

				Analytes (BDL = Below Detection Limit; ND = Non Detect)																																			
				Organic Compounds in Soil (mg/kg [ppm])																		Inorganics in Soil			Metals in Soil (mg/kg [ppm])														
Allowable Concentration -->				500	TPH (total volatile and extractable petroleum hydrocarbons)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver	Zinc
Location	Sample Date:	Sample Matrix	Matrix Notes					Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3,C,D)pyrene	Naphthalene	Pyrene															
USA 1-12LW	11/13/13	Pit	01 [9']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.12	64	9.6	2.2	380	BDL	8.3	BDL	9.6	8.4	BDL	5.3	BDL	BDL	24	
USA 1-12LW	11/13/13	Pit	E 01 [9']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.8	16	8.4	2	270	BDL	8.1	BDL	8.6	7.6	BDL	4.8	BDL	BDL	21	
USA 1-12LW	11/13/13	Pit	S 01 [7']	67.7	1.7	66	BDL	BDL	BDL	BDL	0.007	0.017	BDL	BDL	BDL	BDL	BDL	0.0061	0.013	BDL	0.055	0.011	0.13	20	7.6	2.7	340	BDL	25	BDL	15	41	BDL	4.7	BDL	BDL	39		
USA 1-12LW	11/13/13	Pit	S 01 [9']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	27	8.4	3	240	BDL	10	BDL	10	9.6	BDL	6.7	BDL	BDL	26		
USA 1-12LW	11/13/13	Pit	S 02 [7']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.14	15	8	2.2	350	BDL	8.6	BDL	10	8.6	BDL	5	BDL	BDL	22		
USA 1-12LW	11/14/13	Pit	W 01 [9']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.1	10	8.1	2.5	260	BDL	9.9	BDL	11	9.4	BDL	5.7	BDL	BDL	26		
USA 1-12LW	11/14/13	Pit	N 01 [9']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.7	14	8.5	2.7	280	BDL	11	BDL	10	9.6	BDL	6.5	BDL	BDL	27		



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Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Monday November 25, 2013

Report Number: L669242


Samples Received: 11/16/13

Client Project: PIT SAMPLING

Description: USA01-12LW

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PIT01) 9 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:00

ESC Sample # : L669242-01
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	8.3	2.0	mg/kg	Calc.	11/25/13	1
ORP	140		mV	2580 B-2011	11/21/13	1
pH	9.6		su	9045D	11/21/13	1
Sodium Adsorption Ratio	64.			Calc.	11/18/13	1
Specific Conductance	12.		umhos/cm	9050AMod	11/22/13	1
Mercury	BDL	0.020	mg/kg	7471	11/20/13	1
Arsenic	2.2	1.0	mg/kg	6010B	11/24/13	1
Barium	380	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	8.3	0.50	mg/kg	6010B	11/24/13	1
Copper	9.6	1.0	mg/kg	6010B	11/24/13	1
Lead	8.4	0.25	mg/kg	6010B	11/24/13	1
Nickel	5.3	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	24.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	96.1		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	103.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	116.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	100.		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	79.4		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669242-01 (PH) - 9.6@20.3c



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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITE01) 9 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:15

ESC Sample # : L669242-02
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	8.1	2.0	mg/kg	Calc.	11/25/13	1
ORP	220		mV	2580 B-2011	11/21/13	1
pH	8.4		su	9045D	11/21/13	1
Sodium Adsorption Ratio	16.			Calc.	11/18/13	1
Specific Conductance	1800		umhos/cm	9050AMod	11/22/13	1
Mercury	BDL	0.020	mg/kg	7471	11/20/13	1
Arsenic	2.0	1.0	mg/kg	6010B	11/24/13	1
Barium	270	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	8.1	0.50	mg/kg	6010B	11/24/13	1
Copper	8.6	1.0	mg/kg	6010B	11/24/13	1
Lead	7.6	0.25	mg/kg	6010B	11/24/13	1
Nickel	4.8	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	21.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	95.7		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	97.5		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	104.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	115.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	97.0		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	78.8		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITS01) 7 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:35

ESC Sample # : L669242-03
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	25.	2.0	mg/kg	Calc.	11/25/13	1
ORP	220		mV	2580 B-2011	11/21/13	1
pH	7.6		su	9045D	11/21/13	1
Sodium Adsorption Ratio	20.			Calc.	11/18/13	1
Specific Conductance	13.		umhos/cm	9050AMod	11/22/13	1
Mercury	BDL	0.020	mg/kg	7471	11/21/13	1
Arsenic	2.7	1.0	mg/kg	6010B	11/24/13	1
Barium	340	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	25.	0.50	mg/kg	6010B	11/24/13	1
Copper	15.	1.0	mg/kg	6010B	11/24/13	1
Lead	41.	0.25	mg/kg	6010B	11/24/13	1
Nickel	4.7	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	39.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	1.7	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	96.2		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	99.5		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	100.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	110.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	107.		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	66.	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	75.6		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
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143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITS01) 9 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:40

ESC Sample # : L669242-04
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	10.	2.0	mg/kg	Calc.	11/25/13	1
ORP	200		mV	2580 B-2011	11/21/13	1
pH	8.4		su	9045D	11/21/13	1
Sodium Adsorption Ratio	27.			Calc.	11/18/13	1
Specific Conductance	13.		umhos/cm	9050AMod	11/22/13	1
Mercury	BDL	0.020	mg/kg	7471	11/21/13	1
Arsenic	3.0	1.0	mg/kg	6010B	11/24/13	1
Barium	240	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	10.	0.50	mg/kg	6010B	11/24/13	1
Copper	10.	1.0	mg/kg	6010B	11/24/13	1
Lead	9.6	0.25	mg/kg	6010B	11/24/13	1
Nickel	6.7	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	26.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.3		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	95.4		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	101.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	113.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	95.8		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	85.2		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITS02) 7 FT
Collected By : Dustin Held
Collection Date : 11/13/13 15:35

ESC Sample # : L669242-05
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/24/13	1
Chromium, Trivalent	8.6	2.0	mg/kg	Calc.	11/25/13	1
ORP	280		mV	2580 B-2011	11/21/13	1
pH	8.0		su	9045D	11/21/13	1
Sodium Adsorption Ratio	15.			Calc.	11/18/13	1
Specific Conductance	14.		umhos/cm	9050AMod	11/22/13	1
Mercury	BDL	0.020	mg/kg	7471	11/21/13	1
Arsenic	2.2	1.0	mg/kg	6010B	11/24/13	1
Barium	350	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	8.6	0.50	mg/kg	6010B	11/24/13	1
Copper	10.	1.0	mg/kg	6010B	11/24/13	1
Lead	8.6	0.25	mg/kg	6010B	11/24/13	1
Nickel	5.0	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	22.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.5		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	97.0		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	101.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	115.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	98.7		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	75.6		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L669242-05 (PH) - 8.0@18.9c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L669242-01	WG692808	SAMP	a,a,a-Trifluorotoluene	R2858125	J1
L669242-02	WG692808	SAMP	a,a,a-Trifluorotoluene	R2858125	J1
L669242-05	WG692808	SAMP	a,a,a-Trifluorotoluene	R2858125	J1

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
11/25/13 at 16:56:14

TSR Signing Reports: 358
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).

Sample: L669242-01 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 16:55

Sample: L669242-02 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 16:55

Sample: L669242-03 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 16:55

Sample: L669242-04 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 16:55

Sample: L669242-05 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 16:55



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Est. 1970

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Thursday December 05, 2013

Report Number: L671864


Samples Received: 11/16/13

Client Project: PIT SAMPLING

Description: USA01-12LW

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PIT01) 9 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:00

ESC Sample # : L671864-01
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	92.3		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	92.5		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	94.5		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITE01) 9 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:15

ESC Sample # : L671864-02

Site ID : USA01-12LW

Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	93.2		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	96.4		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	99.5		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITS01) 7 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:35

ESC Sample # : L671864-03
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	0.017	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	0.0065	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	0.0061	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	0.013	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	0.052	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	0.064	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	0.011	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	0.084	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	0.16	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	110.		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	88.6		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	83.7		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITS01) 9 FT
Collected By : Dustin Held
Collection Date : 11/13/13 14:40

ESC Sample # : L671864-04
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	96.4		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	95.8		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	102.		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111313-USA01-12LW (PITS02) 7 FT
Collected By : Dustin Held
Collection Date : 11/13/13 15:35

ESC Sample # : L671864-05
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	94.3		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	93.2		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	93.3		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L671864-01	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8
	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	T8J4
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8
L671864-02	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8
	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	T8J4
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8
L671864-03	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8
	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	J4T8
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8
L671864-04	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L671864-05	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	T8J4
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8
	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8
	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	T8J4
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Est. 1970

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Monday November 25, 2013

Report Number: L669238


Samples Received: 11/16/13

Client Project: PIT SAMPLING

Description: USA01-12LW

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111413-USA01-12LW (PITW01)
Collected By : Dustin Held
Collection Date : 11/14/13 09:05

ESC Sample # : L669238-01
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/21/13	1
Chromium,Trivalent	9.9	2.0	mg/kg	Calc.	11/25/13	1
ORP	200		mV	2580 B-2011	11/21/13	1
pH	8.1		su	9045D	11/21/13	1
Sodium Adsorption Ratio	10.			Calc.	11/18/13	1
Specific Conductance	2100		umhos/cm	9050AMod	11/19/13	1
Mercury	BDL	0.020	mg/kg	7471	11/20/13	1
Arsenic	2.5	1.0	mg/kg	6010B	11/24/13	1
Barium	260	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	9.9	0.50	mg/kg	6010B	11/24/13	1
Copper	11.	1.0	mg/kg	6010B	11/24/13	1
Lead	9.4	0.25	mg/kg	6010B	11/24/13	1
Nickel	5.7	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	26.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.9		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	97.9		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	103.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	113.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	96.7		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	73.5		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 11/25/13 10:22 Printed: 11/25/13 10:22
L669238-01 (PH) - 8.1@20.3c



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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

November 25, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111413-USA01-12LW (PITN01)
Collected By : Dustin Held
Collection Date : 11/14/13 09:55

ESC Sample # : L669238-02
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/21/13	1
Chromium, Trivalent	11.	2.0	mg/kg	Calc.	11/25/13	1
ORP	180		mV	2580 B-2011	11/21/13	1
pH	8.5		su	9045D	11/21/13	1
Sodium Adsorption Ratio	14.			Calc.	11/18/13	1
Specific Conductance	1700		umhos/cm	9050AMod	11/22/13	1
Mercury	BDL	0.020	mg/kg	7471	11/20/13	1
Arsenic	2.7	1.0	mg/kg	6010B	11/24/13	1
Barium	280	0.25	mg/kg	6010B	11/24/13	1
Cadmium	BDL	0.25	mg/kg	6010B	11/24/13	1
Chromium	11.	0.50	mg/kg	6010B	11/24/13	1
Copper	10.	1.0	mg/kg	6010B	11/24/13	1
Lead	9.6	0.25	mg/kg	6010B	11/24/13	1
Nickel	6.5	1.0	mg/kg	6010B	11/24/13	1
Selenium	BDL	1.0	mg/kg	6010B	11/24/13	1
Silver	BDL	0.50	mg/kg	6010B	11/24/13	1
Zinc	27.	1.5	mg/kg	6010B	11/24/13	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	11/18/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	96.1		% Rec.	602/8015	11/18/13	5
Benzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Toluene	BDL	0.025	mg/kg	8260B	11/20/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/20/13	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/20/13	5
Surrogate Recovery						
Toluene-d8	97.0		% Rec.	8260B	11/20/13	5
Dibromofluoromethane	100.		% Rec.	8260B	11/20/13	5
a,a,a-Trifluorotoluene	115.		% Rec.	8260B	11/20/13	5
4-Bromofluorobenzene	96.1		% Rec.	8260B	11/20/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	11/21/13	1
Surrogate recovery(%) o-Terphenyl	82.2		% Rec.	8015D/DRO	11/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 11/25/13 10:22 Printed: 11/25/13 10:22
L669238-02 (PH) - 8.5@20.4c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L669238-02	WG692808	SAMP	a,a,a-Trifluorotoluene	R2858125	J1

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
11/25/13 at 10:22:31

TSR Signing Reports: 358
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).

Sample: L669238-01 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 10:22

Sample: L669238-02 Account: ENCANACO Received: 11/16/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/25/13 10:22



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Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Thursday December 05, 2013

Report Number: L671858


Samples Received: 11/16/13

Client Project: PIT SAMPLING

Description: USA01-12LW

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111413-USA01-12LW (PITW01)
Collected By : Dustin Held
Collection Date : 11/14/13 09:05

ESC Sample # : L671858-01
Site ID : USA01-12LW
Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	81.3		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	82.0		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	79.6		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 12/05/13 16:56 Printed: 12/05/13 17:01



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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas - Parachute, CO
143 Diamond Avenue
Parachute, CO 81635

December 05, 2013

Date Received : November 16, 2013
Description : USA01-12LW
Sample ID : 111413-USA01-12LW (PITN01)
Collected By : Dustin Held
Collection Date : 11/14/13 09:55

ESC Sample # : L671858-02

Site ID : USA01-12LW

Project # : PIT SAMPLING

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	12/05/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	12/05/13	1
Surrogate Recovery						
Nitrobenzene-d5	90.9		% Rec.	8270C-SIM	12/05/13	1
2-Fluorobiphenyl	95.4		% Rec.	8270C-SIM	12/05/13	1
p-Terphenyl-d14	97.0		% Rec.	8270C-SIM	12/05/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/05/13 16:56 Printed: 12/05/13 17:01

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L671858-01	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8
	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	T8J4
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8
L671858-02	WG695573	SAMP	Anthracene	R2863225	T8
	WG695573	SAMP	Acenaphthene	R2863225	T8
	WG695573	SAMP	Acenaphthylene	R2863225	T8
	WG695573	SAMP	Benzo(a)anthracene	R2863225	T8
	WG695573	SAMP	Benzo(a)pyrene	R2863225	T8
	WG695573	SAMP	Benzo(b)fluoranthene	R2863225	T8
	WG695573	SAMP	Benzo(g,h,i)perylene	R2863225	T8
	WG695573	SAMP	Benzo(k)fluoranthene	R2863225	T8
	WG695573	SAMP	Chrysene	R2863225	T8
	WG695573	SAMP	Dibenz(a,h)anthracene	R2863225	T8
	WG695573	SAMP	Fluoranthene	R2863225	T8
	WG695573	SAMP	Fluorene	R2863225	T8
	WG695573	SAMP	Indeno(1,2,3-cd)pyrene	R2863225	T8J4
	WG695573	SAMP	Naphthalene	R2863225	T8
	WG695573	SAMP	Phenanthrene	R2863225	T8
	WG695573	SAMP	Pyrene	R2863225	T8
	WG695573	SAMP	1-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Methylnaphthalene	R2863225	T8
	WG695573	SAMP	2-Chloronaphthalene	R2863225	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.