

BC Geological Survey Assessment Report 29786

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Gold Commissioner's Office VANCOUVER, B.C. Assessment Report on Geophysical Work

Performed on the PETITE Property

Located in the Omineca Mining Division

NTS: 93N/11, 93N/12 BCGS: 093N.063

Centred at approximately 55° 38' 26'' N Latitude 125° 28' 56'' W Longitude 6,168,863 m N; 343,778 m E UTM NAD 83, Zone 10

Owner/Operator: Amarc Researces Lid.



Wojtek Jakubowski, P.Ceo. Taylor Johnson, B.A. (Geol) Gwendolen Ditson, P.Geo. David A. Yeager, P.Geo.

March 19, 2008

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SUMMARY

The Petite property, acquired for Amarc Resources by staking in 2006, is located about 140 km northwest of Fort St.James. The property is in central British Columbia, in the Omineca Mining Division, on NTS map sheets 93N/11 and 93N/12. An extensive network of logging roads provides access from Fort St. James to the northeast corner of the claims.

The Petite claims are underlain by lower Permian to upper Jurassic clastic sedimentary rocks of the Sowchea Succession, part of the Cache Creek Complex. The property is in close proximity on its eastern edge to the Pinchi Fault, which forms the eastern boundary of Quesnel terrane.

An airborne magnetic gradiometer survey was flown over the claims by Aeroquest International in April, 2007. A total of 74 line km were flown at a spacing of 200 m. No ground follow-up work was done on the Petite claims during the 2007 field season.

Prospecting and surface sampling are recommended to further evaluate the property.

INTRODUCTION

This report documents the results of an airborne geophysical survey performed on claims belonging to the Petite Project, located in the Buckley-Nechako Regional District of Central B.C. The airborne survey was conducted between April 6 and April 21, 2007, by Aeroquest International.

LOCATION AND ACCESS

The Petite property is situated in central British Columbia, in the Omineca Mining Division. The property is located on NTS maps 93N/11 and 93N/12, and on BCGS map 093N.063. The centre of the claim group is approximately 140 km northwest of Fort St. James, B.C., at 55° 38' 26" N Latitude and 125° 28' 56" W Longitude, or UTM NAD83, Zone 10, at 6,168,863 m N and 343,778 m E, as shown in Figure 1.

The property is accessible by road from Fort St. James via the Tachie Road northwest from Fort St. James to the Leo Creek Forest Service Road (FSR). The Leo Creek FSR is followed to Leo Creek, from where the Driftwood FSR is followed to the Fall Humphrey FSR. The Fall Humphrey FSR followed northeast eventually intersects the claim.

PHYSIOGRAPHY AND CLIMATE

The Petite property is situated in the Fort St. James Forest District of the Northern Interior Forest Region. The general topography is mountainous, with elevations ranging from 1,000 m to 1,710 m above sea level. The area is forested primarily with lodgepole pine, spruce, and blue Douglas fir, with balsam at higher elevations, and scattered patches of aspen.

Average temperatures in Fort St. James are 18.2°C in summer and -11.3°C in winter, with annual rainfall averaging 29.5 cm and annual snowfall averaging 192.3 cm, respectively (Environment Canada Climate Weather Office Public Website: http://www.climate.weatheroffice.ec.gc.ca/climate normals/index 1961 1990 e.html).

CLAIMS

The Petite property consists of 2 claims covering an area of 912.945 hectares (Figure 2). The claims were staked in December, 2006, for Amarc Resources Ltd. (FMC #146093), which owns 100% of the claims listed in Table 1, below.

Tenure Number	Claim Name	Issue Date	Expiry Date	Area (ha)
548190	PETITE 1	28-Dec-06	31-Dec-09	456.470
548191	PETITE 2	28-Dec-06	31-Dec-09	456.475
			Total	912.945

T	abl	le	1.	Petite	claims



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EXPLORATION HISTORY

There is no known previous work on the Petite claims, although there has been extensive placer mining north and east of the claims on Kenny Creek. Soil and stream sediment geochemical surveys have been conducted to the north and south of the Petite property with limited success (Edmunds, 1983, Macfarlane, 1984 and Smith, 1985). The Lustdust Property, 8 km south of the Petite claims, has been explored since the 1940's (Alpha Gold Corporation website).

REGIONAL GEOLOGY

The Petite claims lie near the eastern boundary of upper Paleozoic to middle Mesozoic oceanic rocks of the Cache Creek Complex (Figures 3a,3b). The eastern boundary of the Cache Creek Complex is defined by the Pinchi Fault, which also forms the boundary between Cache Creek Terrane and Quesnel Terrane. Rocks that underlie the claims consist of phyllite, quartzite and metachert of the lower Permian to upper Jurassic Sowchea Succession. The Sowchea succession also contains lenses of the limestone, marble, minor basalt and chert of the upper Pennsylvanian to upper Triassic Copely Limestone, but these have not been mapped on the Petite claims. Immediately east of the Petite claims, the Cache Creek Complex is bounded by gabbroic to dioritic rocks of the Late Triassic to Early Jurassic Hogem Plutonic Suite across the Pinchi fault. Cache Creek sedimentary rocks are bounded on the west by Late Pennsylvanian to Late Triassic serpentinized ultramafic rocks of the Cache Creek Trembleur Ultramafite Unit. (Schiarizza, 1999).

According to Alpha Gold's website, there are six different types of mineralization present on the Lustdust Property. These include mercury mineralization at the past producing Takla Bralorne Mine, Au-Ag-Cu skarn, and "sediment hosted Carlin-style gold in silicified carbonate without visible sulphides."

AIRBORNE GEOPHYSICS

Aeroquest International of Mississauga, Ontario, was contracted to carry out an airborne magnetic gradiometer survey over the Petite property in April, 2007 (Figure 2; Appendix A, Block "C"). The survey was flown in a Eurocopter AS350B-2 (A-Star) helicopter using an Aeorquest Helicopter-borne Tri-Axial Gradiometer instrument that employs four Geometrics G-823a magnetometers. The sensors were housed in a bird towed on a 45 m tow cable and that was kept at a nominal 50 m terrain clearance. Positional accuracy of the instrument is estimated at 3 m. A total of 74 km of lines were flown along an azimuth of 92° at 200 m spacing.

A strong north-northwesterly trending magnetic high (Total Magnetic Intensity, Block "C") on the eastern edge of the survey probably reflects the presence of mafic intrusive rocks of the Hogem Plutonic Suite to the east of the claims. Elevated readings which extend westerly from that "Hogem high" along a general east-west trend may be interpreted as either

- 1. a reflection of topography, or
- 2. the presence of magnetic intrusive rocks below the two prominent hills, or
- 3. an easterly-dipping, strongly magnetic horizon draped over a less magnetic sequence.





RECOMMENDATIONS

Prospecting and surface sampling is recommended to determine the source of elevated magnetometer values and to evaluate the potential of the claims to host economic mineralization.

Respectfully submitted,



Wojtek Jakubowski, P.Geo.

mom Taylør Johnson, B.A. (Geol)



Gwendolen Ditson, P.Geo.

ROVINCE A. YEAGER David A. Yeager, P.Geo SCIEN

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Alpha Gold Corporation website accessed March 17, 2008: http://www.alphagold.bc.ca/b1.htm

- Edmunds, C., 1983: Geological Report on the Vital Creek Property, B.C. Assessment Report No. 11,978, November 25, 1983.
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- Schiarizza, P., and MacIntrye, D., 1999: Geology of the Babine Lake Takla Lake Area, Central British Columbia (93K/11, 12, 13, 14; 93N/3, 4, 5, 6). Geological Fieldwork 1998, Ministry of Energy and Mines.
- Smith, F.M., 1985: Assessment Report on the Geochemical Surveys on the Mt. Grant Creek Property, B.C. Assessment Report 14,546, September, 1985.

STATEMENTS OF AUTHOR'S QUALIFICATIONS

.....

I, Wojtek Jakubowski, of Vancouver, British Columbia, hereby certify that:

- 1. I am a professional geoscientist residing at #303 639 West 14th Avenue and employed by Hunter Dickinson Inc. of 1020 - 800 West Pender Street, Vancouver, B.C., V6C 2V6.
- I received a B.Sc. degree in Geological Sciences from McGill University, Montreal, Quebec in 1979.
- 3. I have practiced my profession for 29 years in Quebec, Northwest Territories, Yukon Territory, British Columbia and Mexico.
- 4. I am a member of the Association of Professional Engineers and Geoscientists of the province of British Columbia, registration number 19563.
- 5. I am an author of this report.

Signed on the 19th day of March, 2008



Wojtek Jakubowski, B.Sc., P. Geo

I, Taylor R. Johnson, do hereby state:

- That I am a Geological Assistant for Hunter Dickinson Inc., with offices located at 1020

 800 West Pender Street, Vancouver, B.C.
- 2. That I received a B.A. in Geology from Whitman College, Walla Walla, WA, USA in 2007.
- 3. That I am an author of this report.

Signed on the 19th day of March, 2008.

myh N. Jham

Taylor R. Johnson, B.A.

I, Gwendolen May Ditson, do hereby state that:

- 1. I am a Compilation Geologist working for Amarc Resources Ltd., with offices located at 1020 800 West Pender Street, Vancouver, B.C.
- 2. I am a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, holding License Number 20135.
- 3. I am a graduate of the University of Southern California (B.S., 1974), and the University of British Columbia (M.Sc., 1978).
- 4. I have 26 years of experience as an exploration geologist, and have worked in Canada, the United States, Chile, and Mexico.
- 5. I am an author of this report, and am also responsible for the technical figures.

Signed on the 19th day of March, 2008



Gwendolen May Ditson, M.Sc., P.Geo.

I, David A. Yeager, do hereby state:

- That I am the Corporate Coordinator of Amarc Resources Ltd., with offices located at 1020

 800 West Pender Street, Vancouver, B.C.
- 2. That I am a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia holding License Number 19855.
- 3. That I am a graduate of the University of British Columbia (B.Sc., 1972) and have been employed as an exploration and mining geologist since that time.
- 4. That my experience has given me considerable knowledge in geological, geochemical and geophysical prospecting techniques as well as in the planning, execution and evaluation of exploration drilling programs.
- 5. That I supervised the airborne survey and verify that the accompanying Statement of Costs is an accurate statement of expenditures on the project.

Signed on the 19th day of March, 2008

David A. Yeager, P. Ge

STATEMENT OF COSTS

PETITE Project, 2007

Project Supervision & Compilation

Mark Rebagliati, P.Eng: 0.5 days @ \$1,030/day	\$515.00
David Yeager, P.Geo: 0.5 days @ \$630/day	\$315.00
Gwendolen Ditson, P.Geo: 0.5 days @ \$550/day	\$275.00
Airborne Geophysics (Aeroquest International)	\$7,396.24
Fuel & Positioning	\$751.22
Report writing & drafting	
David Yeager, P.Geo.: 1.5 days @ \$630/day	\$945.00
Gwendolen Ditson, P.Geo.: 1.25 days @ \$550/day	\$687.50
Wojtek Jakubowski: 0.5 days @ \$640/day	\$320.00
Taylor Johnson: 1.0 day @ \$360/day	<u>\$360.00</u>
Total:	\$11,564.96

Aeroquest Airborne Survey Allocation Table

Block	Property	Line km	Aerog	uest	Fuel &
	Name	Flown	Percentage	Cost	Positioning
A	Grandnorth	168.2			
В	Grandnorth	62.5	12.3	23,058.28	2,34 <u>1.</u> 99
С	Petite	74.0	4.0	7,396.24	751.22
D	No Report	95.0	5.1	9,495.18	964.41
E	Grand	1,392.0	74.3	139,129.31	14,131.10
F	No Report	81.0	4.3	8,095.89	822.28
		1,872.7	100.0	187,174.90	19,011.00

APPENDIX A

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AIRBORNE GEOPHYSICAL REPORT

Report on a Helicopter-Borne Magnetic Gradiometer Survey



Aeroquest Job # 07093

Quesnel Trough Project

Takla Landing Area, British Columbia

For



by



Report date: June 2007

Report on a Helicopter-Borne Magnetic Gradiometer Survey

Aeroquest Job # 07093

Quesnel Trough Project

Takla Landing Area, British Columbia NTS 093K14,15 and NTS 093N03,04,06,11,12,13

For



By



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

Report date: June 2007





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- * TMI Coloured Total Magnetic Intensity (TMI) with line contours
- MVG -- Measured Vertical Gradient (MVG) with line contours
- 3DAS Measured 3D Analytic signal with line contours
- DTM- digital terrain model with line contours and measured 3D analytic signal profiles





1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Amarc Resources Inc. on the Quesnel Trough Project, in northern British Columbia near Takla Landing (Figure 1). The principal geophysical sensor is Aeroquest's HELI-TAG tridirectional magnetic gradiometer (towed-bird) system which employs four (4) optically pumped Cesium magnetometer sensors. Ancillary equipment includes a GPS navigation system, radar altimeter, digital video acquisition system, and a base station magnetometer.

The total line kilometres within the six (6) defined survey boundaries (Appendix I) amount to 1,872.7 km. Survey flying described in this report took place between April 6th and 21^{st} , 2007. This report describes the survey logistics, the data processing, and provides an overview of the results.

2. SURVEY AREA

The Project area (Figure 1) is located in Northern British Columbia, approximately 200km northwest of Prince George and 150km west of Mackenzie. The survey blocks cover part of the Quesnel Trough, a 600 kilometre long geological belt extending from Mt. Polley in the south, to the Kemess deposit in the north. The survey area runs approximately 200km N-S and the closest towns are Takla Landing at 40km to the west, Germansen Landing, 50km to the east and Middle River Village just to the south of the project area.

The survey was made up of six survey blocks (Figure 1) with an area of approximately 330km². Survey terrain was mountainous and elevations ranged from 750 to 1800m. The project was accessible by local roads running east from Takla Landing in the northern section of the area. The southern section was accessible by smaller forestry roads and by helicopter.

There are almost 100 mining claims either fully or partially covered by the survey, most of which are owned by Amarc Resources Ltd. Details are in Appendix 2.

The base of survey operations was at Takla Landing.



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Figure 1. Project Area



Figure 2. Project flight paths

Aeroquest International - Report on a Helicopter-Borne HELI-TAG - Magnetic Gradiometer Survey





3. SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Block name	Line Spacing (metres)	Line Direction	Survey Coverage (line-km)	Dates flown
Block A	200	NE-SW (48°)	168.2	
Block B	200	E-W (92°)	62.5	
Block C	200	E-W (92°)	74.0	
Block D	200	ENE-WSW (70°)	95.0	April 6" – 21°, 2007
Block E	200	NE-SW (58°)	1392.0	
Block F	200	E-W (90°)	81.0	
	·	Total	1872.7	

Table 1. Survey specifications summary

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

The nominal gradiometer bird terrain clearance was 50 m but was periodically higher or lower over due to the rugged terrain and the capability of the aircraft. Nominal survey speed over relatively flat terrain is 100 km/hr and is generally lower in rougher terrain. Scan rates for gradiometer data acquisition is 0.10 seconds. The 10 samples per second translate to a gradiometer reading about every 1.5 to 3.0 metres along the flight path.

3.1. NAVIGATION

Navigation is carried out using a GPS receiver installed on the gradiometer bird, an AGNAV2 system for navigation control. The Pico Envirotec acquisition system is used for GPS data recording. The x-y-z position of the aircraft, as reported by the GPS, is recorded at 0.2 second intervals. The system has a published accuracy of under 3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 metres and for z under 1.5 metres over a two-hour period. The GPS antenna was mounted in a small bird 8 m below the aircraft.

4. AIRCRAFT AND EQUIPMENT

4.1. AIRCRAFT

A Eurocopter (Aerospatiale) AS350B-2 "A-Star" helicopter - registration C-GSTZ was used as survey platform. The helicopter was owned and operated by TRK helicopters, Langley BC.. Installation of the geophysical and ancillary equipment was carried out by Aeroquest





Limited personnel in conjunction with a licensed aircraft engineer. The survey aircraft was flown at a nominal terrain clearance of 220 ft (65 metres).

4.2. MAGNETIC GRADIOMETER SYSTEM

4.2.1. Overview

The Aeroquest HELI-TAG (Helicopter-borne Tri-Axial Gradiometer) system (Figure 3) employs four (4) Geometrics G-823A optically pumped Cesium-vapor magnetometers. The Mag bird consists of 4 sensors allowing for measurements of the total field, vertical gradient and horizontal gradients both along and cross flight lines. Three sensors are configured in a tri-axial configuration at the rear of the bird and the fourth sensor is located in the nose of the bird to provide a longitudinal (horizontal) gradient measurement. The magnetic data is collected at a rate of 10Hz, and recorded by a dedicated Windows-based computer.

4.2.2. Magnetometer Sensors

The specifications of the cesium vapour magnetometer sensors are as follows*:

Sensitivity:	<0.004 nT/rt-Hz
Absolute Accuracy:	< +/- 1.5 nT throughout operating range
Sampling Rate:	10 Hz
Dynamic Range:	20,000 - 100,000 nT
Heading Error:	less than 0.15 nT combined for sensor spins on all axes
Operating Temperature:	-35°C to +50°C
*Specifications are provided by	the sensor manufacturer

4.2.3. Bird Design

Sensor Standoffs:

 Horizontal: 	3.00 metres
- Vertical:	3.00 metres
- Longitudinal:	3.00 metres

Tow Cable: 45 metres long, with Kevlar strain member and weak-link

Terrain Clearance: 30 metres (nominal)

Refer to Figure 3.







Figure 3. The Aeroquest HELI-TAG bird

4.3. MAGNETOMETER BASE STATION

An integrated GPS and magnetometer base station is set up to monitor and record the diurnal variations of the Earth's magnetic field. The sensor, GPS and magnetic, receiver/signal processor is a dedicated unit for purposes of instrument control and/or data display and recording. The unit uses a common recording reference using the GPS clock.

Aeroquest International - Report on a Helicopter-Borne HELI-TAG - Magnetic Gradiometer Survey





The base station was a Geometrics G858 optically pumped caesium vapour magnetometer coupled with a Garmin GPS18 GPS sensor. Data logging and magnetometer control was provided by the unit's internal software. The logging was configured to measure at 1.0 second intervals. Digital recording resolution was 0.01 nT. The sensor was placed on a tripod away from potential noise sources near the camp. A continuously updated profile plot of the magnetometer value is available for viewing on the unit's display.

4.4. RADAR ALTIMETER

A Terra TRA 3500/TRI-30 radar altimeter is used to record terrain clearance. The antenna was mounted on the outside of the helicopter beneath the cockpit. Therefore, the recorded data reflect the height of the helicopter above the ground. The Terra altimeter has an altitude accuracy of +/- 1.5 metres.

4.5. VIDEO TRACKING AND RECORDING SYSTEM

A high resolution digital colour video camera is used to record the helicopter ground flight path along the survey lines. The video is recorded digitally and annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.



Figure 4. Digital video camera typical mounting location.

4.6. GPS NAVIGATION SYSTEM

The navigation system consists of an Ag-Nav Incorporated AG-NAV2 GPS navigation system comprising a PC-based acquisition system, navigation software, a deviation indicator in front of the aircraft pilot to direct the flight, a full screen display with controls in front of the operator, a Mid-Tech RX400p WAAS-enabled GPS receiver mounted on the instrument rack and an antenna mounted on the magnetometer bird. WAAS (Wide Area Augmentation System) consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations located on the east and west coasts collect data from the reference stations and create a GPS correction message. This correction accounts for GPS satellite orbit and clock drift plus signal delays caused by the atmosphere and ionosphere. The corrected differential message is then broadcast through one of two geostationary satellites, or satellites with a fixed position over the equator. The corrected position has a published accuracy of less than 3 metres.

Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84





[World] using the UTM zone 10N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 s intervals.

5. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Manager of Data Processing: Jonathan Rudd
- Field Data Processor: Geoff Pastow and Greg Roman
- Field Operator: Paul Starmach
- Data Interpretation Map Preparation and Reporting: Matt Pozza, Eric Steffler, Marion Bishop

The survey pilot, Randy Marks, was employed directly by the helicopter operator – TRK Helicopters, Langley BC.

6. DELIVERABLES

6.1. HARDCOPY DELIVERABLES

The report includes a set of 1:20,000 maps. The survey area is covered by a nine map plates. Four geophysical products are delivered as outlined below. All three products are plotted on single map plates for Blocks B,C,D and F and they are plotted on 2 plates for Block A. The larger Block E is divided into four plates, totalling twelve plates for three geophysical products^{*}.

The geophysical data products are delivered as listed below:

- TMI Coloured Total Magnetic Intensity (TMI) with line contours
- MVG Measured Vertical Gradient (MVG) with line contours
- 3DAS Measured 3D Analytic signal with line contours
- DTM- digital terrain model with line contours and measured 3D analytic signal profiles*
- * Blocks A, B, C, D and F only. Maps for Block E are included on the digital archive

The coordinate/projection system for the maps is NAD83 – UTM Zone 10N. For reference, the latitude and longitude in WGS84 are also noted on the maps.

All the maps show flight path trace and contain topographic base data. Survey specifications are displayed in the margin of the maps.

6.2. DIGITAL DELIVERABLES

6.2.1. Final Database of Survey Data (.GDB, .XYZ)

The geophysical profile data is archived digitally in Geosoft GDB binary database format and ASCII Geosoft .XYZ format. A description of the contents of the individual channels in the database can be found in Appendix 2. A copy of this digital data is archived at the Aeroquest head office in Milton.

6.2.2. Geosoft Grid files (.GRD)

Levelled Grid products used to generate the geophysical map images. Cell size for all grid files is 40 metres.





- Total Magnetic Intensity (Mag)
- Measured Vertical Gradient (MVG)
- Measured Longitidinal Gradient (MLG)
- Measured 3-D Analytic Signal (3DAS)
- Survey digital terrain model (DTM)

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

All in-field and post-field data processing was carried out using Aeroquest proprietary data processing software and Geosoft Oasis Montaj software. Maps were generated using 36-inch wide Hewlett Packard ink-jet plotters.

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 10 North. A summary of the map datum and projection specifications is given following:

- Ellipse: GRS 1980
- Ellipse major axis: 6378137m eccentricity: 0.081819191
- Datum: North American 1983 Canada Mean
- Datum Shifts (x,y,z) : 0, 0, 0 metres
- Map Projection: Universal Transverse Mercator Zone 10 North
- Central Scale Factor: 0.9996
- False Easting, Northing: 500,000m, 0m

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

The background vector topography supplied by the client and the background shading was derived from NASA Shuttle Radar Topography Mission (SRTM) 90 metres resolution DEM data.

7.2. FLIGHT PATH & TERRAIN CLEARANCE

The position of the survey helicopter was directed by use of the Global Positioning System (GPS). Positions were updated five times per second (5 Hz) and expressed as WGS84 latitude and longitude calculated from the raw pseudo range derived from the C/A code signal. The instantaneous GPS flight path, after conversion to UTM co-ordinates, is drawn using linear interpolation between the x/y positions. The terrain clearance was maintained with reference to the radar altimeter. The raw Digital Terrain Model (DTM) was derived by taking the GPS





survey elevation and subtracting the radar altimeter terrain clearance values. The calculated topography elevation values are relative and are not tied in to surveyed geodetic heights.

Each flight included at least two high elevation 'background' checks. These high elevation checks are to ensure that the gain of the system remained constant and within specifications.

7.3. MAGNETIC GRADIENT DATA

7.3.1. Initial Processing - Total Field

Prior to any levelling the magnetic data was subjected to a lag correction of -0.05 seconds and a spike removal filter. The total field was calculated using an average reading of all the magnetometers (MagTF channel in database). This processes provides a more accurate reading of the total field in comparison to a single sensor measurement. Diurnal variation was removed using the base magnetometer data. Further levelling was carried out by using the intersections of the tie-lines (tie-line levelling). Finally the data was micro-levelled using a directional spatial filtering technique. This process removes other very small systematic errors in the data. The data was interpolated onto a grid using a bi-directional gridding algorithm with a cell size of 40 m. No corrections for the regional reference field (IGRF) were applied.

7.3.2. Measured Gradients

The three magnetic gradient components were calculated by variable differencing of the four measured total field readings. The baselines distances of the gradient measurements are described in section 5.2. Further levelling of the gradient components was then carried out using tie-line levelling if required. This process minimised the small sources of error discussed above, as well as removed any DC gradient shifts introduced by the absolute accuracy limitations of the cesium sensors. The measured vertical and longitudinal gradient profiles were interpolated into grids and are included in the digital archive.

7.3.3. Measured 3-D Analytic Signal

The 3-D Analytic Signal or "Total Magnetic Gradient" is indirectly measured by the HEL-TAG system. Since three orthogonal gradient components are measured, calculating the measured analytic signal is a trivial matter:

$$AS = \sqrt{MVG^2 + MTG^2 + MLG^2}$$

Where:

AS is the magnitude of the total gradient vector and

MVG, MTG, and MLG are the measured vertical, transverse, and longitudinal gradients.

The above formula is applied using the three gradient channels to provide the measured analytic signal (AS) profile. The primary advantage of this magnetic data form is that positive peaks will directly correlate with the centre of the magnetic sources, regardless of the Earth's magnetic field orientation, or possible remanent magnetism effects in the source bodies. Again, due to the short baseline design of the gradiometer system, the measured AS tends to





enhances near surface magnetic sources. The AS profiles were interpolated onto a grid using minimum curvature and included in the digital archive. This product may be useful for data interpretation since it can be though of as a map of magnetisation in the ground.

Respectfully submitted,

Matt Pozza, MSc.

Aeroquest Limited June, 2007





APPENDIX 1: SURVEY BOUNDARIES

The following table presents the Quesnel Trough block boundaries. All geophysical data presented in this report have been windowed to these outlines. X and Y positions are in NAD83 UTM Zone 10N.

Block A		Block E	
Х	Y	х	Y
329758.2	6193411.6	353903.3	6137478.0
332033.6	6195394.5	354857.1	6136117.1
335551.0	6191322.1	355864.6	6130515.7
337504.1	6187891.8	358155.9	6127657.5
335227.8	6185906.0	359288.0	6125765.2
332719.5	6189820.2	359199.7	6122984.0
		359523.7	6120653.6
Block B		360585.7	6116444.1
Х	Y	362460.9	6112673.7
339021.30	6179312.50	365864.3	6106538.3
342085.67	6179200.19	368147.8	6102758.6
341968.30	6175966.29	370462.3	6099907.2
338901.66	6176078.65	371993.7	6097543.3
		373126.9	6095191.5
Block C		375048.6	6092353.8
Х	Y	376998.3	6090444.4
341721.65	6170319.63	381551.9	6085743.2
345740.53	6170175.7	381782.6	6085872.6
345633.89	6167158.72	382915.8	6084276.8
341612.23	6167280.5	380322.6	6082768.3
		379189.3	6084354.7
Block D		377634.5	6084396.1
Х	Y	375144.3	6086993.3
345675.61	6163218.76	371007.3	6091076.7
348442.28	6164140.78	367914.9	6094878.3
350125.88	6159444.42	365627.1	6098658.1
347290.13	6158480.3	362944.8	6102436.4
		359526.3	6108125.6
Block F		358403.9	6110481.1
х	Y	357312.5	6113763.9
325002.50	6106001.41	356473.3	6119759.7
329495.04	6106002.25	354446.0	6123601.5
329513.80	6102988.02	354109.7	6125468.8
324998.08	6102988.26	353345.9	6126422.1
		353134.4	6131052.1
		352355.8	6132487.8
		351985.5	6134753.1
		351207.3	6135913.9





APPENDIX 2: MINING CLAIMS

Tenure	Claim Name	Owner	Good To Data	Area (Ha)	Block
FEOOLO			2008/66/202		
550059		COURE, DAVID LAWKENCE	2008/jan/23	280.314	
238723	SUMNAPPS #2	EASTFIELD RESOURCES LTD.	2008/n0V/14	500	
556596	LIMYSTONE	EASTHELD RESOURCES LTD.	2008/apr/18	459.721	BIOCK E
514111			2017/jan/28	1205.807	BIOCK C
514104		ALPHA GOLD CORP.	2017/jan/28	603.621	Block D
514105		ALPHA GOLD CORP.	2017/jan/28	493.88	Block D
514106		ALPHA GOLD CORP.	2017/jan/28	365.99	Block U
514109		ALPHA GOLD CORP.	2017/jan/28	694.665	Block D
514114		ALPHA GOLD CORP.	2017/jan/28	695.24	Block D
514117		ALPHA GOLD CORP.	2017/jan/28	274.284	Block D
245946	TAKLA #2	LEPINSKI, JOHN BRENT	2008/mar/06	25	Block D
510937	PINCHI-7	LEPINSKI, JOHN BRENT	2008/apr/18	145.271	Block A
510939	PINCHI-8	LEPINSKI, JOHN BRENT	2008/apr/18	363.021	Block A
521422	HOPPER	ANGEL JADE MINES LTD.	2011/oct/21	91.264	Block C
268380	KEN 1	ANGEL JADE MINES LTD.	2011/oct/30	50	Block C
519614	GPV	ANGEL JADE MINES LTD.	2008/sep/01	438.018	Block C
548581	GRANDNORTH 11	AMARC RESOURCES LTD.	2008/jan/04	436.59	Block A
548582	GRANDNORTH 12	AMARC RESOURCES LTD.	2008/jan/04	454.595	Block A
548583	GRANDNORTH 13	AMARC RESOURCES LTD.	2008/jan/04	436.171	Block A
548584	GRANDNORTH 14	AMARC RESOURCES LTD.	2008/jan/04	454.065	Block A
548585	GRANDNORTH 15	AMARC RESOURCES LTD.	2008/jan/04	453.895	Block A
548565	GRANDNORTH 1	AMARC RESOURCES LTD.	2008/jan/04	455.687	Block B
548567	GRANDNORTH 2	AMARC RESOURCES LTD.	2008/jan/04	455.593	Block B
548568	GRANDNORTH 3	AMARC RESOURCES LTD.	2008/jan/04	455.5	Block B
548569	GRANDNORTH 4	AMARC RESOURCES LTD.	2008/jan/04	437.187	Block B
548190	PETITE 1	AMARC RESOURCES LTD.	2007/dec/28	456.47	Block C
548191	PETITE 2	AMARC RESOURCES LTD.	2007/dec/28	456.475	Block C
556348	GRAND 83	AMARC RESOURCES LTD.	2008/apr/13	390.394	Block E
556349	GRAND 84	AMARC RESOURCES LTD.	2008/apr/13	390.493	Block E
556350	GRAND 85	AMARC RESOURCES LTD.	2008/apr/13	390.366	Block E
548040	GRAND 1	AMARC RESOURCES LTD.	2007/dec/27	459.875	Block E
548041	GRAND 2	AMARC RESOURCES LTD.	2007/dec/27	441.669	Block E
548042	GRAND 3	AMARC RESOURCES LTD.	2007/dec/27	460.25	Block E
548043	GRAND 4	AMARC RESOURCES LTD.	2007/dec/27	460.446	Block E
548044	GRAND 5	AMARC RESOURCES LTD.	2007/dec/27	460.65	Block E
548045	GRAND 6	AMARC RESOURCES LTD.	2007/dec/27	442.192	Block E
548046	GRAND 7	AMARC RESOURCES LTD.	2007/dec/27	460.785	Block E
548047	GRAND 8	AMARC RESOURCES LTD.	2007/dec/27	460.876	Block E
548048	GRAND 9	AMARC RESOURCES LTD.	2007/dec/27	442.529	Block E
548049	GRAND 10	AMARC RESOURCES LTD.	2007/dec/27	461.064	Block E
548050	GRAND 11	AMARC RESOURCES LTD.	2007/dec/27	461.176	Block E
548052	GRAND 12	AMARC RESOURCES LTD.	2007/dec/27	424.394	Block E
548053	GRAND 13	AMARC RESOURCES LTD.	2007/dec/27	461.398	Block E
548054	GRAND 14	AMARC RESOURCES LTD.	2007/dec/27	461.49	Block E
548055	GRAND 15	AMARC RESOURCES LTD.	2007/dec/27	461.584	Block E

Taken from Government of British Columbia Mineral Titles Online (www.mtonline.gov.bc.ca)

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Tenure Number	Claim Name	Owner	Good To Date	Area (Ha)	Block
	GRAND 14		2007/dec/27	461 679	Block E
540050	CRAND 17	AMARC RESOURCES LTD.	2007/000/27	401.070	
540007		AMARC RESOURCES LTD.	2007/08027	401.774	DIUCK E
546056	GRAND 10	AMARC RESOURCES LTD.	2007/dec/27	401.000	BIOCK E
548059	GRAND 19	AMARC RESOURCES LTD.	2007/dec/27	461.95	Block E
548060	GRAND 20	AMARC RESOURCES LTD.	2007/dec/27	443.562	BIOCKE
548061	GRAND 21	AMARC RESOURCES LTD.	2007/dec/27	462.142	Block E
548062	GRAND 22	AMARC RESOURCES LTD.	2007/dec/27	462.236	Block E
548063	GRAND 23	AMARC RESOURCES LTD.	2007/dec/27	462.334	Block E
548064	GRAND 24	AMARC RESOURCES LTD.	2007/dec/27	462.428	Block E
548065	GRAND 25	AMARC RESOURCES LTD.	2007/dec/27	462.526	Block E
548066	GRAND 26	AMARC RESOURCES LTD.	2007/dec/27	462.622	Block E
548067	GRAND 27	AMARC RESOURCES LTD.	2007/dec/27	462.715	Block E
548068	GRAND 28	AMARC RESOURCES LTD.	2007/dec/27	462.813	Block E
548069	GRAND 29	AMARC RESOURCES LTD.	2007/dec/27	462.913	Block E
548071	GRAND 30	AMARC RESOURCES LTD.	2007/dec/27	463.006	Block E
548072	GRAND 31	AMARC RESOURCES LTD.	2007/dec/27	463.103	Block E
548073	GRAND 32	AMARC RESOURCES LTD.	2007/dec/27	463.198	Block E
548074	GRAND 33	AMARC RESOURCES LTD.	2007/dec/27	463.292	Block E
548075	GRAND 34	AMARC RESOURCES LTD.	2007/dec/27	463.387	Block E
548076	GRAND 35	AMARC RESOURCES LTD.	2007/dec/27	463.482	Block E
548078	GRAND 36	AMARC RESOURCES LTD.	2007/dec/27	463.577	Block E
548079	GRAND 37	AMARC RESOURCES LTD.	2007/dec/27	463.672	Block E
548080	GRAND 38	AMARC RESOURCES LTD.	2007/dec/27	463.765	Block E
548081	GRAND 39	AMARC RESOURCES LTD.	2007/dec/27	463.872	Block E
548082	GRAND 40	AMARC RESOURCES LTD.	2007/dec/27	463.969	Block E
548083	GRAND 41	AMARC RESOURCES LTD.	2007/dec/27	464.064	Block E
548084	GRAND 42	AMARC RESOURCES LTD.	2007/dec/27	464.158	Block E
548085	GRAND 43	AMARC RESOURCES LTD.	2007/dec/27	464.252	Block E
548086	GRAND 44	AMARC RESOURCES LTD.	2007/dec/27	464.346	Block E
548087	GRAND 45	AMARC RESOURCES LTD.	2007/dec/27	464.441	Block E
548088	GRAND 46	AMARC RESOURCES LTD.	2007/dec/27	464.536	Block E
548089	GRAND 47	AMARC RESOURCES LTD.	2007/dec/27	464.63	Block E
548092	GRAND 48	AMARC RESOURCES LTD.	2007/dec/27	464.725	Block E
548093	GRAND 49	AMARC RESOURCES LTD.	2007/dec/27	464.83	Block E
548094	GRAND 50	AMARC RESOURCES LTD.	2007/dec/27	464.925	Block E
548095	GRAND 51	AMARC RESOURCES LTD.	2007/dec/27	465.02	Block E
548096	GRAND 52	AMARC RESOURCES LTD.	2007/dec/27	465.115	Block E
548097	GRAND 53	AMARC RESOURCES LTD.	2007/dec/27	465.21	Block E
542762	POLYMET 2	AMARC RESOURCES LTD.	2007/oct/07	444,596	Block F
542763	POLYMET 3	AMARC RESOURCES LTD.	2007/oct/07	444.595	Block F
542765	POLYMET 5	AMARC RESOURCES LTD.	2007/oct/07	463.337	Block F
542766	POLYMET 6	AMARC RESOURCES LTD.	2007/oct/07	463.336	Block F
542767	POLYMET 7	AMARC RESOURCES LTD	2007/oct/07	444.825	Block F
546519	OSILINKA 6	SERENGETI RESOURCES INC.	2007/dec/04	454 12	Block A
546523	OSILINKA 9	SERENGETI RESOURCES INC	2007/dec/04	454 224	Block A
546525	OSILINKA 11	SERENGETI RESOURCES INC	2007/dec/04	454 466	Block A
546529	OSILINKA 15	SERENGETI RESOURCES INC	2007/dec/04	454.6	Block A





APPENDIX 3: 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".

COLUMN	UNITS	DESCRIPTOR
utctime	hh:mm:ss.s	UTC time
X		UTM Easting (NAD83)
Y	m	UTM Northing (NAD83)
basemagf	nT —	base magnetometer readings
ralt	m	radar altitude of aircraft
bheight	m	calculated height of gradiometer bird
galtf	m	elevation of GPS antenna (AMSL) (WGS84)
dtm	m	Calculated Raw Digital terrain model
Dtmf	m	Leveled Digital terrain model
mag	nT	Leveled total magnetic field (Average of Upper, Starboard and Port and Nose)
MVGf	nT/m	Measured Vertical magnetic Gradient (leveled)
MTGf	nT/m	Measured Transverse Gradient (Cross Track) corrected for flight direction and leveled
MLGf	nT/m	Measured Longitudinal Gradient (Along Track) corrected for flight direction and leveled
Ansignal	nT/m	Measured Total Gradient (3D Analytic Signal)
MagU_corr	nT	Upper (Top) sensor magnetic field reading
MagP_corr	nT	Port sensor, magnetic field reading
MagS_corr	лТ	Starboard sensor, magnetic field reading
MagN_corr	nT	Nose (Front) sensor, magnetic field reading







June 2007

Block C