

ATAC RESOURCES LTD

NADALEEN PROJECT

Baseline Water Quality / Hydrology Survey

Environmental Data Update

September, 2012

Nadaleen Project September 2012

ATAC Resources Ltd requested a baseline water quality / hydrology survey be conducted on the surface water tributaries draining the area of the Nadaleen Claims. The site is located in the Nadaleen Range of the Wernecke Mountains east of Mayo, Yukon.

The Nadaleen claims area is located on tributaries flowing north to the Nadaleen River and south to the Stewart River. The Nadaleen River is a tributary to the Stewart River.

The exploration camp at Nadaleen was active during the September survey. The Atlas camp was inactive / closed for the season.

The exploration camp and all survey sites were accessed by helicopter.

The baseline survey consisted of water quality samples for routine chemistry, total metals, dissolved metals, total organic carbon, total cyanide and total mercury with field measurements for pH, water temperature and flow volumes.

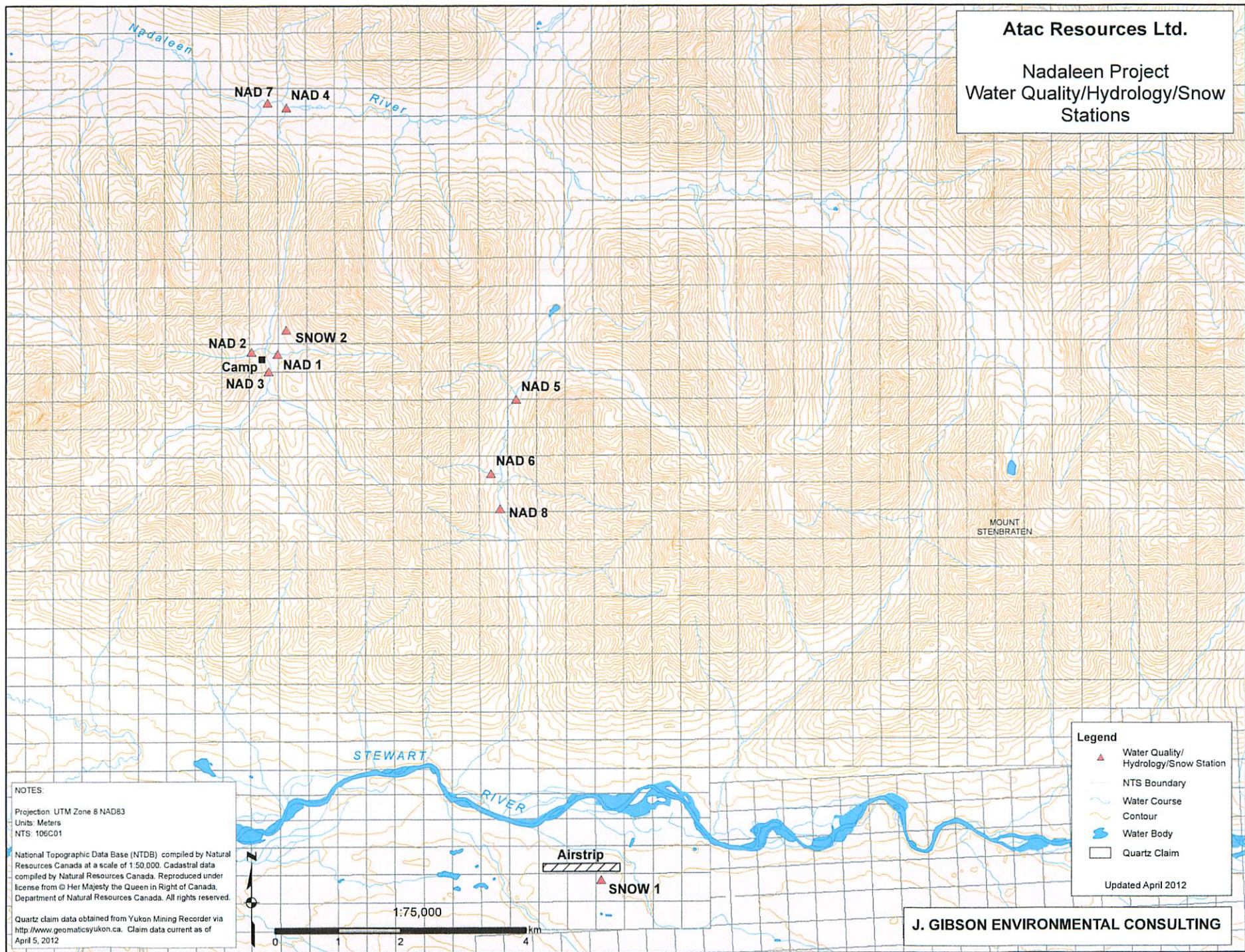
Sample Locations

Eight water quality sample sites (NAD #1 through NAD#8) were established in 2011 on tributary streams draining the drill target zones.

All sites are on the attached location map.

Atac Resources Ltd.

Nadaleen Project
Water Quality/Hydrology/Snow
Stations



Nadaleen Project September 2012

Sample station designations and coordinates are:

Station #	UTM Coordinates		LAT / LONG	
NAD #1	627451	7112577	64.116	132.383
NAD #2	627037	7112611	64.117	132.391
NAD #3	627312	7112298	64.114	132.386
NAD #4	627595	7116536	64.152	132.377
NAD #5	631265	7111843	64.108	132.305
NAD #6	630861	7110640	64.098	132.315
NAD #7	627297	7116616	64.152	132.383
NAD #8	631006	7110069	64.092	132.312
Camp	627206	7112491	64.115	132.388
Snow #1	632616	7104127	at Stewart Air Strip	
Snow #2	631006	7112491	at Camp / core shack	

Sample Analysis Parameters

Stations NAD #1 through NAD #8 were sampled for total metals, dissolved metals and routine chemistry, total organic carbon and total mercury samples.

Stations NAD#1 and NAD#4 were sampled for total cyanide.

Dissolved metals samples were filtered onsite using disposable 60 ml syringes and 0.45 micron filters. New syringes and filters were used for each station.

Total and dissolved metal samples were preserved with nitric acid immediately after sampling.

Total organic carbon samples were preserved with HCL.

Nadaleen camp drinking water supplies was sampled according to requirements under the ***Guidelines for Canadian Drinking Water Quality***.

Samples were taken at Station NAD #2 (raw supply) and NAD#2 Treated (after UV and filtration).

Atlas camp was inactive / closed for season during the September survey..

There were no quality control samples taken in September.

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All samples were stored in coolers, kept at 4 Celsius and shipped by air cargo to the Exova Canada laboratory in Surrey B.C. for analysis within recommended holding times.

Field measurements for pH and conductivity were taken with an Oakton PCS TestR 35, water temperatures with a digital thermometer.

Analysis Results

Laboratory analysis and field measurement results are listed in the following tables:

Table 1. NAD Stations Routine Chemistry – laboratory analysis and field measurements

Table 2. NAD Stations Total Metals ICP–MS laboratory analysis results

Table 3. NAD Stations Dissolved Metals ICP–MS laboratory analysis results

Table 4. NADALEEN Camp Drinking Water Sources - Routine Chemistry and Total Metals ICP-MS laboratory analysis results

Table 5. NADALEEN Project – Additional Camp Drinking Water Sources

Table 6. NADALEEN Stations Flow Volume Summary to July 2012

Listed with the laboratory analysis data are the laboratory detection limits for each parameter.

As a guide for reviewing site water quality, the Maximum Acceptable Concentration (MAC) according to ***Canadian Drinking Water Quality*** are listed along with the ***Aquatic Guidelines*** for the protection of aquatic life in water with a pH of > 6.5 and a total hardness as CaCO₃ > 180 mg/L according to ***CCME – Canadian Water Quality Guidelines***.

All water quality ***Guideline*** concentrations are based on total metal values.

All laboratory analysis was done by Exova Canada of Surrey B.C.

Table 1. ATAC Resources - Nadaleen Project, September, 2012.

Routine Chemistry and Field Measurement Results

Parameter	Unit	STATIONS								Detection Limit	DWQ* G.lines	Aquatic** G.lines
		NAD#1	NAD#2	NAD#3	NAD#4	NAD#5	NAD#6	NAD#7	NAD#8			
pH (field)	ru	8.31	8.34	8.36	8.22	8.50	8.23	8.15	8.34			
pH (lab)	ru	7.96	7.97	7.98	8.05	8.11	8.05	8.03	8		6.5-8.5	6.5-9
Conductivity (lab)	uS/cm	861	720	433	557	555	479	511	749	1		
Water temperature	C	2.0	1.6	2.6	3.1	1.1	1.3	3.7	1.5			
Flow Volume(field)	cms	0.035	0.0240	0.174	0.299	0.024	0.005	3.70	0.260			
Organic Carbon-Total	mg/L	0.7	1.3	1.3	1.1	0.9	0.6	0.9	0.9	0.5		
Cyanide - Total	mg/L	<0.002	nr	nr	<0.002	nr	nr	nr	nr	0.001	0.2	0.005
Phosphorus - T	mg/L	0.182	0.007	0.004	0.013	0.115	0.008	0.008	0.01	0.01		
Ammonia -N	mg/L	<0.01	<0.01	0.06	<0.01	0.06	<0.01	<0.01	<0.01	0.01		1.37-2.2
Nitrate - N	mg/L	0.09	0.07	<0.01	0.01	<0.01	0.02	0.02	0.07	0.01	10	
Nitrite - N	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	1	0.06
Alkalinity (as CaCO3)	mg/L	167	173	133	159	173	144	131	143	5		
Chloride	mg/L	2.76	3.43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.05	<250	
Sulphate (SO4)	mg/L	347	248	112	21.7	148	125	157	297	0.5		
Hardness (as CaCO3)	mg/L	534	436	242	322	319	268	297	450	1	<500	
T.Suspended Solids	mg/L	<2	6	<2	<2	3	4	<2	6	1		
T.Dissolved Solids	mg/L	700	552	284	404	404	328	384	586	5	500	

All results and limits in mg/L unless noted otherwise. Nr = no sample/reading

Exceeds Guideline Limit

DWQ* Guidelines are Maximum Acceptable Concentrations according to

Canadian Drinking Water Quality (December 2010)

Aquatic** Guidelines are for protection of aquatic life in waters with pH >6.5 and Hardness as CaCO3 >180 mg/L

Canadian Water Quality Guidelines

Table 2. ATAC Resources -Nadaleen Project September, 2012

Total Metals Analysis Results.

Parameter	Units	NAD#1	NAD#2	NAD#3	NAD#4	NAD#5	NAD#6	NAD#7	NAD#8	Detection Limit	DWQ* G.Lines	Aquatic** G.Lines
Calcium	mg/L	121	116	69.2	80.6	75.7	69.4	74.6	100	0.05		
Iron	mg/L	0.016	0.074	0.007	0.011	0.127	0.134	0.04	0.017	0.01	0.3	0.3
Magnesium	mg/L	60	40.4	20.7	34.5	37.1	26.6	30.4	53.9	0.05		
Manganese	mg/L	0.0014	0.0029	0.0008	0.0006	0.0052	0.0038	0.0013	0.0008	0.005	0.05	
Potassium	mg/L	1.6	1	0.6	0.7	1.3	1.4	0.4	0.7	0.1		
Silicon	mg/L	1.97	2.21	2.23	2.12	2.26	2.07	2.04	1.98	0.05		
Sulfur	mg/L	nr	nr	nr	nr	nr	nr	nr	nr	0.1		
Sodium	mg/L	2.6	2.1	2.2	2.4	2.8	2.3	2.3	3.3	0.02	<200	
Titanium	mg/L	0.178	0.171	0.0985	0.114	0.109	0.101	0.105	0.148	0.001		
Aluminum	mg/L	0.014	0.033	0.005	0.007	0.046	0.144	0.021	0.016	0.005		0.1
Antimony	mg/L	0.0005	0.0004	0.0001	0.0001	0.0006	<0.0001	0.0001	<0.0001	0.0002	0.006	
Arsenic	mg/L	0.639	0.00076	0.00053	0.0478	0.291	0.00021	0.0222	0.0226	0.0002	0.01	0.05
Barium	mg/L	0.0557	0.0988	0.106	0.0864	0.0539	0.0816	0.0478	0.0418	0.001	1	
Beryllium	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00004		
Bismuth	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001		
Boron	mg/L	0.022	0.01	0.012	0.013	0.027	0.013	0.01	0.014	0.005	5	
Cadmium	mg/L	<0.00001	0.00105	0.00011	0.00009	<0.00001	<0.00001	0.00004	<0.00001	0.00001	0.005	0.0018
Chromium	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0004	0.05	0.002
Cobalt	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00002		
Copper	mg/L	0.0003	0.001	0.0004	0.0004	0.0005	0.0003	0.0002	0.0003	0.001	1	0.004
Lead	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0001	0.01	0.007
Lithium	mg/L	0.0057	0.0059	0.0056	0.0054	0.0058	0.0057	0.0059	0.0091	0.001		
Mercury	ug/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.001	0.0001
Molybdenum	mg/L	0.00018	0.00347	0.0011	0.00095	0.00034	0.00008	0.0005	0.0001	0.00002		
Nickel	mg/L	0.0002	0.0117	0.002	0.0013	0.0003	<0.0002	0.0007	<0.0002	0.001		0.15
Selenium	mg/L	0.0006	0.0044	0.0021	0.0018	0.0005	<0.0001	0.0011	0.0004	0.0006	0.01	0.001
Silver	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	0.00006	<0.00001	<0.00001	<0.00001	0.00001		0.0001
Strontium	mg/L	0.333	0.332	0.235	0.272	0.225	0.322	0.352	0.646	0.001		
Thallium	mg/L	0.00003	0.00001	<0.00001	<0.00001	0.00009	<0.00001	<0.00001	<0.00001	0.00001		
Tin	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001		
Uranium	mg/L	0.00334	0.00286	0.00141	0.0014	0.00042	0.00072	0.00114	0.00087	0.0004	0.02	
Vanadium	mg/L	<0.0001	0.0029	0.0003	0.0003	0.0001	0.0001	0.0002	<0.0001	0.0001		
Zinc	mg/L	0.0027	0.094	0.0064	0.0058	0.0007	0.0012	0.0028	0.0005	0.001	<5	0.03
Zirconium	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0001		

nr=no sample or analysis done

Exceeds Guideline Limit

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Table 3. ATAC Resources - Nadaleen Project, September, 2012.

Dissolved Metals Analysis Results										Detection
Parameter	Units	NAD#1	NAD#2	NAD#3	NAD#4	NAD#5	NAD#6	NAD#7	NAD#8	Limit
Calcium	mg/L	120	115	68.7	78.7	73.8	67.4	71.4	96.3	0.1
Iron	mg/L	0.006	<0.005	<0.005	<0.005	0.008	<0.005	<0.005	0.006	0.005
Magnesium	mg/L	60.1	39.6	20.4	33.6	36.3	25.6	28.8	51.6	0.1
Manganese	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Potassium	mg/L	1.5	0.9	0.5	0.6	1.2	1.2	0.4	0.6	0.1
Silicon	mg/L	1.74	1.95	2.01	1.9	1.99	1.58	1.74	1.71	0.05
Sodium	mg/L	2.5	2	2.2	2.3	2.7	2.2	2.1	3.1	0.1
Sulfur	mg/L	119	88.5	39.3	57.9	53.3	44.9	54.6	103	0.2
Aluminum	mg/L	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.005
Antimony	mg/L	0.0006	0.0004	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	<0.0002	0.0002
Arsenic	mg/L	0.593	0.0006	0.0007	0.0556	0.337	<0.0002	0.0246	0.0262	0.0002
Barium	mg/L	0.051	0.09	0.098	0.08	0.048	0.072	0.042	0.037	0.001
Beryllium	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.00004
Bismuth	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Boron	mg/L	0.02	0.008	0.011	0.011	0.025	0.012	0.006	0.011	0.004
Cadmium	mg/L	<0.00001	0.0009	0.00011	0.00006	<0.00001	<0.00001	0.00002	<0.00001	0.00001
Chromium	mg/L	0.0016	0.0016	0.0011	0.0015	0.0014	0.0012	0.0011	0.0012	0.0004
Cobalt	mg/L	<0.00002	<0.00002	<0.00002	0.00017	0.00035	<0.00002	<0.00002	<0.00002	0.00002
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Lead	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Lithium	mg/L	0.005	0.007	0.006	0.006	0.006	0.006	0.006	0.009	0.001
Molybdenum	mg/L	0.00012	0.00311	0.00098	0.00082	0.0002	<0.00010	0.00037	<0.00010	0.0001
Nickel	mg/L	0.002	0.015	0.004	0.003	0.002	0.001	0.002	0.002	0.001
Selenium	mg/L	<0.0006	0.0048	0.0014	0.0015	<0.0006	<0.0006	<0.0006	<0.0006	0.0006
Silver	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001
Strontium	mg/L	0.337	0.349	0.245	0.282	0.228	0.334	0.361	0.688	0.001
Titanium	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01
Thallium	mg/L	0.00003	0.00001	<0.00001	<0.00001	0.00007	<0.00001	<0.00001	<0.00001	0.00001
Tin	mg/L	<0.0001	<0.0001	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Uranium	mg/L	0.003	0.0026	0.0013	0.0013	<0.0004	0.0006	0.001	0.0008	0.0004
Vanadium	mg/L	0.00047	0.0031	0.00066	0.00077	0.00042	0.00031	0.00046	0.00032	0.0001
Zinc	mg/L	0.002	0.096	0.008	0.006	0.001	<0.001	0.002	<0.001	0.001
Zirconium	mg/L	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	0.0001

Table 4. Nadaleen Project - Camp Drinking Water Supply 2012

Parameter	Units	Mar-12	May 2012		May-12	July 2012		Jul-12	Sept 2012		Detection <i>Limit</i>	DWQ*
		NAD#2	NAD#2	NAD#2	Atlas 1	NAD#2	NAD#2	Atlas	NAD#2	NAD#2		Guideline
		Raw	Raw	Treated	Treated	Raw	Treated	Treated	Raw	Treated		MAC's
pH	ru	8.08	7.94		8.11	8.08		8.07	7.97			6 to 8.5
Conductivity	uS/cm	683	576		399	682		418	720		1	
Chloride	mg/L	<0.5	0.06		0.08	<0.05		<0.05	3.43		0.02	<250
Nitrate	mg/L	0.17	0.17		0.07	0.1		<0.01	0.07		0.01	1
Nitrite	mg/L	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		0.005	10
Sulfate S04	mg/L	218	146		72.8	221		101	248		5	500
Phosphorus - T	mg/L	0.054	<0.01	<0.01	<0.01	0.006		<0.003	0.007		0.02	
Hardness as CaCO3	mg/L	374	320		228	411		227	436		1	<500
Alkalinity total	mg/L	183	168		152	164		124	173		5	
Total Metals												
Aluminum	mg/L	0.282	<0.005	<0.005	<0.005	0.091	<0.005	<0.005	0.033	0.004	0.005	
Antimony	mg/L	<0.0002	0.0004	0.0003	<0.0002	0.0002	<0.0002	<0.0002	0.0004	0.0003	0.0002	0.006
Arsenic	mg/L	0.0009	0.0005	0.0002	<0.0002	0.0008	0.0004	0.0002	0.00076	0.00043	0.0002	0.01
Barium	mg/L	0.127	0.065	0.066	0.012	0.09	0.076	0.015	0.0988	0.0858	0.001	1
Boron	mg/L	0.009	0.009	0.009	0.005	0.012	0.01	0.009	0.01	0.011	0.004	5
Cadmium	mg/L	0.00073	0.00062	0.00063	<0.00001	0.00094	0.0008	<0.00001	0.00105	0.00087	0.00001	0.005
Calcium	mg/L	106	84.3	88.8	46.1	99.1	94.9	52.2	116	116	0.05	
Chromium	mg/L	0.0008	<0.0004	0.0006	<0.0004	0.0005	<0.0004	<0.0004	<0.0005	<0.0005	0.0004	0.05
Cobalt	mg/L	0.00072	0.00008	0.00008	0.00005	0.00023	0.00008	0.00005	<0.0001	<0.0001	0.00002	
Copper	mg/L	0.002	<0.001	0.008	0.019	0.001	0.003	0.003	0.001	0.0037	0.001	1
Iron	mg/L	0.796	<0.01	<0.01	<0.01	0.193	<0.01	<0.01	0.074	0.003	0.01	0.3
Lead	mg/L	0.0011	<0.0001	0.0006	0.0003	0.0002	<0.0001	0.0004	<0.0001	<0.0001	0.0001	0.01
Lithium	mg/L	0.004	0.005	0.005	0.007	0.007	0.007	0.011	0.0058	0.0061	0.001	
Magnesium	mg/L	32.1	26.2	27.7	27.5	35.8	34.6	23.5			0.05	
Manganese	mg/L	0.056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0029	0.0003	0.0002	0.05
Mercury	mg/L					<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.001
Molybdenum	mg/L	0.0028	0.0035	0.0034	<0.0001	0.0028	0.0026	0.0014	0.00347	0.00346	0.0001	
Sulfur	mg/L	67.6	45.5	50.8	25.1	73.3	71.5	34.5	nr	nr	0.1	
Selenium	mg/L	0.0036	0.0027	0.0031	<0.0006	0.0047	0.0044	<0.0006	0.0044	0.0044	0.0006	0.01
Strontium	mg/L	0.297	0.229	0.24	0.315	0.329	0.309	0.383	0.332	0.334	0.001	
Silicon	mg/L	2.14	2.06	2.11	2.28	1.93	1.79	1.93	2.21	2.16	0.05	
Sodium	mg/L	1.84	1.69	1.74	1.75	1.88	2	2.04	2.1	2.1	0.02	<200
Titanium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.171	0.169	0.001	
Uranium	mg/L	0.0031	0.0024	0.0025	0.0005	0.0024	0.0023	0.0006	0.00286	0.0028	0.0004	0.02
Zinc	mg/L	0.086	0.06	0.067	0.01	0.097	0.073	0.005	0.094	0.0866	0.001	<5

DWQ* = Canadian Drinking Water Quality Guideline (December 2010)

MAC = Maximum Acceptable Concentration

Table 5. Nadaleen Project - Additional Camp Drinking Water Supply Sites 2012

Parameter	Units	DWQ*		Detection	Guideline
		Site #1	Site #2		
		Sep-25	Sep-25	Limit	MAC's
pH	ru	7.98	8.19		6 to 8.5
Conductivity	uS/cm	418	583	1	
Nitrate	mg/L	<0.10	<0.10	0.01	1
Nitrite	mg/L	<0.10	1.34	0.005	10
Sulfate S04	mg/L	74.1	134	5	500
Phosphorus - T	mg/L	<0.003	<0.003	0.02	
Total Suspended Solids	mg/L	<2	<2	1	<500
Total Dissolved Solids	mg/L	276	380		
Alkalinity total	mg/L	141	172	5	
Total Metals					
Aluminum	mg/L	0.11	0.003	0.001	
Antimony	mg/L	<0.0001	<0.0001	0.0001	0.006
Arsenic	mg/L	0.0008	0.00026	0.00005	0.01
Barium	mg/L	0.116	0.0834	0.00005	1
Boron	mg/L	0.013	0.008	0.002	5
Cadmium	mg/L	0.00004	0.00006	0.00001	0.005
Calcium	mg/L	67.6	95.2	0.05	
Chromium	mg/L	<0.0005	<0.0005	0.0005	0.05
Cobalt	mg/L	0.0001	<0.0001	0.0001	
Copper	mg/L	0.0014	0.001	0.0001	1
Iron	mg/L	0.262	0.006	0.002	0.3
Lead	mg/L	0.0003	<0.0001	0.0001	0.01
Lithium	mg/L	0.0034	0.0023	0.0005	
Magnesium	mg/L	17.8	20.9	0.04	
Manganese	mg/L	0.0069	0.0004	0.0002	0.05
Mercury	mg/L	<0.00001	<0.00001	0.00001	0.001
Molybdenum	mg/L	0.00066	0.00176	0.00006	
Nickel	mg/L	0.0004	0.0006	0.0002	
Potassium	mg/L	1	0.8	0.1	
Selenium	mg/L	0.0015	0.0022	0.0001	0.01
Silver	mg/L	<0.00001	<0.00001	0.00001	
Strontium	mg/L	0.229	0.232	0.0001	
Silicon	mg/L	2.12	2.22	0.02	
Sodium	mg/L	2.8	1.9	0.1	<200
Titanium	mg/L	0.106	0.149	0.0005	
Uranium	mg/L	0.00101	0.00164	0.00001	0.02
Zinc	mg/L	0.006	0.0043	0.0005	<5

DWQ* = Canadian Drinking Water Quality Guideline (December 2010)

MAC = Maximum Acceptable Concentration

exceeds Guideline MAC

Table 6. Nadaleen Project - Flow Volume Measurement Summary 2011 and 2012

Station	Date						
	May-11	Sep-11	Oct-11	Mar-12	May-12	Jul-12	Sep-12
NAD#1	0.207	0.036	0.017	0.002	0.0094	0.0518	0.0347
NAD#2	0.179	0.04	0.015	0.001	0.0097	0.0361	0.0236
NAD#3	1.054	0.243	0.088	0.02	0.0528	0.336	0.1741
NAD#4	nr	0.527	0.194	0.03	0.072	0.7082	0.2986
NAD#5	0.03	0.049	0.013	0.002	0.0082	0.0373	0.0241
NAD#6	0.096	0.018	0.006	nr	0.0155	0.0252	0.0048
NAD#7*	nr	3.896	1.35	nr	0.7734	4.971	3.704
NAD#8	nr (cms)	0.329 (cms)	0.13 (cms)	0.015 (cms)	0.0824 (cms)	0.549 (cms)	0.2604 (cms)

NAD#7 volumes are Nadaleen River u/s Camp Cr + Nad#4

Nadaleen Project September 2012

Laboratory Analytical Reports are attached in Appendix 1.

Data Summaries for each station are on an attached disc.

Discussion

Hydrology

Stream flow volumes in September 2012 are all measured volumes. Measured volumes reflect input from an ongoing snow precipitation event during the survey.

September flows show a decrease from July 2012 within a range of 19% (NAD#6) to 74% (NAD#7). Larger stream channel show the least variation from July.

September 2012 flows are generally less than those measured in September 2011.

Flow stage / volumes were in late summer low stage with input from snowfall precipitation.

Water Quality

Parameters that exceed either ***Drinking Water or Aquatic Guidelines*** are highlighted in yellow. All Guideline metals levels are for total metals.

Station NAD#1 results exceed ***Drinking Water Guidelines*** for arsenic, total hardness and total dissolved solids. NAD#1 exceeds the ***Aquatic Guidelines*** for arsenic.

Station NAD#2 results exceed the ***Drinking Water Guidelines*** for total dissolved solids and exceed the ***Aquatic Guidelines*** for selenium and zinc.

Station NAD#3 results exceed ***Aquatic Guidelines*** for selenium.

Station NAD#4 results exceed ***Drinking Water Guidelines*** for arsenic and ***Aquatic Guidelines*** for selenium.

Station NAD#5 results exceed the ***Drinking Water Guidelines*** and ***Aquatic Guidelines*** for arsenic.

Nadaleen Project September 2012

Station NAD#6 results exceed the ***Aquatic Guidelines*** for aluminum.

Station NAD #7 (Nadaleen River receiving waters) exceed ***Aquatic Guidelines*** for selenium and ***Drinking Water Guidelines*** for arsenic.

Station NAD#8 results exceed ***Drinking Water Guidelines*** for total dissolved solids and arsenic.

Total Mercury concentrations were below the detection limit of 0.00001 mg/L at all stations.

Quality Control

There were no quality control samples taken in September.

Camp Drinking Water Supply

Camp drinking water results are listed in Table 4 (Nadaleen Camp) and Table 5 (Sites #1 and #2).

Nadaleen Camp

Station NAD#2 is the primary source of camp drinking water. The “raw” and “treated” water samples for September, 2012 met all ***Guideline*** requirements.

Site #1 and #2

Potential camp supplies Sites #1 and #2 were sampled by camp staff on September 25. Samples were of non treated supply and met all ***Guideline*** requirements.

Atlas Camp

Atlas Camp was closed for the season in September.

A P P E N D I X 1

LABORATORY ANALYTICAL REPORTS

September, 2012

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#104, 19575-55 A Ave.
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Report Transmission Cover Page

Bill To:	J. Gibson & Associates	Project:		Lot ID:	892898
Report To:	J. Gibson & Associates	ID:	ATAC Resources	Control Number:	A244815
	Box 20913	Name:	Nadaleen Project	Date Received:	Sep 12, 2012
	Whitehorse, YT, Canada	Location:		Date Reported:	Sep 18, 2012
	Y1A 6P2	LSD:		Report Number:	1765408
Attn:	John Gibson	P.O.:			
Sampled By:	J.Gibson	Acct code:			
Company:					

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

- Analysis was performed on samples 892898-1, 2 and 4 to 9 that exceeded the recommended holding time for Water Nitrate analysis.
- Sample 892898-6; 4179238 An appropriately preserved sample was not received for Ammonia in water analysis of Sample # 892898-6. Analysis was performed on unpreserved sample.
- Sample 892898-7; 4179239 An appropriately preserved sample was not received for Ammonia in water analysis of Sample # 892898-7. Analysis was performed on unpreserved sample.
- Sample 892898-9; 4179241 An appropriately preserved sample was not received for Ammonia in water analysis of Sample # 892898-9. Analysis was performed on unpreserved sample.
- pH analysis was performed past the recommended holding time of 15 minutes from sample collection.

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Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-1	892898-2	892898-3	
		Sample Date	Sep 09, 2012	Sep 09, 2012	Sep 09, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #1	NAD #2	NAD #2T	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Total						
Mercury	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Aluminum	Total	mg/L	0.014	0.033	0.004	0.001
Antimony	Total	mg/L	0.0005	0.0004	0.0003	0.0001
Arsenic	Total	mg/L	0.639	0.00076	0.00043	0.00005
Barium	Total	mg/L	0.0557	0.0988	0.0958	0.00005
Beryllium	Total	mg/L	<0.00005	<0.00005	<0.00005	0.00005
Bismuth	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Boron	Total	mg/L	0.022	0.010	0.011	.002
Cadmium	Total	mg/L	<0.00001	0.00105	0.00097	0.00001
Chromium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Cobalt	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Copper	Total	mg/L	0.0003	0.0010	0.0037	0.0001
Iron	Total	mg/L	0.016	0.074	0.003	0.002
Lead	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Lithium	Total	mg/L	0.0057	0.0059	0.0061	0.0005
Manganese	Total	mg/L	0.0014	0.0029	0.0003	0.0002
Molybdenum	Total	mg/L	0.00018	0.00347	0.00346	0.00005
Nickel	Total	mg/L	0.0002	0.0117	0.0114	0.0002
Selenium	Total	mg/L	0.0006	0.0044	0.0044	0.0001
Silver	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Strontium	Total	mg/L	0.333	0.332	0.334	0.0001
Thallium	Total	mg/L	0.00003	0.00001	0.00001	0.00001
Thorium	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Tin	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Titanium	Total	mg/L	0.178	0.171	0.169	0.0005
Uranium	Total	mg/L	0.00334	0.00286	0.00280	0.00001
Vanadium	Total	mg/L	<0.0001	0.0029	0.0023	0.0001
Zinc	Total	mg/L	0.0027	0.0940	0.0866	0.0005
Zirconium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Calcium	Total	mg/L	121	116	116	0.05
Magnesium	Total	mg/L	60.0	40.4	40.6	0.04
Potassium	Total	mg/L	1.6	1.0	1.0	0.1
Silicon	Total	mg/L	1.97	2.21	2.16	0.02
Sodium	Total	mg/L	2.6	2.1	2.1	0.1

Analytical Report

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

Project:
ID: ATAC Resources
Name: Nadaleen Project
Location:
LSD:
P.O.:
Acct code:

Lot ID: **892898**
Control Number: A244815
Date Received: Sep 12, 2012
Date Reported: Sep 18, 2012
Report Number: 1765408

		Reference Number	892898-1	892898-2	892898-4	
		Sample Date	Sep 09, 2012	Sep 09, 2012	Sep 09, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #1	NAD #2	NAD #3	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Inorganic Nonmetallic Parameters						
Organic Carbon	Total Nonpurgeable	mg/L	0.7	1.3	1.3	0.5
Cyanide	Total	mg/L	<0.002			0.002
Phosphorus	Total	mg/L	0.182	0.007	0.004	0.003
Ammonia - N		mg/L	<0.01	<0.01	0.06	
Nitrate - N		mg/L	0.09	0.07	<0.01	0.01
Nitrite - N		mg/L	<0.005	<0.005	<0.005	0.005
Metals Dissolved						
Sulfur	Dissolved	mg/L	119	88.5	39.3	0.2
Aluminum	Dissolved	mg/L	<0.005	<0.005	<0.005	0.005
Antimony	Dissolved	mg/L	0.0006	0.0004	<0.0002	0.0002
Arsenic	Dissolved	mg/L	0.5930	0.0006	0.0007	0.0002
Barium	Dissolved	mg/L	0.051	0.090	0.098	0.001
Beryllium	Dissolved	mg/L	<0.00004	<0.00004	<0.00004	0.00004
Bismuth	Dissolved	mg/L	<0.001	<0.001	<0.001	0.001
Boron	Dissolved	mg/L	0.020	0.008	0.011	0.004
Cadmium	Dissolved	mg/L	<0.00001	0.00090	0.00011	0.00001
Chromium	Dissolved	mg/L	0.0016	0.0016	0.0011	0.0004
Cobalt	Dissolved	mg/L	<0.00002	<0.00002	<0.00002	0.00002
Copper	Dissolved	mg/L	<0.001	<0.001	<0.001	0.001
Lead	Dissolved	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Lithium	Dissolved	mg/L	0.005	0.007	0.006	0.001
Molybdenum	Dissolved	mg/L	0.00012	0.00311	0.00098	0.0001
Nickel	Dissolved	mg/L	0.002	0.015	0.004	0.001
Selenium	Dissolved	mg/L	<0.0006	0.0048	0.0014	0.0006
Silver	Dissolved	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Titanium	Dissolved	mg/L	<0.010	<0.010	<0.010	0.01
Strontium	Dissolved	mg/L	0.337	0.349	0.245	0.001
Tellurium	Dissolved	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Thallium	Dissolved	mg/L	0.00003	0.00001	<0.00001	0.00001
Thorium	Dissolved	mg/L	<0.0004	<0.0004	<0.0004	0.0004
Tin	Dissolved	mg/L	<0.0001	<0.0001	0.0004	0.0001
Uranium	Dissolved	mg/L	0.0030	0.0026	0.0013	0.0004
Vanadium	Dissolved	mg/L	0.00047	0.00310	0.00066	0.0001
Zinc	Dissolved	mg/L	0.002	0.096	0.008	0.001
Zirconium	Dissolved	mg/L	<0.0001	<0.00010	<0.0001	0.0001

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-1	892898-2	892898-4	
		Sample Date	Sep 09, 2012	Sep 09, 2012	Sep 09, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #1	NAD #2	NAD #3	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Physical and Aggregate Properties						
Solids	Total Suspended	mg/L	<2	6	<2	2
Solids	Total Dissolved	mg/L	700	552	284	5
Routine Water						
pH	at 25 °C		7.96	7.97	7.98	
Electrical Conductivity		µS/cm at 25 C	861	720	433	1
Calcium	Dissolved	mg/L	120	115	68.7	0.1
Iron	Dissolved	mg/L	0.006	<0.005	<0.005	0.005
Magnesium	Dissolved	mg/L	60.1	39.6	20.4	0.1
Manganese	Dissolved	mg/L	<0.001	<0.001	<0.001	0.001
Potassium	Dissolved	mg/L	1.5	0.9	0.5	0.1
Silicon	Dissolved	mg/L	1.74	1.95	2.01	0.05
Sodium	Dissolved	mg/L	2.5	2.0	2.2	0.1
Bicarbonate		mg/L	204	211	162	5
Carbonate		mg/L	<6	<6	<6	6
Hydroxide		mg/L	<5	<5	<5	5
T-Alkalinity	as CaCO3	mg/L	167	173	133	5
Chloride	Dissolved	mg/L	2.76	3.43	<0.50	0.05
Sulfate (SO4)	Dissolved	mg/L	347	248	112	0.5
Hardness	as CaCO3	mg/L	547	450	255	5
Hardness	Total	mg CaCO3/L	534	436	242	1

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-4	892898-5	892898-6	
		Sample Date	Sep 09, 2012	Sep 09, 2012	Sep 10, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #3	NAD #4	NAD #5	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Total						
Mercury	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Aluminum	Total	mg/L	0.005	0.007	0.046	0.001
Antimony	Total	mg/L	0.0001	0.0001	0.0006	0.0001
Arsenic	Total	mg/L	0.00053	0.0478	0.291	0.00005
Barium	Total	mg/L	0.106	0.0864	0.0539	0.00005
Beryllium	Total	mg/L	<0.00005	<0.00005	<0.00005	0.00005
Bismuth	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Boron	Total	mg/L	0.012	0.013	0.027	.002
Cadmium	Total	mg/L	0.00011	0.00009	<0.00001	0.00001
Chromium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Cobalt	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Copper	Total	mg/L	0.0004	0.0004	0.0005	0.0001
Iron	Total	mg/L	0.007	0.011	0.127	0.002
Lead	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Lithium	Total	mg/L	0.0056	0.0054	0.0058	0.0005
Manganese	Total	mg/L	0.0008	0.0006	0.0052	0.0002
Molybdenum	Total	mg/L	0.00110	0.00095	0.00034	0.00005
Nickel	Total	mg/L	0.0020	0.0013	0.0003	0.0002
Selenium	Total	mg/L	0.0021	0.0018	0.0005	0.0001
Silver	Total	mg/L	<0.00001	<0.00001	0.00006	0.00001
Strontium	Total	mg/L	0.235	0.272	0.225	0.0001
Thallium	Total	mg/L	<0.00001	<0.00001	0.00009	0.00001
Thorium	Total	mg/L	<0.00001	<0.00001	0.00003	0.00001
Tin	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Titanium	Total	mg/L	0.0985	0.114	0.109	0.0005
Uranium	Total	mg/L	0.00141	0.00140	0.00042	0.00001
Vanadium	Total	mg/L	0.0003	0.0003	0.0001	0.0001
Zinc	Total	mg/L	0.0064	0.0058	0.0007	0.0005
Zirconium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Calcium	Total	mg/L	69.2	80.6	75.7	0.05
Magnesium	Total	mg/L	20.7	34.5	37.1	0.04
Potassium	Total	mg/L	0.6	0.7	1.3	0.1
Silicon	Total	mg/L	2.23	2.12	2.26	0.02
Sodium	Total	mg/L	2.2	2.4	2.8	0.1

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-5	892898-6	892898-7	
		Sample Date	Sep 09, 2012	Sep 10, 2012	Sep 10, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #4	NAD #5	NAD #6	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Inorganic Nonmetallic Parameters						
Organic Carbon	Total Nonpurgeable	mg/L	1.1	0.9	0.6	0.5
Cyanide	Total	mg/L	<0.002			0.002
Phosphorus	Total	mg/L	0.013	0.115	0.008	0.003
Ammonia - N		mg/L	<0.01	0.06	<0.01	
Nitrate - N		mg/L	0.01	<0.01	0.02	0.01
Nitrite - N		mg/L	<0.005	<0.005	<0.005	0.005
Metals Dissolved						
Sulfur	Dissolved	mg/L	57.9	53.3	44.9	0.2
Aluminum	Dissolved	mg/L	<0.005	0.005	<0.005	0.005
Antimony	Dissolved	mg/L	<0.0002	0.0006	<0.0002	0.0002
Arsenic	Dissolved	mg/L	0.0556	0.3370	<0.0002	0.0002
Barium	Dissolved	mg/L	0.080	0.048	0.072	0.001
Beryllium	Dissolved	mg/L	<0.00004	<0.00004	<0.00004	0.00004
Bismuth	Dissolved	mg/L	<0.001	<0.001	<0.001	0.001
Boron	Dissolved	mg/L	0.011	0.025	0.012	0.004
Cadmium	Dissolved	mg/L	0.00006	<0.00001	<0.00001	0.00001
Chromium	Dissolved	mg/L	0.0015	0.0014	0.0012	0.0004
Cobalt	Dissolved	mg/L	0.00017	0.00035	<0.00002	0.00002
Copper	Dissolved	mg/L	<0.001	<0.001	<0.001	0.001
Lead	Dissolved	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Lithium	Dissolved	mg/L	0.006	0.006	0.006	0.001
Molybdenum	Dissolved	mg/L	0.00082	0.00020	<0.00010	0.0001
Nickel	Dissolved	mg/L	0.003	0.002	0.001	0.001
Selenium	Dissolved	mg/L	0.0015	<0.0006	<0.0006	0.0006
Silver	Dissolved	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Titanium	Dissolved	mg/L	<0.010	<0.010	<0.010	0.01
Strontium	Dissolved	mg/L	0.282	0.228	0.334	0.001
Tellurium	Dissolved	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Thallium	Dissolved	mg/L	<0.00001	0.00007	<0.00001	0.00001
Thorium	Dissolved	mg/L	<0.0004	<0.0004	<0.0004	0.0004
Tin	Dissolved	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Uranium	Dissolved	mg/L	0.0013	<0.0004	0.0006	0.0004
Vanadium	Dissolved	mg/L	0.00077	0.00042	0.00031	0.0001
Zinc	Dissolved	mg/L	0.006	0.001	<0.001	0.001
Zirconium	Dissolved	mg/L	<0.0001	<0.00010	<0.00010	0.0001

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-5	892898-6	892898-7	
		Sample Date	Sep 09, 2012	Sep 10, 2012	Sep 10, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #4	NAD #5	NAD #6	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Physical and Aggregate Properties						
Solids	Total Suspended	mg/L	<2	3	4	2
Solids	Total Dissolved	mg/L	404	404	328	5
Routine Water						
pH	at 25 °C		8.05	8.11	8.05	
Electrical Conductivity		µS/cm at 25 C	557	555	479	1
Calcium	Dissolved	mg/L	78.7	73.8	67.4	0.1
Iron	Dissolved	mg/L	<0.005	0.008	<0.005	0.005
Magnesium	Dissolved	mg/L	33.6	36.3	25.6	0.1
Manganese	Dissolved	mg/L	<0.001	<0.001	<0.001	0.001
Potassium	Dissolved	mg/L	0.6	1.2	1.2	0.1
Silicon	Dissolved	mg/L	1.90	1.99	1.58	0.05
Sodium	Dissolved	mg/L	2.3	2.7	2.2	0.1
Bicarbonate		mg/L	194	211	176	5
Carbonate		mg/L	<6	<6	<6	6
Hydroxide		mg/L	<5	<5	<5	5
T-Alkalinity	as CaCO3	mg/L	159	173	144	5
Chloride	Dissolved	mg/L	<0.50	<0.50	<0.50	0.05
Sulfate (SO4)	Dissolved	mg/L	21.7	148	125	0.5
Hardness	as CaCO3	mg/L	335	334	274	5
Hardness	Total	mg CaCO3/L	322	319	268	1

Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-7	892898-8	892898-9	
		Sample Date	Sep 10, 2012	Sep 09, 2012	Sep 10, 2012	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	NAD #6	NAD #7	NAD #8	
		Matrix	Water	Water	Water	
Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Total						
Mercury	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Aluminum	Total	mg/L	0.144	0.021	0.016	0.001
Antimony	Total	mg/L	<0.0001	0.0001	<0.0001	0.0001
Arsenic	Total	mg/L	0.00021	0.0222	0.0226	0.00005
Barium	Total	mg/L	0.0816	0.0478	0.0418	0.00005
Beryllium	Total	mg/L	<0.00005	<0.00005	<0.00005	0.00005
Bismuth	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Boron	Total	mg/L	0.013	0.010	0.014	.002
Cadmium	Total	mg/L	<0.00001	0.00004	<0.00001	0.00001
Chromium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Cobalt	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Copper	Total	mg/L	0.0003	0.0002	0.0003	0.0001
Iron	Total	mg/L	0.134	0.040	0.017	0.002
Lead	Total	mg/L	0.0002	<0.0001	<0.0001	0.0001
Lithium	Total	mg/L	0.0057	0.0059	0.0091	0.0005
Manganese	Total	mg/L	0.0038	0.0013	0.0008	0.0002
Molybdenum	Total	mg/L	0.00008	0.00050	0.00010	0.00005
Nickel	Total	mg/L	<0.0002	0.0007	<0.0002	0.0002
Selenium	Total	mg/L	<0.0001	0.0011	0.0004	0.0001
Silver	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Strontium	Total	mg/L	0.322	0.352	0.646	0.0001
Thallium	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Thorium	Total	mg/L	0.00004	0.00002	0.00001	0.00001
Tin	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Titanium	Total	mg/L	0.101	0.105	0.148	0.0005
Uranium	Total	mg/L	0.00072	0.00114	0.00087	0.00001
Vanadium	Total	mg/L	0.0001	0.0002	<0.0001	0.0001
Zinc	Total	mg/L	0.0012	0.0028	0.0005	0.0005
Zirconium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Calcium	Total	mg/L	69.4	74.6	100	0.05
Magnesium	Total	mg/L	26.6	30.4	53.9	0.04
Potassium	Total	mg/L	1.4	0.4	0.7	0.1
Silicon	Total	mg/L	2.07	2.04	1.98	0.02
Sodium	Total	mg/L	2.3	2.3	3.3	0.1



Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-8	892898-9	
		Sample Date	Sep 09, 2012	Sep 10, 2012	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	NAD #7	NAD #8	
		Matrix	Water	Water	
Analyte	Units	Results	Results	Results	Nominal Detection Limit
Inorganic Nonmetallic Parameters					
Organic Carbon	Total Nonpurgeable	mg/L	0.9	0.9	0.5
Phosphorus	Total	mg/L	0.008	0.010	0.003
Ammonia - N		mg/L	<0.01	<0.01	
Nitrate - N		mg/L	0.02	0.07	0.01
Nitrite - N		mg/L	<0.005	<0.005	0.005
Metals Dissolved					
Sulfur	Dissolved	mg/L	54.6	103	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	0.0246	0.0262	0.0002
Barium	Dissolved	mg/L	0.042	0.037	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	0.006	0.011	0.004
Cadmium	Dissolved	mg/L	0.00002	<0.00001	0.00001
Chromium	Dissolved	mg/L	0.0011	0.0012	0.0004
Cobalt	Dissolved	mg/L	<0.00002	<0.00002	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	0.006	0.009	0.001
Molybdenum	Dissolved	mg/L	0.00037	<0.00010	0.0001
Nickel	Dissolved	mg/L	0.002	0.002	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	0.361	0.688	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	0.0010	0.0008	0.0004
Vanadium	Dissolved	mg/L	0.00046	0.00032	0.0001
Zinc	Dissolved	mg/L	0.002	<0.001	0.001
Zirconium	Dissolved	mg/L	<0.0001	<0.0001	0.0001
Physical and Aggregate Properties					
Solids	Total Suspended	mg/L	<2	6	2



Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

		Reference Number	892898-8	892898-9	
		Sample Date	Sep 09, 2012	Sep 10, 2012	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	NAD #7	NAD #8	
		Matrix	Water	Water	
Analyte	Units	Results	Results	Results	Nominal Detection Limit
Physical and Aggregate Properties - Continued					
Solids	Total Dissolved	mg/L	384	586	5
Routine Water					
pH	at 25 °C		8.03	8.00	
Electrical Conductivity		µS/cm at 25 C	511	749	1
Calcium	Dissolved	mg/L	71.4	96.3	0.1
Iron	Dissolved	mg/L	<0.005	0.006	0.005
Magnesium	Dissolved	mg/L	28.8	51.6	0.1
Manganese	Dissolved	mg/L	<0.001	<0.001	0.001
Potassium	Dissolved	mg/L	0.4	0.6	0.1
Silicon	Dissolved	mg/L	1.74	1.71	0.05
Sodium	Dissolved	mg/L	2.1	3.1	0.1
Bicarbonate		mg/L	160	175	5
Carbonate		mg/L	<6	<6	6
Hydroxide		mg/L	<5	<5	5
T-Alkalinity	as CaCO3	mg/L	131	143	5
Chloride	Dissolved	mg/L	<0.50	<0.50	0.05
Sulfate (SO4)	Dissolved	mg/L	157	297	0.5
Hardness	as CaCO3	mg/L	297	453	5
Hardness	Total	mg CaCO3/L	297	450	1

Approved by: 
 Randy Neumann, BSc
 General Manager

Methodology and Notes

Bill To: J. Gibson & Associates	Project:	Lot ID: 892898
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244815
Box 20913	Name: Nadaleen Project	Date Received: Sep 12, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Sep 18, 2012
Y1A 6P2	LSD:	Report Number: 1765408
Attn: John Gibson	P.O.:	
Sampled By: J.Gibson	Acct code:	
Company:		

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Alk, pH, EC, Turb in water	APHA	* Alkalinity - Titration Method, 2320 B	12-Sep-12	Exova Surrey
Alk, pH, EC, Turb in water	APHA	* Conductivity, 2510 B	12-Sep-12	Exova Surrey
Alk, pH, EC, Turb in water	APHA	* pH - Electrometric Method, 4500-H+ B	12-Sep-12	Exova Surrey
Ammonia-N in Water (Surrey)	APHA	* Titrametric, 4500-NH3 C	13-Sep-12	Exova Surrey
Anions by IEC in water (Surrey)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	13-Sep-12	Exova Surrey
BC ICP-MS Total Metals in Water	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	17-Sep-12	Exova Edmonton
BC ICP-MS Total Metals in Water	US EPA	Ignitability of Solids, 1030	17-Sep-12	Exova Edmonton
BC ICP-MS Total Metals in Water	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	17-Sep-12	Exova Edmonton
BC Trace Total Metals in Water	APHA	* Inductively Coupled Plasma (ICP) Method, 3120 B	17-Sep-12	Exova Edmonton
Carbon Organic (Total) in water (TOC)	APHA	High-Temperature Combustion Method, 5310 B	17-Sep-12	Exova Edmonton
Cyanide (Total) in water	US EPA	* US EPA method, 335.3	17-Sep-12	Exova Edmonton
Mercury Low Level (Total) in water	EPA	* Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	13-Sep-12	Exova Surrey
Metals SemiTrace (Dissolved) in water	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	13-Sep-12	Exova Surrey
Nitrogen - nitrite+nitrate-N	APHA	* Automated Cadmium Reduction Method, 4500-NO3- F	13-Sep-12	Exova Surrey
Phosphorus - total (low level)	APHA	* Preliminary Acid Hydrolysis, Ascorbic Acid Reduction Method, 4500-P B,E	13-Sep-12	Exova Surrey
Solids Dissolved (Total, Fixed and Volatile)2	APHA	* Total Dissolved Solids Dried at 180 C, 2540 C	13-Sep-12	Exova Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	* Total Suspended Solids Dried at 103-105°C, 2540 D	13-Sep-12	Exova Surrey
Trace Metals (dissolved) in Water	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	13-Sep-12	Exova Surrey
Trace Metals (dissolved) in Water	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	13-Sep-12	Exova Surrey

* Reference Method Modified

References

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

Methodology and Notes

Bill To:	J. Gibson & Associates	Project:		Lot ID:	892898
Report To:	J. Gibson & Associates	ID:	ATAC Resources	Control Number:	A244815
	Box 20913	Name:	Nadaleen Project	Date Received:	Sep 12, 2012
	Whitehorse, YT, Canada	Location:		Date Reported:	Sep 18, 2012
	Y1A 6P2	LSD:		Report Number:	1765408
Attn:	John Gibson	P.O.:			
Sampled By:	J.Gibson	Acct code:			
Company:					

Comments:

- Analysis was performed on samples 892898-1, 2 and 4 to 9 that exceeded the recommended holding time for Water Nitrate analysis.
- Sample 892898-6; 4179238 An appropriately preserved sample was not received for Ammonia in water analysis of Sample # 892898-6. Analysis was performed on unpreserved sample.
- Sample 892898-7; 4179239 An appropriately preserved sample was not received for Ammonia in water analysis of Sample # 892898-7. Analysis was performed on unpreserved sample.
- Sample 892898-9; 4179241 An appropriately preserved sample was not received for Ammonia in water analysis of Sample # 892898-9. Analysis was performed on unpreserved sample.
- pH analysis was performed past the recommended holding time of 15 minutes from sample collection.

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.

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Report Transmission Cover Page

Bill To:	J. Gibson & Associates	Project:		Lot ID:	896328
Report To:	J. Gibson & Associates	ID:	ATAC Resources	Control Number:	A244823
	Box 20913	Name:	Nadaleen Project	Date Received:	Sep 28, 2012
	Whitehorse, YT, Canada	Location:		Date Reported:	Oct 4, 2012
	Y1A 6P2	LSD:		Report Number:	1770073
Attn:	John Gibson	P.O.:			
Sampled By:	Camp Staff	Acct code:			
Company:					

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

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Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 896328
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244823
Box 20913	Name: Nadaleen Project	Date Received: Sep 28, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Oct 4, 2012
Y1A 6P2	LSD:	Report Number: 1770073
Attn: John Gibson	P.O.:	
Sampled By: Camp Staff	Acct code:	
Company:		

		Reference Number	896328-1	896328-2	
		Sample Date	Sep 25, 2012	Sep 25, 2012	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	Site #1 / Surface	Site #2 / Surface	
		Matrix	Water	Water	
Analyte		Units	Results	Results	Nominal Detection Limit
Inorganic Nonmetallic Parameters					
Phosphorus	Total	mg/L	<0.003	<0.003	0.003
Metals Total					
Mercury	Total	mg/L	<0.00001	<0.00001	0.00001
Aluminum	Total	mg/L	0.110	0.003	0.001
Antimony	Total	mg/L	<0.0001	<0.0001	0.0001
Arsenic	Total	mg/L	0.00080	0.00026	0.00005
Barium	Total	mg/L	0.116	0.0834	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	0.013	0.008	.002
Cadmium	Total	mg/L	0.00004	0.00006	0.00001
Chromium	Total	mg/L	<0.0005	<0.0005	0.0005
Cobalt	Total	mg/L	0.0001	<0.0001	0.0001
Copper	Total	mg/L	0.0014	0.0010	0.0001
Iron	Total	mg/L	0.282	0.006	0.002
Lead	Total	mg/L	0.0003	<0.0001	0.0001
Lithium	Total	mg/L	0.0034	0.0023	0.0005
Manganese	Total	mg/L	0.0069	0.0004	0.0002
Molybdenum	Total	mg/L	0.00086	0.00176	0.00005
Nickel	Total	mg/L	0.0004	0.0006	0.0002
Selenium	Total	mg/L	0.0015	0.0022	0.0001
Silver	Total	mg/L	<0.00001	<0.00001	0.00001
Strontium	Total	mg/L	0.229	0.232	0.0001
Thallium	Total	mg/L	0.00001	<0.00001	0.00001
Thorium	Total	mg/L	0.00001	<0.00001	0.00001
Tin	Total	mg/L	<0.0001	<0.0001	0.0001
Titanium	Total	mg/L	0.106	0.149	0.0005
Uranium	Total	mg/L	0.00101	0.00164	0.00001
Vanadium	Total	mg/L	0.0002	0.0014	0.0001
Zinc	Total	mg/L	0.0060	0.0043	0.0005
Zirconium	Total	mg/L	<0.0005	<0.0005	0.0005
Calcium	Total	mg/L	67.6	95.2	0.05
Magnesium	Total	mg/L	17.8	20.9	0.04
Potassium	Total	mg/L	1.0	0.8	0.1
Silicon	Total	mg/L	2.12	2.22	0.02
Sodium	Total	mg/L	2.8	1.9	0.1



Analytical Report

Bill To: J. Gibson & Associates	Project:	Lot ID: 896328
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244823
Box 20913	Name: Nadaleen Project	Date Received: Sep 28, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Oct 4, 2012
Y1A 6P2	LSD:	Report Number: 1770073
Attn: John Gibson	P.O.:	
Sampled By: Camp Staff	Acct code:	
Company:		

		Reference Number	896328-1	896328-2	
		Sample Date	Sep 25, 2012	Sep 25, 2012	
		Sample Time	NA	NA	
		Sample Location			
		Sample Description	Site #1 / Surface	Site #2 / Surface	
		Matrix	Water	Water	
Analyte		Units	Results	Results	Nominal Detection Limit
Physical and Aggregate Properties					
Solids	Total Suspended	mg/L	<2	<2	2
Solids	Total Dissolved	mg/L	276	390	5
Routine Water					
pH	at 25 °C		7.98	8.19	
Electrical Conductivity		µS/cm at 25 C	418	583	1
Bicarbonate		mg/L	172	210	5
Carbonate		mg/L	<6	<6	6
Hydroxide		mg/L	<5	<5	5
T-Alkalinity	as CaCO ₃	mg/L	141	172	5
Nitrate - N	Dissolved	mg/L	<0.10	<0.10	0.01
Nitrite - N	Dissolved	mg/L	<0.10	1.34	0.01
Sulfate (SO ₄)	Dissolved	mg/L	74.1	134	0.5

Approved by: 
 Anthony Neumann, MSc
 Laboratory Operations Manager



Methodology and Notes

Bill To: J. Gibson & Associates	Project:	Lot ID: 896328
Report To: J. Gibson & Associates	ID: ATAC Resources	Control Number: A244823
Box 20913	Name: Nadaleen Project	Date Received: Sep 28, 2012
Whitehorse, YT, Canada	Location:	Date Reported: Oct 4, 2012
Y1A 6P2	LSD:	Report Number: 1770073
Attn: John Gibson	P.O.:	
Sampled By: Camp Staff	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	28-Sep-12	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* Conductivity, 2510 B	28-Sep-12	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* pH - Electrometric Method, 4500-H+ B	28-Sep-12	Exova Surrey
Anions by IEC in water (Surrey)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	01-Oct-12	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-Oct-12	Exova Edmonton
BC Trace Total Metals in Water	APHA	* Inductively Coupled Plasma (ICP) Method, 3120 B	01-Oct-12	Exova Edmonton
Mercury Low Level (Total) in water (Surrey)	EPA	* Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	02-Oct-12	Exova Surrey
Phosphorus - total (low level) - Surrey	APHA	* Preliminary Acid Hydrolysis, Ascorbic Acid Reduction Method, 4500-P B,E	04-Oct-12	Exova Surrey
Solids Dissolved (Total, Fixed and Volatile) - Surrey	APHA	* Total Dissolved Solids Dried at 180 C, 2540 C	01-Oct-12	Exova Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	* Total Suspended Solids Dried at 103-105°C, 2540 D	01-Oct-12	Exova Surrey

* Reference Method Modified

References

APHA Standard Methods for the Examination of Water and Wastewater

Comments:

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

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APPENDIX 2

Stream Flow Volume Calculations

September 2012

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: Sept 9, 2012

Site: Nad#1

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
1.28	0	0.11	0	0	0
1.5	0.08	0.16	0.03	0.013	0.0004
1.6	0.1	0.1	0.339	0.01	0.0034
1.7	0.12	0.1	0.06	0.012	0.0007
1.8	0.12	0.1	0.315	0.012	0.0038
1.9	0.11	0.1	0.462	0.011	0.0051
2	0.11	0.1	0.221	0.011	0.0024
2.1	0.12	0.1	0.221	0.012	0.0027
2.2	0.06	0.1	0.357	0.006	0.0021
2.3	0.16	0.1	0.472	0.016	0.0076
2.4	0.12	0.105	0.521	0.013	0.0066
2.51	0	0.055	0	0	0.0000

1.23 1.23 **0.0347**

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No Ice Cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: 09-Sep-12

Site: Nad#2

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
1.67	0	0.115	0	0	0
1.9	0.09	0.165	0.08	0.015	0.0012
2	0.08	0.1	0.189	0.008	0.0015
2.1	0.08	0.1	0.136	0.008	0.0011
2.2	0.1	0.1	0.122	0.01	0.0012
2.3	0.1	0.1	0.034	0.01	0.0003
2.4	0.12	0.1	0.315	0.012	0.0038
2.5	0.12	0.1	0.508	0.012	0.0061
2.6	0.14	0.1	0.282	0.014	0.0039
2.7	0.04	0.15	0.344	0.006	0.0021
2.9	0.07	0.185	0.182	0.013	0.0024
3.07	0	0.085	0	0	0.0000

1.4 1.4 **0.0236**

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No ice cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: 09-Sep-12

Site: Nad#3

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
0.62	0	0.09	0	0	0
0.8	0.29	0.14	0.133	0.041	0.0054
0.9	0.25	0.1	0.108	0.025	0.0027
1	0.21	0.1	0.162	0.021	0.0034
1.1	0.22	0.1	0.288	0.022	0.0063
1.2	0.25	0.1	0.357	0.025	0.0089
1.3	0.28	0.1	0.357	0.028	0.0100
1.4	0.35	0.1	0.226	0.035	0.0079
1.5	0.39	0.1	0.576	0.039	0.0225
1.6	0.35	0.1	0.495	0.035	0.0173
1.7	0.34	0.1	0.423	0.034	0.0144
1.8	0.32	0.1	0.376	0.032	0.0120
1.9	0.29	0.15	0.403	0.044	0.0175
2.1	0.29	0.2	0.339	0.058	0.0197
2.3	0.2	0.2	0.376	0.04	0.0150
2.5	0.18	0.185	0.331	0.033	0.0110
2.67	0	0.085	0	0	0
2.05		2.05			0.1741

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No ice cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: 09-Sep-12

Site: Nad#4

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
0.94	0	0.18	0	0	0
1.3	0.14	0.33	0.114	0.046	0.0053
1.6	0.16	0.3	0.189	0.048	0.0091
1.9	0.22	0.3	0.162	0.066	0.0107
2.2	0.24	0.3	0.705	0.072	0.0508
2.5	0.18	0.25	0.288	0.045	0.0130
2.7	0.37	0.2	0.432	0.074	0.0320
2.9	0.32	0.2	0.442	0.064	0.0283
3.1	0.3	0.2	0.339	0.06	0.0203
3.3	0.32	0.2	0.295	0.064	0.0189
3.5	0.25	0.2	0.99	0.05	0.0495
3.7	0.31	0.2	0.383	0.062	0.0237
3.9	0.32	0.2	0.061	0.064	0.0039
4.1	0.27	0.2	0.301	0.054	0.0163
4.3	0.26	0.18	0.363	0.047	0.0170
4.46	0	0.08	1.104	0	0.0000

3.52

3.52

0.2986

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No ice cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: 10-Sep-12

Site: Nad#5

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
1.26	0	0.045	0	0	0
1.35	0.07	0.095	0.015	0.007	0.0001
1.45	0.06	0.1	0.17	0.006	0.0010
1.55	0.1	0.1	0.629	0.01	0.0063
1.65	0.12	0.1	0.66	0.012	0.0079
1.75	0.09	0.1	0.483	0.009	0.0043
1.85	0.06	0.1	0.301	0.006	0.0018
1.95	0.1	0.1	0.102	0.01	0.0010
2.05	0.09	0.125	0.043	0.011	0.0005
2.2	0.05	0.125	0.176	0.006	0.0011
2.3	0	0.05	0	0	0.0000

1.04

1.04

0.0241

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No ice cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: 10-Sep-12

Site: Nad#6

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
1.27	0	0.065	0	0	0
1.4	0.08	0.115	0.055	0.009	0.0005
1.5	0.07	0.1	0.093	0.007	0.0007
1.6	0.07	0.1	0.357	0.007	0.0025
1.7	0.06	0.1	0.185	0.006	0.0011
1.8	0.02	0.08	0	0.0016	0.0000
1.86	0	0.03	0	0	0.0000

0.59 0.59 **0.0048**

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No ice cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen **Date:** 09-Sep-12

Site: Nad#7 (u/s Camp Creek /NAD#4)

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
1.45	0	0.075	0	0	0
1.6	0.54	0.275	0.295	0.149	0.0438
2	0.56	0.45	0.805	0.252	0.2029
2.5	0.58	0.5	0.99	0.29	0.2871
3	0.57	0.5	0.966	0.285	0.2753
3.5	0.6	0.5	0.99	0.3	0.2970
4	0.61	0.5	0.69	0.305	0.2105
4.5	0.63	0.5	0.845	0.315	0.2662
5	0.61	0.5	0.966	0.305	0.2946
5.5	0.55	0.75	0.902	0.4125	0.3721
6.5	0.46	1	0.805	0.46	0.3703
7.5	0.38	1	0.825	0.380	0.3135
8.5	0.32	1	0.845	0.32	0.2704
9.5	0.27	1	0.644	0.27	0.1739
10.5	0.1	1	0.115	0.1	0.0115
11.5	0.08	1.025	0.196	0.082	0.0161
12.55	0	0.525	0	0	0
11.1		11.1			3.4051
Plus NAD#4					0.2986
NAD#7					3.704

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? No Ice

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson

Stage Discharge Calculations

Project: Atac Resources - Nadaleen

Date: 10-Sep-12

Site: Nad#8

Point (m)	Depth (meters)	Width (meters)	Velocity (m/sec)	Area (m sq)	Volume (cms)
0.91	0	0.145	0	0	0
1.2	0.17	0.245	0.032	0.042	0.0013
1.4	0.18	0.2	0.315	0.036	0.0113
1.6	0.21	0.2	0.383	0.042	0.0161
1.8	0.24	0.2	0.415	0.048	0.0199
2	0.18	0.2	0.66	0.036	0.0238
2.2	0.23	0.175	0.676	0.040	0.0272
2.35	0.23	0.15	0.552	0.035	0.0190
2.5	0.21	0.15	0.432	0.032	0.0136
2.65	0.23	0.15	0.66	0.035	0.0228
2.8	0.22	0.15	0.629	0.033	0.0208
2.95	0.28	0.15	0.508	0.042	0.0213
3.1	0.16	0.15	0.576	0.024	0.0138
3.25	0.21	0.15	0.66	0.032	0.0208
3.4	0.28	0.2	0.511	0.056	0.0286
3.65	0.08	0.25	0.442	0.02	0.0088
3.9	0	0.125	0	0	0.0000

2.99

2.99

0.2604

All velocity readings at 0.6 depth

No Staff Gauge

Data logger reading: No logger

Channel under ice? no ice cover

Method: Price Velocity meter/ TS Wading Rod

Measurement By: J.Gibson