



Date: 10-JUN-15

PO No.:

WO No.: L1620850

Project Ref:

Sample ID: CCP WELL

Sampled By: GH

Date Collected: 02-JUN-15

Lab Sample ID: L1620850-1

Matrix: Water

Pre-Pay Clients - Vancouver
Cedar Point Class "E" Provincial Park
Box 165

Likely BC VOL1N0

ATTN: Robin Hood

PAGE 1 of 3

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Physical Tests						
Colour, True	<5.0		CU			03-JUN-15
Conductivity	199		uS/cm			06-JUN-15
Hardness (as CaCO3)	113		mg/L		500	10-JUN-15
pH	7.64		pH		6.5-8.5	06-JUN-15
Total Dissolved Solids	137		mg/L		500	06-JUN-15
Turbidity *	0.17		NTU	0.1		03-JUN-15
Anions and Nutrients						
Alkalinity, Total (as CaCO3)	104		mg/L			05-JUN-15
Chloride (Cl)	<0.50		mg/L		250	04-JUN-15
Fluoride (F)	0.027		mg/L	1.5		04-JUN-15
Nitrate (as N)	0.107		mg/L	10		04-JUN-15
Nitrite (as N)	<0.0010		mg/L	1		04-JUN-15
Sulfate (SO4)	6.84		mg/L		500	04-JUN-15
Bacteriological Tests						
E. coli	<1		MPN/100mL	0		03-JUN-15
Coliform Bacteria - Total	<1		MPN/100mL	0		03-JUN-15
Total Metals						
Aluminum (Al)-Total	<0.010		mg/L		0.1	09-JUN-15
Antimony (Sb)-Total	<0.00050		mg/L	0.006		09-JUN-15
Arsenic (As)-Total	0.00045		mg/L	0.01		09-JUN-15
Barium (Ba)-Total	<0.020		mg/L	1		10-JUN-15
Boron (B)-Total	<0.10		mg/L	5		10-JUN-15
Cadmium (Cd)-Total	<0.00020		mg/L	0.005		09-JUN-15
Calcium (Ca)-Total	38.3		mg/L			10-JUN-15
Chromium (Cr)-Total	<0.0020		mg/L	0.05		09-JUN-15
Copper (Cu)-Total	0.0057		mg/L		1.0	09-JUN-15
Iron (Fe)-Total	<0.030		mg/L		0.3	10-JUN-15
Lead (Pb)-Total	<0.00050		mg/L	0.01		09-JUN-15
Magnesium (Mg)-Total	4.21		mg/L			10-JUN-15
Manganese (Mn)-Total	<0.0020		mg/L		0.05	09-JUN-15
Mercury (Hg)-Total	<0.00020		mg/L	0.001		03-JUN-15
Potassium (K)-Total	0.29		mg/L			09-JUN-15
Selenium (Se)-Total	<0.0010		mg/L	0.05		09-JUN-15
Sodium (Na)-Total	<2.0		mg/L		200	10-JUN-15
Uranium (U)-Total	<0.00010		mg/L	0.02		09-JUN-15
Zinc (Zn)-Total	<0.050		mg/L		5.0	10-JUN-15

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700

ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company



Date: 10-JUN-15

PO No.:

WO No.: L1620850

Project Ref:

Sample ID: CCP WELL


Sampled By: GH

Date Collected: 02-JUN-15

Lab Sample ID: L1620850-1

Matrix: Water

Pre-Pay Clients - Vancouver
Cedar Point Class "E" Provincial Park
Box 165
Likely BC V0L1N0
ATTN: Robin Hood

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
<p>CDWQG = Health Canada Guideline Limits updated</p> <p>* CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit. * Turbidity guideline based on membrane filtration. For guidelines on conventional treatment and slow sand or diatomaceous earth filtration please see Summary Table of Guidelines for Canadian Drinking Water Quality - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQG MAC and/ or Aesthetic Objective. - In British Columbia the acceptable limits for drinking water refer to the Guidelines for Canadian Drinking Water Quality for all chemical, physical and radiological parameters. For microbiological parameters, the BC Drinking Water Protection Regulation has an immediate reporting standard of no detectable fecal coliform bacteria or Escherichia coli per 100 mL, which is represented on the report as a result of 0 or <1 MPN/100 mL of 0 or <1 CFU/100 mL.</p>	OCTOBER 2014					
<p>Approved by </p> <p>Jenny Poon, B.Sc. Account Manager</p>						

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700

ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

Guidelines & Objectives

Health Canada MAC Health Related Criteria Limits

Nitrate/Nitrite-N*	Criteria limit is 10 mg/L (1.0 mg/L if present as all Nitrite-N). High concentrations may contribute to blue baby syndrome in infants.
Lead*	A cumulative body poison, uncommon in naturally occurring hard waters.
Fluoride*	Present in fluoridated water supplies at 0.8 mg/L to reduce dental caries. Elevated levels causes fluorosis (mottling of teeth).
Total Coliforms*	Criteria is 0 CFU/100mL. Adverse health effects.
E. Coli*	Criteria is 0 CFU/100 mL. Certain E. Coli bacteria can be life threatening.

*Health Canada Canadian Drinking Water Quality Guidelines (MAC limit)

Aesthetic Objective Concentration Levels

Alkalinity	Acid neutralizing capacity. Usually a measure of carbonate and bicarbonates and calculated and reported as calcium carbonate.
Balance	Quality control parameter ratioing cations to anions
Bicarbonate	See Alkalinity. Report as the anion HCO ₃ -1
Carbonate	See Alkalinity. Reported at the anion CO ₃ -2
Calcium	See Hardness. Common major cation of water chemistry.
Chloride	Common major anion of water chemistry.
Conductance	Physical test measuring water salinity (dissolved ions or solids)
Hardness	Classical measure or capacity of water to precipitate soap (chiefly calcium and magnesium ions). Causes scaling tendency in water if carbonates/bicarbonates are present (if >200 mg/L). For drinking water purposes waters with results <200 mg/L are considered acceptable, results >200 mg/L are considered poor but can be tolerated. Results >500 mg/L are unacceptable.
Hydroxide	See alkalinity
Magnesium	See hardness. Common major cation of water chemistry. Elevated levels (>125 mg/L) may exert a cathartic or diuretic action.
pH	Measure of water acidity/alkalinity. Normal range is 7.0-8.5.
Potassium	Common major cation of water chemistry.
Sodium	Common major cation of water chemistry. Measure of salinity (saltiness).
Sulphate	Common major anion of water chemistry. Elevated levels may exert a cathartic or diuretic action.
Total Dissolved Solids	A measure of water salinity.
Iron	Causes staining to laundry and porcelain and astringent taste. Oxidizes to red-brown precipitate on exposure to air.
Manganese	Elevated levels may cause staining of laundry and porcelain.
Heterotrophic Plate Count	Criteria is 500 cfu/mL Measure of heterotrophic bacteria present.

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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.



L1620850-COFC

Report To Cedar Point Class "2" Provincial Park		Report Format / Distribution			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)																		
Company:		Select Report Format:	<input checked="" type="checkbox"/> PDF	<input type="checkbox"/> EXCEL	<input type="checkbox"/> EDD (DIGITAL)	R	<input checked="" type="checkbox"/> Regular (Standard TAT if received by 3pm)																
Contact: Robin Hood		Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		P	<input type="checkbox"/> Priority (2-4 business days if received by 3pm)																
Address:		<input type="checkbox"/> Criteria on Report - provide details below if box checked				E	<input type="checkbox"/> Emergency (1-2 business days if received by 3pm)																
Phone:		Select Distribution:	<input checked="" type="checkbox"/> EMAIL	<input type="checkbox"/> MAIL	<input type="checkbox"/> FAX	E2	<input type="checkbox"/> Same day or weekend emergency if received by 10am - contact ALS for surcharge.																
Invoice To		Invoice Distribution				Specify Date Required for E2, E or P:																	
Same as Report To <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL	<input type="checkbox"/> MAIL	<input type="checkbox"/> FAX	Analysis Request																	
Copy of Invoice with Report <input type="checkbox"/> Yes <input type="checkbox"/> No		Email 1 or Fax				Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																	
Company:		Email 2	sherwood@thelakebc.ca			<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">General</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TOTAL METALS</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">BACTERIA</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TOTAL MERCURY</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TANIN, H₂O₂/COD/PHT/ALU</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of Containers</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>5</td> </tr> </table>	General	TOTAL METALS	BACTERIA	TOTAL MERCURY	TANIN, H ₂ O ₂ /COD/PHT/ALU	Number of Containers	X	X	X	X	X	5					
General	TOTAL METALS	BACTERIA	TOTAL MERCURY	TANIN, H ₂ O ₂ /COD/PHT/ALU	Number of Containers																		
X	X	X	X	X	5																		
Project Information		Oil and Gas Required Fields (client use)																					
ALS Quote #:		Approver ID:																					
Job #:		GL Account #:																					
PO / AFE:		Activity Code:																					
LSD:		Location:																					
ALS Lab Work Order # (lab use only)		ALS Contact:			Sampler:	GH																	
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																			
	CCP WWH	02/20/15	09:40	WATER	X	X	X	X	X														
Drinking Water (DW) Samples ¹ (client use)		Special Instructions / Specify Criteria to add on report (client use)			LE CONDITION AS RECEIVED (lab use only)																		
Are samples taken from a Regulated DW System?					Frozen	<input type="checkbox"/>	SIF Observations	Yes <input type="checkbox"/>	No <input type="checkbox"/>														
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Ice packs	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Custody seal intact	Yes <input type="checkbox"/>	No <input type="checkbox"/>													
Are samples for human drinking water use?					Cooling Initiated	<input type="checkbox"/>																	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C																	
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:															
GABRIEL HOLMIS	JUNE 2/15	15:30				ISAAC	JUNE 3	09:45															

**Short Holding Time
Rush Processing**

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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