

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT:

201 2 PROSPECTING, GEOLOGICAL, GEOPHYSICAL AND PHYSICAL WORK.

TOTAL COST: \$ 97,303.43

(HONEYMOON portion \$ 67,713.37 and BARRIERE RIDGE portion \$29,590.06)

AUTHOR(S): David J. Piggin, RPF, Prospector and

Dale Brittliffe, PGeo., Astral Mining Corp and Orex Minerals Inc.

SIGNATURE(8): David J. Pigen, RPF(owner)

Dale Brittliffe, P.Geø

COLUMBIA COSCIEN

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

STATEMENT OF WORK EVENT NUMBER(S)/DATE(S):

EVENT 5439832 dated March 27, 2013: December 20, 2011 to March 26, 2013 EVENT 5439849 dated March 27, 2013: December 20, 2011 to March 26, 2013

YEAR OF WORK: 2012 (December 20, 2011 to March 26, 2013).

PROPERTY NAME: HONEYMOON; and BARRIERE RIDGE

CLAIM NAME(S) (on which work was done): 63 Individual Claims - 28,080.2881 hectares

HONEYMOON (43 claims – 19,772.31 hectares): 606463, 606465, 606467, 606469, 672823, 673843, 673864, 673883, 673903, 673904, 673906, 673923, 673943, 673963, 673983, 673984, 673985, 673986, 673987, 673988, 673989, 673990, 741242, 744982; 838100, 838124, 838125, 838126, 838127, 838129, 838130, 838131, 838132, 838133, 838134, 838136, 838137, 838138, 838139, 838141, 838142; plus 848330, and 848331.

BARRIERE RIDGE (20 claims - 8,307.9800 hectares): 744542, 744562, 744582, 744602, 759003, 767042, 767062, 767102, 767123, 840411, 840413, 840415, 840417, 840418, 844642, 844643, 844644, 844645, 844646, and 844647. Save and except DL4023 WHITE ROCK MC (18.09 ha) a Crown Granted mineral claim.

COMMODITIES SOUGHT: Gold, Silver, Copper, Lead, Zinc

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

BC Geological Survey Assessment Report 33744

HONEYMOON:

NSP MINFILE 082M-127 LUCKY BEAR MINFILE 082M-275 MAL002 MINFILE 082M-289

CAM-GLORIA MINFILE 082M-266 MAL001 MINFILE 082M-285 SPAPILEM CREEK MINFILE 082M-292

SPAPILEM GOLD100 MINFILE 082M-290

BARRIERE RIDGE:

MINFILE 082M 066 WHITE ROCK (with DL4043 KDYD WHITE ROCK MC);

MINFILE 082M 069 SILVER MINNOW (aka SILVER MINERAL)

MINFILE 082M 222 CAD

MINING DIVISION: KAMLOOPS

NTS / BCGS:

<u>HONEYMOON</u>: 082M022; 082M023; 082M032; 082M033 **BARRIERE RIDGE**: 082M021; 082M031 (082M022; 082M032)

HONEYMOON:

LATITUDE: <u>51 deg 17' 06" N;</u>

LONGITUDE: 119 deg 35' 30" W " (at centre of work)

UTM Zone: <u>11</u> EASTING: <u>319274</u> NORTHING: <u>5684709</u>

BARRIERE RIDGE:

LATITUDE: 51 deg 17' 34" N;

LONGITUDE: 119 deg 53' 36" W " (at centre of work)

UTM Zone: <u>11</u> EASTING: <u>298275</u> NORTHING: <u>5686360</u>

OPERATOR(S) [who paid for the work]:

Astral Mining Corporation, The Old Stock Exchange Building, Suite 818 – 755 Howe Street, Vancouver, British Columbia, V6C 2B3 (www.astralmining.com)

Orex Minerals Inc, Suite 1130 - 1055 W. Hastings Street Vancouver, British Columbia, V6E 2E9. (www.orexminerals.com)

OWNER [property optioned from]:

David J. Piggin, RPF, Prospector: 91-137 McGill Road, Kamloops, British Columbia, V2C 1L9, Cell: (250) 319-3191

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Baldy Batholith; Granite Intrusion; Mid-Cretaceous Intrusion; Iron
Carbonate Alteration; Eagle Bay Assemblege, Devono-Mississippian;
Metasediments; Volcanogenic Massive Sulfides; Devonian Orthogneiss;
paragneiss; sericite alteration; Intrusive gold; copper in paragneiss;
Limestone; Tshinakin Limstone; chlorite schist, Silver in Limestone; Silver in quartz veins; Silver Lead in limestone; Silver Lead in quartz limestone

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

HONEYMOON:

02654, 06473, 26215, 29378, 29407, 29569, 29709, 29960, 30869, 32076, 33190

BARRIERE RIDGE:

03350, 05363, 08210, 12847A, 12847B, 13168, 13207, 13297, 13793, 14123, 14397, 18489, 19047, 19173, 19851, 22956, 32383, 33190.

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area) Ground, mapping			\$700.00
Photo interpretation	23,530 hectares PhotoSat 0.5m pixel 2012 image	ALL	\$ 8,400.00
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne Fu	gro Airborne - reprocessing and targeting study	ALL	\$ 44,700.00
GEOCHEMICAL (number of sample Soil	les analysed for)		
Silt			
Rock			
Other			
DRILLING (total metres, number of	f holes, size, storage location)		
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Mineralographic			
Metallurgic PROSPECTING (scale/area)	5,000 hectares	744542; 744562; 744602; 759003, 672823, 673883, 673923, etc	\$20,500.00
PREPARATORY / PHYSICAL			
Line/grid (km)	0.825 km	744542; 744562; 744602; 759003, 672823, 673883, 673923	\$ 19,003.43
Topo/Photogrammetric (sca	ale, area)		
Legal Surveys (scale, area))		
Road, local access (km)/tra	iil		
Trench (number/metres)			
Underground development	(metres)		
Other	Literature General Research, database compilation, etc	TOTAL	\$4,000.00 \$ 97,303.43
		COST	ψ 01,000.40

ASSESSMENT REPORT FOR THE HONEYMOON; AND BARRIERE RIDGE CLAIMS

EVENTS 5439832 and 5439849

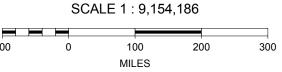
Event	Date	Tenure Numbers	Gross Area	Total Value	PAC	Total
No.			(hectares)	of Work(\$)	Account (\$)	Applied
						Work (\$)
		BARRIERE RIDGE: *				
	March	744542, 744562, 744582, 744602, 759003,				
5439832	27,	767042, 767062, 767102, 767123, 840411,	8,307.9800	\$ 20,713.04	\$ 8,877.02	\$ 29,590.06
	2013	840413, 840415, 840417, 840418, 844642,				
		844643, 844644, 844645, 844646, 844647				
		HONEYMOON:				
		606463, 606465, 606467, 606469, 672823,				
		673843, 673864, 673883, 673903, 673904,		\$ 48,128.91	\$ 19,584.46	\$ 67,713.37
	March	673906, 673923, 673943, 673963, 673983,				
5439849	27,	673984, 673985, 673986, 673987, 673988,	19,772.31			
3433043	2013	673989, 673990, 741242, 744982; 838100,	13,772.31			
	2015	838124, 838125, 838126, 838127, 838129,				
		838130, 838131, 838132, 838133, 838134,				
		838136, 838137, 838138, 838139, 838141,				
		838142; plus 848330, 848331.				
		ASSESSMENT REPORT SUMMARY	28,080.2881			
			hectares	\$ 68,841.95	\$ 28,461.48	\$ 97,303.43
			nectares			

***NOTE:** An 18.09 hectare Crown Granted mineral claim DL4023 KDYD WHITE ROCK MC (within Tenure 744542) is save and excepted from the BARRIERE RIDGE claims; and is held by George Robert Mitchell. MINFILE 082M066 WHITE ROCK is located within DL4023 KDYD WHITE ROCK MC.

BC Geological Survey
Assessment Report
33744

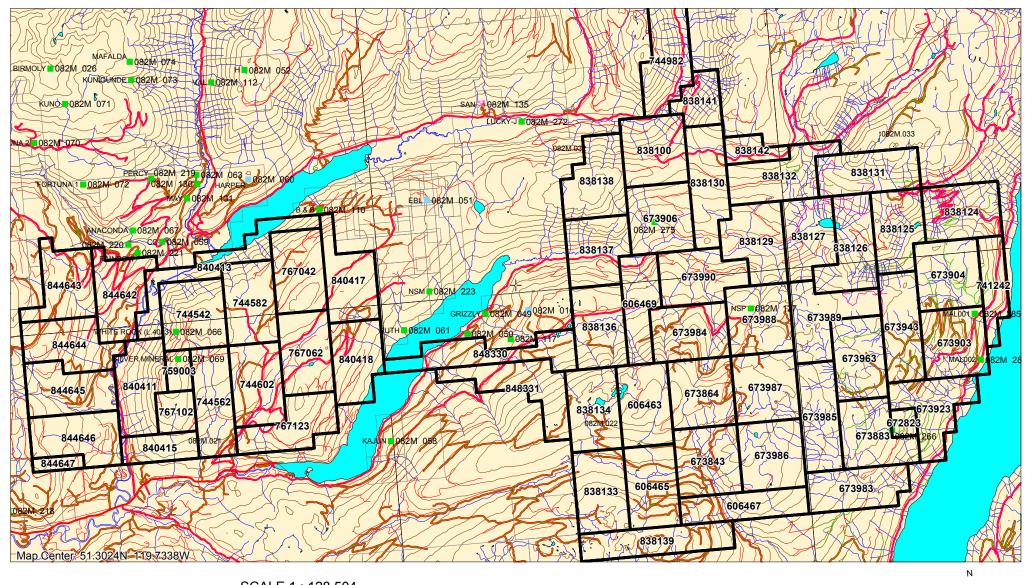
Honeymoon Barriere Ridge Location Map

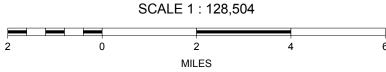






Honeymoon Barriere Ridge Claim Map







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Mineral Titles Online Report

Click on <u>Tenure Numbers</u> for more information.

Click column headings to sort results.

Download to Excel

Tenure Number	Type	Claim Name	Good Until	Area (ha)
606463	Mineral	SPAP4	20141115	485.4537
<u>606465</u>	Mineral	SPAP5	20141115	485.6877
606467	Mineral	SPAP6	20141115	404.8096
606469	Mineral	SPAP7	20141115	404.2745
672823	Mineral	CAM-GLORIA	20141115	80.9284
673843	Mineral	SPAP1	20141115	505.8603
673864	Mineral	SPAP2	20141115	505.6582
673883	Mineral	CAMGLORIA	20141115	485.5951
673903	Mineral	HONEY1	20141115	505.5825
<u>673904</u>	Mineral	HONEY2	20141115	505.357
673906	Mineral	LUCKYBEAR1	20141115	505.0637
673923	Mineral	CAMGLORIA2	20141115	485.5454
673943	Mineral	HONEY3	20141115	485.2902
<u>673963</u>	Mineral	HONEY4	20141115	485.3728
673983	Mineral	CAMGLORIA7	20141115	465.5048
673984	Mineral	SPAP9	20141115	485.2344
<u>673985</u>	Mineral	HONEY9	20141115	485.5321
673986	Mineral	SPAP7	20141115	505.8612
<u>673987</u>	Mineral	SPAP10	20141115	505.6613
<u>673988</u>	Mineral		20141115	505.4332
673989	Mineral	LUCKYBEAR2	20141115	505.4493
673990	Mineral	LUCKYBEAR4	20141115	485.0594
741242	Mineral	HONEY99	20141115	283.0306
744542	Mineral	BLUFF1	20141120	505.2364
<u>744562</u>	Mineral	BLUFF2	20141120	485.3074
744582	Mineral	BLUFF3	20141120	485.0088
744602	Mineral	BLUFF4	20141120	485.2667
744982	Mineral	FENNELL1	20141115	504.4788
<u>759003</u>	Mineral	SILVER	20141120	121.2995
<u>767042</u>	Mineral	RIDGE5	20141120	484.9257
<u>767062</u>	Mineral	RIDGE6	20141120	485.1844
<u>767102</u>	Mineral	RIDGE7	20141120	181.9975
<u>767123</u>	Mineral	RIDGE8	20141120	444.9574
<u>838100</u>	Mineral	LUCKYBEAR5	20141115	504.7879
838124	Mineral	HONEY5	20141115	484.9508
<u>838125</u>	Mineral	HONEY6	20141115	444.5646
<u>838126</u>	Mineral	HONEY7	20141115	505.2315
838127	Mineral	HONEY8	20141115	444.5541
<u>838129</u>	Mineral	HONEY10	20141115	505.1719
<u>838130</u>	Mineral	HONEY11	20141115	504.9392
<u>838131</u>	Mineral	HONEY12	20141115	484.7904
<u>838132</u>	Mineral	HONEY100	20141115	504.9533
<u>838133</u>	Mineral	SPAP20	20141115	485.6875

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<u>838134</u>	Mineral	SPAP21	20141115	485.4545
<u>838136</u>	Mineral	SPAP22	20141115	485.1912
<u>838137</u>	Mineral	LUCKYBEAR5	20141115	464.7386
<u>838138</u>	Mineral	LUCKYBEAR99	20141115	504.8972
<u>838139</u>	Mineral	SPAP100	20141115	485.861
838141	Mineral	LUCKYBEAR101	20141115	242.2199
<u>838142</u>	Mineral	LUCKYBEAR102	20141115	161.5371
<u>840411</u>	Mineral	RIDGE9	20141120	485.2319
<u>840413</u>	Mineral	RIDGE10	20141120	505.0888
<u>840415</u>	Mineral	RIDGE11	20141120	242.7164
840417	Mineral	RIDGE12	20141120	464.764
<u>840418</u>	Mineral	RIDGE13	20141120	444.7881
844642	Mineral	BIRK1	20141120	484.9368
<u>844643</u>	Mineral	BIRK2	20141120	464.6854
<u>844644</u>	Mineral	BIRK3	20141120	485.0789
844645	Mineral	BIRK4	20141120	485.223
<u>844646</u>	Mineral	BIRK5	20141120	485.3746
<u>844647</u>	Mineral	BIRK6	20141120	80.9083
848330	Mineral	HONEYDEW1	20141115	505.4641
<u>848331</u>	Mineral	HONEYDEW2	20141115	505.5891

Total Area: 28080.2881 ha

LIBC Metadata

Mineral Title Online
BC Geological Survey
British Columbia Ministry of Energy, Mines and Natural Gas
Last updated in April 2007

2012 PROSPECTING, GEOLOGICAL, GEOPHYSICAL, AND PHYSICAL WORK

ASSESSMENT REPORT FOR THE HONEYMOON; AND BARRIERE RIDGE CLAIMS

OREX MINERALS INC.

Suite 1130 - 1055 W. Hastings Street, Vancouver, British Columbia, V6E 2E9 (www.orexminerals.com)

ASTRAL MINING CORPORATION

The Old Stock Exchange Building, Suite 818 – 755 Howe Street Vancouver, British Columbia, V6C 2B3, http://www.astralmining.com

David J. Piggin, R.P.F., Prospector and Owner 91-137 McGill Road, Kamloops, British Columbia, V2C 1L9

KAMLOOPS MINING DIVISION, BRITISH COLUMBIA

MINERAL TENURES – 63 Individual Claims – 28,080.2881 hectares

TWO CONTIGUOUS LOCATIONS: HONEYMOON, AND BARRIERE RIDGE

HONEYMOON: (43 claims – 19,772.31 hectares):

Map Sheets: 082M022; 082M023; 082M032; 082M033

85 kilometres northeast of Kamloops, British Columbia, Canada.

Lat 51 deg 17' 06" N; and Long 119 deg 35' 30" W; UTM NAD 83: Zone 11 Easterly 319274 Northerly 5684709. NW shore of Adams Lake between Spapilem Cr, East Barriere River, Fennell Cr., Honeymoon Cr., and Grizzly Cr.

BARRIERE RIDGE: (20 claims - 8,307.98 hectares):

Map Sheets: 082M021; 082M031 (082M022; 082M032)

66 kilometres northeast of Kamloops, British Columbia, Canada.

Lat 51 deg 17' 34" N; and Long 119 deg 53' 36" W; UTM NAD 83: Zone 11 Easterly 298275 Northerly 5686360. West of East Barriere Lake; South of North Barriere Lake and Birk Creek; within Russell Creek and Sprague Creek.

PREPARED BY:

David J. Piggin, R.P.F.

PROSPECTOR, OWNER, Free Miner 140689,

ASSESSMENT REPORT FOR THE HONEYMOON; AND BARRIERE RIDGE CLAIMS

EVENTS 5439832 and 5439849

Event	Date	Tenure Numbers	Gross Area	Total Value	PAC	Total
No.			(hectares)	of Work(\$)	Account (\$)	Applied
						Work (\$)
		BARRIERE RIDGE: *				
	March	744542, 744562, 744582, 744602, 759003,				
5439832	27,	767042, 767062, 767102, 767123, 840411,	8,307.9800	\$ 20,713.04	\$ 8,877.02	\$ 29,590.06
	2013	840413, 840415, 840417, 840418, 844642,				
		844643, 844644, 844645, 844646, 844647				
		HONEYMOON:				
		606463, 606465, 606467, 606469, 672823,				
		673843, 673864, 673883, 673903, 673904,		\$ 48,128.91	\$ 19,584.46	\$ 67,713.37
	March	673906, 673923, 673943, 673963, 673983,				
5439849	27,	673984, 673985, 673986, 673987, 673988,	19,772.31			
3433043	2013	673989, 673990, 741242, 744982; 838100,	15,772.51	7 40,120.51	7 13,304.40	7 07,713.37
	2013	838124, 838125, 838126, 838127, 838129,				
		838130, 838131, 838132, 838133, 838134,				
		838136, 838137, 838138, 838139, 838141,				
		838142; plus 848330, 848331.				
		ASSESSMENT REPORT SUMMARY	28,080.2881			
			hectares	\$ 68,841.95	\$ 28,461.48	\$ 97,303.43

^{*}NOTE: An 18.09 hectare Crown Granted mineral claim DL4023 KDYD WHITE ROCK MC (within Tenure 744542) is save and excepted from the BARRIERE RIDGE claims; and is held by George Robert Mitchell. MINFILE 082M066 WHITE ROCK is located within DL4023 KDYD WHITE ROCK MC.

SUMMARY

Summary of the exploration work completed by Orex Minerals Inc (Orex), Astral Mining Corporation (Astral), and David J. Plggin from December 20, 2011 to March 26, 2013 on the HONEYMOON and BARRIERE RIDGE claims (EVENTS 5439832, 543984). -The HONEYMOON and BARRIERE RIDGE claims are contiguous claims and were explored as one project. They were located on the northwest side of Adams Lake (HONEYMOON) 80 km northeast of the Kamloops, B.C., Canada.; and between North Barriere Lake and East Barriere Lake (BARRIERE RIDGE) 66 km northeast of the Kamloops.

In the 1980's, parts of BARRIERE RIDGE were optioned by Noranda Inc, Minnova Inc, Cyprus Anvil Mining Corporation, Falconbridge Limited, and others. From 1984 - 1988, 20 diamond drill holes were completed for 2,195.98 metres. Best result was P4 BAR23: (sample 17807) Au 0.91 g/t, Ag 203 g/t, Cu 0.133 %, Pb 5.46 %, Zn 13.2 % (over 0.4 m).

In 1999, a portion of the HONEYMOON claims (CAMGLORIA MINFILE 082M 266) was explored by Teck Corp. They trenched; and drilled 7 NQ holes for a total of 836 metres. Best result were: Trench 99-01: up to 9.36 g/t Au over 2.0 metres and Sample #5220 (over 1 m) Au 17.62 g/t, Ag 66.2 g/t, Bi 745, Pb 1372; and also Hole CC99-01 (over 1 m) Au 9.57 g/t, Ag 128.4 g/t, Bi 160 ppm, Pb 1896 ppm. Acrex Ventures Ltd briefly optioned the area in 2008/2009.

In November 12, 2010, Astral optioned the HONEYMOON claims; and in March 2, 2011 they optioned the BARRIERE RIDGE claims. In February 2013, Astral was taken over by Orex. On February 28, 2013, due to the industry wide lack of funding Orex dropped their option on the BARRIERE RIDGE claims. Orex holds an option on the HONEYMOON claims.'

PREVIOUSLY REPORTED ANOMALOUS RESULTS:

SILVERGAL Showing: grab Ag 220 g/t, Pb 12.4 %; and Ag 172g/t, Cu 7470 ppm, Pb 795 ppm, Zn 3078 ppm; **MINFILE 082M 069 SILVER MINNOW** (historic 1925: Ag 927 g/t Au 0.69 g/t;

10E41181 SMQCH7 Ag 171 ppm; Pb 14.4 percent; S 2.27 percent; Sb 198.5 ppm; Te 30.4 ppm; Zn 6490 ppm (1m). MINFILE 082M-292 SPAPILEM CREEK: up to Au 6.01 g/t; MINFILE 082M-290 SPAPILEM GOLD100: up to Au 3.40 g/t MINFILE 082M-285 MAL001: MAL1Q1: Cu 0.78 %; Ag 35.3 g/t; Mo 11 ppm. MAL1D – Cu 0.64 %, Ag 34.8 g/t, Mo 25 ppm.

The majority of the 2012 exploration work was focused on the interpretation of the Airborne Geophysical Survey completed by Fugro Airborne Surveys in 2011, the purchase of aerial photography, prospecting, the commencement of preparatory surveys for ground geophysics and geochemical surveys, and database management.

EXPLORATION WORK COMPLETED: The following is a brief summary of the works completed:

- Total Work Applied \$ 97,303.43 on 28,080.2881 hectares (including \$ 28,461.48 from PAC).
- Geophysics Interpretation study completed by Fugro Airborne for an airborne geophysics survey completed in 2011 (Line kilometres 1334 km (1121.4 km of it was accepted).
- Received the Fugro report: "Magnetic and EM Interpretation Airborne Magnetic and HeliTEM Survey BARRIERE RIDGE and HONEYMOON Blocks British Columbia - Job No. 12578" dated February 2013.
- Aerial Photography: 23,530 hectares PhotoSat 0.5m pixel 2012 image.
- Professional assessment and targeting for selected ground geophysical surveys prior to a full ground geophysical survey.
- Selected and mapped proposed preparatory survey area for ground geophysical/geochemical survey at SILVER MINNNOW, SILVERGAL, and CAMGLORIA. A total of 11,400 lineal metres were selected.
- Completed 825 lineal metres (of 11,400 lineal metres) of preparatory survey (HONEYMOON 600m and BARRIERE RIDGE 225m). Work stopped due to lack of funds.
- ARIS Reports were reviewed in detail to determine the location and results of historic drilling on BARRIERE RIDGE to develop a database; and to find them in the bush. A spreadsheet was created.
- First Nations informational meetings and letters completed, and attended First Nation sponsored Mines and Exploration Workshop at Quaaout Lodge on the Little Shuswap Indian Band reserve.
- No samples were submitted for assay during this work period as funds were focused on geophysics.
- Work continued on a historic database.

RECOMMENDED EXPLORATION: Based on 2011/2012 Airborne Geophysics Survey results and previous work to date, further exploration work is required such as prospecting for new discoveries; prospecting and sourcing known anomalies; geological mapping; database management; soil, stream, and outcrop sampling; ground geophysics surveys; ground truth Airborne Geophysical Survey results and interpretations; trenching; and drilling as well as First Nations consultation. A five year program of \$3,000,000 is recommended, commencing in the summer of 2013 and 2014.

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- **A. MINERAL TENURE ONLINE OVERVIEW MAP and REPORT AREA** in red outline (1:185,778) showing the HONEYMOON and BARRIERE RIDGE claims.
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- **C. BIOGEOCLIMATIC SUB-ZONES** within the HONEYMOON and BARRIERE RIDGE claims on an Orthographic Map (scale 1:145,000).
- **D. OVERVIEW LOCATION FOR SELECTED HISTORIC MINES AND DEPOSITS** in the vicinity of the HONEYMOON and BARRIERE RIDGE claims and Kamloops, B. C. (Mineral Tenures Online 1:1,286,926)
- **E. OVERVIEW GEOLOGY, AND MINFILE OCCURRENCES** on an Orthographic Map. Geology is based on GeoFile 2005-4 and Open File 2000-7.
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- F. OVERVIEW OF EXPLORATION AREA, AND AIRBORNE GEOPHYSICS PROSPECTING AND PREPARATORY SURVEY: Map of the general location of the exploration area where prospecting and preparatory grids were done. (1:130,000).
- G. DETAILED LIST OF PREPARATORY GRID LOCATIONS FOR GROUND GEOPHYSICAL AND GEOCHEMICAL SURVEY: including the Waypoint Name, GPS (UTM NAD83) Coordinates, Grid Name, Strip Line Number, whether or not station has been ribboned and GPD'ed, Soil Sample Tag No (whether or not a soil sample has been collected and assayed)... all within a SPREADSHEET (19 pages).
- H. OVERVIEW (1:130,000) and DETAILED MAPS (1:50,000 and 1:15,000) OF PREPARATORY GRIDS: CAMGLORIA GRID 2; SILVER MINNOW GRID 1 and 2; and SILVERGAL GRID1 based on the data set given in the previous APPENDIX.
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- I. **DETAILED LIST OF HISTORIC DRILLING FROM BARRIERE RIDGE CLAIMS**: Spreadsheet showing Drill Site Name, ARIS Report, Company, and where available bearing, dip, length and grade, etc.
- J. GEOPHYSICS: FUGRO AIRBORNE SURVEYS JOB No. 12578, BARRIERE RIDGE AND HONEYMOON BLOCKS, KAMLOOPS, BRITISH COLUMBIA, CANADA Report Titled: Magnetic and EM Interpretation Airborne Magnetic and HELITEM Survey BARRIERE RIDGE AND HONEYMOON BLOCKS, BRITISH COLUMBIA dated February 2013 (35 pages plus 12 maps). The Airborne Geophysical Survey was completed in 2011 and was report in ARIS Report 33190.
 - (a) HONEYMOON: Anomaly List, 4 pages (spreadsheet)
 - (b) BARRIERE RIDGE Anomaly List, 3 pages (spreadsheet)
 - (c) HONYEMOON: Interpretation for EM and Magnetics (44"x31.5", Scale 1:20,000).
 - (d) HONYEMOON: Interpretation for EM and Magnetics (44"x31.5", Scale 1:20,000).

I - INTRODUCTION:

The purpose of this report is to provide a summary of the exploration work completed by Orex Minerals Inc, Astral Mining Corporation, and David J. Piggin form December 20, 2011 to March 26, 2013 on the HONEYMOON and BARRIERE RIDGE claims are contiguous claims and were explored as one project. Total Value of Work Applied \$ 97,303.43 (including \$ 28,461.48 from PAC). The Mineral Claim Exploration and Development Work/Expiry Date MTOnline documents were recorded under EVENTS 5439832 and 5439849.

There are 63 claims for a total area 28,080.2881 hectares. A MTOnline map showing the assessment report area is given in APPENDIX A. The specific mineral titles included in this assessment report are as follows:

HONEYMOON (43 claims – 19,772.31 hectares): 606463, 606465, 606467, 606469, 672823, 673843, 673864, 673883, 673903, 673904, 673906, 673923, 673943, 673963, 673983, 673984, 673985, 673986, 673987, 673988, 673989, 673990, 741242, 744982; 838100, 838124, 838125, 838126, 838127, 838129, 838130, 838131, 838132, 838133, 838134, 838136, 838137, 838138, 838139, 838141, 838142; plus 848330, and 848331.

BARRIERE RIDGE (20 claims - 8,307.9800 hectares): 744542, 744562, 744582, 744602, 759003, 767042, 767062, 767102, 767123, 840411, 840413, 840415, 840418, 840418, 844642, 844643, 844644, 844645, 844646, and 844647.

An 18.09 hectare crown granted mineral claim DL4023 KDYD WHITE ROCK MC (situated within Tenure 744542) is save and excepted from BARRIERE RIDGE claims; and is believed to be held by George Robert Mitchell (Free Miner 141118). This crown granted mineral claim was granted on January 1, 1921. MINFILE 082M066 WHITE ROCK is located within DL4023 KDYD WHITE ROCK MC.

The **HONEYMOON** claims are located 85 km northeast of Kamloops (pop. 85,000+), British Columbia between Spapilem Creek, the East Barriere Lake/River, Fennell Creek, Pass Lake, Honeymoon Creek, and Grizzly Creek along the west shore of Adams Lake. The onsite arterial access is via the East Barriere Lake Forest Service Road (FSR), Upper John FSR, Fennell FSR, Swale FSR, Honeymoon FSR, Honeymoon North FSR, Grizzly FSR, Spapilem FSR, and Teepee FSR.

The **BARRIERE RIDGE** claims are located 66 km NE of Kamloops, B.C. The claims are situated along the west shore of East Barriere Lake; along the south shore of North Barriere Lake; south of Birk Creek; and within the mid to lower elevations of Sprague Creek. The onsite arterial access is via the Barriere Lakes Public Road (PR), Fir PR, Russell FSR, the Birk FSR, Sprague FSR, Barriere Ridge North FSR, and Barriere Ridge South FSR.

In the 1980's, parts of BARRIERE RIDGE were optioned by Noranda Inc, Minnova Inc, Cyprus Anvil Mining Corporation, Falconbridge Limited, and others. Between 1984 - 1988, 20 diamond drill holes were completed for 2,195.98 metres (see spreadsheet in APPENDIX). In 1999, a portion of the HONEYMOON claims, the CAMGLORIA MINFILE 082M 266 was explored by Teck Corp. (G. Evans Dec 1999). In February 2008, the HONEYMOON CLAIMS were optioned by Acrex Ventures Ltd. (Acrex) of Vancouver, British Columbia. They dropped the option in the fall of 2008 due to the unprecedented global financial crisis and the lack of money to fund exploration. In November 12, 2010, Astral Mining Corporation optioned the HONEYMOON claims; and in March 2, 2011 they optioned the BARRIERE RIDGE claims. In February 2013, Astral was taken over by Orex Minerals Inc (Orex) of Vancouver, B. C. On February 28, 2013, due to the industry wide reduction in funding for junior mining companies, Orex dropped their option on the BARRIERE RIDGE claims. Orex still holds an option on the HONEYMOON claims. They are currently developing and reviewing exploration plans for the 2013 and 2014 field seasons

The primary objectives of the 2012 exploration program were as follows:

- (a) Confirm the published geological and geophysical mapping, and Regional (BSGS) Geochemical Survey results within the HONEYMOON and BARRIERE RIDGE claim area, in general terms. Where possible create a database.
- (b) Complete digital interpretation of Airborne Geophysics (see ARIS Report 33190) through Fugero.
- (c) Complete Preparatory Grid for proposed ground geophysical survey and geochemical survey, on selected areas.
- (d) Collect soil samples from proposed ground geophysical survey areas.

- (e) Prospect for precious metals, map outcrop locations, sample and assay float rock, as well as outcrops.
- (f) Locate the legal boundaries of the DL 4023 KDYD WHITE ROCK MC.
- (g) Locate the MINFILE occurrences, historic drilling, and other historic workings.
- (h) Locate the NSP (MINFILE 082M 127) occurrence (Tenure 673988) and compare mineralization to the Honeymoon Creek discoveries MAL001 MINFILE 082M-285 and MAL002 MINFILE 082M-289.
- (i) Report assay results from moss mats, stream sediments, float rock, channel samples and outcrops.
- (j) Prospect, collect, and report new data using grassroots and hand exploration techniques.
- (k) Propose new explorations works for the 2013 and beyond.
- (I) Contact, listen, liaise, and communicate with First Nations representatives.

<u>ILLUSTRATION #1:</u> Overview of HONEYMOON CLAIMS. Taken in a north easterly direction. Headwaters of MINFILE **082M-292 SPAPILEM CREEK:** (up to Au 6.01 g/t); MINFILE **082M-290 SPAPILEM GOLD100:** (up to Au 3.40 g/t) in the foreground; Honeymoon Cr. and Adams Lk (in fog) in background (100 3456.jpg).



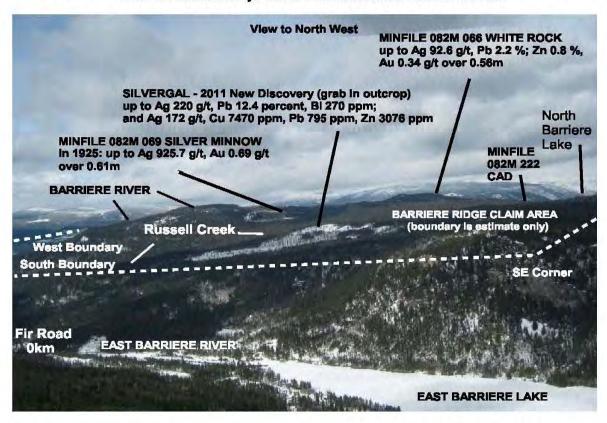
A. LOCATION, ACCESS, INFRASTRUCTURE, FACILITIES:

The City of Kamloops is located at the junction of the Trans Canada Highway (Hwy), Yellowhead Hwy (No. 5), Coquihalla Hwy, and Highway 97 which is the confluence of the South Thompson and North Thompson Rivers. The Village of Barriere is located 80 km north of Kamloops on the Yellowhead Hwy and is the nearest community to the HONEYMOON and BARRIERE RIDGE Claims. The southern (Agate Bay Public Road) and western routes (Barriere Lakes PR) from Barriere were used to access the HONEYMOON and BARRIERE RIDGE claims for this report. (See ILLUSTRATION #3 below and maps in APPENDIX).

<u>ILLUSTRATION # 2:</u> Overview of BARRIERE RIDGE claims. Showing MINFILE Occurrances and claim boundary. Taken in a northwesterly direction from the SW end of East Barriere Lake (mixturemarch162011014-0.jpg).

Photograph #1: Overview of BARRIERE RIDGE claims: Showing MINFILE Occurrances and claim boundary (estimated).

Taken in a northwesternly direction from the SW end of East Barriere Lake.



HONEYMOON: There are at least 5 access roads into the HONEYMOON claims as follows:

- 1. <u>SOUTHWEST ROUTE</u> (Adams West Forest Service Road)
 - Leaving Barriere (southwest route): Travel east from Barriere (paved) on the Agate Bay Public Road (PR) 20 km to the junction with the Adams West Forest Service Road (FSR) (gravel). This junction is at 18 km on the Adams West FSR. Turning left travel north up the Adams West Forest Service Road (FSR) from 18 Km.
 - To access Spapilem Creek (i.e. 673843, 606465, etc.) and the southwest corner of the claims turn left on to the Spapilem FSR at 33.0 km on the Adams West FSR; then stay to your right until you get onto the plateau.
 - To access Grizzly Creek (i.e. 672823, 673883, 673623, etc.) and the southeast corner of the claims turn left on the Grizzly FSR at 46 km on the Adams West FSR.
 - To access the lower portion of the north side of Grizzly Creek (i.e. 673903, 673923, 673943, 673963, etc.), which is along the east boundary, turn left on the Teepee FSR at 47 km on the Adams West FSR.
 - To access the east boundary, central part of the claims, Honeymoon Creek, and northeast corner of the claims (i.e. 673903, 673904, 673989, 838125, 838131, etc) turn left on the Honeymoon Main FSR at 48 km on the Adams West FSR.
 - To access the north east corner of the claims south of Honeymoon Creek (i.e. 673902, 673904, 838124, etc) turn left on the Honeymoon North FSR at 54 km.

There is a road radio frequency change at 37 km. Interfor South channel (FM 157.560) below 37 km and Interfor North Channel (FM 158.100) above 37 km.

Mineral Titles HONEYMOON BARRIERE RIDGE: ACCESS MAP 8211.054 82M 052 ez/v 051 AZIER SHEEKS 92P.049 Legend NEKALOSTON 2 BARRIERE RIDGE CLAIMS HONEYMOON CLAIMS 82M 034 Conservancy Areas 92P.040 Federal Transfer Lands 92P 039 BCGS Grid Annotation (1:250K) ADAMS LAKE Transportation - Points (1:250K) Airfield Anchorage - Seaplane BARRIERE LAKES PR RE RIVER 3A d2M 014 ADAMS WEST FSR BARRIERE 82M.01 92P.019 Transportation - Lines (1:250K) AGATE BAY PR 82M.003 82M 002 82M 001 92P 008 Scale: 1:428,975

ILLUSTRATION # 3: HONEYMOON and BARRIERE RIDGE area access map showing boundary and access roads.

2. NORTH WESTERN ROUTE: (North Barriere Forest Service Road)

Leaving Barriere travel east from Barriere on the Barriere Lakes PR (paved) for 20 km; then turn left onto the North Barriere PR (gravel) and continue onto the North Barriere Lake FSR (gravel). Follow-up the North Barriere Lake FSR in to the Fennell Creek area, and turn right on the Swale FSR (i.e. Tenure744982; 838100, 838132, 838127, etc.).

Also, this route can be taken right through to Adams Lake by continuing on the North Barriere Lake FSR until you join the Gollen Creek FSR, which ends on the Adams West FSR just north of HONEYMOON. Turn right (south) until you reach the Honeymoon Property (i.e. 741242). The northwest corner of the claims can be accessed (i.e. 838100, 838130, etc) by turning right off of the Fennell Creek FSR onto the Swale FSR.

WESTERN ROUTE: (East Barriere Lake Forest Service Road)

Leaving Barriere travel east on the Barriere Lakes PR (paved) for 20 km; then continue straight onto the East Barriere Lake PR (gravel); and the turn right onto to the East Barriere Lake FSR (gravel).

- Access to East Barriere River: Continue east on the East Barriere Lakes FSR passed East Barriere Lake (along the south side of the lake) and this will access 673906, 673990, 838127, 838129, 838137, etc.).
- Access to Upper John Creek: Continue east on the East Barriere Lakes FSR to 4.3 km; and turn right onto the Upper John FSR. Continue to the end of the Upper John FSR and access 606463, 606469, 673984, 673988, etc.).

4. NORTH EAST ROUTE: (from Clearwater/Vavenby)

Leaving Vavenby (northern route): Travel south on the Vavenby Adams FSR to the Adams West FSR; then stay right on the Adams West FSR until you reach the Honeymoon Property (i.e. 741242).

5. SOUTH ROUTE: (from Chase/Salmon Arm)

Leaving Chase, start at the Squilax Bridge on Trans Canada Hwy just east of Chase. Travel north over the Squilax Bridge and stay to your left on the paved road until you reach the Adams Lake Lumber Company Ltd. (Interfor) sawmill (on Adams Lake). The sawmill is located at the beginning of the Adams West FSR. Starting at zero km on the Adams West FSR, travel past the sawmill, and then north on the Adams West FSR to the junction with the Agate Bay PR at 18 km. Travel straight through the intersection to the HONEYMOON Claims as indicated above in SOUTH WEST ROUTE.

BARRIERE RIDGE: There is one main access road to the BARRIERE RIDGE claims as follows:

The Barriere Lakes PR was used to access these claims. The onsite access is via the Russell FSR, the Birk FSR, Sprague FSR, Barriere Ridge North FSR, and Barriere Ridge South FSR; as well as a number of related spur roads.

East Half of Claims:

Leaving Barriere travel east on the Barriere Lakes PR (paved) for 20 km (Zone 11 and 295678 E; 5681505 N); then continue straight onto the East Barriere Lake PR (gravel) for 3.5 km; and then turn left onto to Fir Road (Zone 11. 299226 E and 5681913 N). Within 100 metres you will encounter the Russell FSR #8534 at 0 km. The road radio frequency is FM 158.19.

West Half of Claims

Leaving Barriere travel east on the Barriere Lakes PR (paved) for 20 km (Zone 11 and 295678 E; 5681505 N); then turn left on the North Barriere Lake PR (gravel). Continue straight onto the North Barriere road (gravel) to

- 1 km North Barriere PR and turn right on the Barriere Ridge South FSR, or
- 4.0 km North Barriere PR and turn right on the Barriere Ridge North FSR, or
- 4.8 km North Barriere PR and turn left on the Sprague FSR #3410, or
- Estimate 7.0 km North Barriere PR and turn left on FSR 3400.18, or
- 8.0 km North Barriere PR and turn left on the Birk FSR at 8.0 km

B. PROPERTY STATUS:

The HONEYMOON and BARRIERE RIDGE claims are in good standing. The HONEYMOON claims have been optioned by David J. Piggin to Astral. Orex Minerals Inc. took over Astral in February 2013. The BARRIERE RIDGE claims are currently held by David J. Piggin.

C. PHYSIOGRAPHY AND CLIMATE:

The property is located within the Northern Wet-Belt Climatic Region and the North Wet-Belt Transition Climatic Region (Lloyd et al 1990). More specifically, they are within the Interior Cedar Hemlock (ICHmk2, ICHmw3, ICHmw2) Biogeoclimatic Zone (BGCZ), the Engelmann Spruce Sub-Alpine Fir (ESSFdc2, ESSFwc2) BGCZ, Interior Douglas-fir (IDFmw2) BGCZ, and the Montane Spruce (MSdm2) BGCZ.

In general terms, the Interior Cedar Hemlock (ICH) climate is continental dominated by easterly moving air masses, resulting in cool, wet winters and warm, moderately dry summers. Snow fall is moderate to high. Frost occurrences during the summer are uncommon.

- For the ICHmw2, the mean annual precipitation is 656 mm; and the mean snowfall is 252 cm (184 cm to 259 cm). The mean frost free period is 130 days.
- For the ICHmw3, the mean annual precipitation is 671 mm and the mean snowfall is 252 cm (211 cm to 287 cm). The mean frost free period is 127 days
- For the ICHwk1, the mean annual precipitation is 1044 mm and the mean snowfall is 411 cm (374 cm to 464 cm). The mean frost free period is 110 days.

The Engelmann Spruce Sub-Alpine Fir (ESSF) climate is a continental climate characterized by long, cold winters with high snow cover, and short cool summers. The snow pack reaches a maximum depth of 1 to 4 metres and remains until late May. Frosts are common and moisture deficits are uncommon during the growing season.

- For the ESSFdc2, the mean annual precipitation is 839 mm; and the mean snowfall is estimated to be 650 cm which is slightly greater than the ESSFdc1 at 635 cm.
- For the ESSFwc2, the mean annual precipitation is 1177 mm and the mean snowfall is 782 cm.

The Interior Douglas-fir (IDF) climate is continental characterized by warm dry summers, a relatively long growing season, and cool winters with a low to moderate snowfall.

• For the IDFmw2, the mean annual precipitation is 521 mm and the mean annual snow fall is 171 cm (137 cm to 202 cm). The mean frost free period is 139 days.

The Montane Spruce (MS) climate is cool, continental; and frost may be common during the growing season. Summers are moderately short and warm. Winters are cold with moderate snowfall.

• For the MSdm2, the mean annual precipitation is 606 mm; and the mean snowfall is 307 cm (216 cm to 398 cm). The mean frost free period is 85 days

The large body of water in Adams Lake, East Barriere Lake and North Barriere Lake may moderate the effects of the general climate conditions; and yet proximity of the Dunn Peak snow pack to BARRIERE RIDGE may also influence climatic conditions at Russell Creek and Sprague Creek especially in the spring and fall.

The property is tree covered and is extensively logged with numerous haul roads, spur roads, and skidder trails or dozer trails throughout. Harvesting is active at various locations on the Honeymoon Claims. Some of the oldest logging roads are brushing in and/or have immature trees growing on them.

The site characteristics are quite variable. The following is a brief summary of the general Physiography and Climate separated into two sections as follows:

- HONEYMOON (see also TABLE 1 below, and maps in APPENDIX B and C)
- BARRIERE RIDGE (see also TABLE 2 below, and maps in APPENDIX B and C).

HONEYMOON: The HONEYMOON claims are located in the lower to upper elevations on the north/west side of Adam Lake; in the headwaters of the East Barriere River; Pass Lake, on the east shore of East Barriere Lake, Spapilem Creek; Grizzly Creek, and in the lower reaches of Fennell Creek.

The east side the claims (i.e. 741242) are bounded by Adams Lake at 400 metres ASL and on the west side (i.e. 838134) at 1800 metres which is on the Spapilem Creek plateau. The highest point is located on Tenure 606463 at 1950 metres. The west side of the claims is at East Barriere Lake. The average elevation is about 1300 metres. In general terms, the aspect is east with north and south facing slopes in the east west flowing streams (i.e. Honeymoon Creek). West facing aspects are not common.

Slopes are gentle to moderately steep although some deeply gullied creek drainages (i.e. Grizzly Creek, Honeymoon Creek, Spapilem Creek, East Barriere River, Fennell Creek) have very steep gullied slopes at 50-80% plus, and include some high vertical rock faces (i.e. Grizzly, Honeymoon, Spapilem Creeks). The vertical rock faces and talus slopes are useful for prospecting and identifying rock units; and have been underexplored.

TABLE 1: HONEYMOON: Physiography and Biogeoclimatic Zones by Tenure Number. A summary of the aspect and elevation based on ARIS maps, and Biogeoclimatic Zone based on Lloyd et al 1990.

Tenure	Aspect	Mean	Elevation	Mean	Biogeoclimatic
Number		Slope	Range	Elevation	Subzone
		(%)	(metres	(metres	
			ASL)	ASL)	
606463	N, S, Flat	15	1550-1925	1775	ESSFwc2
606465	N	15	1450-1750	1500	ESSFwc2.
606467	E, S	35	1200-1700	1400	ESSFwc2; on west 1/3 and finger on center of north
					boundary; ICHmw3 on east 2/3.
606469	N, NW	25	650-1700	1100	ICHmw3 north 2/3; ICHwk1 north 1/3 except
					ESSFwc2 in SE corner and south boundary.
672823	E	15	850-1100	1000	ICHmw3;
673843	S	20	1350-1625	1475	ESSFwc2; with finger of ICHmw2 center of south
					boundary.
673864	N, S, Flat	15	1450-1825	1725	ESSFwc2
673883	SE	15	600-1325	1150	ICHmw3.
673903	SE	20	450-1125	800	ICHmw3;
673904	SE, Flat	15	750-1125	950	ICHmw3;
673906	S	25	675-1350	850	ICHmw3;
673923	SE	20	450-1100	900	ICHmw3; IDFmw3 on SE corner.
673943	SE, NE	15	875-1225	1150	ICHmw3;
673963	SE	15	1075-1350	1275	ICHmw3;
673983	SE	20	500-1325	1000	ICHmw3; IDFmw2 in sliver along east boundary.
673984	N, NE	45	1150-1700	1350	ESSFwc2 south 1/3; ICHwk1 north 2/3 except for
					sliver of ICHmw3 on north boundary.
673985	SE	15	1150-1550	1400	ICHmw3; except ESSFwc2 on NW corner.
673986	S, SE	10	1325-1650	1525	ESSFwc2; except ICHmw2 on east boundary and SE
					corner.
673987	NE, SE, Flat	10	1475-1700	1625	ESSFwc2
673988	N	30	1025-1550	1350	ESSFwc2 on south 1/3; ICHwk1 on center 1/3;
					ICHmw3 on north 1/3.
673989	Ε,	15	1150-1425	1300	ESSFwc2 finger on SW corner and center; ICHwk1
					finger on west boundary; ICHmw3 east 1/2 and SW
					corner.
673990	S	30	700-1200	950	ICHmw3; ICHwk1 sliver on along south boundary.
741242	E, SE	20	450-925	700	ICHmw3
744982	E, SE	45	780 – 1450	1100	ICHmw3; ICHwk1 finger center/west boundary;
					ESSFwc2 finger NW corner.
838100	N	35	750-1350	1200	ICHmw3; except ESSFwc2 sliver touching
					center/west boundary
838124	N, S	45	550-1175	900	ICHmw3
838125	NW, SE	40	775-1250	950	ICHmw3.

838126	NE, SW	35	775-1325	1000	ICHmw3; except ICHwk1 sliver in SW corner.
838127	S, N	25	775-1150	950	ICHmw3.
838129	S, N	15	750-1125	900	ICHmw3.
838130	N, SW, Flat	20	750-1550	1100	ICHmw3; except ESSFwc2 NE corner.
838131					ICHmw3; except ESSFwc2 NE corner and center of
					north boundary.
838132	S	20	950-1500	1125	ICHmw3; except ESSFwc2 in sliver on NE corner.
838133	N	15	1450-1825	1600	ESSFwc2
838134	N, S, Flat	15	1325-1800	1700	ESSFwc2; and sliver of ICHwk1 in NW corner.
838136	N, S, Flat	15	1050-1600	1100	ICHmw3 north 2/3; ICHwk1 south 1/3 except for
					sliver of ESSFwc2 in SE corner.
838137	N, S	30	650-1325	900	ICHmw3
838138	N, S, Flat	35	800-1550	1300	ICHmw3; with ESSFwc2 in center on elevated
					ground.
838139	S, N, Flat, E	15	1200-1850	1700	ESSFwc2; and ICHmw3 along east boundary.
838141	NW	40	850-1625	1300	ICHmw3; with ESSFwc2 in SW corner.
838142	SW	15	1300-1550	1375	ICHmw3 on SW 1/2; ESSFwc2 on NE 1/2.
848330	NW	30	650-1375	1000	ICHmw3
848331	NW	35	700-1800	1150	ICHmw3; ICHwk1, EESFwc2

BARRIERE RIDGE:

The BARRIERE RIDGE claims are located along the lower slopes [of the mid-portion] of the Barriere River and East Barriere River; as well as the lower to upper elevations of Russell Creek, Sprague Creek; on the northwest side of East Barriere Lake, and on the southwest side of North Barriere Lake. In general terms, the aspect is south. In the main Barriere River valley (towards North Barriere Lake) the aspect is north, southeast, and northwest. The average elevation is about 1100 metres.

The claims are bounded on the east side (i.e. 840418) by East Barriere Lake at 700 metres and on the west side (i.e. 844643) at 1425 metres which is on the Birk Creek plateau. The north boundary is bounded (i.e. 840413) by Birk Creek, Harper Creek, and North Barriere at about 700 metres. The south boundary is bounded by the main Barriere River valley at about 800 metres. The highest point is located in the eastern half of the claims on the northwest corner of the west boundary of Tenure 844643 at 1425 metres.

Slopes are gentle to moderately steep; and are very steep in the vicinity of Tenure 744542, 840411, 840413, 840415, and 844645. Sprague Creek draw and lower portion of Russell Creek are deeply gullied. There are numerous vertical rock faces and talus slopes at Tenure 767123, 840411, 744542. These rock faces are useful for prospecting and identifying rock units; and have been underexplored.

TABLE 2: BARRIERE RIDGE **Physiography and Biogeoclimatic Zones by Tenure Number**. A summary of the aspect and elevation based on ARIS maps, and Biogeoclimatic Zone classification in based on Lloyd et al 1990.

Tenure Number	Aspect	Mean Slope (%)	Elevation Range (metres ASL)	Mean Elevation (metres ASL)	Biogeoclimatic Subzone
744542	NW, SE	45	625-1375	1200	ICHmw3.
744562	S	20	700-1275	1050	ICHmw3.

744582	S, N, Flat	15	725-1250	1150	ICHmw3.
744602	S	15	850-1200	1050	ICHmw3.
759003	E, NW, Flat	20	1150-1375	1300	ICHmw3.
767042	Mainly NW	25	700-1350	1200	ICHmw3.
767062	SW, Flat, SE	15	975-1300	1125	ICHmw3.
767102	SW, S, SE	40	850-1325	1150	ICHmw3.
767123	S, SE	25	750-1250	1025	ICHmw3.
840411	W, NW	50	600-1375	900	ICHmw3.
840413	N, NW	60	625-1100	800	ICHmw3.
840415	S, SW	35	625-1050	850	ICHmw3; IDFmw2 on SW corner.
840417	SE, Flat, N	25	925-1275	1175	ICHmw3.
840418	SE	40	625-1200	900	ICHmw3.
844642	SE	25	600-1175	800	ICHmw3.
844643	SE	40	875-1450	1250	ICHmk2 on west half; ICHmw3 on eastern ¼; ESSFdc2 in the NW corner.
844644	E, SE	40	600-1475	1100	ICHmk2 on west half; ICHmw3 on east half; IDFmw2 in center of south boundary; ESSFdc2 in the NW corner.
844645	SE, S, NE	45	600-1250	900	IDFmw2; ICHmw3 on eastern 1/4; MSdm2 in NW corner and SW corner.
844646	E, SE, Flat	15	575-1125	875	IDFmw2; MSdm2 in NW corner; ICHmw3 in NE corner
844647	E, S	30	700-1025	900	IDFmw2.

D. LOCAL INFRASTRUCTURE: (HONEYMOON and BARRIERE RIDGE)

The following is a brief summary of the local infrastructure:

- 1. Deep Sea Port: The nearest deep sea port is at Vancouver, B.C. about 350 km southwest of Kamloops.
- 2. <u>Railroad</u>: The Canadian National Railway (CNR) mainline goes through the community of Barriere (on the Yellowhead Hwy) about 20 km west of BARRIERE RIDGE and only 35 km west of HONEYMOON. The CNR mainline goes through Kamloops.

The Canadian Pacific Railway (CPR) mainline goes under the Squilax Bridge on the Trans Canada Hwy approximately 55 km south of HONEYMNOON. The CPR passes through Kamloops, and Chase.

- 3. Utility Distribution Lines:
 - HONEYMOON: To Southeast Corner (Tenure 673983): A power distribution line runs from 18 km on the Adams West FSR to 39.5 km on the Adams West FSR about 5 to 10 km south of the claims.
 - HONEYMOON: To West Boundary: A power distribution line runs from along the East Barriere Lakes FSR up to 10 km. This is about 10 km from the main body of the claim group; and only 2 km from tenures 848330, and 848331.
 - BARRIERE RIDGE: A power distribution line runs from Barriere 20 km along the Barriere Lakes PR and within 1 to 2 km of the claim boundary.
 - Telephone/Cellphone: There is cell phone service in Kamloops, Barriere and Chase but there is no cellphone service from the claim areas.
 - BARRIERE RIDGE: There is land line telephone service to homes along the south boundary.
 - O HONEYMOON: Southeast Corner (Tenure 673983). There is a telephone line up to about 21 km on the Adams West FSR where a cellphone relay is set up for the logging camp at Brennan Creek Camp (about 35 km). The Agate Bay Resort located on Adams Lake at 18 km has telephone service.

 West Boundary (Tenure 838137). There is telephone service to about 10 km on the East Barriere FSR on the south side of East Barriere Lake.

- 4. <u>Commercial Resort</u>: HONEYMOON: The Agate Bay Resort on Adams Lake (cabins and trailer facilities) is open in the summer months. It is uncertain if is open in the winter months. It is located at the junction of the Agate Bay PR and 18 km on the Adams Lake FSR. BARRIERE RIDGE: The private East Barriere Resort is accessed by the Russell FSR (turn off about 2 km); and there is a public resort on the north shore of North Barriere Lake.
- 5. <u>Forest Service Recreation Sites</u>: BARRIERE RIDGE: There is a public recreation site on the west end of East Barriere Lake immediately adjacent to Tenure 767123; and also on the north shore of North Barriere Lake.
- 6. <u>Community Recreation</u>: BARRIERE RIDGE, there is a community recreation site south of Tenure 844647 on the Barriere Lakes PR.
- 7. <u>Roads and Logging Companies:</u> The Thompson Rivers Forest District administers forest tenures in the claims area (250-371-6500).

<u>HONEYMOON</u>: The primary FSR roads are the East Barriere, North Barriere, Fennell, Honeymoon, and Adams Lake West. These roads are maintained to a high standard, where practicable are almost 1.5 to 2 lanes wide, and during logging operations may be ploughed in the winter. The Adams West FSR, which is located on the west side of Adams Lake along the full length of the lake, is an arterial logging road and is ploughed all winter. The East Barriere, North Barriere, and Swale FSR access the HONEYMOON claims from the west and northwest; and are arterial roads and the lower portion of these roads may be ploughed in the winter time.

The Adams West FSR and related secondary roads are maintained by Adams Lake Lumber Co. Ltd (a division of International Forest Products Ltd.) from their Forestry Office and Sawmill at the south the south end of Adams Lake (phone: 250-679-3234, fax: 250-679-3545).

The East Barriere FSR and North Barriere FSR and related secondary roads are maintained by Tolko Industries Ltd a Heffley Division (phone: 250-578-7212, fax: 250-578-8655), as well as other tenure holders. The major secondary FSR logging access roads within the claim area are the Honeymoon Main, Honeymoon Connector, Honeymoon North, Teepee, Grizzly, Spapilem, Upper John, Lower John, East Barriere, and Swale are in good condition and are usually well maintained. They may not be ploughed in the winter time; and in some cases have waterbars which a passable by pickup truck.

<u>BARRIERE RIDGE</u>: Tolko Industries Ltd of Kamloops is a major forest licencee in the Sprague Creek and Birk Creek areas; and the BC Timber Sales Program, Kamloops Timber Sales Office (250-371-6500) is the major licencee harvesting timber from the Russell Creek area.

The primary roads are the East Barriere and North Barriere roads. These roads are maintained to a high standard, where practicable are almost 2 lanes wide, and are ploughed in the winter. The Russell FSR and Sprague FSR are one lane wide and are not ploughed unless there is active logging on the road system. The Russell FSR is maintained by the BC Timber Sales Program; and the Sprague FSR is maintained by Tolko Industries Ltd

- 8. <u>Logging Camp</u>: HONEYMOON: Adams Lake Lumber Co. Ltd (International Forest Products Ltd.) has a permanent logging camp at about 37 km on the Adams West FSR.
- 9. <u>Sawmill</u>: Adams Lake Lumber Co. Ltd (International Forest Products Ltd.) has a large scale sawmill at 0 km on the Adams West FSR 45 km south of the HONEYMOON claims. Tolko Industries Ltd has veneer (plywood) operation at Heffley Creek (north of Kamloops) on the Yellowhead Highway.
- 10. Logging Road Frequencies:
 - Adams Lake FSR from 0 to 37 km FM 157.560 (Interfor South)
 - Adams Lake FSR from 37 to the north FM 158.100 (Interfor North)
 - East Barriere Lake FSR and North Barriere Lake FSR FM 158.19 (Tolko)

11. Emergency Facilities:

- There is a full service hospital with emergency facilities (heliport) in Kamloops including police, and search and rescue. There is an ambulance, clinic, and police station in Barriere and Chase. Active logging operations will have industrial first aid attendants on site.
- 12. <u>Education</u>: There is school, Brennan Creek Elementary School, at 34.5 km on the Adams Lake FSR adjacent to the Brennan Creek Logging Camp, and Sandy Point Recreation Site. There are schools in Kamloops, Barriere and Chase. Thompson Rivers University in Kamloops has various degree programs; and has a geology faculty.
- 13. <u>Residential Garbage Disposal</u>: There is also a Thompson Nicola Regional District (TNRD) garbage pickup site at 20 km on the Adams Lake FSR. At Barriere there is a Thompson Nicola Regional District (TNRD) garbage dump which is located 5 km east of Barriere on the Barriere Lakes PR.

E. HISTORY:

The following section is divided into 5 parts as follows: Past Producers and Producers, Advanced Development Projects, MINFILE occurrences, Assessment Reports, Prospector Assistance Program Reports, Historic Drill Results, and Regional Surveys. Where appropriate these sections are separated for HONEYMOON and BARRIER RIDGE.

- Past Producers and Producers
- 2. Advanced Development Projects
- 3 HONEYMOON: MINFILE Occurrences, Assessment Reports, Historic Drilling, Prospector Assistance Program.
- 4. BARRIERE RIDGE:MINFILE Occurrences, Assessment Reports, Historic Drilling, Prospector Assistance Program.

1. Past Producers and Producers:

Three historic past producer mines are located in the immediate vicinity of the HONEYMOON and BARRIERE RIDGE claims and they are as follows:

- Samatosum Mountain (MINFILE 082M-244) located 12 km to the south (Table 3).
- Homestake Mine (MINFILE 082M-025) located 16 km to the south (Table 4).
- Windpass Mine (MINFILE 092P039) located 16 km to the northwest (Table 5).

Table 3: Samatosum Mountain (MINFILE 082M-244) recovery table.

1989 to 1992	Metric	Imperial
Silver	429,356,776 grams	13,804,121 ounces
Gold	639,118 grams	20,548 ounces
Copper	3,678,016 kilograms	8,108,635 pounds
Lead	5,069,127 kilograms	11,175,509 pounds
Antimony	97,620 kilograms	215,215 pounds
Zinc	9,538,263 kilograms	21,028,264 pounds

Table 4: Homestake Mine (MINFILE 082M-025) recovery table.

1926 to 1941 (intermittent)	Metric	Imperial
Silver	7,750,829 grams	281,345 ounces
Gold	11,259 grams	362 ounces
Copper	9,138 kilograms	20,146 pounds
Lead	141,295 kilograms	311,502 pounds
Zinc	203,310 kilograms	448,222 pounds

Table 5: Windpass Mine (MINFILE 092P-039) recovery table.

1916 to 1944 (intermittent)	Metric	Imperial
Silver	93,435 grams	1,886 ounces
Gold	1,071,684 grams	37,798 ounces
Copper	78,906 kilograms	173,956 pounds
Mined	93,435 tonnes	102,965 tons
Milled	73,319 tonnes	80,798 tons

From a regional perspective (within 150 km radius):

- The **AFTON MINE** (Teck Corp) near Kamloops, a former producer, is 80 km to the southwest. This mine was in production for 20 years.
- New Gold Inc.'s New Afton Project (www.newgold.com) 10 km south of Kamloops recently started production. The mine is being developed for underground block cave at 11,000 tonnes per day. The proposed average annual production will be 120,000 tonnes of concentrate containing 85,000 ounces of Au, and 75 million pounds of Cu. Proven and probable reserves are Au = 1.05 million ounces, Cu = 993 million pounds, Ag 3.1 million ounces.
- The HIGHLAND VALLEY COPPER (Teck Resources Ltd 97.5%) near Logan Lake, is located 120 km southwest of BARRIERE RIDGE. This mine is the largest mine in Canada and produces Cu and Mo. A total of 42,488,000 tonnes were milled in 2010. The mine is expected to close in 2025.

2. Advanced Development Projects: (within 150 km)

From a regional perspective, within 150 km of the HONEYMOON and BARRIERE RIDGE there are a number of active advanced development projects as follows:

The Harper Deposit (MINFILE 082M 009) 20 km to the north, is currently being developed by Yellowhead Mining Inc. of Vancouver (www.yellowheadmining.com) and they have identified a 43-101 compliant resource of over 569 million tonnes grading Cu 0.32% and an inferred resource of 62.7 million tonnes grading Cu 0.33%. Preliminary economic assessments, environmental assessment processes, geotechnical and hydrogeological studies, and First Nations studies are currently underway. Drilling is ongoing.

Abacus Mining and Exploration Corp (www.amemining.com) and KGHM AJAX Mining Inc have a joint venture at the new AJAX deposit which is beneath the former AJAX PIT at the AFTON MINE (Teck Corp) just south of Kamloops. This joint venture is currently in various environmental assessment and permitting processes. A recent Ni-43-101 compliant Preliminary Economic Assessment Report (June 22, 2009) indicated the Ajax copper-gold project proposes a 60,000 tonne per day operation producing an average of 110 million pounds of Cu and 100,000 ounces of Au in concentrate per year. Preliminary economic assessments, environmental assessment processes, geotechnical and hydrogeological studies, First Nations studies, and drilling are currently underway

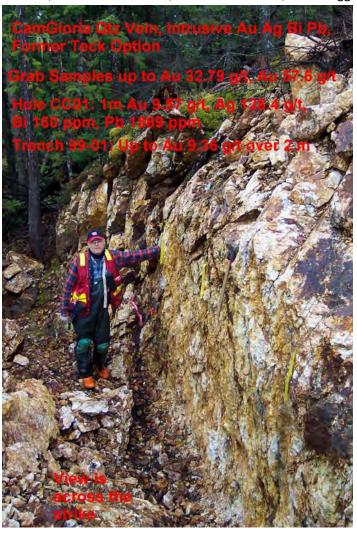
3. HONEYMOON:

The early history of exploration in the area is not well known although historic placer mining was done on Spapilem Creek. The history of the HONEYMOON claims is given here in the following sections: MINFILE Occurrences and Showings, ARIS Reports, Historic Drilling, and Prospector Assistance Program (Grants).

- (a) MINFILE Occurrences and Showings: A number of MINFILE occurrences are described as follows:
- NSP MINFILE 082M-127: This occurrence is apparently located within Tenure 673988. Bruce Madu, P.Geo. Ministry of Natural Resource Operations advised this was a Noranda Inc. option from the 1970's and no exploration data was on file. The occurrence has not been located to date. There is a need to compare the NSP to the newly discovered MAL001 and MAL002 showings south of Honeymoon Creek.

- CAM-GLORIA MINFILE 082M-266: Portions of Tenures 672823 and 673883 were part of the CAM-GLORIA PROPERTY which was optioned to Teck Corp. by Camille Berube (prospector). This work was reported in BC Assessment Report 26216 (G. Evans Dec 1999) drill hole CC99-01: Au 9.57 g/t, Ag 128.4 g/t, Bi 160 ppm, Pb 1896 ppm over 1 metre; and in Trench 99-01 Au 9.36 g/t over 2 metres.
 - o The GPS coordinates in the MINFILE database were not correct. The GPS coordinates for 082M 266 are as follows: NAD 83 Zone 11: 321533.506E and 5680511.058N.

ILLUSTRATION #4: CAMGLORIA, MINFILE 082M 266; Berube Trench #2; David Piggin sampling. (100_1348.jpg).



<u>LUCKY BEAR MINFILE 082M-275 (Au Bi, minor W])</u>: - Located in Tenure 673906 and it was discovered by Camille Berube, David Piggin and Len Piggin. See also Cathro and Lefebure 1999. Intrusive gold in a granodiorite host with vertical quartz veins and pyrrhotite. Best results:

06394 LITSEC – Au 1.30 g/t; Bi 115 ppm; Cu 166 ppm; massive pyrrhotite in quartz vein. 06395 LITTA – Au 1.38 g/t; Bi 130 ppm; Cu 171 ppm; semi-massive pyrrhotite in quartz vein.

HONEYMOON DISCOVERY – MAL001 MINFILE 082M-285 and MAL002 MINFILE 082M-289:

Cu Ag in paragneiss located in Tenure 673903. They were discovered Lorne Warner, P.Geo., and David Piggin in 2006. See Photographs # 4 and #5. The best result was:

MAL1Q1 – Cu 0.78 %; Ag 35.3 g/t; Mo 11 ppm MAL1D – Cu 0.64 %, Ag 34.8 g/t, Mo 25 ppm.

MAL1G – Cu 0.86 %, Ag 5.88 g/t, Mo 11 ppm. MAL1RE – Cu 0.62 %, Ag 33.1 g/t, Mo 54 ppm.

 SPAPILEM CREEK MINFILE 082M-292 (Au Bi) and SPAPILEM GOLD100 MINFILE 082M-290: New discoveries by David Piggin in an intrusive gold/quartz vein within 673864. Quartz veins associated with magnetite. Best results:

SPAPILEM CREEK (aka SPAPGOLD)

Quartz vein with sulfides and magnetite – Au 1.29 g/t; Bi 60 ppm; Fe>10%, Mo 10 ppm; Ti 0.15% Magnetite (next to quartz vein) –Au 6.01 g/t; Bi 165 ppm; Fe>10%; Mo 20 ppm; Ti 0.29% **SPAPILEM GOLD 100** (100 metres along road, east of SPAPILEM CREEK MINFILE 082M-292): Quartz vein with magnetite— Au 3.4 g/t

Host granite with quartz and magnetite- Au 2.60 g/t, As 25 ppm, Fe 6.74 %, S 1.04 %, W 10 ppm Soils – up to Au 4565 ppb, Ag 0.4 ppm, As 20 ppm, Mo 3 ppm.

<u>ILLUSTRATION #5</u>: SPAPILEM CREEK MINFILE 082M-292 gold showing (up to Au 6.01 g/t). Taken from the center of the road facing north. (IMG_1486.JPG). Quartz vein is in center of picture with geotul.



In the interest of brevity; and for detailed information on these MINFILE occurrences refer to the following government website: http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/MINFILE/Pages/default.aspx

- **(b)** Assessment Reports: The following Assessment Reports were completed on the HONEYMOON Claims:
 - 02654 Royal Canadian Ventures Ltd., N.B. Vollo, P.Geo., October 8, 1970, \$19,542.50
 - 06473 Marston Fennell, Prospector, 1977, no cost given, 19 days, estimate \$3,800.00
 - 26215 Teck Corp., Graeme Evans, P.Geo., December 1999, \$92,851.70
 - 29378 David J. Piggin, Prospector, July 4, 2007, \$ 6,375.11
 - 29407 David J. Piggin, Prospector November 18, 2007, \$11,040.10
 - 29569 David J. Piggin, Prospector, August 26, 2007

- 29709 David J. Piggin, Prospector, December 20, 2007, \$ 7037.87.
- 29960 David J. Piggin, Prospector, March 1, 2008, \$25,177.09
- 30869 David J. Piggin, Prospector, June 2, 2009, \$ 29,959.06
- 32076 Astral Mining Corporation, David J. Piggin, June 7, 2011, \$78,250.27
- 33190 Astral Mining Corporation, David J. Piggin, July 18, 2012, \$ 344,154.71 (HONEYMOON \$216,077.90 and BARRIERE RIDGE \$128,076.81)
- (c) **Historic Drilling:** This is a brief summary of Assessment Report 26215 by Graeme Evans of Teck Corp (Dec 1999). In 1999, TECK Corp. drilled 7 NQ holes for a total of 836 metres, and 149 core samples were split and analyzed for gold and 30 element ICP. The drilling tested only the core area for continuity of the main vein area for layout. In addition to this they constructed 13 trenches, totaling 390 lineal metres, and pits. Ground geophysics was also done.

The following is an overview of their 1999 trenching and drilling results:

- (i) Trench 99-01: Up to 9.36 g/t Au over 2.0 metres. Main vein averages 5.2 metres wide at surface and is typically milky with quartz vein with minor hematite on fractures. Sample #5220 with 1 m interval: 17.62 g/t Au, 66.2 g/t Ag, 745 Bi, 1372 Pb.
- (ii) Trench 99-02: Sample #5233 2.65g/t Au, Sample #5234 7.12 g/t Au.
- (iii) Hole CC99-01: Drilled below Trench 99-01. Encountered the main vein (10.7 metres) and its altered structure (33 metre interval). Suggests 60 degree dip to the NW. Sulphide rich upper portion of contained a 1 meter section 9.57 g/t Au, 128.4 g/t Ag, 160 ppm Bi, 1896 ppm Pb.
- (iv) Hole CC99-03: Tested the down dip of Berube Trench #2 on the thickest part of the vein. Intersected 7.3 meter interval of the main vein within a 27.9 metre interval of altered shear zone. The highest value was 1.1 metres grading 0.685 g/t Au, 8.6 g/t Ag, 25 ppm Bi, and 376 ppm Pb.
- (d) Prospectors Assistance Program Grants: In 1998, 1999, and 2000, the area was prospected by Camille Berube, David Piggin, and Len Piggin using prospector assistance grants as follows: 1998-23 (C. Berube); 1998-43 (D. Piggin, 1999-2 (C. Berube); 2000-22 (L. Piggin). The link to the Prospectors Reports is as follows: http://www.empr.gov.bc.ca/Mining/Geoscience/PropertyFile/Pages/ProspectorsReports.aspx

4. BARRIERE RIDGE:

The early history of exploration in the area is not well known although a number of references were found in the Ministry of Mines Annual Report from 1924, 1925, 1926, 1927 and 1928 (Bruce Madu, pers. comm. 2011); and in the Ministry of Energy and Mines MINFILE (www.empr.gov.bc.ca/mining/geoscience/minfile/Pages/default.aspx) information system.

(a) MINFILE Occurrences and Showings:

Within the outer boundary of the BARRIERE RIDGE claims there are 3 MINFILE occurrences and one showing as follows: MINFILE 082M 066 WHITE ROCK (with DL4043 KDYD WHITE ROCK MC)

MINFILE 082M 069 SILVER MINNOW (aka SILVER MINERAL);

MINFILE 082M 222 CAD SILVERGAL SHOWING

• **DL4043 KDYD WHITE ROCK MC**, which contains MINFILE 082M 066 WHITE ROCK, is save and excepted from the BARRIERE RIDGE Claims because it is a crown granted mineral claim and it is owned by a third party George Robert Mitchell. The Crown Grant was made on January 1, 1921. The history of the BARRIERE RIDGE claims is given here in the following sections: MINFILE Occurrences, ARIS Reports, Historic Drilling, and Prospector Assistance Program (Grants).

DL4023 KDYD WHITE ROCK MC is immediately adjacent to SILVER MINNOW, and is geologically relevant to the BARRIERE RIDGE claim group. Therefore it is included here even though it is not within the claim group. The following is a brief description of each of the above 3 MINFILE occurrences as well as some important historic descriptions. Refer to the MINFILE website for more specific references and information; also Assessment Report 32383 and 33190 by David J. Piggin and Astral Mining Corporation..

MINFILE 082M 066 WHITE ROCK (with DL4043 KDYD WHITE ROCK MC)

The WHITE ROCK showing is described as epigenetic hydrothermal polymetallic veins Ag-Pb-Zn+/-Au; and with a vein/stockwork character. The significant minerals are galena tetrahedrite, sphalerite, and chalcopyrite; and it is associated with quartz, calcite, azurite and malachite. The MINFILE indicates a "56 centimetre sample assayed 2.2 percent lead, 0.8 percent zinc, 92.6 grams per tonne silver and 0.34 grams per tonne gold (Annual Report 1950").

<u>ILLUSTRATION #6</u>: : Entrance (apron area) leading into the **WHITE ROCK #1 ADIT** referred to as **MINFILE 082M 066 WHITE ROCK (with DL4043 KDYD WHITE ROCK MC).** David Piggin in picture is 180 cm tall and photo is shot in an easterly direction from the entrance apron. A mine car rail is shown in the foreground. DL 4043 KDYD is save and excepted from

the BARRIERE RIDGE claims (MVI_0330.jpg):



<u>ILLUSTRATION #7</u>: Partially buried entrance to **WHITE ROCK #2 ADIT** within DL4043 KDYD WHITE ROCK MC but on the boundary with BARRIERE RIDGE. Judy Burr is pointing to galena/silver mineralization (162 cm tall). Photo is shot from the

road in an easterly direction (IMG_3941.jpg):



<u>ILLUSTRATION #8</u>: WHITE ROCK #2 ADIT within DL4043 KDYD WHITE ROCK Judy Burr is pointing to galena/silver mineralization. Photo is shot from the road in an easterly direction (IMG_3942.jpg):



• MINFILE 082M 069 SILVER MINNOW (aka SILVER MINERAL): The SILVER MINNOW is described as epigenetic hydrothermal polymetallic veins Ag-Pb-Zn+/-Au; and with a vein character. The significant mineral is galena; and it is associated with quartz and calcite. In 1925 a sample assayed Ag 925.7 grams per tonne and Au 0.69 grams per tonne. Refer to the MINFILE website for more specific references and information; and also Assessment Report 32383 and 33190 by David J. Piggin and Astral Mining Corporation. In 2011, Sample 10E41181 SMQCH7 Ag 171 ppm; Pb 14.4 percent; Zn 6490 ppm (over 1 m). The SILVER MINNOW is located just south of the southeast corner of DL 4023 KDYD WHITE ROCK MC in an area of large quartz veins.

<u>ILLUSTRATION #9</u>: : Entrance (apron area) leading into the re-discovered **SILVER MINNOW ADIT ONE** referred to as **MINFILE 082M 069 SILVER MINNOW (aka SILVER MINNERAL).** Judy Burr in picture is 162 cm tall and photo is shot in a

northerly direction from the donkey trail. (excerpt MVI_0330.jpg):



<u>ILLUSTRATION #10</u>: : SILVER MINNOW ADIT ONE referred to as MINFILE 082M 069 SILVER. Judy is pointing to semi-massive galena/silver mineralization at the contact between the EBG on the right; and on the left a large near vertical (5.8m wide) quartz veins on the left. The contact is near vertical but dipping down to the south. The adit is believed to be buried in earth fill under Judy's feet (162 cm tall). The photo is shot in a NE direction. (excerpt MVI_0330.jpg):



<u>ILLUSTRATION #11</u>: : Galena and silver mineralization from a channel sample at <u>SILVER MINNOW ADIT ONE:10E41181 SMQCH7 - Ag 171 ppm; Pb 14.4 percent; S 2.27 percent; Sb 198.5 ppm; Te 30.4 ppm; Zn 6490 ppm over 1m. Location: MINFILE 082M 069 SILVER MINNOW (aka SILVER MINERAL). In the background is the contact between the EBG on the right 30% of photo; and on the left the EBGt left 70% of photo. (IMG_0522.jpg):</u>



MINFILE 082M 222 CAD

The CAD is described as epigenetic polymetallic veins Ag-Pb-Zn+/-Au; and with a vein character. Significant minerals are pyrite, sphalerite, and galena; and associated with quartz and calcite. The alteration type is chloritic. Assessment Report 13168 reported Ag 15.6 grams per tonne, Pb 0.04 percent, Zn 1.2 percent over 10 cm vein width.

A number drilling programs occurred at CAD and the drill holes are summarized in a spreadsheet within the APPENDIX.

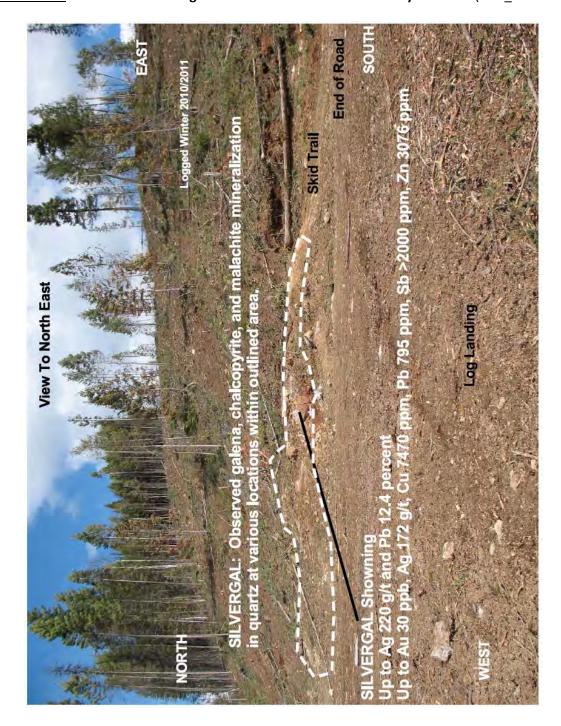
• **SILVERGAL SHOWING**: The SILVERGAL was discovered by David J. Piggin for Astral Mining Corporation in 2010 and reported in Assessment Report 32383. The SILVERGAL reported as follows:

TABLE 6: SILVERGAL - Selected Rock Anomalies For Selected Elements):

SILVERGAL Showing: Outcrop on log landing with quartz/limestone with galena, silver, chalcopyrite, malachite		
10E41157 BR11Q9C	Ag 220 g/t, Pb 12.4 percent, Bi 270 ppm, Cr 202 ppm, S 1.69 percent,	
ISE HIER BRIDGE	Se 110 ppm	
10E41157 BR11Q9C	Ag 220 g/t, Pb 12.4 percent, Bi 270 ppm, Cr 208 ppm, S 1.78 percent,	
repeat	Se 110 ppm	
10E41157 BR11Q9C	Ag 220 g/t, Pb 12.4 percent, Bi 285 ppm, Cr 226 ppm, S 1.80 percent,	
repeat	Se 120 ppm	
	Au 25 ppb, Ag 172 g/t, As 600 ppm, Cu 7470 ppm, Pb 795 ppm, Sb >2000 ppm, Zn 3076	
10E41160 BR11Q9D	ppm	
10E41160 BR11Q9D	Au 30 ppb, Ag 172 g/t, As 600 ppm, Cu 7470 ppm, Pb 795 ppm, Sb >2000 ppm, Zn 3076	
repeat	ppm	
10E41158 BR11Q9A	Au 20 ppb, Ag 5.8 g/t, Bi 5 ppm, Cr 232 ppm, Pb 2250 ppm	
10E41172 BR11-104	Ag 27.2 ppm g/t, Cu 244 ppm	
10E41174 BR11-106	Ag 6.8 ppm, Ca > 10 percent, Cu 428 ppm, Mg 8.88 percent, P 1080 ppm, Sb 245 ppm,	
	Zn 176 ppm	

<u>ILLUSTRATION # 12</u>: SILVERGAL showing close-up galena in sample 10E41160 BR11Q9D (IMG_3695a.JPG).





(b) Assessment Reports: There are at least 19 Assessment Reports within located within the BARRIERE RIDGE boundary, based on the Assessment Report Information System (ARIS). In the interest of brevity a detailed discussion of the results of the work is not included in this report. The reports can be downloaded from the following website if additional information is required. http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx

The following is a complete list of these 21 ARIS reports:

- 03350 Duncanex Resources., B.J. Price and JR. Woodcock., September 27, 1971, \$ 9,989.77
- 05363 Richard A. Rabbitt, D.L. Rabbit, 1974 \$ 2,200.40

- 08210 Cyprus Anvil Mining Corporation, B.V. Hall and P.E. Walcott, July 11, 1980, \$ 10,190.93
- 12847A Noranda Exploration Company Limited, G. Shevchenko, February 1985 \$ 7,059.07
- 12847B Noranda Exploration Company Limited, L. Bradish, December 1984 \$ 19,215.00
- 13168 J.D. Graham & Noranda Exploration Company Limited, R.G. Wilson, December 1984, \$15,974.38
- 13207 Racer Resources Ltd (Ashton & Graham), J.D. Blanchflower, December 4, 2011, \$ 24,301.05
- 13297 Mammoth Resources Limited, G.J. Dickie and G.D. Hodgson, November 1984, \$12,025.00
- 13793 Racer Resources Ltd (Ashton & Graham), J.D. Blanchflower, July 25, 1985, \$8,625.65
- 14123 J.D. Graham and Taywin Resources Ltd,), J.D. Blanchflower, September 19, 1985, \$18, 635.18
- 14397 J.D. Graham & Noranda Exploration Company Limited, G. Shevchenko, February 1986, \$ 21,830.05
- 16190 T.H. Thompson & National Resources Exploration Ltd, B.W. Kyba, July 15, 1987, \$ 2,549.64
- 16331 J.D. Graham & Merritech Development Corporation, J.D. Blanchflower, February 27, 1987,\$ 57, 271.32
- 17739 National Resources Exploration Ltd, D.C. Miller, April 20, 1988, \$7,767.55
- 18489 Minnova Inc., D.W. Blackadar, February 12, 1989, a portion of \$ 60,035.00
- 19047 National Resources Exploration Ltd & Minnova Inc, C.J. Clayton, September 7, 1989, \$1,109.50
- 19173 Falconbridge Limited, S.G. Clemmer, September 1989, \$ 2,739.83
- 19851 National Resources Exploration Ltd & Minnova Inc, D.R. Heberlein, March 1990, \$32,000.00
- 22956 Rich Coast Resources Ltd, Michael Fox, March 23, 1993, \$5,801.80
- 32383 Astral Mining Corporation and David J. Piggin, May 31 2011, \$21,824.78
- 33190 Astral Mining Corporation, David J. Piggin, July 18, 2012, \$ 344,154.71 (HONEYMOON \$216,077.90 and BARRIERE RIDGE \$128,076.81)
- (c) Historic Drilling: In 2012, a detailed review of the above BARRIERE RIDGE ARIS reports indicated that between 1984 1988, 20 diamond drill holes were completed for 2,195.98 metres. For detailed information see attached spreadsheet in APPENDIX). The best result were from Minnova Inc which returned:

 Up to P4 BAR23: (sample 17807) Au 0.91 g/t, Ag 203 g/t, Cu 0.133 %, Pb 5.46 %, Zn 13.2 % (over 0.4 m).

The drill sites have not been located in the field so additional research is required to find and digitize the drill logs. The following is a brief summary of the drilling locations at BARRIERE RIDGE.

• In 1984, drilling within Tenure 744582 and MINFILE 082M 222 CAD: ARIS Report 13168 Noranda Inc. reported two NQ diamond drill holes (DDH) CAD 84-1 and CAD 84.-2 for a total of 132.2 metres. CAD 84-2 best samples in three separate veins:

Ag 15.6 g/t; Zn 12,000 ppm; Pb 392 ppm over 0.1 metres.

Ag 4.6 g/t; Zn 136 ppm; Pb 1070 ppm over 0.1 metres.

Ag 3.6 g/t; Zn 500 ppm; Pb 1020 ppm over 0.6 metres.

- In 1985, drilling within Tenure 744582 and MINFILE 082M 222 CAD: ARIS Report 14397 Noranda Inc. reported two NQ diamond drill holes (DDH) CAD 85-1 and CAD 85-2 for a total of 184.7 metres. The drill holes failed to intersect mineralization.
- In 1987, drilling within Tenure 744582 and MINFILE 082M 222 CAD: ARIS Report 16331 Merritech
 Development Corporation reported three NQ diamond drill holes (DDH) CAD 87-1, CAD 87-2, and CAD 87-3
 for a total of 394.11 metres. The drill holes failed to intersect economic mineralization.

CAD 87-1: Au 30 ppb, Ag 1 ppm, Pb 323 ppm from 545' to 550'.

CAD 87-2: Cu 122 ppm from 190' to 195'; and CAD 87-3: Pb 122 ppm from 300' to 305'.

- In 1987, drilling within Tenure 744542: Maps provided in ARIS Report 17739 (and 16190) National Resources Exploration Ltd indicated four diamond drill sites DDH 87-1, DDH 87-2, DDH 87-3, and DDH 87-4 on a property map, but no record or drill logs are given showing results.
- In 1989, drilling within Tenure 844646, 844647: ARIS Report 18489 Minnova Inc. reported four NQ drill holes, totaling 601 metres, in the extreme southwest corner of BARRIERE RIDGE. The holes were P1 BAR20 (154.5 m); P2 BAR21 (151.5 m); P3 BAR22 (120.7 m); and P4 BAR23 (174.2 m). Three of four holes were not mineralized.

P4 BAR23: (sample 17807) Au 0.91 g/t, Ag 203 g/t, Cu 0.133 %, Pb 5.46 %, Zn 13.2 % (over 0.4 m).

"... The bottom 35 m of the hole encountered medium to coarse grained andesite feldspar crystal tuff.

Potentially significant Pb-Zn mineralization consisting of minor medium brown sphalerite and galena occurs in the bottom 20 m of the hole. This mineralization generally occurs in trace amounts associated with narrow quartz veins. At the top of this interval is a 4 - 6 cm zone of massive, banded, coarse grained sphalerite and galena. ..." page 9.

• In 1989, drilling (1989) within Tenures 744542, 744562, 767102, 840411: ARIS Report 19851 Minnova Inc. reported 5 NQ drill holes totaling 524.6 metres. The holes were MBD89-1 (102.7 m) and MBD89-2 (96.6 m) both within Tenure 744542; hole MBD89-3 (105.8 m) south end of Tenure 744562; both MBD89-4 (124.1 m) and MBD89-5 (95.4 m) are within Tenure 767102 and 840411. No significant mineralization or alteration was encountered.

<u>Other ARIS Reports</u>: In addition to this, there are a number (15+) ARIS reports located near the boundary of BARRIERE RIDGE on adjacent mineral claims. In the interest of brevity they are not listed here but are available through the Exploration Assistant (Map Place) and ARIS program websites.

(d) Prospectors Assistance Program Grants:

At least 4 Prospector Assistance Grants were issued over the HONEYMOON BARRIERE RIDGE area as follows:

• In 1998, the author David J. Piggin - Prospector Assistance Grant #98/99 P94 (1998-43) for \$ 10,000.00. Grassroots exploration work was completed over the eastern half of the BARRIERE RIDGE claims and on the HONEYMOON claims. A number of significant Au, Ag, and base metal anomalies were found in stream sediment and soil samples. A soil sieve sample was collected south of North Barriere Lake and the sieve sample was a significant gold in soils anomaly as follows:

Sample 13C (Tag 103282) Certificate AK-0222i.xls: (UTM NAD 83 Zone 11, 300937.7E and 5688537.2N) Au 555 ppb, Ag 0.8 ppm, As 25 ppm, Bi 15 ppm, Mo 6 ppm, Pb 70 ppm, Zn 215 ppm.

TABLE 7: Ssieve sample, Weev 13C-09 (Tag 103213) Certificate AK98- 0595i.xls returned the following values.

Sample Tag #	Weight (grams)	Mesh Size	Au ppb
103213 Weev 13C-09	91	+32	15
	53	+60	35
	37	+80	20
	62	+140	35
	38	+230	35
	41	-230	65
Repeat	_	+80	105

- In 1998, Camille Berube Prospector Assistance Grant #1998/99 P23 (1998-23) for \$ 10,000.00. The CAM-GLORIA MINFILE 082M-266 was discovered during this exploration program.
- In 2000, Leonard P. Piggin Prospector Assistance Grant #2000/01 P73 (2000-22) for \$ 7,500.00. The LUCKY BEAR MINFILE 082M-275 (Au Bi, minor W) was discovered during this program. Numerous anomalous stream sediments and moss mats were collected.
- In 2000, Camille Berube Prospector Assistance Grant #2000/01 P43 (2000-13) for \$ 10,000.00. The LUCKY BEAR MINFILE 082M-275 (Au Bi, minor W) was discovered during this program.

A copy of each report can found on the following website. http://www.empr.gov.bc.ca/Mining/Geoscience/PropertyFile/Pages/1998pros.aspx

II – TECHNICAL DATA AND INTERPRETATION

2012 EXPLORATION PROGRAM

The property geology described here is based largely on Schiarizza and Preto Dec 1987, Dixon and Warren et al 1997; Logan and Mann April 2000; as well as BC Assessment Report 26216 by G. Evans Dec 1999 (Teck Corp). For detailed information, consult the above references and additional references given in LITERATURE CITED.

A. PROPERTY GEOLOGY:

The property geology and rock type descriptions are based entirely on Schiarizza and Preto Dec 1987; Dixon and Warren et al 1997; Logan and Mann April 2000; and GeoFile 2005-4 downloaded from the Ministry of Energy Mines website. For detailed information, consult the above references and additional references given in LITERATURE CITED. See ILLUSTRATION # 5 and TABLE 6 below, and the geology map provided in the APPENDIX.

Regionally, this property is located in the Kootenay Terrane at or near the main contact between the mid-CRETACEOUS Baldy Batholith Unit [Kg, also KBBgd, KBBmg, mid-JURASSIC mJNHqd and mJNHmd], the DEVONO-MISSISSIPPIAN Eagle Bay Assemblage Unit [EB], and the late DEVONIAN Paragneiss Unit [Dgnp]. On the west side of the BARRIERE RIDGE claims along the western boundary of Tenures 844644/844645, the claims are at the contact between the Fennell Formation [IF](Slide Mountain Terrane) and the Eagle Bay Assemblege (Kootenay Terrane).

The Baldy Batholith is generally considered MID-CRETACEOUS at 80 to 100Ma. The **Kg** is a massive granite and granodiorite intrusive. The south eastern portion of the Baldy Batholith (south of Honeymoon Creek) may be considered MIDDLE JURASSIC – NELSON SUITE – Honeymoon Bay Stock (**mJNHqd**) as per Open File:2007-7 (Logan and Mann April 2000). This portion of this batholith hosts CAM-GLORIA MINFILE and SPAPILEM GOLD/SPAPILEM100 showings. The Eagle Bay Assemblege [**EB**] is a series of low-grade meta-sedimentary and meta-volcanic rocks. The Fennell Formation [**uF** – upper structural division; **IF** – lower structural division] is comprised of oceanic rocks which were tectonically emplaced over Mississippian rocks of the Eagle Bay Assemblege in early Mesozoic time. The **IF** and **EB** successions are cut by mid-Cretaceous granitic rocks, and by Early Tertiary quartz feldspar porthyry, basalt and lamprophyre dykes. The Late Devonian Paragneiss Unit [**Dgnp**], which is present on the HONEYMOON claims is absent from the BARRIERE RIDGE claims.

The following is a brief description of the various rock types:

1. Kootenay Terrane: Lower Cambrian (and older?) to Mississipian

- (a) EBF: Devonian and/or Mississipian light to medium grey, rusty weathering felspathic phyllite, schist and fragmental schist derived from intermediate tuff and volcanic breccia; minor amounts of dark grey phyllite and siltstone.
- (b) EBA: Devonian light silvery grey to medium greenish grey sericite-quartz phyllite and sericite-chlorite-quartz phyllite derived from felsic to intermediate volcanic and volcaniclastic rocks, including pyritic, felspathic and coarsely fragmental varieties; lesser amounts of dark grey phyllite and siltstone, green chloiritc phyllite, sericiteic quartzite and pyritic chert (exhlite?).
- (c) EBG: Lower Cambrian (may include younger and or older rocks) Medium to dark green calcareious chlorite schist, fragmental schist and greenstone derived largely from mafic to intermediate volcanic and volcaniclastic rocks; lesser amounts of limeston and dolostone; minor amouns of quartzite grit and light to dark grey phyllite.
 - EBGp: dark grey phyllite, calcareious phyllite and limestone; minor amounts of rusty weathering carbonate-sericite-quartz phyllite (metatuff?).
 - EBGq: light to medium grey quartzite.
 - EBGt: Tshinakin limestone member massive light grey finely crystalline limestone dolostone.
- (d) EBP: Mississippian dark grey phylilite and slate with interbeedded siltstone, sandstone and grit; lesser amounts of conglomerate, limestone, dolostone, chlorite-sericite quartz schist, quartzite and metatuff.
 - EBPv: metavolcanic breccia and tuff.
- (e) EBQ: Lower Cambrian? and Hadrynian? light to dark grey quartzite, micaceious quartzite, grit chlorite-muscovite-quartz schist and phyllite; lesser amounts of calcareous phyllite, calc-silicate schist, carbonate and green chlorite schist; eastern exposures include staurolite-garnet-mica schist and amphibolite.

 Note: Described by Logan and Mann (April 2000) as "HCEBQ"; and "HCEBQgn" includes orthogneiss of unit Dgn, as well as sericite-quartz phyllite derived from quartz porphyry dikes and sills.

2. <u>Slide Mountain Terrane</u>: Devonian to Permain: Fennell Formation – Lower Structural Division

- (a) IFu: Undivided; mainly IFc, IFg and IFb, but may include any or all of the Fennell Formation rock types.
 - IFc: grey and green bedded chert, certy argillite, slate and phyllite.
 - IFg: gabbro, diorite, diabase.
 - IFb: grey and green pillowed and massive metabasalt; minor amounts of basaltic breccia and tuff.

3. Cretaceous

(a) **Kg:** granite and granodiorite; **Kgp** includes abundant pegmatite; **KBBmg** – medium to course grained, pink potassium feldspar megacrystic biotite monzogranite, hornblende-biotite monzodiorite and coarse pegmatite segregations; **KBBgd** – coarse potassium feldspar megacrystic hornblende-biotite granite to granodiorite, coarse equigranular biotite monzogranite (KBBg) and medium-grained aplite dikes.

4. Jurassic:

- (a) **Mid-JURASSIC mJNHqd and mJNHmd:** coarse equigranular biotite-epidote-hornblende quartz monzodiorite, rare potassium megacrystic phases and monzodiorite phases **mJNHmd.**
- **Geologic Faults:** A number of important geologic faults occur within the BARRIERE RIDGE claims (Schiarizza and Preto Dec 1987 Figure 4 map). They are as follows:
- The Barriere River Fault which follows the Barriere River and North Barriere Lake in a southwest to northeast direction
- The Birk Creek Fault which follows Birk Creek in a northwest to south east direction. This fault forms a junction with the Barriere River Fault at the confluence of Birk Creek. The fault forms a NE facing "U-shape" on the height of land

between North Barriere Lake and East Barriere Lake; and continues in a southerly direction south of East Barriere Lake.

- The Haggard Creek Fault which follows Haggard Creek in a southeast to northwest direction; and follows the Barriere River upstream from the confluence with the East Barriere River.
- The Russell Creek Fault runs in a southwest to northeasterly direction up Russell Creek.
- The East Barriere Lake Fault runs up the center of East Barriere Lake in a roughly southwest to northeasterly direction.

BRITISH COLUMBIA GEOLOGICAL SURVEY DATA (BCGS):

The BCGS has completed a number of regional geochemistry surveys including till, stream water, steam/moss sediment, and geological mapping works as follows:

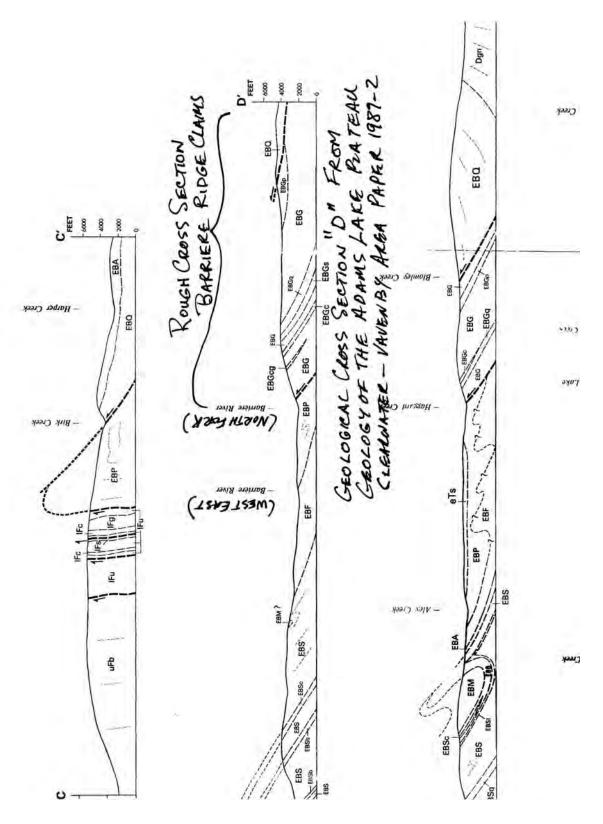
- (a) Till Geochemistry of the Adams Lake Plateau North Barriere Lake Area (82M/4 & 5) Open File 1997-9. (Bobrowsky et. al. 1997).
- (b) Regional Stream Water Geochemistry of the Adams Lake North Barriere Lake Area, British Columbia (NTS 82M/4 and 82M/5) Open File 1998-9 (Lett, Sibbick, Runnells January 1999)
- (c) Stream Geochemical Exploration for Pluton-Related Quartz Vein Gold Deposits in Southern British Columbia Open File 2000-23. (Lett, Jackaman, Englund April 2000).
- (d) Geology & Mineralization around Baldy Batholith, Southcentral BC. Map Scale 1:50 000. NTS 82M/3, 4, 5 &6. Open File 2000-7. (Logan and Mann April 2000).
- (e) Geology of the Adams Plateau-Clearwater-Vavenby Area; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1987-2. Schiarizza, P. and Preto, V. (1987).
- (f) British Columbia Regional Geochemical Survey, Seymour Arm NTS82M RGS 33 (P.F. Maytysek et al 1991)

Anomalies and geological mapping summarized in these 6 OPEN FILE/PAPER references, when considered together, formed part of the basis for this 2010/2011 exploration program. On a number of occasions, the author spoke to various authors named above to obtain (free) advise concerning various aspects of their work (i.e. Jim Logan, Ray Letts, and Paul Schiarizza).

<u>ILLUSTRATION # 14</u>: Map excerpt from Figure 4 of Schiarizza and Preto Dec 1987 showing the geology and faults in the vicinity of North Barriere Lake, East Barriere Lake, Adams Lake (not to scale). The North on this map is up.



ILLUSTRATION # 15: Geological Cross Section D, an excerpt from Figure 4): An excerpt from Geology of the Adams Plateau-Clearwater-Vavenby Area; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1987-2. Schiarizza, P. and Preto, V. (1987). View is to the north and west is at the bottom of the page.



<u>ILLUSTRATION # 16</u>: Map excerpt directly from OPEN FILE 2000-7 Logan and Mann April 2000 showing the geology and faults in the vicinity of North Barriere Lake, East Barriere Lake, Adams Lake (estimated scale <1:100,000). North is up.

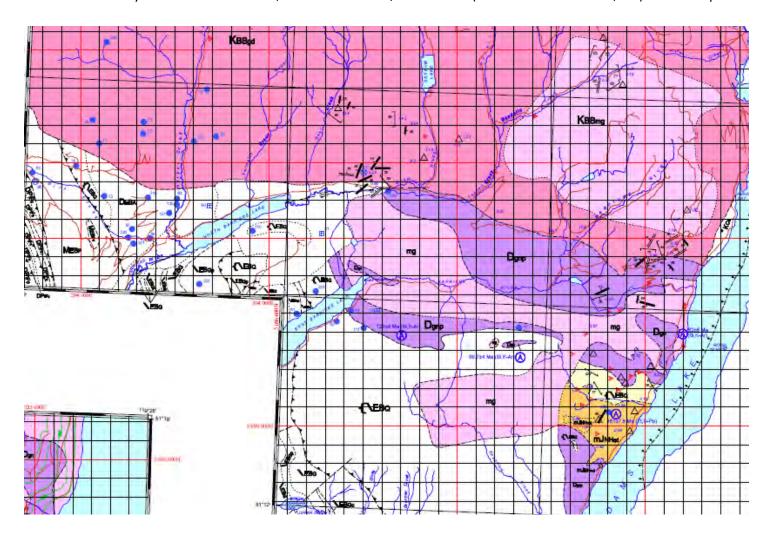


TABLE 8: GEOLOGY OF THE HONEYMOON CLAIMS: This table gives a detailed summary of each claim based on GeoFile 2005-4 and Open File 2007-7. See also Schiarizza and Preto 1987 and geology maps in the APPENDICIES

Tenure	Geology
606463	HCEBQ north 1/2; KBBmg south 1/2.
606465	KBBmg north 3/4, HCEGQ south 1/2.
606467	HCEBQ, except sliver of HCEBQ in NW corner,
606469	KBBmg on north 1/2 and south boundary; with HCEBQ running west/east through center.
672823	mJNHqd: CAM-GLORIA MINFILE 082M 266 also see Tenure 673883.
673843	KBBmg, except sliver of HCEBQ in SE corner,
673864	HCEBQ north 1/2; KBBmg south ½,
673883	CAM-GLORIA MINFILE 082M 266; with HCEBQ in NE corner and Dgnp in SW corner
673903	Dgnp; with KBBmg and Dgnp in the NE corner; and a sliver of HCEBQ in the SE corner.
673904	Dgnp in the center and SE corner; KBBmg northern 1/3 and along west boundary, and SE corner; Also a
	small sliver of Dngp in SW corner.
673906	Dgnp in NE 1/2; KBBmg in SE ½. LUCKY BEAR MINFILE 082M 275

673923	HCEBQ north 1/2, mJNHqd south 1/2.
673943	KBBmg north 1/2, Dgnp south 1/2 except HCEBQ in SW corner.
673963	KBBmg NW corner, Dgnp NE corner, HCEBQ south 1/2 except for mJNHqd in extreme SW corner.
673983	mJNHqd; except for Dgnp in extreme SW corner and HCEBQ in extreme NE corner.
	CAM-GLORIA MINFILE 082M 266 also see Tenure 672823.
673984	Dgnp in north 1/4; HCEBQ in south 3/4 except for an island of KBBmg along east boundary.
673985	KBBmg; nJHNqd sliver on east boundary; HCEBQ sliver on south boundary; Dgnp in extreme SE corner
673986	KBBmg HCEBQ along south boundary.
673987	KBBmg south 1/2 and NE corner; HCEBQ in NW corner.
673988	KBBmg in north 1/5 (boundary); Dgnp in narrow west/east band just south of KBBmg; HCEBQ in South
	1/2 except for island of Dngp in center of claims and KBBmg in extreme SE corner.
	NSP MINFILE 082M127.
673989	KBBmg in north 1/2 and south 1/2 except for fingers of Dgnp and HCEBQ on west boundary.
673990	KBBmg; except sliver of Dgnp on NE corner and south boundary.
741242	KBBmg in north 1/2 and SE corner; Dgnp in SW corner and center of west boundary.
838100	KBBmg NW corner, Dgnp NE corner; HCEBQ south 1/2 except for sliver of mJNHqd extreme SW corner.
838124	mJNHqd; except for Dgnp in extreme SW corner and HCEBQ in extreme NE corner.
838125	Dgnp in north 1/4; HCEBQ in south 3/4 except for an island of KBBmg along east boundary.
838126	KBBmg; nJHNqd sliver on east boundary; HCEBQ sliver on south boundary; Dgnp in extreme SE corner.
838127	KBBmg HCEBQ along south boundary.
838129	KBBmg south 1/2 and NE corner; HCEBQ in NW corner.
838130	KBBmg in north 1/5 (north boundary); Dgnp in narrow west/east band just south of KBBmg; HCEBQ in
	South 1/2 except for island of Dngp in center of claims and KBBmg in extreme SE corner.
838131	KBBmg in north ½ and south 1/2; except for fingers of Dgnp and HCEBQ on west boundary.
838132	KBBmg; except sliver of Dgnp on NE corner and south boundary.
838133	KBBmg in north 1/2 and SE corner; Dgnp in SW corner and center of west boundary.
838134	HCEBQ; except KBBmg in extreme NE corner.
838136	HCEBQ; except KBBmg in SE corner.
838137	Dgnp; KBBmg in north 1/3; HCEBQ sliver on south boundary.
838138	KBBmg.
838139	KBBmg; Dgnp in north 1/4.
838141	HCEBQ.
838142	KBBgd.
848330	EBG
848331	EBG; Dgnp in northeast 1/4.

TABLE 9: GEOLOGY OF THE BARRIERE RIDGE CLAIMS: This table gives a detailed summary of each claim based on GeoFile 2005-4 and Open File 2007-7. See also Schiarizza and Preto 1987 and geology maps in the APPENDICIES

Tenure	Geology
744542	EBG; EBGt with fingers forming in northwest to southeast direction. Hosts WHITE ROCK MINFILE.
744562	EBG; with EBGq in the south 1/2.
744582	EBGp; EBG in SW corner; sliver of EBG in NW.
744602	EBG; EBGp in north 1/3. Hosts new discovery SILVERGAL showing.

759003	EBG; and EBGq in a finger on SW corner. Hosts SILVER MINNOW MINFILE.
767042	EBQ in center and east half; EBGp in SW corner and NW corner.
767062	EBG; EBGp in NW corner.
767102	EBG; EBGq in NE corner.
767123	EBG; EBGq in a NW to SE sliver in middle of claims.
840411	EBG; EBP? in a sliver on SW corner (see note below).
840413	Complex geology; EBG predominately with sliver of EBGt, EBA, EBP, EBQ.
840415	EBG; EBP? in sliver on west boundary (see note below).
840417	EBQ; with EBG on south 1/4; EBGp in sliver on east boundary.
840418	EBG.
844642	EBP on SW half; EBA on NE half.
844643	EBP; EBPv finger on north boundary.
844644	EBP; IFu of Fennell Formation on extreme west boundary.
844645	EBP? (see note below); IFu of Fennell Formation on extreme NW boundary.
844646	EBP? (see note below); EBF sliver on SW corner.
844647	EBP? on East half (see note below); EBF on west half.
NOTE:	Tenures 840411, 840415, 844645, 844646, and 844647 have a portion classified as EBP? as the map
	Figure 4 (Schiarizza and Preto Dec 1987) specifically classify the geologic unit. In Figure 5 of (Schiarizza
	and Preto Dec 1987) Cross Section D describes the area as EBP therefore EBP is used in this table.

B. 2012 EXPLORATION METHODS, WORKS AND OBJECTIVES:

Sampling methods, works and objectives are discussed in the following 6 sections:

- 1. Sampling Methods and Analysis Procedures
- 2. Stream Sediment Surveys
- 3. Moss Mat Surveys,
- 4. Soil Sampling
- 5. Rock Samples
- 6. Assay and Analytical Procedures.

1. Sampling Methods and Analysis Procedures:

Sample locations were marked with winter weight survey ribbon, and/or an aluminum tag or white Tyvek tag. In most circumstances the interval between sample locations was marked with "candy stripe orange & black" survey ribbon, and each sample site was marked with florescent orange or florescent pink ribbon.

A Garmin 60CSx (or Garmin 12XL) was used to collect Global Position System (GPS) waypoints. GPS data was collected using the Universal Transverse Mercator Grid (UTM) in NAD 83 and usually 4 or more satellites were used for waypoints unless narrow gullies, ravines, and heavy timber made waypoint collection problematic. Where the sample location is problematic, in terms of satellite reception (i.e. deep gully, forest cover), and only 2 satellites were obtained the UTM coordinates were interpolated from 3 adjacent waypoints by an iterative process, or by hip chain and compass bearing. Adjusted waypoints were confirmed by referencing the sample location on an orthographic map, at a scale of 1:5000, and/or re-confirming the location with prospecting field notes.

Sample waypoints were named according to the following naming convention:

- The Honeymoon Creek claims had a prefix of "HON__", or "MAL___" or "TK___".
- The Barriere Ridge claims had a prefix of "BR__".

- The Upper John area had a prefix of "UJ".
- The Sprague Creek area had a prefix of "SG__".
- The Spapilem Creek area had a prefix of "SP__", or "SPAP__"
- Cam Gloria area had a prefix "CG__" or "CAM__"
- Stream sediment sample waypoints "_SS_" (i.e. TKSS__).
- Moss Mat sediment sample waypoints "_MM_" (i.e. TKMM__).
- Soil or Till sample waypoints "_TL_" or "_T" or "__T" (i.e. TKTL__) or (i.e. TKT__) or (i.e. "__T".
- Float Rock sample waypoints "_FT_ " (i.e. TKFT__) or (i.e. TKFL__).
- Rock sample waypoints "_R_" (i.e. TKR__) and are associated with talus or outcrops.
- Grab sample waypoints "GR" (i.e. CAMGR")
- Quartz Veins waypoints "_Q_" or "_QZ_" or "_QTZ_" (i.e. MALQZ___) or (i.e. SPAP9QZ__")
- Skarn waypoints "SK" (ie. UJSKAA)

Important samples sites were photographed with a digital camera for future reference. Rocks, outcrops and sample sites were photographed in the field, and then at home a close up of each sample rock (macro zoom) was taken before being assayed. Before sealing the sample bag for assay, a voucher specimen piece was taken from the sample bag, and marked and securely stored for future reference.

2. Stream Sediment Surveys:

Usually a stream sediment sample is collected in tandem with a moss mat sample because the moss mats tended to give more reliable data for gold anomalies.

Stream sediment surveys were collected using a clean plastic hand trowel, black plastic gold pan (40cm diameter), black plastic door screen (0.1 inch square), and kraft sample bags. Stream sediments were collected from the centre of the main stream channel. The trowel or D-handled spade was used to dig the gravels and sand from the creek bed and the material was dumped into a clean plastic gold pan which had been covered by the black plastic screen. Approximately 4.5 litres of gravel, sand, and silt were collected; sieved with a plastic screen, and lightly panned. Gravels were removed and discarded on the steam bank. The whole remaining sample was troweled or poured into a kraft sample bag. In some cases, the kraft bags were double bagged because they were too wet and would break. The location was GPS'd, and samples were air dried in Kamloops prior to assay at Eco Tech Laboratories in Kamloops.

To determine if stream sediment assay results were anomalous they were compared to statistical (90 percentile) references given in Lett, Jackaman, Englund April 2000.

3. Moss Mat Surveys:

Usually a moss mat sample is collected in tandem with a stream sediment sample because the stream sediment samples tended to give more reliable data for elements other than gold.

Moss mat samples were collected using methods recommended Open File 2000-23 (Lett, Jackaman, Englund April 2000), and based on numerous personal communications with Dr. Ray Letts a co-author. Moss mats were collected by hand from the main stream channel and from (overhanging or partially submerged) moss on the edge of the main water flow. The moss was attached to rocks, logs, and stream banks. Moss Mat samples were compacted tightly into white "cloth" linen-like bags. Approximately 4.0 – 5.0 litres of moss, organics, sands, and silts were collected. Large gravels and sticks were removed unless they were encrusted with sediments. In order to ensure moss mat samples were not cross contaminated while packing them out of the bush the moss mat bags were put into plastic bags. These plastic bags were removed at the vehicle so the samples would not become moldy prior to drying. The location was GPS'd, and samples were air dried in Kamloops prior to assay at Eco Tech Laboratories in Kamloops.

Based on recommendations in Open File 2000-23, moss mat sampling is a preferred sampling method for heavy sediments like gold. For the purposes of prospecting at each sample site both a stream sediment sample and a moss mat samples were collected. In the odd case, a moss mat was not collected due to the lack of suitable stream moss

for collection purposes. There was no intent to conduct efficacy studies on the two sampling methods as part of this assessment report.

To determine if moss mat assay results were anomalous they were compared to statistical (90 percentile) references given in Lett, Jackaman, Englund April 2000.

4. Soil Sampling:

Surface soils (exposed in road cuts or skidder trails) containing color anomalies were observed in some locations. On a prospective basis, random soil samples were collected from these apparently altered soil. A shallow pit or hand trench (i.e. $0.5 \, \text{m} \times 0.5 \, \text{m} \times 0.4 \, \text{m}$) was dug with a grub hoe, geotul, or shovel. The soil sample was collected with a clean plastic hand trowel and put in a kraft soil bag. If samples were very wet they were double bagged to ensure the samples was secure. The location was GPS'd and photographed; and samples were then air dried in Kamloops prior to assay at Eco Tech Laboratories. To determine if soil sample assay results were anomalous they were compared to statistical (90 percentile) references given in Open File 1997-9 (Bobrowsky, et al. 1999).

The SPAPILEM SOIL GRID (see also 2009/2010 Exploration and Analytical Results in previous assessment report) had been previously surveyed with a hand held compass and hip chain; and sample stations were marked with survey ribbon and Tyvek tags. In addition, the baseline was also marked with orange tree marking paint. The point of commencement for the SPAPILEM SOIL GRID was marked as follows "10,000N + 10,000E". These soil samples were taken with a hand powered soil auger except on rocky sites where a geotul or rock hammer was used to dig a small sampling pit.

The SILVERGAL SOIL GRID and SILVER MINNOW SOIL GRID samples were collected in a similar manner as the SPAPILEM SOIL GRID, except the sample locations (stations - 25 metre interval) were selected on a "preset" UTM grid using a Garmin 60scx hand held GPS; and following a UTM easterly strip line. No hip chain was used to measure the distance between samples.

Where possible, soil samples were collected from the top of the B horizon (usually Bf, Bm, Bmf, or Bh) based on the reference *The Canadian System of Soil Classification* (1987) as well as the *Taxonomic Classification of Humus Forms in Ecosystems of British Columbia* (Klinka et al 1981).

5. Rock Samples:

Rock samples were collected using a geotul, rock hammer, sledge hammer or grub hoe. In certain cases small prospecting hand trenches (i.e. $0.5 \text{m x} \ 0.5 \text{m x} \ 0.4 \text{m}$) were made to collect the sample. All samples were broken to a suitable size and collected in plastic samples bags secured with survey ribbon. The plastic bags were permanently marked for identification purposes and survey ribbon (sample no.) was placed inside the bag just in case the markings on the bag were rubbed off.

The location was GPS'd. The collection site and rocks were photographed with a digital camera, and again. (macro zoom) prior to being sent to the assay lab for processing. Where necessary, field notes described the location of the samples and rough sketch maps were made of rock faces showing the detailed sample location. Care was taken to note if samples were a random sample, selective sample, channel sample, grab sample, glacial float sample, stream float sample, or from outcrop. Some rocks were collected, observed and not assayed. These rocks were discarded in a sensitive manner.

6. Assay and Analytical Procedures:

Assay and analytical work are done by ALS Minerals Canada following international certification practices. Since no samples were assayed, in the interest of brevity, refer to their website (http://www.alsglobal.com/en/Our-Services/Minerals) for more specific assay criterion.

C. 2012- EXPLORATION AND ANALYTICAL RESULTS:

In 2012, in general terms, exploration works involved prospecting; reprocessing (interpretation and targeting) of airborne geophysical data; selection of trenching and drilling targets, the collection of digital aerial photography; professional/technical consultation with Fugro related to airborne geophysical work and proposed ground geophysical work; the determination of select areas for ground geophysical work and related preparatory survey work, and preparatory surveys for ground geophysics and soil geochemistry work planned for 2013 and 2014.

Exploration work completed by Astral Mining Corporation, Orex Minerals Inc, and David J. Piggin from December 20, 2011 and March 26, 2013 on the HONEYMOON and BARRIERE RIDGE claims. For this report, a detailed cost summary is at the end of this report just before the APPENDICIES. The Mineral Claim Exploration and Development Work/Expiry Date MTOnline documents were recorded under EVENTS 5439832 and 5439849 as shown in the following table.

<u>TABLE 10</u>: Cost Summary by EVENT Number: A cost summary is presented at the end of this report before the APPENDIX.

Event No.	Date	Area (hectares)	Total Value of	PAC Account	Total Applied
			Work(\$)	(\$)	Work (\$)
5439832	March 27,	8,307.9800	\$ 20,713.04	\$ 8,877.02	\$ 29,590.06
J433032	2013	8,307.3800	ŷ 20,7 13.0 4	Ϋ 0,077.02	Ş 25,550.00
5439849	March 27,	28,080.2881	\$ 48,128.91	\$ 19,584.46	\$67,713.37
3433043	2013	20,000.2001	ý 1 0,120.51	Ç 19,904.40	Ç07,713.37
			\$ 68,841.95	\$ 28,461.48	\$ 97,303.43
TOTAL EXP	TOTAL EXPENDITURES		4 00,011100	Ψ = 0, 10 11 10	4 01 ,0001 10

In general terms, all exploration works (where applicable) are given in the APPENDICIES for example:

- An overview map showing the general location of the prospecting areas and geophysical work.
- Detailed spreadsheets giving historic drill site data, GPS locations for proposed/completed preparatory surveys (proposed for ground geophysical surveys), and etc.
- Detailed maps of the preparatory survey.

The following is a brief summary of the works completed:

- Total Work Applied \$ 97,303.43 on 28,080.2881 hectares.
- Reprocessing and targeting study completed by Fugro Airborne for an airborne geophysics survey completed in 2011 (Line kilometres 1334 km (1121.4 km of it was accepted).
- Received the Fugro report: "Magnetic and EM Interpretation Airborne Magnetic and HeliTEM Survey BARRIERE RIDGE and HONEYMOON Blocks British Columbia Job No. 12578" dated February 2013.
- Aerial Photography: 23,530 hectares PhotoSat 0.5m pixel 2012 image.
- Professional and technical consultation with Fugro staff concerning geophysics reprocessing and targeting project; and aerial photography/elevation modeling.
- Professional assessment and targeting for selected ground geophysical surveys prior to a full ground geophysical survey.
- Completed 825 metres of preparatory survey for a proposed ground geophysical survey at SILVER MINNNOW, SILVERGAL, and CAMGLORIA. A total of 11,400 lineal metres were proposed.
- ARIS Reports were reviewed in detail to determine the location and results of historic drilling on BARRIERE RIDGE to develop a database and to find them in the bush. A spreadsheet was created (See APPENDIX). Between 1984 1988, 20 diamond drill holes were completed for 2,195.98 metres.

- First Nations informational meetings and letters completed and attended First Nation sponsored Mines and Exploration Workshop at Quaaout Lodge on the Little Shuswap Indian Band reserve.
- No rock, soil, or stream samples were submitted for assay during this work period.
- Work continued on a historic database.

Discussion of the 2012 exploration work is provided here in the following five sections:

- 1. Rock Samples, Soil Samples, and Stream Sediment Samples.
- 2. Airborne Geophysics
- 3. Ground Geophysics
- 4. Aerial Photography:
- 5. First Nations.

1. ROCK SAMPLES, SOIL SAMPLES, AND STREAM SEDIMENT SAMPLES:

No rock samples, soil samples, or stream sediement samples were assayed during this exploration period. The focus for expenditures in 2011 and 2012 was to complete airborne geophysical surveys and interpretation; and to commence preparatory surveys for selected ground geophysics surveys. In 2013 and 2014 geochemical surveys will be done in conjunction with ground geophysical surveys.

AIRBORNE GEOPHYSICS: In 2011, an airborne geophysical survey was completed on selected areas by Fugro Airborne Surveys — *Project No. 11089 - Logistics and Processing Report: Helicopter-borne HELITEM Time Domain Electromagnetic and Magnetic Geophysical Survey* dated January 23, 2012 (see ILLUSTRATION # 17 below). The survey was flown from October 21, 2011 to November 9, 2011 and cost \$ 239,146.00. Total coverage of the survey blocks amounted to 1334 km (1121.4 km of it was accepted). Due to bad weather over the blocks survey was stopped by the Astral Mining Corp. before the Fugro's crew was able to re-flight lines L20270-L22420 (Honeymoon block). In the interest of brevity the full report, submitted by Furo Airborne Surveys, was included in ARIS Report 33190 and is not included here.

Based on their report "...The purpose of the survey was to determine the existence and locations of bedrock conductors and for better understanding of the subsurface geology within the survey areas. The EM data and the magnetic data were processed to produce images and profiles that are indicative of the magnetic and conductive properties of the survey areas. A GPS electronic navigation system ensured accurate positioning of the geophysical data with respect to the base maps..." Page 4.

The full report for Project No 11089, submitted by Fugro Airborne Surveys, has been reported in the APPENDIX of ARIS Report 33190 dated July 18, 2013. In the interest of brevity, the Project No. 11089 report is not given here.

The Project No. 11089 report identified numerous significant geological and contract related features as well as geophysical and conductive features which require extensive exploration such as prospecting, geochemical surveys, geological mapping, ground geophysical surveys, trenching and drilling.

In 2012, Fugro was contracted to re-process the Project No. 11089 data for interpretation and targeting purposes. They subsequently submitted their report *Magnetic and EM Interpretation Airborne Magnetic and HELITEM*Survey - BARRIERE RIDGE AND HONEYMOON Blocks, British Columbia - Job No. 12578 dated February 2013. The report was cost \$ 29,500.00 and is enclosed in the APPENDIX of this report.

In general terms, Job No. 12578 reported significant results and priority targets as follows:

• Significant conductors within the survey area and were outlined on interpretation maps. Conductors were classified as conductive zones, points, and axes. A list of anomalous EM responses, for detailed review and ground follow-up, are provided.

<u>ILLUSTRATION # 17</u>: Location of the HONEYMOON and BARRIERE RIDGE airborne geophysical survey completed in 2011. This map is an excerpt from the Project No 11089 report. Not to scale and north is up.



- At BARRIERE RIDGE, the magnetic grid showed a magnetic low, with a gently rippling character in the western
 portion of the block, and a more complex and highly magnetic area to the centre and northeast. High
 conductivities exist in both the east and west with a low conductivity area running nearly N-S through the midwestern portion of the block, and along the north in the eastern portion of the block. There is a low
 conductivity area in the southeast.
- At HONEYMOON, the Residual Magnetic Intensity (RMI) and First Vertical Derivative show the magnetics are very complex; and overall, there is a highly magnetic region (with complex internal structures) running along the northern edge of the block; and another highly magnetic region filling most of the centre and southeastern portions of the block. There is a greater range of apparent conductivities in HONEYMOON. In the north half, predominantly low conductivities prevail with some strong linear highs. The centre portion of the block has a "noisy section" which is due to poor data.
- Conductivity depth (CDI) sections identified major faults and in many cases these had been identified from the magnetic signatures. Conductivity depth identified som new faults. The dips of the faults can also be identified using CDI sections.

3. GROUND GEOPHYSICS:

A number of initial (primary) ground geophysical targets were identified based on historical/recent data and airborne geophysics. In the fall of 2012, in advance of a large scale ground geophysical survey, a small ground geophysics survey totaling 11,400 lineal metres was recommended as follows:

SILVER MINNOW: - 3 lines 1400 lineal metres each; Zone 11 central line 5,686,900mN, 297,400mE – 298,800mE SILVERGAL: 3 lines 1800 lineal metres each; Zone 11 central line 5,684,200mN, 298,600mE – 300,400mE CAMGLORIA: - 3 lines 600 lineal metres; central line Zone 11 5,680,700mN, 321,000mE – 322,600mE

See APPENDIX for maps also, the line was marked with florescent pink ribbon and kevlar tags at 25 m stations, candy strip orange/ black for the line.

The purpose of the small geophysical survey area was to provide starting point data for a much larger scale survey. A total of 600 lineal metres was ribboned on the centre line at CAMGLORIA; and a total of 225 lineal metres was ribboned on the centre line at SILVERMINNOW. (see ILLUSTRATION # 15 below).

Line work on the east end of the central line at CAMGLORIA was problematic (hands and knees for 150+ metres) due to heavy mountain pine beetle windfall. This short stretch of survey line may adversely affect line cutting costs over this 150 metre stretch.

Snow/road and budget circumstances brought the survey to a halt before it could be completed. The intent was to have First Nations contractors buck out the survey line before the ground geophysical survey started. A First Nations contractor was available but funds were not therefore, the project was re-scheduled for 2013/2014.

These ground geophysics survey lines will also be used to collect soil geochemical samples in 2013 as part of a much larger soil geochemical survey.

<u>ILLUSTRATION # 15</u>: Preparatory survey for ground geophysical survey at SILVER MINNOW (Line 2). Photo (David J. Piggin, author) taken in an easterly direction down the survey line. Station is at NAD83 Zone11. 298300E. 5686900N. (IMG 1351.jpg).



4. AERIAL PHOTOGRAPHY:

A total of 23,530 hectares of 2012 PhotoSat 0.5metre Pixel imagery was acquired at a cost of \$6,578.00. This will be used extensively for mineral exploration and development programs; and reporting.

- **FIRST NATIONS**: Based on current government information, the following First Nations may have aboriginal interests in the BENDGOLD mineral tenure(s) area. This is a preliminary First Nations contact list and should not be considered conclusive.
 - Adams Lake, Chief and Council, Hillcrest Road, PO Box 588, Chase, British Columbia, V0E 1M0 Phone: 250-679-8841, Fax: 250-679-8813
 - Neskonlith, Chief and Council, PO Box 608, Chase, British Columbia, V0E 1M0
 Phone: 250-679-3295, Fax 250-679-5306
 - North Thompson Simpcw, Chief and Council, PO Box 220, Barriere, British Columbia, V0E 1E0 Phone: 250-672-9995, Fax 250-672-5858
 - Little Shuswap Indian Band, Chief and Council, PO Box 1100, Chase, British Columbia, V0E 1M0 Phone: 250-679-3203, Fax 250-679-3220

In 2011 and 2012, an number of informal meetings, telephone conversations, and informational letters were shared with First Nations. A two day First Nations sponsored workshop was attended by David J. Piggin and Dale Brittliffe, P.Geo (OREX/Astral) which was held at the Quaaout Lodge and Spa, 1663 Little Shuswap Road in Chase, B. C. [250-679-3090] which is located on the Little Shuswap Indian Band reserve.

III – CONCLUSIONS AND RECOMMENDATIONS:

The following conclusions and recommendations were made based on the exploration work completed by Orex Minerals Inc, Astral Mining Corporation, and David J. Plggin from December 20, 2011 to March 26, 2013 on the HONEYMOON and BARRIERE RIDGE claims are contiguous claims and were explored as one project. Total Value of Work Applied \$ 97,303.43 (including \$ 28,461.48 from PAC). The Mineral Claim Exploration and Development Work/Expiry Date MTOnline documents were recorded under EVENTS 5439832 and 5439849.

SUMMARY:

Based on 2011/2012 Airborne Geophysics Survey results and previous work to date, further exploration work is required such as prospecting for new discoveries; prospecting and sourcing known anomalies; geological mapping; database management; soil, stream, and outcrop sampling; ground geophysics surveys; ground truth Airborne Geophysical Survey results and interpretations; trenching; and drilling as well as First Nations consultation. A five year program of \$3,000,000 is recommended, commencing in the summer of 2013 and 2014. The expenditures would be split equally between the HONEYMOON and BARRIERE RIDGE Claims.

EXPLORATION WORK COMPLETED 2012:

The following is a brief summary of the works completed:

- Total Work Applied \$ 97,303.43 on 28,080.2881 hectares.
- The expenditures were split as follows: HONEYMOON \$67,713.37 and BARRIERE RIDGE \$29,590.06.
- Reprocessing and targeting study completed by Fugro Airborne for an airborne geophysics survey completed in 2011 (Line kilometres 1334 km (1121.4 km of it was accepted).
- Received the Fugro report: "Magnetic and EM Interpretation Airborne Magnetic and HeliTEM Survey BARRIERE
 RIDGE and HONEYMOON Blocks British Columbia Job No. 12578" dated February 2013.

- Aerial Photography: 23,530 hectares PhotoSat 0.5m pixel 2012 image.
- Professional and technical consultation with Fugro staff concerning geophysics reprocessing and targeting project; and aerial photography/elevation modeling.
- Professional assessment and targeting for selected ground geophysical surveys prior to a full ground geophysical survey.
- Completed 825 metres of preparatory survey for a proposed ground geophysical survey at SILVER MINNNOW, SILVERGAL, and CAMGLORIA. A total of 11,400 lineal metres were proposed.
- ARIS Reports were reviewed in detail to determine the location and results of historic drilling on BARRIERE RIDGE to develop a database and to find them in the bush. A spreadsheet was created (See APPENDIX). Between 1984 -1988, 20 diamond drill holes were completed for 2,195.98 metres.
- First Nations informational meetings and letters completed and attended First Nation sponsored Mines and Exploration Workshop at Quaaout Lodge on the Little Shuswap Indian Band reserve.
- No rock, soil, or stream samples were submitted for assay during this work period. Geophysics was the focus for expenditures i 2012.
- Work continued on a historic database.

THE DETAILS:

1. HIGH PRIORITY TRENCHING AND DRILLING AREAS.

It is recommended the following high priority - main showings be trenched and drilled:

(a) HONEYMOON:

- SPAPILEM CREEK MINFILE 082M-292 (Au Bi) (up to Au 6.01 g/t)
- SPAPILEM GOLD100 MINFILE 082M-290 (up to Au 3.40 g/t);
- CAM-GLORIA MINFILE 082M-266 (CC99-01: Au 9.57 g/t, Ag 128.4 g/t, Bi 160 ppm, Pb 1896 ppm over 1 metre; and in Trench 99-01: Au 9.36 g/t over 2 m);
- LUCKY BEAR MINFILE 082M-275 (Au 1.38 g/t)
- HONEYMOON MAL001 MINFILE 082M-285 (Cu 0.78 % Ag 35.3 g/t) and MAL002 MINFILE 082M-289
- NSP MINFILE 082M-127 (Cu 0.3 %) has not been located to date and should be included when it is located.

(b) BARRIERE RIDGE:

- SILVERGAL (grab Ag 220 g/t, Pb 12.4 %; and Ag 172g/t, Cu 7470 ppm, Pb 795 ppm, Zn 3078 ppm);
- MINFILE 082M 069 SILVER MINNOW (historic 1925) Ag 927 g/t Au 0.69 g/t; and in 2011: Ag 171 ppm; Pb 14.4 percent; S 2.27 percent; Sb 198.5 ppm; Te 30.4 ppm; Zn 6490 ppm over 1m).

3. GEOPHYSICS AND GEOCHEMICAL SURVEYS:

In general terms,: "Magnetic and EM Interpretation Airborne Magnetic and HeliTEM Survey BARRIERE RIDGE and HONEYMOON Blocks British Columbia - Job No. 12578" reported significant results and priority targets as follows:

- HONEYMOON and BARRIERE RIDGE: Significant conductors within the survey area and they were outlined on interpretation maps. Conductors were classified as conductive zones, points, and axes. A list of anomalous EM responses, for detailed review and ground follow-up, were provided.
- At BARRIERE RIDGE, the magnetic grid showed a magnetic low, with a gently rippling character in the western portion of the block, and a more complex and highly magnetic area to the centre and northeast. High conductivities exist in both the east and west with a low conductivity area running nearly N-S through the midwestern portion of the block, and along the north in the eastern portion of the block. There is a low conductivity area in the southeast.

- At HONEYMOON, the Residual Magnetic Intensity (RMI) and First Vertical Derivative show the magnetics are very complex; and overall, there is a highly magnetic region (with complex internal structures) running along the northern edge of the block; and another highly magnetic region filling most of the centre and southeastern portions of the block. There is a greater range of apparent conductivities in HONEYMOON. In the north half, predominantly low conductivities prevail with some strong linear highs. The centre portion of the block has a "noisy section" which is due to poor data.
- HONEYMOON and BARRIERE RIDGE: Conductivity depth (CDI) sections identified major faults and in many cases these had been identified from the magnetic signatures. Conductivity depth identified some new faults. The dips of the faults can also be identified using CDI sections.

To target trench and drill site selection, additional ground geophysical surveys, soil surveys, and prospecting are required as follows:

SPAPILEM CREEK and SPAPILEM GOLD100: ground geophysics and expand existing soil grid.

CAM-GLORIA: ground geophysics and initiate a soil grid; and include a new airborne geophysics target to the northwest.

LUCKY BEAR: ground geophysics and initiate a soil grid.

HONEYMOON MAL001: ground geophysics and initiate a soil grid.

SILVERGAL: ground geophysics and expand existing (2 line) SILVERGAL1 soil grid.

SILVERMINNOW: ground geophysics; initiate a soil grid surrounding DL 4023 KDYD WHITE ROCK MC and expand it to include the SILVERMINNOW1 GRID (2 line test). Also, include outcrop sample 10E41016 SM11R999 and 10E41017 SM11R999 which is a new malachite quartz limestone breccia outcrop east of the NW corner DL 4023 KDYD WHITE ROCK MC.

The geophysics and subsequent trenching will test the strike, dip, structure, and nature of the mineralization as well as determine if the showings are part of one structure or more structures.

4. GEOPHYSICS; AND PREVIOUS GEOCHEMICAL SURVEYS (soil, stream, rock):

Previous anomalous results and MINFILES should be spatially mapped and compared the Airborne Geophysical Data and Interpretation to consider any coincidental anomalies; and to do follow-up prospecting, surveys, and geological mapping. Previously, in 2011, the SPAPGRID1, SILVERGAL1, and SILVER MINNOW1 soil geochemistry grids were completed as well as numerous prospecting samples were assayed; with anomalous results. These samples require additional prospecting, sampling, outcrop mapping, ground geophysics, geological mapping, trenching and drilling.

The following is a partial list of highly anomalous soil, moss mat, stream sediment, and rock samples which require comparison with airborne geophysics results, and subsequently ground checked.

SILVERGAL1 SOIL GRID:

14E41213: Au 80 ppb, W 0.2 ppm.

14E41233: Au 30 ppm, Se 0.3 ppm.

14E41239 repeat: Au 11 ppb, Ag 0.7 ppm, Cu 55.6 ppm, Fe 4.28 %, Ge 34.8 ppm, Zn 113.7 ppm

14E41270: Au 10 ppb, Mo 1.18 ppm

14E41232, 14E41235, 14E41230, 14E41231, 14E41240, and 14E41254 all carried Au 7 ppb

14E41213: Ag 1.1 ppm, Bi 4 ppm, Fe 6.04 %, Mo 2 ppm, Pb 1117 ppm

14E41212, 14E41222, 14E41227, 14E41236, and 14E41265 were all anomalous with Ag 0.5 ppm

14E41266 returned Cu 179.0 ppm; and sample 14E41266 returned Pb 246.9 ppm.

SILVER MINNOW1 SOIL GRID:

14E41285: Au 26 ppb, Ag 0.3 ppm, Cu 149.4 ppm, Fe 5.55 %, Mo 1.31 ppm.

14E41306: Au 12 ppb

14E41305: Ag 0.5 ppm, Cu 63 ppm, Zn 188 ppm

14E41308: Cu 59.7 (90 percentile being Cu 52.32 ppm). 14E41309: Cu 84.4 ppm 14E41325: Cu 75.3 ppm.

14E41297: Pb 28 (90 percentile being Pb 24.72 ppm).

14E41330: Pb 26 ppm 14E41325: Pb 27.3 ppm 14E41299: Pb 25.5 ppm.

SPAPGRID1 Soil Grid: (partial list)

10000N+10250E: Au 134 ppb, W 0.2 ppm 9600N+10125E: Au 92 ppb, W 0.2 ppm

9700N+10025E: Au 37 ppb, Ag 0.4 ppm, W 0.3 ppm

10000N+10175E: Au 36 ppm, Ag 0.6 ppm, Ce 141.1 ppm, Y 41.5 ppm.

9800N+10250E: Au 31 ppb, W 0.2 ppm

9600N+10050E: Au 29 ppb; Bi 0.68ppm; W 0.20 ppm 10300N+9750E: Au 27 ppb; Fe 3.65 %; Ge 6.70 ppm.

9500N+10000E: Au 26 ppb; W 0.20

9800N+9925E: Au 18 ppb, Ag 1.30, Al 3.36 ppm, Ba 98.5 ppm, Be 2.40 ppm, Ca 0.31 %, Cd 0.36 ppm, Ce 74.8 ppm, Co 11.40 ppm, Hg 180 ppm, La 65.5 ppm, Li 21.7 ppm, Mn 1149 ppm, Mo 2.07 ppm Ni 29.30 ppm, P 10109 ppm, Pb 23.3 ppm, Se 1.9 ppm, Sr 34.50 ppm, TL 0.26 ppm, U 21 ppm, Y 39.2 ppm, Zn 102.3 ppm. This is an interesting sample as all elements above are at 90 percentile.

10400N+10050E: Ag 1.5 ppm, Bi 0.7 ppm. 9600N+9875E: Ag 1.3 ppm, Pb 40.2 ppm, Zn 113.7 ppm. 9700N+10200E: Ag 1.3 ppm. 10600N+9550E: Ag 1.1 ppm, Cr 22.5 ppm, Nb 3.24 ppm.

10800N + 10200E: Ag 1 ppm, Cu 29.6 ppm, Pb 65.4 ppm.

10800N + 10000EAg 1 ppm, Bi 2.38 ppm, Mo 1.75 ppm, Pb 43.4 ppm.

There were numerous additional samples with silver leading above the 90 percentile.

PROSPECTING SOIL SAMPLES:

10E41191 SM11FRAT: Au 18.1 ppb, Au 9.74 ppm, Cu 53.4 ppm, Pb 1835 ppm, Zn 2730 ppm.

10E41193 SM11FR10T: Au 6.1 ppb, Cu 174 ppm, Pb 30.2 ppm, Zn 427 ppm

14E41194 SM11T8: Cu 124 ppm, Fe 5.99 %, Pb 30.3 ppm.

14E41190 SM11FR5T: Cu 37.1 ppm, Pb 139 ppm.

STREAM SEDIMENT AND MOSS MAT SAMPLES:

Moss Mat and paired Stream Sediment Samples:

10E41186 SM11MM1: Ag 0.35 ppm; 10E41188 SM11SS1: Ag 0.75 ppm, Cu 26.1 ppm.

10E41187 SM11MM2: Cu 29 ppm, Pb 16.8 ppm; 10E41189 SM11SS2: Cu 21.8 ppm, Pb 24.8 ppm.

ROCK SAMPLES:

- 10E41016 SM11R999: Au 29.2 ppb, Ag 50.4 ppm, Cu 1475 ppm, Pb 1275 ppm, Sb 533 ppm, Zn 2990 ppm. Limestone quartz breccia with malachite in outcrop; possibly a new mineralized zone.
- Limestone quartz stockwork/veins.

10E41021 SM11CHR1: Ag 12.8 ppm, Pb 1.16 %, Zn 1880 ppm (channel).

10E41023 SM11CHR1-3: Ag 1.89 ppm, Pb 1910 ppm, Zn 2510 ppm (channel).

- 10E41198 SM11FRA (float rock): Ag 10.55 ppm, Cu 185.5 ppm, Pb 6510 ppm, Zn 839 ppm.
- 10E41334 BR11FR59 (float rock): Al 1.7 %, Co 117 ppm, Cr 1152 ppm, Fe >10 %, Mg 6.49 %, Ni 1027 ppm.

5. MISCELLANEOUS:

A. Copper (and Silver) - MAL001 and the HARPER Deposit 25 km to the north:

To the north of the Honeymoon Claims, Yellowhead Mining Inc. of Vancouver, British Columbia www.yellowheadmining.com is actively developing the HARPER MINFILE 082M 009 deposit. They have identified a 43-101 compliant resource of over 569 million tonnes grading Cu 0.32 % with 0.2 % cutoff grade; and an inferred resource of 62.7 million tonnes grading Cu 0.33%. This is a significant deposit and it is located an estimate 25

kilometres north the HONEYMOON Claims with similar rock types and mineralizaton as the HONEYMOON showing MAL001, MAL002 and possibly the NSP MINFILE.

The HONEYMOON MAL001 (up to 0.78% Cu; Ag 35.3 g/t) and MAL002 showings have a similar geological setting and petrography samples suggest the chalcopyrite is syngenetic. Therefore, it is reasonable to speculate the MAL001/MAL002 showings, and VMS float boulders in the LIMONITE AREA, and NSP MINFILE may be in a similar geological setting as the HARPER deposit.

- B. MINFILE 082M 127 NSP: Based on the geological capsule for the NSP, there is a need to prospect and sample the NSP showing to compare it to the Honeymoon MAL001 and MAL002 showings. The NSP has not been located during or studied in relation to discoveries at MAL001 and MAL002 or the HARPER Deposit. A literature search was conducted to find the field work related to the NSP and no information was obtained. An email query to Bruce Madu, P. Geo. (Ministry of Energy, Mines, and Petroleum Resources) indicated the NSP was held by Noranda in the 1970's and apparently no assessment report records could be located in his files.
- C. <u>British Columbia Geological Survey</u> (BCGS) Open File reports are extremely useful for prospecting the Birk Creek, North Barriere River, East Barriere River, Russell Creek, Grizzly Creek, Spapilem Creek, Upper John Creek, Lucky Bear, and Honeymoon Creek areas. There is a wealth of geological, mapping, geochemical, sampling, and exploration information in the till, stream chemistry, moss mat, stream sediment, and mapping data. The GeoFile 2005-4 download data set proved to be invaluable for spatial mapping purposes. It was noted that GeoFile 2005-4 needs to be updated with respect to new mapping available in Open File 2000-7. Personal communication with Dr. Ray Letts and Jim Logan both of the BCGS proved invaluable for exploration.
- D. Spatial Data: A digital database is being developed and continued for HONEYMOON and BARRIERE RIDGE. In addition, there are various existing published (government) data files for stream chemistry, stream sediment surveys, moss mat surveys, soil and till sampling, rock sampling, heavy metal concentrates, and related information. In addition to this there are dozens of ad hoc data sets that contain useful data for example: prospector assistance program files, physical work and assessment report documents and data files, and prospector field notes and data files. There is a need to bring all this data together into a spatial data base (Arcview) to determine possible exploration targets. Work was commenced by David Piggin and Dale Brittliffe on a spatial data base and will continue until all data sources are coalesced.
- E. MINIFILE 082M 266 CAMGLORIA: Tenure 672823 and 673883. The GPS coordinates in the MINFILE database are incorrect. The correct GPS coordinates for 082M 266 are as follows: NAD 83 Zone 11: 321533.506E and 5680511.058N.
- **F.** MINFILE 082M 069 SILVER MINNOW (aka SILVER MINERAL): Tenure 744542. The GPS coordinates in the MINFILE database are incorrect. The correct GPS coordinates for 082M 069 are as follows: NAD 83 Zone 11: 297803.482E and 5686989.765N.

List of Literature Cited

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- Massey, N., MacIntyre, D., et al. 2005: Geology Map of British Columbia: Tile NM11 Southeast B.C., B.C. Ministry of Energy and Mines, GeoFile 2005-4, 82E, F, G, J, K, L, M, N, O (Southeast B.C.). Download Shape File Albers Projection (33MB)
- Schiarizza, P. and Preto, V. (1987): Geology of the Adams Plateau-Clearwater-Vavenby Area; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1987-2.

AUTHORS QUALIFICATIONS

The author has been a prospector since 1997 and has the following qualifications:

- Registered Professional Forester (2412).
- Retired in 2009 from the Ministry of Forests and Range, Southern Interior Forest Region with 35 years of meritorious service.
- Director, Vice President, and Member of the Kamloops Exploration Group (KEG).
- Plan and participate in KEG meetings in Kamloops since 1997.
- Attend the Cordilleran Roundup (Vancouver) and maintained a prospector's booth for most years.
- Attend the KEG (Kamloops) and maintained a prospector's booth for most years.
- KEG Prospectors Course (University College of the Cariboo) in 1997.
- Attended numerous KEG and Geoscience BC short courses or field trips for prospecting, geochemistry, (basic) geophysics, mineralization, ore bodies, and formations such as the Nicola Volcanics.
- Attended numerous KEG and Geoscience BC field trips to Afton (Abacus), New Gold Inc (underground), Gibraltar, Mount Polley, Highland Valley Copper, Samatosum, Copper Mountain, and etc.
- Conducted numerous "one on one" field tours of properties with company geologists, and government geologists.
- Conducted one rotary wing geological inspection with geologist.
- Completed Prospectors Assistance Grant #98/99 P94.
- Completed contract staking for mining companies.
- Completed contracts for over 80 line kilometers of soil surveys for mining companies.
- Collected 2500+ of soil samples for assay by exploration companies.
- Collected 500+ prospecting soil samples.
- Collected 400+ moss mats and stream sediments samples.
- Collected 400+ rock samples.
- Completed advanced courses in Mathematics and Physics in the 1970s; and Forest Sciences such as Forest Hydrology, Forest Soils, Forest Ecology, Statistics, and Forest Mensuration in the 1980s..
- Project Management Courses, Continuous Improvement, Conflict Resolution, Coaching & Facilitating (meetings and teams), and business processes.
- Member of Provincial Working Groups related to government initiatives.
- Budgeted and implemented up to \$ 1.2 million per year of forestry related contracts.
- Contracted and supervised professionals working to a scientific standard.
- Certified Incident Commander for forest fires.
- Completed Assessment Reports as follows:

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29378 July 4, 2007 $ 6,375.11;
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29407 November 18, 2007 \$ 11,040.10;

29569 August 26, 2007

29709 December 20, 2007 \$ 7,037.87;

29960 March 1, 2008 \$ 25,177.09;

30869 June 2, 2009, \$ 29,959.06;

32076 for Astral Mining Corporation, June 7, 2011, \$ 78,250.27;

32383 for Astral Mining Corporation \$21,824.78;

33202: SASKUM BEAR for David J. Piggin,

33216: BENDGOLD for David J. Piggin, \$ 37,007.66

33190 Astral Mining Corporation, July 18, 2012, \$ 344,154.71.

- Optioned/sold the MAGNUM CLAIMS (near Ajax Pit at Afton) to New Gold Inc, near Kamloops, British Columbia.
- Optioned the HONEYMOON CLAIMS to Acrex Ventures Ltd., Vancouver, British Columbia.
- Optioned the HONEYMOON CLAIMS to Astral Mining Corporation, Vancouver, British Columbia.
- Optioned the BARRIERE RIDGE CLAIMS to Astral Mining Corporation, Vancouver, British Columbia.

Software Programs Used In Support of this Report

The following computer software and equipment used in support of the exploration and development work, and in the preparation of this report.

- 1. Microsoft Office 2010: EXCEL, WORD, OUTLOOK, ACCESS.
- 2. Internet Explorer (version 7).
- 3. Mineral Tenures Online mapping software.
- 4. ARIS MapBuilder.
- 5. MINFILE, Ministry of Mines Open Files and related data.
- 6. Arcview 3.2a and ArcGIS
- 7. Adobe Acrobat 9 Pro.
- 8. Trackmaker version 13.1 (freeware) for GPS download.
- 9. DNR Garmin GPS download.
- 10. Garmin 12XL Global Positioning Unit.
- 11. Garmin GPSmap 60CSx Global Positioning Unit.
- 12. Canon A630 and A1100 digital camera.
- 13. ICOM road radio and hand held radio for safety.
- 14. Stone Blaze, belt chain, surveying tool.
- 15. Hand held Ranger Silva Compass, Azimuth.
- 16. Clinometer, Sunnto, (degrees, percent).
- 17. Iwamoto Hand lens.
- 18. Survey ribbon (various colours), metal tags, and tyvek tags with wire.
- 19. Rock hammer, geotul, and various sledge hammers, shovels, and trowels.
- 20. Gold pan, black, for collecting sediment samples prior to bagging.
- 21. Black plastic door screen (0.1 inch square mesh) for screening stream sediment samples.
- 22. Samples were collected with plastic bags (rock), stream sediments/soil (kraft bags), moss mats (linen bags).
- 23. 2 Trapper Nelson pack boards with sacks.
- 24. Ford, F150 4x4 pickup, with canopy/boat racks.
- 25. Shindawa powersaw and Husqvarna Chainsaw.
- 26. 1 hand tank pumps (fire) and fire extinguishers for fire prevention
- 27. First aid kit for safety.

HONEYMOON AND I	BARRIERE RIDO	GE COST SUMMARY:	EVENTS 5439832	2 and 5439849	
Event	Dates	Total Value of Work	Total Applied Work Value	PAC	
5439832					
December 20, 2011	March 26, 2013	20,713.04	29,590.06	8,877.02	
5439849					
December 20, 2011	March 26, 2013	\$48,128.91	\$67,713.37	\$19,584.46	
	TOTAL	\$ 68,841.95	\$ 97,303.43	\$ 28,461.48	
Exploration Work type	Comment	Days	7.11000.110	20,1011.10	Totals
Personnel (Name)* / Position	Field Days (list actual days)	Days	Rate	Subtotal*	
avid Piggin, RPF. Prospector	January 6, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	January 11, 2012	0.5	\$300.00	\$150.00	
avid Piggin, RPF. Prospector	January 12, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	January 13, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	February 23, 2012	0.5	\$300.00	\$150.00	
avid Piggin, RPF. Prospector	March 6, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	April 12, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	April 13, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 10, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 15, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 16, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 17, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 18, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 19, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 20, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 21, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 22, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 23, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 24, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 29, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 30, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	May 31, 2012	1	\$300.00	\$300.00	
avid Piggin, RPF. Prospector	June 5, 2012	1	\$300.00	\$300.00	

David Piggin, RPF. Prospector	June 9, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 10, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 11, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 12, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 18, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 19, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 22, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	June 25, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	July 8, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	July 9, 2012	1	\$300.00	\$300.00	
David Piggin, RPF. Prospector	July 11, 2012	0.5	\$300.00	\$150.00	
David Piggin, RPF. Prospector	July 12, 2012	0.5	\$300.00	\$150.00	
David Piggin, RPF. Prospector	July 13, 2012	0.5	\$300.00	\$150.00	
David Piggin, RPF. Prospector	July 14, 2012	0.5	\$300.00	\$150.00	
David Piggin, RPF. Prospector	July 16, 2012	0.5	\$300.00	\$150.00	
David Piggin, RPF. Prospector	July 18, 2012	0.5	\$300.00	\$150.00	
David Piggin, RPF. Prospector	October 24, 2012	1	\$ 400.00	\$400.00	
David Piggin, RPF. Prospector	October 25, 2012	1	\$ 400.00	\$400.00	
Leonard Piggin, Prospector	October 25, 2012	1	\$ 300.00	\$300.00	
David Piggin, RPF. Prospector	October 26, 2012	1	\$ 400.00	\$400.00	
Leonard Piggin, Prospector	October 26, 2012	1	\$ 300.00	\$300.00	
Judy Burr, Field Exploration					
Service	October 26, 2012	1	\$ 300.00	\$300.00	
David Piggin, RPF. Prospector	October 27, 2012	1	\$ 400.00	\$400.00	
Matthew Piggin. Prospector	October 27, 2012	1	\$ 260.00	\$260.00	
David Piggin, RPF. Prospector	October 28, 2012	1	\$ 400.00	\$400.00	
Matthew Piggin. Prospector	October 28, 2012	1	\$ 260.00	\$260.00	
David Piggin, RPF. Prospector	October 29, 2012	0.4	\$ 400.00	\$160.00	
David Piggin, RPF. Prospector	October 30, 2012	1	\$ 400.00	\$400.00	
David Piggin, RPF. Prospector	October 31, 2012	1	\$ 400.00	\$400.00	
David Piggin, RPF. Prospector	November 1, 2012	0.6	\$ 400.00	\$240.00	
David Piggin, RPF. Prospector	December 10, 2012	1	\$ 350.00	\$350.00	
David Piggin, RPF. Prospector	December 11, 2012	1	\$ 350.00	\$350.00	
David Piggin, RPF. Prospector	December 12, 2012	1	\$ 350.00	\$350.00	
David Piggin, RPF. Prospector	December 13, 2012	1	\$ 350.00	\$350.00	
David Piggin, RPF. Prospector	December 14, 2012	0.6	\$ 350.00	\$210.00	
David Piggin, RPF. Prospector	December 15, 2012	0.4	\$ 350.00	\$140.00	
David Piggin, RPF. Prospector	December 17, 2012	1	\$ 350.00	\$350.00	

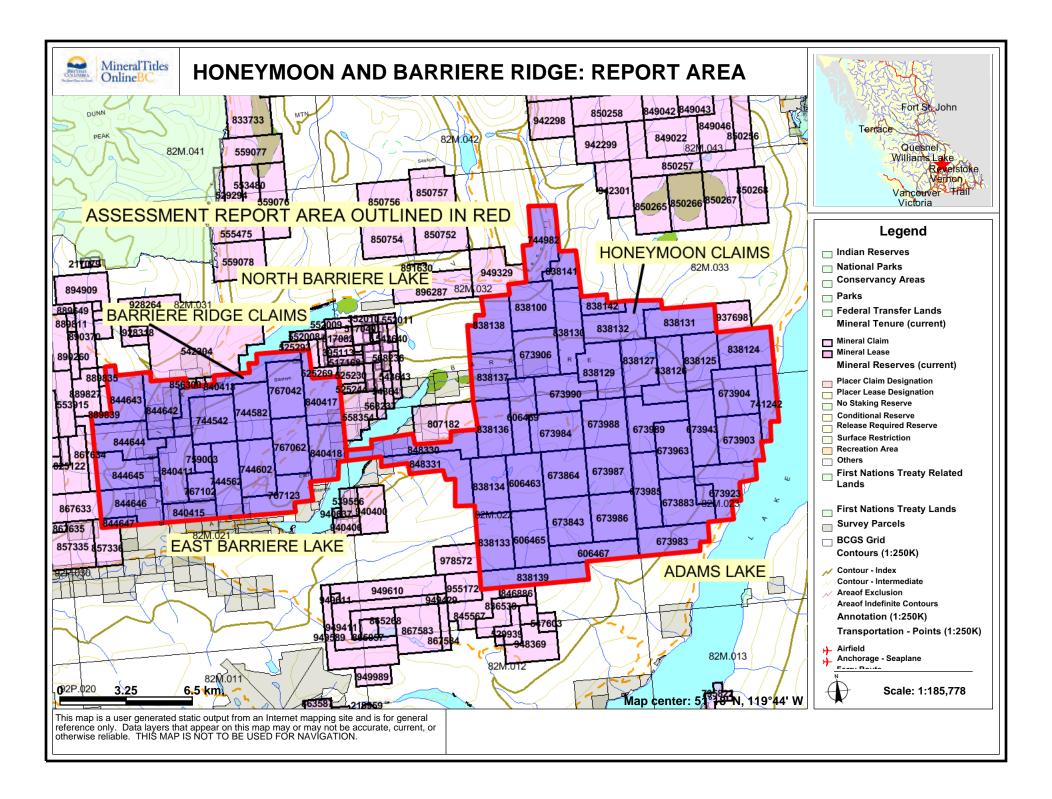
	1		T	*050.00	
David Piggin, RPF. Prospector	December 18, 2012	1	\$ 350.00	\$350.00	
David Piggin, RPF. Prospector	December 19, 2012	1	\$ 350.00	\$350.00	
David Piggin, RPF. Prospector	March 11, 2013	0.6	\$ 350.00	\$210.00	
				\$18,130.00	\$18,130.00
Office Studies	List Personnel (note - O	y :			
Literature search	David Piggin	4.0	\$350.00	\$1,400.00	
Literature search	Dale Brittliffe, Pgeo		\$650.00	\$0.00	
Database compilation	David Piggin	4.0	\$350.00	\$1,400.00	
Database compilation	Dale Brittliffe, Pgeo	3.0	\$650.00	\$1,950.00	
Computer modelling			\$0.00	\$0.00	
Reprocessing of data	Dale Brittliffe, Pgeo	1.0	\$650.00	\$650.00	
General research	David Piggin	3.0	\$350.00	\$1,050.00	
General research	Dale Brittliffe, Pgeo		\$650.00	\$0.00	
Report preparation	David Piggin	5.0	\$350.00	\$1,750.00	
	Dale Brittliffe, Pgeo	1.0	\$650.00	\$650.00	
	David Piggin, RPF.				
	Prospector, organize				
	field crews, gps				
Other (specify)	upload, etc	1.0	\$350.00	\$350.00	
Other (specify)			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
1 3/				\$9,200.00	\$9,200.00
Airborne Exploration					. ,
Surveys	Line Kilometres / Enter	total invoiced amount			
,	Fugro Airborne -				
	reprocessing and				
Aeromagnetics	targeting study	1.0	\$29,500.00	\$29,500.00	
Radiometrics			\$0.00	\$0.00	
Electromagnetics			\$0.00	\$0.00	
Gravity			\$0.00	\$0.00	
Digital terrain modelling			\$0.00	\$0.00	
Other (specify)	Dale Brittliffe, Pgeo	2.0		\$1,300.00	
				\$30,800.00	\$30,800.00
Remote Sensing	Area in Hectares / Enter	total invoiced amount	nr list nersonnel	Ψ00,000.00	+00/000.00
nonote delibing	23,530 hectares	total involect amount		I	
	PhotoSat 0.5m pixel				
Aerial photography	2012 image	1.0	\$6,578.00	\$6,578.00	
LANDSAT	2012 illiage	1.0	\$0.00	\$0,576.00	
LUIDOUI			\$0.00	\$0.00	

Other (specify)	Dale Brittliffe, Pgeo	0.5	\$650.00	\$325.00	
				\$6,903.00	\$6,903.00
Ground Exploration					
Surveys	Area in Hectares/Lis	t Personnel			
Geological mapping					
Regional		note: expenditures here			
Reconnaissance		should be captured in Personi	nel		
Prospect		field expenditures above			
Underground	Define by length and w	idth			
Trenches	Define by length and w	idth		\$0.00	
				\$0.00	\$0.00
Ground Geophysics	Line Kilometres / Er	nter total amount invoiced l	ist personnel		
Radiometrics					
Magnetics					
Gravity					
Digital terrain modelling					
Electromagnetics	note: expenditures for	your crew in the field			
SP/AP/EP	should be captured abo	ove in Personnel			
IP	field expenditures abov	re			
AMT/CSAMT					
Resistivity					
Complex resistivity					
Seismic reflection					
Seismic refraction					
Well logging	Define by total length				
Geophysical interpretation					
Petrophysics					
	Dale Brittliffe,				
	Pgeo.Plan, Map,				
	organize, digitize				
	preparatory survey				
Other (specify)	lines for field crews	3.0	\$650.00		
				\$1,950.00	\$1,950.00
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Drill (cuttings, core, etc.)			\$0.00		
Stream sediment			\$0.00	\$0.00	
Soil			\$0.00	\$0.00	

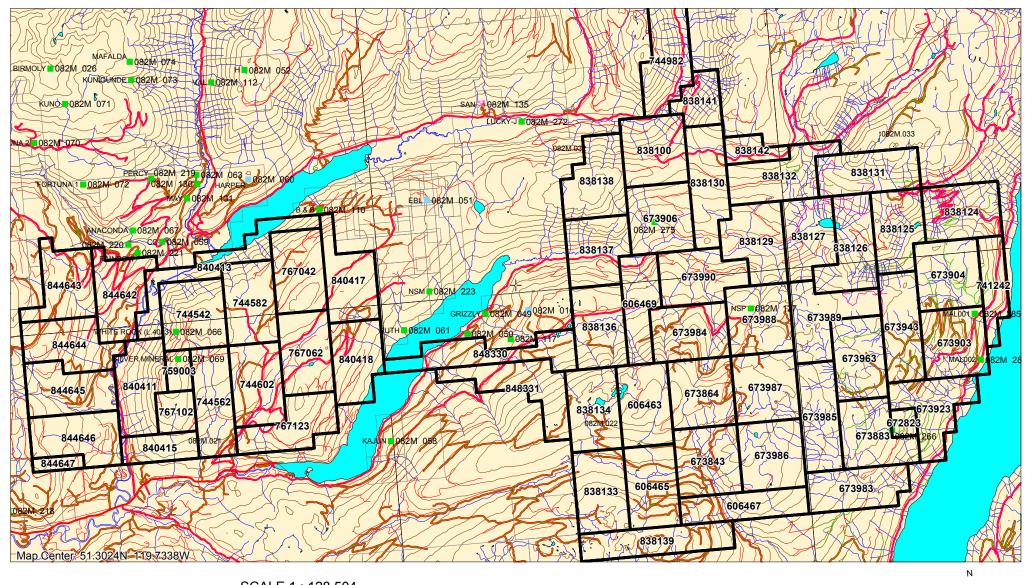
Rock			\$0.00	\$0.00	
Water			\$0.00		
Biogeochemistry			\$0.00		
Whole rock			\$0.00		
Petrology			\$0.00		
Other (specify)			\$0.00		
other (speerly)			\$6.66	\$0.00	\$0.00
Drilling	No. of Holes, Size	of (No	Rate	Subtotal	Ψ0.00
Diamond	110: 01 110103, 0120		\$0.00		
Reverse circulation (RC)			\$0.00		
Rotary air blast (RAB)			\$0.00		
Other (specify)			\$0.00		
Cirici (Specify)			\$6.55	\$0.00	\$0.00
Other Operations	Clarify	No.	Rate	Subtotal	Ψ0.00
Trenching	Oldi II y	I WO.	\$0.00		
Bulk sampling			\$0.00		
Underground development			\$0.00		
Other (specify)			\$0.00		
Other (specify)			\$0.00	\$0.00	\$0.00
Reclamation	Clarify	No.	Rate	Subtotal	φυ.υυ
After drilling	Clarity	140.	\$0.00		
Monitoring			\$0.00		
Other (specify)			\$0.00		
Other (specify)			\$0.00	\$0.00	\$0.00
Transportation		No.	Rate	Subtotal	φυ.υυ
Transportation		NO.	Kate	Jubiolai	
Airfaro	DR flight to Kamloo	ns Anril 2011	00.00	00.02	
Airfare	DB flight to Kamloo	ps April 2011	\$0.00		
Taxi			\$0.00	\$0.00	
Taxi truck rental	Barriere Ridge	5.0	\$0.00 0 \$75.00	\$0.00 \$375.00	
Taxi truck rental kilometers			\$0.00 0 \$75.00 0 \$0.48	\$0.00 \$375.00 \$696.00	
Taxi truck rental kilometers ATV	Barriere Ridge	5.0	\$0.00 0 \$75.00 0 \$0.48 \$0.00	\$0.00 \$375.00 \$696.00 \$0.00	
Taxi truck rental kilometers ATV fuel	Barriere Ridge	5.0	\$0.00 0 \$75.00 0 \$0.48 \$0.00	\$0.00 \$375.00 \$696.00 \$0.00	
Taxi truck rental kilometers ATV fuel Helicopter (hours)	Barriere Ridge	5.0	\$0.00 0 \$75.00 0 \$0.48 \$0.00 \$0.00	\$0.00 \$375.00 \$696.00 \$0.00 \$0.00	
Taxi truck rental kilometers ATV fuel Helicopter (hours) Fuel (litres/hour)	Barriere Ridge	5.0	\$0.00 0 \$75.00 0 \$0.48 \$0.00 \$0.00 \$0.00	\$0.00 \$375.00 \$696.00 \$0.00 \$0.00 \$0.00	
Taxi truck rental kilometers ATV fuel Helicopter (hours)	Barriere Ridge	5.0	\$0.00 0 \$75.00 0 \$0.48 \$0.00 \$0.00	\$0.00 \$375.00 \$696.00 \$0.00 \$0.00 \$0.00	\$1,071.00

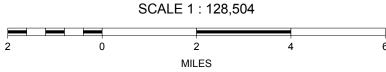
				TOTAL	\$97,303.43
				PAC ACCOUNT	\$28,461.48
TOTAL Expend	itures				\$68,841.95
				\$0.00	\$0.00
			\$0.00	\$0.00	
			\$0.00	\$0.00	
reight, rock samples					
				\$25.00	\$25.00
Other (Specify)	Chainsaw	1.00	\$25.00	\$25.00	
ield Gear (Specify)				\$0.00	
quipment Rentals					
•				\$357.95	\$357.95
ther (Specify)	Field Supplies			\$0.00	
ther (Specify)	Field Supplies		\$357.95	\$357.95	
elephone		1.00	\$100.00	\$100.00	
liscellaneous					
	Ī			\$405.00	\$405.00
leals	day rate or actual costs-sp	ecify		\$0.00	
leals	day rate	9.00	\$45.00	\$405.00	
amp			\$0.00	\$0.00	
otel			\$0.00	\$0.00	
Hotel			\$0.00	\$0.00	

APPENDICIES



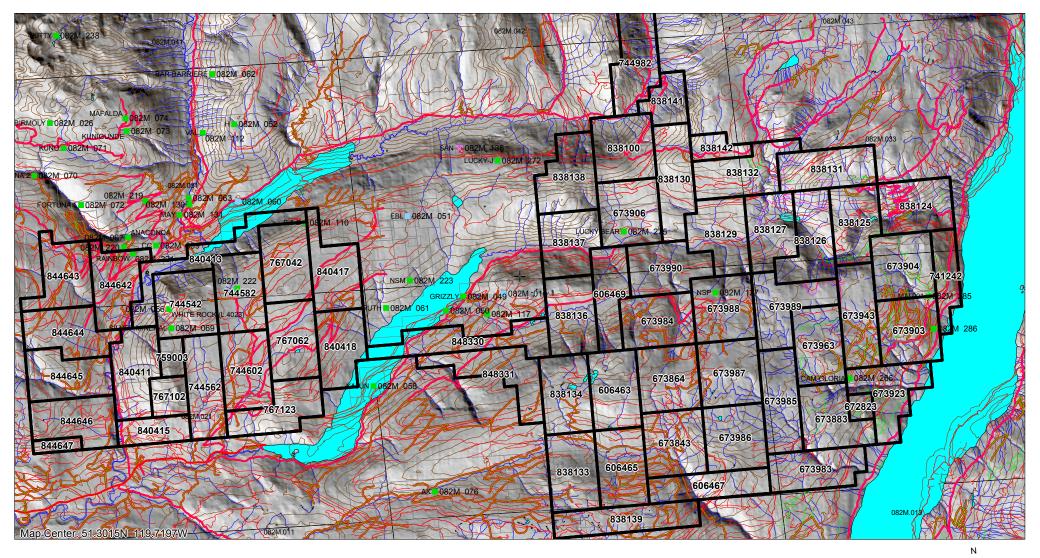
Honeymoon Barriere Ridge Claim Map

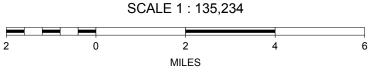






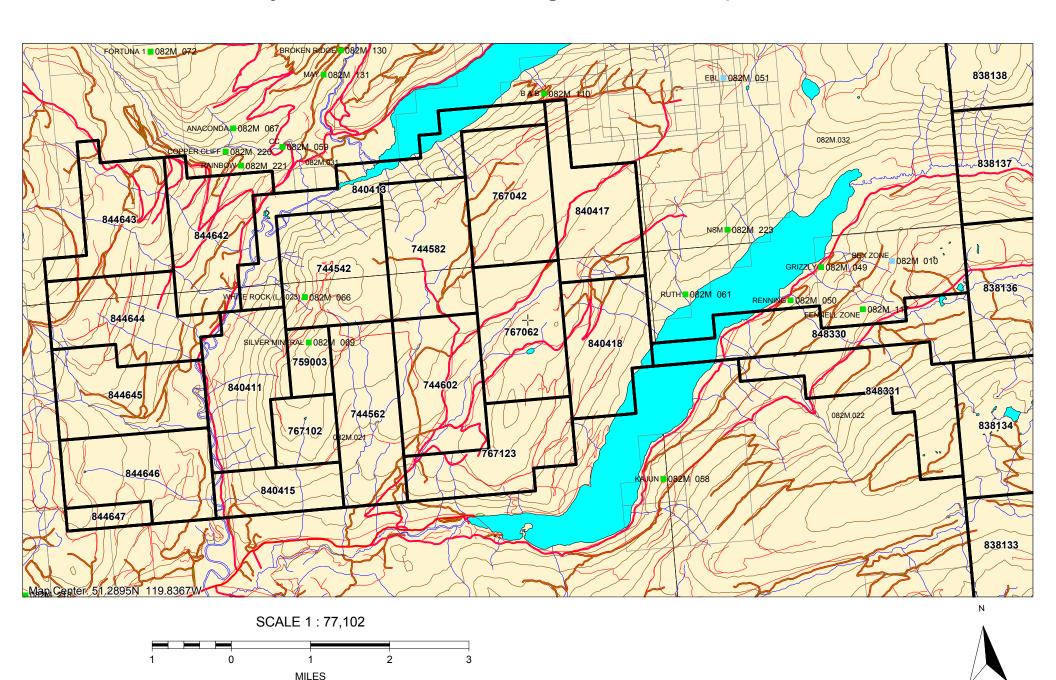
Honeymoon Barriere Ridge Claim Map - DEM Hillshade



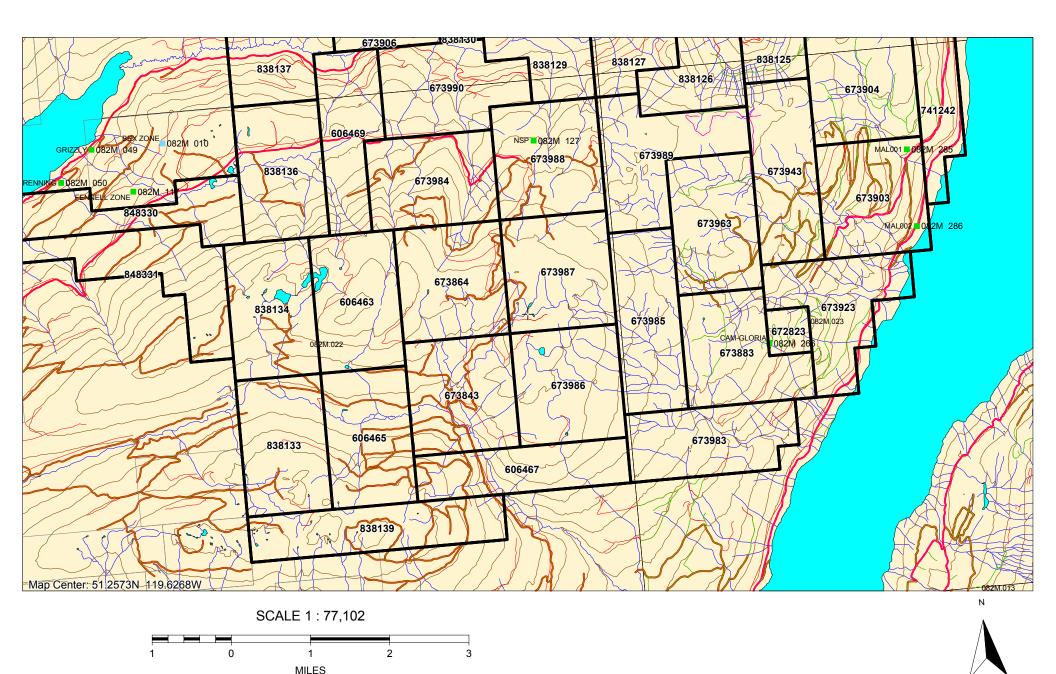




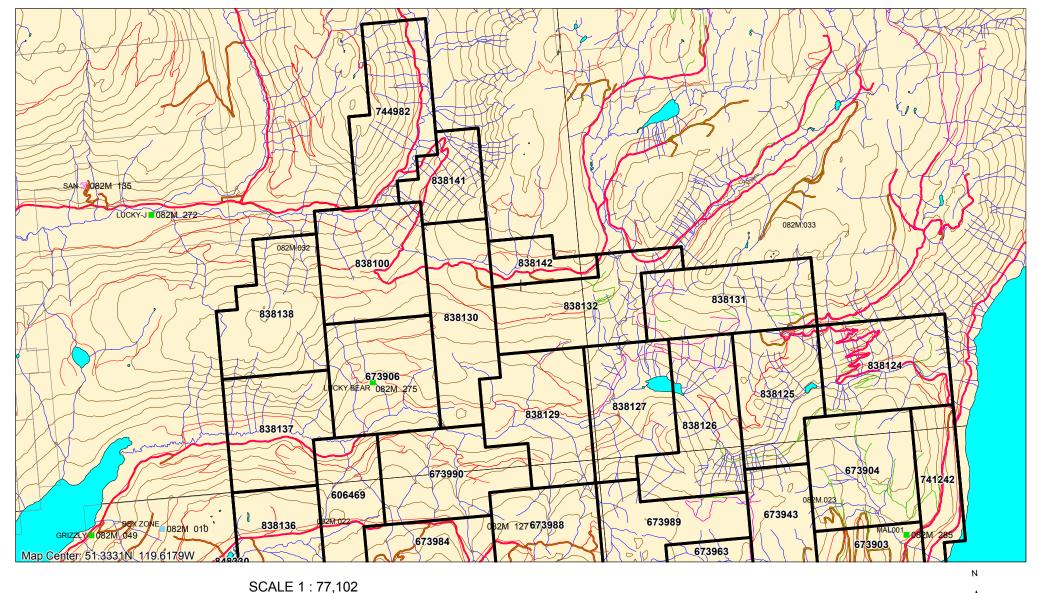
Honeymoon Barriere Ridge Claim Map - WEST



Honeymoon Barriere Ridge Claim Map - SOUTH and SOUTHEAST



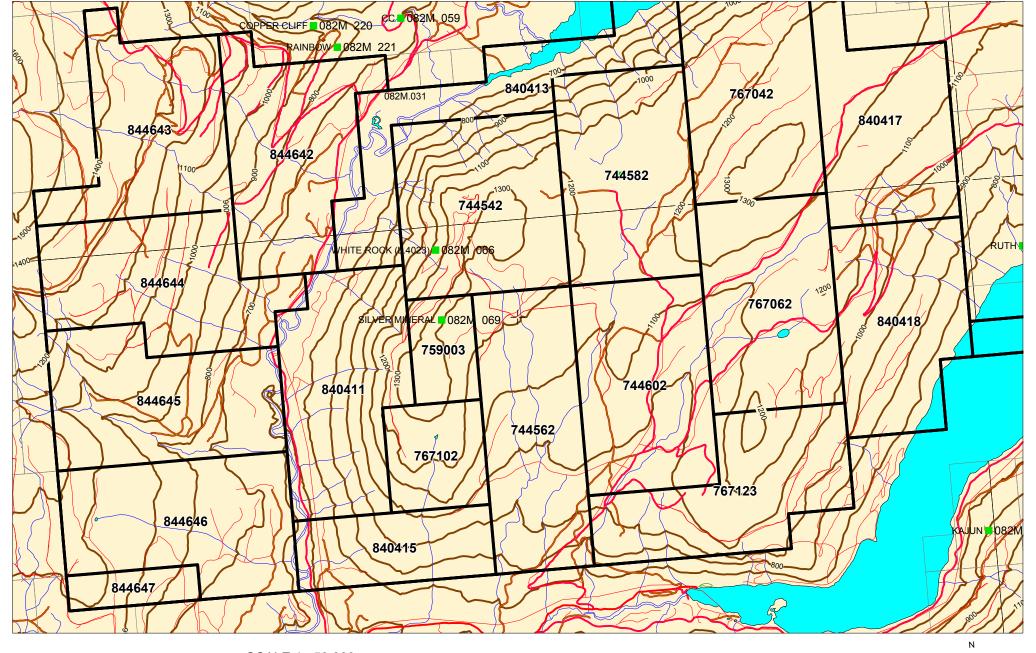
Honeymoon Barriere Ridge Claim Map - NORTH and NORTHEAST

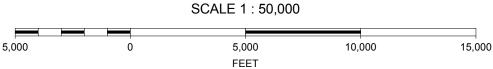


MILES



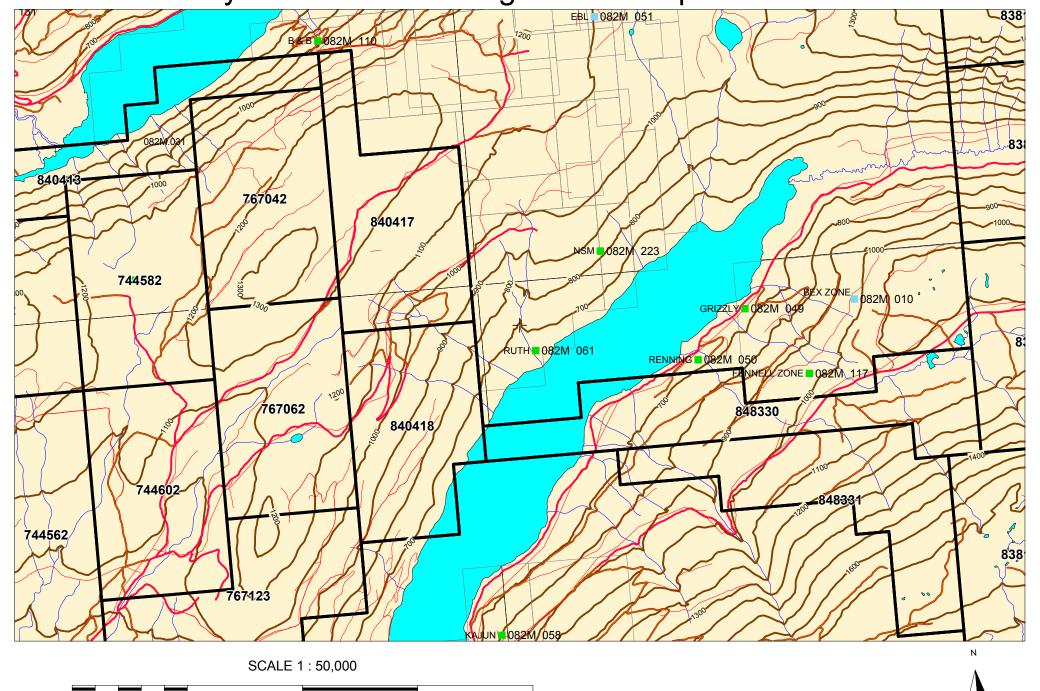
Honeymoon Barriere Ridge Claim Map - WEST







Honeymoon Barriere Ridge Claim Map - CentreWest



15,000

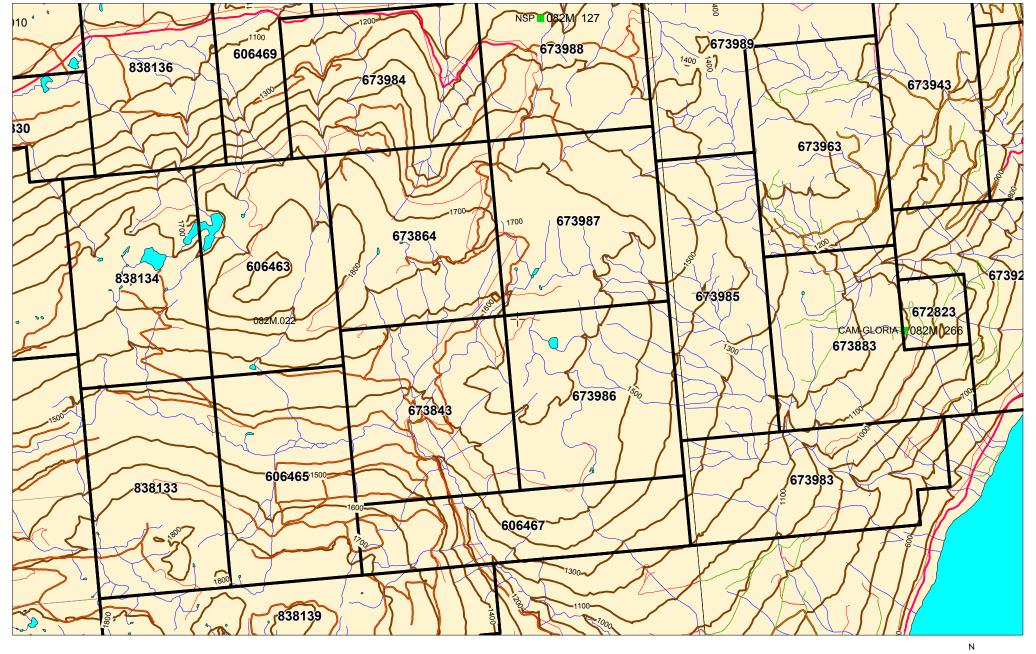
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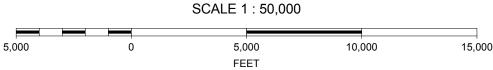
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FEET

10,000

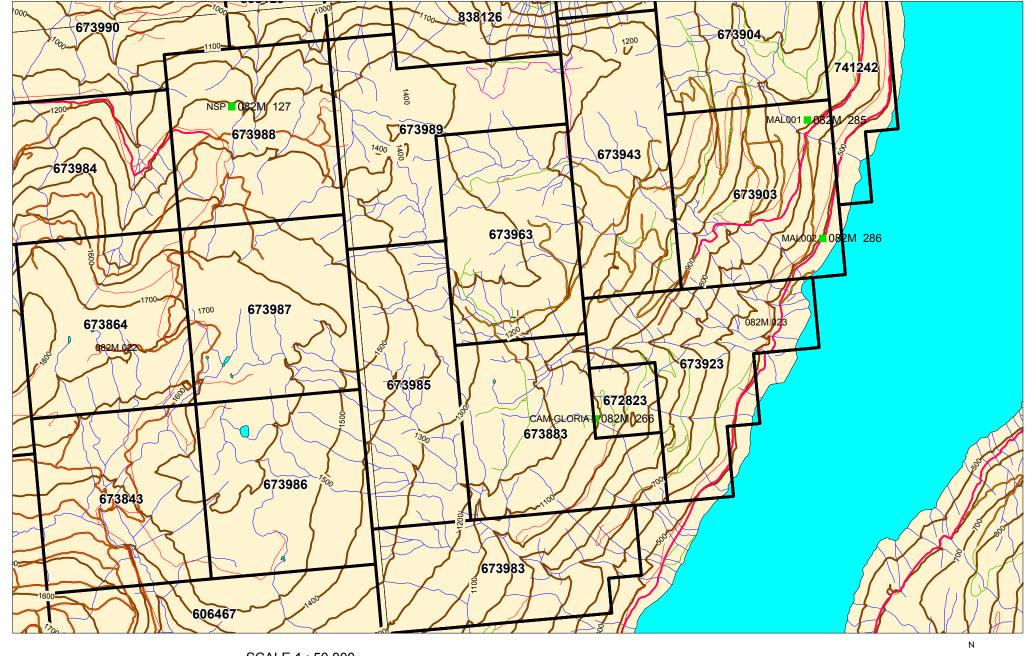
Honeymoon Barriere Ridge Claim Map - South and Southeast

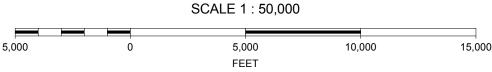






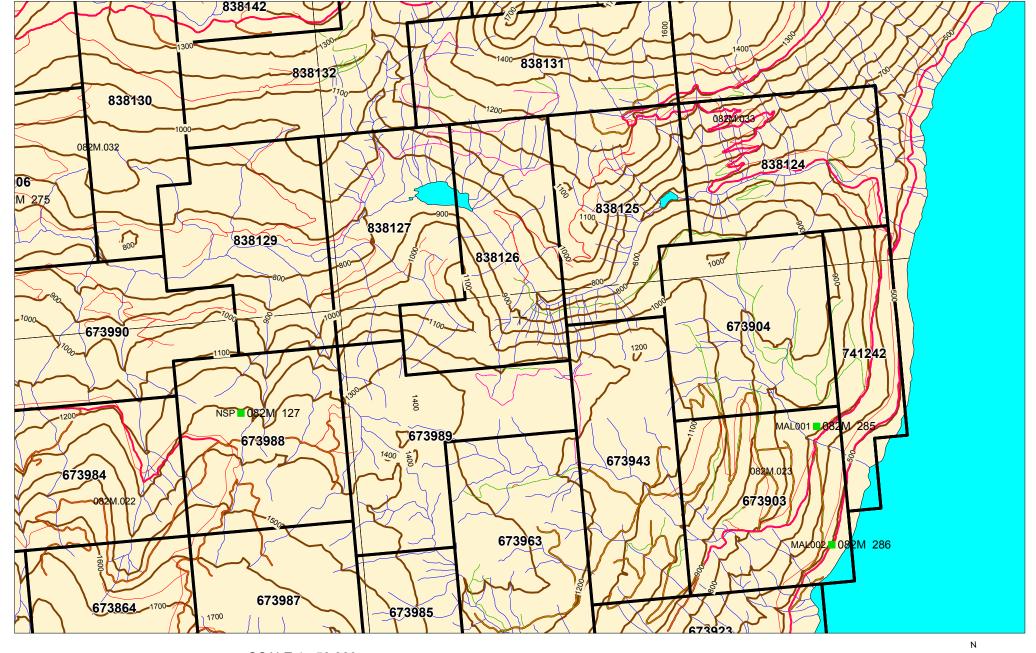
Honeymoon Barriere Ridge Claim Map - Southeast

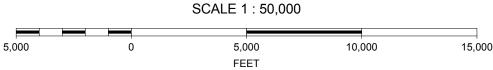






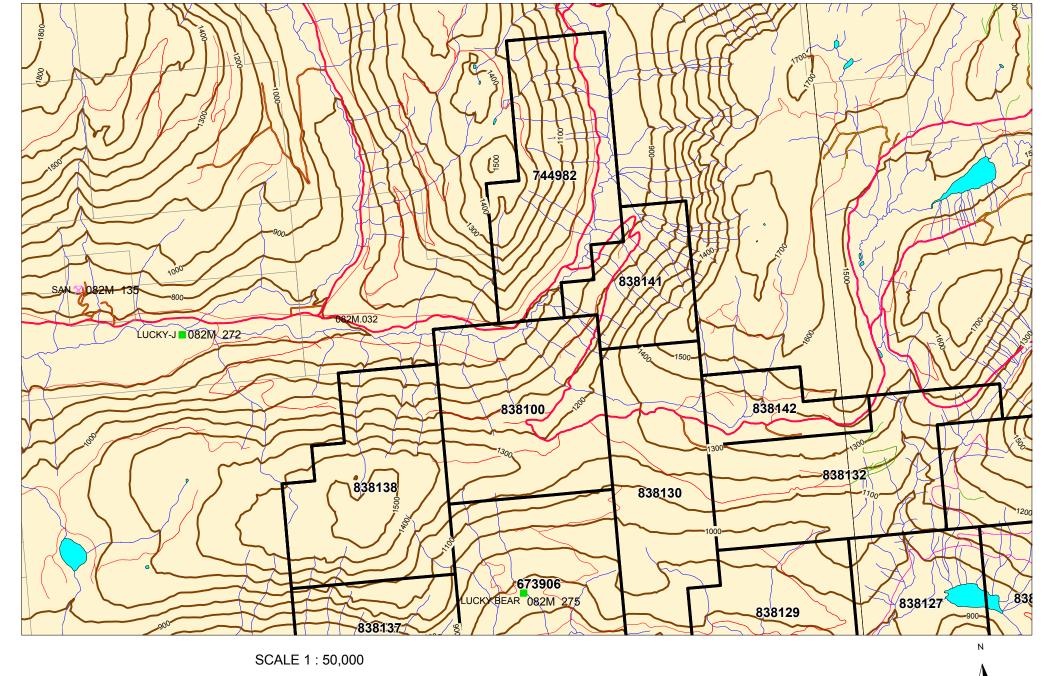
Honeymoon Barriere Ridge Claim Map - Northeast







Honeymoon Barriere Ridge Claim Map - Centre and Northwest



15,000

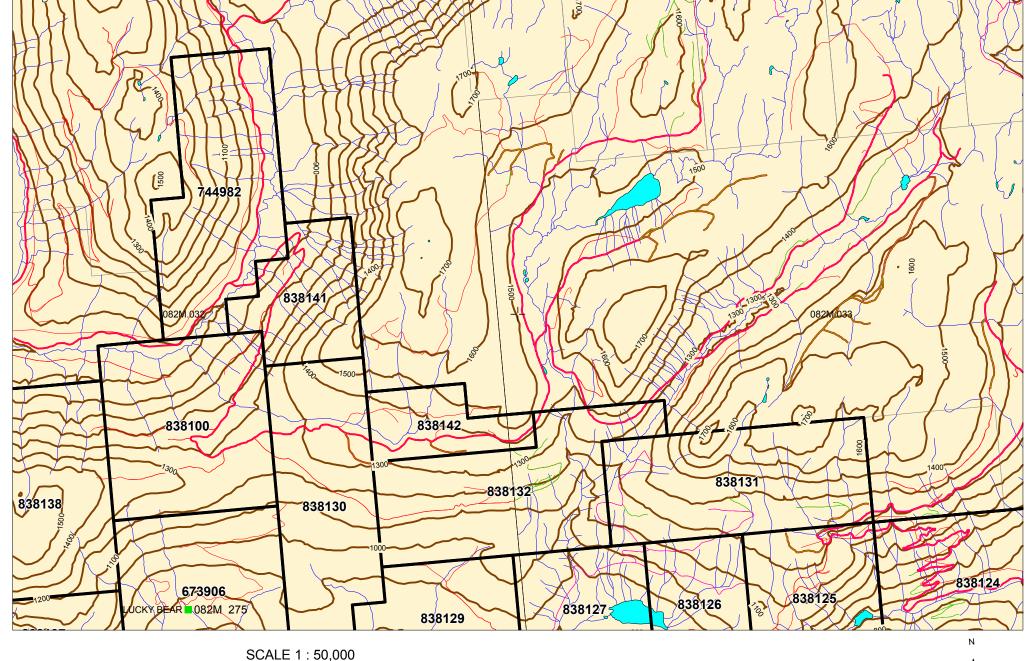
5,000

5,000

FEET

10,000

Honeymoon Barriere Ridge Claim Map - North and Northeast



15,000

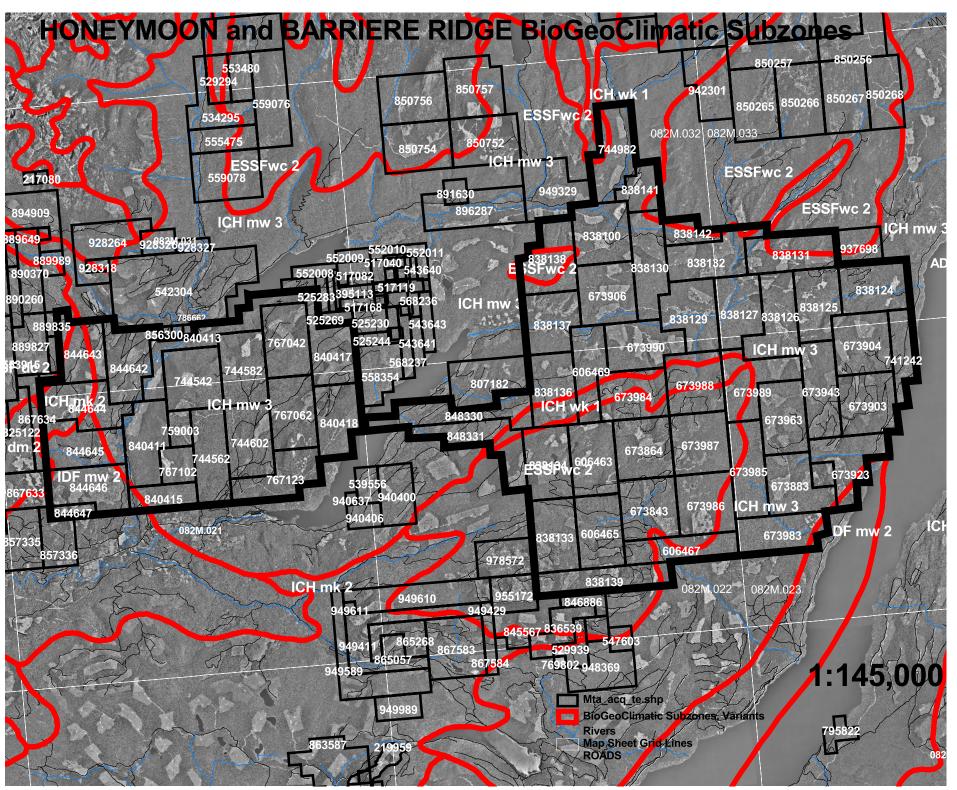
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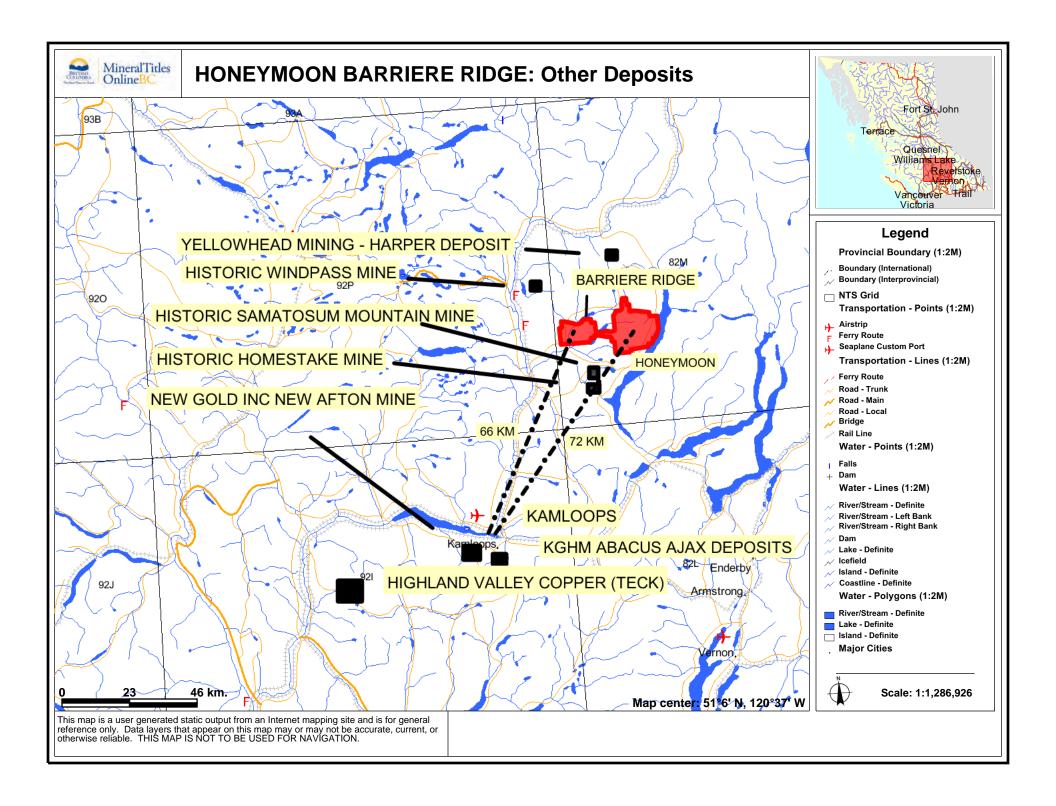
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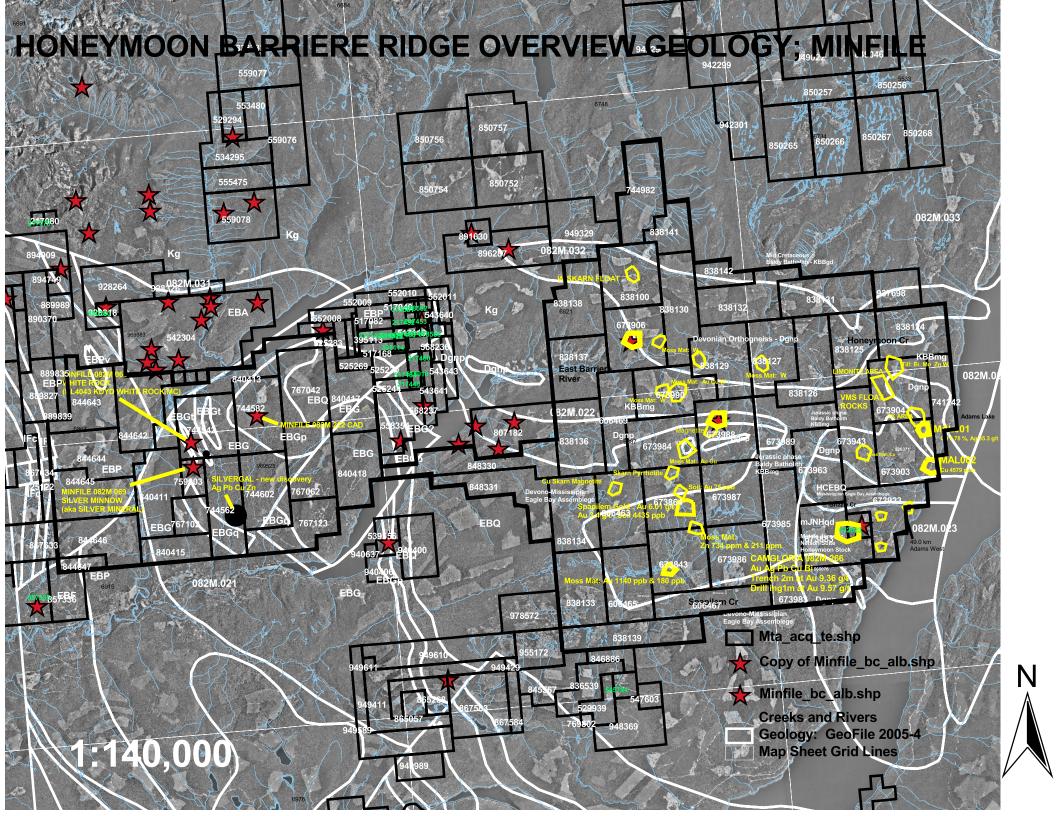
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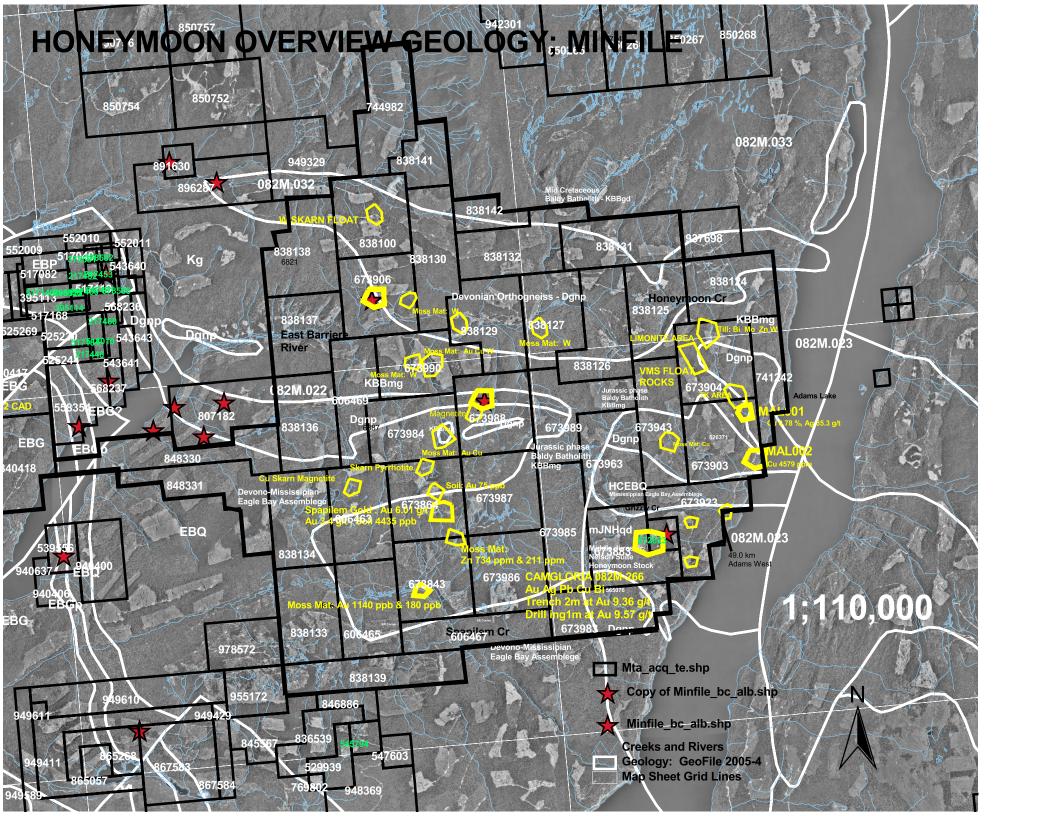


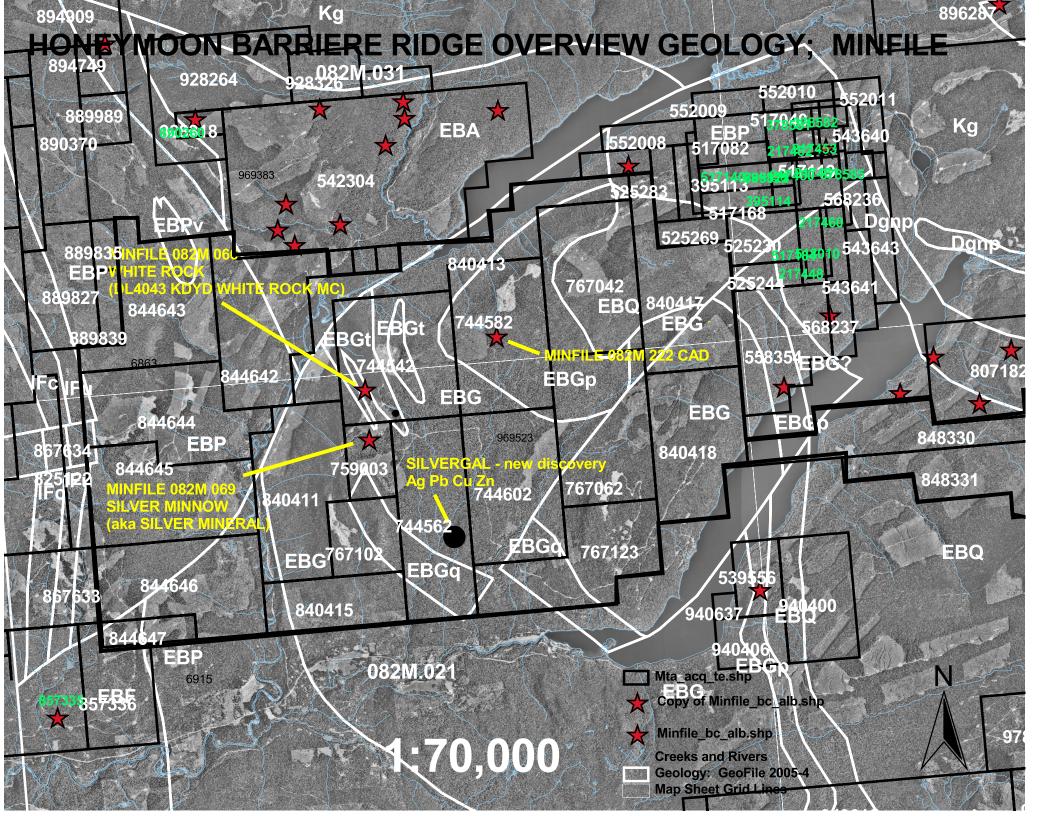


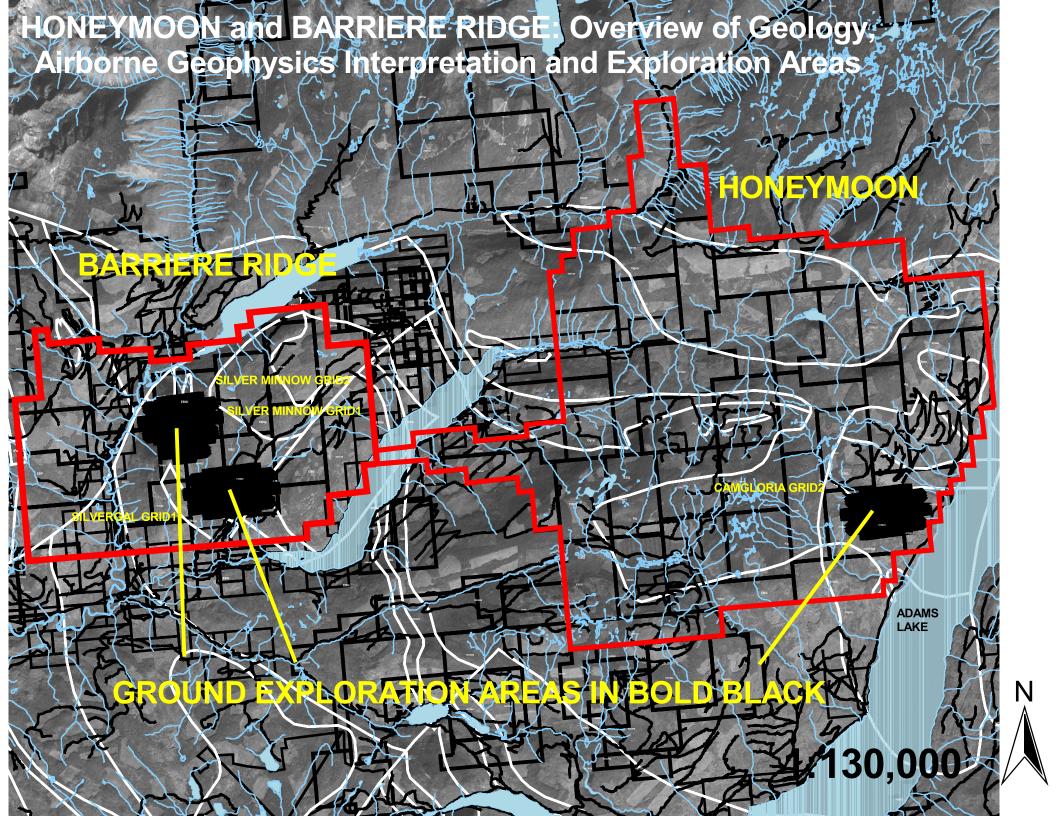












HONEYMOON AND BARRIERE RIDGE: LOCATION OF PREPARATORY SURVEYS, FOR GROUND GEOPHYICAL/GEOCHEMICAL SURVEY Spreadsheet shows: Target anomaly for Grid Name; GPS location of each station; If station installed (yes/no); and Sample Tag No. given if soils already collected and assayed (i.e. previously reported in ARIS Report 33190). SEE VARIOUS SCALE MAPS IN APPENDIX

		SEE VARIOUS SC	CALE MA	PS IN APP	ENDIX				
Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silvergal	SG1L1 298600	11	298600	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 298625	11	298625	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 298650	11	298650	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 298675	11	298675	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 298700	11	298700	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298725	11	298725	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298750	11	298750	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298775	11	298775	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298800	11	298800	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298825	11	298825	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298850	11	298850	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298875	11	298875	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298900	11	298900	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298925	11	298925	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298950	11	298950	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_298975	11	298975	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299000	11	299000	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299025	11	299025	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299050	11	299050	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299075	11	299075	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299100	11	299100	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299125	11	299125	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299150	11	299150	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299175	11	299175	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299200	11	299200	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299225	11	299225	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299250	11	299250	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299275	11	299275	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299300	11	299300	5684300	silvergal1	line1	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silvergal	SG1L1 299325	11	299325	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 299350	11	299350	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 299375	11	299375	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 299400	11	299400	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 299425	11	299425	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 299450	11	299450	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1 299475	11	299475	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299500	11	299500	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299525	11	299525	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299550	11	299550	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299575	11	299575	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299600	11	299600	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299625	11	299625	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299650	11	299650	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299675	11	299675	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299700	11	299700	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299725	11	299725	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299750	11	299750	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299775	11	299775	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299800	11	299800	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299825	11	299825	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299850	11	299850	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299875	11	299875	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299900	11	299900	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299925	11	299925	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299950	11	299950	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_299975	11	299975	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300000	11	300000	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300025	11	300025	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300050	11	300050	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300075	11	300075	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300100	11	300100	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300125	11	300125	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300150	11	300150	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300175	11	300175	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300200	11	300200	5684300	silvergal1	line1	no	

			UTM NAD83				Line	Station Surveyed	Assay Sample Tag
Project	Target Anomaly	Waypoint Name	Zone	Easterly	Northerly	Grid Name	No.	(yes, no)	No
Barriere Ridge	Silvergal	SG1L1_300225	11	300225	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300250	11	300250	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300275	11	300275	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300300	11	300300	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300325	11	300325	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300350	11	300350	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300375	11	300375	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L1_300400	11	300400	5684300	silvergal1	line1	no	
Barriere Ridge	Silvergal	SG1L2_298600	11	298600	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298625	11	298625	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298650	11	298650	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298675	11	298675	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298700	11	298700	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298725	11	298725	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298750	11	298750	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298775	11	298775	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_298800	11	298800	5684200	silvergal1	line2	yes	10E41201
Barriere Ridge	Silvergal	SG1L2_298825	11	298825	5684200	silvergal1	line2	yes	10E41202
Barriere Ridge	Silvergal	SG1L2_298850	11	298850	5684200	silvergal1	line2	yes	10E41203
Barriere Ridge	Silvergal	SG1L2_298875	11	298875	5684200	silvergal1	line2	yes	10E41204
Barriere Ridge	Silvergal	SG1L2_298900	11	298900	5684200	silvergal1	line2	yes	10E41205
Barriere Ridge	Silvergal	SG1L2_298925	11	298925	5684200	silvergal1	line2	yes	10E41206
Barriere Ridge	Silvergal	SG1L2_298950	11	298950	5684200	silvergal1	line2	yes	10E41207
Barriere Ridge	Silvergal	SG1L2_298975	11	298975	5684200	silvergal1	line2	yes	10E41208
Barriere Ridge	Silvergal	SG1L2_299000	11	299000	5684200	silvergal1	line2	yes	10E41209
Barriere Ridge	Silvergal	SG1L2_299025	11	299025	5684200	silvergal1	line2	yes	10E41210
Barriere Ridge	Silvergal	SG1L2_299050	11	299050	5684200	silvergal1	line2	yes	10E41211
Barriere Ridge	Silvergal	SG1L2_299075	11	299075	5684200	silvergal1	line2	yes	10E41212
Barriere Ridge	Silvergal	SG1L2_299100	11	299100	5684200	silvergal1	line2	yes	10E41213
Barriere Ridge	Silvergal	SG1L2_299125	11	299125	5684200	silvergal1	line2	yes	10E41214
Barriere Ridge	Silvergal	SG1L2_299150	11	299150	5684200	silvergal1	line2	yes	10E41215
Barriere Ridge	Silvergal	SG1L2_299175	11	299175	5684200	silvergal1	line2	yes	10E41216
Barriere Ridge	Silvergal	SG1L2_299200	11	299200	5684200	silvergal1	line2	yes	10E41217
Barriere Ridge	Silvergal	SG1L2_299225	11	299225	5684200	silvergal1	line2	yes	10E41218
Barriere Ridge	Silvergal	SG1L2_299250	11	299250	5684200	silvergal1	line2	yes	10E41219
Barriere Ridge	Silvergal	SG1L2_299275	11	299275	5684200	silvergal1	line2	yes	10E41220

			UTM NAD83				Lina	Station	Assay Sample Tag
Project	Target Anomaly	Waypoint Name		Easterly	Northerly	Grid Name	Line No.	Surveyed (yes, no)	No No
Barriere Ridge	Silvergal	SG1L2 299300	11	299300	5684200	silvergal1	line2	yes	10E41221
Barriere Ridge	Silvergal	SG1L2 299325	11	299325	5684200	silvergal1	line2	yes	10E41222
Barriere Ridge	Silvergal	SG1L2 299350	11	299350	5684200	silvergal1	line2	yes	10E41223
Barriere Ridge	Silvergal	SG1L2 299375	11	299375	5684200	silvergal1	line2	yes	10E41224
Barriere Ridge	Silvergal	SG1L2 299400	11	299400	5684200	silvergal1	line2	yes	10E41225
Barriere Ridge	Silvergal	SG1L2_299425	11	299425	5684200	silvergal1	line2	yes	10E41226
Barriere Ridge	Silvergal	SG1L2_299450	11	299450	5684200	silvergal1	line2	yes	10E41227
Barriere Ridge	Silvergal	SG1L2_299475	11	299475	5684200	silvergal1	line2	yes	10E41228
Barriere Ridge	Silvergal	SG1L2_299500	11	299500	5684200	silvergal1	line2	yes	10E41229
Barriere Ridge	Silvergal	SG1L2_299525	11	299525	5684200	silvergal1	line2	yes	10E41230
Barriere Ridge	Silvergal	SG1L2_299550	11	299550	5684200	silvergal1	line2	yes	10E41231
Barriere Ridge	Silvergal	SG1L2_299575	11	299575	5684200	silvergal1	line2	yes	10E41232
Barriere Ridge	Silvergal	SG1L2_299600	11	299600	5684200	silvergal1	line2	yes	10E41233
Barriere Ridge	Silvergal	SG1L2_299625	11	299625	5684200	silvergal1	line2	yes	10E41234
Barriere Ridge	Silvergal	SG1L2_299650	11	299650	5684200	silvergal1	line2	yes	10E41235
Barriere Ridge	Silvergal	SG1L2_299675	11	299675	5684200	silvergal1	line2	yes	10E41236
Barriere Ridge	Silvergal	SG1L2_299700	11	299700	5684200	silvergal1	line2	yes	10E41237
Barriere Ridge	Silvergal	SG1L2_299725	11	299725	5684200	silvergal1	line2	yes	10E41238
Barriere Ridge	Silvergal	SG1L2_299750	11	299750	5684200	silvergal1	line2	yes	10E41239
Barriere Ridge	Silvergal	SG1L2_299775	11	299775	5684200	silvergal1	line2	yes	10E41240
Barriere Ridge	Silvergal	SG1L2_299800	11	299800	5684200	silvergal1	line2	yes	10E41241
Barriere Ridge	Silvergal	SG1L2_299825	11	299825	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_299850	11	299850	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_299875	11	299875	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_299900	11	299900	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_299925	11	299925	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_299950	11	299950	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_299975	11	299975	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300000	11	300000	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300025	11	300025	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300050	11	300050	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300075	11	300075	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300100	11	300100	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300125	11	300125	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300150	11	300150	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2_300175	11	300175	5684200	silvergal1	line2	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silvergal	SG1L2 300200	11	300200	5684200	silvergal1	line2	no	<u> </u>
Barriere Ridge	Silvergal	SG1L2 300225	11	300225	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300250	11	300250	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300275	11	300275	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300300	11	300300	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300325	11	300325	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300350	11	300350	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300375	11	300375	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L2 300400	11	300400	5684200	silvergal1	line2	no	
Barriere Ridge	Silvergal	SG1L3 298600	11	298600	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 298625	11	298625	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298650	11	298650	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298675	11	298675	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298700	11	298700	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298725	11	298725	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298750	11	298750	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298775	11	298775	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_298800	11	298800	5684100	silvergal1	line3	yes	10E41242
Barriere Ridge	Silvergal	SG1L3_298825	11	298825	5684100	silvergal1	line3	yes	10E41243
Barriere Ridge	Silvergal	SG1L3_298850	11	298850	5684100	silvergal1	line3	yes	10E41244
Barriere Ridge	Silvergal	SG1L3_298875	11	298875	5684100	silvergal1	line3	yes	10E41245
Barriere Ridge	Silvergal	SG1L3_298900	11	298900	5684100	silvergal1	line3	yes	10E41246
Barriere Ridge	Silvergal	SG1L3_298925	11	298925	5684100	silvergal1	line3	yes	10E41247
Barriere Ridge	Silvergal	SG1L3_298950	11	298950	5684100	silvergal1	line3	yes	10E41248
Barriere Ridge	Silvergal	SG1L3_298975	11	298975	5684100	silvergal1	line3	yes	10E41249
Barriere Ridge	Silvergal	SG1L3_299000	11	299000	5684100	silvergal1	line3	yes	10E41250
Barriere Ridge	Silvergal	SG1L3_299025	11	299025	5684100	silvergal1	line3	yes	10E41251
Barriere Ridge	Silvergal	SG1L3_299050	11	299050	5684100	silvergal1	line3	yes	10E41252
Barriere Ridge	Silvergal	SG1L3_299075	11	299075	5684100	silvergal1	line3	yes	10E41253
Barriere Ridge	Silvergal	SG1L3_299100	11	299100	5684100	silvergal1	line3	yes	10E41254
Barriere Ridge	Silvergal	SG1L3_299125	11	299125	5684100	silvergal1	line3	yes	10E41255
Barriere Ridge	Silvergal	SG1L3_299150	11	299150	5684100	silvergal1	line3	yes	10E41256
Barriere Ridge	Silvergal	SG1L3_299175	11	299175	5684100	silvergal1	line3	yes	10E41257
Barriere Ridge	Silvergal	SG1L3_299200	11	299200	5684100	silvergal1	line3	yes	10E41258
Barriere Ridge	Silvergal	SG1L3_299225	11	299225	5684100	silvergal1	line3	yes	10E41259
Barriere Ridge	Silvergal	SG1L3_299250	11	299250	5684100	silvergal1	line3	yes	10E41260

			UTM					Station	Assay
Project	Target Anomaly	Waypoint Name	NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Surveyed (yes, no)	Sample Tag No
Barriere Ridge	Silvergal	SG1L3 299275	11	299275	5684100	silvergal1	line3	yes	10E41261
Barriere Ridge	Silvergal	SG1L3_299300	11	299300	5684100	silvergal1	line3	yes	10E41262
Barriere Ridge	Silvergal	SG1L3_299325	11	299325	5684100	silvergal1	line3	yes	10E41263
Barriere Ridge	Silvergal	SG1L3_299350	11	299350	5684100	silvergal1	line3	yes	10E41264
Barriere Ridge	Silvergal	SG1L3_299375	11	299375	5684100	silvergal1	line3	yes	10E41265
Barriere Ridge	Silvergal	SG1L3 299400	11	299400	5684100	silvergal1	line3	yes	10E41266
Barriere Ridge	Silvergal	SG1L3 299425	11	299425	5684100	silvergal1	line3	yes	10E41267
Barriere Ridge	Silvergal	SG1L3 299450	11	299450	5684100	silvergal1	line3	yes	10E41268
Barriere Ridge	Silvergal	SG1L3 299475	11	299475	5684100	silvergal1	line3	yes	10E41269
Barriere Ridge	Silvergal	SG1L3 299500	11	299500	5684100	silvergal1	line3	yes	10E41270
Barriere Ridge	Silvergal	SG1L3 299525	11	299525	5684100	silvergal1	line3	yes	10E41271
Barriere Ridge	Silvergal	SG1L3 299550	11	299550	5684100	silvergal1	line3	yes	10E41272
Barriere Ridge	Silvergal	SG1L3 299575	11	299575	5684100	silvergal1	line3	yes	10E41273
Barriere Ridge	Silvergal	SG1L3 299600	11	299600	5684100	silvergal1	line3	yes	10E41274
Barriere Ridge	Silvergal	SG1L3 299625	11	299625	5684100	silvergal1	line3	yes	10E41275
Barriere Ridge	Silvergal	SG1L3 299650	11	299650	5684100	silvergal1	line3	yes	10E41276
Barriere Ridge	Silvergal	SG1L3 299675	11	299675	5684100	silvergal1	line3	yes	10E41277
Barriere Ridge	Silvergal	SG1L3 299700	11	299700	5684100	silvergal1	line3	yes	10E41278
Barriere Ridge	Silvergal	SG1L3 299725	11	299725	5684100	silvergal1	line3	yes	10E41279
Barriere Ridge	Silvergal	SG1L3_299750	11	299750	5684100	silvergal1	line3	yes	10E41280
Barriere Ridge	Silvergal	SG1L3_299775	11	299775	5684100	silvergal1	line3	yes	10E41281
Barriere Ridge	Silvergal	SG1L3_299800	11	299800	5684100	silvergal1	line3	yes	10E41282
Barriere Ridge	Silvergal	SG1L3_299825	11	299825	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_299850	11	299850	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_299875	11	299875	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_299900	11	299900	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_299925	11	299925	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_299950	11	299950	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_299975	11	299975	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300000	11	300000	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300025	11	300025	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300050	11	300050	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300075	11	300075	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300100	11	300100	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300125	11	300125	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300150	11	300150	5684100	silvergal1	line3	no	

			UTM NAD83				Line	Station Surveyed	Assay Sample Tag
Project	Target Anomaly	Waypoint Name	Zone	Easterly	Northerly	Grid Name	No.	(yes, no)	No
Barriere Ridge	Silvergal	SG1L3_300175	11	300175	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 300200	11	300200	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 300225	11	300225	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 300250	11	300250	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 300275	11	300275	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 300300	11	300300	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3 300325	11	300325	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300350	11	300350	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300375	11	300375	5684100	silvergal1	line3	no	
Barriere Ridge	Silvergal	SG1L3_300400	11	300400	5684100	silvergal1	line3	no	
Barriere Ridge	Silver Minnow	SM1L1_297800	11	297800	5686300	silverminnow1	line1	yes	10E41283
Barriere Ridge	Silver Minnow	SM1L1_297825	11	297825	5686300	silverminnow1	line1	yes	10E41284
Barriere Ridge	Silver Minnow	SM1L1_297850	11	297850	5686300	silverminnow1	line1	yes	10E41285
Barriere Ridge	Silver Minnow	SM1L1_297875	11	297875	5686300	silverminnow1	line1	yes	10E41286
Barriere Ridge	Silver Minnow	SM1L1_297900	11	297900	5686300	silverminnow1	line1	yes	10E41287
Barriere Ridge	Silver Minnow	SM1L1_297925	11	297925	5686300	silverminnow1	line1	yes	10E41288
Barriere Ridge	Silver Minnow	SM1L1_297950	11	297950	5686300	silverminnow1	line1	yes	10E41289
Barriere Ridge	Silver Minnow	SM1L1_297975	11	297975	5686300	silverminnow1	line1	yes	10E41290
Barriere Ridge	Silver Minnow	SM1L1_298000	11	298000	5686300	silverminnow1	line1	yes	10E41291
Barriere Ridge	Silver Minnow	SM1L1_298025	11	298025	5686300	silverminnow1	line1	yes	10E41292
Barriere Ridge	Silver Minnow	SM1L1_298050	11	298050	5686300	silverminnow1	line1	yes	10E41293
Barriere Ridge	Silver Minnow	SM1L1_298075	11	298075	5686300	silverminnow1	line1	yes	10E41294
Barriere Ridge	Silver Minnow	SM1L1_298100	11	298100	5686300	silverminnow1	line1	yes	10E41295
Barriere Ridge	Silver Minnow	SM1L1_298125	11	298125	5686300	silverminnow1	line1	yes	10E41296
Barriere Ridge	Silver Minnow	SM1L1_298150	11	298150	5686300	silverminnow1	line1	yes	10E41297
Barriere Ridge	Silver Minnow	SM1L1_298175	11	298175	5686300	silverminnow1	line1	yes	10E41298
Barriere Ridge	Silver Minnow	SM1L1_298200	11	298200	5686300	silverminnow1	line1	yes	10E41299
Barriere Ridge	Silver Minnow	SM1L1_298225	11	298225	5686300	silverminnow1	line1	yes	10E41300
Barriere Ridge	Silver Minnow	SM1L1_298250	11	298250	5686300	silverminnow1	line1	yes	10E41301
Barriere Ridge	Silver Minnow	SM1L1_298275	11	298275	5686300	silverminnow1	line1	yes	10E41302
Barriere Ridge	Silver Minnow	SM1L1_298300	11	298300	5686300	silverminnow1	line1	yes	10E41303
Barriere Ridge	Silver Minnow	SM1L1_298325	11	298325	5686300	silverminnow1	line1	yes	10E41304
Barriere Ridge	Silver Minnow	SM1L1_298350	11	298350	5686300	silverminnow1	line1	yes	10E41305
Barriere Ridge	Silver Minnow	SM1L1_298375	11	298375	5686300	silverminnow1	line1	yes	10E41306
Barriere Ridge	Silver Minnow	SM1L1_298400	11	298400	5686300	silverminnow1	line1	yes	10E41307
Barriere Ridge	Silver Minnow	SM1L2_298600	11	297800	5686200	silverminnow1	line2	no	

			UTM NAD83				Line	Station Surveyed	Assay Sample Tag
Project	Target Anomaly	<u> </u>	Zone	Easterly	Northerly	Grid Name	No.	(yes, no)	No
Barriere Ridge	Silver Minnow	SM1L2_298625	11	297825	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298650	11	297850	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298675	11	297875	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298700	11	297900	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298725	11	297925	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298750	11	297950	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298775	11	297975	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298800	11	298000	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298825	11	298025	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298850	11	298050	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298875	11	298075	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298900	11	298100	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298925	11	298125	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298950	11	298150	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_298975	11	298175	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299000	11	298200	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299025	11	298225	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299050	11	298250	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299075	11	298275	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299100	11	298300	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299125	11	298325	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299150	11	298350	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299175	11	298375	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L2_299200	11	298400	5686200	silverminnow1	line2	no	
Barriere Ridge	Silver Minnow	SM1L3_298600	11	297800	5686100	silverminnow1	line3	yes	10E41308
Barriere Ridge	Silver Minnow	SM1L3_298625	11	297825	5686100	silverminnow1	line3	yes	10E41309
Barriere Ridge	Silver Minnow	SM1L3_298650	11	297850	5686100	silverminnow1	line3	yes	10E41310
Barriere Ridge	Silver Minnow	SM1L3_298675	11	297875	5686100	silverminnow1	line3	yes	10E41311
Barriere Ridge	Silver Minnow	SM1L3_298700	11	297900	5686100	silverminnow1	line3	yes	10E41312
Barriere Ridge	Silver Minnow	SM1L3_298725	11	297925	5686100	silverminnow1	line3	yes	10E41313
Barriere Ridge	Silver Minnow	SM1L3_298750	11	297950	5686100	silverminnow1	line3	yes	10E41314
Barriere Ridge	Silver Minnow	SM1L3_298775	11	297975	5686100	silverminnow1	line3	yes	10E41315
Barriere Ridge	Silver Minnow	SM1L3_298800	11	298000	5686100	silverminnow1	line3	yes	10E41316
Barriere Ridge	Silver Minnow	SM1L3_298825	11	298025	5686100	silverminnow1	line3	yes	10E41317
Barriere Ridge	Silver Minnow	SM1L3_298850	11	298050	5686100	silverminnow1	line3	yes	10E41318
Barriere Ridge	Silver Minnow	SM1L3_298875	11	298075	5686100	silverminnow1	line3	yes	10E41319

			UTM NAD83				Line	Station Surveyed	Assay Sample Tag
Project	Target Anomaly	Waypoint Name	Zone	Easterly	Northerly	Grid Name	No.	(yes, no)	No No
Barriere Ridge	Silver Minnow	SM1L3 298900	11	298100	5686100	silverminnow1	line3	yes	10E41320
Barriere Ridge	Silver Minnow	SM1L3 298925	11	298125	5686100	silverminnow1	line3	yes	10E41321
Barriere Ridge	Silver Minnow	SM1L3 298950	11	298150	5686100	silverminnow1	line3	yes	10E41322
Barriere Ridge	Silver Minnow	SM1L3 298975	11	298175	5686100	silverminnow1	line3	yes	10E41323
Barriere Ridge	Silver Minnow	SM1L3 299000	11	298200	5686100	silverminnow1	line3	yes	10E41324
Barriere Ridge	Silver Minnow	SM1L3_299025	11	298225	5686100	silverminnow1	line3	yes	10E41325
Barriere Ridge	Silver Minnow	SM1L3_299050	11	298250	5686100	silverminnow1	line3	yes	10E41326
Barriere Ridge	Silver Minnow	SM1L3_299075	11	298275	5686100	silverminnow1	line3	yes	10E41327
Barriere Ridge	Silver Minnow	SM1L3_299100	11	298300	5686100	silverminnow1	line3	yes	10E41328
Barriere Ridge	Silver Minnow	SM1L3_299125	11	298325	5686100	silverminnow1	line3	yes	10E41329
Barriere Ridge	Silver Minnow	SM1L3_299150	11	298350	5686100	silverminnow1	line3	yes	10E41330
Barriere Ridge	Silver Minnow	SM1L3_299175	11	298375	5686100	silverminnow1	line3	yes	10E41331
Barriere Ridge	Silver Minnow	SM1L3_299200	11	298400	5686100	silverminnow1	line3	yes	10E41332
Barriere Ridge	Silver Minnow	SM2L1_297400	11	297400	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297425	11	297425	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297450	11	297450	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297475	11	297475	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297500	11	297500	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297525	11	297525	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297550	11	297550	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297575	11	297575	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297600	11	297600	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297625	11	297625	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297650	11	297650	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297675	11	297675	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297700	11	297700	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297725	11	297725	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297750	11	297750	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297775	11	297775	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297800	11	297800	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297825	11	297825	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297850	11	297850	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297875	11	297875	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297900	11	297900	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297925	11	297925	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_297950	11	297950	5687000	silverminnow2	line1	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silver Minnow	SM2L1 297975	11	297975	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298000	11	298000	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298025	11	298025	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298050	11	298050	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298075	11	298075	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298100	11	298100	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298125	11	298125	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298150	11	298150	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298175	11	298175	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298200	11	298200	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298225	11	298225	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298250	11	298250	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1 298275	11	298275	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298300	11	298300	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298325	11	298325	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298350	11	298350	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298375	11	298375	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298400	11	298400	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298425	11	298425	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298450	11	298450	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298475	11	298475	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298500	11	298500	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298525	11	298525	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298550	11	298550	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298575	11	298575	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298600	11	298600	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298625	11	298625	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298650	11	298650	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298675	11	298675	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298700	11	298700	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298725	11	298725	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298750	11	298750	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298775	11	298775	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L1_298800	11	298800	5687000	silverminnow2	line1	no	
Barriere Ridge	Silver Minnow	SM2L2_297400	11	297400	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297425	11	297425	5686900	silverminnow2	line2	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silver Minnow	SM2L2 297450	11	297450	5686900	silverminnow2	line2	no	110
Barriere Ridge	Silver Minnow	SM2L2 297475	11	297475	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297500	11	297500	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297525	11	297525	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297550	11	297550	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297575	11	297575	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297600	11	297600	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297625	11	297625	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297650	11	297650	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297675	11	297675	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297700	11	297700	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297725	11	297725	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 297750	11	297750	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297775	11	297775	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297800	11	297800	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297825	11	297825	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297850	11	297850	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297875	11	297875	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297900	11	297900	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297925	11	297925	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297950	11	297950	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_297975	11	297975	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_298000	11	298000	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_298025	11	298025	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_298050	11	298050	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_298075	11	298075	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298100	11	298100	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298125	11	298125	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298150	11	298150	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298175	11	298175	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298200	11	298200	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298225	11	298225	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298250	11	298250	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298275	11	298275	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298300	11	298300	5686900	silverminnow2	line2	yes	
Barriere Ridge	Silver Minnow	SM2L2_298325	11	298325	5686900	silverminnow2	line2	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silver Minnow	SM2L2 298350	11	298350	5686900	silverminnow2	line2	no	140
Barriere Ridge	Silver Minnow	SM2L2 298375	11	298375	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298400	11	298400	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298425	11	298425	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298450	11	298450	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_298475	11	298475	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298500	11	298500	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298525	11	298525	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298550	11	298550	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298575	11	298575	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298600	11	298600	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298625	11	298625	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298650	11	298650	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298675	11	298675	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298700	11	298700	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298725	11	298725	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298750	11	298750	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2 298775	11	298775	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L2_298800	11	298800	5686900	silverminnow2	line2	no	
Barriere Ridge	Silver Minnow	SM2L3_297400	11	297400	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297425	11	297425	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297450	11	297450	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297475	11	297475	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297500	11	297500	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297525	11	297525	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297550	11	297550	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297575	11	297575	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297600	11	297600	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297625	11	297625	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297650	11	297650	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297675	11	297675	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297700	11	297700	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297725	11	297725	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297750	11	297750	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297775	11	297775	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297800	11	297800	5686800	silverminnow2	line3	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silver Minnow	SM2L3 297825	11	297825	5686800	silverminnow2	line3	no	140
Barriere Ridge	Silver Minnow	SM2L3 297850	11	297850	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 297875	11	297875	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 297900	11	297900	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_297925	11	297925	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 297950	11	297950	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 297975	11	297975	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298000	11	298000	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298025	11	298025	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298050	11	298050	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298075	11	298075	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298100	11	298100	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298125	11	298125	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298150	11	298150	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298175	11	298175	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298200	11	298200	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298225	11	298225	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298250	11	298250	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298275	11	298275	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298300	11	298300	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298325	11	298325	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298350	11	298350	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298375	11	298375	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298400	11	298400	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298425	11	298425	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298450	11	298450	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298475	11	298475	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298500	11	298500	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298525	11	298525	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298550	11	298550	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298575	11	298575	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298600	11	298600	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298625	11	298625	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298650	11	298650	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298675	11	298675	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3_298700	11	298700	5686800	silverminnow2	line3	no	

Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Barriere Ridge	Silver Minnow	SM2L3 298725	11	298725	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298750	11	298750	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298775	11	298775	5686800	silverminnow2	line3	no	
Barriere Ridge	Silver Minnow	SM2L3 298800	11	298800	5686800	silverminnow2	line3	no	
Honeymoon	Camgloria	CG2L1 321000	11	321000	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321025	11	321025	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321050	11	321050	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321075	11	321075	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321100	11	321100	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321125	11	321125	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321150	11	321150	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321175	11	321175	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321200	11	321200	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321225	11	321225	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321250	11	321250	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321275	11	321275	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321300	11	321300	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321325	11	321325	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321350	11	321350	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321375	11	321375	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321400	11	321400	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321425	11	321425	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321450	11	321450	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321475	11	321475	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321500	11	321500	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321525	11	321525	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321550	11	321550	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321575	11	321575	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321600	11	321600	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321625	11	321625	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321650	11	321650	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321675	11	321675	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321700	11	321700	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321725	11	321725	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321750	11	321750	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321775	11	321775	5680800	camgloria2	line1	no	

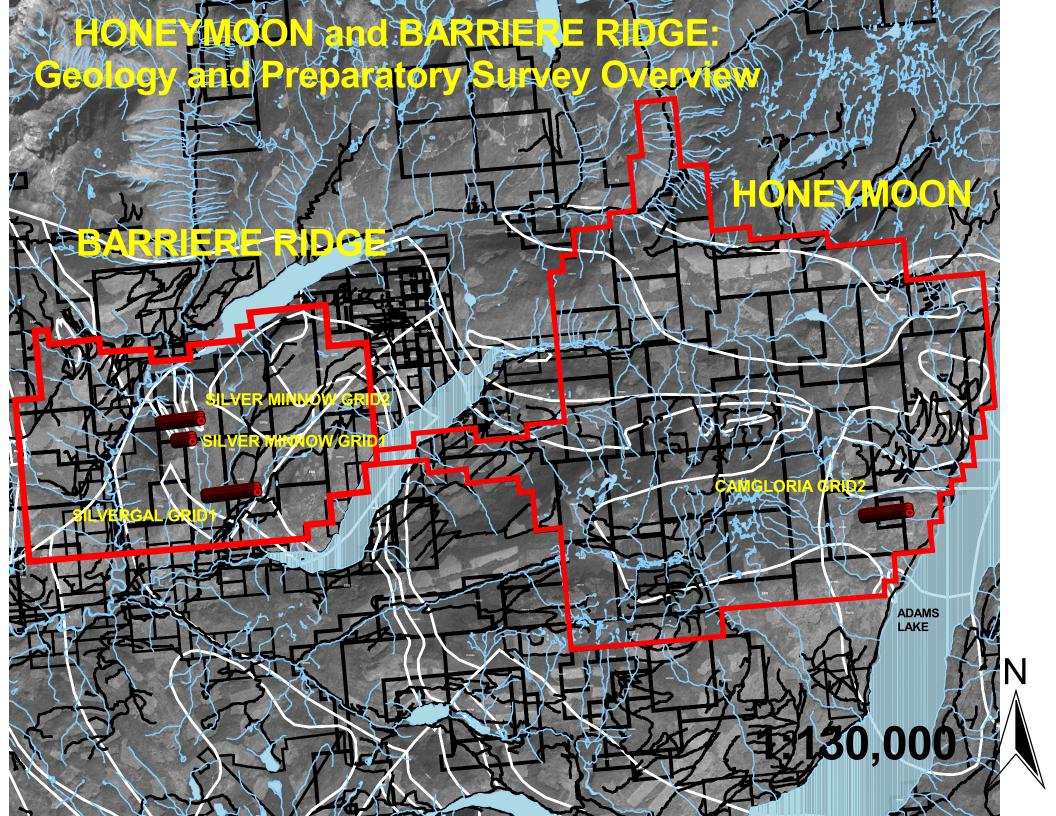
Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Honeymoon	Camgloria	CG2L1 321800	11	321800	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 321825	11	321825	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 321850	11	321850	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321875	11	321875	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 321900	11	321900	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_321925	11	321925	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 321950	11	321950	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 321975	11	321975	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 322000	11	322000	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 322025	11	322025	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 322050	11	322050	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 322075	11	322075	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1 322100	11	322100	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322125	11	322125	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322150	11	322150	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322175	11	322175	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322200	11	322200	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322225	11	322225	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322250	11	322250	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322275	11	322275	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322300	11	322300	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322325	11	322325	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322350	11	322350	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322375	11	322375	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322400	11	322400	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322425	11	322425	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322450	11	322450	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322475	11	322475	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322500	11	322500	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322525	11	322525	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322550	11	322550	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322575	11	322575	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L1_322600	11	322600	5680800	camgloria2	line1	no	
Honeymoon	Camgloria	CG2L2_321000	11	321000	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321025	11	321025	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321050	11	321050	5680700	camgloria2	line2	yes	

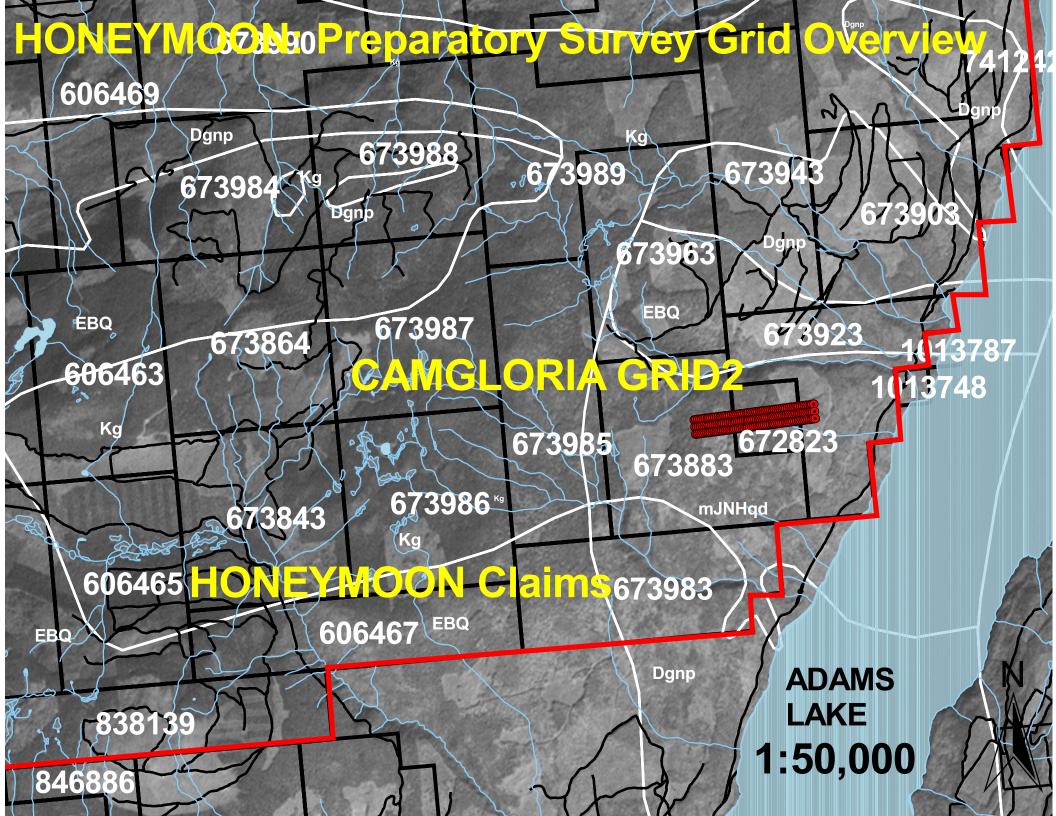
Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Honeymoon	Camgloria	CG2L2_321075	11	321075	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321100	11	321100	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 321125	11	321125	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 321150	11	321150	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 321175	11	321175	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321200	11	321200	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 321225	11	321225	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321250	11	321250	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321275	11	321275	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321300	11	321300	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321325	11	321325	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321350	11	321350	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321375	11	321375	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321400	11	321400	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321425	11	321425	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321450	11	321450	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321475	11	321475	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321500	11	321500	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321525	11	321525	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321550	11	321550	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321575	11	321575	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321600	11	321600	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321625	11	321625	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321650	11	321650	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321675	11	321675	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321700	11	321700	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321725	11	321725	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321750	11	321750	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321775	11	321775	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321800	11	321800	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321825	11	321825	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321850	11	321850	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321875	11	321875	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321900	11	321900	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321925	11	321925	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_321950	11	321950	5680700	camgloria2	line2	yes	

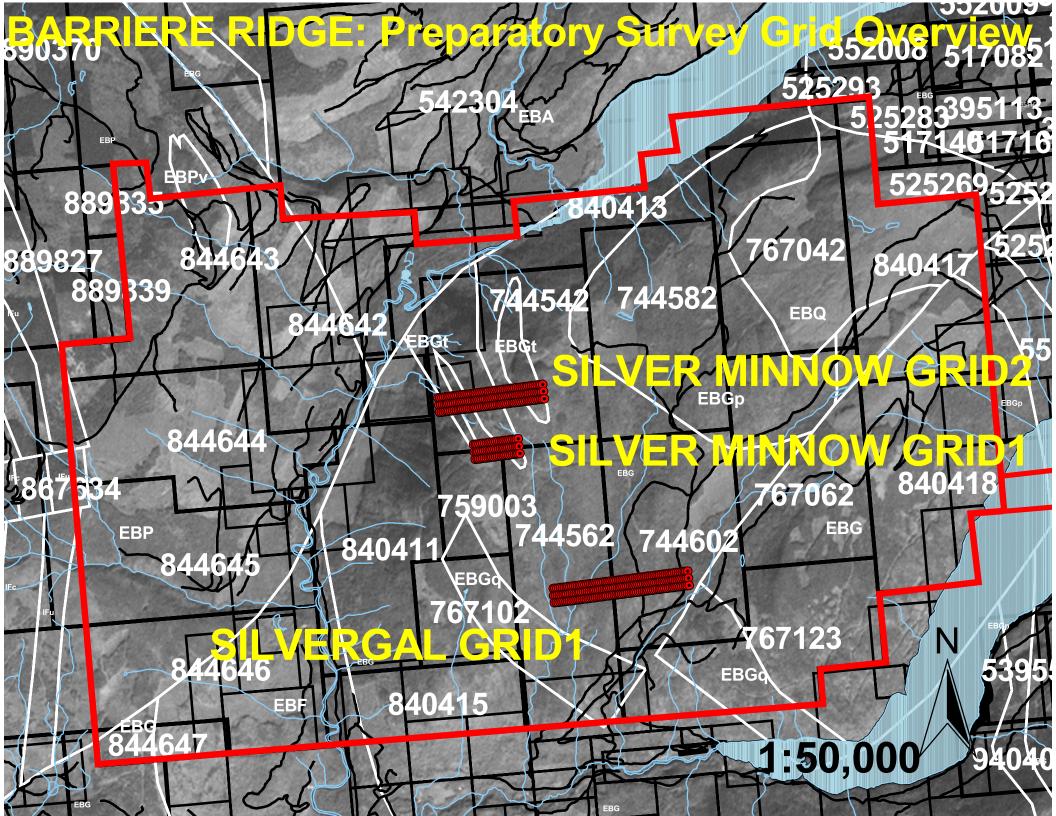
Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Honeymoon	Camgloria	CG2L2_321975	11	321975	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322000	11	322000	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 322025	11	322025	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 322050	11	322050	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2 322075	11	322075	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322100	11	322100	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322125	11	322125	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322150	11	322150	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322175	11	322175	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322200	11	322200	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322225	11	322225	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322250	11	322250	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322275	11	322275	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322300	11	322300	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322325	11	322325	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322350	11	322350	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322375	11	322375	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322400	11	322400	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322425	11	322425	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322450	11	322450	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322475	11	322475	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322500	11	322500	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322525	11	322525	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322550	11	322550	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322575	11	322575	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L2_322600	11	322600	5680700	camgloria2	line2	yes	
Honeymoon	Camgloria	CG2L3_321000	11	321000	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321025	11	321025	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321050	11	321050	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321075	11	321075	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321100	11	321100	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321125	11	321125	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321150	11	321150	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321175	11	321175	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321200	11	321200	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321225	11	321225	5680600	camgloria2	line3	no	

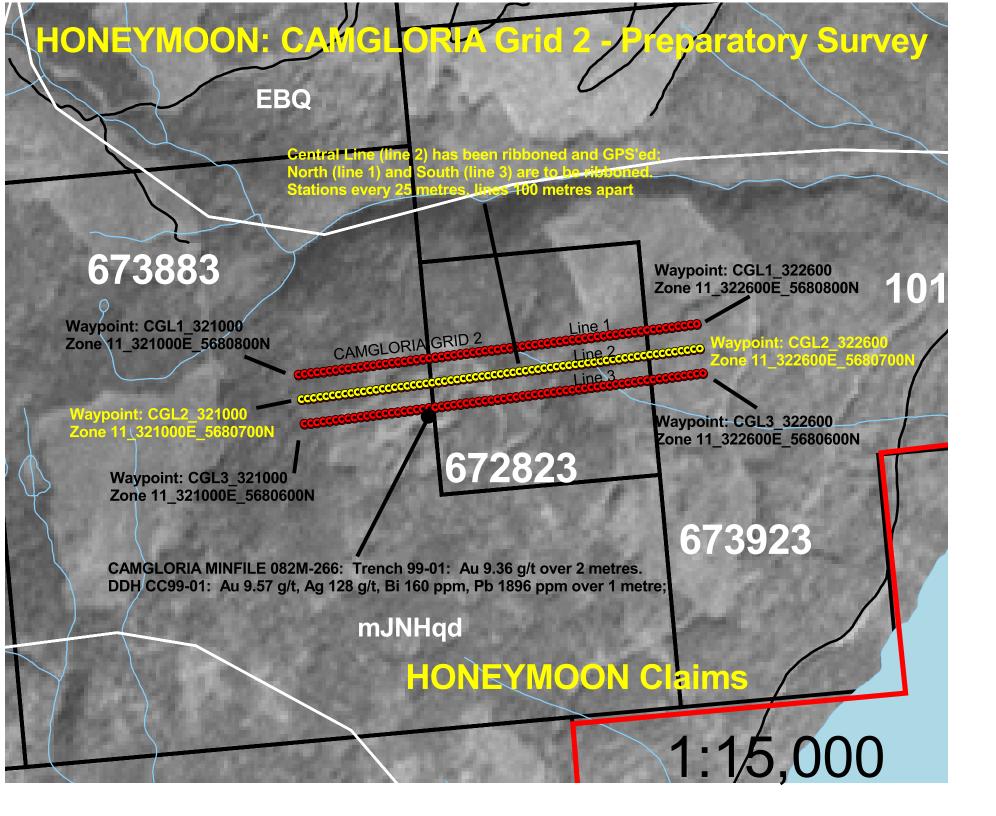
Project	Target Anomaly	Waypoint Name	UTM NAD83 Zone	Easterly	Northerly	Grid Name	Line No.	Station Surveyed (yes, no)	Assay Sample Tag No
Honeymoon	Camgloria	CG2L3 321250	11	321250	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321275	11	321275	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3 321300	11	321300	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3 321325	11	321325	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3 321350	11	321350	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321375	11	321375	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3 321400	11	321400	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3 321425	11	321425	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321450	11	321450	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321475	11	321475	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321500	11	321500	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321525	11	321525	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321550	11	321550	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321575	11	321575	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321600	11	321600	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321625	11	321625	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321650	11	321650	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321675	11	321675	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321700	11	321700	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321725	11	321725	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321750	11	321750	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321775	11	321775	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321800	11	321800	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321825	11	321825	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321850	11	321850	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321875	11	321875	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321900	11	321900	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321925	11	321925	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321950	11	321950	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_321975	11	321975	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322000	11	322000	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322025	11	322025	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322050	11	322050	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322075	11	322075	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322100	11	322100	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322125	11	322125	5680600	camgloria2	line3	no	

			UTM					Station	Assay
			NAD83				Line	Surveyed	Sample Tag
Project	Target Anomaly	Waypoint Name	Zone	Easterly	Northerly	Grid Name	No.	(yes, no)	No
Honeymoon	Camgloria	CG2L3_322150	11	322150	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322175	11	322175	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322200	11	322200	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322225	11	322225	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322250	11	322250	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322275	11	322275	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322300	11	322300	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322325	11	322325	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322350	11	322350	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322375	11	322375	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322400	11	322400	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322425	11	322425	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322450	11	322450	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322475	11	322475	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322500	11	322500	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322525	11	322525	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322550	11	322550	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322575	11	322575	5680600	camgloria2	line3	no	
Honeymoon	Camgloria	CG2L3_322600	11	322600	5680600	camgloria2	line3	no	

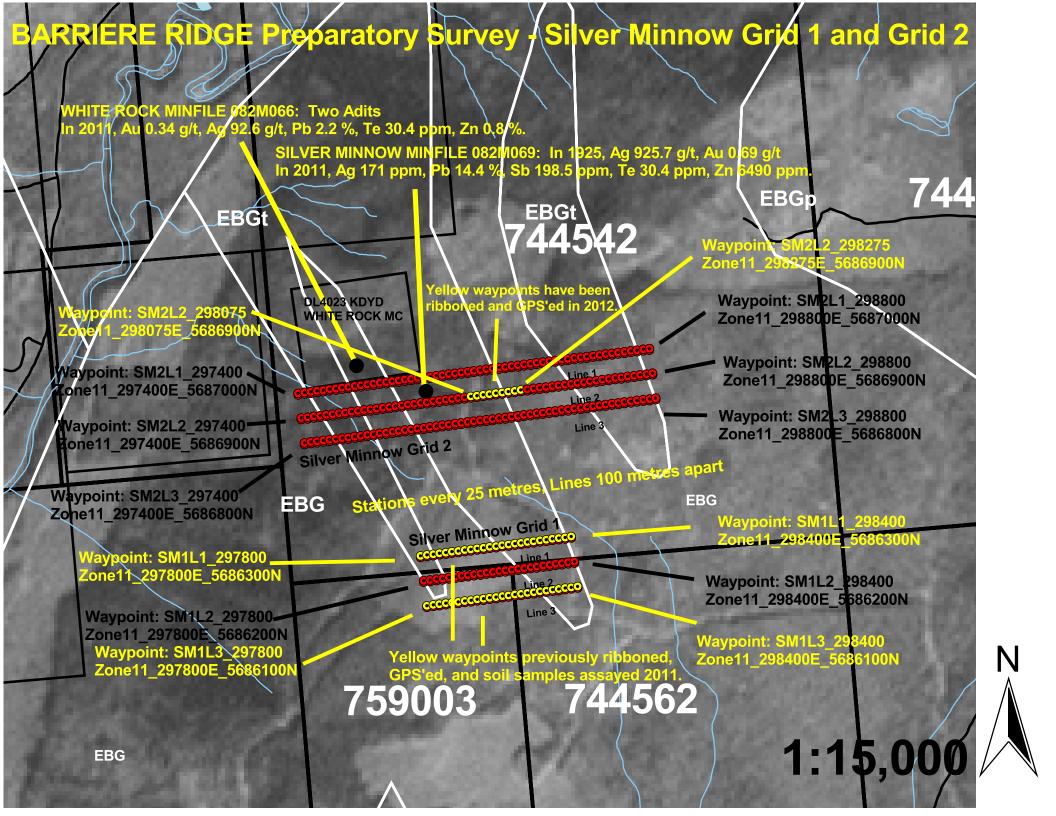


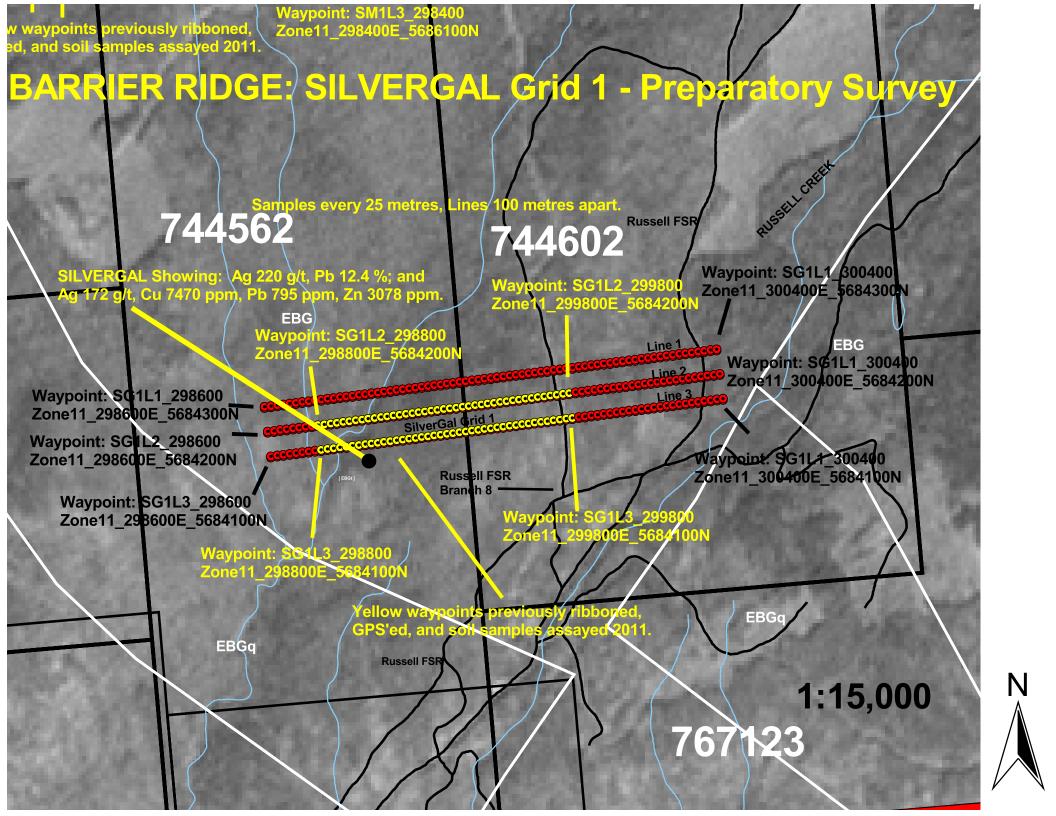












BARI	RIERE	RIDGE CLA	IMS: GE	NER	AL LIST	OF HIST	ORIC D	IAMC	DND DI	RILLING BASED ON A	RIS REPOR	RTS.
Data	based (on review of	ARIS Repo	orts c	ompleted	d March 2	013 by I	David	J. Piggir	١.		
Field	eld work to locate and GPS drill collars scheduled for 2013/2014.											
	ESTIMATED TOTAL LENGTH OF DRILLING (metres)					2,195.98	20 Histori	ic Drill H	loles bas	ed on ARIS Reports		
	ARIS	Operator	Dwill Hala	Core	S.D. Length	H.D.	Azimuth	_		Results and Comments	Intonial	Coordinates
Year	Report	Operator	Drill Hole	Size	(m)	Length (m)	(deg)	(deg)	(m)	Results and Comments	Interval	Coordinates
1984	13168	Noranda Inc	CAD 84-1	NQ	1,836.60 66.1	359.38	250	-45		Ag 2 g/t; Zn 0.65 % Drill logs in ARIS report.	2 m	Line 145+15E and II0+00N.
										Ag 15.6 g/t; Zn 12,000 ppm; Pb 392 ppm over 0.1 metres; and Ag 4.6 g/t; Zn 136 ppm; Pb 1070 ppm over 0.1 metres; and Ag 3.6 g/t; Zn 500 ppm; Pb 1020 ppm over 0.6 metres. Drill logs in ARIS	In 3 separate	Line 134+58E and
1984	13168	Noranda Inc	CAD 84-2	NQ	66.1		250	-45		report.	quartz veins	II2+00N,
										Drilling failed to intersect mineralization that would explain Soil and IP anomaly. Drill logs in ARIS report.		East 146+95 and
1985	14397	Noranda Inc	CAD 85-1	NQ	137.2		270	-45	17.08	,		North 110+90
										Drilling failed to intersect mineralization that would explain Soil and IP anomaly. Drill logs in ARIS report.		East 146+47 and
1985	14397	Noranda Inc	CAD 85-2	NQ	47.5		270	-65	13.1			North 110+95
1987	16331	Merritech Development Corporation	CAD 87-1	NQ	175		250	-45		Drilling failed to intersect mineralization that would explain soil anomaly. Drill logs in ARIS report.		143+00 East and 110+00 North

					S.D.				Depth			
	ARIS			Core	Length	H.D.	Azimuth	Δησίρ				
Year	Report	Operator	Drill Hole	Size	(m)	Length (m)	(deg)	(deg)	(m)	Results and Comments	Interval	Coordinates
	•	·			, ,			. 0,	. ,	Drilling failed to intersect		
		Merritech								mineralization that would		
		Development								explain soil anomaly. Drill		146+42 East and
1987	16331	Corporation	CAD 87-2	NQ	98.8		250	-60	9.1	logs in ARIS report.		111+50 North
		CO. po. a a.o	0.12 0.2		30.0				3.1	Drilling failed to intersect		
		Merritech								mineralization that would		
		Development								explain soil anomaly. Drill		145+60.5 East and
1987	16331	•	CAD 87-3	NQ	120.4		250	-45	2	logs in ARIS report.		106+94 North
1307	10331	Corporation	CAD 07 3	ΝQ	120.4		230	73		Unknown, Drill site shown on		100134 NOITH
		National								map 125 m horizontal		115 North line
		Resources								distance. Drill logs not		about 134.4 m
1987	17739	Exploration Ltd	DDU 07 1	NQ	na	125	CVA/	2	na	found.		west of baseline.
1967	17739	Exploration Ltu	DDH 67-1	NQ	na	125	300	na	na			west of baseline.
		Matianal								Unknown, Drill site shown on		114 North line
		National								map 134 m horizontal		
1007	17720	Resources	DDU 07 3	NO		404.075	CVA			distance. Drill logs not found.		about 93.8 m west of baseline.
1987	17739	Exploration Ltd	DDH 87-2	NQ	na	134.375	SVV	na	na			or baseline.
										Unknown, Drill site shown on		442 N
		National								map 50 m horizontal		113 North line
	4	Resources								distance. Drill logs not		about 156.3
1987	17739	Exploration Ltd	DDH 87-3	NQ	na	50	SW	na	na	found.		mwest of baseline.
		_								Unknown, Drill site shown on		
		National								map 50 m horizontal		113 North line
		Resources								distance. Drill logs not		about 156.3
1987	17739	Exploration Ltd	DDH 87-4	NQ	na	50	SW	na	na	found.		mwest of baseline.
										Intersected a uniform		
										sequence of dacite tuffs with		
										a relatively narrow rhyolite		
										interval. Conductor is		
										associated with graphitic		L52+50E and
1988	18489	Minnova Inc.	P1 BAR20	NQ	154.5		235	-45	4.1	argillites.		53+50N

			1							I		
					S.D.				Depth			
	ARIS			Core	Length	H.D.	Azimuth	Angle				
Year	Report	Operator	Drill Hole	Size	(m)	Length (m)	(deg)	(deg)	(m)	Results and Comments	Interval	Coordinates
Tear	пероп	Operator	Dim riole	3120	(''')	zengen (m)	(408)	(408)	(111)	Results and comments	meervar	coordinates
										Drill through a QFP rhyolite-		
										dacite dome in a na area of		
										overlapping Na2O depletion		
										and Ag enrichment.		
										Intersected QFP rhyolite flow		
4000										and dacite tuff. Drill logs in		L54+25E and
1988	18489	Minnova Inc.	P2 BAR21	NQ	151.5		235	-45	3.05	ARIS report.		52+35N
										Tested a Max/Min conductor		
										with a weak coincident Cu		
										soil anomaly. Trace pyrite		
										and pyrrhotite. Drill logs in		L48+35E and
1988	18489	Minnova Inc.	P3 BAR22	NQ	120.7		235	-45	15.7	ARIS report.		53+08N
										Tested a strong coincident		
										Cu and Zn soil anomaly.		
										Intersected a narrow		
										intervalof epigenetic (?)		
										massive sulphide		
										mineralization. Conductor is		
										associated with graphitic		
										argillites. Au 0.91 g/t, Ag 203		
										g/t, Cu 0.133 %, Pb 5.46 %,		
										Zn 13.2 % Drill logs in ARIS		L48+00E and
1988	18489	Minnova Inc.	P4 BAR23	NQ	174.2		235	-45	4.8	report.	0.4 m	56+73N
										No significant mineralization		
										or alteration was		Grid 1-C:
										encountered. Drill logs in		109+50mE and
1989	19851	Minnova Inc.	MBD89-1		102.7		270	-50	3.05	ARIS report.		137+00mN

Year	ARIS Report	Operator	Drill Hole	Core Size	S.D. Length (m)	H.D. Length (m)	Azimuth (deg)	Angle (deg)	Depth to Collar (m)	Results and Comments	Interval	Coordinates
1989	19851	Minnova Inc.	MBD89-2		96.6		245	-50	13.3	No significant mineralization or alteration was encountered. Drill logs in ARIS report.		Grid 1-C: 110+75mE and 133+00mN
1989	19851	Minnova Inc.	MBD89-3		105.8		270	-48	18.3	No significant mineralization or alteration was encountered. Drill logs in ARIS report.		Grid 1-B: 100+60mE and 105+20mN
1989	19851	Minnova Inc.	MBD89-4		124.1		235	-50	12.2	No significant mineralization or alteration was encountered. Drill logs in ARIS report.		Grid 6: 89+00mE and 120+00mN
1989	19851	Minnova Inc.	MBD89-5		95.4		235	-50	30.5	No significant mineralization or alteration was encountered. Drill logs in ARIS report.		Grid 6: 89+35mE and 116+00mN

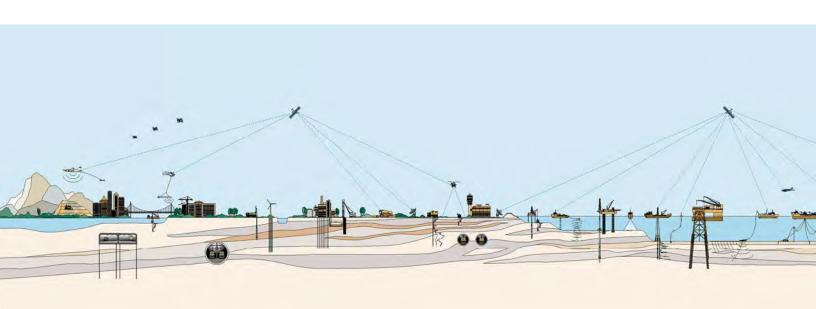


Magnetic and EM Interpretation Airborne Magnetic and HeliTEM® Survey

BARRIERE RIDGE AND HONEYMOON BLOCKS BRITISH COLUMBIA

Job No. 12578

Astral Mining Corporation





MAGNETIC AND EM INTERPRETATION
AIRBORNE MAGNETIC AND HELITEM® SURVEY
BARRIERE RIDGE AND HONEYMOON BLOCKS
BRITISH COLUMBIA

JOB NO. 12578

Client : Astral Mining Corp.

1180 – 999 West Hastings Street

Vancouver, BC V6C 2W2

Date of Report : Feb, 2013



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APPENDICES

- A EM ANOMALY LISTING
- B AIRBORNE TRANSIENT EM INTERPRETATION



Introduction

Between the dates of October 22nd to November 9th, 2011, Fugro Airborne Surveys conducted a HeliTEM[®] electromagnetic and magnetic survey (1334 line kilometres) of the Barriere Ridge and Honeymoon properties on behalf of Astral Mining Corp. Due to bad weather in the area, the survey was stopped by Astral Mining Corp. before the re-flight of lines L20270 - L22420 in the Honeymoon block, leaving sub-optimal data for those lines.

The interpretation is presented in colour on paper and digitally as Geosoft map and Adobe PDF files. A complete processing report has been delivered previously as a separate document. Refer to the processing report for more details on the survey and system specifications as well as information on the data processing and final products.

Background

The Barriere Ridge Property and the Honeymoon Property are gold, silver and copper properties owned by Astral Mining Corp. They are both within the Kootenay Terrane and are underlain by rocks of the Palaeozoic Eagle Bay Assemblage. The Honeymoon Property is intruded by phases of the mid-cretaceous Baldy Batholith. The areas contain numerous mineralized showings available on MINFILE (Barriere Ridge: Copper Cliff, Rainbow, White Rock, Silver Mineral, and Cad, Honeymoon: Lucky Bear, NSP, and Cam-Gloria). A general geology map is shown in Figure 1 and a satellite image is shown in Figure 2.

The primary target in the Barriere Ridge Property is meta-sediment hosted silver-lead-zinc (polymetallic) veins, which can contain high grade ores. The target model includes veins typically emplaced along faults and fractures in sedimentary basins dominated by clastics which have been deformed, metamorphosed, and intruded by igneous rocks. Mineralized veining appears to be preferentially hosted by lenses of Tshinakin limestone/dolostone within the Eagle Bay Assemblage. Numerous VMS showing are found to the north of the property¹.

The Honeymoon Property is of interest primarily for Intrusive-related gold potential and secondarily for possible VMS style mineralization. Mineralization is observed in veins within faults and shear zones near or within intrusive contacts of the intrusive phases of the Cretaceous Baldy Batholith. Multiple intrusive phases and cross-cutting events show the complex geological history. There is a possibility of mineralization associated with stockwork veining, sulphide bearing veins, skarns, and sulphide replacement in carbonate rich rocks².



- 1) Taken from: "Barriere Ridge Silver-Lead Project", Astral Mining Corporation, Nov. 2011.
- 2) Taken from: "Honeymoon Project", Astral Mining Corporation, Nov 2001.

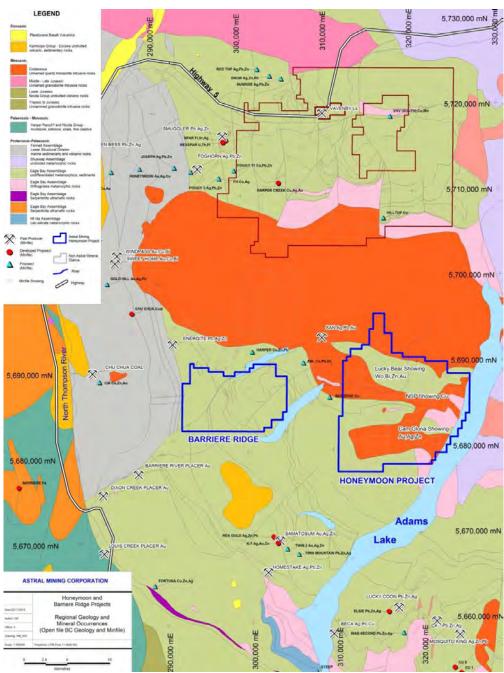


Figure 1: Regional geology around the Barriere Ridge and Honeymoon properties.



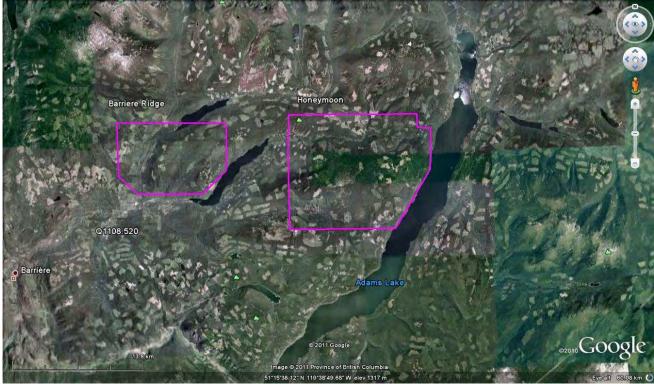


Figure 2: Satellite image of area around the two blocks.



INTERPRETATION

General Magnetic Theory

The Earth's magnetic field, which changes from over 60,000 gammas in a vertical direction at the poles to about 30,000 gammas in a horizontal direction at the equator, induces a secondary magnetic field in rock bodies containing ferromagnetic minerals. It is this property to become magnetized by an external field that is described as the susceptibility of a rock.

Some rocks contain a natural or thermo-remnant magnetization that was acquired when the rock was last heated above the Curie point and subsequently cooled. The direction of this remanent magnetization is parallel to the magnetic field that prevailed during the cooling period. These fields, both the induced and remanent, disturb the otherwise smooth magnetic pattern of the Earth's field, and it is these perturbations that are of prime interest in aeromagnetic interpretation.



The crystalline rocks of igneous or high-grade metamorphic origin, such as granite, basalt, gneiss and schist, usually contain sufficient quantities of ferromagnetic minerals (mainly magnetite) that their influence on the earth's field can be observed even when covered by sedimentary sections thousands of feet thick.

The magnetic pattern over large areas of a single rock type is generally consistent throughout, and whenever the magnetic character changes, it usually implies a change in the rock composition. For example, the contact between a granitic mass and an ultrabasic unit can usually be precisely positioned where the magnetic pattern begins to change from the usual quiet character of granite to the more disturbed pattern of an ultrabasic rock body.

The study of magnetic anomalies does, to some degree, depend upon the latitude; in high latitudes attention is devoted to positive anomalies, while at the equator negative anomalies are of prime interest. This is due to the inclination of the earth's magnetic field, which is near vertical, 90°, at the poles, horizontal, 0°, at the equator, and about 73° North in this survey area. Therefore, in such a relatively steep magnetic inclination, the strike of a magnetic body has little effect upon the magnitude and symmetry of the anomaly it produces. An E-W dyke will be primarily positive, with a very weak negative on its north side. The same dyke striking magnetic north (azimuth 17° in this area) will be a symmetrical positive, but only about 95% of its E-W amplitude.

Magnetic Interpretation Procedures

In the qualitative interpretation, magnetic features are studied with regard to shape, size, strike and grouping. Whenever an anomaly is adequately defined by contours, the outline of the source is shown as a magnetic/geologic contact. These contacts follow the contours and can be relied on to represent a definite change in lithology and/or structure. Any of these contacts, but particularly the linear ones, may represent faulted contacts; but as we can rarely be certain (unless it coincides with a geologically mapped fault) the contact symbol is retained since it is an indication of greater reliability than a fault.

Faults are located by offsets, terminations and strike changes in linear anomalies, or level shifts, or simply changes in character. Since the fault symbol is usually used to join isolated points of disruption, its location and direction is much more subjective than the contact symbol.

Possible lineaments that lie parallel to the flight path have been rejected unless there is sufficient evidence of offset or level shifts from tie lines.

Due to the active nature of the magnetic signature many possible breaks could be identified in many directions. Therefore only those that are very obvious, and or correlate with breaks in the EM data or the terrain have been outlined.



Overview of the Magnetic Response

Barriere Ridge Property

Figure 3 shows the residual magnetic intensity (RMI) over the Barriere Ridge property. Figure 4 shows the corresponding first vertical derivative. In general the magnetic grid shows a magnetic low, gently rippling character in the western portion of the block, with a more complex and highly magnetic area to the centre and northeast.

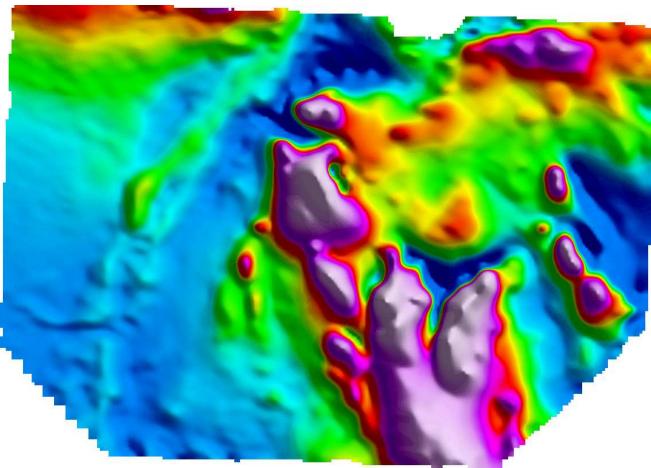


Figure 3: Residual magnetic intensity (RMI) grid for the Barriere Ridge property.



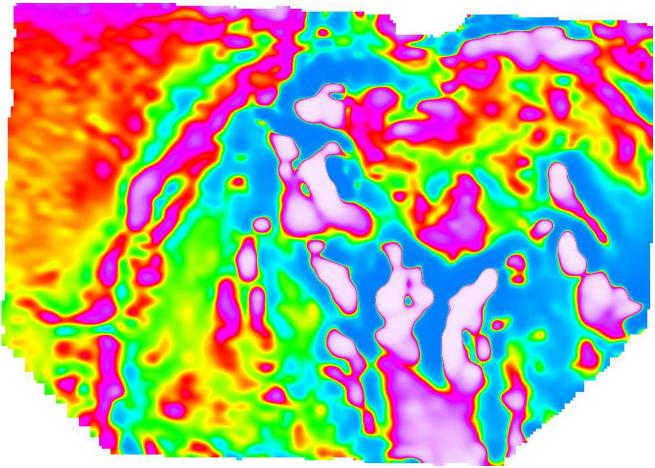


Figure 4: First vertical derivative of the RMI for Barriere Ridge.



Honeymoon Property

The RMI and first vertical derivative of the RMI for the Honeymoon property is shown in Figure 5 and Figure 6 respectively. The magnetics for this block is very much more complex than that of the Barrierre Ridge property. Overall, there is a highly magnetic region, with complex internal structures, running along the northern edge of the block, and another filling most of the centre and southeast.

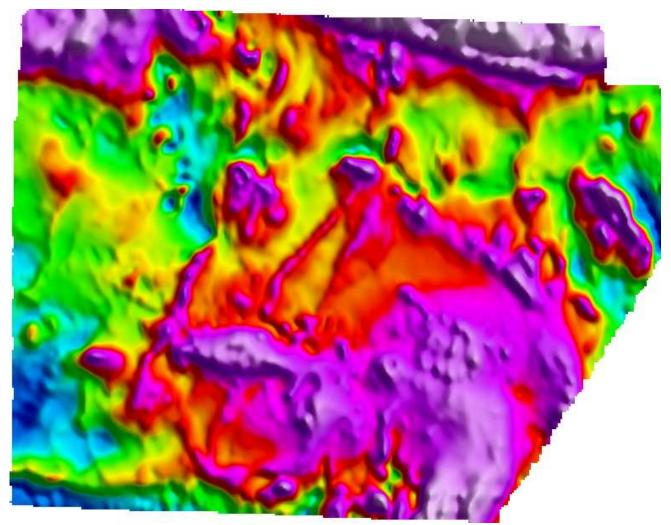


Figure 5: Honeymoon property RMI grid.



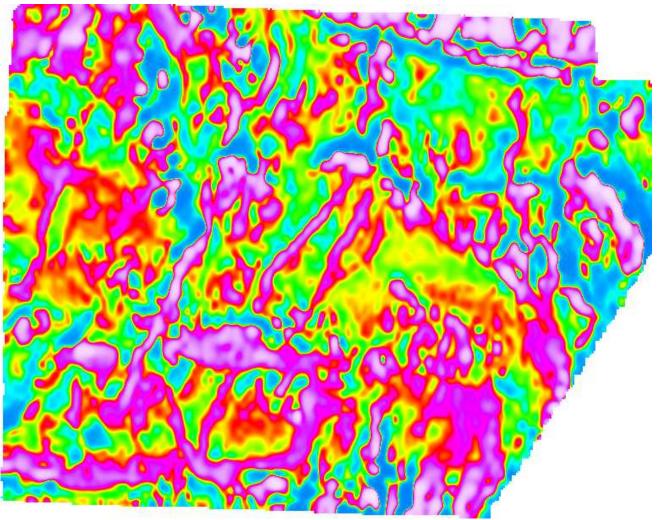


Figure 6: Honeymoon property first vertical derivative of RMI.

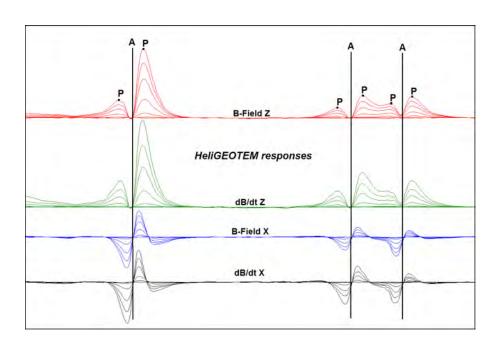


Electromagnetic Anomaly Selection

With the HeliTEM response, neither the response from the X or Z coil will peak over the axis of the conductor, due to the system geometry. Instead, over a vertical conductor, the response will show a cross-over on the X-coil and a minima on the Z-coil.

The EM anomaly locations provided and used for the interpretation is an <u>anomaly trend</u> map. This map simply shows the locations of the anomaly peaks from the X-coil crossover for a D-type or vertical or dipping body. For this project the initial anomaly selection was produced from the dB/dt data, but can be done from either the dB/dt or B-Field response. In the EM anomaly listing, provided as an appendix to this report, the UTM coordinates given correspond to the locations of the anomaly peaks but not the conductor axis. As part of the interpretation, where an anomaly response is judged to represent a vertical conductor, the assumed position of the conductor axis is shown on the map by the axis that is drawn.

In the profile example below, showing HeliTEM responses measured over vertical conductors, the locations of the EM anomalies shown on the map and the corresponding UTM coordinates given in the anomaly listing would correspond to the positions marked by a **P.** The interpreted position of the conductor axes are shown at the locations marked **A**.



Where the anomaly is suitably well defined and not overly disturbed by the presence of other closely spaced conductors, the EM response can be modeled which provides information on the position of the conductor, its depth below surface, its strike and dip as well as the conductivity of the source.

Refer to for the full anomaly listing in Appendix A.



Electromagnetic Interpretation Procedures

The general approach to EM interpretation is two-fold. One is to work from the data in plan form (maps), correlating back to the data in profile form; the other is to work from the profiles back to the maps. The basis of target selection is to look for anomalous responses. Some of these will stand out on the maps as somewhat isolated features along favourable structures (magnetic/geologic). Conversely, some localized changes in conductivity may only be apparent in profile form and may not stand out on the maps due to surrounding conductivity. So, a general review of the EM anomalies in profile form is done to search for well-defined symmetrical shape, moderate amplitude, slow decay, etc., then checked on the maps for strike length, structural support and overall conductivity pattern.

The conductor axes and zones were compared with the magnetic signature to separate the basement conductors from those arising from overburden. The magnetic signature over a shield area arises almost exclusively from the crystalline basement. Two levels of correlation with magnetic/geologic basement were noted:

- structurally favorable (along contacts, intersected by faults, near intrusives, etc.);
- coincidence of EM and magnetic bodies of similar dimensions.

At the end of this process, the EM selections will normally fall into six groups, which will be:

Based on the EM signature

- A. Anomalous on the maps and having good anomaly characteristics in profile form;
- B. Non-distinct on the maps but having good anomaly characteristics in profile form;
- C. Anomalous on the maps but lacking good anomaly characteristics in profile form;

Based on the Magnetic signature

- 1. With a magnetic coincidence suggesting a common source;
- 2. Showing evidence of structural control from the magnetic signature;
- 3. Showing no support from the magnetic signature.

These six groups will then be recombined into nine categories, ordered in terms of their potential of mineralization, A-1 having the greatest potential to C-3 having the least potential.

Categories: A-1, A-2, A-3, B-1, B-2, B-3, C-1, C-2 and C-3

The EM responses discussed in the following section identify those anomalies, which generally met the criteria associated with possible mineralization. The category assigned to each selection is based on the criteria outlined above which can be summarized by the table below:



Classification of EM Selections

CATEGORY	Response in plan View (from maps)	Profile expression	Magnetic signature
A-1	Anomalous	Good	Coincident anomaly
A-2	Anomalous	Good	Structural support
A-3	Anomalous	Good	No support
B-1	Non-distinct	Good	Coincident anomaly
B-2	Non-distinct	Good	Structural support
B-3	Non-distinct	Good	No support
C-1	Anomalous	Poor	Coincident anomaly
C-2	Anomalous	Poor	Structural support
C-3	Anomalous	Poor	No support

A reminder that category A-1 identifies the greatest potential for mineralization with the priority dropping to category C-3 having the least potential.

It should be noted that the EM data cannot be used to directly detect gold occurrences, but can identify VMS type deposits which are of secondary interest in these areas. However, the EM data in combination with the magnetic data is used to map structure which is a controlling factor in the locations of the polymetallic gold veins as mentioned in the Background section.

Overview of the Electromagnetic Response

Several products were selected and generated from the EM data and delivered with final data from Fugro Airborne Surveys Toronto office. These products include:

- Conductivity Depth Slice at 50 m below surface
- Conductivity Depth Slice at 150 m below surface
- Frasier Filter grids of B-field X channel 15
- Grids of Conductivity Depth Images for each line

The final interpretation utilized these products along with channel amplitude grids and the profile data.



Barriere Ridge

The apparent conductivities within Barrier Ridge are higher overall than that of Honeymoon. Highs exist in both the east and the west, with a low running nearly N-S through the mid-western potion and along the north in the east. There is also a low region in the southeast (Figure 7 and Figure 8).

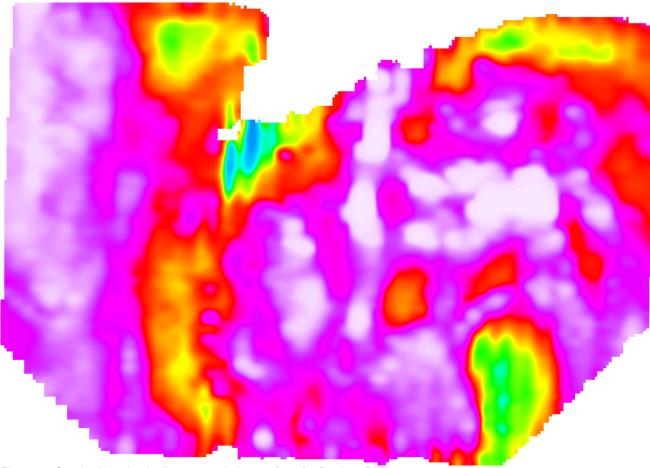


Figure 7: Conductivity depth slice at 50m below surface for Barriere Ridge.



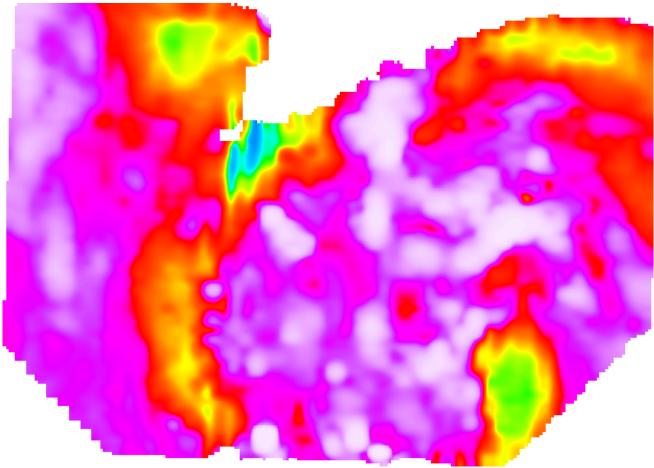


Figure 8: Conductivity depth slice at 150m below surface for Barriere Ridge.



Honeymoon

There is a greater range in apparent conductivities in the Honeymoon block. Predominantly low conductivities prevail with some strong linear highs in the northern half of the area (Figure 9 and Figure 10). Across the centre portion of the block is a noisy section which is due to poor data as mentioned in the Introduction section.

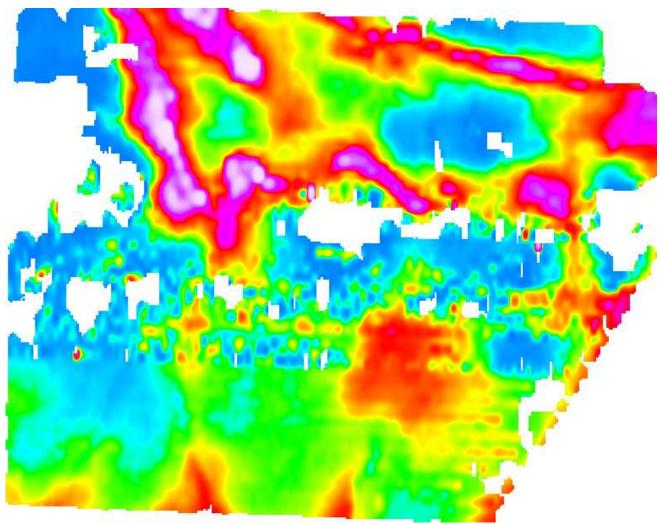


Figure 9: Conductivity depth slice at 50 m below surface for Honeymoon Property.



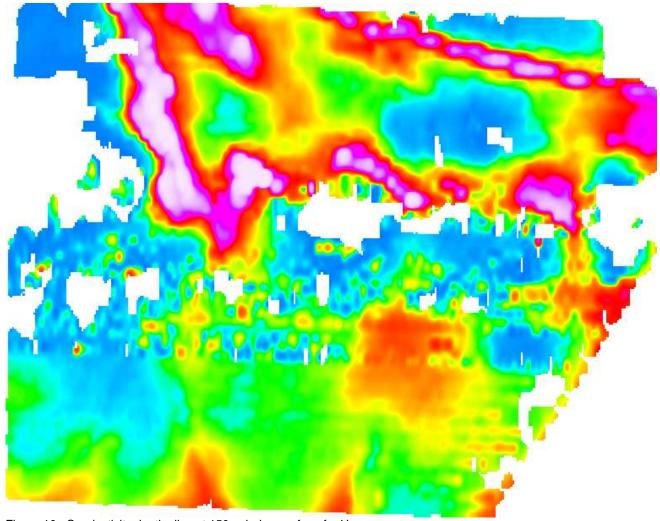


Figure 10: Conductivity depth slice at 150 m below surface for Honeymoon.

The CDI sections were used to indentify major faults in the area by locating obvious breaks (Figure 11). In many cases these had already been identified from the magnetics, but some new faults were identified in this manor. The dips of the faults can also be identified using the CDI sections.



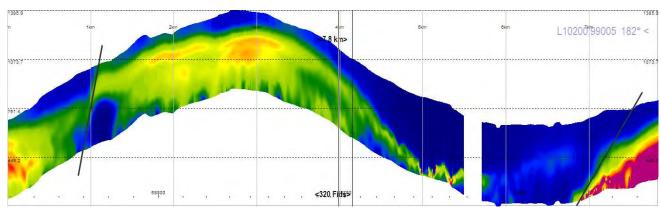


Figure 11: CDI section for L10200, draped to the terrain, showing example of major faults. Interpreted faults drawn as dark grey lines.

Electromagnetic Interpretation Discussion

Conductors in the Survey Area

Significant conductors within the survey area have been outlined on the interpretation map and are described below. The conductors are classified as conductive zones, points and axes. An axis describes a conductor that displays a relatively narrow, linear feature with defined profile response, often with indication of vertical extent. Dip directions are shown where the profiles shapes allow for a confident determination of the conductor's geometry. Single point anomalies are generally notable responses seen only on one line, and depending on their strength and the survey line spacing, can often be considered good exploration targets. Areas interpreted as conductive zones are generally broad conductors displaying a well-defined boundary on at least one of the EM products. Potential faults and basement lineaments are shown on the interpretation map in the vicinity of the conductors described below.

Selected Conductors of Interest

A list of anomalous EM responses for each block follows. These are recommended for detailed review and possible ground follow-up within the survey area. The selections are based on analysis of both dB/dt and B-field data and the criteria and categories described earlier. They are numbered on the EM Interpretation map and discussed in detail in the table below. These are mainly of interest for VMS type deposits in this area, but some targets have dissimilar character in part which may indicate some minor faulting and may be of interest for gold exploration. A break is identified on the map where the character of an EM trend changes.

Other EM trends which may be visible in the EM grid products may not be identified as selections as they do not meet enough of the selection criteria. However, should there exist other favorable geological information (from geochemistry, mapping, other ground work, etc.), these should be upgraded to follow-up selections.



Barriere Ridge

Target	Line Range	Best response(s)- Line/Anomaly	Observations	Category
1 point	10100	-	 Coincident with fault mapped from CDI sections. No magnetic correlation. 	B-3
2 axis	10040 - 10090	10080/A	 Weak axis trending NW-SE. No magnetic correlation. The character of the anomalies along this axis suggests that the conductor is dipping to the SW, except for the character of the anomaly on L10090 which suggests a dip to the N. 	B-3
3 axis	10140 - 10160	10140/A 10140/B	 Axis trending NE-SW. No magnetic response. Corresponds with part of a fault interpreted from CDI sections. Character of anomaly indicates conductor is SE dipping, consistent with interpreted fault. 	B-3
4 axis	10230 - 10250	10250/B	 Axis trending NW-SE. Corresponds with vertical fault interpreted from CDI sections. NW end of the axis is close to location of White Rock showing. Anomaly character indicates conductor is vertical. 	A-3
5 axis	10210 - 10220	-	 Weak axis trending NW-SE. Along southwestern edge of magnetic high. Anomaly indicates SW dip. 	B-2
6 axis	10210 - 10240	10220/C	 Axis trending NW-SE. Coincident with a very weak magnetic low. Anomaly indicates SW dip. 	A-2
7 point	10120	-	 Single point well defined anomaly. Within a long N-S running magnetic low mapped as a fault. 	A-2
8 point	10150	•	Single point anomaly.No associated magnetic response.	B-3
9 axis	10270 - 10280	10280/A	 Axis trending NW-SE. Coincident with vertical fault mapped from CDI sections. No magnetic response. Position of this axis as well as conductor dip is uncertain. There is a hint of a second peak on L10280 just of the end of the survey line, which would move the anomaly south to being closer to the fault. 	A-3
10 point	10350	-	Single point anomaly.On magnetically mapped fault.	B-2
11 point	10420	-	 Single point anomaly. On vertical fault mapped from CDI sections. No magnetic response. 	A-3
12 axis	10410 - 10460	10410/A 10420/D 10430/A	 Axis trending NE-SW. Weakening towards the NE. No magnetic correlation. Anomaly shape indicates SE dipping, except on L10460. Possibly part of Target 24, but offset by a fault. 	A-3
13 axis	10350 - 10370	10370/B	 Axis trending ENE-WSW. Parallel and just to the south of a SE dipping fault mapped from the CDI sections. No magnetic correlation. Anomaly shape indicates SE dipping. 	A-3



Target	Line Range	Best response(s)- Line/Anomaly	Observations	Category
14 axis	10350 - 10370	10370/C	 Axis trending NW-SE. Apparently limited to the N and S by faults mapped from the CDI sections. Associated with a weak magnetic high. Northern end near location of Cad showing. Unable to determine dip direction due to proximity of other anomalies. 	A-1
15 point	10320	-	Strong single point anomaly.No magnetic response.	A-3
16 point	10290	-	Single point anomaly.Near fault mapped from CDI section and magnetics.	B-2
17 point	10370	-	Single point anomaly.On small magnetic high.	B-2
18 point	10390	-	Single point anomaly.No magnetic association.	B-3
19 axis	10400 - 10450	10430/D	 Axis trending NE-SW. No associated magnetic signature. EM response suggests SE dipping. 	A-3
20 axis	10420 - 10450	10430/B 10430/C 10440/A 10450/B	 Axis trending NW-SE. Follows part of a mapped fault from magnetics and CDI sections. 	A-2
21 axis	10500 - 10510	10510/A	 Axis trending NE-SW. Parallel to and near a SE dipping fault mapped with magnetics and CDI sections. Appears to be SE dipping. 	B-2
22 axis	10520 - 10530	10520/B	Axis trending NE-SW.Terminates at the north end at a fault mapped from CDI sections.	A-3
23 point	10490	-	 Single point anomaly. No magnetic correlation. Just to the south of a fault mapped from the CDI sections. 	A-3
24 axis	10480 - 10500	10500/B	 Axis trending NE-SW. No magnetic response. Possibly SE dipping. May be an extension of Target 12, but offset. 	B-3
25 point	10560	-	 Single point anomaly. Located on fault mapped from CDI sections. On edge of magnetic high. 	A-2

Honeymoon

Target	Line Range	Best response(s)- Line/Anomaly	Observations	Category
1 axis	20010 - 20020	-	Axis trending NW-SE.Weak magnetic high.	A-1
2 axis	20010 - 20090	20050/A	 Axis trending NW-SE. Parallel and to the west of a fault mapped from the magnetics. Within a broader magnetic low. At the south end of this axis lies the Lucky Bear showing. Anomaly shape suggests W dipping conductor in the S, but in the north is indeterminant. 	A-2



Target	Line Range	Best response(s)- Line/Anomaly	Observations	Category
3 axis	20110 - 20120	20120/B	 Axis trending nearly N-S. Along a fault mapped from the magnetic data, which appears to run through the Lucky Bear showing. 	A-2
4 axis	20130 - 20140	20140/A	 Axis trending NE-SW. Parallel to interpreted fault. Anomaly shape indicates NW dipping body. 	A-2
5 axis	20151 - 20170	-	Axis trending nearly N-S.Coincident with a magnetic high.	A-1
6 axis	20170 - 20210	20170/B	 Axis trending NW-SE. Along magnetically interpreted fault. West dipping conductor indicated by EM anomalies. 	A-2
7 axis	20210 - 20250	-	 Axis trending NW-SE. Associated with a magnetic high within a wider low. Anomalies indicate W dipping conductor. 	A-2
8 axis	20010 - 20020	20020/C	 Axis trending NE-SW. Along fault interpreted from magnetic data. Anomalies indicate NW dipping conductor. 	A-2
9 axis	20030 - 20050	20030/D	 Axis trending nearly N-S. North end bound by interpreted fault. No magnetic signature. Possibly west dipping. 	A-3
10 axis	20030 - 20060	20050/C	 Axis trending NNW-SSE. Not correlated with magnetics. Anomaly character changes between L20040 and L20050, possibly indicating a break. 	A-3
11 point	20080	-	 Single point anomaly. On southern tip of larger magnetic body. Conductor appears to be dipping westward. 	A-2
12 point	20090	-	Weak single point anomaly.Associated magnetic high.	A-1
13 zone	20180 - 20240	20220/D	 Conductive zone. Contains several discrete anomalies. Largely coincident with a magnetic body. 	C-1
14 axis	20260 - 20270	20270/A	 Axis trending NW-SE. Along interpreted fault. Possibly W dipping, but weakness of anomaly makes determination difficult. 	A-3
15 point	20330	-	Weak single point anomaly.On edge of slightly magnetic body.	A-2
16 point	20330	-	Weak single point anomaly.No magnetic correlation.	C-3
17 axis	20010 - 20020	20020/D	 Axis trending NW-SE. No correlation with magnetics. Anomaly shape indicates conductor is SW dipping. 	A-3
18 axis	20030 - 20050	20030/B	 Axis trending NE-SW. Corresponds with part of fault interpreted from magnetics. Anomaly indicates conductor is vertical. 	A-2
19 axis	20030 - 20090	20060/A	 Axis trending ENE-WSW. Follows magnetic ridge. Dip of conductor cannot be easily determined due to axis being oblique to flight lines. 	C-2



Target	Line Range	Best response(s)- Line/Anomaly	Observations	Category
20 axis	20170 - 20230	20210/F	 Axis trending NW-SE. Parallel to magnetically interpreted fault, but slightly to the south. South end anomalies indicate SW dip, but northern anomalies show a different NE dipping character. 	A-2
21 point	29060	-	Single point anomaly.No magnetic response.	B-3
22 zone	20200 - 20250	20210/I	Conductive zone.No correlation with magnetics.	C-3
23 axis	20110 - 20130	-	Weak axis trending SW-NE.On edge of magnetic high.	B-2
24 axis	20570 - 20580	20570/A	 Weak axis trending NW-SE. No magnetic response. Possibly same conductor as Target 25, offset by fault. Appears to be SW dipping conductor. 	B-3
25 axis	20590 - 20600	20590/A	 Weak axis trending NW-SE. No magnetic correlation. Possibly same conductor as Target 24, offset by fault. Appears to be SW dipping conductor. 	C-3

Priority of Targets

As explained previously, priority is given to targets categorized at the higher end of the ABC-123 scale for VMS type deposits. Based on this classification system, priority for the targets listed in this report goes to the A-1 conductors followed by A-2 conductors, and so on. The "best response line/anomaly" column in the conductor description table generally lists the anomaly or a series of anomalies along each axis which shows the strongest or best-defined profile/map response. This is meant a guideline for focusing follow-up work on each of the targets. However, proximity to potential or mapped faults, known geological features, ease of access etc. must also be considered when planning follow-up work.

Faulting is a major control on the location of polymetallic veins, and as such, areas around any of the mapped faults may be of interest for gold exploration. In addition, where the character of an EM axis changes, identified on the map as breaks, are of potential interest. This would also include the ends of any EM axis, which may be structurally controlled.



Closing Remarks

We trust this data will further your exploration program; and we remain available for questions and any feedback that you are able to provide.

Respectfully Submitted: Fugro Airborne Surveys



Appendix A

EM Anomaly Listing

MODEL USED IN FITTING: Vertical plate model*

Length of 600 m Depth extent of 300 m

Vertical dip

Strike perpendicular to flight line

ANOMALY LISTING DESCRIPTION:

Line	Line Number
	Flight Number
	Flight line heading
	Anomaly category B=bedrock D=plate S = surficial
. .	Anomaly identifier
	Fiducial value at anomaly
X	UTM X coordinate of anomaly peak (metres)
Y	UTM Y coordinate of anomaly peak (metres)
Alt(Tx)	Terrain clearance of transmitter (metres)
PickedBy	dB/dt X or Z component
EM	Amplitude of channel 08 (ppm)
	Calculated conductivity thickness product
DEP	Calculated depth of conductor
	Calculated dip
TAU	Decay constant (s)
LastChan	Last channel deflected above threshold

^{*} The vertical plate model will not be accurate for non-vertical bodies, such as dipping plates, spheres, horizontal layers, etc. When anomaly does not fit the vertical plate model, it is often manifested as negative depth estimates. The CTP values calculated also assume the vertical plate model, and the absolute values are suspect, but can still give a relative indication of conductivity.



Barriere Ridge

		_	_											
Line	Flight	Bear	Category	ID	FID	Х	Υ	Alt(Tx)	PickedBy	EM	CTP	DEP	TAU	LastChan
10080	99006	2.2	D	Α	77234.4	294868.6	5689002	78.8	dB/dT X	469.6	12	-18.8	0.3873	16
10090	99006	182.3	D	Α	76688.8	295069	5688888	75.9	dB/dT X	279	3	-15.9	0.1377	11
10100	99006	2.2	D	Α	76512.8	295298.9	5689814	60.1	dB/dT X	170.3	2	-0.1	0.103	9
10110	99006	182.1	D	Α	76049.5	295311	5684483	96.5	dB/dT X	74.7	2	-36.5	0.0964	7
10110	99006	182.1	D	В	76096.3	295256.8	5682948	92.6	dB/dT X	100.3	10	-32.6	0.3498	13
10120	99006	2.5	D	Α	75411.7	295448.8	5682588	99	dB/dT X	308.3	11	-39	0.3755	16
10130	99006	2.6	D	Α	74609.9	295654.6	5683102	85.6	dB/dT X	107.4	16	-25.6	0.4908	15
10130	99006	2.6	D	В	74628.6	295675.8	5683557	81.8	dB/dT X	83.8	7	-21.8	0.24	13
10140	99005	182.1	D	Α	71204.2	296053.2	5688371	101.7	dB/dT X	58.3	26	-41.7	0.741	16
10140	99005	182.1	D	В	71227.1	296024.9	5687638	77.2	dB/dT X	83.1	9	-17.2	0.3068	14
10150	99005	2.3	D	Ā	70734.3	296052.2	5683048	76.9	dB/dT X	335.5	3	-17.9	0.1226	10
10170	99005	2.3	D	A	70050.7	296569.1	5686193	83.8	dB/dT X	157.9	Ü	11.0	0.1220	17
10170	99005	2.3	D	A	69092	296911.8	5684437	114.9	dB/dT X	249				0
10190	99005	2.3	D	В	69106.3	296916.4		101.8	dB/dT X	245.2				0
			D	C			5684830							0
10190	99005	2.3			69124.7	296949.6	5685349	107.3	dB/dT X	114.5				
10190	99005	2.3	D	D	69173.5	296985.3	5686762	113.4	dB/dT X	25.7	•	00.0	0.0004	0
10200	99005	181.9	D	A	68825.1	297064.1	5683399	82.9	dB/dT X	269.3	6	-22.9	0.2234	13
10210	99005	2.5	D	A	68187.9	297303.1	5684217	75.7	dB/dT X	282.3				18
10210	99005	2.5	D	В	68242.5	297349.9	5685554	94.4	dB/dT X	73.9				0
10220	99005	182.4	D	Α	67869.5	297538.3	5685305	68.9	dB/dT X	148.9				0
10220	99005	182.4	D	В	67904.9	297492.1	5684236	80.7	dB/dT X	218.9				20
10220	99005	182.4	D	С	67918.1	297484.5	5683838	92	dB/dT X	492	26	-32	0.7407	19
10230	99005	2.2	D	Α	67287.8	297684.9	5683902	67.6	dB/dT X	555.3	5	-7.6	0.1892	12
10230	99005	2.2	E	В	67401.5	297794.3	5686715	89.2	dB/dT X	229.8	42	-29.2	1.094	20
10240	99004	182.2	D	Α	86569.2	297850.8	5682843	56.1	dB/dT X	331.8	4	3.9	0.1699	13
10240	99004	182.2	D	В	86580.4	297845.1	5682513	61.7	dB/dT X	374.6	119	-1.7	2.6031	25
10250	99004	2.2	D	Α	85920.7	298056.3	5682982	91.6	dB/dT X	114.7	6	-31.6	0.2278	12
10250	99004	2.2	D	В	86062.9	298189.8	5686566	72	dB/dT X	446.4	39	-12	1.0343	21
10250	99004	2.2	D	Ċ	86099.6	298223.4	5687655	66.7	dB/dT X	191.4	5	-6.7	0.1743	12
10270	99004	1.9	D	Ä	85091.3	298451.7	5682872	86.4	dB/dT X	70.2	30	-26.4	0.8284	17
10270	99004	1.9	D	В	85277.8	298632.1	5687724	103.5	dB/dT X	67.5	16	-43.5	0.5076	16
10270	99004	1.9	D	C	85323.4	298670	5688966	117.2	dB/dT X	73.3	8	-57.2	0.281	13
10270	99004	182	D		84915.2	298647.9	5682800	62.3	dB/dT X	462.1	24	-2.3	0.7038	
				A		299048.1								19
10290	99004	1.9	D	A	84427.2		5688208	81.6	dB/dT X	313.2	14	-21.6	0.4326	16
10310	99004	2.4	D	A	83429.3	299320.9	5684661	83.9	dB/dT X	202	17	-23.9	0.5321	16
10310	99004	2.4	D	В	83509.9	299405.8	5686864	65.3	dB/dT X	550.4	33	-5.3	0.9113	20
10320	99004	182	D	Α	82998.4	299624.3	5687578	56.9	dB/dT X	2037.9	38	3.1	1.0145	20
10350	99003	1.3	D	Α	86829.8	300112.6	5684404	98.5	dB/dT X	317.3	13	-38.5	0.4134	17
10350	99003	1.3	D	В	86896.7	300165.3	5686242	89.8	dB/dT X	246.9	7	-29.8	0.2624	14
10350	99003	1.3	D	С	86939.2	300217.1	5687432	69.5	dB/dT X	434.1	26	-9.5	0.736	19
10350	99003	1.3	D	D	86946.5	300221.7	5687640	70.6	dB/dT X	236.6	4	-15.6	0.1546	11
10360	99003	183.2	D	Α	86497.6	300410.7	5687443	84.4	dB/dT X	280.1	26	-24.4	0.7522	18
10360	99003	183.2	D	В	86507.9	300406.9	5687116	84.4	dB/dT X	290.9	2	-32.4	0.0719	9
10360	99003	183.2	D	С	86528.3	300383.5	5686474	79.8	dB/dT X	295.7				17
10360	99003	183.2	D	D	86545.1	300368.5	5685940	76.9	dB/dT X	382.6	19	-16.9	0.5835	18
10370	99003	2.9	D	Α	86008.2	300462	5683190	94.2	dB/dT X	188.9	14	-34.2	0.4574	15
10370	99003	2.9	D	В	86123.1	300580.7	5686331	81.2	dB/dT X	802.8	22	-21.2	0.6352	19
10370	99003	2.9	D	Ċ	86153.1	300609.8	5687194	77	dB/dT X	1099.1	35	-17	0.9384	20
10370	99003	2.9	D	Ď	86228.1	300695.6	5689339	79.2	dB/dT X	540.3	5	-19.2	0.2044	13
10380	99003	181.8	D	A	85742.5	300765.8	5685941	82.5	dB/dT X	444.3	12	-22.5	0.3804	16
10380	99003	181.8	D	В	85806.1	300686	5683998	65.3	dB/dT X	383.2	3	-21.3	0.1301	9
10390	99003	3.1	D	A	85236.6	300930.3	5685057	97.3	dB/dT X	242.2	23	-37.3	0.6754	19
10390	99003		D	В			5688451				23 8			
		3.1			85365.2	301054.8		86.8	dB/dT X	377.4		-26.8	0.2835	15
10390	99003	3.1	D	C	85402.5	301101	5689540	114.1	dB/dT X	127.3	26	-54.1	0.7499	18
10400	99003	182	D	A	84848.5	301237.6	5688042	83.2	dB/dT X	263.6	2	-23.2	0.0914	10
10410	99003	2.8	D	A	84469.1	301322.3	5684625	94.9	dB/dT X	360	43	-34.9	1.1219	21
10410	99003	2.8	D	В	84603.7	301439.9	5688053	86.4	dB/dT X	253.3	18	-26.4	0.5576	16
10410	99003	2.8	D	С	84615.6	301454.5	5688405	88.7	dB/dT X	274.1	10	-28.7	0.3487	15
10420	99003	182.1	D	Α	84058.7	301645	5688583	98	dB/dT X	283.1	19	-38	0.5676	15
10420	99003	182.1	D	В	84072.5	301658	5688197	94.2	dB/dT X	323	3	-34.2	0.1354	11
10420	99003	182.1	D	С	84174.3	301533.7	5685086	90.2	dB/dT X	365.7	31	-30.2	0.8612	18
10420	99003	182.1	D	D	84186.3	301527.4	5684728	98.8	dB/dT X	483	12	-38.8	0.4005	16
10420	99003	182.1	D	Е	84255.5	301456.1	5682792	66.5	dB/dT X	653.7	26	-6.5	0.7374	20
10430	99003	2.3	D	Α	83773	301741.2	5685040	85.1	dB/dT X	430.9	12	-25.1	0.39	16
10430	99003	2.3	D	В	83853.8	301809.8	5687000	78.9	dB/dT X	2048.1	55	-18.9	1.3819	23
10430	99003	2.3	D	Č	83871	301819.4	5687428	68.2	dB/dT X	1067.3	28	-8.2	0.7964	20
10430	99003	2.3	D	D	83896.1	301851.4	5688172	80.4	dB/dT X	837.7	19	-20.4	0.5619	19
10430	99003	2.3	D	E	83906.3	301846.4	5688483	76.1	dB/dT X	758.1	18	-16.1	0.5434	18
10430	99003	182.4	D	A	83402.1	301979.4		100.5	dB/dT X	1066.7	5	-61.5	0.1995	14
10170	55505	102.7	5	, ,	00 r02.1	301313.4	3000100	100.0	ab,ai A	1000.1	5	01.0	0.1000	17



10440	99003	182.4	D	В	83448.7	301942.2	5685259	91.1	dB/dT X	147.6	23	-31.1	0.6795	17
10440	99003	182.4	D	С	83463.5	301932.5	5684832	73.9	dB/dT X	189.9	5	-13.9	0.1849	12
10450	99003	2.1	D	Α	83020.1	302144	5685125	115.2	dB/dT X	98.6	13	-55.2	0.424	15
10450	99003	2.1	D	В	83100.6	302197	5687018	83	dB/dT X	1290.3	24	-23	0.6842	20
10450	99003	2.1	D	С	83147.5	302249.1	5688293	62.4	dB/dT X	627.8	35	-2.4	0.951	19
10450	99003	2.1	D	D	83157.2	302261.5	5688580	75.9	dB/dT X	496.6	27	-15.9	0.7764	20
10460	99002	182.2	D	Α	79813.6	302337.8	5685137	80.7	dB/dT X	96.4	25	-20.7	0.7099	17
10470	99002	2.2	D	Α	79471.6	302616.2	5687300	73.9	dB/dT X	1230	11	-21.9	0.3767	17
10470	99002	2.2	D	В	79527.1	302671.3	5688978	67.1	dB/dT X	214.5	6	-7.1	0.2081	13
10480	99002	181.9	D	Α	79105.3	302737.5	5685033	94.3	dB/dT X	303	11	-34.3	0.3624	15
10490	99002	2	D	Α	78674.2	302950.2	5685409	85.6	dB/dT X	146.2	21	-25.6	0.6257	17
10490	99002	2	D	В	78702.5	302977.5	5686224	85	dB/dT X	610.8	10	-25	0.3265	16
10490	99002	2	D	С	78755.9	303029.8	5687739	77.8	dB/dT X	204.9	5	-17.8	0.178	12
10500	99002	182.3	D	Α	78314.5	303257.3	5688261	66.3	dB/dT X	354.8	2	-9.3	0.0822	8
10500	99002	182.3	D	В	78352.1	303210.7	5687048	71.9	dB/dT X	224.7	7	-11.9	0.2446	13
10500	99002	182.3	D	С	78402	303154.2	5685549	68.9	dB/dT X	410.1	19	-8.9	0.5832	17
10500	99002	182.3	D	D	78415.2	303141.3	5685157	68.5	dB/dT X	561.2	25	-8.5	0.7092	19
10510	99002	2.2	D	Α	78056.7	303414.9	5687314	81.8	dB/dT X	563.3	11	-21.8	0.374	16
10520	99002	182.9	D	Α	77649.3	303633.3	5687870	82.3	dB/dT X	116.7	9	-22.3	0.314	13
10520	99002	182.9	D	В	77695.4	303595.7	5686514	78.4	dB/dT X	732.7	10	-18.4	0.3437	16
10530	99002	2.4	D	Α	77276.3	303721.4	5684666	118.8	dB/dT X	64.4	5	-58.8	0.1888	12
10530	99002	2.4	D	В	77354	303803.3	5686776	98.1	dB/dT X	205.8	11	-38.1	0.3648	16
10530	99002	2.4	D	С	77391.6	303834.4	5687751	78.6	dB/dT X	131	5	-18.6	0.2053	12
10540	99002	182.9	D	Α	77054	303972.6	5686160	68.9	dB/dT X	181.9	25	-8.9	0.7286	18
10550	99002	2.1	D	Α	76757.7	304259.9	5688278	85.9	dB/dT X	81.8	7	-25.9	0.2401	13
10550	99002	2.1	D	В	76777.9	304272.3	5688818	72.9	dB/dT X	65.3	4	-12.9	0.15	11
10560	99002	183	D	Α	76412.8	304362	5685623	63.9	dB/dT X	158.2	3	-3.9	0.1148	9
10560	99002	183	D	В	76438.9	304336.8	5684860	69.3	dB/dT X	279.1	23	-9.3	0.6701	18
10570	99002	2.2	D	Α	76075	304638.8	5687853	67.8	dB/dT X	158.4	8	-7.8	0.2887	14
10570	99002	2.2	D	В	76091.6	304655.3	5688276	82.5	dB/dT X	59.7	7	-22.5	0.2394	12
19010	99007	272.7	D	Α	82118.1	301581	5689306	106	dB/dT X	126.3	4	-46	0.1569	11
19020	99007	92	D	Α	81619.1	300279.1	5687349	87.4	dB/dT X	494.5	59	-27.4	1.4698	22
19020	99007	92	D	В	81626.8	300534.8	5687347	91.5	dB/dT X	448.7	5	-31.5	0.1818	13
19020	99007	92	D	С	81695.7	302641.8	5687271	60.7	dB/dT X	2849.9	17	-0.7	0.5178	19
19020	99007	92	D	D	81717.9	303432	5687243	87.9	dB/dT X	846.6	12	-27.9	0.3809	17
19030	99007	271.8	D	Α	80783	301991.6	5685293	82.6	dB/dT X	232.7	3	-24.6	0.1168	10
19030	99007	271.8	D	В	80878.2	299794	5685369	99.8	dB/dT X	209.6	31	-39.8	0.8536	19
19030	99007	271.8	D	С	80987.4	297388.8	5685463	112.6	dB/dT X	263.2	22	-52.6	0.6499	18
19030	99007	271.8	Е	D	81165.7	293501.8	5685589	90.8	dB/dT X	214.3	18	-30.8	0.5382	16
19040	99007	91.7	D	Α	80453.6	301387.2	5683308	57.8	dB/dT X	352.4	20	2.2	0.5913	19



Honeymoon

Line	Flight	Bear	Category	ID	FID	Χ	Υ	Alt(Tx)	PickedBy	EM	CTP	DEP	TAU	LastChan
20010	99009	272.1	D	Α	68384.3	319113.8	5690012	90.1	dB/dT X	55.7	55	-30.1	1.3771	20
20010	99009	272.1	D	В	68400	318756.7	5690029	78.5	dB/dT X	93.8	18	-18.5	0.5387	16
20010	99009	272.1	D	С	68423.2	318194.3	5690051	71.8	dB/dT X	41.9	57	-11.8	1.4212	20
20010	99009	272.1	D	D	68508.9	315971.1	5690133	133.9	dB/dT X	62.4	47	-73.9	1.202	19
20010	99009	272.1	D	E	68520.9	315638.9	5690144	127.6	dB/dT X	148.7	7	-67.6	0.251	13
20010	99009	272.1	D	F	68541.7	315091.1	5690170	116	dB/dT X	352.9	17	-56	0.5327	18
20010	99009	272.1	D	G	68583.4	313968.8	5690203	94.4	dB/dT X	30.5				19
20010	99009	272.1	D	Н	68606.6	313352.2	5690224	94.6	dB/dT X	110.8	50	-34.6	1.2804	21
20020	99009	92	D	A	68918.8	313733	5690008	116.2	dB/dT X	118.4	63	-56.2	1.5437	21
20020	99009	92	D	В	68957	314899.3	5689967	96.4	dB/dT X	63.5	16	-36.4	0.5065	16
20020	99009	92	D	С	68982	315673.7	5689939	114	dB/dT X	422.3	43	-54	1.1265	22
20020	99009	92	D	D	69096.1	319098.2	5689827	106.3	dB/dT X	125.5	81	-46.3	1.902	22
20030	99009	272.1	D D	A	69604.3	320499.3	5689576	76.2	dB/dT X	87.9	3	-16.2	0.114	9 22
20030 20030	99009 99009	272.1 272.1	D	B C	69626 69757.1	319905.2 316379.7	5689588 5689716	119.1	dB/dT X dB/dT X	155.6 91	79 34	-59.1	1.8644 0.9328	18
20030	99009	272.1	D	D	69781.1	315669	5689743	94.1 114.1	dB/dT X	105.3	32	-34.1 -54.1	0.883	19
20030	99009	272.1	D	E	69805.5	315004.5	5689759	94.9	dB/dT X	71.5	25	-34.1	0.7114	16
20040	99009	92.1	D	Ā	70187.2	314212.2	5689591	124	dB/dT X	151.3	58	-64	1.4394	21
20040	99009	92.1	D	В	70232.6	315627.2	5689545	98.4	dB/dT X	36	5	-38.4	0.1772	11
20040	99009	92.1	D	Č	70258.8	316390.7	5689508	79.5	dB/dT X	365.5	34	-19.5	0.9153	20
20040	99009	92.1	D	Ď	70368.3	319755.4	5689401	148	dB/dT X	27	87	-88	2.0171	20
20040	99009	92.1	D	E	70421.4	321001.3	5689349	87.4	dB/dT X	84.3	49	-27.4	1.2441	21
20050	99010	92.1	D	Ā	74317.8	314285.9	5689388	110.7	dB/dT X	312.9	52	-50.7	1.3127	22
20050	99010	92.1	D	В	74365.9	315716.3	5689334	112.4	dB/dT X	99.5	20	-52.4	0.6034	17
20050	99010	92.1	D	С	74396.1	316537.2	5689309	66.3	dB/dT X	674.2	59	-6.3	1.455	23
20050	99010	92.1	D	D	74499.2	319549.3	5689199	102.4	dB/dT X	74.2	4	-42.4	0.17	12
20050	99010	92.1	D	E	74569.5	321264.2	5689143	85.7	dB/dT X	44.7	88	-25.7	2.0254	22
20050	99010	92.1	D	F	74579.3	321545.9	5689131	128.5	dB/dT X	42.2	160	-68.5	3.3294	22
20050	99010	92.1	D	G	74600.8	322177.1	5689116	104.2	dB/dT X	26.6	17	-44.2	0.5146	15
20060	99010	272	D	Α	74885.3	322374.7	5688904	101.1	dB/dT X	138.9	24	-41.1	0.6889	18
20060	99010	272	D	В	75087.1	316815.1	5689101	93.5	dB/dT X	107	41	-33.5	1.0858	20
20060	99010	272	D	С	75097.4	316529.4	5689116	87.4	dB/dT X	101	2	-43.4	0.104	7
20060	99010	272	D	D	75170.2	314536.1	5689179	204.4	dB/dT X	21	25		0.7233	16
20060	99010	272	D	E	75202.3	313866.6	5689201	285	dB/dT X	34.5	23	00.0	0.6746	16
20070	99010	92	D	A	75532.8	313870.5	5688997	126.2	dB/dT X	124.7	52	-66.2	1.3177	20
20070	99010	92	D	В	75549.3	314340.3	5688996	92.3	dB/dT X	300.6	70	-32.3	1.6782	23
20070	99010	92	D	С	75887	323486.5	5688663	92.6	dB/dT X	93.4	39	-32.6	1.0319	19
20070	99010	92	D	D	75896.8	323779.5	5688647	108.1	dB/dT X	93.6	27	-48.1	0.7644	18
20080	99010	272.1	D	A B	76134.5	324909.9	5688410	152.7	dB/dT X	55.5	19 50	-92.7	0.5798	17 10
20080	99010 99010	272.1	D D	C	76162.1 76449.5	324299.4 316279.2	5688433 5688719	95.1 81.9	dB/dT X	46 464.9	50 14	-35.1 -21.9	1.2739 0.448	19 17
20080 20080	99010	272.1 272.1	D	D	76506.6	314664.2	5688771	154.8	dB/dT X dB/dT X	23.9	62	-21.9 -94.8	1.5136	17
20080	99010	272.1	D	E	76528.2	314160.8	5688794	174.8	dB/dT X	46.9	29	-94.0	0.8042	17
20090	99010	91.9	D	A	76895.5	314100.9	5688590	77.1	dB/dT X	92.1	130	-17.1	2.8105	24
20090	99010	91.9	D	В	76904.9	314370.2	5688585	97.1	dB/dT X	205	80	-37.1	1.8812	22
20090	99010	91.9	D	Č	76913.3	314606.6	5688576	102.9	dB/dT X	310.4	56	-42.9	1.4077	22
20090	99010	91.9	D	Ď	77002.9	316832.6	5688491	76.8	dB/dT X	94.3	1	-17.8	0.0651	8
20090	99010	91.9	D	Е	77334.7	325795.4	5688177	101.5	dB/dT X	51.6	72	-41.5	1.73	20
20100	99010	272	D	Α	77461.3	325962.2	5687971	138.4	dB/dT X	61	7	-78.4	0.2552	13
20100	99010	272	D	В	77885.9	314917.7	5688360	119.1	dB/dT X	39.4	35	-59.1	0.9524	18
20100	99010	272	D	С	77909.1	314296.5	5688397	114.6	dB/dT X	148.8	23	-54.6	0.6824	18
20110	99011	91.9	D	Α	80995	314398.3	5688180	89.7	dB/dT X	191.8	134	-29.7	2.8798	24
20110	99011	91.9	D	В	81009.2	314791.6	5688163	100.7	dB/dT X	650.5	65	-40.7	1.5856	23
20110	99011	91.9	D	С	81471	326313	5687777	84.4	dB/dT X	174.2	6	-24.4	0.227	13
20120	99011	272.2	D	Α	82252.1	325721	5687569	117.5	dB/dT X	97.1	12	-57.5	0.3916	15
20120	99011	272.2	D	В	82643.8	314337.6	5687984	98.2	dB/dT X	428.1	34	-38.2	0.9355	20
20130	99011	91.9	D	A	83037.7	314568.1	5687783	82.4	dB/dT X	240.6	52	-22.4	1.3059	22
20130	99011	91.9	D	В	83486.6	325469	5687385	97	dB/dT X	84.3	4	-37	0.1647	11
20140	99011	272.1	D	A	84017.5	314255.4	5687586	95.7	dB/dT X	376.6	111	-35.7	2.469	24
20151	99013	91.8	D	A	59666	314288.5	5687386	68.2	dB/dT X	72.4	12	-8.2	0.4036	15
20151	99013	91.8	D	В	59673.8	314480.8 314701.7	5687375 5687368	73.2	dB/dT X	514 1790.8	8 27	-27.2	0.2799	14
20151	99013	91.8 272.1	D	C	59682.1 60701.8	314701.7		66.8 68.6	dB/dT X		37 35	-6.8 -9.6	0.9955	22
20161 20161	99013 99013	272.1 272.1	D D	A B	60701.8	314649.8	5687171 5687181	68.6 76.2	dB/dT X dB/dT X	1038.6 636.1	35 135	-9.6 -16.2	0.9525 2.899	22 25
20161	99013	91.9	D	A	61081.1	314455.1	5686974	76.2 81.2	dB/dT X	335.9	24	-16.2 -21.2	0.69	25 19
20170	99013	91.9	D	В	61094.8	314846.5	5686963	78.7	dB/dT X	771.7	88	-21.2 -18.7	2.0412	25
20170	99013	91.9	D	C	61240.2	318650.1	5686826	87.8	dB/dT X	65.9	21	-10.7	0.6295	16
20170	99013	91.9	D	D	61272.7	319387.8	5686807	94.3	dB/dT X	55.4	5	-34.3	0.0295	11
20180	99013	272	D	A	61966.8	319117.1	5686611	90.1	dB/dT X	215	14	-30.1	0.4425	17
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20180	99013	272	D	В	61980.5	318698.3	5686634	101.3	dB/dT X	351.5	62	-41.3	1.5243	23
20180	99013	272	D	С	62049	316681.7	5686706	87	dB/dT X	153.4	41	-27	1.087	20
20180	99013	272	D	D	62065.5	316195	5686719	74	dB/dT X	162.9	11	-14	0.3705	15
20180	99013	272	D	Е	62108.2	315024.5	5686754	86	dB/dT X	199.4	105	-26	2.3508	24
20180	99013	272	D	F	62116.6	314813.9	5686763	87.7	dB/dT X	364.8	17	-27.7	0.5254	17
20190	99013	91.8	D	A	62524.4	315012.7	5686553	94	dB/dT X	409.6	72	-34	1.7164	23
20190	99013	91.8	D	В	62596.9	316809.3	5686495	87.4	dB/dT X	330.3	14	-27.4	0.4556	17
20190	99013	91.8	D	С	62705.2	319603.4	5686385	101.4	dB/dT X	87.7	50	-41.4	1.2718	20
20190	99013	91.8	D	D	62715.4	319867	5686385	117.5	dB/dT X	79.8	4	-57.5	0.1434	11
20190	99013	91.8	D	Е	62880.1	324007.2	5686238	101.6	dB/dT X	55.6	6	-41.6	0.2121	12
20200	99013			Ā	63194.7									
		272.1	D			323682.4	5686057	75.6	dB/dT X	87.5	15	-15.6	0.4596	16
20200	99013	272.1	D	В	63214.9	323172.3	5686062	83.3	dB/dT X	175.6	11	-23.3	0.3526	15
20200	99013	272.1	D	С	63267.8	321561.3	5686140	134.5	dB/dT X	62.2	22	-74.5	0.6406	16
20200	99013	272.1	D	D	63327.9	320212.9	5686178	138.1	dB/dT X	47.5	41	-78.1	1.0756	18
20200	99013	272.1	D	Е	63341.6	319823.4	5686190	100.9	dB/dT X	35.5			0.0861	6
20200	99013	272.1	D	F	63388.3	318473.8	5686233	122.6	dB/dT X	51	36	-62.6	0.9781	18
20200	99013	272.1	D	G	63436.6	317032.9	5686267	82.9	dB/dT X	207.9	121	-22.9	2.6513	24
20200	99013	272.1	D	Н	63445.4	316761.8	5686288	87.8	dB/dT X	330	11	-34.8	0.3664	15
20200	99013	272.1	D	- 1	63466.8	316079.3	5686327	100.8	dB/dT X	597.4	32	-40.8	0.8729	20
20200	99013	272.1	D	J	63495.6	315199.7	5686360	106.1	dB/dT X	109.4	88	-46.1	2.0332	23
20200	99013	272.1	D	K	63506.7	314908.8	5686373	91.6	dB/dT X	259.5	24	-31.6	0.6886	19
20210	99014	91.6	D	A	66688.1	314784.6	5686168	97	dB/dT X	187.1	28	-37	0.7898	19
20210	99014	91.6	D	В	66701	315178.5	5686154	83.7	dB/dT X	521.1	60	-23.7	1.4784	23
20210	99014	91.6	D	С	66730.7	316037.3	5686123	85.8	dB/dT X	117.5	38	-25.8	1.0257	19
20210	99014	91.6	D	D	66748.4	316518.4	5686112	95.6	dB/dT X	358.9	10	-36.6	0.3231	15
20210	99014	91.6	D	Е	66772.4	317171.3	5686082	106.5	dB/dT X	238.5	34	-46.5	0.9328	19
20210	99014	91.6	D	F	66881.3	320160.1	5685961	89.3	dB/dT X	160.3	15	-29.3	0.4734	16
20210	99014	91.6	D	G	66909.5	320935.2	5685947	129.7	dB/dT X	60	32	-69.7	0.8797	17
20210	99014	91.6	D	Н	66929.4	321483.8	5685937	127.6	dB/dT X	47.7	3	-67.6	0.1349	10
20210	99014	91.6	D	ı	67016	323689.8	5685849	84.9	dB/dT X	223.4	21	-24.9	0.6176	18
20220	99014	272.1	D	Α	67467.9	320438.3	5685764	98.8	dB/dT X	71.5	67	-38.8	1.6151	21
20220	99014	272.1	D	В	67478.4	320138.6	5685782	99.8	dB/dT X	68.9	2	-39.8	0.1047	9
20220	99014	272.1	D	С	67583.1	317071.5	5685892	84.2	dB/dT X	32.7	45	-24.2	1.1692	19
20220	99014	272.1	D	Ď	67611.2	316195.1	5685920	94.3	dB/dT X	613.5	92	-34.3	2.1111	24
20220	99014	272.1	D	E	67631.9	315561.7	5685942	107.3	dB/dT X	116.6	30	-47.3	0.8398	18
20220	99014	272.1	D	F	67656.6	314858	5685967	85.2	dB/dT X	224.8	95	-25.2	2.1587	24
20220	99014	272.1	D	G	67664.8	314614.2	5685973	108.1	dB/dT X	181.2	20	-48.1	0.5959	18
20230	99014	91.7	D	Α	68036.1	314852.2	5685774	80.2	dB/dT X	191.7	2	-26.2	0.1018	11
20230	99014	91.7	D	В	68058.4	315508.3	5685741	100.7	dB/dT X	640.3	17	-40.7	0.5263	19
20230	99014	91.7	D	Č	68076.1	316026.6	5685725	110.8	dB/dT X	69.7	14	-50.8	0.4355	15
20230	99014	91.7	D	D	68089.3	316355.6	5685720	86.9	dB/dT X	100.8	11	-26.9	0.3598	14
20230	99014	91.7	D	Е	68244.5	320706.2	5685557	110.4	dB/dT X	165.6	51	-50.4	1.2855	21
20230	99014	91.7	D	F	68360.2	323963.5	5685434	95.3	dB/dT X	162.5	39	-35.3	1.0384	20
20240	99014	272	D	Α	68975.7	316225.3	5685513	96.4	dB/dT X	112.7	87	-36.4	2.0059	23
20240	99014	272	D	В	68990.3	315796.8	5685528	125	dB/dT X	114	50	-65	1.2667	20
20240	99014	272	D	C	69019.4	315021	5685561	109.4	dB/dT X	175.3	43	-49.4	1.129	21
			D	D	69027.4	314781.9								
20240	99014	272					5685575	85.2	dB/dT X	335.7	25	-25.2	0.7105	19
20250	99014	91.8	D	Α	69408.4	315045.5	5685375	150.5	dB/dT X	41.5	8	-90.5	0.2869	12
20250	99014	91.8	D	В	69431.9	315674.8	5685347	150.7	dB/dT X	69.1				20
20260	99014	272	D	Α	70331.1	315939.2	5685128	223.6	dB/dT X	40.6	11		0.3708	13
20270	99016	91.9	D	Α	71749.8	316170.9	5684911	119.5	dB/dT X	78.5	10	-59.5	0.3437	14
20280	99016	272.1	D	Α	72646.2	315971.8	5684726	198.8	dB/dT X	50.3	9		0.3133	13
			D		78249.6	313827.4	5683810					12.2	0.489	
20330	99017	91.7		A				73.2	dB/dT X	91.1	16	-13.2		16
20330	99017	91.7	D	В	78345.4	316782.9	5683685	79.6	dB/dT X	50.4	9	-19.6	0.3104	13
20570	99022	91.6	D	Α	86827.8	319022.6	5678808	89	dB/dT X	72.7	18	-29	0.5591	16
20580	99022	272.1	D	Α	87200.5	319213.2	5678604	79.3	dB/dT X	44.2	17	-19.3	0.5307	15
20590	99022	91.4	D	Α	87844	319013.8	5678410	70.2	dB/dT X	115.3	8	-10.2	0.292	13
20600	99022	272.1	D	Α	88197.6	319154.2	5678197	92.4	dB/dT X	61.4	13	-32.4	0.4133	15
29020	99008	2	D	Α	59459.3	313755.8	5690345	84.9	dB/dT X	467.4	16	-24.9	0.487	18
29030	99008	182	D	A	59630.2	315739.4	5690349	99.4	dB/dT X	201.8	4	-39.4	0.1678	13
29030	99008	182	D	В	59641	315746.2	5690018	124.2	dB/dT X	336.4	63	-64.2	1.5446	22
29030	99008	182	D	С	59670.7	315708.5	5689120	84.8	dB/dT X	76.3	14	-24.8	0.435	15
29040	99008	2	D	Α	60501.2	317604.5	5685882	104.5	dB/dT X	82.5	67	-44.5	1.6187	22
29050	99008	182	D	Α	60901.8	319712	5689292	129.4	dB/dT X	158.4	17	-69.4	0.5232	17
29060	99008	2.1	D	A	61754	321603.8	5685812	174.7	dB/dT X	82.4	44		1.1495	20
							5688805					56 G		
29070	99009	182.4	D	A	67253.1	323705.8		116.6	dB/dT X	96.4	75	-56.6	1.7744	21
29070	99009	182.4	D	В	67264.2	323693	5688466	102.1	dB/dT X	67.6	22	-42.1	0.6578	17
29070	99009	182.4	D	С	67362	323611.3	5686046	85.9	dB/dT X	90.8	21	-25.9	0.6206	17
29070	99009	182.4	D	D	67379.5	323590.5	5685558	104.4	dB/dT X	117.4	6	-44.4	0.2256	13
29081	99011	183.7	D	Α	81780.2	325703.2	5688458	87.2	dB/dT X	179.8	65	-27.2	1.5911	21
29081	99011	183.7	D	В	81795.2	325687	5688004	117.6	dB/dT X	145.5	43	-57.6	1.1151	19
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Appendix B

Airborne Transient EM Interpretation

Interpretation of transient electromagnetic data

Introduction

The basis of the transient electromagnetic (EM) geophysical surveying technique relies on the premise that changes in the primary EM field produced in the transmitting loop will result in eddy currents being generated in any conductors in the ground. The eddy currents then decay to produce a secondary EM field which may be sensed in the receiver coil.

The HeliTEM[®] airborne transient (or time-domain) EM systems incorporates a high-speed digital receiver which records the secondary field response with a high degree of accuracy. Most often the earth's total magnetic field is recorded concurrently.

Although the approach to interpretation varies from one survey to another depending on the type of data presentation, objectives and local conditions, the following generalizations may provide the reader with some helpful background information.

The main purpose of the interpretation is to determine the probable origin of the responses detected during the survey and to suggest recommendations for further exploration. This is possible through an objective analysis of all characteristics of the different types of responses and associated magnetic anomalies, if any. If possible the airborne results are compared to other available data. A certitude is seldom reached, but a high probability is achieved in identifying the causes in most cases. One of the most difficult problems is usually the differentiation between surface conductor responses and bedrock conductor responses.

Types of Conductors

Bedrock Conductors

The different types of bedrock conductors normally encountered are the following:

- <u>Graphites</u>. Graphitic horizons (including a large variety of carbonaceous rocks) occur in sedimentary formations of the Precambrian as well as in volcanic tuffs, often concentrated in shear zones. They correspond generally to long, multiple conductors lying in parallel bands. They have no magnetic expression unless associated with pyrrhotite or magnetite. Their conductivity is variable but generally high.
- Massive sulphides. Massive sulphide deposits usually manifest themselves as short conductors
 of high conductivity, often with a coincident magnetic anomaly. Some massive sulphides,
 however, are not magnetic, others are not very conductive (discontinuous mineralization or
 sphalerite), and some may be located among formational conductors so that one must not be
 too rigid in applying the selection criteria.



In addition, there are syngenetic sulphides whose conductive pattern may be similar to that of graphitic horizons but these are generally not as prevalent as graphites.

- 3. <u>Magnetite and some</u> serpentinized ultrabasics. These rocks are conductive and very magnetic.
- 4. <u>Manganese oxides</u>. This mineralization may give rise to a weak EM response.

Surficial Conductors

- 1. Beds of clay and alluvium, some swamps, and brackish ground water are usually poorly conductive to moderately conductive.
- 2. Lateritic formations, residual soils and the weathered layer of the bedrock may cause surface anomalous zones, the conductivity of which is generally low to medium but can occasionally be high. Their presence is often related to the underlying bedrock.

Cultural Conductors (Man-Made)

- 3. <u>Power lines</u>. These frequently, but not always, produce a conductive type of response. In the case when the radiated field is not removed by the power line comb filter, the anomalous response can exhibit phase changes between different windows. In the case of current induced by the EM system in a grounded wire, or steel pylon, the anomaly may look very much like a bedrock conductor.
- 4. <u>Grounded fences or pipelines</u>. These will invariably produce responses much like a bedrock conductor. Whenever they cannot be identified positively, a ground check is recommended.
- 5. <u>General culture</u>. Other localized sources such as certain buildings, bridges, irrigation systems, tailings ponds etc., may produce EM anomalies. Their instances, however, are rare and often they can be identified on the visual path recovery system.

Analysis of the Conductors

The rate of decay of a conductor is generally indicative of the conductivity of the anomalous material. However, the decay rate alone is not generally a decisive criterion in the analysis of a conductor. In particular, one should note:

- its shape and size,
- all local variations of characteristics within a conductive zone,
- any associated geophysical parameter (e.g. magnetics),
- the geological environment,
- the structural context, and
- the pattern of surrounding conductors.

The first objective of the interpretation is to classify each conductive zone according to one of the three categories which best defines its probable origin. The categories are cultural, surficial and



bedrock. A second objective is to assign to each zone a priority rating as to its potential as an economic prospect.

Bedrock Conductors

This category comprises those anomalies which cannot be classified according to the criteria established for cultural and surficial responses. It is difficult to assign a universal set of values which typify bedrock conductivity because any individual zone or anomaly might exhibit some, but not all, of these values and still be a bedrock conductor. The following criteria are considered indicative of a bedrock conductor:

- 1. An intermediate to high conductivity identified by a response with slow decay, with an anomalous response present in the later windows.
- 2. For vertical conductors, the anomaly should be narrow, relatively symmetrical, with two well-defined z-component peaks and a null between the peaks.
- 3. If the conductor is thin, the response varies as a function of depth and dip. If the conductor is wider, the responses might look more similar to the sphere response.
- 4. A small to intermediate amplitude. Large amplitudes are normally associated with surficial conductors. The amplitude varies according to the depth of the source.
- 5. A degree of continuity of the EM characteristics across several lines.
- 6. An associated magnetic response of similar dimensions. One should note, however, that those magnetic rocks which weather to produce a conductive upper layer will possess this magnetic association. In the absence of one or more of the characteristics defined in 1, 2, 3, 4 and 5, the related magnetic response cannot be considered significant.

Most obvious bedrock conductors occur in long, relatively monotonous, sometimes multiple zones following formational strike. Graphitic material is usually the most probable source. Massive syngenetic sulphides extending for many kilometres are known in nature but, in general, they are not common. Long formational structures associated with a strong magnetic expression may be indicative of banded iron formations.

In summary, a bedrock conductor reflecting the presence of a <u>massive sulphide</u> would normally exhibit the following characteristics:

- a high conductivity,
- an appropriate anomaly shape,
- a small to intermediate amplitude.
- an isolated setting,
- a short strike length (in general, not exceeding one kilometre), and
- preferably, with a localized magnetic anomaly of matching dimensions.

Surficial Conductors

This term is used for geological conductors in the overburden, either glacial or residual in origin, and in the weathered layer of the bedrock. Most surficial conductors are probably caused by clay minerals. In some environments the presence of salts will contribute to the conductivity. Other



possible electrolytic conductors are residual soils, swamps, brackish ground water and alluvium such as lake or river-bottom deposits, flood plains and estuaries.

Normally, most surficial materials have low to intermediate conductivity so they are not easily mistaken for highly conductive bedrock features. Also, many of them are wide and their anomaly shapes are typical of broad horizontal sheets.

When surficial conductivity is high it is usually still possible to distinguish between a horizontal plate (more likely to be surficial material) and a vertical body (more likely to be a bedrock source) thanks to the characteristic shapes of the two anomalies and the differences in the x-component responses.

One of the more ambiguous situations as to the true source of the response is when surface conductivity is related to bedrock lithology as for example, surface alteration of an underlying bedrock unit. At times, it is also difficult to distinguish between a weak conductor within the bedrock (e.g. near-massive sulphides) and a surficial source.

In the search for massive sulphides or other bedrock targets, surficial conductivity is generally considered as interference but there are situations where the interpretation of surficial-type conductors is the primary goal. When soils, weathered or altered products are conductive, and insitu, the responses are a very useful aid to geologic mapping. Shears and faults are often identified by weak, usually narrow, anomalies.

Analysis of surficial conductivity can be used in the exploration for such features as lignite deposits, kimberlites, paleochannels and ground water. In coastal or arid areas, surficial responses may serve to define the limits of fresh, brackish and salty water.

Cultural Conductors

The majority of cultural anomalies occur along roads and are accompanied by a response on the power line monitor. (This monitor is set to 50 or 60 Hz, depending on the local power grid.) In some cases, the current induced in the power line results in anomalies which could be mistaken for bedrock responses. There are also some power lines which have no response whatsoever.

The power line monitor, of course, is of great assistance in identifying cultural anomalies of this type. It is important to note, however, that geological conductors in the vicinity of power lines may exhibit a weak response on the monitor because of current induction via the earth.

Fences, pipelines, communication lines, railways and other man-made conductors can give rise to responses, the strength of which will depend on the grounding of these objects.

Another facet of this analysis is the line-to-line comparison of anomaly character along suspected man-made conductors. In general, the amplitude, the rate of decay, and the anomaly width should not vary a great deal along any one conductor, except for the change in amplitude related to terrain clearance variation. A marked departure from the average response character along any given feature gives rise to the possibility of a second conductor.

In most cases a visual examination of the site will suffice to verify the presence of a man-made conductor. If a second conductor is suspected the ground check is more difficult to accomplish. The object would be to determine if there is (i) a change in the man-made construction, (ii) a difference in the grounding conditions, (iii) a second cultural source, or (iv) if there is, indeed, a



geological conductor in addition to the known man-made source.

The selection of targets from within extensive (formational) belts is much more difficult than in the case of isolated conductors. Local variations in the EM characteristics, such as in the amplitude, decay, shape etc., can be used as evidence for a relatively localized occurrence. Changes in the character of the EM responses, however, may be simply reflecting differences in the conductive formations themselves rather than indicating the presence of massive sulphides and, for this reason, the degree of confidence is reduced.

Another useful guide for identifying localized variations within formational conductors is to examine the magnetic data in map or image form. Further study of the magnetic data can reveal the presence of faults, contacts, and other features which, in turn, help define areas of potential economic interest.

Finally, once ground investigations begin, it must be remembered that the continual comparison of ground knowledge to the airborne information is an essential step in maximizing the usefulness of the airborne EM data.

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Based	on JC	B No	12578 by	/ Fu	gro Geol	ogical Su	rveys							
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Line	Flight	Bear	Category	ID	FID	Χ	Υ	Alt(Tx)	Picked By	EM	СТР	DEP	TAU	Chan
20010	99009	272.1	D	Α	68384.3	319113.8	5690012		dB/dT X	55.7	55	-30.1	1.3771	20
20010	99009	272.1	D	В	68400	318756.7	5690029	78.5	dB/dT X	93.8	18	-18.5	0.5387	16
20010	99009	272.1		С	68423.2	318194.3	5690051		dB/dT X	41.9	57	-11.8	1.4212	20
	99009	272.1		D	68508.9	315971.1	5690133		dB/dT X	62.4	47	-73.9	1.202	19
20010	99009	272.1		Е	68520.9	315638.9	5690144	127.6	dB/dT X	148.7	7	-67.6	0.251	13
		272.1		F	68541.7	315091.1	5690170		dB/dT X	352.9	17	-56	0.5327	18
20010	99009	272.1		G	68583.4	313968.8	5690203		dB/dT X	30.5				19
20010		272.1		Н	68606.6	313352.2	5690224		dB/dT X	110.8	50		1.2804	21
		92		Α	68918.8	313733	5690008		dB/dT X	118.4	63	-56.2	1.5437	21
20020	99009	92		В	68957	314899.3	5689967		dB/dT X	63.5	16	-36.4	0.5065	
		92		С	68982	315673.7	5689939		dB/dT X	422.3	43	-54	1.1265	22
20020	99009	92		D	69096.1	319098.2	5689827	106.3	dB/dT X	125.5	81	-46.3	1.902	22
	99009	272.1		Α	69604.3	320499.3	5689576		dB/dT X	87.9	3	-16.2	0.114	9
		272.1		В	69626	319905.2	5689588		dB/dT X	155.6	79	-59.1	1.8644	22
	99009	272.1		С	69757.1	316379.7	5689716		dB/dT X	91	34	-34.1	0.9328	18
		272.1		D	69781.1	315669	5689743		dB/dT X	105.3	32	-54.1	0.883	19
	99009	272.1		Ε	69805.5	315004.5	5689759	94.9	dB/dT X	71.5	25	-34.9	0.7114	16
	99009	92.1		Α	70187.2	314212.2	5689591		dB/dT X	151.3	58		1.4394	21
	99009	92.1		В	70232.6	315627.2	5689545		dB/dT X	36	5	-38.4	0.1772	11
20040	99009	92.1		С	70258.8	316390.7	5689508		dB/dT X	365.5	34	-19.5	0.9153	20
	99009	92.1		D	70368.3	319755.4	5689401		dB/dT X	27	87	-88	2.0171	20
20040	99009	92.1	D	Ε	70421.4	321001.3	5689349		dB/dT X	84.3	49	-27.4	1.2441	21
	99010	92.1		Α	74317.8	314285.9	5689388		dB/dT X	312.9	52	-50.7	1.3127	22
-	99010	92.1		В	74365.9				dB/dT X	99.5				
-	99010	92.1		С	74396.1	316537.2	5689309		dB/dT X	674.2	59		1.455	
	99010	92.1		D	74499.2	319549.3	5689199		dB/dT X	74.2	4		0.17	
	99010	92.1		Ε	74569.5	321264.2	5689143		dB/dT X	44.7	88		2.0254	
	99010	92.1		F	74579.3	321545.9	5689131		dB/dT X	42.2	160		3.3294	
	99010	92.1		G	74600.8	322177.1	5689116		dB/dT X	26.6	17	-44.2	0.5146	
	99010	272		Α	74885.3	322374.7	5688904		dB/dT X	138.9			0.6889	
	99010	272		В	75087.1	316815.1	5689101		dB/dT X	107	41	-33.5	1.0858	
	99010	272		С	75097.4	316529.4	5689116		dB/dT X	101	2		0.104	
	99010	272		D	75170.2	314536.1	5689179		dB/dT X	21	25		0.7233	
	99010	272		Ε	75202.3	313866.6	5689201		dB/dT X	34.5	23		0.6746	
-	99010	92		Α	75532.8	313870.5			dB/dT X	124.7	52		1.3177	
	99010	92		В	75549.3	314340.3	5688996		dB/dT X	300.6	70		1.6782	
	99010	92		С	75887	323486.5	5688663		dB/dT X	93.4	39		1.0319	
-	99010	92		D	75896.8	323779.5	5688647		dB/dT X	93.6		-48.1	0.7644	
-	99010	272.1		Α	76134.5	324909.9	5688410		dB/dT X	55.5	19		0.5798	
20080	99010	272.1	D	В	76162.1	324299.4	5688433	95.1	dB/dT X	46	50	-35.1	1.2739	19

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Line	Flight	Bear	Category	ID	FID	Х	Υ	Alt(Tx)	Picked By	EM	СТР	DEP	TAU	Chan
20080		272.1		С	76449.5	316279.2	5688719		dB/dT X	464.9	14	-21.9	0.448	1
20080	99010	272.1	D	D	76506.6	314664.2	5688771	154.8	dB/dT X	23.9	62	-94.8	1.5136	17
20080	99010	272.1	D	Е	76528.2	314160.8	5688794	174.8	dB/dT X	46.9	29		0.8042	17
20090	99010	91.9	D	Α	76895.5	314100.9	5688590	77.1	dB/dT X	92.1	130	-17.1	2.8105	24
20090	99010	91.9	D	В	76904.9	314370.2	5688585	97.1	dB/dT X	205	80	-37.1	1.8812	22
20090	99010	91.9	D	С	76913.3	314606.6	5688576		dB/dT X	310.4	56	-42.9	1.4077	22
	99010	91.9		D	77002.9	316832.6	5688491		dB/dT X	94.3	1	-17.8	0.0651	8
	99010	91.9		E	77334.7	325795.4	5688177		dB/dT X	51.6	72	-41.5	1.73	
\vdash	99010	272		Α	77461.3	325962.2	5687971		dB/dT X	61	7	-78.4	0.2552	13
-	99010	272		В	77885.9	314917.7	5688360		dB/dT X	39.4	35	-59.1	0.9524	
\vdash	99010	272		C	77909.1	314296.5	5688397		dB/dT X	148.8	23	-54.6	0.6824	
20110		91.9		Α	80995	314398.3	5688180		dB/dT X	191.8	134	-29.7	2.8798	
20110 20110		91.9 91.9		B C	81009.2 81471	314791.6	5688163		dB/dT X	650.5	65 6	-40.7 -24.4	1.5856 0.227	
-	99011	272.2		A	82252.1	326313 325721	5687777 5687569		dB/dT X dB/dT X	174.2 97.1	12	-57.5	0.227	
	99011	272.2		В	82643.8	314337.6	5687984		dB/dT X	428.1	34	-38.2	0.9355	-
20120		91.9		А	83037.7	314568.1	5687783		dB/dT X	240.6	52	-22.4	1.3059	
20130		91.9		В	83486.6	325469	5687385		dB/dT X	84.3	4	-37	0.1647	11
\vdash	99011	272.1		Α	84017.5	314255.4	5687586		dB/dT X	376.6	111	-35.7	2.469	
	99013	91.8		Α	59666	314288.5	5687386		dB/dT X	72.4	12	-8.2	0.4036	
	99013	91.8		В	59673.8	314480.8	5687375		dB/dT X	514	8	-27.2	0.2799	
20151	99013	91.8	D	С	59682.1	314701.7	5687368		dB/dT X	1790.8	37	-6.8	0.9955	22
20161	99013	272.1	D	Α	60701.8	314649.8	5687171	68.6	dB/dT X	1038.6	35	-9.6	0.9525	22
20161	99013	272.1	D	В	60708.2	314455.1	5687181	76.2	dB/dT X	636.1	135	-16.2	2.899	25
20170	99013	91.9	D	Α	61081.1	314518.7	5686974	81.2	dB/dT X	335.9	24	-21.2	0.69	
20170	99013	91.9	D	В	61094.8	314846.5	5686963	78.7	dB/dT X	771.7	88	-18.7	2.0412	25
	99013	91.9		С	61240.2	318650.1	5686826		dB/dT X	65.9	21	-27.8	0.6295	
	99013	91.9		D	61272.7		5686807		dB/dT X	55.4				•
-	99013	272		Α	61966.8		5686611		dB/dT X	215		-30.1		
\vdash	99013	272		В	61980.5	318698.3	5686634		dB/dT X	351.5		-41.3	1.5243	
	99013	272		С	62049	316681.7	5686706		dB/dT X	153.4		-27	1.087	
	99013	272		D	62065.5	316195	5686719		dB/dT X	162.9			0.3705	-
\vdash	99013 99013	272 272		E F	62108.2 62116.6	315024.5 314813.9	5686754 5686763		dB/dT X dB/dT X	199.4 364.8	105 17	-26 -27.7	2.3508 0.5254	
	99013	91.8		А	62524.4	315012.7	5686553		dB/dT X	409.6		-27.7	1.7164	
	99013	91.8		В	62596.9	316809.3	5686495		dB/dT X	330.3				1
\vdash	99013	91.8		С	62705.2	319603.4	5686385		dB/dT X	87.7			1.2718	
-	99013	91.8		D	62715.4	319867	5686385		dB/dT X	79.8		-57.5	0.1434	
	99013	91.8		E	62880.1	324007.2	5686238		dB/dT X	55.6				
-	99013	272.1		A	63194.7	323682.4	5686057		dB/dT X	87.5	15	-15.6	0.4596	
\vdash	99013	272.1		В	63214.9	323172.3	5686062		dB/dT X	175.6		-23.3	0.3526	
\vdash	99013	272.1		С	63267.8	321561.3	5686140		dB/dT X	62.2		-74.5	0.6406	-
20200	99013	272.1	D	D	63327.9	320212.9	5686178	138.1	dB/dT X	47.5	41	-78.1	1.0756	18
20200	99013	272.1	D	Ε	63341.6	319823.4	5686190	100.9	dB/dT X	35.5			0.0861	6

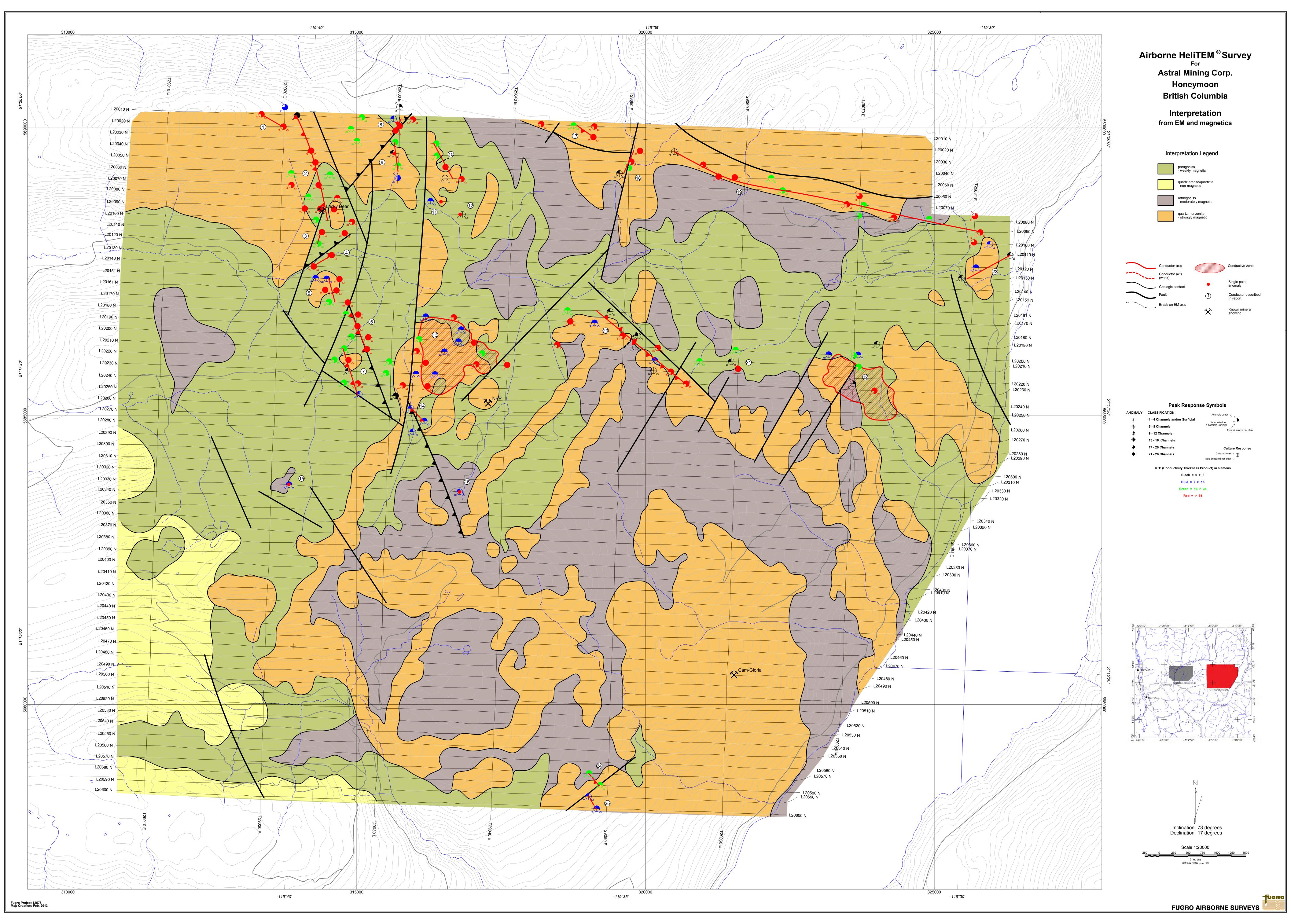
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Line	Flight	Bear	Category	ID	FID	Х	Υ	Alt(Tx)	Picked By	EM	СТР	DEP	TAU	Chan
20200	99013	272.1		F	63388.3	318473.8	5686233		dB/dT X	51	36	-62.6	0.9781	18
20200	99013	272.1		G	63436.6	317032.9	5686267	82.9	dB/dT X	207.9	121	-22.9	2.6513	24
20200	99013	272.1	D	Н	63445.4	316761.8	5686288	87.8	dB/dT X	330	11	-34.8	0.3664	15
20200	99013	272.1	D	l	63466.8	316079.3	5686327	100.8	dB/dT X	597.4	32	-40.8	0.8729	20
	99013	272.1		J	63495.6	315199.7	5686360	106.1	dB/dT X	109.4	88	-46.1	2.0332	
	99013	272.1		K	63506.7	314908.8	5686373		dB/dT X	259.5	24	-31.6	0.6886	
	99014	91.6		Α	66688.1	314784.6	5686168		dB/dT X	187.1	28	-37	0.7898	
	99014	91.6		В	66701	315178.5	5686154		dB/dT X	521.1	60	-23.7	1.4784	
	99014	91.6		С	66730.7	316037.3	5686123		dB/dT X	117.5	38	-25.8	1.0257	19
	99014	91.6		D	66748.4	316518.4	5686112		dB/dT X	358.9	10	-36.6	0.3231	15
	99014 99014	91.6 91.6		E F	66772.4 66881.3	317171.3 320160.1	5686082 5685961		dB/dT X dB/dT X	238.5 160.3	34 15	-46.5 -29.3	0.9328 0.4734	
	99014	91.6		G	66909.5	320100.1	5685947		dB/dT X	60		-69.7	0.4734	17
	99014	91.6		Н	66929.4	321483.8	5685937		dB/dT X	47.7	32	-67.6	0.1349	
	99014	91.6		 I	67016	323689.8	5685849		dB/dT X	223.4	21	-24.9	0.6176	
	99014	272.1		A	67467.9	320438.3	5685764		dB/dT X	71.5	67	-38.8	1.6151	21
	99014	272.1		В	67478.4	320138.6	5685782		dB/dT X	68.9	2	-39.8	0.1047	9
20220	99014	272.1	D	С	67583.1	317071.5	5685892	84.2	dB/dT X	32.7	45	-24.2	1.1692	19
20220	99014	272.1	D	D	67611.2	316195.1	5685920	94.3	dB/dT X	613.5	92	-34.3	2.1111	24
20220	99014	272.1	D	Ε	67631.9	315561.7	5685942	107.3	dB/dT X	116.6	30	-47.3	0.8398	18
20220	99014	272.1	D	F	67656.6	314858	5685967		dB/dT X	224.8		-25.2	2.1587	24
	99014	272.1		G	67664.8	314614.2	5685973		dB/dT X	181.2	20	-48.1	0.5959	
	99014	91.7		Α	68036.1	314852.2	5685774		dB/dT X	191.7	2	-26.2	0.1018	
	99014	91.7		В	68058.4	315508.3	5685741		dB/dT X	640.3	17	-40.7	0.5263	
	99014	91.7		С	68076.1	316026.6	5685725		dB/dT X	69.7	14	-50.8	0.4355	
	99014 99014	91.7 91.7		D E	68089.3	316355.6	5685720		dB/dT X	100.8	11 51	-26.9	0.3598	
	99014			E F	68244.5	320706.2 323963.5	5685557 5685434		dB/dT X dB/dT X	165.6 162.5		-50.4 -35.3	1.2855 1.0384	
	99014	272		A	68975.7	316225.3	5685513		dB/dT X	112.7		-36.4		
	99014	272		В	68990.3	315796.8	5685528		dB/dT X	114		-65	1.2667	
	99014	272		C	69019.4	315021	5685561		dB/dT X	175.3		-49.4	1.129	
	99014	272		D	69027.4	314781.9	5685575		dB/dT X	335.7	25	-25.2	0.7105	
20250	99014	91.8	D	Α	69408.4	315045.5	5685375	150.5	dB/dT X	41.5	8	-90.5	0.2869	12
20250	99014	91.8	D	В	69431.9	315674.8	5685347	150.7	dB/dT X	69.1				20
	99014	272	D	Α	70331.1	315939.2	5685128	223.6	dB/dT X	40.6	11		0.3708	13
	99016	91.9	D	Α	71749.8	316170.9	5684911		dB/dT X	78.5		-59.5	0.3437	14
	99016	272.1		Α	72646.2	315971.8	5684726		dB/dT X	50.3			0.3133	
	99017	91.7		A	78249.6	313827.4	5683810		dB/dT X	91.1	16		0.489	
	99017	91.7		В	78345.4	316782.9	5683685		dB/dT X	50.4		-19.6	0.3104	
	99022	91.6		A	86827.8	319022.6	5678808		dB/dT X	72.7	18		0.5591	
	99022 99022	272.1 91.4		Α	87200.5 87844	319213.2 319013.8	5678604 5678410		dB/dT X dB/dT X	44.2 115.3	17 8	-19.3 -10.2	0.5307 0.292	15 13
	99022	272.1		A A	88197.6	319013.8	5678197		dB/dT X	61.4			0.292	
	99022		D	A	59459.3	313755.8	5690345		dB/dT X	467.4			0.4133	
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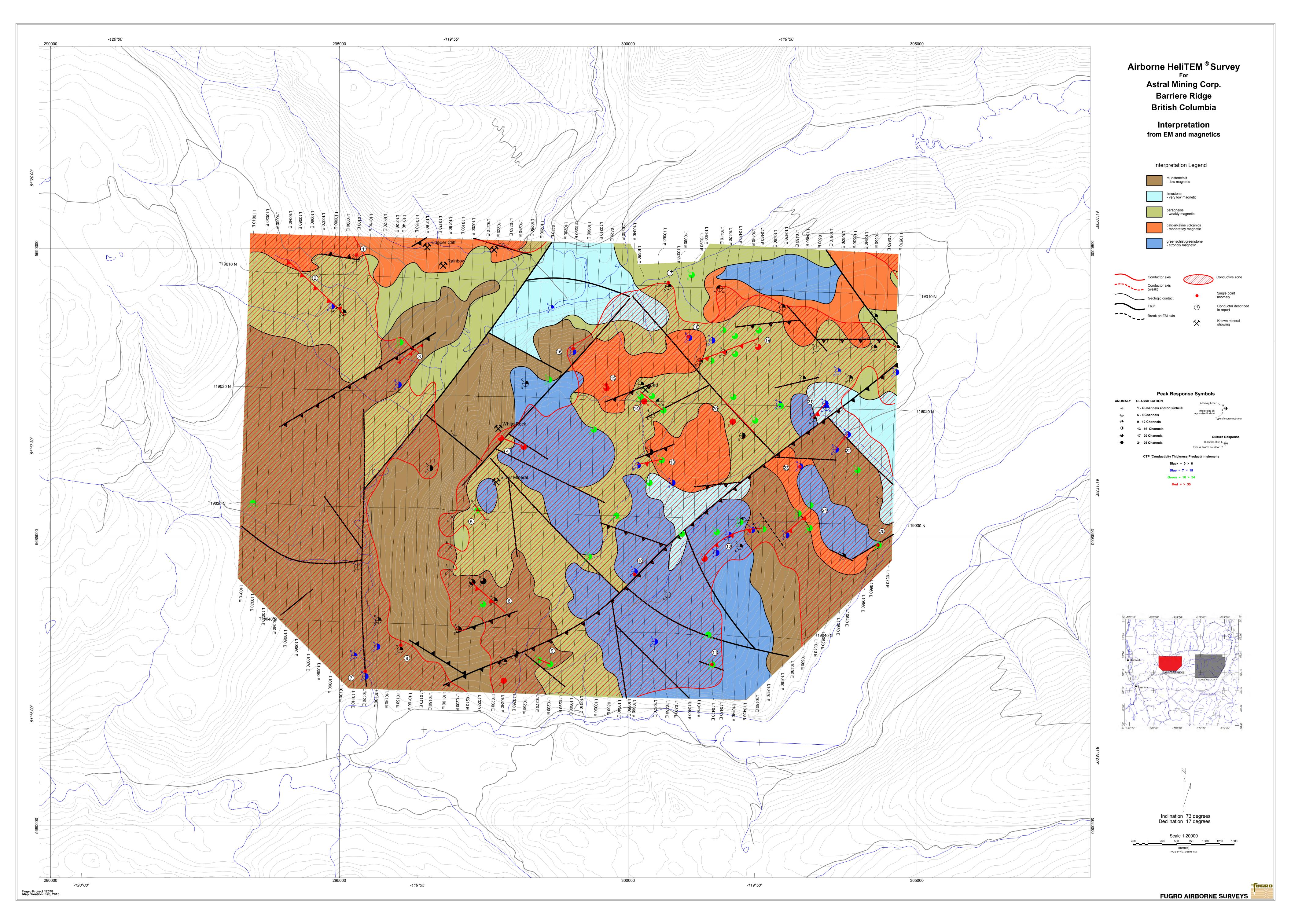
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Line	Flight	Bear	Category	ID	FID	Χ	Υ	Alt(Tx)	Picked By	EM	CTP	DEP	TAU	Chan
29030	99008	182	D	Α	59630.2	315739.4	5690349	99.4	dB/dT X	201.8	4	-39.4	0.1678	13
29030	99008	182	D	В	59641	315746.2	5690018	124.2	dB/dT X	336.4	63	-64.2	1.5446	22
29030	99008	182	D	С	59670.7	315708.5	5689120	84.8	dB/dT X	76.3	14	-24.8	0.435	15
29040	99008	2	D	Α	60501.2	317604.5	5685882	104.5	dB/dT X	82.5	67	-44.5	1.6187	22
29050	99008	182	D	Α	60901.8	319712	5689292	129.4	dB/dT X	158.4	17	-69.4	0.5232	17
29060	99008	2.1	D	Α	61754	321603.8	5685812	174.7	dB/dT X	82.4	44		1.1495	20
29070	99009	182.4	D	Α	67253.1	323705.8	5688805	116.6	dB/dT X	96.4	75	-56.6	1.7744	21
29070	99009	182.4	D	В	67264.2	323693	5688466	102.1	dB/dT X	67.6	22	-42.1	0.6578	17
29070	99009	182.4	D	С	67362	323611.3	5686046	85.9	dB/dT X	90.8	21	-25.9	0.6206	17
29070	99009	182.4	D	D	67379.5	323590.5	5685558	104.4	dB/dT X	117.4	6	-44.4	0.2256	13
29081	99011	183.7	D	Α	81780.2	325703.2	5688458	87.2	dB/dT X	179.8	65	-27.2	1.5911	21
29081	99011	183.7	D	В	81795.2	325687	5688004	117.6	dB/dT X	145.5	43	-57.6	1.1151	19

BAR	RIERI	E RID	GE: AI	RE	ORNE	GEOPH	HYSICS	SURV	ΈΥ					
INTE	RPRI	TAT	ION AI	10	MALY	LIST								
Based	l on JC	B No	12578 by	/ Fu	igro Geo	logical Su	ırveys							
							,							Last
Line	Flight	Bear	Category	ID	FID	Χ	Υ	Alt(Tx)	Picked By	EM	СТР	DEP	TAU	Chan
10080	99006	2.2	D	Α	77234.4	294868.6	5689002	78.8	dB/dT X	469.6	12	-18.8	0.3873	16
10090	99006	182.3	D	Α	76688.8	295069	5688888	75.9	dB/dT X	279	3	-15.9	0.1377	11
10100	99006	2.2	D	Α	76512.8	295298.9	5689814	60.1	dB/dT X	170.3	2	-0.1	0.103	9
10110	99006	182.1	D	Α	76049.5	295311	5684483		dB/dT X	74.7	2	-36.5	0.0964	
	99006	182.1		В	76096.3	295256.8	5682948		dB/dT X	100.3	10	-32.6	0.3498	13
	99006	2.5		Α	75411.7	295448.8	5682588		dB/dT X	308.3	11	-39	0.3755	16
	99006	2.6		Α	74609.9	295654.6	5683102		dB/dT X	107.4	16	-25.6	0.4908	15
	99006	2.6		В	74628.6	295675.8	5683557		dB/dT X	83.8	7	-21.8	0.24	13
	99005	182.1		A	71204.2	296053.2	5688371		dB/dT X	58.3	26	-41.7	0.741	16
	99005	182.1		В	71227.1	296024.9	5687638		dB/dT X	83.1	9	-17.2	0.3068	14
10150		2.3		A	70734.3	296052.2	5683048		dB/dT X	335.5	3	-17.9	0.1226	10
	99005 99005	2.3		A	70050.7	296569.1	5686193		dB/dT X dB/dT X	157.9				17
	99005	2.3		A B	69092 69106.3	296911.8 296916.4	5684437 5684830		dB/dT X	249 245.2				0
	99005	2.3		С	69106.3	296916.4	5685349		dB/dT X	114.5				0
	99005	2.3		D	69173.5	296985.3	5686762		dB/dT X	25.7				0
	99005	181.9		A	68825.1	297064.1	5683399		dB/dT X	269.3	6	-22.9	0.2234	13
_	99005	2.5		A	68187.9	297303.1	5684217		dB/dT X	282.3	- 0	-22.5	0.2234	18
	99005	2.5		В	68242.5	297349.9	5685554		dB/dT X	73.9				0
	99005	182.4		A	67869.5	297538.3	5685305		dB/dT X	148.9				0
	99005	182.4		В	67904.9	297492.1	5684236		dB/dT X	218.9				20
	99005	182.4		C	67918.1	297484.5	5683838		dB/dT X	492	26	-32	0.7407	19
_	99005	2.2		A	67287.8	297684.9	5683902		dB/dT X	555.3	5	-7.6	0.1892	12
	99005	2.2		В	67401.5	297794.3	5686715		dB/dT X	229.8	42	-29.2	1.094	20
	99004			Α		297850.8			•	331.8			0.1699	
	99004			В	86580.4	297845.1	5682513		dB/dT X	374.6			2.6031	25
10250	99004	2.2	D	Α	85920.7	298056.3	5682982	91.6	dB/dT X	114.7	6	-31.6	0.2278	12
10250	99004	2.2	D	В	86062.9	298189.8	5686566	72	dB/dT X	446.4	39	-12	1.0343	21
10250	99004	2.2	D	С	86099.6	298223.4	5687655	66.7	dB/dT X	191.4	5	-6.7	0.1743	12
10270	99004	1.9	D	Α	85091.3	298451.7	5682872	86.4	dB/dT X	70.2	30	-26.4	0.8284	17
10270	99004	1.9	D	В	85277.8	298632.1	5687724	103.5	dB/dT X	67.5	16	-43.5	0.5076	16
10270	99004	1.9	D	С	85323.4	298670	5688966	117.2	dB/dT X	73.3	8	-57.2	0.281	13
10280	99004	182	D	Α	84915.2	298647.9	5682800	62.3	dB/dT X	462.1	24	-2.3	0.7038	19
10290	99004	1.9	D	Α	84427.2	299048.1	5688208		dB/dT X	313.2	14	-21.6	0.4326	16
\vdash	99004	2.4		Α	83429.3	299320.9	5684661		dB/dT X	202		-23.9	0.5321	16
\vdash	99004	2.4		В	83509.9	299405.8	5686864		dB/dT X	550.4	33	-5.3	0.9113	
	99004	182		Α	82998.4	299624.3	5687578		dB/dT X	2038		3.1	1.0145	
	99003	1.3		Α	86829.8	300112.6	5684404		dB/dT X	317.3		-38.5	0.4134	
\vdash	99003	1.3		В	86896.7	300165.3	5686242		dB/dT X	246.9		-29.8	0.2624	
-	99003	1.3		С	86939.2	300217.1	5687432		dB/dT X	434.1	26	-9.5	0.736	
10350	99003	1.3	D	D	86946.5	300221.7	5687640	70.6	dB/dT X	236.6	4	-15.6	0.1546	11

														Last
Line	Flight	Bear	Category	ID	FID	Х	Υ	Alt(Tx)	Picked By	EM	СТР	DEP	TAU	Chan
	99003	183.2	<u> </u>	Α	86497.6	300410.7	5687443		dB/dT X	280.1	26	-24.4	0.7522	18
10360	99003	183.2	D	В	86507.9	300406.9	5687116	84.4	dB/dT X	290.9	2	-32.4	0.0719	9
10360	99003	183.2	D	С	86528.3	300383.5	5686474	79.8	dB/dT X	295.7				17
10360		183.2		D	86545.1	300368.5	5685940		dB/dT X	382.6	19	-16.9	0.5835	18
	99003	2.9		Α	86008.2	300462	5683190		dB/dT X	188.9	14	-34.2	0.4574	
10370		2.9		В	86123.1	300580.7	5686331		dB/dT X	802.8	22	-21.2	0.6352	19
10370		2.9		С	86153.1	300609.8	5687194		dB/dT X	1099	35	-17	0.9384	20
10370		2.9 181.8		D ^	86228.1	300695.6	5689339		dB/dT X	540.3	5 12	-19.2 -22.5	0.2044	13 16
10380 10380		181.8		A B	85742.5 85806.1	300765.8 300686	5685941 5683998		dB/dT X dB/dT X	444.3 383.2	3	-22.3	0.3804 0.1301	9
10390		3.1		А	85236.6	300930.3	5685057		dB/dT X	242.2	23	-37.3	0.1301	
10390		3.1		В	85365.2	301054.8	5688451		dB/dT X	377.4	8	-26.8	0.2835	15
10390		3.1		С	85402.5	301101	5689540		dB/dT X	127.3	26	-54.1	0.7499	18
10400		182		Α	84848.5	301237.6	5688042		dB/dT X	263.6	2	-23.2	0.0914	10
10410	99003	2.8	D	Α	84469.1	301322.3	5684625	94.9	dB/dT X	360	43	-34.9	1.1219	21
10410	99003	2.8	D	В	84603.7	301439.9	5688053	86.4	dB/dT X	253.3	18	-26.4	0.5576	16
10410	99003	2.8		С	84615.6	301454.5	5688405	88.7	dB/dT X	274.1	10	-28.7	0.3487	15
10420		182.1		Α	84058.7	301645	5688583		dB/dT X	283.1	19	-38	0.5676	
10420		182.1		В	84072.5	301658	5688197		dB/dT X	323	3	-34.2	0.1354	11
10420		182.1		С	84174.3	301533.7	5685086		dB/dT X	365.7	31	-30.2	0.8612	18
10420		182.1		D	84186.3	301527.4	5684728		dB/dT X	483	12	-38.8	0.4005	16
10420		182.1		E	84255.5	301456.1	5682792		dB/dT X	653.7	26	-6.5	0.7374	
10430 10430		2.3		A B	83773 83853.8	301741.2 301809.8	5685040 5687000		dB/dT X dB/dT X	430.9 2048	12 55	-25.1 -18.9	0.39 1.3819	16 23
10430		2.3		С	83871	301809.8	5687428		dB/dT X	1067	28	-8.2	0.7964	20
10430		2.3		D	83896.1	301813.4	5688172		dB/dT X	837.7	19	-20.4	0.5619	19
10430		2.3		E	83906.3	301846.4	5688483		dB/dT X	758.1	18	-16.1	0.5434	18
	99003	182.4		Α	83402.1	301979.4	5686755		dB/dT X	1067	5	-61.5	0.1995	14
10440	99003	182.4		В	83448.7	301942.2			dB/dT X	147.6	23		0.6795	17
10440	99003	182.4	D	С	83463.5	301932.5	5684832	73.9	dB/dT X	189.9	5	-13.9	0.1849	12
10450	99003	2.1	D	Α	83020.1	302144	5685125	115.2	dB/dT X	98.6	13	-55.2	0.424	15
10450		2.1		В	83100.6	302197	5687018		dB/dT X	1290			0.6842	20
10450		2.1		С	83147.5	302249.1	5688293		dB/dT X	627.8		-2.4	0.951	19
10450		2.1		D	83157.2	302261.5			dB/dT X	496.6	_	-15.9		
10460		182.2		A	79813.6	302337.8			dB/dT X	96.4	25	-20.7	0.7099	
10470		2.2		Α	79471.6		5687300		dB/dT X	1230		-21.9	0.3767	
10470 10480		2.2 181.9		В	79527.1	302671.3	5688978		dB/dT X dB/dT X	214.5 303	6 11	-7.1 -34.3	0.2081 0.3624	13 15
10480		181.9		A A	79105.3 78674.2	302737.5 302950.2	5685033 5685409		dB/dT X	146.2	_	-34.3		
10490			D	В	78702.5	302930.2	5686224		dB/dT X	610.8	_	-25.0	0.3265	
10490		2		С	78755.9	303029.8	5687739		dB/dT X	204.9	_	-17.8	0.3203	
10500		182.3		Α	78314.5	303257.3	5688261		dB/dT X	354.8		-9.3	0.0822	
10500		182.3		В	78352.1	303210.7	5687048		dB/dT X	224.7	7	-11.9	0.2446	
10500		182.3		С	78402	303154.2			dB/dT X	410.1	19	-8.9		
10500		182.3		D	78415.2	303141.3	5685157		dB/dT X	561.2	25	-8.5	0.7092	19

														Last
Line	Flight	Bear	Category	ID	FID	Х	Υ	Alt(Tx)	Picked By	EM	СТР	DEP	TAU	Chan
10510	99002	2.2	D	Α	78056.7	303414.9	5687314	81.8	dB/dT X	563.3	11	-21.8	0.374	16
10520	99002	182.9	D	Α	77649.3	303633.3	5687870	82.3	dB/dT X	116.7	9	-22.3	0.314	13
10520	99002	182.9	D	В	77695.4	303595.7	5686514	78.4	dB/dT X	732.7	10	-18.4	0.3437	16
10530	99002	2.4	D	Α	77276.3	303721.4	5684666	118.8	dB/dT X	64.4	5	-58.8	0.1888	12
10530	99002	2.4	D	В	77354	303803.3	5686776	98.1	dB/dT X	205.8	11	-38.1	0.3648	16
10530	99002	2.4	D	С	77391.6	303834.4	5687751	78.6	dB/dT X	131	5	-18.6	0.2053	12
10540	99002	182.9	D	Α	77054	303972.6	5686160	68.9	dB/dT X	181.9	25	-8.9	0.7286	18
10550	99002	2.1	D	Α	76757.7	304259.9	5688278	85.9	dB/dT X	81.8	7	-25.9	0.2401	13
10550	99002	2.1	D	В	76777.9	304272.3	5688818	72.9	dB/dT X	65.3	4	-12.9	0.15	11
10560	99002	183	D	Α	76412.8	304362	5685623	63.9	dB/dT X	158.2	3	-3.9	0.1148	9
10560	99002	183	D	В	76438.9	304336.8	5684860	69.3	dB/dT X	279.1	23	-9.3	0.6701	18
10570	99002	2.2	D	Α	76075	304638.8	5687853	67.8	dB/dT X	158.4	8	-7.8	0.2887	14
10570	99002	2.2	D	В	76091.6	304655.3	5688276	82.5	dB/dT X	59.7	7	-22.5	0.2394	12
19010	99007	272.7	D	Α	82118.1	301581	5689306	106	dB/dT X	126.3	4	-46	0.1569	11
19020	99007	92	D	Α	81619.1	300279.1	5687349	87.4	dB/dT X	494.5	59	-27.4	1.4698	22
19020	99007	92	D	В	81626.8	300534.8	5687347	91.5	dB/dT X	448.7	5	-31.5	0.1818	13
19020	99007	92	D	С	81695.7	302641.8	5687271	60.7	dB/dT X	2850	17	-0.7	0.5178	19
19020	99007	92	D	D	81717.9	303432	5687243	87.9	dB/dT X	846.6	12	-27.9	0.3809	17
19030	99007	271.8	D	Α	80783	301991.6	5685293	82.6	dB/dT X	232.7	3	-24.6	0.1168	10
19030	99007	271.8	D	В	80878.2	299794	5685369	99.8	dB/dT X	209.6	31	-39.8	0.8536	19
19030	99007	271.8	D	С	80987.4	297388.8	5685463	112.6	dB/dT X	263.2	22	-52.6	0.6499	18
19030	99007	271.8	E	D	81165.7	293501.8	5685589	90.8	dB/dT X	214.3	18	-30.8	0.5382	16
19040	99007	91.7	D	Α	80453.6	301387.2	5683308	57.8	dB/dT X	352.4	20	2.2	0.5913	19





HONEYMOON: CAMGLORIA Grid 2 - Preparatory Survey

