



M33 496 (Location: 335937)
North Pit (Facility: 425573)
South Pit (Facility: 425585)
Encana Oil & Gas (USA) Inc. (Operator: 100185)

REPORT OF WORK COMPLETED

- North Pit (Facility: 425573) - Form 27 (Doc: 2232932) (Rem: 7771)
- South Pit (Facility: 425585) - Form 27 (Doc: 2232933) (Rem: 7772)

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Form 4 (Report of Work Completed and Notification of Completion) to document closure of two lined earthen pits and cuttings disposal on a well pad in the North Parachute area of operation in Garfield County.

Initial pit closure and characterization efforts were carried out in July, 2010. The pit was drained, and the liner and above liner solids were removed for offsite disposal. Below-liner soil conditions were assessed with field observations and each pit was characterized with a 5-point composite sample of the pit bottom submitted to a laboratory for analysis. Sample results identified concentrations/levels above the allowable limits in COGCC Table 910-1 for TPH, benzene, PAH, EC, SAR, pH, and arsenic. A composite sample of the drill cuttings stockpile on location was also collected, with lab results identifying elevated levels of PAH, SAR, pH, and arsenic.

Following identification of below-liner impacts, the pit excavations were left open through the remainder of 2010 and early 2011 to allow hydrocarbon impacts to naturally attenuate through biological processes.

Beginning in June, 2011 both pit cells were further characterized with a series of discrete grab samples. Those samples and field observations confirmed persistent hydrocarbon impacts in below-liner soils in localized portions of each pit. A track-hoe was used to remove visually stained soils from both pits, and stockpile material on the pad to support remediation. Competent bedrock was encountered during the second excavation effort which prevented vertical and lateral pursuit of soil impacts. A final round of grab samples was collected for characterization of the excavations.

The stockpile of material excavated from the pit bottoms was characterized with a composite sample, and was laid out in a thin lift on the pad surface and water and fertilizer were applied to augment natural bioremediation. On August 24, 2011 a composite sample of the stockpile remediation lift demonstrating compliance with TPH limits was collected.

Analytical results are provided in the attached summary table and laboratory reports.

This location and pit excavations occur immediately above or within the Green River Formation. The formation is known for lacustrine fossil beds and oil shale, among other lithology. Lacustrine and marine fossil beds are commonly associated with high background arsenic concentrations, while oil shale is known for elevated levels of heavy end organics, including TPH-DRO and PAH constituents. Encana has collected background samples throughout much of the Piceance with elevated background levels of arsenic, TPH-DRO, and PAH constituents.

NOTIFICATION OF COMPLETION

After excavation efforts were prevented by bedrock from pursuing soil impacts further vertically or laterally, four (4) clearance samples from the pit bottoms and walls were analyzed for TPH. One pit bottom sample from the north pit remained above the allowable limit. The samples in question were collected from the unrecoverable residual material on top of the bedrock. They are not representative of the bedrock or the geology beneath the bedrock, and only demonstrate that the removed material had hydrocarbon impacts. Encana requests that the COGCC consider the physical conditions associated with this pit closure project and sampled material as an alternative to the allowable limit for TPH identified in Table 910-1.

PAH constituent concentrations in the pit bottom and cuttings stockpile on this location were above the allowable concentrations in Table 910-1, however the pit excavations occur within the Green River Formation, where the presence of heavy-end organic (TPH-DRO and PAH) background concentrations is common. Heavy-end organic compounds are not readily soluble in water and are typically entrained in soil and shale. Based on the stability of heavy-end organic constituents, the naturally occurring geologic conditions, and Footnote 1 to COGCC Table 910-1, Encana requests the COGCC consider the PAH in the pit bottom and drill cuttings consistent with background in the area.

Arsenic concentrations in the pit bottom and stockpile, and drill cuttings stockpile are above the allowable concentration in Table 910-1, but are within the range of background values for this area. Based on these results and Footnote 1 to COGCC Table 910-1, Encana requests that the COGCC consider the higher range of background arsenic values as the allowable concentration for this constituent.

With regards to the inorganic constituents (SAR, EC, pH), the material represented by these samples are within the former pit footprint, are greater than five feet below the current working surface, and will be at an even greater depth below the final reclaimed working surface where the constituents will have no effect on revegetation efforts. Encana requests that the COGCC consider the reclamation purpose of listing these constituents and the physical disposition of these materials as an alternative to the allowable levels listed in COGCC Table 910-1.

After bedrock refusal and receipt of applicable clearance samples, the drill cuttings stockpile (approximately 800 cubic yards) and pit spoil stockpile were placed in the pit excavations, and the pits were backfilled and reclaimed.

If the information provided here is satisfactory, please close the associated remediation project, and pit facility, and provide documentation of these record closures.

ATTACHMENTS

1. Topographic Location Map
2. Laboratory Results Summary Table
3. Laboratory Reports



North Parachute Mountain

Garfield County, Colorado

0 3,200 6,400 Feet

1 inch = 3,000 feet



M33 496 Well Pad and Pits
Location ID: 335937
Facility IDs: 425573 & 425585
Rem #: 7771 & 7772

T004S-R096W

T004S-R097W

T005S-R097W

T005S-R096W

T004S-R095W

T005S-R095W

- Encana Site Boundary
- Access Road
- Township Boundary
- Surface Ownership**
- Not Identified Below (clear)
- EnCana (transparent)
- USFS (transparent)
- BLM (transparent)

Revised: 11/13/2012
C. Hines

Organic Compounds in Soil (mg/kg [ppm])																				Inorganics in Soil			Metals in Soil (mg/kg [ppm])													
500	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		(<12)	(6-9)	0.39	15000	70	120000	23	3100	400	23	1600	390	390	23000		
TPH (total volatile and extractable petroleum hydrocarbons)			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	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		
4147	97	4050	0.051	0.081	ND	0.12	ND	0.13	0.066	0.11	ND	0.029	0.098	ND	0.12	0.33	0.024	0.062	0.073	0.24	20	8.71	4.1	1200	0.07	34	0.17	12	8.7	0.049	15	ND	ND	33		
3360	420	2940	0.37	1.6	0.19	11	ND	0.26	1.2	2.4	ND	0.62	1.7	0.34	1.8	0.44	0.56	0.61	0.74	460	18	11.6	9.1	1900	0.3	23	0.049	21	12	0.031	13	ND	ND	44		
299.6	9.6	290	0.0012	0.0025	ND	0.0016	0.013	0.051	0.48	0.87	ND	0.23	0.6	0.14	0.64	0.02	0.19	0.12	0.26	0.41	18	11.4	5.2	1800	0.34	23	0.031	16	12	0.021	12	0.77	ND	38		
2900	BDL	2900										BDL																								
240	BDL	240																																		
												0.0091																								
350	BDL	350										0.032																								
320	BDL	320										0.036																								
3300	BDL	3300										BDL																								
1406.2	6.2	1400																																		
			BDL																			8.9														
50	BDL	50	BDL																			4														
80	BDL	80	BDL																			7														
110	BDL	110	BDL																			9.8														
210	BDL	210	BDL																			4.1														
									0.36	0.76		0.18		0.046			0.068																			
180	BDL	180							BDL	BDL		BDL		BDL			BDL																			
38.85	0.85	38							BDL	BDL		BDL		BDL			BDL																			
3710	410	3300							BDL	BDL		BDL		BDL			BDL																			
208	48	160							BDL	BDL		BDL		BDL			BDL																			
983.2	3.2	980							BDL	BDL		BDL		BDL			BDL																			
374	14	360							0.041	BDL		BDL		BDL			BDL																			
550	BDL	550																																		
210	BDL	210																																		

ANALYTICAL REPORT

Job Number: 280-5234-1

Job Description: M33 CoP Diligence

For:

EnCana Oil & Gas, Inc. (USA)
2717 County Road 215
Suite 100
Parachute, CO 81635
Attention: Chris Hines



Approved for release.
Katie Abbott
Project Mgmt. Assistant
8/3/2010 3:47 PM

Designee for
Lori A Parsons
Project Manager I
lori.parsons@testamericainc.com
08/03/2010

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com



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CASE NARRATIVE

Client: EnCana Oil & Gas, Inc. (USA)

Project: M33 CoP Diligence

Report Number: 280-5234-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 07/10/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 3.1 and 1.7 degrees C.

The hexavalent chromium analyses were performed by TestAmerica Chicago and the results have been included in the report. Chicago Laboratory: 2417 Bond Street; University Park, IL 60484; Phone: 708.534.5200.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/15/2010 and 07/16/2010.

Sample M33-S. PIT BOTTOM-070810 (280-5234-4) exhibited a surrogate recovery below the control limits for dibromofluoromethane. Sample M33-CUTTINGS-070810 (280-5234-5) exhibited a surrogate recovery above the control limits for 4-bromofluorobenzene. Evidence of matrix interferences were present for both samples causing the surrogate failures.

The MS/MSD associated with analytical batch 23266 was performed on an unrelated sample and exhibited percent recoveries below the control limits for surrogate dibromofluoromethane. The acceptable LCS analyses data indicated the analytical system was within control; therefore corrective action was deemed unnecessary.

The MS/MSD associated with analytical batch 23407 was performed on an unrelated sample and exhibited an RPD value above the control limits for ethylbenzene. The acceptable MS/MSD and LCS percent recoveries indicated the analytical system was within control; therefore corrective action was deemed unnecessary. No other difficulties were encountered during the VOC analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/11/2010 and analyzed on 08/02/2010.

No difficulties were encountered during the SVOC analyses.

All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 07/14/2010 and 07/15/2010.

Samples M33-N. PIT BOTTOM-070810 (280-5234-3)[5X] and M33-S. PIT BOTTOM-070810 (280-5234-4)[10X] required dilution prior to analysis due to the abundance of target analytes. The reporting limits have been adjusted accordingly. Additionally the surrogate recoveries for these samples were below the control limits due to the dilutions performed.

The MS/MSD was performed on an unrelated sample and exhibited percent recoveries below the control limits for GRO (C6-C10). The acceptable LCS and LCSD analyses data indicated the analytical system was within control; therefore corrective action was deemed unnecessary.

No other difficulties were encountered during the GRO analyses.

All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 07/11/2010 and analyzed on 07/12/2010 and 07/13/2010.

Samples M33-N. PIT BOTTOM-070810 (280-5234-3)[10X] and M33-S. PIT BOTTOM-070810 (280-5234-4)[10X] required dilution prior to analysis, due to the abundance of target compounds. The reporting limits have been adjusted accordingly. Additionally the surrogate recoveries were below the control limits due to the dilutions performed.

No other difficulties were encountered during the DRO analyses.

All other quality control parameters were within the acceptance limits.

SODIUM ABSORPTION RATIO

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for Sodium Absorption Ratio in accordance with USDA Handbook 60 - 20B. The samples were prepared on 07/20/2010 and analyzed on 07/23/2010.

No difficulties were encountered during the SAR analyses.

All quality control parameters were within the acceptance limits.

TOTAL METALS

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/21/2010 and analyzed on 07/22/2010.

Chromium was detected in method blank MB 280-23479/1-A at a level that was above the method detection limit but below the reporting limit. The samples exhibited detections greater than ten times the detection in the Method Blank. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The serial dilution performed for the following sample(s) in batch 23824 was outside control limits for Ba, Cr, Cu, Ni, and Zn: M33-CUTTINGS-070810, M33-N. PIT BOTTOM-070810, M33-NW BACK-070810, M33-S. PIT BOTTOM-070810

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

TOTAL METALS ICP/MS - Arsenic

Samples M33-SW BACK-070810 (280-5234-1), M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for total metals in accordance with EPA SW-846 Method 6020. The samples were prepared on 07/21/2010 and analyzed on 07/23/2010.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 07/19/2010.

The MS/MSD was performed on an unrelated sample and exhibited percent recoveries above the control limits for mercury. The acceptable LCS analyses data indicated the analytical system was within control; therefore corrective action was deemed unnecessary.

No other difficulties were encountered during the mercury analyses.

All other quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 7196A. The samples were prepared on 07/15/2010 and analyzed on 07/16/2010.

The MS/MSD was performed on an unrelated sample and the MSD exhibited a percent recovery below the control limits for hexavalent chromium. The MS/MSD exhibited an RPD value above the control limits for hexavalent chromium. The acceptable LCS analyses data indicated the analytical system was within control; therefore corrective action was deemed unnecessary.

No other difficulties were encountered during the hexavalent chromium analyses.

All other quality control parameters were within the acceptance limits.

TRIVALENT CHROMIUM

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for Trivalent Chromium in accordance with SW-846 7196A_CR3. The samples were analyzed on 07/27/2010.

No difficulties were encountered during the trivalent chromium analyses.

All quality control parameters were within the acceptance limits.

PH

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were leached on 07/13/2010 and analyzed on 07/13/2010.

No difficulties were encountered during the pH analyses.

All quality control parameters were within the acceptance limits.

SPECIFIC CONDUCTANCE

Samples M33-NW BACK-070810 (280-5234-2), M33-N. PIT BOTTOM-070810 (280-5234-3), M33-S. PIT BOTTOM-070810 (280-5234-4) and M33-CUTTINGS-070810 (280-5234-5) were analyzed for specific conductance in accordance with EPA SW-846 9050A. The samples were leached on 07/16/2010 and analyzed on 07/16/2010.

No difficulties were encountered during the conductivity analyses.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
280-5234-1	M33-SW BACK-070810					
Arsenic		4.1		0.59	mg/Kg	6020
280-5234-2	M33-NW BACK-070810					
C10-C22		1.2	J	4.0	mg/Kg	8015D
C22-C36		14		12	mg/Kg	8015D
Barium		300		0.98	mg/Kg	6010B
Cadmium		0.095	J	0.49	mg/Kg	6010B
Chromium		39	B	1.5	mg/Kg	6010B
Copper		13		2.0	mg/Kg	6010B
Lead		12		0.78	mg/Kg	6010B
Nickel		16		3.9	mg/Kg	6010B
Zinc		41		2.9	mg/Kg	6010B
Arsenic		4.5		0.59	mg/Kg	6020
Mercury		0.0081	J	0.015	mg/Kg	7471A
Cr (III)		39		2.0	mg/Kg	7196A
<i>Soluble</i>						
pH adj. to 25 deg C-Soluble		6.89		0.0100	SU	9045C
Specific Conductance-Soluble		9.4		2.0	umhos/cm	9050A

EXECUTIVE SUMMARY - Detections

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
280-5234-3	M33-N. PIT BOTTOM-070810					
Benzene		51	J	250	ug/Kg	8260B
Toluene		81	J	250	ug/Kg	8260B
Xylenes, Total		120	J	250	ug/Kg	8260B
Pyrene		0.073	J	0.30	mg/Kg	8270C
Anthracene		0.13	J	0.30	mg/Kg	8270C
Benzo[a]anthracene		0.066	J	0.30	mg/Kg	8270C
Benzo[b]fluoranthene		0.11	J K	0.30	mg/Kg	8270C
Benzo[a]pyrene		0.029	J	0.30	mg/Kg	8270C
Chrysene		0.098	J	0.30	mg/Kg	8270C
Fluoranthene		0.12	J	0.30	mg/Kg	8270C
Fluorene		0.33		0.30	mg/Kg	8270C
Indeno[1,2,3-cd]pyrene		0.024	J	0.30	mg/Kg	8270C
Naphthalene		0.062	J	0.30	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		97		5.8	mg/Kg	8015B
C10-C22		3300		40	mg/Kg	8015D
C22-C36		750		120	mg/Kg	8015D
Barium		1200		0.85	mg/Kg	6010B
Cadmium		0.065	J	0.42	mg/Kg	6010B
Chromium		34	B	1.3	mg/Kg	6010B
Copper		12		1.7	mg/Kg	6010B
Lead		8.7		0.68	mg/Kg	6010B
Nickel		15		3.4	mg/Kg	6010B
Zinc		33		2.5	mg/Kg	6010B
Arsenic		4.1		0.59	mg/Kg	6020
Mercury		0.049		0.016	mg/Kg	7471A
Cr (III)		34		2.0	mg/Kg	7196A
Chromium, hexavalent		0.17		0.097	mg/Kg	7196A
Soluble						
Sodium Adsorption Ratio		20		1.2	No Unit	20B
pH adj. to 25 deg C-Soluble		8.71		0.0100	SU	9045C
Specific Conductance-Soluble		240		2.0	umhos/cm	9050A

EXECUTIVE SUMMARY - Detections

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
280-5234-4	M33-S. PIT BOTTOM-070810				
Benzene		370	250	ug/Kg	8260B
Ethylbenzene		190 J	250	ug/Kg	8260B
Toluene		1600	250	ug/Kg	8260B
Xylenes, Total		11000	250	ug/Kg	8260B
Pyrene		0.74	0.31	mg/Kg	8270C
Anthracene		0.26 J	0.31	mg/Kg	8270C
Benzo[a]anthracene		1.2	0.31	mg/Kg	8270C
Benzo[b]fluoranthene		2.4 K	0.31	mg/Kg	8270C
Benzo[a]pyrene		0.62	0.31	mg/Kg	8270C
Chrysene		1.7	0.31	mg/Kg	8270C
Dibenz(a,h)anthracene		0.34	0.31	mg/Kg	8270C
Fluoranthene		1.8	0.31	mg/Kg	8270C
Fluorene		0.44	0.31	mg/Kg	8270C
Indeno[1,2,3-cd]pyrene		0.56	0.31	mg/Kg	8270C
Naphthalene		0.61	0.31	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		420	12	mg/Kg	8015B
C10-C22		2400	40	mg/Kg	8015D
C22-C36		540	120	mg/Kg	8015D
Barium		1900	0.90	mg/Kg	6010B
Cadmium		0.30 J	0.45	mg/Kg	6010B
Chromium		23 B	1.4	mg/Kg	6010B
Copper		21	1.8	mg/Kg	6010B
Lead		12	0.72	mg/Kg	6010B
Nickel		13	3.6	mg/Kg	6010B
Zinc		44	2.7	mg/Kg	6010B
Arsenic		9.1	0.54	mg/Kg	6020
Mercury		0.031	0.016	mg/Kg	7471A
Cr (III)		23	2.0	mg/Kg	7196A
Chromium, hexavalent		0.049 J	0.097	mg/Kg	7196A
<i>Soluble</i>					
Sodium Adsorption Ratio		18	1.2	No Unit	20B
pH adj. to 25 deg C-Soluble		11.6	0.0100	SU	9045C
Specific Conductance-Soluble		460	2.0	umhos/cm	9050A

EXECUTIVE SUMMARY - Detections

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
280-5234-5	M33-CUTTINGS-070810					
Benzene		0.0012	J	0.0048	mg/Kg	8260B
Toluene		0.0025	J	0.0048	mg/Kg	8260B
Xylenes, Total		0.0016	J	0.0048	mg/Kg	8260B
Pyrene		0.26	J	0.30	mg/Kg	8270C
Acenaphthene		0.013	J	0.30	mg/Kg	8270C
Anthracene		0.051	J	0.30	mg/Kg	8270C
Benzo[a]anthracene		0.48		0.30	mg/Kg	8270C
Benzo[b]fluoranthene		0.87	K	0.30	mg/Kg	8270C
Benzo[a]pyrene		0.23	J	0.30	mg/Kg	8270C
Chrysene		0.60		0.30	mg/Kg	8270C
Dibenz(a,h)anthracene		0.14	J	0.30	mg/Kg	8270C
Fluoranthene		0.64		0.30	mg/Kg	8270C
Fluorene		0.020	J	0.30	mg/Kg	8270C
Indeno[1,2,3-cd]pyrene		0.19	J	0.30	mg/Kg	8270C
Naphthalene		0.12	J	0.30	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		9.6		1.2	mg/Kg	8015B
C10-C22		110		4.0	mg/Kg	8015D
C22-C36		180		12	mg/Kg	8015D
Barium		1800		0.88	mg/Kg	6010B
Cadmium		0.34	J	0.44	mg/Kg	6010B
Chromium		23	B	1.3	mg/Kg	6010B
Copper		16		1.8	mg/Kg	6010B
Lead		12		0.70	mg/Kg	6010B
Nickel		12		3.5	mg/Kg	6010B
Selenium		0.77	J	1.1	mg/Kg	6010B
Zinc		38		2.6	mg/Kg	6010B
Arsenic		5.2		0.57	mg/Kg	6020
Mercury		0.021		0.016	mg/Kg	7471A
Cr (III)		23		2.0	mg/Kg	7196A
Chromium, hexavalent		0.031	J	0.097	mg/Kg	7196A
Soluble						
Sodium Adsorption Ratio		18		1.2	No Unit	20B
pH adj. to 25 deg C-Soluble		11.4		0.0100	SU	9045C
Specific Conductance-Soluble		410		2.0	umhos/cm	9050A

METHOD SUMMARY

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Description		Lab Location	Method	Preparation Method
Matrix	Solid			
Volatile Organic Compounds (GC/MS)		TAL DEN	SW846 8260B	
Purge and Trap		TAL DEN		SW846 5030B
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)		TAL DEN	SW846 8270C	
Ultrasonic Extraction		TAL DEN		SW846 3550C
Gasoline Range Organics - (GC)		TAL DEN	SW846 8015B	
Purge and Trap		TAL DEN		SW846 5030B
Diesel Range Organics (DRO)		TAL DEN	SW846 8015D	
Ultrasonic Extraction		TAL DEN		SW846 3550C
Sodium Adsorption Ratio		TAL DEN	USDA 20B	
Preparation, Sodium Absorption Ratio		TAL DEN		USDA 20B
RCRA Metals		TAL DEN	SW846 6010B	
Preparation, Metals		TAL DEN		SW846 3050B
Metals (ICP/MS)		TAL DEN	SW846 6020	
Preparation, Metals		TAL DEN		SW846 3050B
Mercury		TAL DEN	SW846 7471A	
Preparation, Mercury		TAL DEN		SW846 7471A
Chromium, Hexavalent		TAL CHI	SW846 7196A	
Anions, Ion Chromatography, 10% Wt/Vol		TAL CHI		MCAWW 300_Prep
Chromium, Trivalent (Colorimetric)		TAL DEN	SW846 7196A	
pH		TAL DEN	SW846 9045C	
Deionized Water Leaching Procedure		TAL DEN		ASTM DI Leach
Specific Conductance		TAL DEN	SW846 9050A	
Deionized Water Leaching Procedure		TAL DEN		ASTM DI Leach

Lab References:

TAL CHI = TestAmerica Chicago

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

USDA = "USDA Agriculture Handbook 60, section 20B".

METHOD / ANALYST SUMMARY

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method	Analyst	Analyst ID
SW846 8260B	Dobransky, Michael E	MD
SW846 8260B	Zhou, Huaqing	HZ
SW846 8270C	Kiekel, Daniel C	DCK
SW846 8015B	Moore, Tegan E	TEM
SW846 8015D	Birdsell, Matthew R	MRB
USDA 20B	Harre, John K	JKH
SW846 6010B	Wells, David	DW
SW846 6020	Lill, Thomas E	TEL
SW846 7471A	Grisdale, Christopher G	CGG
SW846 7196A	Burns, Julie M	JMB
SW846 7196A	Deb, Khona	KD
SW846 9045C	Kilker, Lorelei M	LMK
SW846 9050A	Plumb, Paul M	PMP

SAMPLE SUMMARY

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-5234-1	M33-SW BACK-070810	Solid	07/08/2010 1250	07/10/2010 0945
280-5234-2	M33-NW BACK-070810	Solid	07/08/2010 1230	07/10/2010 0945
280-5234-3	M33-N. PIT BOTTOM-070810	Solid	07/08/2010 1345	07/10/2010 0945
280-5234-4	M33-S. PIT BOTTOM-070810	Solid	07/08/2010 1315	07/10/2010 0945
280-5234-5	M33-CUTTINGS-070810	Solid	07/08/2010 1415	07/10/2010 0945

SAMPLE RESULTS

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-NW BACK-070810

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-23407	Instrument ID:	MSV_J
Preparation:	5030B		Lab File ID:	J9582.D
Dilution:	1.0		Initial Weight/Volume:	5.716 g
Date Analyzed:	07/16/2010 1403		Final Weight/Volume:	5 mL
Date Prepared:	07/16/2010 1403			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		ND		0.00041	0.0044
Ethylbenzene		ND		0.00059	0.0044
Toluene		ND		0.00060	0.0044
Xylenes, Total		ND		0.00053	0.0044

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		58 - 140
Toluene-d8 (Surr)	100		80 - 126
4-Bromofluorobenzene (Surr)	118		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-23266	Instrument ID:	MSV_P
Preparation:	5030B	Prep Batch: 280-22953	Lab File ID:	P9530.D
Dilution:	1.0		Initial Weight/Volume:	4.973 g
Date Analyzed:	07/15/2010 1315		Final Weight/Volume:	1000 mL
Date Prepared:	07/14/2010 1512			

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Benzene		51	J	45	250
Ethylbenzene		ND		34	250
Toluene		81	J	39	250
Xylenes, Total		120	J	35	250

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	63		50 - 139
Toluene-d8 (Surr)	79		68 - 143
4-Bromofluorobenzene (Surr)	88		62 - 133
Dibromofluoromethane (Surr)	69		60 - 133

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-23266	Instrument ID:	MSV_P
Preparation:	5030B	Prep Batch: 280-22953	Lab File ID:	P9534.D
Dilution:	1.0		Initial Weight/Volume:	4.976 g
Date Analyzed:	07/15/2010 1607		Final Weight/Volume:	1000 mL
Date Prepared:	07/14/2010 1512			

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Benzene		370		45	250
Ethylbenzene		190	J	34	250
Toluene		1600		39	250
Xylenes, Total		11000		35	250

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	62		50 - 139
Toluene-d8 (Surr)	90		68 - 143
4-Bromofluorobenzene (Surr)	105		62 - 133
Dibromofluoromethane (Surr)	37	X	60 - 133

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-CUTTINGS-070810

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-23407	Instrument ID:	MSV_J
Preparation:	5030B		Lab File ID:	J9583.D
Dilution:	1.0		Initial Weight/Volume:	5.258 g
Date Analyzed:	07/16/2010 1425		Final Weight/Volume:	5 mL
Date Prepared:	07/16/2010 1425			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		0.0012	J	0.00045	0.0048
Ethylbenzene		ND		0.00064	0.0048
Toluene		0.0025	J	0.00066	0.0048
Xylenes, Total		0.0016	J	0.00058	0.0048

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		58 - 140
Toluene-d8 (Surr)	106		80 - 126
4-Bromofluorobenzene (Surr)	129	X	76 - 127
Dibromofluoromethane (Surr)	75		75 - 121

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-NW BACK-070810

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-25217	Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-22524	Lab File ID:	B9389.D
Dilution:	1.0		Initial Weight/Volume:	32.2 g
Date Analyzed:	08/02/2010 1427		Final Weight/Volume:	1000 uL
Date Prepared:	07/11/2010 0925		Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Pyrene		ND		0.011	0.31
Acenaphthene		ND		0.0096	0.31
Anthracene		ND		0.016	0.31
Benzo[a]anthracene		ND		0.019	0.31
Benzo[b]fluoranthene		ND		0.024	0.31
Benzo[k]fluoranthene		ND		0.037	0.31
Benzo[a]pyrene		ND		0.019	0.31
Chrysene		ND		0.025	0.31
Dibenz(a,h)anthracene		ND		0.018	0.31
Fluoranthene		ND		0.034	0.31
Fluorene		ND		0.017	0.31
Indeno[1,2,3-cd]pyrene		ND		0.020	0.31
Naphthalene		ND		0.029	0.31

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		50 - 120
Nitrobenzene-d5	66		50 - 120
Terphenyl-d14	75		55 - 120

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-25217	Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-22524	Lab File ID:	B9400.D
Dilution:	1.0		Initial Weight/Volume:	32.7 g
Date Analyzed:	08/02/2010 1810		Final Weight/Volume:	1000 uL
Date Prepared:	07/11/2010 0925		Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Pyrene		0.073	J	0.011	0.30
Acenaphthene		ND		0.0094	0.30
Anthracene		0.13	J	0.016	0.30
Benzo[a]anthracene		0.066	J	0.018	0.30
Benzo[b]fluoranthene		0.11	J K	0.024	0.30
Benzo[k]fluoranthene		ND	K	0.037	0.30
Benzo[a]pyrene		0.029	J	0.018	0.30
Chrysene		0.098	J	0.025	0.30
Dibenz(a,h)anthracene		ND		0.017	0.30
Fluoranthene		0.12	J	0.033	0.30
Fluorene		0.33		0.017	0.30
Indeno[1,2,3-cd]pyrene		0.024	J	0.020	0.30
Naphthalene		0.062	J	0.028	0.30
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		79		50 - 120	
Nitrobenzene-d5		81		50 - 120	
Terphenyl-d14		89		55 - 120	

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-25217	Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-22524	Lab File ID:	B9392.D
Dilution:	1.0		Initial Weight/Volume:	31.7 g
Date Analyzed:	08/02/2010 1528		Final Weight/Volume:	1000 uL
Date Prepared:	07/11/2010 0925		Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Pyrene		0.74		0.011	0.31
Acenaphthene		ND		0.0097	0.31
Anthracene		0.26	J	0.016	0.31
Benzo[a]anthracene		1.2		0.019	0.31
Benzo[b]fluoranthene		2.4	K	0.025	0.31
Benzo[k]fluoranthene		ND	K	0.038	0.31
Benzo[a]pyrene		0.62		0.019	0.31
Chrysene		1.7		0.026	0.31
Dibenz(a,h)anthracene		0.34		0.018	0.31
Fluoranthene		1.8		0.034	0.31
Fluorene		0.44		0.017	0.31
Indeno[1,2,3-cd]pyrene		0.56		0.021	0.31
Naphthalene		0.61		0.029	0.31
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		71		50 - 120	
Nitrobenzene-d5		83		50 - 120	
Terphenyl-d14		78		55 - 120	

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-CUTTINGS-070810

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-25217	Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-22524	Lab File ID:	B9393.D
Dilution:	1.0		Initial Weight/Volume:	32.6 g
Date Analyzed:	08/02/2010 1548		Final Weight/Volume:	1000 uL
Date Prepared:	07/11/2010 0925		Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Pyrene		0.26	J	0.011	0.30
Acenaphthene		0.013	J	0.0095	0.30
Anthracene		0.051	J	0.016	0.30
Benzo[a]anthracene		0.48		0.018	0.30
Benzo[b]fluoranthene		0.87	K	0.024	0.30
Benzo[k]fluoranthene		ND	K	0.037	0.30
Benzo[a]pyrene		0.23	J	0.018	0.30
Chrysene		0.60		0.025	0.30
Dibenz(a,h)anthracene		0.14	J	0.017	0.30
Fluoranthene		0.64		0.033	0.30
Fluorene		0.020	J	0.017	0.30
Indeno[1,2,3-cd]pyrene		0.19	J	0.020	0.30
Naphthalene		0.12	J	0.029	0.30
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		68		50 - 120	
Nitrobenzene-d5		62		50 - 120	
Terphenyl-d14		77		55 - 120	

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-NW BACK-070810

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015B Gasoline Range Organics - (GC)

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.10 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/14/2010 2129		Injection Volume:	5 mL
Date Prepared:	07/13/2010 1105		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		ND		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	81		77 - 123

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015B Gasoline Range Organics - (GC)

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.28 g
Dilution:	5.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 0931		Injection Volume:	5 mL
Date Prepared:	07/13/2010 1105		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		97		1.6	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	0	D	77 - 123

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015B Gasoline Range Organics - (GC)

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.16 g
Dilution:	10		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 1009		Injection Volume:	5 mL
Date Prepared:	07/13/2010 1105		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		420		3.2	12

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	0	D	77 - 123

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-CUTTINGS-070810

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015B Gasoline Range Organics - (GC)

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.10 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 1046		Injection Volume:	5 mL
Date Prepared:	07/13/2010 1105		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		9.6		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	92		77 - 123

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-NW BACK-070810

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015D Diesel Range Organics (DRO)

Method:	8015D	Analysis Batch: 280-22885	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-22529	Initial Weight/Volume:	30.0 g
Dilution:	1.0		Final Weight/Volume:	1000 uL
Date Analyzed:	07/12/2010 2243		Injection Volume:	1 uL
Date Prepared:	07/11/2010 1210		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		1.2	J	1.0	4.0
C22-C36		14		3.9	12

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	78		49 - 115

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015D Diesel Range Organics (DRO)

Method:	8015D	Analysis Batch: 280-22885	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-22529	Initial Weight/Volume:	30.2 g
Dilution:	10		Final Weight/Volume:	1000 uL
Date Analyzed:	07/13/2010 1808		Injection Volume:	1 uL
Date Prepared:	07/11/2010 1210		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		3300		9.9	40
C22-C36		750		39	120

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	0	D	49 - 115

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015D Diesel Range Organics (DRO)

Method:	8015D	Analysis Batch: 280-22885	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-22529	Initial Weight/Volume:	30.0 g
Dilution:	10		Final Weight/Volume:	1000 uL
Date Analyzed:	07/13/2010 1842		Injection Volume:	1 uL
Date Prepared:	07/11/2010 1210		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		2400		10	40
C22-C36		540		39	120

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	0	D	49 - 115

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-CUTTINGS-070810

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

8015D Diesel Range Organics (DRO)

Method:	8015D	Analysis Batch: 280-22885	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-22529	Initial Weight/Volume:	30.1 g
Dilution:	1.0		Final Weight/Volume:	1000 uL
Date Analyzed:	07/13/2010 0021		Injection Volume:	1 uL
Date Prepared:	07/11/2010 1210		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		110		0.99	4.0
C22-C36		180		3.9	12

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	78		49 - 115

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-SW BACK-070810

Lab Sample ID: 280-5234-1

Date Sampled: 07/08/2010 1250

Client Matrix: Solid

Date Received: 07/10/2010 0945

6020 Metals (ICP/MS)

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	123SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.02 g
Date Analyzed:	07/23/2010 0117		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		4.1		0.050	0.59

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-NW BACK-070810

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

20B Sodium Adsorption Ratio-Soluble

Method:	20B	Analysis Batch: 280-24007	Instrument ID:	MT_025
Preparation:	20B	Prep Batch: 280-23560	Lab File ID:	N/A
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	07/23/2010 1046		Final Weight/Volume:	50 mL
Date Prepared:	07/20/2010 1500			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		ND		1.2	1.2

6010B RCRA Metals

Method:	6010B	Analysis Batch: 280-23824	Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-23479	Lab File ID:	26c072110.txt
Dilution:	1.0		Initial Weight/Volume:	1.02 g
Date Analyzed:	07/22/2010 0038		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		300		0.075	0.98
Cadmium		0.095	J	0.040	0.49
Chromium		39	B	0.057	1.5
Copper		13		0.21	2.0
Lead		12		0.26	0.78
Nickel		16		0.12	3.9
Selenium		ND		0.84	1.3
Silver		ND		0.16	0.98
Zinc		41		0.39	2.9

6020 Metals (ICP/MS)

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	124AREF.D
Dilution:	1.0		Initial Weight/Volume:	1.02 g
Date Analyzed:	07/23/2010 0120		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		4.5		0.050	0.59

7471A Mercury

Method:	7471A	Analysis Batch: 280-23489	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-23340	Lab File ID:	100719AA.txt
Dilution:	1.0		Initial Weight/Volume:	0.69 g
Date Analyzed:	07/19/2010 1614		Final Weight/Volume:	50 mL
Date Prepared:	07/19/2010 0840			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0081	J	0.0048	0.015

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-NW BACK-070810

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

7471A Mercury

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

20B Sodium Adsorption Ratio-Soluble

Method:	20B	Analysis Batch: 280-24007	Instrument ID:	MT_025
Preparation:	20B	Prep Batch: 280-23560	Lab File ID:	N/A
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	07/23/2010 1046		Final Weight/Volume:	50 mL
Date Prepared:	07/20/2010 1500			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		20		1.2	1.2

6010B RCRA Metals

Method:	6010B	Analysis Batch: 280-23824	Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-23479	Lab File ID:	26c072110.txt
Dilution:	1.0		Initial Weight/Volume:	1.18 g
Date Analyzed:	07/22/2010 0050		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		1200		0.064	0.85
Cadmium		0.065	J	0.035	0.42
Chromium		34	B	0.049	1.3
Copper		12		0.18	1.7
Lead		8.7		0.23	0.68
Nickel		15		0.10	3.4
Selenium		ND		0.73	1.1
Silver		ND		0.14	0.85
Zinc		33		0.34	2.5

6020 Metals (ICP/MS)

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	129SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.01 g
Date Analyzed:	07/23/2010 0134		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		4.1		0.050	0.59

7471A Mercury

Method:	7471A	Analysis Batch: 280-23489	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-23340	Lab File ID:	100719AA.txt
Dilution:	1.0		Initial Weight/Volume:	0.65 g
Date Analyzed:	07/19/2010 1616		Final Weight/Volume:	50 mL
Date Prepared:	07/19/2010 0840			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.049		0.0051	0.016

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

7471A Mercury

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

20B Sodium Adsorption Ratio-Soluble

Method:	20B	Analysis Batch: 280-24007	Instrument ID:	MT_025
Preparation:	20B	Prep Batch: 280-23560	Lab File ID:	N/A
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	07/23/2010 1046		Final Weight/Volume:	50 mL
Date Prepared:	07/20/2010 1500			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		18		1.2	1.2

6010B RCRA Metals

Method:	6010B	Analysis Batch: 280-23824	Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-23479	Lab File ID:	26c072110.txt
Dilution:	1.0		Initial Weight/Volume:	1.11 g
Date Analyzed:	07/22/2010 0052		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		1900		0.068	0.90
Cadmium		0.30	J	0.037	0.45
Chromium		23	B	0.052	1.4
Copper		21		0.20	1.8
Lead		12		0.24	0.72
Nickel		13		0.11	3.6
Selenium		ND		0.77	1.2
Silver		ND		0.14	0.90
Zinc		44		0.36	2.7

6020 Metals (ICP/MS)

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	132SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.12 g
Date Analyzed:	07/23/2010 0142		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		9.1		0.045	0.54

7471A Mercury

Method:	7471A	Analysis Batch: 280-23489	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-23340	Lab File ID:	100719AA.txt
Dilution:	1.0		Initial Weight/Volume:	0.64 g
Date Analyzed:	07/19/2010 1618		Final Weight/Volume:	50 mL
Date Prepared:	07/19/2010 0840			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.031		0.0052	0.016

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

7471A Mercury

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-CUTTINGS-070810

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

20B Sodium Adsorption Ratio-Soluble

Method:	20B	Analysis Batch: 280-24007	Instrument ID:	MT_025
Preparation:	20B	Prep Batch: 280-23560	Lab File ID:	N/A
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	07/23/2010 1046		Final Weight/Volume:	50 mL
Date Prepared:	07/20/2010 1500			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		18		1.2	1.2

6010B RCRA Metals

Method:	6010B	Analysis Batch: 280-23824	Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-23479	Lab File ID:	26c072110.txt
Dilution:	1.0		Initial Weight/Volume:	1.14 g
Date Analyzed:	07/22/2010 0055		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		1800		0.067	0.88
Cadmium		0.34	J	0.036	0.44
Chromium		23	B	0.051	1.3
Copper		16		0.19	1.8
Lead		12		0.24	0.70
Nickel		12		0.11	3.5
Selenium		0.77	J	0.75	1.1
Silver		ND		0.14	0.88
Zinc		38		0.35	2.6

6020 Metals (ICP/MS)

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	133SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.06 g
Date Analyzed:	07/23/2010 0145		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		5.2		0.048	0.57

7471A Mercury

Method:	7471A	Analysis Batch: 280-23489	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-23340	Lab File ID:	100719AA.txt
Dilution:	1.0		Initial Weight/Volume:	0.65 g
Date Analyzed:	07/19/2010 1621		Final Weight/Volume:	50 mL
Date Prepared:	07/19/2010 0840			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.021		0.0051	0.016

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Client Sample ID: M33-CUTTINGS-070810

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

7471A Mercury

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

General Chemistry**Client Sample ID: M33-NW BACK-070810**

Lab Sample ID: 280-5234-2

Date Sampled: 07/08/2010 1230

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	ND		mg/Kg	0.020	0.099	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1332 (End) 07/16/2010 1333					DryWt Corrected: N
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	39		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24403		Date Analyzed: 07/27/2010 1442					DryWt Corrected: N
pH adj. to 25 deg C-Soluble	6.89		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1209					DryWt Corrected: N
Specific Conductance-Soluble	9.4		umhos/cm	2.0	2.0	1.0	9050A
Analysis Batch: 280-23232		Date Analyzed: 07/16/2010 1330					DryWt Corrected: N

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

General Chemistry**Client Sample ID:** M33-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-3

Date Sampled: 07/08/2010 1345

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.17		mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1333 (End) 07/16/2010 1334				DryWt Corrected: N	
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	34		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24403		Date Analyzed: 07/27/2010 1442				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	8.71		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1217				DryWt Corrected: N	
Specific Conductance-Soluble	240		umhos/cm	2.0	2.0	1.0	9050A
Analysis Batch: 280-23232		Date Analyzed: 07/16/2010 1330				DryWt Corrected: N	

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

General Chemistry**Client Sample ID: M33-S. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-4

Date Sampled: 07/08/2010 1315

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.049	J	mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1334 (End) 07/16/2010 1334					DryWt Corrected: N
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	23		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24403		Date Analyzed: 07/27/2010 1442					DryWt Corrected: N
pH adj. to 25 deg C-Soluble	11.6		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1253					DryWt Corrected: N
Specific Conductance-Soluble	460		umhos/cm	2.0	2.0	1.0	9050A
Analysis Batch: 280-23232		Date Analyzed: 07/16/2010 1330					DryWt Corrected: N

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

General Chemistry**Client Sample ID: M33-CUTTINGS-070810**

Lab Sample ID: 280-5234-5

Date Sampled: 07/08/2010 1415

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.031	J	mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1334 (End) 07/16/2010 1335				DryWt Corrected: N	
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	23		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24403		Date Analyzed: 07/27/2010 1442				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	11.4		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1257				DryWt Corrected: N	
Specific Conductance-Soluble	410		umhos/cm	2.0	2.0	1.0	9050A
Analysis Batch: 280-23232		Date Analyzed: 07/16/2010 1330				DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	F	RPD of the MS and MSD exceeds the control limits
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	K	Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	F	MS or MSD exceeds the control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
Metals		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Section	Qualifier	Description
General Chemistry		
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	F	RPD of the MS and MSD exceeds the control limits

QUALITY CONTROL RESULTS

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS VOA					
Prep Batch: 280-22953					
LCS 280-22953/2-A	Lab Control Sample	T	Solid	5030B	
LCSD 280-22953/3-A	Lab Control Sample Duplicate	T	Solid	5030B	
MB 280-22953/1-A	Method Blank	T	Solid	5030B	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	5030B	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	5030B	
280-5287-C-1-B MS	Matrix Spike	T	Solid	5030B	
280-5287-C-1-C MSD	Matrix Spike Duplicate	T	Solid	5030B	
Analysis Batch:280-23266					
LCS 280-22953/2-A	Lab Control Sample	T	Solid	8260B	280-22953
LCSD 280-22953/3-A	Lab Control Sample Duplicate	T	Solid	8260B	280-22953
MB 280-22953/1-A	Method Blank	T	Solid	8260B	280-22953
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	8260B	280-22953
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	8260B	280-22953
280-5287-C-1-B MS	Matrix Spike	T	Solid	8260B	280-22953
280-5287-C-1-C MSD	Matrix Spike Duplicate	T	Solid	8260B	280-22953
Analysis Batch:280-23407					
LCS 280-23407/4	Lab Control Sample	T	Solid	8260B	
LCSD 280-23407/5	Lab Control Sample Duplicate	T	Solid	8260B	
MB 280-23407/6	Method Blank	T	Solid	8260B	
280-5234-2	M33-NW BACK-070810	T	Solid	8260B	
280-5234-5	M33-CUTTINGS-070810	T	Solid	8260B	
280-5251-E-6 MS	Matrix Spike	T	Solid	8260B	
280-5251-E-6 MSD	Matrix Spike Duplicate	T	Solid	8260B	

Report Basis

T = Total

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS Semi VOA					
Prep Batch: 280-22524					
LCS 280-22524/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-22524/1-A	Method Blank	T	Solid	3550C	
280-5234-2	M33-NW BACK-070810	T	Solid	3550C	
280-5234-2MS	Matrix Spike	T	Solid	3550C	
280-5234-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-5	M33-CUTTINGS-070810	T	Solid	3550C	
Analysis Batch:280-25217					
LCS 280-22524/2-A	Lab Control Sample	T	Solid	8270C	280-22524
MB 280-22524/1-A	Method Blank	T	Solid	8270C	280-22524
280-5234-2	M33-NW BACK-070810	T	Solid	8270C	280-22524
280-5234-2MS	Matrix Spike	T	Solid	8270C	280-22524
280-5234-2MSD	Matrix Spike Duplicate	T	Solid	8270C	280-22524
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	8270C	280-22524
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	8270C	280-22524
280-5234-5	M33-CUTTINGS-070810	T	Solid	8270C	280-22524

Report Basis

T = Total

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC VOA					
Prep Batch: 280-22749					
LCS 280-22749/1-A	Lab Control Sample	T	Solid	5030B	
LCSD 280-22749/2-A	Lab Control Sample Duplicate	T	Solid	5030B	
MB 280-22749/3-A	Method Blank	T	Solid	5030B	
280-5234-2	M33-NW BACK-070810	T	Solid	5030B	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	5030B	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	5030B	
280-5234-5	M33-CUTTINGS-070810	T	Solid	5030B	
280-5251-C-6-B MS	Matrix Spike	T	Solid	5030B	
280-5251-C-6-C MSD	Matrix Spike Duplicate	T	Solid	5030B	
Analysis Batch:280-23436					
LCS 280-22749/1-A	Lab Control Sample	T	Solid	8015B	280-22749
LCSD 280-22749/2-A	Lab Control Sample Duplicate	T	Solid	8015B	280-22749
MB 280-22749/3-A	Method Blank	T	Solid	8015B	280-22749
280-5234-2	M33-NW BACK-070810	T	Solid	8015B	280-22749
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	8015B	280-22749
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	8015B	280-22749
280-5234-5	M33-CUTTINGS-070810	T	Solid	8015B	280-22749
280-5251-C-6-B MS	Matrix Spike	T	Solid	8015B	280-22749
280-5251-C-6-C MSD	Matrix Spike Duplicate	T	Solid	8015B	280-22749

Report Basis

T = Total

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC Semi VOA					
Prep Batch: 280-22529					
LCS 280-22529/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-22529/1-A	Method Blank	T	Solid	3550C	
280-5234-2	M33-NW BACK-070810	T	Solid	3550C	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-5	M33-CUTTINGS-070810	T	Solid	3550C	
280-5234-A-12-C MS	Matrix Spike	T	Solid	3550C	
280-5234-A-12-D MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-22885					
LCS 280-22529/2-A	Lab Control Sample	T	Solid	8015D	280-22529
MB 280-22529/1-A	Method Blank	T	Solid	8015D	280-22529
280-5234-2	M33-NW BACK-070810	T	Solid	8015D	280-22529
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	8015D	280-22529
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	8015D	280-22529
280-5234-5	M33-CUTTINGS-070810	T	Solid	8015D	280-22529
280-5234-A-12-C MS	Matrix Spike	T	Solid	8015D	280-22529
280-5234-A-12-D MSD	Matrix Spike Duplicate	T	Solid	8015D	280-22529

Report Basis

T = Total

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
Metals					
Prep Batch: 280-23340					
LCS 280-23340/2-A	Lab Control Sample	T	Solid	7471A	
LCSD 280-23340/3-A	Lab Control Sample Duplicate	T	Solid	7471A	
MB 280-23340/1-A	Method Blank	T	Solid	7471A	
280-5035-A-5-E MS	Matrix Spike	T	Solid	7471A	
280-5035-A-5-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
280-5234-2	M33-NW BACK-070810	T	Solid	7471A	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	7471A	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	7471A	
280-5234-5	M33-CUTTINGS-070810	T	Solid	7471A	
Prep Batch: 280-23465					
LCS 280-23465/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-23465/1-A	Method Blank	T	Solid	3050B	
280-5234-1	M33-SW BACK-070810	T	Solid	3050B	
280-5234-2	M33-NW BACK-070810	T	Solid	3050B	
280-5234-2MS	Matrix Spike	T	Solid	3050B	
280-5234-2MSD	Matrix Spike Duplicate	T	Solid	3050B	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	3050B	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	3050B	
280-5234-5	M33-CUTTINGS-070810	T	Solid	3050B	
Prep Batch: 280-23479					
LCS 280-23479/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-23479/1-A	Method Blank	T	Solid	3050B	
280-5234-2	M33-NW BACK-070810	T	Solid	3050B	
280-5234-2MS	Matrix Spike	T	Solid	3050B	
280-5234-2MSD	Matrix Spike Duplicate	T	Solid	3050B	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	3050B	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	3050B	
280-5234-5	M33-CUTTINGS-070810	T	Solid	3050B	
Analysis Batch:280-23489					
LCS 280-23340/2-A	Lab Control Sample	T	Solid	7471A	280-23340
LCSD 280-23340/3-A	Lab Control Sample Duplicate	T	Solid	7471A	280-23340
MB 280-23340/1-A	Method Blank	T	Solid	7471A	280-23340
280-5035-A-5-E MS	Matrix Spike	T	Solid	7471A	280-23340
280-5035-A-5-F MSD	Matrix Spike Duplicate	T	Solid	7471A	280-23340
280-5234-2	M33-NW BACK-070810	T	Solid	7471A	280-23340
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	7471A	280-23340
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	7471A	280-23340
280-5234-5	M33-CUTTINGS-070810	T	Solid	7471A	280-23340

TestAmerica Denver

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
Metals					
Prep Batch: 280-23560					
MB 280-23560/1-A	Method Blank	S	Solid	20B	
280-5234-2	M33-NW BACK-070810	S	Solid	20B	
280-5234-3	M33-N. PIT BOTTOM-070810	S	Solid	20B	
280-5234-4	M33-S. PIT BOTTOM-070810	S	Solid	20B	
280-5234-5	M33-CUTTINGS-070810	S	Solid	20B	
Analysis Batch:280-23824					
LCS 280-23479/2-A	Lab Control Sample	T	Solid	6010B	280-23479
MB 280-23479/1-A	Method Blank	T	Solid	6010B	280-23479
280-5234-2	M33-NW BACK-070810	T	Solid	6010B	280-23479
280-5234-2MS	Matrix Spike	T	Solid	6010B	280-23479
280-5234-2MSD	Matrix Spike Duplicate	T	Solid	6010B	280-23479
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	6010B	280-23479
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	6010B	280-23479
280-5234-5	M33-CUTTINGS-070810	T	Solid	6010B	280-23479
Analysis Batch:280-23997					
LCS 280-23465/2-A	Lab Control Sample	T	Solid	6020	280-23465
MB 280-23465/1-A	Method Blank	T	Solid	6020	280-23465
280-5234-1	M33-SW BACK-070810	T	Solid	6020	280-23465
280-5234-2	M33-NW BACK-070810	T	Solid	6020	280-23465
280-5234-2MS	Matrix Spike	T	Solid	6020	280-23465
280-5234-2MSD	Matrix Spike Duplicate	T	Solid	6020	280-23465
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	6020	280-23465
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	6020	280-23465
280-5234-5	M33-CUTTINGS-070810	T	Solid	6020	280-23465
Analysis Batch:280-24007					
MB 280-23560/1-A	Method Blank	S	Solid	20B	280-23560
280-5234-2	M33-NW BACK-070810	S	Solid	20B	280-23560
280-5234-3	M33-N. PIT BOTTOM-070810	S	Solid	20B	280-23560
280-5234-4	M33-S. PIT BOTTOM-070810	S	Solid	20B	280-23560
280-5234-5	M33-CUTTINGS-070810	S	Solid	20B	280-23560

Report Basis

S = Soluble

T = Total

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
General Chemistry					
Prep Batch: 280-22705					
280-5234-2	M33-NW BACK-070810	S	Solid	DI Leach	
280-5234-2DU	Duplicate	S	Solid	DI Leach	
280-5234-3	M33-N. PIT BOTTOM-070810	S	Solid	DI Leach	
280-5234-4	M33-S. PIT BOTTOM-070810	S	Solid	DI Leach	
280-5234-4DU	Duplicate	S	Solid	DI Leach	
280-5234-5	M33-CUTTINGS-070810	S	Solid	DI Leach	
Analysis Batch:280-22764					
LCS 280-22764/16	Lab Control Sample	T	Water	9045C	
LCS 280-22764/4	Lab Control Sample	T	Water	9045C	
LCSD 280-22764/17	Lab Control Sample Duplicate	T	Water	9045C	
LCSD 280-22764/5	Lab Control Sample Duplicate	T	Water	9045C	
280-5234-2	M33-NW BACK-070810	S	Solid	9045C	
280-5234-2DU	Duplicate	S	Solid	9045C	
280-5234-3	M33-N. PIT BOTTOM-070810	S	Solid	9045C	
280-5234-4	M33-S. PIT BOTTOM-070810	S	Solid	9045C	
280-5234-4DU	Duplicate	S	Solid	9045C	
280-5234-5	M33-CUTTINGS-070810	S	Solid	9045C	
Prep Batch: 280-23203					
MB 280-23203/1-A	Method Blank	S	Solid	DI Leach	
280-5234-2	M33-NW BACK-070810	S	Solid	DI Leach	
280-5234-2DU	Duplicate	S	Solid	DI Leach	
280-5234-3	M33-N. PIT BOTTOM-070810	S	Solid	DI Leach	
280-5234-4	M33-S. PIT BOTTOM-070810	S	Solid	DI Leach	
280-5234-5	M33-CUTTINGS-070810	S	Solid	DI Leach	
Analysis Batch:280-23232					
LCS 280-23232/3	Lab Control Sample	T	Solid	9050A	
LCSD 280-23232/4	Lab Control Sample Duplicate	T	Solid	9050A	
MB 280-23203/1-A	Method Blank	S	Solid	9050A	
280-5234-2	M33-NW BACK-070810	S	Solid	9050A	
280-5234-2DU	Duplicate	S	Solid	9050A	
280-5234-3	M33-N. PIT BOTTOM-070810	S	Solid	9050A	
280-5234-4	M33-S. PIT BOTTOM-070810	S	Solid	9050A	
280-5234-5	M33-CUTTINGS-070810	S	Solid	9050A	
Analysis Batch:280-24403					
MB 280-24403/1	Method Blank	T	Solid	7196A	
280-5234-2	M33-NW BACK-070810	T	Solid	7196A	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	7196A	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	7196A	
280-5234-5	M33-CUTTINGS-070810	T	Solid	7196A	

TestAmerica Denver

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
General Chemistry					
Prep Batch: 500-89751					
LCS 500-89751/2-A	Lab Control Sample	T	Solid	300_Prep	
MB 500-89751/1-A	Method Blank	T	Solid	300_Prep	
280-5234-2	M33-NW BACK-070810	T	Solid	300_Prep	
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	300_Prep	
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	300_Prep	
280-5234-5	M33-CUTTINGS-070810	T	Solid	300_Prep	
280-5234-D-7-B MS	Matrix Spike	T	Solid	300_Prep	
280-5234-D-7-C MSD	Matrix Spike Duplicate	T	Solid	300_Prep	
Analysis Batch:500-89762					
LCS 500-89751/2-A	Lab Control Sample	T	Solid	7196A	500-89751
MB 500-89751/1-A	Method Blank	T	Solid	7196A	500-89751
280-5234-2	M33-NW BACK-070810	T	Solid	7196A	500-89751
280-5234-3	M33-N. PIT BOTTOM-070810	T	Solid	7196A	500-89751
280-5234-4	M33-S. PIT BOTTOM-070810	T	Solid	7196A	500-89751
280-5234-5	M33-CUTTINGS-070810	T	Solid	7196A	500-89751
280-5234-D-7-B MS	Matrix Spike	T	Solid	7196A	500-89751
280-5234-D-7-C MSD	Matrix Spike Duplicate	T	Solid	7196A	500-89751

Report Basis

S = Soluble

T = Total

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Surrogate Recovery Report**8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Solid**

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DBFM %Rec
280-5234-2	M33-NW BACK-070810	92	100	118	96
280-5234-5	M33-CUTTINGS-070 810	90	106	129X	75
MB 280-23407/6		84	94	108	92
LCS 280-23407/4		86	100	110	91
LCSD 280-23407/5		88	99	110	91
280-5251-E-6 MS		84	99	106	87
280-5251-E-6 MSD		77	88	96	80

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	58-140
TOL = Toluene-d8 (Surr)	80-126
BFB = 4-Bromofluorobenzene (Surr)	76-127
DBFM = Dibromofluoromethane (Surr)	75-121

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Surrogate Recovery Report**8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Solid**

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DBFM %Rec
280-5234-3	M33-N. PIT BOTTOM-070810	63	79	88	69
280-5234-4	M33-S. PIT BOTTOM-070810	62	90	105	37X
MB 280-22953/1-A		64	83	84	72
LCS 280-22953/2-A		67	84	86	78
LCSD 280-22953/3-A		68	85	83	82
280-5287-C-1-B MS		67	84	83	58X
280-5287-C-1-C MSD		68	81	80	56X

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	50-139
TOL = Toluene-d8 (Surr)	68-143
BFB = 4-Bromofluorobenzene (Surr)	62-133
DBFM = Dibromofluoromethane (Surr)	60-133

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Surrogate Recovery Report**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)****Client Matrix: Solid**

Lab Sample ID	Client Sample ID	FBP %Rec	NBZ %Rec	TPH %Rec
280-5234-2	M33-NW BACK-070810	69	66	75
280-5234-3	M33-N. PIT BOTTOM-070810	79	81	89
280-5234-4	M33-S. PIT BOTTOM-070810	71	83	78
280-5234-5	M33-CUTTINGS-070 810	68	62	77
MB 280-22524/1-A		72	69	82
LCS 280-22524/2-A		81	79	89
280-5234-2 MS	M33-NW BACK-070810 MS	71	68	81
280-5234-2 MSD	M33-NW BACK-070810 MSD	71	67	81

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl	50-120
NBZ = Nitrobenzene-d5	50-120
TPH = Terphenyl-d14	55-120

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Surrogate Recovery Report**8015B Gasoline Range Organics - (GC)****Client Matrix: Solid**

Lab Sample ID	Client Sample ID	TFT1 %Rec
280-5234-2	M33-NW BACK-070810	81
280-5234-3	M33-N. PIT BOTTOM-070810	0D
280-5234-4	M33-S. PIT BOTTOM-070810	0D
280-5234-5	M33-CUTTINGS-070 810	92
MB 280-22749/3-A		90
LCS 280-22749/1-A		97
LCSD 280-22749/2-A		93
280-5251-C-6-B MS		85
280-5251-C-6-C MSD		86

Surrogate

Acceptance Limits

TFT = a,a,a-Trifluorotoluene

77-123

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Surrogate Recovery Report**8015D Diesel Range Organics (DRO)****Client Matrix: Solid**

Lab Sample ID	Client Sample ID	OTPH2 %Rec
280-5234-2	M33-NW BACK-070810	78
280-5234-3	M33-N. PIT BOTTOM-070810	0D
280-5234-4	M33-S. PIT BOTTOM-070810	0D
280-5234-5	M33-CUTTINGS-070 810	78
MB 280-22529/1-A		76
LCS 280-22529/2-A		75
280-5234-A-12-C MS		80
280-5234-A-12-D MSD		78

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-22953

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-22953/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1037
Date Prepared: 07/14/2010 1512

Analysis Batch: 280-23266
Prep Batch: 280-22953
Units: ug/Kg

Instrument ID: MSV_P
Lab File ID: P9522.D
Initial Weight/Volume: 5.046 g
Final Weight/Volume: 1000 mL

Analyte	Result	Qual	MDL	RL
Benzene	ND		45	250
Ethylbenzene	ND		34	250
Toluene	ND		39	250
Xylenes, Total	ND		35	250

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	64	50 - 139
Toluene-d8 (Surr)	83	68 - 143
4-Bromofluorobenzene (Surr)	84	62 - 133
Dibromofluoromethane (Surr)	72	60 - 133

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-22953**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 280-22953/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1056
Date Prepared: 07/14/2010 1512

Analysis Batch: 280-23266
Prep Batch: 280-22953
Units: ug/Kg

Instrument ID: MSV_P
Lab File ID: P9523.D
Initial Weight/Volume: 5.049 g
Final Weight/Volume: 1000 mL

LCSD Lab Sample ID: LCSD 280-22953/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1116
Date Prepared: 07/14/2010 1512

Analysis Batch: 280-23266
Prep Batch: 280-22953
Units: ug/Kg

Instrument ID: MSV_P
Lab File ID: P9524.D
Initial Weight/Volume: 5.003 g
Final Weight/Volume: 1000 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	92	94	67 - 125	2	20		
Ethylbenzene	94	94	73 - 127	1	20		
Toluene	92	91	71 - 127	0	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	67		68		50 - 139		
Toluene-d8 (Surr)	84		85		68 - 143		
4-Bromofluorobenzene (Surr)	86		83		62 - 133		
Dibromofluoromethane (Surr)	78		82		60 - 133		

**Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-22953**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 280-22953/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1056
Date Prepared: 07/14/2010 1512

Units: ug/Kg

LCSD Lab Sample ID: LCSD 280-22953/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1116
Date Prepared: 07/14/2010 1512

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Benzene	1980	2000	1830	1870
Ethylbenzene	1980	2000	1870	1880
Toluene	1980	2000	1830	1820

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-22953**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 280-5287-C-1-B MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1235
Date Prepared: 07/14/2010 1512

Analysis Batch: 280-23266
Prep Batch: 280-22953

Instrument ID: MSV_P
Lab File ID: P9528.D
Initial Weight/Volume: 5.021 g
Final Weight/Volume: 1000 mL

MSD Lab Sample ID: 280-5287-C-1-C MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1255
Date Prepared: 07/14/2010 1512

Analysis Batch: 280-23266
Prep Batch: 280-22953

Instrument ID: MSV_P
Lab File ID: P9529.D
Initial Weight/Volume: 5.052 g
Final Weight/Volume: 1000 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	91	87	67 - 125	5	20		
Ethylbenzene	91	87	73 - 127	6	20		
Toluene	89	88	71 - 127	2	20		
Xylenes, Total	92	88	73 - 127	5	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	67		68	50 - 139			
Toluene-d8 (Surr)	84		81	68 - 143			
4-Bromofluorobenzene (Surr)	83		80	62 - 133			
Dibromofluoromethane (Surr)	58		56	X	X	60 - 133	

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-22953**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 280-5287-C-1-B MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1235
Date Prepared: 07/14/2010 1512

Units: ug/Kg

MSD Lab Sample ID: 280-5287-C-1-C MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/15/2010 1255
Date Prepared: 07/14/2010 1512

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Benzene	ND	1990	1980	1800	1720
Ethylbenzene	ND	1990	1980	1820	1720
Toluene	ND	1990	1980	1770	1740
Xylenes, Total	ND	5970	5940	5520	5240

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-23407

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-23407/6
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1043
Date Prepared: 07/16/2010 1043

Analysis Batch: 280-23407
Prep Batch: N/A
Units: mg/Kg

Instrument ID: MSV_J
Lab File ID: J9573.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Benzene	ND		0.00047	0.0050
Ethylbenzene	ND		0.00067	0.0050
Toluene	ND		0.00069	0.0050
Xylenes, Total	ND		0.00061	0.0050

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84	58 - 140
Toluene-d8 (Surr)	94	80 - 126
4-Bromofluorobenzene (Surr)	108	76 - 127
Dibromofluoromethane (Surr)	92	75 - 121

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 280-23407

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 280-23407/4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 0936
Date Prepared: 07/16/2010 0936

Analysis Batch: 280-23407
Prep Batch: N/A
Units: mg/Kg

Instrument ID: MSV_J
Lab File ID: J9570.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 280-23407/5
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 0958
Date Prepared: 07/16/2010 0958

Analysis Batch: 280-23407
Prep Batch: N/A
Units: mg/Kg

Instrument ID: MSV_J
Lab File ID: J9571.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	95	93	76 - 120	2	20		
Ethylbenzene	93	90	78 - 120	4	20		
Toluene	94	91	72 - 120	3	20		
Xylenes, Total	94	91	77 - 120	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86	88	58 - 140
Toluene-d8 (Surr)	100	99	80 - 126
4-Bromofluorobenzene (Surr)	110	110	76 - 127
Dibromofluoromethane (Surr)	91	91	75 - 121

Laboratory Control/

Laboratory Duplicate Data Report - Batch: 280-23407

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 280-23407/4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 0936
Date Prepared: 07/16/2010 0936

Units: mg/Kg

LCSD Lab Sample ID: LCSD 280-23407/5
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 0958
Date Prepared: 07/16/2010 0958

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Benzene	0.0500	0.0500	0.0473	0.0464
Ethylbenzene	0.0500	0.0500	0.0467	0.0450
Toluene	0.0500	0.0500	0.0470	0.0457
Xylenes, Total	0.150	0.150	0.141	0.136

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-23407**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 280-5251-E-6 MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1318
Date Prepared: 07/16/2010 1318

Analysis Batch: 280-23407
Prep Batch: N/A

Instrument ID: MSV_J
Lab File ID: J9580.D
Initial Weight/Volume: 5.113 g
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-5251-E-6 MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1340
Date Prepared: 07/16/2010 1340

Analysis Batch: 280-23407
Prep Batch: N/A

Instrument ID: MSV_J
Lab File ID: J9581.D
Initial Weight/Volume: 5.433 g
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	94	85	76 - 120	15	20		
Ethylbenzene	94	81	78 - 120	21	20		F
Toluene	93	83	72 - 120	17	20		
Xylenes, Total	92	82	77 - 120	18	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	84		77	58 - 140			
Toluene-d8 (Surr)	99		88	80 - 126			
4-Bromofluorobenzene (Surr)	106		96	76 - 127			
Dibromofluoromethane (Surr)	87		80	75 - 121			

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-23407**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 280-5251-E-6 MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1318
Date Prepared: 07/16/2010 1318

Units: mg/Kg

MSD Lab Sample ID: 280-5251-E-6 MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1340
Date Prepared: 07/16/2010 1340

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
Benzene	ND	0.0489	0.0460	0.0459	0.0393	
Ethylbenzene	ND	0.0489	0.0460	0.0460	0.0374	F
Toluene	ND	0.0489	0.0460	0.0453	0.0382	
Xylenes, Total	ND	0.147	0.138	0.135	0.113	

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-22524

Lab Sample ID: MB 280-22524/1-A
 Client Matrix: Solid
 Dilution: 1.0
 Date Analyzed: 08/02/2010 1347
 Date Prepared: 07/11/2010 0925

Analysis Batch: 280-25217
 Prep Batch: 280-22524
 Units: mg/Kg

Method: 8270C Preparation: 3550C

Instrument ID: MSS_B
 Lab File ID: B9387.D
 Initial Weight/Volume: 30.7 g
 Final Weight/Volume: 1000 uL
 Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
Pyrene	ND		0.012	0.32
Acenaphthene	ND		0.010	0.32
Anthracene	ND		0.017	0.32
Benzo[a]anthracene	ND		0.020	0.32
Benzo[b]fluoranthene	ND		0.026	0.32
Benzo[k]fluoranthene	ND		0.039	0.32
Benzo[a]pyrene	ND		0.020	0.32
Chrysene	ND		0.026	0.32
Dibenz(a,h)anthracene	ND		0.019	0.32
Fluoranthene	ND		0.035	0.32
Fluorene	ND		0.018	0.32
Indeno[1,2,3-cd]pyrene	ND		0.021	0.32
Naphthalene	ND		0.030	0.32
Surrogate	% Rec	Acceptance Limits		
2-Fluorobiphenyl	72	50 - 120		
Nitrobenzene-d5	69	50 - 120		
Terphenyl-d14	82	55 - 120		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Lab Control Sample - Batch: 280-22524

Method: 8270C
Preparation: 3550C

Lab Sample ID: LCS 280-22524/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 08/02/2010 1407
Date Prepared: 07/11/2010 0925

Analysis Batch: 280-25217
Prep Batch: 280-22524
Units: mg/Kg

Instrument ID: MSS_B
Lab File ID: B9388.D
Initial Weight/Volume: 30.5 g
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Pyrene	2.62	2.23	85	50 - 120	
Acenaphthene	2.62	2.08	79	52 - 120	
Anthracene	2.62	2.23	85	57 - 120	
Benzo[a]anthracene	2.62	2.24	86	55 - 120	
Benzo[b]fluoranthene	2.62	2.18	83	52 - 120	
Benzo[k]fluoranthene	2.62	2.39	91	54 - 120	
Benzo[a]pyrene	2.62	2.02	77	54 - 120	
Chrysene	2.62	2.20	84	55 - 120	
Dibenz(a,h)anthracene	2.62	2.34	89	55 - 120	
Fluoranthene	2.62	2.35	89	55 - 120	
Fluorene	2.62	2.19	83	55 - 120	
Indeno[1,2,3-cd]pyrene	2.62	2.31	88	54 - 120	
Naphthalene	2.62	2.02	77	50 - 120	
Surrogate	% Rec		Acceptance Limits		
2-Fluorobiphenyl	81		50 - 120		
Nitrobenzene-d5	79		50 - 120		
Terphenyl-d14	89		55 - 120		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-22524**

**Method: 8270C
Preparation: 3550C**

MS Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 08/02/2010 1448
Date Prepared: 07/11/2010 0925

Analysis Batch: 280-25217
Prep Batch: 280-22524

Instrument ID: MSS_B
Lab File ID: B9390.D
Initial Weight/Volume: 30.9 g
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

MSD Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 08/02/2010 1508
Date Prepared: 07/11/2010 0925

Analysis Batch: 280-25217
Prep Batch: 280-22524

Instrument ID: MSS_B
Lab File ID: B9391.D
Initial Weight/Volume: 30.6 g
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Pyrene	78	76	50 - 120	1	38		
Acenaphthene	70	70	52 - 120	1	30		
Anthracene	77	75	57 - 120	1	30		
Benzo[a]anthracene	77	75	55 - 120	1	30		
Benzo[b]fluoranthene	72	69	52 - 120	2	44		
Benzo[k]fluoranthene	84	81	54 - 120	2	30		
Benzo[a]pyrene	69	66	54 - 120	4	30		
Chrysene	75	76	55 - 120	2	35		
Dibenz(a,h)anthracene	77	75	55 - 120	1	30		
Fluoranthene	81	79	55 - 120	1	30		
Fluorene	75	74	55 - 120	0	30		
Indeno[1,2,3-cd]pyrene	74	74	54 - 120	1	30		
Naphthalene	67	65	50 - 120	2	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
2-Fluorobiphenyl	71		71	50 - 120			
Nitrobenzene-d5	68		67	50 - 120			
Terphenyl-d14	81		81	55 - 120			

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-22524

Method: 8270C

Preparation: 3550C

MS Lab Sample ID: 280-5234-2

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 08/02/2010 1448

Date Prepared: 07/11/2010 0925

MSD Lab Sample ID: 280-5234-2

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 08/02/2010 1508

Date Prepared: 07/11/2010 0925

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Pyrene	ND	2.59	2.61	2.01	1.99
Acenaphthene	ND	2.59	2.61	1.82	1.83
Anthracene	ND	2.59	2.61	2.00	1.97
Benzo[a]anthracene	ND	2.59	2.61	1.99	1.96
Benzo[b]fluoranthene	ND	2.59	2.61	1.85	1.81
Benzo[k]fluoranthene	ND	2.59	2.61	2.16	2.11
Benzo[a]pyrene	ND	2.59	2.61	1.78	1.71
Chrysene	ND	2.59	2.61	1.94	1.97
Dibenz(a,h)anthracene	ND	2.59	2.61	1.99	1.96
Fluoranthene	ND	2.59	2.61	2.10	2.08
Fluorene	ND	2.59	2.61	1.94	1.94
Indeno[1,2,3-cd]pyrene	ND	2.59	2.61	1.93	1.94
Naphthalene	ND	2.59	2.61	1.73	1.69

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-22749

Lab Sample ID: MB 280-22749/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/14/2010 1512
Date Prepared: 07/13/2010 1102

Analysis Batch: 280-23436
Prep Batch: 280-22749
Units: mg/Kg

Method: 8015B Preparation: 5030B

Instrument ID: GCV_L
Lab File ID: 218F0501.D
Initial Weight/Volume: 10.08 g
Final Weight/Volume: 500 mL
Injection Volume: 5 mL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Gasoline Range Organics (GRO)-C6-C10	ND		0.32	1.2

Surrogate	% Rec	Acceptance Limits
a,a,a-Trifluorotoluene	90	77 - 123

Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-22749

LCS Lab Sample ID: LCS 280-22749/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/14/2010 1328
Date Prepared: 07/13/2010 1102

Analysis Batch: 280-23436
Prep Batch: 280-22749
Units: mg/Kg

Method: 8015B Preparation: 5030B

Instrument ID: GCV_L
Lab File ID: 132F0301.D
Initial Weight/Volume: 10.04 g
Final Weight/Volume: 500 mL
Injection Volume: 5 mL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-22749/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/14/2010 1434
Date Prepared: 07/13/2010 1102

Analysis Batch: 280-23436
Prep Batch: 280-22749
Units: mg/Kg

Instrument ID: GCV_L
Lab File ID: 217F0401.D
Initial Weight/Volume: 10.02 g
Final Weight/Volume: 500 mL
Injection Volume: 5 mL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Gasoline Range Organics (GRO)-C6-C10	122	115	85 - 153	7	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
a,a,a-Trifluorotoluene	97		93		77 - 123		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-22749

Method: 8015B
Preparation: 5030B

LCS Lab Sample ID: LCS 280-22749/1-A Units: mg/Kg
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/14/2010 1328
Date Prepared: 07/13/2010 1102

LCSD Lab Sample ID: LCSD 280-22749/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/14/2010 1434
Date Prepared: 07/13/2010 1102

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Gasoline Range Organics (GRO)-C6-C10	5.48	5.49	6.71	6.29

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-22749

Method: 8015B
Preparation: 5030B

MS Lab Sample ID: 280-5251-C-6-B MS Analysis Batch: 280-23436
Client Matrix: Solid Prep Batch: 280-22749
Dilution: 1.0
Date Analyzed: 07/14/2010 1859
Date Prepared: 07/13/2010 1102

Instrument ID: GCV_L
Lab File ID: 224F1101.D
Initial Weight/Volume: 10.22 g
Final Weight/Volume: 500 mL
Injection Volume: 5 mL
Column ID: PRIMARY

MSD Lab Sample ID: 280-5251-C-6-C MSD Analysis Batch: 280-23436
Client Matrix: Solid Prep Batch: 280-22749
Dilution: 1.0
Date Analyzed: 07/14/2010 1937
Date Prepared: 07/13/2010 1102

Instrument ID: GCV_L
Lab File ID: 225F1201.D
Initial Weight/Volume: 10.20 g
Final Weight/Volume: 500 mL
Injection Volume: 5 mL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Gasoline Range Organics (GRO)-C6-C10	82	83	85 - 153	2	30	F	F
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
a,a,a-Trifluorotoluene	85		86	77 - 123			

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-22749

Method: 8015B

Preparation: 5030B

MS Lab Sample ID: 280-5251-C-6-B MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/14/2010 1859

Date Prepared: 07/13/2010 1102

MSD Lab Sample ID: 280-5251-C-6-C MSD

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/14/2010 1937

Date Prepared: 07/13/2010 1102

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Gasoline Range Organics (GRO)-C6-C10	0.36	J	5.38	5.39	4.76	F	4.83	F

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-22529

Lab Sample ID: MB 280-22529/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/12/2010 2138
Date Prepared: 07/11/2010 1210

Analysis Batch: 280-22885
Prep Batch: 280-22529
Units: mg/Kg

Method: 8015D Preparation: 3550C

Instrument ID: GCS_U2
Lab File ID: 006B0601.D
Initial Weight/Volume: 30.1 g
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
C10-C22	ND		0.99	4.0
C22-C36	ND		3.9	12
Surrogate	% Rec		Acceptance Limits	
o-Terphenyl	76		49 - 115	

Lab Control Sample - Batch: 280-22529

Lab Sample ID: LCS 280-22529/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/12/2010 2211
Date Prepared: 07/11/2010 1210

Analysis Batch: 280-22885
Prep Batch: 280-22529
Units: mg/Kg

Method: 8015D Preparation: 3550C

Instrument ID: GCS_U2
Lab File ID: 007B0701.D
Initial Weight/Volume: 30.3 g
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C22	66.0	51.1	77	50 - 150	
Surrogate	% Rec		Acceptance Limits		
o-Terphenyl	75		49 - 115		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-22529**

**Method: 8015D
Preparation: 3550C**

MS Lab Sample ID: 280-5234-A-12-C MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/13/2010 0516
Date Prepared: 07/11/2010 1210

Analysis Batch: 280-22885
Prep Batch: 280-22529

Instrument ID: GCS_U2
Lab File ID: 020B2001.D
Initial Weight/Volume: 30.0 g
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

MSD Lab Sample ID: 280-5234-A-12-D MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/13/2010 0549
Date Prepared: 07/11/2010 1210

Analysis Batch: 280-22885
Prep Batch: 280-22529

Instrument ID: GCS_U2
Lab File ID: 021B2101.D
Initial Weight/Volume: 30.3 g
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
C10-C22	77	71	50 - 150	9	30		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
o-Terphenyl		80	78			49 - 115	

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-22529**

**Method: 8015D
Preparation: 3550C**

MS Lab Sample ID: 280-5234-A-12-C MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/13/2010 0516
Date Prepared: 07/11/2010 1210

Units: mg/Kg

MSD Lab Sample ID: 280-5234-A-12-D MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/13/2010 0549
Date Prepared: 07/11/2010 1210

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C10-C22	ND	66.7	66.0	51.6	47.1

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-23560

Lab Sample ID: MB 280-23560/1-A
Client Matrix: Solid
Dilution: 10
Date Analyzed: 07/23/2010 1046
Date Prepared: 07/20/2010 1500

Analysis Batch: 280-24007
Prep Batch: 280-23560
Units: No Unit

Method: 20B

Preparation: 20B

Soluble

Instrument ID: MT_025
Lab File ID: N/A
Initial Weight/Volume: 5 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Sodium Adsorption Ratio	ND		1.2	1.2

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-23479

Method: 6010B

Preparation: 3050B

Lab Sample ID: MB 280-23479/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2010 0034
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23824
Prep Batch: 280-23479
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26c072110.txt
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Barium	ND		0.076	1.0
Cadmium	ND		0.041	0.50
Chromium	0.0650	J	0.058	1.5
Copper	ND		0.22	2.0
Lead	ND		0.27	0.80
Nickel	ND		0.12	4.0
Selenium	ND		0.86	1.3
Silver	ND		0.16	1.0
Zinc	ND		0.40	3.0

Lab Control Sample - Batch: 280-23479

Method: 6010B

Preparation: 3050B

Lab Sample ID: LCS 280-23479/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2010 0036
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23824
Prep Batch: 280-23479
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26c072110.txt
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	200	210	105	87 - 112	
Cadmium	10.0	10.0	100	87 - 110	
Chromium	20.0	20.1	100	84 - 114	
Copper	25.0	25.0	100	88 - 110	
Lead	50.0	47.8	96	86 - 110	
Nickel	50.0	47.8	96	87 - 110	
Selenium	200	189	95	83 - 110	
Silver	5.00	5.13	103	87 - 114	
Zinc	50.0	49.7	99	76 - 114	

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-23479

Method: 6010B

Preparation: 3050B

MS Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2010 0043
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23824
Prep Batch: 280-23479

Instrument ID: MT_026
Lab File ID: 26c072110.txt
Initial Weight/Volume: 1.12 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2010 0046
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23824
Prep Batch: 280-23479

Instrument ID: MT_026
Lab File ID: 26c072110.txt
Initial Weight/Volume: 1.02 g
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Barium	116	124	52 - 159	7	30		
Cadmium	91	95	40 - 130	13	30		
Chromium	120	130	70 - 200	7	40		
Copper	102	110	37 - 187	11	30		
Lead	84	89	70 - 200	11	40		
Nickel	88	92	61 - 126	10	30		
Selenium	86	89	76 - 104	14	30		
Silver	98	101	75 - 141	13	30		
Zinc	99	107	70 - 200	9	40		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-23479

Method: 6010B

Preparation: 3050B

MS Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2010 0043
Date Prepared: 07/21/2010 0900

Units: mg/Kg

MSD Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2010 0046
Date Prepared: 07/21/2010 0900

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Barium	300	179	196	505	543
Cadmium	0.095 J	8.93	9.80	8.23	9.40
Chromium	39	17.9	19.6	60.2	64.3
Copper	13	22.3	24.5	35.4	39.6
Lead	12	44.6	49.0	49.5	55.4
Nickel	16	44.6	49.0	55.2	61.0
Selenium	ND	179	196	153	175
Silver	ND	4.46	4.90	4.36	4.96
Zinc	41	44.6	49.0	85.4	93.6

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-23465

Method: 6020
Preparation: 3050B

Lab Sample ID: MB 280-23465/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2010 0111
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23997
Prep Batch: 280-23465
Units: mg/Kg

Instrument ID: MT_024
Lab File ID: 121_BLK.D
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.051	0.60

Lab Control Sample - Batch: 280-23465

Method: 6020
Preparation: 3050B

Lab Sample ID: LCS 280-23465/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2010 0114
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23997
Prep Batch: 280-23465
Units: mg/Kg

Instrument ID: MT_024
Lab File ID: 122_LCS.D
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	20.0	19.5	97	83 - 111	

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23465

Method: 6020
Preparation: 3050B

MS Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2010 0128
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23997
Prep Batch: 280-23465

Instrument ID: MT_024
Lab File ID: 127_MS.D
Initial Weight/Volume: 1.07 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2010 0131
Date Prepared: 07/21/2010 0900

Analysis Batch: 280-23997
Prep Batch: 280-23465

Instrument ID: MT_024
Lab File ID: 128_MSD.D
Initial Weight/Volume: 1.04 g
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	91	92	83 - 111	3	20		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-23465

Method: 6020

Preparation: 3050B

MS Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2010 0128
Date Prepared: 07/21/2010 0900

Units: mg/Kg

MSD Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2010 0131
Date Prepared: 07/21/2010 0900

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	4.5	18.7	19.2	21.6	22.3

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-23340

Lab Sample ID: MB 280-23340/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/19/2010 1524
Date Prepared: 07/19/2010 0840

Analysis Batch: 280-23489
Prep Batch: 280-23340
Units: mg/Kg

Method: 7471A Preparation: 7471A

Instrument ID: MT_033
Lab File ID: 100719AA.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.0055	0.017

Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-23340

LCS Lab Sample ID: LCS 280-23340/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/19/2010 1526
Date Prepared: 07/19/2010 0840

Analysis Batch: 280-23489
Prep Batch: 280-23340
Units: mg/Kg

Method: 7471A Preparation: 7471A

Instrument ID: MT_033
Lab File ID: 100719AA.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 280-23340/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/19/2010 1529
Date Prepared: 07/19/2010 0840

Analysis Batch: 280-23489
Prep Batch: 280-23340
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 100719AA.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Mercury	106	103	87 - 111	3	20		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-23340

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 280-23340/2-A Units: mg/Kg
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/19/2010 1526
Date Prepared: 07/19/2010 0840

LCSD Lab Sample ID: LCSD 280-23340/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/19/2010 1529
Date Prepared: 07/19/2010 0840

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Mercury	0.417	0.417	0.442	0.430

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23340

Method: 7471A
Preparation: 7471A

MS Lab Sample ID: 280-5035-A-5-E MS Analysis Batch: 280-23489
Client Matrix: Solid Prep Batch: 280-23340
Dilution: 1.0
Date Analyzed: 07/19/2010 1548
Date Prepared: 07/19/2010 0840

Instrument ID: MT_033
Lab File ID: 100719AA.txt
Initial Weight/Volume: 0.68 g
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-5035-A-5-F MSD Analysis Batch: 280-23489
Client Matrix: Solid Prep Batch: 280-23340
Dilution: 1.0
Date Analyzed: 07/19/2010 1553
Date Prepared: 07/19/2010 0840

Instrument ID: MT_033
Lab File ID: 100719AA.txt
Initial Weight/Volume: 0.65 g
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	112	118	87 - 111	6	20	F	F

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-23340

Method: 7471A

Preparation: 7471A

MS Lab Sample ID: 280-5035-A-5-E MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/19/2010 1548

Date Prepared: 07/19/2010 0840

MSD Lab Sample ID: 280-5035-A-5-F MSD

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/19/2010 1553

Date Prepared: 07/19/2010 0840

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.29	0.368	0.385	0.703 F	0.746 F

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-24403

Lab Sample ID: MB 280-24403/1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/27/2010 1442
Date Prepared: N/A

Analysis Batch: 280-24403
Prep Batch: N/A
Units: mg/Kg

Method: 7196A Preparation: N/A

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Cr (III)	ND		2.0	2.0

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 500-89751

Lab Sample ID: MB 500-89751/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1331
Date Prepared: 07/15/2010 1300

Analysis Batch: 500-89762
Prep Batch: 500-89751
Units: mg/Kg

Method: 7196A Preparation: 300_Prep

Instrument ID: SPEC5
Lab File ID: N/A
Initial Weight/Volume: 25 g
Final Weight/Volume: 250 mL

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.020	0.10

Lab Control Sample - Batch: 500-89751

Lab Sample ID: LCS 500-89751/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1332
Date Prepared: 07/15/2010 1300

Analysis Batch: 500-89762
Prep Batch: 500-89751
Units: mg/Kg

Method: 7196A Preparation: 300_Prep

Instrument ID: SPEC5
Lab File ID: N/A
Initial Weight/Volume: 25 g
Final Weight/Volume: 250 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	2.50	2.48	99	80 - 120	

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 500-89751

Method: 7196A Preparation: 300_Prep

MS Lab Sample ID: 280-5234-D-7-B MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1337
Date Prepared: 07/15/2010 1300

Analysis Batch: 500-89762
Prep Batch: 500-89751

Instrument ID: SPEC5
Lab File ID: N/A
Initial Weight/Volume: 10.1 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 280-5234-D-7-C MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1338
Date Prepared: 07/15/2010 1300

Analysis Batch: 500-89762
Prep Batch: 500-89751

Instrument ID: SPEC5
Lab File ID: N/A
Initial Weight/Volume: 10.1 g
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chromium, hexavalent	77	53	75 - 125	37	20		F

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 500-89751

Method: 7196A

Preparation: 300_Prep

MS Lab Sample ID: 280-5234-D-7-B MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1337
Date Prepared: 07/15/2010 1300

Units: mg/Kg

MSD Lab Sample ID: 280-5234-D-7-C MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1338
Date Prepared: 07/15/2010 1300

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
Chromium, hexavalent	ND	2.48	2.48	1.90	1.30	F

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-22764**

**Method: 9045C
Preparation: N/A**

LCS Lab Sample ID: LCS 280-22764/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1206
Date Prepared: N/A

Analysis Batch: 280-22764
Prep Batch: N/A
Units: SU

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

LCSD Lab Sample ID: LCSD 280-22764/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1207
Date Prepared: N/A

Analysis Batch: 280-22764
Prep Batch: N/A
Units: SU

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
pH adj. to 25 deg C-Soluble	100	100	97 - 103	0	5		

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-22764**

**Method: 9045C
Preparation: N/A**

LCS Lab Sample ID: LCS 280-22764/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1249
Date Prepared: N/A

Analysis Batch: 280-22764
Prep Batch: N/A
Units: SU

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

LCSD Lab Sample ID: LCSD 280-22764/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1252
Date Prepared: N/A

Analysis Batch: 280-22764
Prep Batch: N/A
Units: SU

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
pH adj. to 25 deg C-Soluble	100	100	97 - 103	0	5		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

**Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-22764**

**Method: 9045C
Preparation: N/A**

LCS Lab Sample ID: LCS 280-22764/4 Units: SU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1206
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-22764/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1207
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
pH adj. to 25 deg C-Soluble	7.00	7.00	7.030	7.030

**Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-22764**

**Method: 9045C
Preparation: N/A**

LCS Lab Sample ID: LCS 280-22764/16 Units: SU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1249
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-22764/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1252
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
pH adj. to 25 deg C-Soluble	10.0	10.0	10.01	10.00

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Duplicate - Batch: 280-22764

Method: 9045C
Preparation: N/A

Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/13/2010 1211
Date Prepared: N/A
Date Leached: 07/13/2010 0904

Analysis Batch: 280-22764
Prep Batch: N/A
Units: SU

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH adj. to 25 deg C-Soluble	6.89	6.860	0	5	

Duplicate - Batch: 280-22764

Method: 9045C
Preparation: N/A

Lab Sample ID: 280-5234-4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/13/2010 1254
Date Prepared: N/A
Date Leached: 07/13/2010 0904

Analysis Batch: 280-22764
Prep Batch: N/A
Units: SU

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH adj. to 25 deg C-Soluble	11.6	11.62	0	5	

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Method Blank - Batch: 280-23232

Method: 9050A
Preparation: N/A

Lab Sample ID: MB 280-23203/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1330
Date Prepared: N/A
Date Leached: 07/16/2010 1046

Analysis Batch: 280-23232
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Specific Conductance-Soluble	ND		2.0	2.0

Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-23232

Method: 9050A
Preparation: N/A

LCS Lab Sample ID: LCS 280-23232/3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1330
Date Prepared: N/A

Analysis Batch: 280-23232
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-23232/4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1330
Date Prepared: N/A

Analysis Batch: 280-23232
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Specific Conductance-Soluble	100	101	90 - 110	2	10		

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-23232

Method: 9050A
Preparation: N/A

LCS Lab Sample ID: LCS 280-23232/3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1330
Date Prepared: N/A

Units: umhos/cm

LCSD Lab Sample ID: LCSD 280-23232/4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1330
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Specific Conductance-Soluble	1410	1410	1400	1430

Duplicate - Batch: 280-23232

Method: 9050A
Preparation: N/A

Lab Sample ID: 280-5234-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2010 1330
Date Prepared: N/A
Date Leached: 07/16/2010 1046

Analysis Batch: 280-23232
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Specific Conductance-Soluble	9.4	8.13	15	20	

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: 280-5234-1

Client ID: M33-SW BACK-070810

Sample Date/Time: 07/08/2010 12:50

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	280-5234-A-1-A		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-1-A		280-23997	280-23465	07/23/2010 01:17	1	TAL DEN	TEL

Lab ID: 280-5234-2

Client ID: M33-NW BACK-070810

Sample Date/Time: 07/08/2010 12:30

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5234-B-2		280-23407		07/16/2010 14:03	1	TAL DEN	MD
A:8260B	280-5234-B-2		280-23407		07/16/2010 14:03	1	TAL DEN	MD
P:3550C	280-5234-A-2-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-2-A		280-25217	280-22524	08/02/2010 14:27	1	TAL DEN	DCK
P:5030B	280-5234-B-2-A		280-23436	280-22749	07/13/2010 11:05	1	TAL DEN	TEM
A:8015B	280-5234-B-2-A		280-23436	280-22749	07/14/2010 21:29	1	TAL DEN	TEM
P:3550C	280-5234-A-2-D		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-2-D		280-22885	280-22529	07/12/2010 22:43	1	TAL DEN	MRB
P:20B	280-5234-A-2-Q		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	280-5234-A-2-Q		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	280-5234-A-2-N		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-2-N		280-23824	280-23479	07/22/2010 00:38	1	TAL DEN	DW
P:3050B	280-5234-A-2-K		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-2-K		280-23997	280-23465	07/23/2010 01:20	1	TAL DEN	TEL
P:7471A	280-5234-A-2-I		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5234-A-2-I		280-23489	280-23340	07/19/2010 16:14	1	TAL DEN	CGG
P:300_Prep	280-5234-D-2-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-2-A		500-89762	500-89751	07/16/2010 13:32	1	TAL CHI	KD
A:7196A	280-5234-A-2		280-24403		07/27/2010 14:42	1	TAL DEN	JMB
A:9045C	280-5234-A-2-E		280-22764		07/13/2010 12:09	1	TAL DEN	LMK
A:9050A	280-5234-A-2-G		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: 280-5234-2 MS

Client ID: M33-NW BACK-070810

Sample Date/Time: 07/08/2010 12:30

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3550C	280-5234-A-2-B MS		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-2-B MS		280-25217	280-22524	08/02/2010 14:48	1	TAL DEN	DCK
P:3050B	280-5234-A-2-O MS		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-2-O MS		280-23824	280-23479	07/22/2010 00:43	1	TAL DEN	DW
P:3050B	280-5234-A-2-L MS		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-2-L MS		280-23997	280-23465	07/23/2010 01:28	1	TAL DEN	TEL

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: 280-5234-2 MSD

Client ID: M33-NW BACK-070810

Sample Date/Time: 07/08/2010 12:30

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3550C	280-5234-A-2-C MSD		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-2-C MSD		280-25217	280-22524	08/02/2010 15:08	1	TAL DEN	DCK
P:3050B	280-5234-A-2-P MSD		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-2-P MSD		280-23824	280-23479	07/22/2010 00:46	1	TAL DEN	DW
P:3050B	280-5234-A-2-M MSD		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-2-M MSD		280-23997	280-23465	07/23/2010 01:31	1	TAL DEN	TEL

Lab ID: 280-5234-2 DU

Client ID: M33-NW BACK-070810

Sample Date/Time: 07/08/2010 12:30

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:9045C	280-5234-A-2-F DU		280-22764		07/13/2010 12:11	1	TAL DEN	LMK
A:9050A	280-5234-A-2-H DU		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: 280-5234-3

Client ID: M33-N. PIT BOTTOM-070810

Sample Date/Time: 07/08/2010 13:45

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5234-B-3-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5234-B-3-A		280-23266	280-22953	07/15/2010 13:15	1	TAL DEN	HZ
P:3550C	280-5234-A-3-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-3-A		280-25217	280-22524	08/02/2010 18:10	1	TAL DEN	DCK
P:5030B	280-5234-C-3-A		280-23436	280-22749	07/13/2010 11:05	5	TAL DEN	TEM
A:8015B	280-5234-C-3-A		280-23436	280-22749	07/15/2010 09:31	5	TAL DEN	TEM
P:3550C	280-5234-A-3-B		280-22885	280-22529	07/11/2010 12:10	10	TAL DEN	CDC
A:8015D	280-5234-A-3-B		280-22885	280-22529	07/13/2010 18:08	10	TAL DEN	MRB
P:20B	280-5234-A-3-H		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	280-5234-A-3-H		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	280-5234-A-3-G		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-3-G		280-23824	280-23479	07/22/2010 00:50	1	TAL DEN	DW
P:3050B	280-5234-A-3-F		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-3-F		280-23997	280-23465	07/23/2010 01:34	1	TAL DEN	TEL
P:7471A	280-5234-A-3-E		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5234-A-3-E		280-23489	280-23340	07/19/2010 16:16	1	TAL DEN	CGG
P:300_Prep	280-5234-D-3-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-3-A		500-89762	500-89751	07/16/2010 13:33	1	TAL CHI	KD
A:7196A	280-5234-A-3		280-24403		07/27/2010 14:42	1	TAL DEN	JMB
A:9045C	280-5234-A-3-C		280-22764		07/13/2010 12:17	1	TAL DEN	LMK
A:9050A	280-5234-A-3-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: 280-5234-4

Client ID: M33-S. PIT BOTTOM-070810

Sample Date/Time: 07/08/2010 13:15

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5234-C-4-B		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5234-C-4-B		280-23266	280-22953	07/15/2010 16:07	1	TAL DEN	HZ
P:3550C	280-5234-A-4-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-4-A		280-25217	280-22524	08/02/2010 15:28	1	TAL DEN	DCK
P:5030B	280-5234-C-4-A		280-23436	280-22749	07/13/2010 11:05	10	TAL DEN	TEM
A:8015B	280-5234-C-4-A		280-23436	280-22749	07/15/2010 10:09	10	TAL DEN	TEM
P:3550C	280-5234-A-4-B		280-22885	280-22529	07/11/2010 12:10	10	TAL DEN	CDC
A:8015D	280-5234-A-4-B		280-22885	280-22529	07/13/2010 18:42	10	TAL DEN	MRB
P:20B	280-5234-A-4-H		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	280-5234-A-4-H		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	280-5234-A-4-G		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-4-G		280-23824	280-23479	07/22/2010 00:52	1	TAL DEN	DW
P:3050B	280-5234-A-4-F		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-4-F		280-23997	280-23465	07/23/2010 01:42	1	TAL DEN	TEL
P:7471A	280-5234-A-4-E		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5234-A-4-E		280-23489	280-23340	07/19/2010 16:18	1	TAL DEN	CGG
P:300_Prep	280-5234-D-4-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-4-A		500-89762	500-89751	07/16/2010 13:34	1	TAL CHI	KD
A:7196A	280-5234-A-4		280-24403		07/27/2010 14:42	1	TAL DEN	JMB
A:9045C	280-5234-A-4-C		280-22764		07/13/2010 12:53	1	TAL DEN	LMK
A:9050A	280-5234-A-4-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: 280-5234-4 DU

Client ID: M33-S. PIT BOTTOM-070810

Sample Date/Time: 07/08/2010 13:15

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:9045C	280-5234-A-4-C DU		280-22764		07/13/2010 12:54	1	TAL DEN	LMK

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: 280-5234-5

Client ID: M33-CUTTINGS-070810

Sample Date/Time: 07/08/2010 14:15

Received Date/Time: 07/10/2010 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5234-C-5		280-23407		07/16/2010 14:25	1	TAL DEN	MD
A:8260B	280-5234-C-5		280-23407		07/16/2010 14:25	1	TAL DEN	MD
P:3550C	280-5234-A-5-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-5-A		280-25217	280-22524	08/02/2010 15:48	1	TAL DEN	DCK
P:5030B	280-5234-B-5-A		280-23436	280-22749	07/13/2010 11:05	1	TAL DEN	TEM
A:8015B	280-5234-B-5-A		280-23436	280-22749	07/15/2010 10:46	1	TAL DEN	TEM
P:3550C	280-5234-A-5-B		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-5-B		280-22885	280-22529	07/13/2010 00:21	1	TAL DEN	MRB
P:20B	280-5234-A-5-H		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	280-5234-A-5-H		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	280-5234-A-5-G		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-5-G		280-23824	280-23479	07/22/2010 00:55	1	TAL DEN	DW
P:3050B	280-5234-A-5-F		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-5-F		280-23997	280-23465	07/23/2010 01:45	1	TAL DEN	TEL
P:7471A	280-5234-A-5-E		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5234-A-5-E		280-23489	280-23340	07/19/2010 16:21	1	TAL DEN	CGG
P:300_Prep	280-5234-D-5-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-5-A		500-89762	500-89751	07/16/2010 13:34	1	TAL CHI	KD
A:7196A	280-5234-A-5		280-24403		07/27/2010 14:42	1	TAL DEN	JMB
A:9045C	280-5234-A-5-C		280-22764		07/13/2010 12:57	1	TAL DEN	LMK
A:9050A	280-5234-A-5-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 280-22953/1-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	MB 280-22953/1-A		280-23266	280-22953	07/15/2010 10:37	1	TAL DEN	HZ
P:5030B	MB 280-23407/6		280-23407		07/16/2010 10:43	1	TAL DEN	MD
A:8260B	MB 280-23407/6		280-23407		07/16/2010 10:43	1	TAL DEN	MD
P:3550C	MB 280-22524/1-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	MB 280-22524/1-A		280-25217	280-22524	08/02/2010 13:47	1	TAL DEN	DCK
P:5030B	MB 280-22749/3-A		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	MB 280-22749/3-A		280-23436	280-22749	07/14/2010 15:12	1	TAL DEN	TEM
P:3550C	MB 280-22529/1-A		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	MB 280-22529/1-A		280-22885	280-22529	07/12/2010 21:38	1	TAL DEN	MRB
P:20B	MB 280-23560/1-A		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	MB 280-23560/1-A		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	MB 280-23479/1-A		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	MB 280-23479/1-A		280-23824	280-23479	07/22/2010 00:34	1	TAL DEN	DW
P:3050B	MB 280-23465/1-A		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	MB 280-23465/1-A		280-23997	280-23465	07/23/2010 01:11	1	TAL DEN	TEL
P:7471A	MB 280-23340/1-A		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	MB 280-23340/1-A		280-23489	280-23340	07/19/2010 15:24	1	TAL DEN	CGG
P:300_Prep	MB 500-89751/1-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	MB 500-89751/1-A		500-89762	500-89751	07/16/2010 13:31	1	TAL CHI	KD
A:7196A	MB 280-24403/1		280-24403		07/27/2010 14:42	1	TAL DEN	JMB
A:9050A	MB 280-23203/1-A		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 280-22953/2-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	LCS 280-22953/2-A		280-23266	280-22953	07/15/2010 10:56	1	TAL DEN	HZ
P:5030B	LCS 280-23407/4		280-23407		07/16/2010 09:36	1	TAL DEN	MD
A:8260B	LCS 280-23407/4		280-23407		07/16/2010 09:36	1	TAL DEN	MD
P:3550C	LCS 280-22524/2-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	LCS 280-22524/2-A		280-25217	280-22524	08/02/2010 14:07	1	TAL DEN	DCK
P:5030B	LCS 280-22749/1-A		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	LCS 280-22749/1-A		280-23436	280-22749	07/14/2010 13:28	1	TAL DEN	TEM
P:3550C	LCS 280-22529/2-A		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	LCS 280-22529/2-A		280-22885	280-22529	07/12/2010 22:11	1	TAL DEN	MRB
P:3050B	LCS 280-23479/2-A		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	LCS 280-23479/2-A		280-23824	280-23479	07/22/2010 00:36	1	TAL DEN	DW
P:3050B	LCS 280-23465/2-A		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	LCS 280-23465/2-A		280-23997	280-23465	07/23/2010 01:14	1	TAL DEN	TEL
P:7471A	LCS 280-23340/2-A		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	LCS 280-23340/2-A		280-23489	280-23340	07/19/2010 15:26	1	TAL DEN	CGG
P:300_Prep	LCS 500-89751/2-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	LCS 500-89751/2-A		500-89762	500-89751	07/16/2010 13:32	1	TAL CHI	KD
A:9045C	LCS 280-22764/4		280-22764		07/13/2010 12:06	1	TAL DEN	LMK
A:9045C	LCS 280-22764/16		280-22764		07/13/2010 12:49	1	TAL DEN	LMK
A:9050A	LCS 280-23232/3		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 280-22953/3-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	LCSD 280-22953/3-A		280-23266	280-22953	07/15/2010 11:16	1	TAL DEN	HZ
P:5030B	LCSD 280-23407/5		280-23407		07/16/2010 09:58	1	TAL DEN	MD
A:8260B	LCSD 280-23407/5		280-23407		07/16/2010 09:58	1	TAL DEN	MD
P:5030B	LCSD 280-22749/2-A		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	LCSD 280-22749/2-A		280-23436	280-22749	07/14/2010 14:34	1	TAL DEN	TEM
P:7471A	LCSD 280-23340/3-A		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	LCSD 280-23340/3-A		280-23489	280-23340	07/19/2010 15:29	1	TAL DEN	CGG
A:9045C	LCSD 280-22764/5		280-22764		07/13/2010 12:07	1	TAL DEN	LMK
A:9045C	LCSD 280-22764/17		280-22764		07/13/2010 12:52	1	TAL DEN	LMK
A:9050A	LCSD 280-23232/4		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Laboratory Chronicle

Lab ID: MS

Client ID: N/A

Sample Date/Time: 07/13/2010 10:00

Received Date/Time: 07/14/2010 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5287-C-1-B MS		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5287-C-1-B MS		280-23266	280-22953	07/15/2010 12:35	1	TAL DEN	HZ
P:5030B	280-5251-E-6 MS		280-23407		07/16/2010 13:18	1	TAL DEN	MD
A:8260B	280-5251-E-6 MS		280-23407		07/16/2010 13:18	1	TAL DEN	MD
P:5030B	280-5251-C-6-B MS		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	280-5251-C-6-B MS		280-23436	280-22749	07/14/2010 18:59	1	TAL DEN	TEM
P:3550C	280-5234-A-12-C MS		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-12-C MS		280-22885	280-22529	07/13/2010 05:16	1	TAL DEN	MRB
P:7471A	280-5035-A-5-E MS		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5035-A-5-E MS		280-23489	280-23340	07/19/2010 15:48	1	TAL DEN	CGG
P:300_Prep	280-5234-D-7-B MS		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-7-B MS		500-89762	500-89751	07/16/2010 13:37	1	TAL CHI	KD

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 07/13/2010 10:00

Received Date/Time: 07/14/2010 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5287-C-1-C MSD		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5287-C-1-C MSD		280-23266	280-22953	07/15/2010 12:55	1	TAL DEN	HZ
P:5030B	280-5251-E-6 MSD		280-23407		07/16/2010 13:40	1	TAL DEN	MD
A:8260B	280-5251-E-6 MSD		280-23407		07/16/2010 13:40	1	TAL DEN	MD
P:5030B	280-5251-C-6-C MSD		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	280-5251-C-6-C MSD		280-23436	280-22749	07/14/2010 19:37	1	TAL DEN	TEM
P:3550C	280-5234-A-12-D MSD		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-12-D MSD		280-22885	280-22529	07/13/2010 05:49	1	TAL DEN	MRB
P:7471A	280-5035-A-5-F MSD		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5035-A-5-F MSD		280-23489	280-23340	07/19/2010 15:53	1	TAL DEN	CGG
P:300_Prep	280-5234-D-7-C MSD		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-7-C MSD		500-89762	500-89751	07/16/2010 13:38	1	TAL CHI	KD

Lab References:

TAL CHI = TestAmerica Chicago

TAL DEN = TestAmerica Denver

Login Sample Receipt Check List

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Login Number: 5234

List Source: TestAmerica Denver

Creator: Miller, Lisa

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC FOR E06-CUTTINGS-070810 SAYS 1 CONTAINER, 3 CONTAINERS REC.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Login Sample Receipt Check List

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-5234-1

Login Number: 5234

List Source: TestAmerica Chicago

Creator: Lunt, Jeff T

List Creation: 07/13/10 10:42 AM

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



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Est. 1970

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Sunday June 12, 2011

Report Number: L519110

Samples Received: 06/03/11

Client Project:

Description: M33 Pit North

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:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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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 Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN1-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:05

ESC Sample # : L519110-01

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.9		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	2900	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN2-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:13

ESC Sample # : L519110-02

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	240	4.0	mg/kg	3546/DRO	06/09/11	1
Surrogate recovery(%) o-Terphenyl	57.5		% Rec.	3546/DRO	06/09/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN3-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:20

ESC Sample # : L519110-03

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	350	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN4-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:25

ESC Sample # : L519110-04

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	320	4.0	mg/kg	3546/DRO	06/10/11	1
Surrogate recovery(%) o-Terphenyl	75.3		% Rec.	3546/DRO	06/10/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN5-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:30

ESC Sample # : L519110-05

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.8		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	3300	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20

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
L519110-01	WG539036	SAMP	o-Terphenyl	R1718450	J7
L519110-03	WG539036	SAMP	o-Terphenyl	R1718450	J7
L519110-05	WG539037	SAMP	o-Terphenyl	R1718634	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out

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
06/12/11 at 16:55:49

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L519110-01 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519110-02 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519110-03 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519110-04 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519110-05 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55



YOUR LAB OF CHOICE

EnCana Oil & Gas Inc. - CO
Chris Hines
2717 County Road 215, Suite 100
Parachute, CO 81635

Quality Assurance Report
Level II

L519110

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June 12, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG538875	06/05/11 01:45
a,a,a-Trifluorotoluene(FID)		% Rec.	100.8	59-128	WG538875	06/05/11 01:45
TPH (GC/FID) High Fraction	< 4	ppm			WG539036	06/09/11 16:13
o-Terphenyl		% Rec.	70.02	50-150	WG539036	06/09/11 16:13
TPH (GC/FID) High Fraction	< 4	ppm			WG539037	06/10/11 07:50
o-Terphenyl		% Rec.	77.61	50-150	WG539037	06/10/11 07:50

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.19	113.	67-135	WG538875
a,a,a-Trifluorotoluene(FID)				106.4	59-128	WG538875
TPH (GC/FID) High Fraction	ppm	60	44.3	73.8	50-150	WG539036
o-Terphenyl				66.02	50-150	WG539036
TPH (GC/FID) High Fraction	ppm	60	52.4	87.4	50-150	WG539037
o-Terphenyl				76.83	50-150	WG539037

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.98	6.19	109.	67-135	3.52	20	WG538875
a,a,a-Trifluorotoluene(FID)				105.7	59-128			WG538875
TPH (GC/FID) High Fraction	ppm	43.2	44.3	72.0	50-150	2.44	25	WG539036
o-Terphenyl				65.43	50-150			WG539036
TPH (GC/FID) High Fraction	ppm	45.1	52.4	75.0	50-150	15.1	20	WG539037
o-Terphenyl				67.20	50-150			WG539037

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	19.6	0	5.5	71.2	55-109	L519063-01	WG538875
a,a,a-Trifluorotoluene(FID)					106.4	59-128		WG538875
TPH (GC/FID) High Fraction	ppm	43.1	0	60	71.8	50-150	L518874-09	WG539036
o-Terphenyl					69.36	50-150		WG539036
TPH (GC/FID) High Fraction	ppm	127.	79.0	60	80.7	50-150	L519113-05	WG539037
o-Terphenyl					49.98*	50-150		WG539037

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	17.1	19.6	62.1	55-109	13.7	20	L519063-01	WG538875
a,a,a-Trifluorotoluene(FID)				105.4	59-128				WG538875

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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EnCana Oil & Gas Inc. - CO
Chris Hines
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June 12, 2011

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	ppm	41.3	43.1	68.8	50-150	4.28	25	L518874-09	WG539036
o-Terphenyl				66.08	50-150				WG539036
TPH (GC/FID) High Fraction	ppm	93.7	127.	24.5*	50-150	30.5*	20	L519113-05	WG539037
o-Terphenyl				50.99	50-150				WG539037

Batch number /Run number / Sample number cross reference

WG538875: R1713449: L519110-01 02 03 04 05
WG539036: R1718450: L519110-01 02 03
WG539037: R1718634: L519110-04 05

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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June 12, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Sunday June 12, 2011

Report Number: L519114

Samples Received: 06/03/11

Client Project:

Description: M33 Pit South

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:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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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 Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS1-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:42

ESC Sample # : L519114-01

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	6.2	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	1400	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS2-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:50

ESC Sample # : L519114-02

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	50.	4.0	mg/kg	3546/DRO	06/10/11	1
Surrogate recovery(%) o-Terphenyl	58.4		% Rec.	3546/DRO	06/10/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS3-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:55

ESC Sample # : L519114-03

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.2		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	80.	4.0	mg/kg	3546/DRO	06/10/11	1
Surrogate recovery(%) o-Terphenyl	56.0		% Rec.	3546/DRO	06/10/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS4-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:58

ESC Sample # : L519114-04

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	110	4.0	mg/kg	3546/DRO	06/10/11	1
Surrogate recovery(%) o-Terphenyl	62.6		% Rec.	3546/DRO	06/10/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 12, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS5-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 13:00

ESC Sample # : L519114-05

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/05/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	602/8015	06/05/11	5
TPH (GC/FID) High Fraction	210	4.0	mg/kg	3546/DRO	06/10/11	1
Surrogate recovery(%) o-Terphenyl	68.7		% Rec.	3546/DRO	06/10/11	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
L519114-01	WG539037	SAMP	o-Terphenyl	R1718634	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out

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
06/12/11 at 16:56:04

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L519114-01 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519114-02 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519114-03 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519114-04 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55
Sample: L519114-05 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/12/11 16:55



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EnCana Oil & Gas Inc. - CO
Chris Hines
2717 County Road 215, Suite 100
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Quality Assurance Report
Level II

L519114

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June 12, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG539003	06/05/11 20:02
a,a,a-Trifluorotoluene(FID)		% Rec.	98.60	59-128	WG539003	06/05/11 20:02
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG538875	06/05/11 01:45
a,a,a-Trifluorotoluene(FID)		% Rec.	100.8	59-128	WG538875	06/05/11 01:45
TPH (GC/FID) High Fraction	< 4	ppm			WG539037	06/10/11 07:50
o-Terphenyl		% Rec.	77.61	50-150	WG539037	06/10/11 07:50

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.13	111.	67-135	WG539003
a,a,a-Trifluorotoluene(FID)				99.96	59-128	WG539003
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.19	113.	67-135	WG538875
a,a,a-Trifluorotoluene(FID)				106.4	59-128	WG538875
TPH (GC/FID) High Fraction	ppm	60	52.4	87.4	50-150	WG539037
o-Terphenyl				76.83	50-150	WG539037

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	6.21	6.13	113.	67-135	1.34	20	WG539003
a,a,a-Trifluorotoluene(FID)				100.5	59-128			WG539003
TPH (GC/FID) Low Fraction	mg/kg	5.98	6.19	109.	67-135	3.52	20	WG538875
a,a,a-Trifluorotoluene(FID)				105.7	59-128			WG538875
TPH (GC/FID) High Fraction	ppm	45.1	52.4	75.0	50-150	15.1	20	WG539037
o-Terphenyl				67.20	50-150			WG539037

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	26.9	0	5.5	97.7	55-109	L519114-02	WG539003
a,a,a-Trifluorotoluene(FID)					97.41	59-128		WG539003
TPH (GC/FID) Low Fraction	mg/kg	19.6	0	5.5	71.2	55-109	L519063-01	WG538875
a,a,a-Trifluorotoluene(FID)					106.4	59-128		WG538875
TPH (GC/FID) High Fraction	ppm	127.	79.0	60	80.7	50-150	L519113-05	WG539037
o-Terphenyl					49.98*	50-150		WG539037

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	24.9	26.9	90.5	55-109	7.62	20	L519114-02	WG539003
a,a,a-Trifluorotoluene(FID)				96.94	59-128				WG539003

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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June 12, 2011

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	17.1	19.6	62.1	55-109	13.7	20	L519063-01	WG538875
a,a,a-Trifluorotoluene(FID)				105.4	59-128				WG538875
TPH (GC/FID) High Fraction	ppm	93.7	127.	24.5*	50-150	30.5*	20	L519113-05	WG539037
o-Terphenyl				50.99	50-150				WG539037

Batch number /Run number / Sample number cross reference

WG539003: R1712891: L519114-02 03 04 05
WG538875: R1713449: L519114-01
WG539037: R1718634: L519114-01 02 03 04 05

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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EnCana Oil & Gas Inc. - CO
Chris Hines
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Parachute, CO 81635

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Level II

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June 12, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Monday June 13, 2011

Report Number: L519121

Samples Received: 06/03/11

Client Project:

Description: M33

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:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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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 Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 13, 2011

Date Received : June 03, 2011
Description : M33
Sample ID : M33-CUT-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 13:45

ESC Sample # : L519121-01

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.1		% Rec.	602/8015	06/06/11	5
TPH (GC/FID) High Fraction	180	4.0	mg/kg	3546/DRO	06/12/11	1
Surrogate recovery(%) o-Terphenyl	84.9		% Rec.	3546/DRO	06/12/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 13, 2011

Date Received : June 03, 2011
Description : M33
Sample ID : M33-BGSE-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 14:18

ESC Sample # : L519121-02

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.0	1.0	mg/kg	6010B	06/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 13, 2011

Date Received : June 03, 2011
Description : M33
Sample ID : M33-BGNE-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 14:24

ESC Sample # : L519121-03

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.4	1.0	mg/kg	6010B	06/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 13, 2011

Date Received : June 03, 2011
Description : M33
Sample ID : M33-BGN-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 14:30

ESC Sample # : L519121-04

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.1	1.0	mg/kg	6010B	06/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/13/11 12:47 Printed: 06/13/11 12:47



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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 13, 2011

Date Received : June 03, 2011
Description : M33
Sample ID : M33-BGNW-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 14:35

ESC Sample # : L519121-05

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.2	1.0	mg/kg	6010B	06/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/13/11 12:47 Printed: 06/13/11 12:47

Summary of Remarks For Samples Printed
06/13/11 at 12:47:24

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L519121-01 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/13/11 12:47
Sample: L519121-02 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/13/11 12:47
Sample: L519121-03 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/13/11 12:47
Sample: L519121-04 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/13/11 12:47
Sample: L519121-05 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/10/11 00:00 RPT Date: 06/13/11 12:47



YOUR LAB OF CHOICE

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Quality Assurance Report
Level II

L519121

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June 13, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG539003	06/05/11 20:02
a,a,a-Trifluorotoluene(FID)		% Rec.	98.60	59-128	WG539003	06/05/11 20:02
Arsenic	< 1	mg/kg			WG538997	06/07/11 17:18
TPH (GC/FID) High Fraction	< 4	ppm			WG539694	06/11/11 10:54
o-Terphenyl		% Rec.	71.47	50-150	WG539694	06/11/11 10:54

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Arsenic	mg/kg	4.80	5.20	7.58	20	L519121-05	WG538997

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.13	111.	67-135	WG539003
a,a,a-Trifluorotoluene(FID)				99.96	59-128	WG539003
Arsenic	mg/kg	192	182.	94.8	78.6-120.8	WG538997
TPH (GC/FID) High Fraction	ppm	60	50.7	84.5	50-150	WG539694
o-Terphenyl				69.54	50-150	WG539694

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	6.21	6.13	113.	67-135	1.34	20	WG539003
a,a,a-Trifluorotoluene(FID)				100.5	59-128			WG539003
TPH (GC/FID) High Fraction	ppm	49.4	50.7	82.0	50-150	2.51	25	WG539694
o-Terphenyl				66.51	50-150			WG539694

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	26.9	0	5.5	97.7	55-109	L519114-02	WG539003
a,a,a-Trifluorotoluene(FID)					97.41	59-128		WG539003
Arsenic	mg/kg	49.9	5.20	50	89.4	75-125	L519121-05	WG538997

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	24.9	26.9	90.5	55-109	7.62	20	L519114-02	WG539003
a,a,a-Trifluorotoluene(FID)				96.94	59-128				WG539003
Arsenic	mg/kg	49.8	49.9	89.2	75-125	0.201	20	L519121-05	WG538997

Batch number /Run number / Sample number cross reference

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



EnCana Oil & Gas Inc. - CO
Chris Hines
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Parachute, CO 81635

Quality Assurance Report
Level II

L519121

12065 Lebanon Rd.
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June 13, 2011

WG539003: R1712891: L519121-01
WG538997: R1715380: L519121-02 03 04 05
WG539694: R1719950: L519121-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

EnCana Oil & Gas Inc. - CO
Chris Hines
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report
Level II

L519121

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Wednesday June 22, 2011

Report Number: L521118

Samples Received: 06/03/11

Client Project:

Description: M33

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:

Jayred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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 Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 22, 2011

Date Received : June 03, 2011
Description : M33
Sample ID : M33-CUT-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 13:45

ESC Sample # : L521118-01

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Benzo(a)anthracene	0.36	0.030	mg/kg	8270C-SIM	06/16/11	5
Benzo(a)pyrene	0.18	0.030	mg/kg	8270C-SIM	06/16/11	5
Benzo(b)fluoranthene	0.76	0.030	mg/kg	8270C-SIM	06/16/11	5
Dibenz(a,h)anthracene	0.046	0.030	mg/kg	8270C-SIM	06/16/11	5
Indeno(1,2,3-cd)pyrene	0.068	0.030	mg/kg	8270C-SIM	06/16/11	5
Surrogate Recovery						
Nitrobenzene-d5	35.6		% Rec.	8270C-SIM	06/16/11	5
2-Fluorobiphenyl	43.6		% Rec.	8270C-SIM	06/16/11	5
p-Terphenyl-d14	52.7		% Rec.	8270C-SIM	06/16/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/21/11 17:23 Revised: 06/22/11 09:21

L521118-01 (SV8270PAHSIM) - Dilution due to dark/thick extract matrix



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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN1-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:05

ESC Sample # : L521118-02

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Benzo(a)pyrene	BDL	0.12	mg/kg	8270C-SIM	06/17/11	20
Surrogate Recovery						
Nitrobenzene-d5	45.2		% Rec.	8270C-SIM	06/16/11	5
2-Fluorobiphenyl	66.3		% Rec.	8270C-SIM	06/16/11	5
p-Terphenyl-d14	0.00		% Rec.	8270C-SIM	06/20/11	50

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Chris Hines
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2717 County Road 215, Suite 100
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June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN2-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:13

ESC Sample # : L521118-03

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Benzo(a)pyrene	0.0091	0.0060	mg/kg	8270C-SIM	06/16/11	1
Surrogate Recovery						
Nitrobenzene-d5	64.3		% Rec.	8270C-SIM	06/16/11	1
2-Fluorobiphenyl	66.7		% Rec.	8270C-SIM	06/16/11	1
p-Terphenyl-d14	71.1		% Rec.	8270C-SIM	06/17/11	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Chris Hines
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2717 County Road 215, Suite 100
Parachute, CO 81635

June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN3-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:20

ESC Sample # : L521118-04

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Benzo(a)pyrene	0.032	0.0060	mg/kg	8270C-SIM	06/16/11	1
Surrogate Recovery						
Nitrobenzene-d5	56.8		% Rec.	8270C-SIM	06/16/11	1
2-Fluorobiphenyl	59.6		% Rec.	8270C-SIM	06/16/11	1
p-Terphenyl-d14	65.7		% Rec.	8270C-SIM	06/17/11	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Chris Hines
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN4-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:25

ESC Sample # : L521118-05

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Benzo(a)pyrene	0.036	0.0060	mg/kg	8270C-SIM	06/16/11	1
Surrogate Recovery						
Nitrobenzene-d5	51.5		% Rec.	8270C-SIM	06/16/11	1
2-Fluorobiphenyl	54.9		% Rec.	8270C-SIM	06/16/11	1
p-Terphenyl-d14	54.8		% Rec.	8270C-SIM	06/17/11	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit North
Sample ID : M33-PITN5-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:30

ESC Sample # : L521118-06

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons						
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	06/17/11	10
Surrogate Recovery						
Nitrobenzene-d5	37.1		% Rec.	8270C-SIM	06/17/11	10
2-Fluorobiphenyl	143.		% Rec.	8270C-SIM	06/17/11	10
p-Terphenyl-d14	41.5		% Rec.	8270C-SIM	06/17/11	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/21/11 17:23 Revised: 06/22/11 09:21
L521118-06 (SV8270PAHSIM) - Dilution due to matrix



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REPORT OF ANALYSIS

Chris Hines
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2717 County Road 215, Suite 100
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June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS1-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:05

ESC Sample # : L521118-07

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	8.9	1.0	mg/kg	6010B	06/18/11	1
Benzene	BDL	0.0050	mg/kg	8260B	06/16/11	5
Surrogate Recovery						
Toluene-d8	94.5		% Rec.	8260B	06/16/11	5
Dibromofluoromethane	115.		% Rec.	8260B	06/16/11	5
a,a,a-Trifluorotoluene	90.5		% Rec.	8260B	06/16/11	5
4-Bromofluorobenzene	100.		% Rec.	8260B	06/16/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

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June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS2-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:13

ESC Sample # : L521118-08

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.0	1.0	mg/kg	6010B	06/18/11	1
Benzene	BDL	0.0050	mg/kg	8260B	06/16/11	5
Surrogate Recovery						
Toluene-d8	98.5		% Rec.	8260B	06/16/11	5
Dibromofluoromethane	108.		% Rec.	8260B	06/16/11	5
a,a,a-Trifluorotoluene	98.0		% Rec.	8260B	06/16/11	5
4-Bromofluorobenzene	92.7		% Rec.	8260B	06/16/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/21/11 17:23 Revised: 06/22/11 09:21



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June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS3-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:20

ESC Sample # : L521118-09

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	7.0	1.0	mg/kg	6010B	06/18/11	1
Benzene	BDL	0.0050	mg/kg	8260B	06/16/11	5
Surrogate Recovery						
Toluene-d8	98.9		% Rec.	8260B	06/16/11	5
Dibromofluoromethane	111.		% Rec.	8260B	06/16/11	5
a,a,a-Trifluorotoluene	99.8		% Rec.	8260B	06/16/11	5
4-Bromofluorobenzene	92.5		% Rec.	8260B	06/16/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

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2717 County Road 215, Suite 100
Parachute, CO 81635

June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS4-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:25

ESC Sample # : L521118-10

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	9.8	1.0	mg/kg	6010B	06/18/11	1
Benzene	BDL	0.0050	mg/kg	8260B	06/16/11	5
Surrogate Recovery						
Toluene-d8	98.7		% Rec.	8260B	06/16/11	5
Dibromofluoromethane	105.		% Rec.	8260B	06/16/11	5
a,a,a-Trifluorotoluene	98.5		% Rec.	8260B	06/16/11	5
4-Bromofluorobenzene	88.7		% Rec.	8260B	06/16/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Reported: 06/21/11 17:23 Revised: 06/22/11 09:21



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REPORT OF ANALYSIS

Chris Hines
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June 22, 2011

Date Received : June 03, 2011
Description : M33 Pit South
Sample ID : M33-PITS5-060211 10-12 IN
Collected By : Brennen Graff
Collection Date : 06/02/11 12:30

ESC Sample # : L521118-11

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.1	1.0	mg/kg	6010B	06/18/11	1
Benzene	BDL	0.0050	mg/kg	8260B	06/16/11	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/16/11	5
Dibromofluoromethane	90.6		% Rec.	8260B	06/16/11	5
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/16/11	5
4-Bromofluorobenzene	99.8		% Rec.	8260B	06/16/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/21/11 17:23 Revised: 06/22/11 09:21

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L521118-02	WG540795	SAMP	p-Terphenyl-d14	R1728470	J7
L521118-06	WG540795	SAMP	2-Fluorobiphenyl	R1728470	J1

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out

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
06/22/11 at 09:21:59

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L521118-01 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519121-01. Report only Benzo(A)anthracene, Benzo(B)fluoranthene,
Benzo(A)pyrene, Dibenzo(A,H)anthracene, Indeno(1,2,3,C,D)pyrene.
Sample: L521118-02 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519110-01. Report only Benzo(A)anthracene, Benzo(B)fluoranthene,
Benzo(A)pyrene, Dibenzo(A,H)anthracene, Indeno(1,2,3,C,D)pyrene.
Sample: L521118-03 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519110-02. Report only Benzo(A)anthracene, Benzo(B)fluoranthene,
Benzo(A)pyrene, Dibenzo(A,H)anthracene, Indeno(1,2,3,C,D)pyrene.
Sample: L521118-04 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519110-03. Report only Benzo(A)anthracene, Benzo(B)fluoranthene,
Benzo(A)pyrene, Dibenzo(A,H)anthracene, Indeno(1,2,3,C,D)pyrene.
Sample: L521118-05 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519110-04. Report only Benzo(A)anthracene, Benzo(B)fluoranthene,
Benzo(A)pyrene, Dibenzo(A,H)anthracene, Indeno(1,2,3,C,D)pyrene.
Sample: L521118-06 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519110-05. Report only Benzo(A)anthracene, Benzo(B)fluoranthene,
Benzo(A)pyrene, Dibenzo(A,H)anthracene, Indeno(1,2,3,C,D)pyrene.
Sample: L521118-07 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519114-01. Report only Benzene
Sample: L521118-08 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519114-02. Report only Benzene
Sample: L521118-09 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519114-03. Report only Benzene
Sample: L521118-10 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519114-04. Report only Benzene
Sample: L521118-11 Account: ENCANACO Received: 06/03/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/21/11 17:23
Expires 6/16. Relogged from L519114-05. Report only Benzene



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Chris Hines
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L521118

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Est. 1970

June 22, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/kg			WG540724	06/16/11 04:14
4-Bromofluorobenzene		% Rec.	102.5	59-140	WG540724	06/16/11 04:14
Dibromofluoromethane		% Rec.	107.3	63-139	WG540724	06/16/11 04:14
Toluene-d8		% Rec.	100.9	84-116	WG540724	06/16/11 04:14
a,a,a-Trifluorotoluene		% Rec.	101.6	80-118	WG540724	06/16/11 04:14
Benzo(a)anthracene	< .006	mg/kg			WG540795	06/16/11 11:45
Benzo(a)pyrene	< .006	mg/kg			WG540795	06/16/11 11:45
Benzo(b)fluoranthene	< .006	mg/kg			WG540795	06/16/11 11:45
Dibenz(a,h)anthracene	< .006	mg/kg			WG540795	06/16/11 11:45
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG540795	06/16/11 11:45
2-Fluorobiphenyl		% Rec.	78.17	21-120	WG540795	06/16/11 11:45
Nitrobenzene-d5		% Rec.	73.80	33-114	WG540795	06/16/11 11:45
p-Terphenyl-d14		% Rec.	76.34	18-142	WG540795	06/16/11 11:45
Arsenic	< 1	mg/kg			WG541172	06/18/11 16:52

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Arsenic	mg/kg	4.00	3.80	6.12	20	L521603-01	WG541172

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.025	0.0272	109.	65-128	WG540724
4-Bromofluorobenzene				94.49	59-140	WG540724
Dibromofluoromethane				110.6	63-139	WG540724
Toluene-d8				104.1	84-116	WG540724
a,a,a-Trifluorotoluene				100.9	80-118	WG540724
Benzo(a)anthracene	mg/kg	.033	0.0239	72.4	38-126	WG540795
Benzo(a)pyrene	mg/kg	.033	0.0257	78.0	47-118	WG540795
Benzo(b)fluoranthene	mg/kg	.033	0.0261	79.2	47-118	WG540795
Dibenz(a,h)anthracene	mg/kg	.033	0.0279	84.4	41-124	WG540795
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0286	86.6	40-126	WG540795
2-Fluorobiphenyl				72.58	33-114	WG540795
Nitrobenzene-d5				66.26	21-120	WG540795
p-Terphenyl-d14				71.69	18-142	WG540795
Arsenic	mg/kg	192	176.	91.7	78.6-120.8	WG541172

Analyte	Units	Laboratory Control Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref %Rec				
Benzene	mg/kg	0.0272	0.0272	109.	65-128	0.0100	WG540724
4-Bromofluorobenzene				94.68	59-140		WG540724
Dibromofluoromethane				111.8	63-139		WG540724
Toluene-d8				103.9	84-116		WG540724
a,a,a-Trifluorotoluene				102.2	80-118		WG540724
Benzo(a)anthracene	mg/kg	0.0219	0.0239	66.0	38-126	8.63	WG540795
Benzo(a)pyrene	mg/kg	0.0250	0.0257	76.0	47-118	2.96	WG540795
Benzo(b)fluoranthene	mg/kg	0.0271	0.0261	82.0	47-118	3.59	WG540795

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Dibenz(a,h)anthracene	mg/kg	0.0265	0.0279	80.0		41-124	4.97	20	WG540795
Indeno(1,2,3-cd)pyrene	mg/kg	0.0279	0.0286	84.0		40-126	2.52	20	WG540795
2-Fluorobiphenyl				67.68		33-114			WG540795
Nitrobenzene-d5				62.93		21-120			WG540795
p-Terphenyl-d14				68.33		18-142			WG540795

Analyte	Units	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res					
Benzene	mg/kg	0.152	0	.025	122.	16-143	L521118-07	WG540724
4-Bromofluorobenzene					124.5	59-140		WG540724
Dibromofluoromethane					116.1	63-139		WG540724
Toluene-d8					95.70	84-116		WG540724
a,a,a-Trifluorotoluene					89.49	80-118		WG540724
Benzo(a)pyrene	mg/kg	0.0158	0	.033	48.0	28-130	L520797-01	WG540795
Benzo(b)fluoranthene	mg/kg	0.0263	0	.033	79.8	37-130	L520797-01	WG540795
Dibenz(a,h)anthracene	mg/kg	0.00589	0	.033	17.8*	20-134	L520797-01	WG540795
Indeno(1,2,3-cd)pyrene	mg/kg	0.00563	0	.033	17.1	16-135	L520797-01	WG540795
2-Fluorobiphenyl					59.36	33-114		WG540795
Nitrobenzene-d5					98.00	21-120		WG540795
Arsenic	mg/kg	48.1	3.80	50	88.6	75-125	L521603-01	WG541172
Benzo(a)anthracene	mg/kg	0.0198	0	.033	60.1	32-131	L520797-01	WG540795
p-Terphenyl-d14					93.95	18-142		WG540795

Analyte	Units	Matrix Spike Duplicate		Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
		MSD								
Benzene	mg/kg	0.139	0.152		111.	16-143	9.39	31	L521118-07	WG540724
4-Bromofluorobenzene					120.6	59-140				WG540724
Dibromofluoromethane					118.0	63-139				WG540724
Toluene-d8					95.22	84-116				WG540724
a,a,a-Trifluorotoluene					88.65	80-118				WG540724
Benzo(a)pyrene	mg/kg	0.0168	0.0158		51.0	28-130	6.05	28	L520797-01	WG540795
Benzo(b)fluoranthene	mg/kg	0.0311	0.0263		94.2	37-130	16.6	41	L520797-01	WG540795
Dibenz(a,h)anthracene	mg/kg	0.00570	0.00589		17.3*	20-134	3.32	25	L520797-01	WG540795
Indeno(1,2,3-cd)pyrene	mg/kg	0.00487	0.00563		14.8*	16-135	14.5	26	L520797-01	WG540795
2-Fluorobiphenyl					66.60	33-114				WG540795
Nitrobenzene-d5					85.63	21-120				WG540795
Arsenic	mg/kg	47.2	48.1		86.8	75-125	1.89	20	L521603-01	WG541172
Benzo(a)anthracene	mg/kg	0.0235	0.0198		71.3	32-131	16.9	31	L520797-01	WG540795
p-Terphenyl-d14					109.9	18-142				WG540795

Batch number /Run number / Sample number cross reference

WG540724: R1725969: L521118-07 08 09 10 11

WG540795: R1728470: L521118-01 02 03 04 05 06

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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June 22, 2011

WG541172: R1729431 R1729432: L521118-07 08 09 10 11

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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June 22, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Thursday July 21, 2011

Report Number: L526336

Samples Received: 07/16/11

Client Project: M33

Description: M33 Spoils

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:

Jayred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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 / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

July 21, 2011

Date Received : July 16, 2011
Description : M33 Spoils
Sample ID : M33-PITX-SPOIL-070811
Collected By : Robert Stockton
Collection Date : 07/14/11 12:41

ESC Sample # : L526336-01

Site ID : M33

Project # : M33

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	3.2	0.50	mg/kg	8015D/GRO	07/19/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	95.7		% Rec.	602/8015	07/19/11	5
TPH (GC/FID) High Fraction	980	80.	mg/kg	3546/DRO	07/20/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	07/20/11	20
Base/Neutral Extractables						
Benzo(a)anthracene	BDL	0.66	mg/kg	8270C	07/20/11	20
Benzo(b)fluoranthene	BDL	0.66	mg/kg	8270C	07/20/11	20
Benzo(a)pyrene	BDL	0.66	mg/kg	8270C	07/20/11	20
Dibenz(a,h)anthracene	BDL	0.66	mg/kg	8270C	07/20/11	20
Indeno(1,2,3-cd)pyrene	BDL	0.66	mg/kg	8270C	07/20/11	20
Surrogate Recovery						
2-Fluorophenol	0.00		% Rec.	8270C	07/20/11	20
Phenol-d5	0.00		% Rec.	8270C	07/20/11	20
Nitrobenzene-d5	0.00		% Rec.	8270C	07/20/11	20
2-Fluorobiphenyl	0.00		% Rec.	8270C	07/20/11	20
2,4,6-Tribromophenol	0.00		% Rec.	8270C	07/20/11	20
p-Terphenyl-d14	0.00		% Rec.	8270C	07/20/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 07/20/11 20:52 Revised: 07/21/11 10:07

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L526336-01	WG546045	SAMP	Benzo(a)anthracene	R1773030	O
	WG546045	SAMP	Benzo(b)fluoranthene	R1773030	O
	WG546045	SAMP	Benzo(a)pyrene	R1773030	O
	WG546045	SAMP	Dibenz(a,h)anthracene	R1773030	O
	WG546045	SAMP	Indeno(1,2,3-cd)pyrene	R1773030	O
	WG546045	SAMP	2-Fluorophenol	R1773030	J7
	WG546045	SAMP	Phenol-d5	R1773030	J7
	WG546045	SAMP	Nitrobenzene-d5	R1773030	J7
	WG546045	SAMP	2-Fluorobiphenyl	R1773030	J7
	WG546045	SAMP	2,4,6-Tribromophenol	R1773030	J7
	WG546045	SAMP	p-Terphenyl-d14	R1773030	J7
	WG546153	SAMP	o-Terphenyl	R1770350	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out
0	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

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
07/21/11 at 10:08:00

TSR Signing Reports: 358
R3 - Rush: Two Day

TPH = GRO/DRO

Sample: L526336-01 Account: ENCANACO Received: 07/16/11 09:00 Due Date: 07/20/11 00:00 RPT Date: 07/20/11 20:52
Added GRO/DRO per NCF. AV 7/18



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July 21, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG546134	07/18/11 20:00
a,a,a-Trifluorotoluene(FID)		% Rec.	96.47	59-128	WG546134	07/18/11 20:00
TPH (GC/FID) High Fraction	< 4	ppm			WG546153	07/19/11 11:08
o-Terphenyl		% Rec.	75.14	50-150	WG546153	07/19/11 11:08
Benzo(a)anthracene	< .033	mg/kg			WG546045	07/18/11 11:15
Benzo(a)pyrene	< .033	mg/kg			WG546045	07/18/11 11:15
Benzo(b)fluoranthene	< .033	mg/kg			WG546045	07/18/11 11:15
Dibenz(a,h)anthracene	< .033	mg/kg			WG546045	07/18/11 11:15
Indeno(1,2,3-cd)pyrene	< .033	mg/kg			WG546045	07/18/11 11:15
2,4,6-Tribromophenol		mg/kg	76.55	16-136	WG546045	07/18/11 11:15
2-Fluorobiphenyl		mg/kg	65.62	37-119	WG546045	07/18/11 11:15
2-Fluorophenol		mg/kg	57.70	22-114	WG546045	07/18/11 11:15
Nitrobenzene-d5		mg/kg	64.27	20-114	WG546045	07/18/11 11:15
Phenol-d5		mg/kg	64.99	26-127	WG546045	07/18/11 11:15
p-Terphenyl-d14		mg/kg	74.84	15-174	WG546045	07/18/11 11:15

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.94	108.	67-135	WG546134
a,a,a-Trifluorotoluene(FID)				102.1	59-128	WG546134
TPH (GC/FID) High Fraction	ppm	60	47.3	78.8	50-150	WG546153
o-Terphenyl				60.46	50-150	WG546153
Benzo(a)anthracene	mg/kg	.333	0.226	67.9	56-103	WG546045
Benzo(a)pyrene	mg/kg	.333	0.233	70.1	57-103	WG546045
Benzo(b)fluoranthene	mg/kg	.333	0.218	65.6	52-106	WG546045
Dibenz(a,h)anthracene	mg/kg	.333	0.265	79.5	49-111	WG546045
Indeno(1,2,3-cd)pyrene	mg/kg	.333	0.262	78.6	50-110	WG546045
2,4,6-Tribromophenol				74.41	16-136	WG546045
2-Fluorobiphenyl				60.74	37-119	WG546045
2-Fluorophenol				52.66	22-114	WG546045
Nitrobenzene-d5				65.39	20-114	WG546045
Phenol-d5				60.64	26-127	WG546045
p-Terphenyl-d14				60.64	15-174	WG546045

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.87	5.94	107.	67-135	1.07	20	WG546134
a,a,a-Trifluorotoluene(FID)				101.8	59-128			WG546134
TPH (GC/FID) High Fraction	ppm	52.2	47.3	87.0	50-150	9.87	20	WG546153
o-Terphenyl				68.33	50-150			WG546153
Benzo(a)anthracene	mg/kg	0.219	0.226	66.0	56-103	3.40	20	WG546045
Benzo(a)pyrene	mg/kg	0.227	0.233	68.0	57-103	2.97	20	WG546045
Benzo(b)fluoranthene	mg/kg	0.210	0.218	63.0	52-106	4.09	20	WG546045
Dibenz(a,h)anthracene	mg/kg	0.259	0.265	78.0	49-111	2.23	20	WG546045
Indeno(1,2,3-cd)pyrene	mg/kg	0.251	0.262	75.0	50-110	4.13	20	WG546045

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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2717 County Road 215, Suite 100

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Quality Assurance Report
Level II

L526336

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 21, 2011

Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
2,4,6-Tribromophenol				77.55		16-136			
2-Fluorobiphenyl				63.98		37-119			
2-Fluorophenol				51.43		22-114			
Nitrobenzene-d5				64.85		20-114			
Phenol-d5				60.32		26-127			
p-Terphenyl-d14				63.24		15-174			

Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
TPH (GC/FID) Low Fraction	mg/kg	23.4	0.610	5.5	83.0	55-109	L526470-04	WG546134	
a,a,a-Trifluorotoluene(FID)					99.32	59-128		WG546134	
TPH (GC/FID) High Fraction	ppm	98.8	40.5	60	97.2	50-150	L526217-01	WG546153	
o-Terphenyl					63.26	50-150		WG546153	

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	22.1	23.4	78.3	55-109	5.65	20	L526470-04	WG546134
a,a,a-Trifluorotoluene(FID)				98.69	59-128				WG546134
TPH (GC/FID) High Fraction	ppm	103.	98.8	103.	50-150	3.67	20	L526217-01	WG546153
o-Terphenyl				62.50	50-150				WG546153

Batch number /Run number / Sample number cross reference

WG546134: R1769910: L526336-01
WG546153: R1770350: L526336-01
WG546045: R1773030: L526336-01

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Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Friday August 12, 2011

Report Number: L530209

Samples Received: 08/10/11

Client Project:

Description: M33 Pit Closure

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:

Jayred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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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 / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

August 12, 2011

Date Received : August 10, 2011
Description : M33 Pit Closure
Sample ID : M33-PITX-SPOIL-080911 4-6IN
Collected By : Brennen Graff
Collection Date : 08/09/11 09:19

ESC Sample # : L530209-01

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/11/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	602/8015	08/11/11	5
TPH (GC/FID) High Fraction	550	20.	mg/kg	3546/DRO	08/12/11	5
Surrogate recovery(%) o-Terphenyl	49.8		% Rec.	3546/DRO	08/12/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 08/12/11 17:08 Printed: 08/12/11 17:09

Summary of Remarks For Samples Printed
08/12/11 at 17:09:03

TSR Signing Reports: 358
R3 - Rush: Two Day

Sample: L530209-01 Account: ENCANACO Received: 08/10/11 09:00 Due Date: 08/12/11 00:00 RPT Date: 08/12/11 17:08



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2717 County Road 215, Suite 100

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August 12, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG550056	08/11/11 15:25
a,a,a-Trifluorotoluene(FID)		% Rec.	100.1	59-128	WG550056	08/11/11 15:25
TPH (GC/FID) High Fraction	< 4	ppm			WG550202	08/12/11 14:07
o-Terphenyl		% Rec.	64.25	50-150	WG550202	08/12/11 14:07

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.91	107.	67-135	WG550056
a,a,a-Trifluorotoluene(FID)				105.4	59-128	WG550056
TPH (GC/FID) High Fraction	ppm	60	41.9	69.8	50-150	WG550202
o-Terphenyl				65.99	50-150	WG550202

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.47	5.91	99.0	67-135	7.65	20	WG550056
a,a,a-Trifluorotoluene(FID)				105.7	59-128			WG550056
TPH (GC/FID) High Fraction	ppm	41.6	41.9	69.0	50-150	0.776	25	WG550202
o-Terphenyl				65.24	50-150			WG550202

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	19.3	0	5.5	70.1	55-109	L530181-02	WG550056
a,a,a-Trifluorotoluene(FID)					98.32	59-128		WG550056

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	20.8	19.3	75.6	55-109	7.60	20	L530181-02	WG550056
a,a,a-Trifluorotoluene(FID)				99.37	59-128				WG550056

Batch number /Run number / Sample number cross reference

WG550056: R1811630: L530209-01
WG550202: R1812690: L530209-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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August 12, 2011

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Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Friday September 02, 2011

Report Number: L532893

Samples Received: 08/25/11

Client Project:

Description: M33-PITX Spoil

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:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

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REPORT OF ANALYSIS

Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

September 02, 2011

Date Received : August 25, 2011
Description : M33-PITX Spoil
Sample ID : M33-PITX-SPOIL-082411
Collected By : Brennen Graff
Collection Date : 08/24/11 13:24

ESC Sample # : L532893-01

Site ID : M33

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/26/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	95.6		% Rec.	602/8015	08/26/11	5
TPH (GC/FID) High Fraction	210	4.0	mg/kg	3546/DRO	09/02/11	1
Surrogate recovery(%) o-Terphenyl	32.5		% Rec.	3546/DRO	09/02/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/02/11 15:15 Printed: 09/02/11 15:20

L532893-01 (DRO) - Surrogate fails due to matrix interference; confirmed by MS/D

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L532893-01	WG553314	SAMP	TPH (GC/FID) High Fraction	R1842212	J5
	WG553314	SAMP	o-Terphenyl	R1842212	J2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high

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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September 02, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG552341	08/26/11 10:35
a,a,a-Trifluorotoluene(FID)		% Rec.	95.93	59-128	WG552341	08/26/11 10:35
TPH (GC/FID) High Fraction	< 4	ppm			WG553314	09/02/11 10:08
o-Terphenyl		% Rec.	67.29	50-150	WG553314	09/02/11 10:08

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.74	104.	67-135	WG552341
a,a,a-Trifluorotoluene(FID)				104.4	59-128	WG552341
TPH (GC/FID) High Fraction	ppm	60	44.4	74.0	50-150	WG553314
o-Terphenyl				70.07	50-150	WG553314

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.92	5.74	108.	67-135	3.19	20	WG552341
a,a,a-Trifluorotoluene(FID)				103.5	59-128			WG552341
TPH (GC/FID) High Fraction	ppm	43.2	44.4	72.0	50-150	2.62	25	WG553314
o-Terphenyl				66.12	50-150			WG553314

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	16.2	0	5.5	59.0	55-109	L532893-01	WG552341
a,a,a-Trifluorotoluene(FID)					98.08	59-128		WG552341
TPH (GC/FID) High Fraction	ppm	341.	210.	60	219.*	50-150	L532893-01	WG553314
o-Terphenyl					48.55*	50-150		WG553314

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	16.2	16.2	59.0	55-109	0.0800	20	L532893-01	WG552341
a,a,a-Trifluorotoluene(FID)				98.73	59-128				WG552341
TPH (GC/FID) High Fraction	ppm	405.	341.	325.*	50-150	17.1	25	L532893-01	WG553314
o-Terphenyl				48.73*	50-150				WG553314

Batch number /Run number / Sample number cross reference

WG552341: R1834132: L532893-01
WG553314: R1842212: L532893-01

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