EDI ENVIRONMENTAL DYNAMICS INC.
ATTN: Lyndsay Doetzel
2195 - 2nd Ave
Whitehorse YT Y1A 3T8

Date Received: 08-MAR-17
Report Date: 16-MAR-17 19:05 (MT)
Version: FINAL

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1898852

Project P.O. #: NOT SUBMITTED
Job Reference: MOUNT NANSEN 16-Y-0089
C of C Numbers:
Legal Site Desc:

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1898852-1	L1898852-2	L1898852-3	L1898852-4	L1898852-5
	Description	Water	Water	Water	Water	Water
	Sampled Date	08-MAR-17	07-MAR-17	07-MAR-17	08-MAR-17	08-MAR-17
	Sampled Time	08:40	14:50	13:00	14:45	
	Client ID	WQ-VC-U	WQ-VC-DBC	WQ-VC-UMN	WQ-VC-R+150	TRAVEL BLANK
Grouping	**Analyte**					
WATER						
Physical Tests	Colour, True (CU)					
	Conductivity (uS/cm)	206	212	269	295	<2.0 HTC
	Hardness (as CaCO3) (mg/L)	111	109	142	151	<0.50
	pH (pH)	7.69	7.70	7.64	8.04	5.41
	Total Suspended Solids (mg/L)	<3.0	<3.0	<3.0	<3.0	<3.0
	Total Dissolved Solids (mg/L)					
	TDS (Calculated) (mg/L)	118	119	159	174	<1.0
	Turbidity (NTU)					
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	93.7	93.7	105	119	<1.0
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	93.7	93.7	105	119	<1.0
	Ammonia, Total (as N) (mg/L)	<0.010 DLB	<0.010 DLB	<0.010 DLB	<0.010 DLB	<0.010 RRV
	Bromide (Br) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.039	0.040	0.042	0.050	<0.020
	Nitrate (as N) (mg/L)	0.104	0.101	0.0978	0.158	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Sulfate (SO4) (mg/L)	19.1	20.2	41.8	44.2	<0.30
	Anion Sum (meq/L)	2.28	2.30	2.98	3.32	<0.10
	Cation Sum (meq/L)	2.37	2.34	3.02	3.23	<0.10
	Cation - Anion Balance (%)	2.0	0.7	0.6	-1.3	0.0
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.0124	0.0102	0.0099	0.0170	<0.0030
	Antimony (Sb)-Total (mg/L)	0.00013	0.00011	0.00058	0.00052	<0.00010
	Arsenic (As)-Total (mg/L)	0.00031	0.00033	0.00077	0.00154	<0.00010
	Barium (Ba)-Total (mg/L)	0.0992	0.0997	0.0926	0.112	<0.000050
	Beryllium (Be)-Total (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000486	0.0000585	0.0000206	0.0000229	<0.0000050
	Calcium (Ca)-Total (mg/L)	29.0	29.6	36.7	39.8	<0.050
	Chromium (Cr)-Total (mg/L)	0.00014	0.00016	<0.00010	0.00014	<0.00010
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1898852-6 Water 08-MAR-17 10:35 FIELD BLANK	L1898852-7 Water 06-MAR-17 17:45 WQ-DC-U	L1898852-8 Water 06-MAR-17 19:10 WQ-TP	L1898852-9 Water 07-MAR-17 18:40 WQ-SEEP	L1898852-10 Water 07-MAR-17 18:45 WQ-SEEP-R
WATER						
Physical Tests	Colour, True (CU)	<2.0	1470	3380	1570	1570
	Conductivity (uS/cm)	<0.50	848	2380	882	887
	Hardness (as CaCO3) (mg/L)	5.39	7.95	7.82	7.70	7.72
	pH (pH)	<3.0	49.5	419	51.4	49.9
	Total Suspended Solids (mg/L)					
	Total Dissolved Solids (mg/L)	<1.0	1150	3470	1260	1250
	TDS (Calculated) (mg/L)					
	Turbidity (NTU)					
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	<1.0	288	404	287	291
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	<1.0	288	404	287	291
	Ammonia, Total (as N) (mg/L)	<0.010 RRV	3.80 DLDS	1.58 DLDS	4.98 DLDS	5.00 DLDS
	Bromide (Br) (mg/L)	<0.050	<0.25 DLDS	<1.0 DLDS	<0.25 DLDS	<0.25 DLDS
	Chloride (Cl) (mg/L)	<0.50	<2.5 DLDS	<10 DLDS	<2.5 DLDS	<2.5 DLDS
	Fluoride (F) (mg/L)	<0.020	0.10	0.47 DLDS	<0.10	<0.10
	Nitrate (as N) (mg/L)	<0.0050	0.287	<0.10 DLDS	0.619	0.607
	Nitrite (as N) (mg/L)	<0.0010	0.0160	<0.020 DLDS	0.0238	0.0209
	Sulfate (SO4) (mg/L)	<0.30	618	2240	694	680
	Anion Sum (meq/L)	<0.10	18.6	54.7	20.2	20.0
	Cation Sum (meq/L)	<0.10	19.3	52.1	21.1	21.0
	Cation - Anion Balance (%)	0.0	1.7	-2.4	2.0	2.4
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	0.0068	0.0073
	Cyanide, Total (mg/L)	<0.0050	0.0136	<0.0050	0.0195	0.0227
	Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	3.37	0.69	5.58	5.59
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0030	0.0760	2.45	0.0192	0.0188
	Antimony (Sb)-Total (mg/L)	<0.00010	0.00045	0.187	0.00056	0.00056
	Arsenic (As)-Total (mg/L)	<0.00010	0.0778	2.36	0.104	0.107
	Barium (Ba)-Total (mg/L)	<0.000050	0.0941	0.176	0.0696	0.0711
	Beryllium (Be)-Total (mg/L)	<0.000020	<0.000020	0.00018	<0.000020	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	0.0201	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	0.041	0.174	0.053	0.052
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.000194	0.0210	0.000488	0.000492
	Calcium (Ca)-Total (mg/L)	<0.050	245	770	268	267
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00063	0.00583	0.00074	0.00073
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00599	0.0189	0.00793	0.00803

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ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1898852-11				
	Description	Water				
	Sampled Date	08-MAR-17				
	Sampled Time	08:55				
	Client ID	WQ-PW				
Grouping	**Analyte**					
WATER						
Physical Tests	Colour, True (CU)	<5.0				
	Conductivity (uS/cm)	348				
	Hardness (as CaCO3) (mg/L)	186 HTC				
	pH (pH)	8.16				
	Total Suspended Solids (mg/L)					
	Total Dissolved Solids (mg/L)	217				
	TDS (Calculated) (mg/L)					
	Turbidity (NTU)	<0.10				
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)					
	Alkalinity, Carbonate (as CaCO3) (mg/L)					
	Alkalinity, Hydroxide (as CaCO3) (mg/L)					
	Alkalinity, Total (as CaCO3) (mg/L)	160				
	Ammonia, Total (as N) (mg/L)					
	Bromide (Br) (mg/L)					
	Chloride (Cl) (mg/L)	<0.50				
	Fluoride (F) (mg/L)	0.097				
	Nitrate (as N) (mg/L)	0.122				
	Nitrite (as N) (mg/L)	0.0011				
	Sulfate (SO4) (mg/L)	30.6				
	Anion Sum (meq/L)					
	Cation Sum (meq/L)					
	Cation - Anion Balance (%)					
Cyanides	Cyanide, Weak Acid Diss (mg/L)					
	Cyanide, Total (mg/L)					
	Cyanate (mg/L)					
	Thiocyanate (SCN) (mg/L)					
Total Metals	Aluminum (Al)-Total (mg/L)	<0.010				
	Antimony (Sb)-Total (mg/L)	<0.00050				
	Arsenic (As)-Total (mg/L)	0.00051				
	Barium (Ba)-Total (mg/L)	0.091				
	Beryllium (Be)-Total (mg/L)					
	Bismuth (Bi)-Total (mg/L)					
	Boron (B)-Total (mg/L)	<0.10				
	Cadmium (Cd)-Total (mg/L)	<0.00020				
	Calcium (Ca)-Total (mg/L)	42.7				
	Chromium (Cr)-Total (mg/L)	<0.0020				
	Cobalt (Co)-Total (mg/L)					

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ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1898852-1	L1898852-2	L1898852-3	L1898852-4	L1898852-5
	Description	Water	Water	Water	Water	Water
	Sampled Date	08-MAR-17	07-MAR-17	07-MAR-17	08-MAR-17	08-MAR-17
	Sampled Time	08:40	14:50	13:00	14:45	
	Client ID	WQ-VC-U	WQ-VC-DBC	WQ-VC-UMN	WQ-VC-R+150	TRAVEL BLANK
Grouping	**Analyte**					
WATER						
Total Metals	Copper (Cu)-Total (mg/L)	0.00143	0.00141	0.00130	0.00156	<0.00050
	Iron (Fe)-Total (mg/L)	0.014	0.013	0.014	0.023	<0.010
	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	0.000051	<0.000050
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	0.0013	0.0025	<0.0010
	Magnesium (Mg)-Total (mg/L)	10.3	10.3	13.7	15.0	<0.10
	Manganese (Mn)-Total (mg/L)	0.271	0.283	0.0342	0.0132	<0.00010
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000329	0.000338	0.000267	0.000517	<0.000050
	Nickel (Ni)-Total (mg/L)	0.00072	0.00078	0.00062	<0.00050	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	0.80	0.78	1.04	1.27	<0.10
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000086	0.000068	<0.000050
	Silicon (Si)-Total (mg/L)	6.53	6.63	6.86	7.95	<0.050
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	3.11	3.11	4.13	4.66	<0.050
	Strontium (Sr)-Total (mg/L)	0.296	0.304	0.337	0.375	<0.00020
	Sulfur (S)-Total (mg/L)	6.61	6.93	14.7	17.1	<0.50
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.00030	<0.00030	<0.00030	0.00048	<0.00030
	Uranium (U)-Total (mg/L)	0.000463	0.000504	0.000526	0.000788	<0.000010
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0065	0.0065	0.0056	0.0041	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	0.00054	0.00048	
	Arsenic (As)-Dissolved (mg/L)	0.00028	0.00025	0.00065	0.00129	
	Barium (Ba)-Dissolved (mg/L)	0.0970	0.0938	0.0874	0.100	
	Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	0.0000500	0.0000507	0.0000203	0.0000195	
	Calcium (Ca)-Dissolved (mg/L)	28.1	28.5	36.5	38.7	
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1898852-6	L1898852-7	L1898852-8	L1898852-9	L1898852-10
Description	Water	Water	Water	Water	Water
Sampled Date	08-MAR-17	06-MAR-17	06-MAR-17	07-MAR-17	07-MAR-17
Sampled Time	10:35	17:45	19:10	18:40	18:45
Client ID	FIELD BLANK	WQ-DC-U	WQ-TP	WQ-SEEP	WQ-SEEP-R
Grouping / **Analyte**					
WATER					
Total Metals Copper (Cu)-Total (mg/L)	<0.00050	0.00162	1.18	0.00332	0.00341
Iron (Fe)-Total (mg/L)	<0.010	9.40	31.0	22.1	22.8
Lead (Pb)-Total (mg/L)	<0.000050	0.000125	1.09	0.000168	0.000091
Lithium (Li)-Total (mg/L)	<0.0010	0.0012	0.0207	<0.0010	<0.0010
Magnesium (Mg)-Total (mg/L)	<0.10	66.1	140	59.7	61.0
Manganese (Mn)-Total (mg/L)	<0.00010	5.56	25.8	6.48	6.61
Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	0.0000220	<0.0000050	<0.0000050
Molybdenum (Mo)-Total (mg/L)	<0.000050	0.00107	0.00729	0.00108	0.00111
Nickel (Ni)-Total (mg/L)	<0.00050	0.00252	0.0130	0.00308	0.00325
Phosphorus (P)-Total (mg/L)	<0.050	0.064	0.28	0.059	0.052
Potassium (K)-Total (mg/L)	<0.10	5.96	47.0	6.59	6.78
Selenium (Se)-Total (mg/L)	<0.000050	0.000195	0.00030	0.000271	0.000270
Silicon (Si)-Total (mg/L)	<0.050	8.45	11.9	8.95	9.13
Silver (Ag)-Total (mg/L)	<0.000010	0.000017	0.0198	0.000036	0.000030
Sodium (Na)-Total (mg/L)	<0.050	32.8	48.7	38.4	39.9
Strontium (Sr)-Total (mg/L)	<0.00020	0.751	2.07	0.789	0.784
Sulfur (S)-Total (mg/L)	<0.50	257	815	276	281
Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	0.000815	<0.000010	<0.000010
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00050 DLA	<0.00010	<0.00010
Titanium (Ti)-Total (mg/L)	<0.00030	0.00399	0.0098	0.00139	0.00161
Uranium (U)-Total (mg/L)	<0.000010	0.00173	0.00529	0.00184	0.00184
Vanadium (V)-Total (mg/L)	<0.00050	0.00226	0.0079	0.00361	0.00363
Zinc (Zn)-Total (mg/L)	<0.0030	0.0230	1.55	0.0475	0.0481
Zirconium (Zr)-Total (mg/L)	<0.00030	0.00050	<0.0015 DLA	0.00083	0.00084
Dissolved Metals Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Aluminum (Al)-Dissolved (mg/L)	<0.0010	0.0084	<0.0050 DLA	0.0114	0.0107
Antimony (Sb)-Dissolved (mg/L)	<0.00010	0.00035	0.00719	0.00049	0.00048
Arsenic (As)-Dissolved (mg/L)	<0.00010	0.0606	0.687	0.0632	0.0582
Barium (Ba)-Dissolved (mg/L)	<0.000050	0.0888	0.101	0.0678	0.0592
Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.00010 DLA	<0.000020	<0.000020
Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00025 DLA	<0.000050	<0.000050
Boron (B)-Dissolved (mg/L)	<0.010	0.036	0.161	0.046	0.046
Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	0.000111	0.00140	0.000354	0.000329
Calcium (Ca)-Dissolved (mg/L)	<0.050	236	724	258	262
Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00041	<0.00050 DLA	0.00046	0.00059
Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00563	0.0151	0.00767	0.00699

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1898852-11				
	Description	Water				
	Sampled Date	08-MAR-17				
	Sampled Time	08:55				
	Client ID	WQ-PW				
Grouping	**Analyte**					
WATER						
Total Metals	Copper (Cu)-Total (mg/L)	<0.0010				
	Iron (Fe)-Total (mg/L)	<0.030				
	Lead (Pb)-Total (mg/L)	0.00060				
	Lithium (Li)-Total (mg/L)					
	Magnesium (Mg)-Total (mg/L)	19.3				
	Manganese (Mn)-Total (mg/L)	<0.0020				
	Mercury (Hg)-Total (mg/L)	<0.00020				
	Molybdenum (Mo)-Total (mg/L)					
	Nickel (Ni)-Total (mg/L)					
	Phosphorus (P)-Total (mg/L)					
	Potassium (K)-Total (mg/L)	1.00				
	Selenium (Se)-Total (mg/L)	<0.0010				
	Silicon (Si)-Total (mg/L)					
	Silver (Ag)-Total (mg/L)					
	Sodium (Na)-Total (mg/L)	5.1				
	Strontium (Sr)-Total (mg/L)					
	Sulfur (S)-Total (mg/L)					
	Thallium (Tl)-Total (mg/L)					
	Tin (Sn)-Total (mg/L)					
	Titanium (Ti)-Total (mg/L)					
	Uranium (U)-Total (mg/L)	0.00167				
	Vanadium (V)-Total (mg/L)					
	Zinc (Zn)-Total (mg/L)	<0.050				
	Zirconium (Zr)-Total (mg/L)					
Dissolved Metals	Dissolved Mercury Filtration Location					
	Dissolved Metals Filtration Location					
	Aluminum (Al)-Dissolved (mg/L)					
	Antimony (Sb)-Dissolved (mg/L)					
	Arsenic (As)-Dissolved (mg/L)					
	Barium (Ba)-Dissolved (mg/L)					
	Beryllium (Be)-Dissolved (mg/L)					
	Bismuth (Bi)-Dissolved (mg/L)					
	Boron (B)-Dissolved (mg/L)					
	Cadmium (Cd)-Dissolved (mg/L)					
	Calcium (Ca)-Dissolved (mg/L)					
	Chromium (Cr)-Dissolved (mg/L)					
	Cobalt (Co)-Dissolved (mg/L)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1898852-1	L1898852-2	L1898852-3	L1898852-4	L1898852-5
Description	Water	Water	Water	Water	Water
Sampled Date	08-MAR-17	07-MAR-17	07-MAR-17	08-MAR-17	08-MAR-17
Sampled Time	08:40	14:50	13:00	14:45	
Client ID	WQ-VC-U	WQ-VC-DBC	WQ-VC-UMN	WQ-VC-R+150	TRAVEL BLANK
Grouping / **Analyte**					
WATER					
Dissolved Metals Copper (Cu)-Dissolved (mg/L)	0.00137	0.00119	0.00119	0.00131	
Iron (Fe)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	0.0013	0.0022	
Magnesium (Mg)-Dissolved (mg/L)	9.87	9.26	12.3	13.2	
Manganese (Mn)-Dissolved (mg/L)	0.261	0.254	0.0307	0.0102	
Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Molybdenum (Mo)-Dissolved (mg/L)	0.000298	0.000317	0.000247	0.000456	
Nickel (Ni)-Dissolved (mg/L)	0.00077	0.00064	0.00055	<0.00050	
Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
Potassium (K)-Dissolved (mg/L)	0.76	0.71	0.97	1.14	
Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	0.000069	0.000066	
Silicon (Si)-Dissolved (mg/L)	6.40	6.21	6.55	7.30	
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium (Na)-Dissolved (mg/L)	2.96	2.81	3.71	4.17	
Strontium (Sr)-Dissolved (mg/L)	0.290	0.295	0.336	0.366	
Sulfur (S)-Dissolved (mg/L)	6.52	6.32	13.5	15.2	
Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
Uranium (U)-Dissolved (mg/L)	0.000421	0.000463	0.000488	0.000715	
Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0018	0.0020	0.0017	
Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1898852-6 Water 08-MAR-17 10:35 FIELD BLANK	L1898852-7 Water 06-MAR-17 17:45 WQ-DC-U	L1898852-8 Water 06-MAR-17 19:10 WQ-TP	L1898852-9 Water 07-MAR-17 18:40 WQ-SEEP	L1898852-10 Water 07-MAR-17 18:45 WQ-SEEP-R
WATER						
Dissolved Metals	Copper (Cu)-Dissolved (mg/L)	<0.00020	0.00081	0.0076	0.00183	0.00170
	Iron (Fe)-Dissolved (mg/L)	<0.010	7.51	5.50	19.4	18.4
	Lead (Pb)-Dissolved (mg/L)	0.000125 RRV	<0.000050	0.00097	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	0.0186	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	<0.10	62.5	138	58.0	56.5
	Manganese (Mn)-Dissolved (mg/L)	<0.00010	5.34	24.3	6.33	6.06
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000982	0.00645	0.00102	0.00102
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.00235	0.0074	0.00290	0.00277
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.25 DLA	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	<0.10	5.70	46.3	6.48	6.20
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000238	<0.00025 DLA	0.000290	0.000315
	Silicon (Si)-Dissolved (mg/L)	<0.050	7.95	8.81	8.76	8.16
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000050 DLA	<0.000010	0.000013
	Sodium (Na)-Dissolved (mg/L)	<0.050	31.1	48.4	37.7	36.1
	Strontium (Sr)-Dissolved (mg/L)	<0.00020	0.725	1.91	0.771	0.755
	Sulfur (S)-Dissolved (mg/L)	<0.50	241	796	268	241
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	0.000077	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00050 DLA	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00067	<0.0015 DLA	0.00113	0.00103
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.00160	0.00458	0.00173	0.00179
	Vanadium (V)-Dissolved (mg/L)	<0.00050	0.00136	<0.0025 DLA	0.00243	0.00230
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0227	0.454	0.0473	0.0440
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	0.00047	<0.0015 DLA	0.00077	0.00076

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1898852-11				
	Description	Water				
	Sampled Date	08-MAR-17				
	Sampled Time	08:55				
	Client ID	WQ-PW				
Grouping	**Analyte**					
WATER						
Dissolved Metals	Copper (Cu)-Dissolved (mg/L)					
	Iron (Fe)-Dissolved (mg/L)					
	Lead (Pb)-Dissolved (mg/L)					
	Lithium (Li)-Dissolved (mg/L)					
	Magnesium (Mg)-Dissolved (mg/L)					
	Manganese (Mn)-Dissolved (mg/L)					
	Mercury (Hg)-Dissolved (mg/L)					
	Molybdenum (Mo)-Dissolved (mg/L)					
	Nickel (Ni)-Dissolved (mg/L)					
	Phosphorus (P)-Dissolved (mg/L)					
	Potassium (K)-Dissolved (mg/L)					
	Selenium (Se)-Dissolved (mg/L)					
	Silicon (Si)-Dissolved (mg/L)					
	Silver (Ag)-Dissolved (mg/L)					
	Sodium (Na)-Dissolved (mg/L)					
	Strontium (Sr)-Dissolved (mg/L)					
	Sulfur (S)-Dissolved (mg/L)					
	Thallium (Tl)-Dissolved (mg/L)					
	Tin (Sn)-Dissolved (mg/L)					
	Titanium (Ti)-Dissolved (mg/L)					
	Uranium (U)-Dissolved (mg/L)					
	Vanadium (V)-Dissolved (mg/L)					
	Zinc (Zn)-Dissolved (mg/L)					
	Zirconium (Zr)-Dissolved (mg/L)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Iron (Fe)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1898852-1, -10, -2, -3, -4, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1898852-1, -2, -3, -4, -6, -7, -8
Matrix Spike	Barium (Ba)-Total	MS-B	L1898852-5
Matrix Spike	Calcium (Ca)-Total	MS-B	L1898852-1, -2, -3, -4, -6, -7, -8
Matrix Spike	Calcium (Ca)-Total	MS-B	L1898852-10, -11, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1898852-5
Matrix Spike	Iron (Fe)-Total	MS-B	L1898852-5
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1898852-1, -2, -3, -4, -6, -7, -8
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1898852-10, -11, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1898852-5
Matrix Spike	Manganese (Mn)-Total	MS-B	L1898852-1, -2, -3, -4, -6, -7, -8
Matrix Spike	Manganese (Mn)-Total	MS-B	L1898852-5
Matrix Spike	Potassium (K)-Total	MS-B	L1898852-10, -11, -9
Matrix Spike	Silicon (Si)-Total	MS-B	L1898852-5
Matrix Spike	Sodium (Na)-Total	MS-B	L1898852-1, -2, -3, -4, -6, -7, -8
Matrix Spike	Sodium (Na)-Total	MS-B	L1898852-10, -11, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1898852-5
Matrix Spike	Strontium (Sr)-Total	MS-B	L1898852-1, -2, -3, -4, -6, -7, -8
Matrix Spike	Strontium (Sr)-Total	MS-B	L1898852-10, -11, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1898852-5
Matrix Spike	Sulfur (S)-Total	MS-B	L1898852-5

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TITR-VA	Water	Alkalinity Species by Titration	APHA 2320 Alkalinity

This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

BE-D-L-CCMS-VA	Water	Diss. Be (low) in Water by CRC ICPMS	APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

BE-T-L-CCMS-VA	Water	Total Be (Low) in Water by CRC ICPMS	EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

BR-L-IC-N-VA	Water	Bromide in Water by IC (Low Level)	EPA 300.1 (mod)

Reference Information

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CL-IC-N-VA	Water	Chloride in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CN-CNO-WT	Water	Cyanate	APHA 4500-CN-L

This analysis is carried out using procedures adapted from APHA method 4500-CN "Cyanide". Cyanate is determined by the Cyanate hydrolysis method using an ammonia selective electrode

CN-SCN-VA	Water	Thiocyanate by Colour	APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN- M "Thiocyanate" Thiocyanate is determined by the ferric nitrate colourimetric method.
Water samples containing high levels of hexavalent chromium, cyanide (together with sulfide), reducing agents, or hydrocarbons may cause negative or positive interferences with this method. Contact ALS for additional information if required.

CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.

CN-WAD-CFA-VA	Water	Weak Acid Diss. Cyanide in water by CFA	APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

COLOUR-TRUE-VA	Water	Colour (True) by Spectrometer	BCMOE Colour Single Wavelength

This analysis is carried out using procedures adapted from British Columbia Environmental Manual "Colour- Single Wavelength." Colour (True Colour) is determined by filtering a sample through a 0.45 micron membrane filter followed by analysis of the filtrate using the platinum-cobalt colourimetric method.
Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment. Concurrent measurement of sample pH is recommended.

EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

EC-SCREEN-VA	Water	Conductivity Screen (Internal Use Only)	APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F-IC-N-VA	Water	Fluoride in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-VA	Water	Hardness	APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-D-CVAA-VA	Water	Diss. Mercury in Water by CVAAS or CVAFS	APHA 3030B/EPA 1631E (mod)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.

HG-T-CVAA-VA	Water	Total Mercury in Water by CVAAS or CVAFS	EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.

HG-TOT-CVAFS-VA	Water	Total Hg in Water by CVAFS LOR=50ppt	EPA 1631E (mod)

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry or atomic absorption spectrophotometry (EPA Method 245.7).

IONBALANCE-VA	Water	Ion Balance Calculation	APHA 1030E

Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero.

Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance is calculated as:

Reference Information

Ion Balance (%) = [Cation Sum-Anion Sum] / [Cation Sum+Anion Sum]

MET-D-CCMS-VA Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-T-CCMS-VA Water Total Metals in Water by CRC ICPMS EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

NH3-F-VA Water Ammonia in Water by Fluorescence APHA 4500 NH3-NITROGEN (AMMONIA)

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NH3-F-VA Water Ammonia in Water by Fluorescence J. ENVIRON. MONIT., 2005, 7, 37-42, RSC

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NO2-L-IC-N-VA Water Nitrite in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-L-IC-N-VA Water Nitrate in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H pH Value

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

SO4-IC-N-VA Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

TDS-CALC-VA Water TDS (Calculated) APHA 1030E (20TH EDITION)

This analysis is carried out using procedures adapted from APHA 1030E "Checking Correctness of Analyses".
The Total Dissolved Solids result is calculated from measured concentrations of anions and cations in the sample.

TDS-VA Water Total Dissolved Solids by Gravimetric APHA 2540 C - GRAVIMETRIC

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, TDS is determined by evaporating the filtrate to dryness at 180 degrees celsius.

TSS-VA Water Total Suspended Solids by Gravimetric APHA 2540 D - GRAVIMETRIC

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.
Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.

TURBIDITY-VA Water Turbidity by Meter APHA 2130 Turbidity

This analysis is carried out using procedures adapted from APHA Method 2130 "Turbidity". Turbidity is determined by the nephelometric method.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Reference Information

VA ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L1898852-COFC

COC Number:

Page 1 of 3

Report To		Report Format / Distribution		Turnaround Time (TAT) (Rush TAT is not available for all tests)	
Company:	EDI	Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R	☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Lyndsay Doetzel	Quality Control (QC) Report with Report	☐ Yes ☐ No	P	☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked		E	☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
Phone:	867-393-4682	Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	E2	☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
		Email 1 or Fax	ldoetzel@edynamics.com	Specify Date Required for E2, E or P:	
		Email 2	Emilie.Hamm@gov.yk.ca		
		Email 3	erik.pit@gov.yk.ca		

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Company:	EDI	Email 1 or Fax	sjenner@edynamics.com
Contact:	S Jenner	Email 2	ldoetzel@edynamics.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q55559	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 16-Y-0089	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

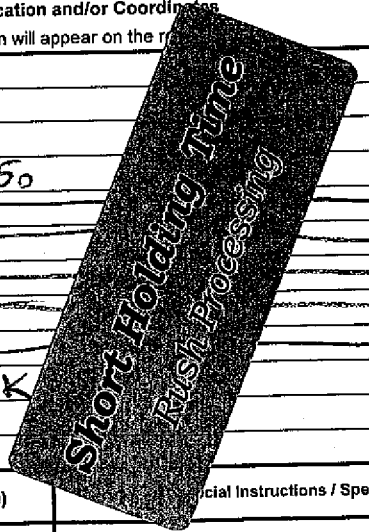
ALS Lab Work Order # (lab use only):

ALS Contact: V. Dykshoorn **Sampler:** AM SD DS

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA (P)	ANIONS-ALL-IC-WR,TSS-MAN-WR (P)	CN-WAD-CFA-VA,CN-T-CFA-VA (P)	CN-CNO-WT (P)	CN-SCN-VA (P)	NH3-F-VA (P)	MET-T-BCMDG-VA (F/P)	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
1	WQ-VC-U	08-MAR-17	0840	Water	R	R	R	R	R	R	R	R	R					9
2	WQ-VC-DBC	07-MAR-17	1450	Water	R	R	R	R	R	R	R	R	R					9
3	WQ-VC-UMN	07-MAR-17	1300	Water	R	R	R	R	R	R	R	R	R					9
4	WQ-VC-R+150	06-MAR-17	1445	Water	R	R	R	R	R	R	R	R	R					9
		MAR-17		Water	R	R	R	R	R	R	R	R	R					9
		MAR-17		Water	R	R	R	R	R	R	R	R	R					9
		MAR-17		Water	R	R	R	R	R	R	R	R	R					9
		MAR-17		Water	R	R	R	R	R	R	R	R	R					9
	WQ-PW	08-MAR-17	0855	WATER														3
5	TRAVEL BLANK	08-MAR-17	/	WATER	R	R	R	R	R	R	R		R					7



Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ Yes ☑ No

Are samples for human drinking water use?
☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☐	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
3.3					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
A. MISCHLER	08 MAR 17	15:25	VD.	Mar 8/17	15:25			

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NA-FM-0326a v09 Front/04 January 2014

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L1898852-COFC

COC Number:

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Lyndsay Doetzel	Quality Control (QC) Report with Report ☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
Phone:	867-393-4882	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
		Email 1 or Fax ldoetzel@edynamics.com	Specify Date Required for E2, E or P:
		Email 2 Emilie.Hamm@gov.yk.ca	
		Email 3 erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax sjenner@edynamics.com	
Contact:	S Jenner	Email 2 ldoetzel@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q55559	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 16-Y-0089	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		ALS Contact: V. Dykshoorn	Sampler: AM SD DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	P	P	P	P	P	P	F/P						Number of Containers
					ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA						
6	FIELD BLANK	08-MAR-17	1035	Water	R	R	R	R	R	R	R	R	R						9
7	WQ-DC-U	06-MAR-17	1745	Water	R	R	R	R	R	R	R	R	R						9
8	WQ-TP	06-MAR-17	1910	Water	R	R	R	R	R	R	R	R	R						9
9	WQ-SEEP	07-MAR-17	1840	Water	R	R	R	R	R	R	R	R	R						9
10	WQ-SEEP-R	07-MAR-17	1845	Water	R	R	R	R	R	R	R	R	R						9
		-MAR-17		Water	R	R	R	R	R	R	R	R	R						9
		-MAR-17		Water	R	R	R	R	R	R	R	R	R						9
		-MAR-17		Water	R	R	R	R	R	R	R	R	R						9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☐	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
3.3					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
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Canada Toll Free: 1 800 668 9878

L1898852-COFC

COC Number:

Page 3 of 3

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Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
Phone:	867-393-4882	Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
		Email 1 or Fax ldoetzel@edynamics.com	Specify Date Required for E2,E or P:
		Email 2 Emilie.Hamm@gov.yk.ca	
		Email 3 erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☐ No	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax sjenner@edynamics.com	
Contact:	S Jenner	Email 2 ldoetzel@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q55556	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 16-Y-0089	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		ALS Contact: V. Dykshoorn	Sampler: AM SD DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	FULL-TOT-DW-WR	Number of Containers
11	WQ-PW	08 -MAR-17	08 55	Water	R	3

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
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