

Report Transmission Cover Page

Bill To:	J. Gibson & Associates	Project:		Lot ID:	999095
Report To:	J. Gibson & Associates	ID:	Silver Range RES	Control Number:	B15267
	Box 20913	Name:	HAMMER Project	Date Received:	Apr 28, 2014
	Whitehorse, YT, Canada	Location:		Date Reported:	May 2, 2014
	Y1A 6P2	LSD:		Report Number:	1912100
Attn:	John Gibson	P.O.:			
Sampled By:	R. Gibson	Acct code:			
Company:					

Contact & Affiliation	Address	Delivery Commitments
John Gibson J. Gibson & Associates	, Box 20913 Whitehorse, Yukon Territory Y1A 6P2 Phone: (867) 633-4522 Fax: (867) 668-6895 Email: ludditegibson@gmail.com	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (COC, Test Report) by Email - Merge Reports On [Report Approval] send (Test Report) by Email - Single Report On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report On [Lot Creation] send (COR) by Email - Single Report

Notes To Clients:

- pH analysis was performed past the recommended holding time of 15 minutes from sample collection.

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 999095
Report To: J. Gibson & Associates	ID: Silver Range RES	Control Number: B15267
Box 20913	Name: HAMMER Project	Date Received: Apr 28, 2014
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Attn: John Gibson	P.O.:	
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Company:		

		Reference Number	999095-1	999095-2	
		Sample Date	Apr 26, 2014	Apr 26, 2014	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	Surf / HAM #1	Surf / HAM #3	
		Matrix	Water	Water	
Analyte		Units	Results	Results	Nominal Detection Limit
Inorganic Nonmetallic Parameters					
Organic Carbon	Total Nonpurgeable	mg/L	3.2	2.2	0.5
Cyanide	Total	mg/L	<0.002	<0.002	0.002
Ammonia - N		mg/L	0.06	0.02	.01
Phosphorus	Total	mg/L	0.069	<0.003	0.003
Metals Dissolved					
Subsample	Field Filtered		Field Filtered	Field Filtered	
Sulfur	Dissolved	mg/L	2.7	5.4	0.2
Aluminum	Dissolved	mg/L	<0.005	<0.005	0.005
Antimony	Dissolved	mg/L	<0.0002	<0.0002	0.0002
Arsenic	Dissolved	mg/L	0.0065	0.0003	0.0002
Barium	Dissolved	mg/L	0.183	0.063	0.001
Beryllium	Dissolved	mg/L	<0.00004	<0.00004	0.00004
Bismuth	Dissolved	mg/L	<0.001	<0.001	0.001
Boron	Dissolved	mg/L	<0.004	<0.004	0.004
Cadmium	Dissolved	mg/L	<0.00001	<0.00001	0.00001
Chromium	Dissolved	mg/L	<0.0004	<0.0004	0.0004
Cobalt	Dissolved	mg/L	0.00015	0.00003	0.00002
Copper	Dissolved	mg/L	<0.001	<0.001	0.001
Lead	Dissolved	mg/L	<0.0001	<0.0001	0.0001
Lithium	Dissolved	mg/L	0.005	0.001	0.001
Molybdenum	Dissolved	mg/L	0.00123	0.00063	0.0001
Nickel	Dissolved	mg/L	<0.001	<0.001	0.001
Selenium	Dissolved	mg/L	0.0006	0.0006	0.0006
Silver	Dissolved	mg/L	<0.00001	<0.00001	0.00001
Titanium	Dissolved	mg/L	<0.010	<0.010	0.01
Strontium	Dissolved	mg/L	0.189	0.116	0.001
Tellurium	Dissolved	mg/L	<0.0001	<0.0001	0.0001
Thallium	Dissolved	mg/L	<0.00001	<0.00001	0.00001
Thorium	Dissolved	mg/L	<0.0004	<0.0004	0.0004
Tin	Dissolved	mg/L	<0.0001	<0.0001	0.0001
Uranium	Dissolved	mg/L	0.0024	0.0013	0.0004
Vanadium	Dissolved	mg/L	0.00013	0.00012	0.0001
Zinc	Dissolved	mg/L	0.001	<0.001	0.001
Zirconium	Dissolved	mg/L	<0.00010	<0.00010	0.0001
Metals Total					
Mercury	Total	mg/L	<0.00001	<0.00001	0.00001

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 999095
Report To: J. Gibson & Associates	ID: Silver Range RES	Control Number: B15267
Box 20913	Name: HAMMER Project	Date Received: Apr 28, 2014
Whitehorse, YT, Canada	Location:	Date Reported: May 2, 2014
Y1A 6P2	LSD:	Report Number: 1912100
Attn: John Gibson	P.O.:	
Sampled By: R. Gibson	Acct code:	
Company:		

		Reference Number	999095-1	999095-2	
		Sample Date	Apr 26, 2014	Apr 26, 2014	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	Surf / HAM #1	Surf / HAM #3	
		Matrix	Water	Water	
Analyte	Units	Results	Results	Results	Nominal Detection Limit
Metals Total - Continued					
Aluminum	Total	mg/L	0.030	0.013	0.005
Antimony	Total	mg/L	<0.0001	<0.0001	0.0001
Arsenic	Total	mg/L	0.00943	0.00027	0.00005
Barium	Total	mg/L	0.200	0.0663	0.00005
Beryllium	Total	mg/L	<0.00005	<0.00005	0.00005
Bismuth	Total	mg/L	<0.0001	<0.0001	0.0001
Boron	Total	mg/L	0.004	<0.002	.002
Cadmium	Total	mg/L	0.00002	0.00001	0.00001
Calcium	Total	mg/L	45.3	38.4	0.05
Chromium	Total	mg/L	<0.0005	<0.0005	0.0005
Cobalt	Total	mg/L	0.0002	<0.0001	0.0001
Copper	Total	mg/L	0.0004	0.0010	0.0001
Iron	Total	mg/L	1.55	0.068	0.002
Lead	Total	mg/L	<0.0001	<0.0001	0.0001
Lithium	Total	mg/L	0.0046	0.0013	0.0005
Magnesium	Total	mg/L	11.0	11.4	0.04
Manganese	Total	mg/L	0.202	0.0094	0.001
Molybdenum	Total	mg/L	0.00145	0.00079	0.00005
Nickel	Total	mg/L	0.0003	<0.0002	0.0002
Potassium	Total	mg/L	1.6	0.4	0.1
Selenium	Total	mg/L	0.0007	0.0008	0.0001
Silicon	Total	mg/L	6.01	3.66	0.02
Silver	Total	mg/L	<0.00005	<0.00005	0.00005
Sodium	Total	mg/L	3.0	1.5	0.1
Strontium	Total	mg/L	0.206	0.127	0.0001
Thallium	Total	mg/L	<0.00001	<0.00001	0.00001
Thorium	Total	mg/L	0.00003	<0.00001	0.00001
Tin	Total	mg/L	<0.0001	<0.0001	0.0001
Titanium	Total	mg/L	0.0009	<0.0005	0.0005
Uranium	Total	mg/L	0.00242	0.00132	0.00001
Vanadium	Total	mg/L	0.0003	0.0001	0.0001
Zinc	Total	mg/L	0.0036	0.0018	0.0005
Zirconium	Total	mg/L	<0.0005	<0.0005	0.0005
Hardness	as CaCO3	mg/L	159	143	1
Physical and Aggregate Properties					
Solids	Total Suspended	mg/L	4	<3	1

Analytical Report

Bill To: J. Gibson & Associates
Report To: J. Gibson & Associates
Box 20913
Whitehorse, YT, Canada
Y1A 6P2
Attn: John Gibson
Sampled By: R. Gibson
Company:

Project:
ID: Silver Range RES
Name: HAMMER Project
Location:
LSD:
P.O.:
Acct code:

Lot ID: **999095**
Control Number: B15267
Date Received: Apr 28, 2014
Date Reported: May 2, 2014
Report Number: 1912100

		Reference Number	999095-1	999095-2	
		Sample Date	Apr 26, 2014	Apr 26, 2014	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	Surf / HAM #1	Surf / HAM #3	
		Matrix	Water	Water	
Analyte		Units	Results	Results	Nominal Detection Limit
Physical and Aggregate Properties - Continued					
Solids	Total Dissolved	mg/L	196	178	5
Routine Water					
pH	at 25 °C		7.35	7.84	
Electrical Conductivity		µS/cm at 25 C	306	268	1
Calcium	Dissolved	mg/L	43.8	37.7	0.1
Iron	Dissolved	mg/L	0.449	0.026	0.005
Magnesium	Dissolved	mg/L	11.0	11.4	0.1
Manganese	Dissolved	mg/L	0.180	<0.001	0.001
Potassium	Dissolved	mg/L	1.4	0.3	0.1
Silicon	Dissolved	mg/L	5.46	3.35	0.05
Sodium	Dissolved	mg/L	2.7	1.3	0.1
Bicarbonate		mg/L	196	160	5
Carbonate		mg/L	<6	<6	6
Hydroxide		mg/L	<5	<5	5
P-Alkalinity	as CaCO ₃	mg/L	<5	<5	5
T-Alkalinity	as CaCO ₃	mg/L	161	131	5
Chloride	Dissolved	mg/L	0.19	0.20	0.05
Nitrate - N	Dissolved	mg/L	0.08	0.17	0.01
Nitrite - N	Dissolved	mg/L	<0.01	<0.01	0.01
Sulfate (SO ₄)	Dissolved	mg/L	7.6	17.3	0.5
Hardness	as CaCO ₃	mg/L	155	141	5

Approved by: 

Mathieu Simoneau
Operations Manager

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).
Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

Methodology and Notes

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Report To: J. Gibson & Associates	ID: Silver Range RES	Control Number: B15267
Box 20913	Name: HAMMER Project	Date Received: Apr 28, 2014
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Attn: John Gibson	P.O.:	
Sampled By: R. Gibson	Acct code:	
Company:		

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Alk, pH, EC, Turb in water (Surrey)	APHA	* Alkalinity - Titration Method, 2320 B	29-Apr-14	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* Conductivity, 2510 B	29-Apr-14	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* pH - Electrometric Method, 4500-H+ B	29-Apr-14	Exova Surrey
Ammonia-N in Water (Surrey)	APHA	* Flow Injection Analysis, 4500-NH3 H	02-May-14	Exova Surrey
Anions by IEC in water (Surrey)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	29-Apr-14	Exova Surrey
BC ICP-MS Total Metals in Water	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	01-May-14	Exova Edmonton
BC Trace Total Metals in Water	APHA	* Inductively Coupled Plasma (ICP) Method, 3120 B	01-May-14	Exova Edmonton
Carbon Organic (Total) in water (TOC)	APHA	High-Temperature Combustion Method, 5310 B	30-Apr-14	Exova Edmonton
Cyanide (Total) in water	US EPA	* US EPA method, 335.3	02-May-14	Exova Edmonton
Mercury Low Level (Total) in water (Surrey)	EPA	* Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	29-Apr-14	Exova Surrey
Metals SemiTrace (Dissolved) in water (Surrey)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	29-Apr-14	Exova Surrey
Phosphorus - total by Smartchem (Surrey)	APHA	* Preliminary Acid Hydrolysis, Ascorbic Acid Reduction Method, 4500-P B,E	29-Apr-14	Exova Surrey
Solids Dissolved (Total, Fixed and Volatile) - Surrey	APHA	* Total Dissolved Solids Dried at 180 C, 2540 C	01-May-14	Exova Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	* Total Suspended Solids Dried at 103-105°C, 2540 D	01-May-14	Exova Surrey
Trace Metals (dissolved) in Water (Surrey)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	29-Apr-14	Exova Surrey
Trace Metals (dissolved) in Water (Surrey)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	29-Apr-14	Exova Surrey

* Reference Method Modified

References

APHA	Standard Methods for the Examination of Water and Wastewater
US EPA	US Environmental Protection Agency Test Methods

Comments:

- pH analysis was performed past the recommended holding time of 15 minutes from sample collection.

Methodology and Notes

Bill To:	J. Gibson & Associates	Project:		Lot ID:	999095
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	Box 20913	Name:	HAMMER Project	Date Received:	Apr 28, 2014
	Whitehorse, YT, Canada	Location:		Date Reported:	May 2, 2014
	Y1A 6P2	LSD:		Report Number:	1912100
Attn:	John Gibson	P.O.:			
Sampled By:	R. Gibson	Acct code:			
Company:					

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

Exova



www.exova.com

Project Information

Project ID: Silver Range Res.
 Project Name: Hammer Project
 Project Location: _____
 Legal Location: _____
 PO/A/E#: _____
 Proj. Acct. Code: _____

Billing Information

Company: J. Gibson & Associates
 Address: _____
 Attention: Whitehorse, YT Y1A 0P2
 Phone: (867) 633-4522
 Cell: _____
 Fax: (867) 668-0895
 E-mail: judd@jgibson.com@gmail.com
 Agreement ID: 6645
 Copy of report: X

Copy of Report To:

Company: J. Gibson & Associates
 Address: _____
 Attention: Whitehorse, YT Y1A 0P2
 Phone: (867) 633-4522
 Cell: _____
 Fax: (867) 668-0895
 E-mail: judd@jgibson.com@gmail.com
 Copy of invoice: X

RUSH Priority

Upon filling out this section, client accepts that surcharges will be applied to the analysis

Date Required _____
 As Indicated _____ All Analysis _____

When "ASAP" is requested, turn around will default to a 100% RUSH priority, with pricing and turn around time to match. Please contact the lab prior to submitting RUSH samples.

Signature _____

Sample Custody (please print)

Sampled by: RGIBSON

I authorize Exova to proceed with the work indicated on this form:
 Date: APR 23/14 Initial: 16.

This section for Lab use only

RECEIVED
 APR 28 2014

Special Instructions/Comments (please include contact information including ph. # if different from above).
RLHGM=PH, EC, TP, N₂, N₃, TAC, C, S, O₄, THAD, TS, TDS.
TW23 field filtered, memos + NH₄ C
TOC, TS + HCL
NH₄ + SU-EURIC
TCN + NaOH

Sample Identification	Location	Depth IN CM M	Date/Time sampled	Matrix	Sampling Method	Enter tests above (/ relevant samples below)	Indicate below any deficiencies in the condition of samples:	Were Exova supplies used? Yes	Was there any damage to the shipping container?	Were the containers packaged well?	Were any extra samples received (document below)?	Are samples within recommended holding times/temp? Yes
1												
2	HAMM #1		APR 26	H2O	61.5	TV V V V V V V						
3												
4	HAMM #3		APR 26	H2O	Gra5	TV V V V V V V						
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												

Environmental Sample Information Sheet

Note: Proper completion of this form is required in order to proceed with analysis

Please indicate any potentially hazardous samples

Page 1 of 1 Control # B15267

Indicate lot number or affix lot label here:

LOT: 999095

COC



Shipping:

COD Y

Cooler Temp: 7.7°C

and size of coolers received:

1 large

Delivery Method: AIR MAIL

Waybill:

Received by: DS