTM zone 7N

1020
929
879
844
818
796
777
759
743
728
714
700
688
676
665
655
645
635
625
615
605
595
584
574
564
554
544
533
522
509
495
481
465
448
429
406
378
334

TC
cps

TC Contour Interval

20 cps
40 cps
200 cps
1000 cps

Road
River
Wetland
Lake

SURVEY SPECIFICATIONS:
Survey flown: July 02 - July 07, 2011
Traverse / Tie line spacing: 100 / 900 metres
Traverse / Tie line direction: (45º/225º) / (158º/338º)
Aircraft: Aerospatiale A-Star 350BA (C-FXED)
Nominal aircraft height: 30 metres

INSTRUMENTATION:
Data acquisition: DAARC500
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Installation: mounted as stinger on belly of aircraft
Sensitivity: .02 nanoTesla
Compensator: DAARC500
Gamma Ray Spectometer: RSI AGRS RSX-5
Downward looking crystal vol. - 16.75L (1024cu in)
Upward looking crystal vol. - 4.18L (256cu in)
Sample Interval: 1.0 seconds
Channels: 512
Installation: In aircraft

NAVIGATION:
Navigation: Differential Global Positioning System (DGPS)
Navigation equipment: Ag-Nav Guia system
Radar Altimeter: Terra TRA3000/TRI-40
Laser Altimeter: Riegl LD90-3300HR

POSITIONING:
Datum: NAD83
Major Axis: 6378137
Inverse Flattening: 298.25722

MAP PROJECTION:
Projection: Universal Transverse Mercator
Central Meridian: 141°W (Zone 07)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m

scale 1:25,000

500 0 500 1000 1500
(meters)
NAD83 / UTM zone 7N

Yukon, Canada
Silver Quest Resources Ltd.

TOTAL COUNTS

Henderson Block

NTS 115O05,06,11,12

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www.aeroquestairborne.com

August 2011

TC

TC_25k_Henderson Block.map, AA Job no. 11039

-139°30' 575000E -139°25' 580000E -139°20' 585000E -139°15'

7055000N 7050000N 7045000N 7040000N 7035000N 7030000N

63°35' 63°30' 63°25'

Grid North
NAD83-Zone07

The topographic data base and inset data were sourced from 1:500000 NRC (Natural Resources Canada) NTDB data
Background shading derived from NASA SRTM data

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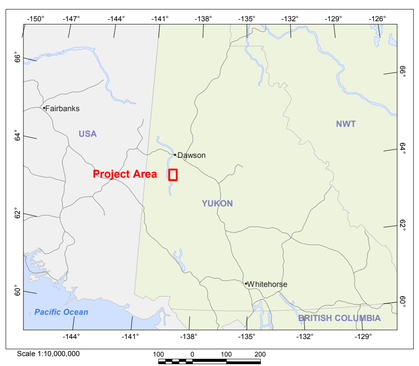

Scale 1:10,000,000

100 0 100 200
(kilometers)
NAD83 / UTM zone 7N

0.3 0.2 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.2 -0.3

1VD
nT/m

1VD Contour Interval
- 0.02
- 0.04
- 0.20
- 1.00

Road
River
Wetland
Lake

SURVEY SPECIFICATIONS:
- Survey flown: July 02 - July 07, 2011
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  - Downward looking crystal vol. - 16.75L (1024cu in)
  - Upward looking crystal vol. - 4.18L (256cu in)
  - Sample Interval: 1.0 seconds
  - Channels: 512
  - Installation: In aircraft

NAVIGATION:
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- Navigation equipment: Ag-Nav Guia system
- Radar Altimeter: Terra TRA3000/TRI-40
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scale 1:25,000

500 0 500 1000 1500
(meters)
NAD83 / UTM zone 7N

Yukon, Canada
Silver Quest Resources Ltd.

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