



HUSKY ENERGY INC  
ATTN: Chris Salewich  
707 8 AVENUE SW  
BOX 6525 STN D SW  
CALGARY AB T2P 1H5

Date Received: 19-DEC-13  
Report Date: 02-JAN-14 09:51 (MT)  
Version: FINAL

Client Phone: 403-700-4780

## Certificate of Analysis

**Lab Work Order #:** L1405325  
**Project P.O. #:** 8400675388/US-55463-02-01-DR-WM  
**Job Reference:** G/L ACCOUNT CODE 82250  
**C of C Numbers:** 1  
**Legal Site Desc:** Husky Slater River Campsite MAEV # 141388

**Other Information:** AFE Number: 8400675388/US-55463-02-01-DR-WM  
Approver Code: 2Z-02006150  
Cost Center: G/L code: 82250  
Husky Manager: Chris Salewich  
Legal Land Description: Husky Slater River Campsite MAEV #141388

Karen O'Malley  
Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311  
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1405325-1 EFFLUENT DISCHARGE 238707 Sampled By: CP on 18-DEC-13 @ 07:45 Matrix: WATER							
<b>Miscellaneous Parameters</b>							
Fecal Coliforms	96	OCR	1	CFU/100mL		19-DEC-13	R2763489
Oil and Grease	<1.0		1.0	mg/L		21-DEC-13	R2763942
Special Request	See Attached					19-DEC-13	R2767385
Total Suspended Solids	<3		3.0	mg/L		20-DEC-13	R2763650
pH	7.29		0.10	pH		20-DEC-13	R2763719

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

## Sample Parameter Qualifier Key:

Qualifier	Description
OCR	Parameter is out of client specific range.

## Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
FC-MF-YL	Water	Fecal Coliform	APHA 9222D
OGG-LLE-ED	Water	Oil and Grease-Gra	APHA 5520 B HEXANE MTBE EXT. GRAVIME
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
SPECIAL REQUEST-TG	Misc.	Special Request Taiga Yellowknife	SEE SUBLET LAB RESULTS

\*\* 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
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
TG	TAIGA ENVIRONMENTAL LABORATORY (INAC)
YL	ALS ENVIRONMENTAL -YELLOWKNIFE, NORTHWEST TERRITORIES CANADA

## Chain of Custody Numbers:

1

## 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.



## Quality Control Report

Workorder: L1405325

Report Date: 02-JAN-14

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Client: HUSKY ENERGY INC  
 707 8 AVENUE SW BOX 6525 STN D SW  
 CALGARY AB T2P 1H5

Contact: Chris Salewich

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>FC-MF-YL</b>		<b>Water</b>						
Batch	R2763489							
<b>WG1808438-1</b>	<b>MB</b>							
Fecal Coliforms			<1		CFU/100mL		1	19-DEC-13
<b>OGG-LLE-ED</b>		<b>Water</b>						
Batch	R2763942							
<b>WG1808853-2</b>	<b>LCS</b>							
Oil and Grease			95.0		%		70-130	21-DEC-13
<b>WG1808853-1</b>	<b>MB</b>							
Oil and Grease			<1.0		mg/L		1	21-DEC-13
<b>PH-ED</b>		<b>Water</b>						
Batch	R2763719							
<b>WG1808269-3</b>	<b>LCS</b>							
pH			7.05		pH		6.9-7.1	20-DEC-13
<b>SOLIDS-TOTSUS-ED</b>		<b>Water</b>						
Batch	R2763650							
<b>WG1808288-2</b>	<b>LCS</b>							
Total Suspended Solids			90.0		%		85-115	20-DEC-13
<b>WG1808288-1</b>	<b>MB</b>							
Total Suspended Solids			<3.0		mg/L		3	20-DEC-13

# Quality Control Report

Workorder: L1405325

Report Date: 02-JAN-14

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## Legend:

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Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

## Sample Parameter Qualifier Definitions:

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Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.

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# Quality Control Report

Workorder: L1405325

Report Date: 02-JAN-14

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## Hold Time Exceedances:

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ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
<b>Physical Tests</b>							
pH	1	18-DEC-13 07:45	20-DEC-13 13:38	0.25	54	hours	EHTR-FM

## Legend & Qualifier Definitions:

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EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.  
EHTR: Exceeded ALS recommended hold time prior to sample receipt.  
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.  
EHT: Exceeded ALS recommended hold time prior to analysis.  
Rec. HT: ALS recommended hold time (see units).

Notes\*:  
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.  
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1405325 were received on 19-DEC-13 08:20.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



**Taiga Environmental Laboratory**  
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3  
Tel: (867)-669-2788 Fax: (867)-669-2718

**Taiga Batch No.:**  
**131100**

**- FINAL REPORT -**

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**Prepared For:** ALS Environmental

**Address:** 314 Old Airport Road  
Unit 116  
Yellowknife, NT  
X1A 2R1

**Attn:** Bradley Koswan

**Facsimile:**

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**Final report has been reviewed and approved by:**

A handwritten signature in black ink, appearing to read 'Angelique Ruzindana', written over a horizontal line.

**Angelique Ruzindana**  
**Quality Assurance Officer**

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**NOTES:**

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
  - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
  - Environment Canada
  - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

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**ReportDate:** Tuesday, December 31, 2013

**Print Date:** Tuesday, December 31, 2013



Taiga Environmental Laboratory  
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3  
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:  
**131100**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **L1405325-1 EFFLUENT DISCHARGE** Taiga Sample ID: **001**  
**238707**

**Client Project:**

**Sample Type:** Water  
**Received Date:** 19-Dec-13  
**Sampling Date:** 18-Dec-13  
**Sampling Time:** 7:45

**Location:**

**Report Status:** Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Inorganics - Nutrients</u></b>						
Biochemical Oxygen Demand	5	2	mg/L	19-Dec-13	SM5210:B	

**ReportDate:** Tuesday, December 31, 2013  
**Print Date:** Tuesday, December 31, 2013





Taiga Environmental Laboratory  
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3  
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:  
**131100**


**- CERTIFICATE OF ANALYSIS -**

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Client Sample ID: **L1405325-1 EFFLUENT DISCHARGE**      Taiga Sample ID: **001**  
**238707**

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\* Taiga analytical methods are based on the following standard analytical methods  
SM - Standard Methods for the Examination of Water and Wastewater  
EPA - United States Environmental Protection Agency

<b>Report To</b>		<b>Report Format / Distribution</b>			<b>Service Requested (Rush for routine analysis subject to availability)</b>																
Company: Husky		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other			<input type="radio"/> Regular (Standard Turnaround Times - Business Days)																
Contact: Chris Salewich		<input type="checkbox"/> PDF <input type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax			<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																
Address: 707 8 ave SW Calgary, Alberta T2P 1H5		Email 1: chris.salewich@huskyenergy.com			<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT																
Phone: 403-700-4780 Fax: _____		Email 2: stevesmith@envconsulting.com			<input checked="" type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT																
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Email 3: labresults@marquissalliance.com ken.shepherd@hotmail.com			<b>Analysis Request</b>																
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Client / Project Information</b>			Please indicate below Filtered, Preserved or both (F, P, F/P)																
Company: _____		Job #: G/L Account Code 82250			FC-MF-YL	TOTSUS	OGG	BOD	PH	P											Number of Containers
Contact: _____		PO / AFE: 8400675388/ US-55463-02-01-DR-WM																			
Address: _____		LSD: Husky Slater River Campsite																			
Phone: _____ Fax: _____		Quote #: MAEV# 141388																			
Lab Work Order # (lab use only)		ALS Contact: Bruce Stuart			Sampler: Carmen Parry																
L1405325																					
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	FC-MF-YL	TOTSUS	OGG	BOD	PH												Number of Containers
	Effluent Discharge 23870#			Water	X	X	X	X	X												4
<b>HUSKY BILLING INFORMATION FOR MARQUIS ALLIANCE:</b> Approver #: 2Z-02006150 Cortex Requisition (Onsite Supervisor): <a href="mailto:chris.salewich@huskyenergy.com">chris.salewich@huskyenergy.com</a> Unique ID: Slater River-Lab Testing Services Environmental AFE#: US-56120-EX-13-DR-WM / PO#: 8400675388 Surface: Construction AWR Please send field tickets to: <a href="mailto:athurmeier@marquissalliance.com">athurmeier@marquissalliance.com</a> for P.O. requests Marquis Alliance Technician: (Please contact if you have any questions) <b>CONTRACT #:</b> All invoices and field tickets must have this information*																					
 L1405325-COFC																					
<b>Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details</b>																					
Any questions please contact Steve Smith @ 780-214-3217, Carmen Perry @ 778-872-0949 or Kyle Arsenault @ <del>250-263-4864</del> 778 256 2224																					
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 provided on a separate Excel tab. Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																					
<b>SHIPMENT RELEASE (client use)</b>				<b>SHIPMENT RECEPTION (lab use only)</b>				<b>SHIPMENT VERIFICATION (lab use only)</b>													
Released by: Ken Shepherd	Date (dd-mmm-yy) 18/12/13	Time (hh-mm) 0930	Received by: K S	Date: 19-Dec-13	Time: 1120am	Temperature: °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF											

8/10/13