



**E06 596 (Location: 335906)**  
**North Pit (Facility: 425749)**  
**South Pit (Facility: 425752)**  
**Encana Oil & Gas (USA) Inc. (Operator: 100185)**

#### **REPORT OF WORK COMPLETED**

- North Pit (425749): Form 27 (Doc: 2232906) (Rem: 7752)
- South Pit (425752): Form 27 (Doc: 2232907) (Rem: 7753)

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Form 4 (Report of Work Completed and Notification of Completion) to document closure of two (2) lined earthen pits on a well pad in the North Parachute area of operation in Garfield County.

Initial below-liner samples were collected on July 14, 2010. Both pits were drained, and the liner and above liner solids were removed for offsite disposal. Following removal of the pit liner, composite samples were collected from the bottom of each pit and sent to the lab to be analyzed for COGCC Table 910-1 constituents of concern. Upon receipt of laboratory results identifying TPH concentrations above the allowable limit, pit closure efforts were suspended for the year.

On June 6, 2011 both excavations were sampled again with a series of discrete grab samples collected to provide greater detail on where soil impacts existed within each excavation. When lab results confirmed persistent TPH concentrations above COGCC Table 910-1 allowable limits, heavy equipment was used to remove potential impacts and blend and stockpile material for additional remediation.

July 28, 2011 sampling efforts showed impacts remaining in the south pit along the weir dividing the two (2) pits, and in the spoil pile generated during excavation of the two (2) pits. The weir was removed along with additional material from along the east wall of the south pit, and the soil stockpile was blended in preparation for a final clearance sample. Clearance samples were collected from the below the weir and soil stockpile in early August, 2011.

#### **NOTIFICATION OF COMPLETION**

Final samples collected from the pit excavations and soil stockpile were within COGCC Table 910-1 allowable concentrations for TPH. Arsenic concentrations 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 soils represented by these samples are within the former pit footprint, are greater than three feet (3') 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.


After receipt of laboratory results demonstrating compliance for the pit excavations and soil stockpile, the stockpiled pit spoil and approximately 600 cubic yards of onsite drill cuttings were placed in the bottom of the pit excavations. The combined excavation was backfilled to grade with native material.

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

#### **ATTACHMENTS**

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






Northern Piceance Multiple  
Pit Closure Location Map


00.511.5

Miles

N

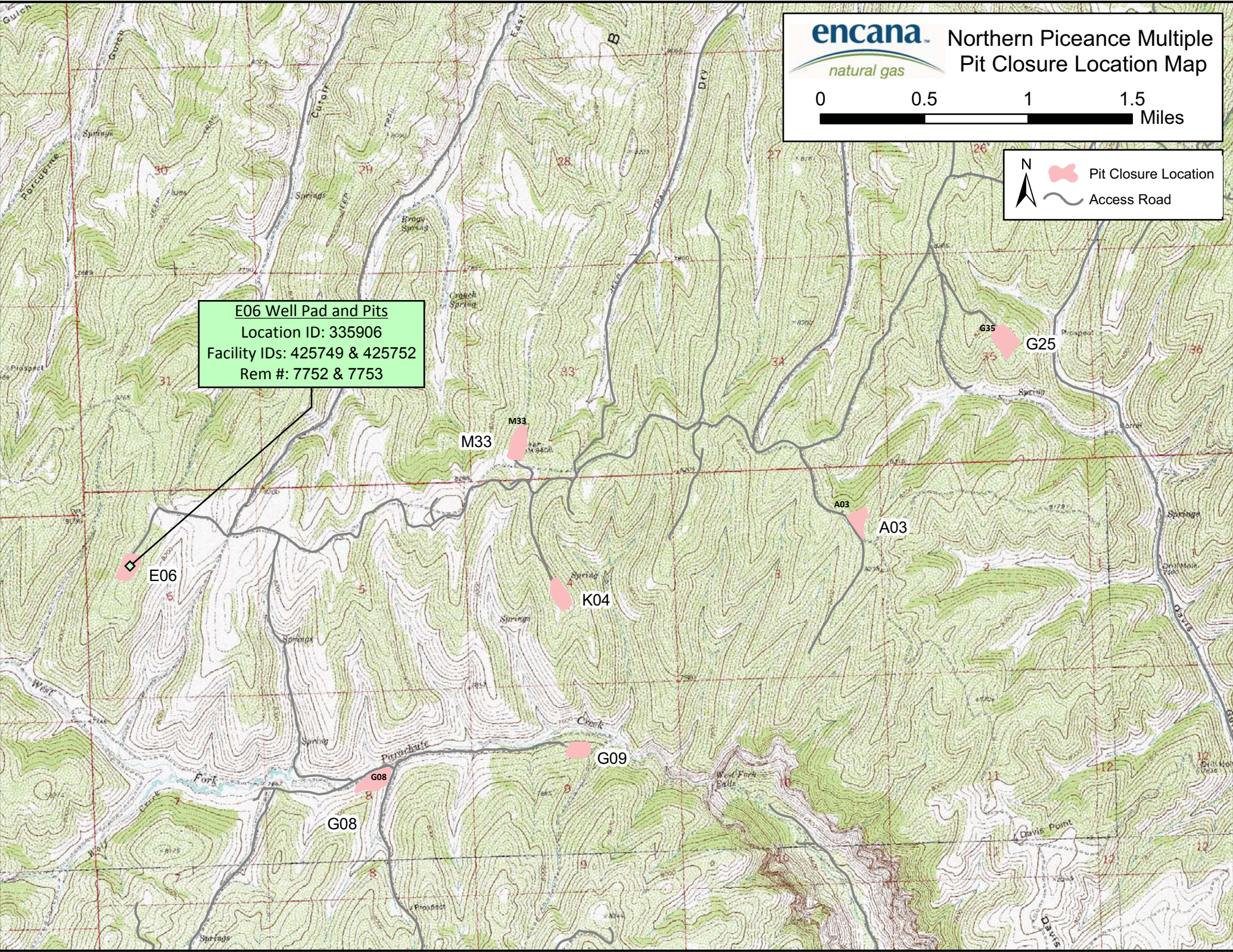


Pit Closure Location



Access Road

E06 Well Pad and Pits  
Location ID: 335906  
Facility IDs: 425749 & 425752  
Rem #: 7752 & 7753





Analytes (BDL = Below Detection Limit; ND = Non Detect)

Allowable Concentration -->					Organic Compounds in Soil (mg/kg [ppm])																		Inorganics in Soil			Metals in Soil (mg/kg [ppm])															
Location	Sampler:	Sample Date:	Sample Matrix	Matrix Notes	500	TPH (total volatile and extractable petroleum hydrocarbons)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver	Zinc	
E06	BR	07/14/10	Pit	N pit bottom	3248	28	3220	0.0023	0.0067	ND	0.019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.058	5.5	0.28	11.4	6.4	3700	0.78	19	0.023	18	12	0.027	12	1	ND	50		
E06	BR	07/14/10	Pit	S pit bottom	1295	15	1280	0.0039	0.013	ND	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	ND	8.4	0.6	11.6	13	2400	1	20	0.021	16	10	0.018	13	2	ND	49		
E06	BG	06/06/11	Pit	N pit - grab #1	3100	BDL	3100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.21	BDL	1.6	3.8	12	5.7	5200	0.81	16	BDL	21	13	0.026	8.5	1.8	BDL	34	
E06	BG	06/06/11	Pit	N pit - grab #2	66	BDL	66	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.02	BDL	0.27	7.4	9.7	4.1	8100	0.82	21	BDL	10	7.4	BDL	9.9	BDL	BDL	39	
E06	BG	06/06/11	Pit	N pit - grab #3	1300	BDL	1300	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.16	1.1	7.8	3.8	7500	0.51	21	BDL	12	13	0.033	5.2	BDL	BDL	44	
E06	BG	06/06/11	Pit	N pit - grab #4	220	BDL	220	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.15	0.98	8.4	4.4	6500	0.6	21	BDL	7.1	6.3	BDL	9.5	BDL	BDL	48	
E06	BG	06/06/11	Pit	N pit - grab #5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.14	0.75	8.4	3.3	1400	0.56	25	BDL	12	4.4	BDL	10	BDL	BDL	46	
E06	BG	06/06/11	Pit	S pit - grab #1	510	BDL	510	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.1	BDL	0.19	BDL	0.56	5.8	11	4.7	7100	0.81	17	BDL	20	11	BDL	9.4	BDL	BDL	43
E06	BG	06/06/11	Pit	S pit - grab #2	410	BDL	410	0.0067	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3.4	34	12	6.4	6400	0.64	15	BDL	17	7.9	BDL	9.8	BDL	BDL	41	
E06	BG	06/06/11	Pit	S pit - grab #3	120	BDL	120	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.35	3.2	10	6.9	7600	0.84	17	BDL	17	8.6	BDL	9	1.1	BDL	42	
E06	BG	06/06/11	Pit	S pit - grab #4	3800	BDL	3800	BDL	BDL	BDL	BDL	0.071	0.081	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.084	BDL	0.12	BDL	0.27	1	8.2	6	6900	0.97	21	BDL	12	6.4	BDL	14	BDL	BDL	42
E06	BG	06/06/11	Pit	S pit - grab #5	180	BDL	180	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.15	2.4	8.6	5.9	5400	0.84	20	BDL	14	6.8	0.022	10	BDL	BDL	45		
E06	BG	07/28/11	Pit	PitX - North pit, east wall	52	BDL	52																																		
E06	BG	07/28/11	Pit	PitX - North pit, north bottom	7.3	BDL	7.3																																		
E06	BG	07/28/11	Pit	PitX - North pit, northwest wall	240	BDL	240																																		
E06	BG	07/28/11	Pit	PitX - North pit, south bottom	150	BDL	150																																		
E06	BG	07/28/11	Pit	PitX - South pit, east wall	950	BDL	950																																		
E06	BG	07/28/11	Pit	PitX - South pit, north bottom	1600	BDL	1600																																		
E06	BG	07/28/11	Pit	PitX - South Pit, south bottom	39	BDL	39																																		
E06	BG	07/28/11	Pit	PitX - South Pit, west wall	160	BDL	160																																		
E06	BG	07/28/11	Pit	PitX - Spoil	1100	BDL	1100																																		
E06	BG	08/02/11	Pit	PitX - pit bottom center	BDL	BDL	BDL																																		
E06	BG	08/09/11	Pit	PitX Spoil	340	BDL	340																																		
E06	BR	07/08/11	Cuttings		107	11	96	0.0013	0.0024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.024	ND	0.14	0.024	0.3	10	10.1	7.3	2500	0.5	19	ND	17	10	0.017	13	0.89	ND	49	

## ANALYTICAL REPORT

Job Number: 280-5423-1

Job Description: E06 Pit Closure

For:

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



Approved for release.  
Lori A Parsons  
Project Manager I  
7/31/2010 9:50 AM

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Lori A Parsons  
Project Manager I  
lori.parsons@testamericainc.com  
07/31/2010

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](http://www.testamericainc.com)



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## CASE NARRATIVE

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

**Project: E06 Pit Closure**

**Report Number: 280-5423-1**

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 07/16/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.1 C.

### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/19/2010.

The samples required dilutions prior to analysis. Elevated reporting limits have been provided.

Sample E06-S. PIT BOTTOM-071410 (280-5423-2) exhibited a surrogate recovery below the control limits for dibromofluoromethane. Re-analysis was performed yielding concurring results indicating possible matrix interference.

The MS/MSD was performed on an unrelated sample and exhibited percent recoveries below the control limits for all target compounds. 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 VOC analyses.

All other quality control parameters were within the acceptance limits.

### **SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/19/2010 and analyzed on 07/28/2010.

Samples E06-N. PIT BOTTOM-071410 (280-5423-1)[4X] and E06-S. PIT BOTTOM-071410 (280-5423-2)[4X] required dilution prior to analysis due to the high concentration of non-target compounds. The reporting limits have been adjusted accordingly.

All quality control parameters were within the acceptance limits.

### **GASOLINE RANGE ORGANICS (GRO)**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 07/22/2010.

Gasoline Range Organics (GRO)-C6-C10 was detected in method blank MB 280-23575/3-A at a level that was above the method detection limit but below the reporting limit. The sample detection were 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 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 E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 07/20/2010 and analyzed on 07/22/2010.

Samples E06-N. PIT BOTTOM-071410 (280-5423-1)[10X] and E06-S. PIT BOTTOM-071410 (280-5423-2)[5X] required dilution prior to analysis due to high analyte concentrations. The reporting limits have been adjusted accordingly. Additionally the samples exhibited surrogate recoveries below the control limits for o-terphenyl due to the dilutions performed.

The MSs/MSDs were performed on unrelated samples and exhibited percent recoveries below the control limits for C10-C22, C22-C36, and surrogate o-terphenyl due to the dilutions performed on the parents samples and the high target analyte concentrations. 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 DRO analyses.

All other quality control parameters were within the acceptance limits.

#### **SODIUM ABSORPTION RATIO**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for Sodium Absorption Ratio in accordance with USDA Handbook 60 - 20B. The samples were prepared on 07/26/2010 and analyzed on 07/27/2010.

No difficulties were encountered during the SAR analyses.

All quality control parameters were within the acceptance limits.

#### **TOTAL METALS**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) 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 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.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

#### **TOTAL METALS - ARSENIC**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) 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.

#### **HEXAVALENT CHROMIUM**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 7196A. The samples were prepared on 07/20/2010 and analyzed on 07/21/2010.

No difficulties were encountered during the hexavalent chromium analyses.

All quality control parameters were within the acceptance limits.

#### **TRIVALENT CHROMIUM**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for Trivalent Chromium in accordance with SW-846 7196A\_CR3. The samples were analyzed on 07/30/2010.

No difficulties were encountered during the trivalent chromium analyses.

All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 07/29/2010.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.

#### **PH**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were leached on 07/17/2010 and analyzed on 07/17/2010.

No difficulties were encountered during the pH analyses.

All quality control parameters were within the acceptance limits.

#### **SPECIFIC CONDUCTANCE**

Samples E06-N. PIT BOTTOM-071410 (280-5423-1) and E06-S. PIT BOTTOM-071410 (280-5423-2) were analyzed for specific conductance in accordance with EPA SW-846 9050A. The samples were leached on 07/22/2010 and analyzed on 07/22/2010.

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: 280-5423-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>280-5423-1</b>	<b>E06-N. PIT BOTTOM-071410</b>					
Benzene		0.0023	J	0.024	mg/Kg	8260B
Toluene		0.0067	J	0.024	mg/Kg	8260B
Xylenes, Total		0.019	J	0.024	mg/Kg	8260B
Pyrene		0.058	J	1.3	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		28	B	1.2	mg/Kg	8015B
C10-C22		2500		37	mg/Kg	8015D
C22-C36		720		110	mg/Kg	8015D
Barium		3700		0.98	mg/Kg	6010B
Cadmium		0.78		0.49	mg/Kg	6010B
Chromium		20	B	1.5	mg/Kg	6010B
Copper		18		2.0	mg/Kg	6010B
Lead		12		0.78	mg/Kg	6010B
Nickel		12		3.9	mg/Kg	6010B
Selenium		1.0	J	1.3	mg/Kg	6010B
Zinc		50		2.9	mg/Kg	6010B
Arsenic		6.4		0.57	mg/Kg	6020
Mercury		0.027		0.016	mg/Kg	7471A
Cr (III)		19		2.0	mg/Kg	7196A
Chromium, hexavalent		0.023	J	0.097	mg/Kg	7196A
<b><i>Soluble</i></b>						
Sodium Adsorption Ratio		0.28		0.12	No Unit	20B
pH adj. to 25 deg C-Soluble		11.4		0.0100	SU	9045C
Specific Conductance-Soluble		5500		20	umhos/cm	9050A

## EXECUTIVE SUMMARY - Detections

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

Job Number: 280-5423-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>280-5423-2</b>	<b>E06-S. PIT BOTTOM-071410</b>					
Benzene		0.0039	J	0.024	mg/Kg	8260B
Toluene		0.013	J	0.024	mg/Kg	8260B
Xylenes, Total		0.017	J	0.024	mg/Kg	8260B
Naphthalene		0.14	J	1.3	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		15	B	1.2	mg/Kg	8015B
C10-C22		910		19	mg/Kg	8015D
C22-C36		370		56	mg/Kg	8015D
Barium		2400		0.95	mg/Kg	6010B
Cadmium		1.0		0.48	mg/Kg	6010B
Chromium		20	B	1.4	mg/Kg	6010B
Copper		16		1.9	mg/Kg	6010B
Lead		10		0.76	mg/Kg	6010B
Nickel		13		3.8	mg/Kg	6010B
Selenium		2.0		1.2	mg/Kg	6010B
Zinc		49		2.9	mg/Kg	6010B
Arsenic		13		0.58	mg/Kg	6020
Mercury		0.018		0.016	mg/Kg	7471A
Cr (III)		20		2.0	mg/Kg	7196A
Chromium, hexavalent		0.021	J	0.097	mg/Kg	7196A
<b><i>Soluble</i></b>						
Sodium Adsorption Ratio		0.60		0.12	No Unit	20B
pH adj. to 25 deg C-Soluble		11.6		0.0100	SU	9045C
Specific Conductance-Soluble		8400		20	umhos/cm	9050A

## METHOD SUMMARY

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

Job Number: 280-5423-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Solid</b>			
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: 280-5423-1

Method	Analyst	Analyst ID
SW846 8260B	Dobransky, Michael E	MD
SW846 8270C	Tinkham, Sarah A	SAT
SW846 8015B	Moore, Tegan E	TEM
SW846 8015D	Birdsell, Matthew R	MRB
USDA 20B	Wells, David	DW
SW846 6010B	Wells, David	DW
SW846 6020	Lill, Thomas E	TEL
SW846 7471A	Stoltz, Katie	KS
SW846 7196A	Collins, Janice	JC
SW846 7196A	Ficarello, Peter M	PMF
SW846 9045C	Kilker, Lorelei M	LMK
SW846 9050A	Plumb, Paul M	PMP

## SAMPLE SUMMARY

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

Job Number: 280-5423-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-5423-1	E06-N. PIT BOTTOM-071410	Solid	07/14/2010 1230	07/16/2010 1000
280-5423-2	E06-S. PIT BOTTOM-071410	Solid	07/14/2010 1300	07/16/2010 1000

# **SAMPLE RESULTS**



**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-N. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 280-23606	Instrument ID:	MSV_J
Preparation:	5030B		Lab File ID:	J9623.D
Dilution:	1.0		Initial Weight/Volume:	1.028 g
Date Analyzed:	07/19/2010 1316		Final Weight/Volume:	5 mL
Date Prepared:	07/19/2010 1316			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		0.0023	J	0.0023	0.024
Ethylbenzene		ND		0.0033	0.024
Toluene		0.0067	J	0.0034	0.024
Xylenes, Total		0.019	J	0.0030	0.024

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84		58 - 140
Toluene-d8 (Surr)	101		80 - 126
4-Bromofluorobenzene (Surr)	121		76 - 127
Dibromofluoromethane (Surr)	75		75 - 121

**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-S. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 280-23606	Instrument ID:	MSV_J
Preparation:	5030B		Lab File ID:	J9624.D
Dilution:	1.0		Initial Weight/Volume:	1.040 g
Date Analyzed:	07/19/2010 1338		Final Weight/Volume:	5 mL
Date Prepared:	07/19/2010 1338			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		0.0039	J	0.0023	0.024
Ethylbenzene		ND		0.0032	0.024
Toluene		0.013	J	0.0033	0.024
Xylenes, Total		0.017	J	0.0029	0.024

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	85		58 - 140
Toluene-d8 (Surr)	98		80 - 126
4-Bromofluorobenzene (Surr)	125		76 - 127
Dibromofluoromethane (Surr)	73	X	75 - 121

**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-N. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

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

Method:	8270C	Analysis Batch: 280-24674	Instrument ID:	MSS_Y
Preparation:	3550C	Prep Batch: 280-23377	Lab File ID:	Y3750.D
Dilution:	4.0		Initial Weight/Volume:	30.9 g
Date Analyzed:	07/28/2010 1838		Final Weight/Volume:	1000 uL
Date Prepared:	07/19/2010 1745		Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Pyrene		0.058	J	0.047	1.3
Acenaphthene		ND		0.040	1.3
Anthracene		ND		0.066	1.3
Benzo[a]anthracene		ND		0.078	1.3
Benzo[b]fluoranthene		ND		0.10	1.3
Benzo[k]fluoranthene		ND		0.16	1.3
Benzo[a]pyrene		ND		0.078	1.3
Chrysene		ND		0.10	1.3
Dibenz(a,h)anthracene		ND		0.074	1.3
Fluoranthene		ND		0.14	1.3
Fluorene		ND		0.070	1.3
Indeno[1,2,3-cd]pyrene		ND		0.085	1.3
Naphthalene		ND		0.12	1.3

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86	D	50 - 120
Nitrobenzene-d5	85	D	50 - 120
Terphenyl-d14	92	D	55 - 120



**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-S. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

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

Method:	8270C	Analysis Batch: 280-24674	Instrument ID:	MSS_Y
Preparation:	3550C	Prep Batch: 280-23377	Lab File ID:	Y3751.D
Dilution:	4.0		Initial Weight/Volume:	31.5 g
Date Analyzed:	07/28/2010 1858		Final Weight/Volume:	1000 uL
Date Prepared:	07/19/2010 1745		Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Pyrene		ND		0.046	1.3
Acenaphthene		ND		0.039	1.3
Anthracene		ND		0.065	1.3
Benzo[a]anthracene		ND		0.076	1.3
Benzo[b]fluoranthene		ND		0.10	1.3
Benzo[k]fluoranthene		ND		0.15	1.3
Benzo[a]pyrene		ND		0.076	1.3
Chrysene		ND		0.10	1.3
Dibenz(a,h)anthracene		ND		0.072	1.3
Fluoranthene		ND		0.14	1.3
Fluorene		ND		0.069	1.3
Indeno[1,2,3-cd]pyrene		ND		0.084	1.3
Naphthalene		0.14	J	0.12	1.3
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		78	D	50 - 120	
Nitrobenzene-d5		71	D	50 - 120	
Terphenyl-d14		89	D	55 - 120	

**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-N. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

**8015B Gasoline Range Organics - (GC)**

Method:	8015B	Analysis Batch: 280-24029	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-23575	Initial Weight/Volume:	10.08 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/22/2010 1936		Injection Volume:	5 mL
Date Prepared:	07/20/2010 1428		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		28	B	0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	85		77 - 123

**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-S. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

**8015B Gasoline Range Organics - (GC)**

Method:	8015B	Analysis Batch: 280-24029	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-23575	Initial Weight/Volume:	10.11 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/22/2010 2014		Injection Volume:	5 mL
Date Prepared:	07/20/2010 1429		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		15	B	0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	104		77 - 123

**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-N. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

**8015D Diesel Range Organics (DRO)**

Method:	8015D	Analysis Batch: 280-23991	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-23605	Initial Weight/Volume:	32.1 g
Dilution:	10		Final Weight/Volume:	1000 uL
Date Analyzed:	07/22/2010 2323		Injection Volume:	1 uL
Date Prepared:	07/20/2010 2045		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		2500		9.3	37
C22-C36		720		37	110

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

## Analytical Data

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

Job Number: 280-5423-1

Client Sample ID: E06-S. PIT BOTTOM-071410

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

### 8015D Diesel Range Organics (DRO)

Method:	8015D	Analysis Batch: 280-23991	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-23605	Initial Weight/Volume:	32.1 g
Dilution:	5.0		Final Weight/Volume:	1000 uL
Date Analyzed:	07/22/2010 2355		Injection Volume:	1 uL
Date Prepared:	07/20/2010 2045		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		910		4.7	19
C22-C36		370		18	56

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

**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-N. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

**20B Sodium Adsorption Ratio-Soluble**

Method:	20B	Analysis Batch: 280-24582	Instrument ID:	NOEQUIP
Preparation:	20B	Prep Batch: 280-23725	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/27/2010 1840		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 2300			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		0.28		0.12	0.12

**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 0125		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		3700		0.075	0.98
Cadmium		0.78		0.040	0.49
Chromium		20	B	0.057	1.5
Copper		18		0.21	2.0
Lead		12		0.26	0.78
Nickel		12		0.12	3.9
Selenium		1.0	J	0.84	1.3
Silver		ND		0.16	0.98
Zinc		50		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:	143SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.06 g
Date Analyzed:	07/23/2010 0212		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		6.4		0.048	0.57

**7471A Mercury**

Method:	7471A	Analysis Batch: 280-24797	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-24354	Lab File ID:	100729AA.txt
Dilution:	1.0		Initial Weight/Volume:	0.63 g
Date Analyzed:	07/29/2010 1209		Final Weight/Volume:	50 mL
Date Prepared:	07/29/2010 0930			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.027		0.0053	0.016

## Analytical Data

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

Job Number: 280-5423-1

**Client Sample ID:** E06-N. PIT BOTTOM-071410

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

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7471A Mercury



**Analytical Data**

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

Job Number: 280-5423-1

**Client Sample ID: E06-S. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

**20B Sodium Adsorption Ratio-Soluble**

Method:	20B	Analysis Batch: 280-24582	Instrument ID:	NOEQUIP
Preparation:	20B	Prep Batch: 280-23725	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/27/2010 1843		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 2300			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		0.60		0.12	0.12

**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:	1.05 g
Date Analyzed:	07/22/2010 0127		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		2400		0.072	0.95
Cadmium		1.0		0.039	0.48
Chromium		20	B	0.055	1.4
Copper		16		0.21	1.9
Lead		10		0.26	0.76
Nickel		13		0.12	3.8
Selenium		2.0		0.82	1.2
Silver		ND		0.15	0.95
Zinc		49		0.38	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:	144SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.03 g
Date Analyzed:	07/23/2010 0215		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		13		0.049	0.58

**7471A Mercury**

Method:	7471A	Analysis Batch: 280-24797	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-24354	Lab File ID:	100729AA.txt
Dilution:	1.0		Initial Weight/Volume:	0.63 g
Date Analyzed:	07/29/2010 1211		Final Weight/Volume:	50 mL
Date Prepared:	07/29/2010 0930			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.018		0.0053	0.016

## Analytical Data

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

Job Number: 280-5423-1

**Client Sample ID:** E06-S. PIT BOTTOM-071410

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

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7471A Mercury

**Analytical Data**

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

Job Number: 280-5423-1

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**General Chemistry****Client Sample ID: E06-N. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-1

Date Sampled: 07/14/2010 1230

Client Matrix: Solid

Date Received: 07/16/2010 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.023	J	mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89972		Date Analyzed (Start): 07/21/2010 0822 (End) 07/21/2010 0822				DryWt Corrected: N	
Prep Batch: 500-89928		Date Prepared: 07/20/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	19		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24942		Date Analyzed: 07/30/2010 1143				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	11.4		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-23306		Date Analyzed: 07/17/2010 1424				DryWt Corrected: N	
Specific Conductance-Soluble	5500		umhos/cm	20	20	1.0	9050A
Analysis Batch: 280-23895		Date Analyzed: 07/22/2010 1423				DryWt Corrected: N	

**Analytical Data**

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

Job Number: 280-5423-1

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**General Chemistry****Client Sample ID: E06-S. PIT BOTTOM-071410**

Lab Sample ID: 280-5423-2

Date Sampled: 07/14/2010 1300

Client Matrix: Solid

Date Received: 07/16/2010 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.021	J	mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89972		Date Analyzed (Start): 07/21/2010 0822 (End) 07/21/2010 0823					DryWt Corrected: N
Prep Batch: 500-89928		Date Prepared: 07/20/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	20		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24942		Date Analyzed: 07/30/2010 1143					DryWt Corrected: N
pH adj. to 25 deg C-Soluble	11.6		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-23306		Date Analyzed: 07/17/2010 1428					DryWt Corrected: N
Specific Conductance-Soluble	8400		umhos/cm	20	20	1.0	9050A
Analysis Batch: 280-23895		Date Analyzed: 07/22/2010 1423					DryWt Corrected: N

## DATA REPORTING QUALIFIERS

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

Job Number: 280-5423-1

Lab Section	Qualifier	Description
GC/MS VOA		
	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
	X	Surrogate is outside control limits
GC/MS 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.
GC VOA		
	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.
GC Semi VOA		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	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.
	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: 280-5423-1

Lab Section	Qualifier	Description
General Chemistry	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# **QUALITY CONTROL RESULTS**



## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:280-23606</b>					
LCS 280-23606/5	Lab Control Sample	T	Solid	8260B	
LCSD 280-23606/6	Lab Control Sample Duplicate	T	Solid	8260B	
MB 280-23606/7	Method Blank	T	Solid	8260B	
280-5405-F-5 MS	Matrix Spike	T	Solid	8260B	
280-5405-F-5 MSD	Matrix Spike Duplicate	T	Solid	8260B	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	8260B	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	8260B	

#### Report Basis

T = Total

### GC/MS Semi VOA

<b>Prep Batch: 280-23377</b>					
LCS 280-23377/2-A	Lab Control Sample	T	Solid	3550C	
LCSD 280-23377/3-A	Lab Control Sample Duplicate	T	Solid	3550C	
MB 280-23377/1-A	Method Blank	T	Solid	3550C	
280-5357-A-2-C MS	Matrix Spike	T	Solid	3550C	
280-5357-A-2-D MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	3550C	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	3550C	
<b>Analysis Batch:280-24674</b>					
LCS 280-23377/2-A	Lab Control Sample	T	Solid	8270C	280-23377
LCSD 280-23377/3-A	Lab Control Sample Duplicate	T	Solid	8270C	280-23377
MB 280-23377/1-A	Method Blank	T	Solid	8270C	280-23377
280-5357-A-2-C MS	Matrix Spike	T	Solid	8270C	280-23377
280-5357-A-2-D MSD	Matrix Spike Duplicate	T	Solid	8270C	280-23377
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	8270C	280-23377
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	8270C	280-23377

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC VOA</b>					
<b>Prep Batch: 280-23575</b>					
LCS 280-23575/1-A	Lab Control Sample	T	Solid	5030B	
LCSD 280-23575/2-A	Lab Control Sample Duplicate	T	Solid	5030B	
MB 280-23575/3-A	Method Blank	T	Solid	5030B	
280-5357-C-2-B MS	Matrix Spike	T	Solid	5030B	
280-5357-C-2-C MSD	Matrix Spike Duplicate	T	Solid	5030B	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	5030B	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	5030B	
<b>Analysis Batch:280-24029</b>					
LCS 280-23575/1-A	Lab Control Sample	T	Solid	8015B	280-23575
LCSD 280-23575/2-A	Lab Control Sample Duplicate	T	Solid	8015B	280-23575
MB 280-23575/3-A	Method Blank	T	Solid	8015B	280-23575
280-5357-C-2-B MS	Matrix Spike	T	Solid	8015B	280-23575
280-5357-C-2-C MSD	Matrix Spike Duplicate	T	Solid	8015B	280-23575
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	8015B	280-23575
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	8015B	280-23575

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 280-23605</b>					
LCS 280-23605/2-A	Lab Control Sample	T	Solid	3550C	
LCS 280-23605/4-A	Lab Control Sample	T	Solid	3550C	
LCSD 280-23605/3-A	Lab Control Sample Duplicate	T	Solid	3550C	
LCSD 280-23605/5-A	Lab Control Sample Duplicate	T	Solid	3550C	
MB 280-23605/1-A	Method Blank	T	Solid	3550C	
280-5357-B-1-F MS	Matrix Spike	T	Solid	3550C	
280-5357-B-1-G MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-5357-B-2-C MS	Matrix Spike	T	Solid	3550C	
280-5357-B-2-D MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	3550C	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	3550C	
<b>Analysis Batch:280-23981</b>					
LCS 280-23605/2-A	Lab Control Sample	T	Solid	8015D	280-23605
LCS 280-23605/4-A	Lab Control Sample	T	Solid	8015D	280-23605
LCSD 280-23605/3-A	Lab Control Sample Duplicate	T	Solid	8015D	280-23605
LCSD 280-23605/5-A	Lab Control Sample Duplicate	T	Solid	8015D	280-23605
MB 280-23605/1-A	Method Blank	T	Solid	8015D	280-23605
<b>Analysis Batch:280-23991</b>					
280-5357-B-1-F MS	Matrix Spike	T	Solid	8015D	280-23605
280-5357-B-1-G MSD	Matrix Spike Duplicate	T	Solid	8015D	280-23605
280-5357-B-2-C MS	Matrix Spike	T	Solid	8015D	280-23605
280-5357-B-2-D MSD	Matrix Spike Duplicate	T	Solid	8015D	280-23605
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	8015D	280-23605
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	8015D	280-23605

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-23465</b>					
LCS 280-23465/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-23465/1-A	Method Blank	T	Solid	3050B	
280-5234-A-2-L MS	Matrix Spike	T	Solid	3050B	
280-5234-A-2-M MSD	Matrix Spike Duplicate	T	Solid	3050B	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	3050B	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	3050B	
<b>Prep Batch: 280-23479</b>					
LCS 280-23479/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-23479/1-A	Method Blank	T	Solid	3050B	
280-5234-A-2-O MS	Matrix Spike	T	Solid	3050B	
280-5234-A-2-P MSD	Matrix Spike Duplicate	T	Solid	3050B	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	3050B	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	3050B	
<b>Prep Batch: 280-23725</b>					
MB 280-23725/1-A	Method Blank	S	Solid	20B	
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	20B	
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	20B	
<b>Analysis Batch:280-23824</b>					
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-A-2-O MS	Matrix Spike	T	Solid	6010B	280-23479
280-5234-A-2-P MSD	Matrix Spike Duplicate	T	Solid	6010B	280-23479
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	6010B	280-23479
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	6010B	280-23479
<b>Analysis Batch:280-23997</b>					
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-A-2-L MS	Matrix Spike	T	Solid	6020	280-23465
280-5234-A-2-M MSD	Matrix Spike Duplicate	T	Solid	6020	280-23465
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	6020	280-23465
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	6020	280-23465
<b>Prep Batch: 280-24354</b>					
LCS 280-24354/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-24354/1-A	Method Blank	T	Solid	7471A	
280-5251-A-6-H MS	Matrix Spike	T	Solid	7471A	
280-5251-A-6-I MSD	Matrix Spike Duplicate	T	Solid	7471A	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	7471A	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	7471A	

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## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-24526</b>					
MB 280-23725/1-A	Method Blank	S	Solid	20B	280-23725
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	20B	280-23725
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	20B	280-23725
<b>Analysis Batch:280-24582</b>					
MB 280-23725/1-A	Method Blank	S	Solid	20B	280-23725
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	20B	280-23725
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	20B	280-23725
<b>Analysis Batch:280-24797</b>					
LCS 280-24354/2-A	Lab Control Sample	T	Solid	7471A	280-24354
MB 280-24354/1-A	Method Blank	T	Solid	7471A	280-24354
280-5251-A-6-H MS	Matrix Spike	T	Solid	7471A	280-24354
280-5251-A-6-I MSD	Matrix Spike Duplicate	T	Solid	7471A	280-24354
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	7471A	280-24354
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	7471A	280-24354

#### Report Basis

S = Soluble

T = Total

## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Prep Batch: 280-23287</b>					
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	DI Leach	
280-5423-1DU	Duplicate	S	Solid	DI Leach	
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	DI Leach	
<b>Analysis Batch:280-23306</b>					
LCS 280-23306/22	Lab Control Sample	T	Water	9045C	
LCSD 280-23306/23	Lab Control Sample Duplicate	T	Water	9045C	
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	9045C	
280-5423-1DU	Duplicate	S	Solid	9045C	
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	9045C	
<b>Prep Batch: 280-23862</b>					
MB 280-23862/1-A	Method Blank	S	Solid	DI Leach	
280-5405-C-1-B DU	Duplicate	S	Solid	DI Leach	
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	DI Leach	
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	DI Leach	
<b>Analysis Batch:280-23895</b>					
LCS 280-23895/3	Lab Control Sample	T	Solid	9050A	
LCSD 280-23895/4	Lab Control Sample Duplicate	T	Solid	9050A	
MB 280-23862/1-A	Method Blank	S	Solid	9050A	
280-5405-C-1-B DU	Duplicate	S	Solid	9050A	
280-5423-1	E06-N. PIT BOTTOM-071410	S	Solid	9050A	
280-5423-2	E06-S. PIT BOTTOM-071410	S	Solid	9050A	
<b>Analysis Batch:280-24942</b>					
MB 280-24942/1	Method Blank	T	Solid	7196A	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	7196A	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	7196A	
<b>Prep Batch: 500-89928</b>					
LCS 500-89928/2-A	Lab Control Sample	T	Solid	300_Prep	
MB 500-89928/1-A	Method Blank	T	Solid	300_Prep	
280-5418-C-5-H MS	Matrix Spike	T	Solid	300_Prep	
280-5418-C-5-I MSD	Matrix Spike Duplicate	T	Solid	300_Prep	
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	300_Prep	
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	300_Prep	
<b>Analysis Batch:500-89972</b>					
LCS 500-89928/2-A	Lab Control Sample	T	Solid	7196A	500-89928
MB 500-89928/1-A	Method Blank	T	Solid	7196A	500-89928
280-5418-C-5-H MS	Matrix Spike	T	Solid	7196A	500-89928
280-5418-C-5-I MSD	Matrix Spike Duplicate	T	Solid	7196A	500-89928
280-5423-1	E06-N. PIT BOTTOM-071410	T	Solid	7196A	500-89928
280-5423-2	E06-S. PIT BOTTOM-071410	T	Solid	7196A	500-89928

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## Quality Control Results

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

Job Number: 280-5423-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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#### Report Basis

S = Soluble

T = Total



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

Job Number: 280-5423-1

**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
280-5423-1	E06-N. PIT BOTTOM-071410	84	101	121	75
280-5423-2	E06-S. PIT BOTTOM-071410	85	98	125	73X
MB 280-23606/7		74	82	97	81
LCS 280-23606/5		89	101	114	93
LCSD 280-23606/6		85	94	105	87
280-5405-F-5 MS		89	101	121	93
280-5405-F-5 MSD		84	101	118	90

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 &amp; Gas, Inc. (USA)

Job Number: 280-5423-1

**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
280-5423-1	E06-N. PIT BOTTOM-071410	86D	85D	92D
280-5423-2	E06-S. PIT BOTTOM-071410	78D	71D	89D
MB 280-23377/1-A		74	74	93
LCS 280-23377/2-A		81	79	93
LCSD 280-23377/3-A		81	82	96
280-5357-A-2-C MS		85	92	96
280-5357-A-2-D MSD		86	91	89

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

## Quality Control Results

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

Job Number: 280-5423-1

### Surrogate Recovery Report

#### 8015B Gasoline Range Organics - (GC)

##### Client Matrix: Solid

Lab Sample ID	Client Sample ID	TFT1 %Rec
280-5423-1	E06-N. PIT BOTTOM-071410	85
280-5423-2	E06-S. PIT BOTTOM-071410	104
MB 280-23575/3-A		90
LCS 280-23575/1-A		97
LCSD 280-23575/2-A		97
280-5357-C-2-B MS		89
280-5357-C-2-C MSD		93

Surrogate	Acceptance Limits
TFT = a,a,a-Trifluorotoluene	77-123

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

Job Number: 280-5423-1

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

Lab Sample ID	Client Sample ID	OTPH1 %Rec
280-5423-1	E06-N. PIT BOTTOM-071410	0D
280-5423-2	E06-S. PIT BOTTOM-071410	0D
MB 280-23605/1-A		70
LCS 280-23605/2-A		71
LCS 280-23605/4-A		59
LCSD 280-23605/3-A		69
LCSD 280-23605/5-A		58
280-5357-B-1-F MS		0D
280-5357-B-2-C MS		0D
280-5357-B-1-G MSD		0D
280-5357-B-2-D MSD		0D

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-23606

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-23606/7  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 1004  
Date Prepared: 07/19/2010 1004

Analysis Batch: 280-23606  
Prep Batch: N/A  
Units: mg/Kg

Instrument ID: MSV\_J  
Lab File ID: J9616.D  
Initial Weight/Volume: 5.276 g  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Benzene	ND		0.00045	0.0047
Ethylbenzene	ND		0.00063	0.0047
Toluene	ND		0.00065	0.0047
Xylenes, Total	ND		0.00058	0.0047

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	74	58 - 140
Toluene-d8 (Surr)	82	80 - 126
4-Bromofluorobenzene (Surr)	97	76 - 127
Dibromofluoromethane (Surr)	81	75 - 121

## Quality Control Results

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

Job Number: 280-5423-1

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-23606

Method: 8260B  
Preparation: 5030B

LCS Lab Sample ID: LCS 280-23606/5  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 0858  
Date Prepared: 07/19/2010 0858

Analysis Batch: 280-23606  
Prep Batch: N/A  
Units: mg/Kg

Instrument ID: MSV\_J  
Lab File ID: J9613.D  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 280-23606/6  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 0920  
Date Prepared: 07/19/2010 0920

Analysis Batch: 280-23606  
Prep Batch: N/A  
Units: mg/Kg

Instrument ID: MSV\_J  
Lab File ID: J9614.D  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	92	87	76 - 120	5	20		
Ethylbenzene	88	83	78 - 120	6	20		
Toluene	92	87	72 - 120	5	20		
Xylenes, Total	88	83	77 - 120	6	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	89		85		58 - 140		
Toluene-d8 (Surr)	101		94		80 - 126		
4-Bromofluorobenzene (Surr)	114		105		76 - 127		
Dibromofluoromethane (Surr)	93		87		75 - 121		

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-23606

Method: 8260B  
Preparation: 5030B

LCS Lab Sample ID: LCS 280-23606/5  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 0858  
Date Prepared: 07/19/2010 0858

Units: mg/Kg

LCSD Lab Sample ID: LCSD 280-23606/6  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 0920  
Date Prepared: 07/19/2010 0920

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Benzene	0.0500	0.0500	0.0460	0.0437
Ethylbenzene	0.0500	0.0500	0.0440	0.0413
Toluene	0.0500	0.0500	0.0459	0.0437
Xylenes, Total	0.150	0.150	0.133	0.124

## Quality Control Results

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

Job Number: 280-5423-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23606

Method: 8260B  
Preparation: 5030B

MS Lab Sample ID: 280-5405-F-5 MS  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 1633  
Date Prepared: 07/19/2010 1633

Analysis Batch: 280-23606  
Prep Batch: N/A

Instrument ID: MSV\_J  
Lab File ID: J9631.D  
Initial Weight/Volume: 5.220 g  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-5405-F-5 MSD  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 1210  
Date Prepared: 07/19/2010 1210

Analysis Batch: 280-23606  
Prep Batch: N/A

Instrument ID: MSV\_J  
Lab File ID: J9620.D  
Initial Weight/Volume: 5.092 g  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	53	58	76 - 120	11	20	F	F
Ethylbenzene	40	50	78 - 120	25	20	F	F
Toluene	44	50	72 - 120	16	20	F	F
Xylenes, Total	38	48	77 - 120	25	20	F	F

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	84	58 - 140
Toluene-d8 (Surr)	101	101	80 - 126
4-Bromofluorobenzene (Surr)	121	118	76 - 127
Dibromofluoromethane (Surr)	93	90	75 - 121

### Matrix Spike/ Matrix Spike Duplicate Data Report - Batch: 280-23606

Method: 8260B  
Preparation: 5030B

MS Lab Sample ID: 280-5405-F-5 MS  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 1633  
Date Prepared: 07/19/2010 1633

Units: mg/Kg

MSD Lab Sample ID: 280-5405-F-5 MSD  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/19/2010 1210  
Date Prepared: 07/19/2010 1210

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Benzene	ND	0.0479	0.0491	0.0256 F	0.0286 F
Ethylbenzene	ND	0.0479	0.0491	0.0190 F	0.0245 F
Toluene	ND	0.0479	0.0491	0.0211 F	0.0247 F
Xylenes, Total	ND	0.144	0.147	0.0552 F	0.0712 F



## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-23377

Lab Sample ID: MB 280-23377/1-A  
 Client Matrix: Solid  
 Dilution: 1.0  
 Date Analyzed: 07/28/2010 1558  
 Date Prepared: 07/19/2010 1745

Analysis Batch: 280-24674  
 Prep Batch: 280-23377  
 Units: mg/Kg

### Method: 8270C Preparation: 3550C

Instrument ID: MSS\_Y  
 Lab File ID: Y3742.D  
 Initial Weight/Volume: 30.2 g  
 Final Weight/Volume: 1000 uL  
 Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
Pyrene	ND		0.012	0.33
Acenaphthene	ND		0.010	0.33
Anthracene	ND		0.017	0.33
Benzo[a]anthracene	ND		0.020	0.33
Benzo[b]fluoranthene	ND		0.026	0.33
Benzo[k]fluoranthene	ND		0.040	0.33
Benzo[a]pyrene	ND		0.020	0.33
Chrysene	ND		0.027	0.33
Dibenz(a,h)anthracene	ND		0.019	0.33
Fluoranthene	ND		0.036	0.33
Fluorene	ND		0.018	0.33
Indeno[1,2,3-cd]pyrene	ND		0.022	0.33
Naphthalene	ND		0.031	0.33
Surrogate	% Rec	Acceptance Limits		
2-Fluorobiphenyl	74	50 - 120		
Nitrobenzene-d5	74	50 - 120		
Terphenyl-d14	93	55 - 120		

## Quality Control Results

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

Job Number: 280-5423-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-23377**

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

LCS Lab Sample ID: LCS 280-23377/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1618  
Date Prepared: 07/19/2010 1745

Analysis Batch: 280-24674  
Prep Batch: 280-23377  
Units: mg/Kg

Instrument ID: MSS\_Y  
Lab File ID: Y3743.D  
Initial Weight/Volume: 30.1 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

LCSD Lab Sample ID: LCSD 280-23377/3-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1639  
Date Prepared: 07/19/2010 1745

Analysis Batch: 280-24674  
Prep Batch: 280-23377  
Units: mg/Kg

Instrument ID: MSS\_Y  
Lab File ID: Y3744.D  
Initial Weight/Volume: 30.3 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Pyrene	91	92	50 - 120	1	38		
Acenaphthene	81	81	52 - 120	1	30		
Anthracene	91	92	57 - 120	0	30		
Benzo[a]anthracene	90	91	55 - 120	1	30		
Benzo[b]fluoranthene	94	90	52 - 120	6	44		
Benzo[k]fluoranthene	83	93	54 - 120	11	30		
Benzo[a]pyrene	80	82	54 - 120	3	30		
Chrysene	87	89	55 - 120	2	35		
Dibenz(a,h)anthracene	97	100	55 - 120	3	30		
Fluoranthene	94	97	55 - 120	2	30		
Fluorene	88	87	55 - 120	2	30		
Indeno[1,2,3-cd]pyrene	101	100	54 - 120	1	30		
Naphthalene	76	78	50 - 120	3	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
2-Fluorobiphenyl	81		81		50 - 120		
Nitrobenzene-d5	79		82		50 - 120		
Terphenyl-d14	93		96		55 - 120		

## Quality Control Results

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

Job Number: 280-5423-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-23377**

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

LCS Lab Sample ID: LCS 280-23377/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1618  
Date Prepared: 07/19/2010 1745

Units: mg/Kg

LCSD Lab Sample ID: LCSD 280-23377/3-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1639  
Date Prepared: 07/19/2010 1745

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Pyrene	2.66	2.64	2.41	2.43
Acenaphthene	2.66	2.64	2.16	2.15
Anthracene	2.66	2.64	2.42	2.43
Benzo[a]anthracene	2.66	2.64	2.39	2.41
Benzo[b]fluoranthene	2.66	2.64	2.51	2.37
Benzo[k]fluoranthene	2.66	2.64	2.20	2.46
Benzo[a]pyrene	2.66	2.64	2.12	2.17
Chrysene	2.66	2.64	2.31	2.36
Dibenz(a,h)anthracene	2.66	2.64	2.57	2.64
Fluoranthene	2.66	2.64	2.51	2.55
Fluorene	2.66	2.64	2.34	2.30
Indeno[1,2,3-cd]pyrene	2.66	2.64	2.69	2.65
Naphthalene	2.66	2.64	2.01	2.06

## Quality Control Results

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

Job Number: 280-5423-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23377

Method: 8270C  
Preparation: 3550C

MS Lab Sample ID: 280-5357-A-2-C MS  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1739  
Date Prepared: 07/19/2010 1745

Analysis Batch: 280-24674  
Prep Batch: 280-23377

Instrument ID: MSS\_Y  
Lab File ID: Y3747.D  
Initial Weight/Volume: 31.7 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

MSD Lab Sample ID: 280-5357-A-2-D MSD  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1759  
Date Prepared: 07/19/2010 1745

Analysis Batch: 280-24674  
Prep Batch: 280-23377

Instrument ID: MSS\_Y  
Lab File ID: Y3748.D  
Initial Weight/Volume: 31.7 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Pyrene	93	82	50 - 120	11	38		
Acenaphthene	82	83	52 - 120	1	30		
Anthracene	91	91	57 - 120	0	30		
Benzo[a]anthracene	74	79	55 - 120	7	30		
Benzo[b]fluoranthene	87	86	52 - 120	2	44		
Benzo[k]fluoranthene	79	87	54 - 120	10	30		
Benzo[a]pyrene	76	78	54 - 120	2	30		
Chrysene	91	85	55 - 120	7	35		
Dibenz(a,h)anthracene	92	94	55 - 120	3	30		
Fluoranthene	92	93	55 - 120	1	30		
Fluorene	87	87	55 - 120	1	30		
Indeno[1,2,3-cd]pyrene	106	100	54 - 120	6	30		
Naphthalene	86	86	50 - 120	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	85	86	50 - 120
Nitrobenzene-d5	92	91	50 - 120
Terphenyl-d14	96	89	55 - 120

## Quality Control Results

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

Job Number: 280-5423-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 280-23377**

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

MS Lab Sample ID: 280-5357-A-2-C MS  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1739  
Date Prepared: 07/19/2010 1745

Units: mg/Kg

MSD Lab Sample ID: 280-5357-A-2-D MSD  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/28/2010 1759  
Date Prepared: 07/19/2010 1745

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Pyrene	0.060	J	2.52	2.52	2.40	2.14
Acenaphthene	ND		2.52	2.52	2.07	2.10
Anthracene	ND		2.52	2.52	2.29	2.29
Benzo[a]anthracene	0.077	J	2.52	2.52	1.94	2.08
Benzo[b]fluoranthene	0.047	J	2.52	2.52	2.25	2.21
Benzo[k]fluoranthene	ND		2.52	2.52	1.99	2.19
Benzo[a]pyrene	ND		2.52	2.52	1.91	1.96
Chrysene	ND		2.52	2.52	2.30	2.14
Dibenz(a,h)anthracene	ND		2.52	2.52	2.32	2.38
Fluoranthene	ND		2.52	2.52	2.32	2.34
Fluorene	ND		2.52	2.52	2.18	2.20
Indeno[1,2,3-cd]pyrene	ND		2.52	2.52	2.68	2.52
Naphthalene	ND		2.52	2.52	2.16	2.16

## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-23575

Lab Sample ID: MB 280-23575/3-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1314  
Date Prepared: 07/20/2010 1428

Analysis Batch: 280-24029  
Prep Batch: 280-23575  
Units: mg/Kg

Method: 8015B  
Preparation: 5030B

Instrument ID: GCV\_L  
Lab File ID: 127F0601.D  
Initial Weight/Volume: 10.12 g  
Final Weight/Volume: 500 mL  
Injection Volume: 5 mL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Gasoline Range Organics (GRO)-C6-C10	0.349	J	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: 280-23575

Method: 8015B  
Preparation: 5030B

LCS Lab Sample ID: LCS 280-23575/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1200  
Date Prepared: 07/20/2010 1428

Analysis Batch: 280-24029  
Prep Batch: 280-23575  
Units: mg/Kg

Instrument ID: GCV\_L  
Lab File ID: 125F0401.D  
Initial Weight/Volume: 10.09 g  
Final Weight/Volume: 500 mL  
Injection Volume: 5 mL  
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-23575/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1237  
Date Prepared: 07/20/2010 1428

Analysis Batch: 280-24029  
Prep Batch: 280-23575  
Units: mg/Kg

Instrument ID: GCV\_L  
Lab File ID: 126F0501.D  
Initial Weight/Volume: 10.09 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	133	128	85 - 153	4	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
a,a,a-Trifluorotoluene	97		97		77 - 123		

## Quality Control Results

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

Job Number: 280-5423-1

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-23575

Method: 8015B  
Preparation: 5030B

LCS Lab Sample ID: LCS 280-23575/1-A Units: mg/Kg  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1200  
Date Prepared: 07/20/2010 1428

LCSD Lab Sample ID: LCSD 280-23575/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1237  
Date Prepared: 07/20/2010 1428

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Gasoline Range Organics (GRO)-C6-C10	5.45	5.45	7.24	6.95

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23575

Method: 8015B  
Preparation: 5030B

MS Lab Sample ID: 280-5357-C-2-B MS Analysis Batch: 280-24029  
Client Matrix: Solid Prep Batch: 280-23575  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1558  
Date Prepared: 07/20/2010 1428

Instrument ID: GCV\_L  
Lab File ID: 130F0901.D  
Initial Weight/Volume: 10.03 g  
Final Weight/Volume: 500 mL  
Injection Volume: 5 mL  
Column ID: PRIMARY

MSD Lab Sample ID: 280-5357-C-2-C MSD Analysis Batch: 280-24029  
Client Matrix: Solid Prep Batch: 280-23575  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1636  
Date Prepared: 07/20/2010 1428

Instrument ID: GCV\_L  
Lab File ID: 131F1001.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	MS Qual	MSD Qual
	MS	MSD					
Gasoline Range Organics (GRO)-C6-C10	34	39	85 - 153	3	30	F	F

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
a,a,a-Trifluorotoluene	89	93	77 - 123

## Quality Control Results

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

Job Number: 280-5423-1

### Matrix Spike/

**Matrix Spike Duplicate Data Report - Batch: 280-23575**

**Method: 8015B**

**Preparation: 5030B**

MS Lab Sample ID: 280-5357-C-2-B MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2010 1558

Date Prepared: 07/20/2010 1428

MSD Lab Sample ID: 280-5357-C-2-C MSD

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2010 1636

Date Prepared: 07/20/2010 1428

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Gasoline Range Organics (GRO)-C6-C10	6.3	5.48	5.49	8.15	F	8.43	F



## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-23605

Method: 8015D

Preparation: 3550C

Lab Sample ID: MB 280-23605/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1758  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23981  
Prep Batch: 280-23605  
Units: mg/Kg

Instrument ID: GCS\_U2  
Lab File ID: 008F0801.D  
Initial Weight/Volume: 30.4 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
C10-C22	ND		0.98	3.9
C22-C36	ND		3.9	12
Surrogate	% Rec		Acceptance Limits	
o-Terphenyl	70		49 - 115	

## Quality Control Results

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

Job Number: 280-5423-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-23605**

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

LCS Lab Sample ID: LCS 280-23605/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1831  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23981  
Prep Batch: 280-23605  
Units: mg/Kg

Instrument ID: GCS\_U2  
Lab File ID: 009F0901.D  
Initial Weight/Volume: 30.6 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-23605/3-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1904  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23981  
Prep Batch: 280-23605  
Units: mg/Kg

Instrument ID: GCS\_U2  
Lab File ID: 010F1001.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	LCS Qual	LCSD Qual
	LCS	LCSD					
C10-C22	83	79	50 - 150	4	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
o-Terphenyl	71		69		49 - 115		

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-23605**

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

LCS Lab Sample ID: LCS 280-23605/4-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1938  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23981  
Prep Batch: 280-23605  
Units: mg/Kg

Instrument ID: GCS\_U2  
Lab File ID: 011F1101.D  
Initial Weight/Volume: 30.5 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-23605/5-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 2010  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23981  
Prep Batch: 280-23605  
Units: mg/Kg

Instrument ID: GCS\_U2  
Lab File ID: 012F1201.D  
Initial Weight/Volume: 30.6 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
C22-C36	97	94	50 - 150	3	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
o-Terphenyl	59		58		49 - 115		

## Quality Control Results

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

Job Number: 280-5423-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-23605**

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

LCS Lab Sample ID: LCS 280-23605/2-A      Units: mg/Kg  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1831  
Date Prepared: 07/20/2010 2045

LCSD Lab Sample ID: LCSD 280-23605/3-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1904  
Date Prepared: 07/20/2010 2045

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
C10-C22	65.4	66.0	54.2	52.2

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-23605**

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

LCS Lab Sample ID: LCS 280-23605/4-A      Units: mg/Kg  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 1938  
Date Prepared: 07/20/2010 2045

LCSD Lab Sample ID: LCSD 280-23605/5-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 2010  
Date Prepared: 07/20/2010 2045

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
C22-C36	164	164	159	155

## Quality Control Results

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

Job Number: 280-5423-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23605

Method: 8015D  
Preparation: 3550C

MS Lab Sample ID: 280-5357-B-1-F MS  
Client Matrix: Solid  
Dilution: 10  
Date Analyzed: 07/22/2010 1933  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23991  
Prep Batch: 280-23605

Instrument ID: GCS\_U2  
Lab File ID: 007F0701.D  
Initial Weight/Volume: 31.1 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 280-5357-B-1-G MSD  
Client Matrix: Solid  
Dilution: 10  
Date Analyzed: 07/22/2010 2006  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23991  
Prep Batch: 280-23605

Instrument ID: GCS\_U2  
Lab File ID: 008F0801.D  
Initial Weight/Volume: 31.3 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	-141	-792	50 - 150	25	30	D 4	D 4
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
o-Terphenyl	0	D	0	D	49 - 115		

## Quality Control Results

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

Job Number: 280-5423-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23605

Method: 8015D  
Preparation: 3550C

MS Lab Sample ID: 280-5357-B-2-C MS  
Client Matrix: Solid  
Dilution: 5.0  
Date Analyzed: 07/22/2010 2111  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23991  
Prep Batch: 280-23605

Instrument ID: GCS\_U2  
Lab File ID: 010F1001.D  
Initial Weight/Volume: 30.8 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 280-5357-B-2-D MSD  
Client Matrix: Solid  
Dilution: 5.0  
Date Analyzed: 07/22/2010 2144  
Date Prepared: 07/20/2010 2045

Analysis Batch: 280-23991  
Prep Batch: 280-23605

Instrument ID: GCS\_U2  
Lab File ID: 011F1101.D  
Initial Weight/Volume: 30.8 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					
C22-C36	251	164	50 - 150	11	30	D 4	D 4
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
o-Terphenyl	0	D	0	D	49 - 115		

## Quality Control Results

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

Job Number: 280-5423-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 280-23605**

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

MS Lab Sample ID: 280-5357-B-1-F MS  
Client Matrix: Solid  
Dilution: 10  
Date Analyzed: 07/22/2010 1933  
Date Prepared: 07/20/2010 2045

Units: mg/Kg

MSD Lab Sample ID: 280-5357-B-1-G MSD  
Client Matrix: Solid  
Dilution: 10  
Date Analyzed: 07/22/2010 2006  
Date Prepared: 07/20/2010 2045

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C10-C22	1900	64.3	63.9	1850 D 4	1430 D 4

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 280-23605**

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

MS Lab Sample ID: 280-5357-B-2-C MS  
Client Matrix: Solid  
Dilution: 5.0  
Date Analyzed: 07/22/2010 2111  
Date Prepared: 07/20/2010 2045

Units: mg/Kg

MSD Lab Sample ID: 280-5357-B-2-D MSD  
Client Matrix: Solid  
Dilution: 5.0  
Date Analyzed: 07/22/2010 2144  
Date Prepared: 07/20/2010 2045

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C22-C36	900	163	163	1310 D 4	1170 D 4

## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-23725

Lab Sample ID: MB 280-23725/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/27/2010 1751  
Date Prepared: 07/26/2010 2300

Analysis Batch: 280-24582  
Prep Batch: 280-23725  
Units: No Unit

### Method: 20B

#### Preparation: 20B

#### Soluble

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Sodium Adsorption Ratio	ND		0.12	0.12

## Quality Control Results

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

Job Number: 280-5423-1

### 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: 280-5423-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-23479**

**Method: 6010B  
Preparation: 3050B**

MS Lab Sample ID: 280-5234-A-2-O MS  
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-A-2-P MSD  
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: 280-5423-1

### Matrix Spike/

**Matrix Spike Duplicate Data Report - Batch: 280-23479**

**Method: 6010B**

**Preparation: 3050B**

MS Lab Sample ID: 280-5234-A-2-O MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2010 0043

Date Prepared: 07/21/2010 0900

MSD Lab Sample ID: 280-5234-A-2-P MSD

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: 280-5423-1

### 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-A-2-L MS  
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-A-2-M MSD  
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: 280-5423-1

### Matrix Spike/

**Matrix Spike Duplicate Data Report - Batch: 280-23465**

**Method: 6020**

**Preparation: 3050B**

MS Lab Sample ID: 280-5234-A-2-L MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/23/2010 0128

Date Prepared: 07/21/2010 0900

MSD Lab Sample ID: 280-5234-A-2-M MSD

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: 280-5423-1

### Method Blank - Batch: 280-24354

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID: MB 280-24354/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/29/2010 1137  
Date Prepared: 07/29/2010 0930

Analysis Batch: 280-24797  
Prep Batch: 280-24354  
Units: mg/Kg

Instrument ID: MT\_033  
Lab File ID: 100729AA.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 - Batch: 280-24354

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID: LCS 280-24354/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/29/2010 1139  
Date Prepared: 07/29/2010 0930

Analysis Batch: 280-24797  
Prep Batch: 280-24354  
Units: mg/Kg

Instrument ID: MT\_033  
Lab File ID: 100729AA.txt  
Initial Weight/Volume: 0.60 g  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.381	91	87 - 111	

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-24354

**Method: 7471A**  
**Preparation: 7471A**

MS Lab Sample ID: 280-5251-A-6-H MS  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/29/2010 1157  
Date Prepared: 07/29/2010 0930

Analysis Batch: 280-24797  
Prep Batch: 280-24354

Instrument ID: MT\_033  
Lab File ID: 100729AA.txt  
Initial Weight/Volume: 0.65 g  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-5251-A-6-I MSD  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/29/2010 1204  
Date Prepared: 07/29/2010 0930

Analysis Batch: 280-24797  
Prep Batch: 280-24354

Instrument ID: MT\_033  
Lab File ID: 100729AA.txt  
Initial Weight/Volume: 0.61 g  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	94	100	87 - 111	13	20		

## Quality Control Results

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

Job Number: 280-5423-1

### Matrix Spike/

**Matrix Spike Duplicate Data Report - Batch: 280-24354**

**Method: 7471A**

**Preparation: 7471A**

MS Lab Sample ID: 280-5251-A-6-H MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/29/2010 1157

Date Prepared: 07/29/2010 0930

MSD Lab Sample ID: 280-5251-A-6-I MSD

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/29/2010 1204

Date Prepared: 07/29/2010 0930

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	ND	0.385	0.410	0.360	0.410

## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-24942

Lab Sample ID: MB 280-24942/1  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/30/2010 1143  
Date Prepared: N/A

Analysis Batch: 280-24942  
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: 280-5423-1

### Method Blank - Batch: 500-89928

Lab Sample ID: MB 500-89928/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 0816  
Date Prepared: 07/20/2010 1300

Analysis Batch: 500-89972  
Prep Batch: 500-89928  
Units: mg/Kg

### Method: 7196A Preparation: 300\_Prep

Instrument ID: SPEC5  
Lab File ID: N/A  
Initial Weight/Volume: 10 g  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.020	0.10

### Lab Control Sample - Batch: 500-89928

Lab Sample ID: LCS 500-89928/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/21/2010 0816  
Date Prepared: 07/20/2010 1300

Analysis Batch: 500-89972  
Prep Batch: 500-89928  
Units: mg/Kg

### Method: 7196A Preparation: 300\_Prep

Instrument ID: SPEC5  
Lab File ID: N/A  
Initial Weight/Volume: 10 g  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	2.50	2.38	95	80 - 120	



## Quality Control Results

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

Job Number: 280-5423-1

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-23306

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

LCS Lab Sample ID: LCS 280-23306/22  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 07/17/2010 1422  
Date Prepared: N/A

Analysis Batch: 280-23306  
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 280-23306/23  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 07/17/2010 1423  
Date Prepared: N/A

Analysis Batch: 280-23306  
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		

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-23306

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

LCS Lab Sample ID: LCS 280-23306/22  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 07/17/2010 1422  
Date Prepared: N/A

Units: SU

LCSD Lab Sample ID: LCSD 280-23306/23  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 07/17/2010 1423  
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	9.990	9.990

## Quality Control Results

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

Job Number: 280-5423-1

### Duplicate - Batch: 280-23306

Lab Sample ID: 280-5423-1  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/17/2010 1426  
Date Prepared: N/A  
Date Leached: 07/17/2010 1029

Analysis Batch: 280-23306  
Prep Batch: N/A  
Units: SU

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

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	11.4	11.32	1	5	

## Quality Control Results

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

Job Number: 280-5423-1

### Method Blank - Batch: 280-23895

**Method: 9050A**  
**Preparation: N/A**

Lab Sample ID: MB 280-23862/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1423  
Date Prepared: N/A  
Date Leached: 07/22/2010 1125

Analysis Batch: 280-23895  
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		20	20

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-23895

**Method: 9050A**  
**Preparation: N/A**

LCS Lab Sample ID: LCS 280-23895/3  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1423  
Date Prepared: N/A

Analysis Batch: 280-23895  
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 280-23895/4  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1423  
Date Prepared: N/A

Analysis Batch: 280-23895  
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	101	101	90 - 110	0	10		

## Quality Control Results

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

Job Number: 280-5423-1

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-23895

Method: 9050A  
Preparation: N/A

LCS Lab Sample ID: LCS 280-23895/3  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1423  
Date Prepared: N/A

Units: umhos/cm

LCSD Lab Sample ID: LCSD 280-23895/4  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1423  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Specific Conductance-Soluble	1410	1410	1420	1420

### Duplicate - Batch: 280-23895

Method: 9050A  
Preparation: N/A

Lab Sample ID: 280-5405-C-1-B DU  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/22/2010 1423  
Date Prepared: N/A  
Date Leached: 07/22/2010 1125

Analysis Batch: 280-23895  
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	84	87.3	4	20	

## Quality Control Results

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

Job Number: 280-5423-1

### Laboratory Chronicle

Lab ID: 280-5423-1

Client ID: E06-N. PIT BOTTOM-071410

Sample Date/Time: 07/14/2010 12:30

Received Date/Time: 07/16/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5423-C-1		280-23606		07/19/2010 13:16	1	TAL DEN	MD
A:8260B	280-5423-C-1		280-23606		07/19/2010 13:16	1	TAL DEN	MD
P:3550C	280-5423-A-1-A		280-24674	280-23377	07/19/2010 17:45	4	TAL DEN	EJP
A:8270C	280-5423-A-1-A		280-24674	280-23377	07/28/2010 18:38	4	TAL DEN	SAT
P:5030B	280-5423-B-1-A		280-24029	280-23575	07/20/2010 14:28	1	TAL DEN	TEM
A:8015B	280-5423-B-1-A		280-24029	280-23575	07/22/2010 19:36	1	TAL DEN	TEM
P:3550C	280-5423-C-1-C		280-23991	280-23605	07/20/2010 20:45	10	TAL DEN	ASJ
A:8015D	280-5423-C-1-C		280-23991	280-23605	07/22/2010 23:23	10	TAL DEN	MRB
P:20B	280-5423-A-1-E		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	280-5423-A-1-E		280-24582	280-23725	07/27/2010 18:40	1	TAL DEN	DW
P:3050B	280-5423-A-1-C		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5423-A-1-C		280-23824	280-23479	07/22/2010 01:25	1	TAL DEN	DW
P:3050B	280-5423-A-1-B		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5423-A-1-B		280-23997	280-23465	07/23/2010 02:12	1	TAL DEN	TEL
P:7471A	280-5423-B-1-B		280-24797	280-24354	07/29/2010 09:30	1	TAL DEN	KS
A:7471A	280-5423-B-1-B		280-24797	280-24354	07/29/2010 12:09	1	TAL DEN	KS
P:300_Prep	280-5423-A-1-D		500-89972	500-89928	07/20/2010 13:00	1	TAL CHI	PMF
A:7196A	280-5423-A-1-D		500-89972	500-89928	07/21/2010 08:22	1	TAL CHI	PMF
A:7196A	280-5423-A-1		280-24942		07/30/2010 11:43	1	TAL DEN	JC
A:9045C	280-5423-C-1-A		280-23306		07/17/2010 14:24	1	TAL DEN	LMK
A:9050A	280-5423-C-1-D		280-23895		07/22/2010 14:23	1	TAL DEN	PMP

Lab ID: 280-5423-1 DU

Client ID: E06-N. PIT BOTTOM-071410

Sample Date/Time: 07/14/2010 12:30

Received Date/Time: 07/16/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:9045C	280-5423-C-1-B DU		280-23306		07/17/2010 14:26	1	TAL DEN	LMK

## Quality Control Results

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

Job Number: 280-5423-1

### Laboratory Chronicle

Lab ID: 280-5423-2

Client ID: E06-S. PIT BOTTOM-071410

Sample Date/Time: 07/14/2010 13:00

Received Date/Time: 07/16/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5423-C-2		280-23606		07/19/2010 13:38	1	TAL DEN	MD
A:8260B	280-5423-C-2		280-23606		07/19/2010 13:38	1	TAL DEN	MD
P:3550C	280-5423-A-2-A		280-24674	280-23377	07/19/2010 17:45	4	TAL DEN	EJP
A:8270C	280-5423-A-2-A		280-24674	280-23377	07/28/2010 18:58	4	TAL DEN	SAT
P:5030B	280-5423-B-2-A		280-24029	280-23575	07/20/2010 14:29	1	TAL DEN	TEM
A:8015B	280-5423-B-2-A		280-24029	280-23575	07/22/2010 20:14	1	TAL DEN	TEM
P:3550C	280-5423-C-2-B		280-23991	280-23605	07/20/2010 20:45	5	TAL DEN	ASJ
A:8015D	280-5423-C-2-B		280-23991	280-23605	07/22/2010 23:55	5	TAL DEN	MRB
P:20B	280-5423-A-2-E		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	280-5423-A-2-E		280-24582	280-23725	07/27/2010 18:43	1	TAL DEN	DW
P:3050B	280-5423-A-2-C		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5423-A-2-C		280-23824	280-23479	07/22/2010 01:27	1	TAL DEN	DW
P:3050B	280-5423-A-2-B		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5423-A-2-B		280-23997	280-23465	07/23/2010 02:15	1	TAL DEN	TEL
P:7471A	280-5423-B-2-B		280-24797	280-24354	07/29/2010 09:30	1	TAL DEN	KS
A:7471A	280-5423-B-2-B		280-24797	280-24354	07/29/2010 12:11	1	TAL DEN	KS
P:300_Prep	280-5423-A-2-D		500-89972	500-89928	07/20/2010 13:00	1	TAL CHI	PMF
A:7196A	280-5423-A-2-D		500-89972	500-89928	07/21/2010 08:22	1	TAL CHI	PMF
A:7196A	280-5423-A-2		280-24942		07/30/2010 11:43	1	TAL DEN	JC
A:9045C	280-5423-C-2-A		280-23306		07/17/2010 14:28	1	TAL DEN	LMK
A:9050A	280-5423-C-2-C		280-23895		07/22/2010 14:23	1	TAL DEN	PMP

## Quality Control Results

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

Job Number: 280-5423-1

### 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 280-23606/7		280-23606		07/19/2010 10:04	1	TAL DEN	MD
A:8260B	MB 280-23606/7		280-23606		07/19/2010 10:04	1	TAL DEN	MD
P:3550C	MB 280-23377/1-A		280-24674	280-23377	07/19/2010 17:45	1	TAL DEN	EJP
A:8270C	MB 280-23377/1-A		280-24674	280-23377	07/28/2010 15:58	1	TAL DEN	SAT
P:5030B	MB 280-23575/3-A		280-24029	280-23575	07/20/2010 14:28	1	TAL DEN	TEM
A:8015B	MB 280-23575/3-A		280-24029	280-23575	07/22/2010 13:14	1	TAL DEN	TEM
P:3550C	MB 280-23605/1-A		280-23981	280-23605	07/20/2010 20:45	1	TAL DEN	ASJ
A:8015D	MB 280-23605/1-A		280-23981	280-23605	07/21/2010 17:58	1	TAL DEN	MRB
P:20B	MB 280-23725/1-A		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	MB 280-23725/1-A		280-24582	280-23725	07/27/2010 17:51	1	TAL DEN	DW
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 280-24354/1-A		280-24797	280-24354	07/29/2010 09:30	1	TAL DEN	KS
A:7471A	MB 280-24354/1-A		280-24797	280-24354	07/29/2010 11:37	1	TAL DEN	KS
P:300_Prep	MB 500-89928/1-A		500-89972	500-89928	07/20/2010 13:00	1	TAL CHI	PMF
A:7196A	MB 500-89928/1-A		500-89972	500-89928	07/21/2010 08:16	1	TAL CHI	PMF
A:7196A	MB 280-24942/1		280-24942		07/30/2010 11:43	1	TAL DEN	JC
A:9050A	MB 280-23862/1-A		280-23895		07/22/2010 14:23	1	TAL DEN	PMP

## Quality Control Results

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

Job Number: 280-5423-1

### 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 280-23606/5		280-23606		07/19/2010 08:58	1	TAL DEN	MD
A:8260B	LCS 280-23606/5		280-23606		07/19/2010 08:58	1	TAL DEN	MD
P:3550C	LCS 280-23377/2-A		280-24674	280-23377	07/19/2010 17:45	1	TAL DEN	EJP
A:8270C	LCS 280-23377/2-A		280-24674	280-23377	07/28/2010 16:18	1	TAL DEN	SAT
P:5030B	LCS 280-23575/1-A		280-24029	280-23575	07/20/2010 14:28	1	TAL DEN	TEM
A:8015B	LCS 280-23575/1-A		280-24029	280-23575	07/22/2010 12:00	1	TAL DEN	TEM
P:3550C	LCS 280-23605/2-A		280-23981	280-23605	07/20/2010 20:45	1	TAL DEN	ASJ
A:8015D	LCS 280-23605/2-A		280-23981	280-23605	07/21/2010 18:31	1	TAL DEN	MRB
P:3550C	LCS 280-23605/4-A		280-23981	280-23605	07/20/2010 20:45	1	TAL DEN	ASJ
A:8015D	LCS 280-23605/4-A		280-23981	280-23605	07/21/2010 19:38	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 280-24354/2-A		280-24797	280-24354	07/29/2010 09:30	1	TAL DEN	KS
A:7471A	LCS 280-24354/2-A		280-24797	280-24354	07/29/2010 11:39	1	TAL DEN	KS
P:300_Prep	LCS 500-89928/2-A		500-89972	500-89928	07/20/2010 13:00	1	TAL CHI	PMF
A:7196A	LCS 500-89928/2-A		500-89972	500-89928	07/21/2010 08:16	1	TAL CHI	PMF
A:9045C	LCS 280-23306/22		280-23306		07/17/2010 14:22	1	TAL DEN	LMK
A:9050A	LCS 280-23895/3		280-23895		07/22/2010 14:23	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 280-23606/6		280-23606		07/19/2010 09:20	1	TAL DEN	MD
A:8260B	LCSD 280-23606/6		280-23606		07/19/2010 09:20	1	TAL DEN	MD
P:3550C	LCSD 280-23377/3-A		280-24674	280-23377	07/19/2010 17:45	1	TAL DEN	EJP
A:8270C	LCSD 280-23377/3-A		280-24674	280-23377	07/28/2010 16:39	1	TAL DEN	SAT
P:5030B	LCSD 280-23575/2-A		280-24029	280-23575	07/20/2010 14:28	1	TAL DEN	TEM
A:8015B	LCSD 280-23575/2-A		280-24029	280-23575	07/22/2010 12:37	1	TAL DEN	TEM
P:3550C	LCSD 280-23605/3-A		280-23981	280-23605	07/20/2010 20:45	1	TAL DEN	ASJ
A:8015D	LCSD 280-23605/3-A		280-23981	280-23605	07/21/2010 19:04	1	TAL DEN	MRB
P:3550C	LCSD 280-23605/5-A		280-23981	280-23605	07/20/2010 20:45	1	TAL DEN	ASJ
A:8015D	LCSD 280-23605/5-A		280-23981	280-23605	07/21/2010 20:10	1	TAL DEN	MRB
A:9045C	LCSD 280-23306/23		280-23306		07/17/2010 14:23	1	TAL DEN	LMK
A:9050A	LCSD 280-23895/4		280-23895		07/22/2010 14:23	1	TAL DEN	PMP



## Quality Control Results

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

Job Number: 280-5423-1

### Laboratory Chronicle

Lab ID: MS

Client ID: N/A

Sample Date/Time: 07/15/2010 13:40

Received Date/Time: 07/16/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5405-F-5 MS		280-23606		07/19/2010 16:33	1	TAL DEN	MD
A:8260B	280-5405-F-5 MS		280-23606		07/19/2010 16:33	1	TAL DEN	MD
P:3550C	280-5357-A-2-C MS		280-24674	280-23377	07/19/2010 17:45	1	TAL DEN	EJP
A:8270C	280-5357-A-2-C MS		280-24674	280-23377	07/28/2010 17:39	1	TAL DEN	SAT
P:5030B	280-5357-C-2-B MS		280-24029	280-23575	07/20/2010 14:28	1	TAL DEN	TEM
A:8015B	280-5357-C-2-B MS		280-24029	280-23575	07/22/2010 15:58	1	TAL DEN	TEM
P:3550C	280-5357-B-1-F MS		280-23991	280-23605	07/20/2010 20:45	10	TAL DEN	ASJ
A:8015D	280-5357-B-1-F MS		280-23991	280-23605	07/22/2010 19:33	10	TAL DEN	MRB
P:3550C	280-5357-B-2-C MS		280-23991	280-23605	07/20/2010 20:45	5	TAL DEN	ASJ
A:8015D	280-5357-B-2-C MS		280-23991	280-23605	07/22/2010 21:11	5	TAL DEN	MRB
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
P:7471A	280-5251-A-6-H MS		280-24797	280-24354	07/29/2010 09:30	1	TAL DEN	KS
A:7471A	280-5251-A-6-H MS		280-24797	280-24354	07/29/2010 11:57	1	TAL DEN	KS

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 07/15/2010 13:40

Received Date/Time: 07/16/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5405-F-5 MSD		280-23606		07/19/2010 12:10	1	TAL DEN	MD
A:8260B	280-5405-F-5 MSD		280-23606		07/19/2010 12:10	1	TAL DEN	MD
P:3550C	280-5357-A-2-D MSD		280-24674	280-23377	07/19/2010 17:45	1	TAL DEN	EJP
A:8270C	280-5357-A-2-D MSD		280-24674	280-23377	07/28/2010 17:59	1	TAL DEN	SAT
P:5030B	280-5357-C-2-C MSD		280-24029	280-23575	07/20/2010 14:28	1	TAL DEN	TEM
A:8015B	280-5357-C-2-C MSD		280-24029	280-23575	07/22/2010 16:36	1	TAL DEN	TEM
P:3550C	280-5357-B-1-G MSD		280-23991	280-23605	07/20/2010 20:45	10	TAL DEN	ASJ
A:8015D	280-5357-B-1-G MSD		280-23991	280-23605	07/22/2010 20:06	10	TAL DEN	MRB
P:3550C	280-5357-B-2-D MSD		280-23991	280-23605	07/20/2010 20:45	5	TAL DEN	ASJ
A:8015D	280-5357-B-2-D MSD		280-23991	280-23605	07/22/2010 21:44	5	TAL DEN	MRB
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
P:7471A	280-5251-A-6-I MSD		280-24797	280-24354	07/29/2010 09:30	1	TAL DEN	KS
A:7471A	280-5251-A-6-I MSD		280-24797	280-24354	07/29/2010 12:04	1	TAL DEN	KS

## Quality Control Results

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

Job Number: 280-5423-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

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

Received Date/Time: 07/16/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:9050A	280-5405-C-1-B DU		280-23895		07/22/2010 14:23	1	TAL DEN	PMP

#### Lab References:

TAL CHI = TestAmerica Chicago

TAL DEN = TestAmerica Denver

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

[illegible]

# **Constituents of Concern: Allowable Concentrations and Analytical Methods (COGCC Table 910-1)**

CONTAMINANT OF CONCERN	CONCENTRATIONS <sup>1</sup>	ANALYTICAL METHOD (SW846)
<i>Organic Compounds in Soil</i>		
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg	8015
Benzene	0.17 mg/kg <sup>2</sup>	8260B
Toluene	85 mg/kg <sup>2</sup>	8260B
Ethylbenzene	100 mg/kg <sup>2</sup>	8260B
Xylenes (total)	175 mg/kg <sup>2</sup>	8260B
Acenaphthene	1,000 mg/kg <sup>2</sup>	8270C
Anthracene	1,000 mg/kg <sup>2</sup>	8270C
Benzo(A)anthracene	0.22 mg/kg <sup>2</sup>	8270C
Benzo(B)fluoranthene	0.22 mg/kg <sup>2</sup>	8270C
Benzo(K)fluoranthene	2.2 mg/kg <sup>2</sup>	8270C
Benzo(A)pyrene	0.022 mg/kg <sup>2</sup>	8270C
Chrysene	22 mg/kg <sup>2</sup>	8270C
Dibenzo(A,H)anthracene	0.022 mg/kg <sup>2</sup>	8270C
Fluoranthene	1,000 mg/kg <sup>2</sup>	8270C
Fluorene	1,000 mg/kg <sup>2</sup>	8270C
Indeno(1,2,3-C,D)pyrene	0.22 mg/kg <sup>2</sup>	8270C
Napthalene	23 mg/kg <sup>2</sup>	8270C
Pyrene	1,000 mg/kg <sup>2</sup>	8270C
<i>Inorganics in Soils</i>		
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background	9050
Sodium Adsorption Ratio (SAR)	<12 <sup>5</sup>	LADNR29B
pH	6-9	9045C
<i>Metals in Soils</i>		
Arsenic	0.39 mg/kg <sup>2</sup>	6010B
Barium	15,000 mg/kg <sup>2</sup>	6010B
Cadmium	70 mg/kg <sup>3,6</sup>	6010B
Chromium (III)	120,000 mg/kg <sup>2</sup>	6010B
Chromium (VI)	23 mg/kg <sup>2,6</sup>	6010B
Copper	3,100 mg/kg <sup>2</sup>	6010B
Lead (inorganic)	400 mg/kg <sup>2</sup>	6010B
Mercury	23 mg/kg <sup>2</sup>	6010B
Nickel (soluble salts)	1,600 mg/kg <sup>2,6</sup>	6010B
Selenium	390 mg/kg <sup>2,6</sup>	6010B
Silver	390 mg/kg <sup>2</sup>	6010BB
Zinc	23,000 mg/kg <sup>2,6</sup>	6010B
<i>Liquid Hydrocarbons in Soils and Ground Water</i>		
Liquid hydrocarbons including condensate and oil	Below detection level	Visual

COGCC recommends that the latest version of EPA SW-846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

1 Consideration shall be given to background levels in native soils and ground water.

2 Concentrations taken from CDPHE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007).

3 Concentrations taken from CDPHE-WQCC Regulation 41 - The Basic Standards for Ground Water.

4 For this range of standards, the first number in the range is a strictly health-based value, based on the WQCC's established methodology for human health-based standards. The second number in the range is a maximum contaminant level (MCL), established under the Federal Safe Drinking Water Act which has been 900-22 As of April 1, 2009; 900-23 As of April 1, 2009

determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. The WQCC intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range except as follows: 1) where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 14, 2004 (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range or the ground water quality resulting from such release, whichever is more protective, and 2) whenever the WQCC has adopted alternative, site-specific standards for the chemical, the site-specific standards shall apply instead of these statewide standards.

5 Analysis by USDA Agricultural Handbook 60 method (20B) with soluble cations determined by method (2). Method (20B) = estimation of exchangeable sodium percentage and exchangeable potassium percentage from soluble cations. Method (2) = saturated paste method (note: each analysis requires a unique sample of at least 500 grams). If soils are saturated, USDA Agricultural Handbook 60 with soluble cations determined by method (3A) saturation extraction method.

6 The table value for these inorganic constituents is taken from the CDPHE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007). However, because these values are high, it is possible that site-specific geochemical conditions may exist that could allow these constituents to migrate into ground water at levels exceeding ground water standards even though the concentrations are below the table values. Therefore, when these constituents are present as contaminants, a secondary evaluation of their leachability must be performed to ensure ground water protection.

## Login Sample Receipt Check List

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

Job Number: 280-5423-1

Login Number: 5423

List Source: TestAmerica Denver

Creator: Green, Angel L

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	

## Login Sample Receipt Check List

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

Job Number: 280-5423-1

Login Number: 5423

Creator: Kelsey, Shawn M

List Number: 1

List Source: TestAmerica Chicago

List Creation: 07/20/10 11:06 AM

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.	N/A	
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	



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

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

## Report Summary

Wednesday June 15, 2011

Report Number: L519513

Samples Received: 06/07/11

Client Project: E06

Description: E06

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:

Mark W. Beasley , 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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN1-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:40

ESC Sample # : L519513-01

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/14/11	1
Chromium, Trivalent	16.	2.0	mg/kg	Calc.	06/08/11	1
ORP	25.		mV	2580	06/08/11	1
pH	12.		su	9045D	06/09/11	1
Sodium Adsorption Ratio	3.8			Calc.	06/12/11	1
Specific Conductance	1600		umhos/cm	9050AMod	06/08/11	1
Mercury	0.026	0.020	mg/kg	7471	06/09/11	1
Arsenic	5.7	1.0	mg/kg	6010B	06/08/11	1
Barium	5200	1.2	mg/kg	6010B	06/08/11	5
Cadmium	0.81	0.25	mg/kg	6010B	06/08/11	1
Chromium	16.	0.50	mg/kg	6010B	06/08/11	1
Copper	21.	5.0	mg/kg	6010B	06/08/11	5
Lead	13.	1.2	mg/kg	6010B	06/08/11	5
Nickel	8.5	1.0	mg/kg	6010B	06/08/11	1
Selenium	1.8	1.0	mg/kg	6010B	06/08/11	1
Silver	BDL	0.50	mg/kg	6010B	06/08/11	1
Zinc	34.	1.5	mg/kg	6010B	06/08/11	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/07/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	91.3		% Rec.	602/8015	06/07/11	5
Volatile Organics						
Acetone	BDL	0.25	mg/kg	8260B	06/07/11	5
Benzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromochloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromodichloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromoform	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromomethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Carbon disulfide	BDL	0.0050	mg/kg	8260B	06/07/11	5
Carbon tetrachloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorodibromomethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chloroethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloroform	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloromethane	BDL	0.012	mg/kg	8260B	06/07/11	5
Cyclohexane	BDL	0.0050	mg/kg	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-01 (PH) - 12@20.7c  
L519513-01 (SV8270PAHSIM) - Dilution due to matrix



REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN1-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:40

ESC Sample # : L519513-01

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2-Dibromoethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Dichlorodifluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,3-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,4-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloropropane	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
n-Hexane	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Hexanone	BDL	0.050	mg/kg	8260B	06/07/11	5
Isopropylbenzene	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Butanone (MEK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl Acetate	BDL	0.10	mg/kg	8260B	06/07/11	5
Methyl Cyclohexane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Methylene Chloride	BDL	0.025	mg/kg	8260B	06/07/11	5
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl tert-butyl ether	BDL	0.0050	mg/kg	8260B	06/07/11	5
Styrene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2,2-Tetrachloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Tetrachloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Toluene	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2,3-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2,4-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,1-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichlorofluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0050	mg/kg	8260B	06/07/11	5
Vinyl chloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
o-Xylene	BDL	0.0050	mg/kg	8260B	06/07/11	5
m&p-Xylene	BDL	0.010	mg/kg	8260B	06/07/11	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	06/07/11	5
Surrogate Recovery						
Toluene-d8	99.2		% Rec.	8260B	06/07/11	5
Dibromofluoromethane	69.9		% Rec.	8260B	06/07/11	5
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/07/11	5
4-Bromofluorobenzene	98.3		% Rec.	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-01 (PH) - 12@20.7c  
L519513-01 (SV8270PAHSIM) - Dilution due to matrix

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN1-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:40

ESC Sample # : L519513-01

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) High Fraction	3100	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%)						
o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Naphthalene	0.21	0.060	mg/kg	8270C-SIM	06/13/11	10
Phenanthrene	0.10	0.060	mg/kg	8270C-SIM	06/13/11	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
1-Methylnaphthalene	0.24	0.060	mg/kg	8270C-SIM	06/13/11	10
2-Methylnaphthalene	0.48	0.060	mg/kg	8270C-SIM	06/13/11	10
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Surrogate Recovery						
Nitrobenzene-d5	118.		% Rec.	8270C-SIM	06/13/11	10
2-Fluorobiphenyl	95.5		% Rec.	8270C-SIM	06/13/11	10
p-Terphenyl-d14	84.9		% Rec.	8270C-SIM	06/13/11	10

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: 06/15/11 13:14 Printed: 06/15/11 13:15

L519513-01 (PH) - 12@20.7c

L519513-01 (SV8270PAHSIM) - Dilution due to matrix

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN2-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:47

ESC Sample # : L519513-02

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/14/11	1
Chromium, Trivalent	21.	2.0	mg/kg	Calc.	06/08/11	1
ORP	35.		mV	2580	06/08/11	1
pH	9.7		su	9045D	06/09/11	1
Sodium Adsorption Ratio	7.4			Calc.	06/12/11	1
Specific Conductance	270		umhos/cm	9050AMod	06/08/11	1
Mercury	BDL	0.020	mg/kg	7471	06/09/11	1
Arsenic	4.1	1.0	mg/kg	6010B	06/08/11	1
Barium	8100	1.2	mg/kg	6010B	06/08/11	5
Cadmium	0.82	0.25	mg/kg	6010B	06/08/11	1
Chromium	21.	0.50	mg/kg	6010B	06/08/11	1
Copper	10.	5.0	mg/kg	6010B	06/08/11	5
Lead	7.4	1.2	mg/kg	6010B	06/08/11	5
Nickel	9.9	1.0	mg/kg	6010B	06/08/11	1
Selenium	BDL	1.0	mg/kg	6010B	06/08/11	1
Silver	BDL	0.50	mg/kg	6010B	06/08/11	1
Zinc	39.	1.5	mg/kg	6010B	06/08/11	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/08/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	91.4		% Rec.	602/8015	06/08/11	5
Volatile Organics						
Acetone	BDL	0.25	mg/kg	8260B	06/07/11	5
Benzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromochloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromodichloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromoform	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromomethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Carbon disulfide	BDL	0.0050	mg/kg	8260B	06/07/11	5
Carbon tetrachloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorodibromomethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chloroethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloroform	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloromethane	BDL	0.012	mg/kg	8260B	06/07/11	5
Cyclohexane	BDL	0.0050	mg/kg	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-02 (PH) - 9.7@20.9c

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN2-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:47

ESC Sample # : L519513-02

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2-Dibromoethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Dichlorodifluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,3-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,4-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloropropane	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
n-Hexane	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Hexanone	BDL	0.050	mg/kg	8260B	06/07/11	5
Isopropylbenzene	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Butanone (MEK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl Acetate	BDL	0.10	mg/kg	8260B	06/07/11	5
Methyl Cyclohexane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Methylene Chloride	BDL	0.025	mg/kg	8260B	06/07/11	5
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl tert-butyl ether	BDL	0.0050	mg/kg	8260B	06/07/11	5
Styrene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2,2-Tetrachloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Tetrachloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Toluene	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2,3-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2,4-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,1-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichlorofluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0050	mg/kg	8260B	06/07/11	5
Vinyl chloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
o-Xylene	BDL	0.0050	mg/kg	8260B	06/07/11	5
m&p-Xylene	BDL	0.010	mg/kg	8260B	06/07/11	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	06/07/11	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/07/11	5
Dibromofluoromethane	101.		% Rec.	8260B	06/07/11	5
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/07/11	5
4-Bromofluorobenzene	98.8		% Rec.	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-02 (PH) - 9.7@20.9c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN2-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:47

ESC Sample # : L519513-02

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) High Fraction	66.	4.0	mg/kg	3546/DRO	06/09/11	1
Surrogate recovery(%)						
o-Terphenyl	61.1		% Rec.	3546/DRO	06/09/11	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Naphthalene	0.020	0.0060	mg/kg	8270C-SIM	06/13/11	1
Phenanthrene	0.012	0.0060	mg/kg	8270C-SIM	06/13/11	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
1-Methylnaphthalene	0.019	0.0060	mg/kg	8270C-SIM	06/13/11	1
2-Methylnaphthalene	0.039	0.0060	mg/kg	8270C-SIM	06/13/11	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Surrogate Recovery						
Nitrobenzene-d5	68.5		% Rec.	8270C-SIM	06/13/11	1
2-Fluorobiphenyl	58.1		% Rec.	8270C-SIM	06/13/11	1
p-Terphenyl-d14	59.1		% Rec.	8270C-SIM	06/13/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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

Reported: 06/15/11 13:14 Printed: 06/15/11 13:15  
L519513-02 (PH) - 9.7@20.9c

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN3-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:53

ESC Sample # : L519513-03

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/14/11	1
Chromium, Trivalent	21.	2.0	mg/kg	Calc.	06/08/11	1
ORP	60.		mV	2580	06/08/11	1
pH	7.8		su	9045D	06/09/11	1
Sodium Adsorption Ratio	1.1			Calc.	06/12/11	1
Specific Conductance	160		umhos/cm	9050AMod	06/09/11	1
Mercury	0.033	0.020	mg/kg	7471	06/09/11	1
Arsenic	3.8	1.0	mg/kg	6010B	06/08/11	1
Barium	7500	1.2	mg/kg	6010B	06/08/11	5
Cadmium	0.51	0.25	mg/kg	6010B	06/08/11	1
Chromium	21.	0.50	mg/kg	6010B	06/08/11	1
Copper	12.	1.0	mg/kg	6010B	06/08/11	1
Lead	13.	0.25	mg/kg	6010B	06/08/11	1
Nickel	5.2	1.0	mg/kg	6010B	06/08/11	1
Selenium	BDL	1.0	mg/kg	6010B	06/08/11	1
Silver	BDL	0.50	mg/kg	6010B	06/08/11	1
Zinc	44.	1.5	mg/kg	6010B	06/08/11	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/08/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	91.3		% Rec.	602/8015	06/08/11	5
Volatile Organics						
Acetone	BDL	0.25	mg/kg	8260B	06/07/11	5
Benzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromochloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromodichloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromoform	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromomethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Carbon disulfide	BDL	0.0050	mg/kg	8260B	06/07/11	5
Carbon tetrachloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorodibromomethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chloroethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloroform	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloromethane	BDL	0.012	mg/kg	8260B	06/07/11	5
Cyclohexane	0.0088	0.0050	mg/kg	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-03 (PH) - 7.8@20.6c

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN3-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:53

ESC Sample # : L519513-03

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2-Dibromoethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Dichlorodifluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,3-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,4-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloropropane	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
n-Hexane	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Hexanone	BDL	0.050	mg/kg	8260B	06/07/11	5
Isopropylbenzene	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Butanone (MEK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl Acetate	BDL	0.10	mg/kg	8260B	06/07/11	5
Methyl Cyclohexane	0.064	0.050	mg/kg	8260B	06/08/11	50
Methylene Chloride	BDL	0.025	mg/kg	8260B	06/07/11	5
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl tert-butyl ether	BDL	0.0050	mg/kg	8260B	06/07/11	5
Styrene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2,2-Tetrachloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Tetrachloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Toluene	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2,3-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2,4-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,1-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichlorofluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0050	mg/kg	8260B	06/07/11	5
Vinyl chloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
o-Xylene	BDL	0.0050	mg/kg	8260B	06/07/11	5
m&p-Xylene	BDL	0.010	mg/kg	8260B	06/07/11	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	06/07/11	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/07/11	5
Dibromofluoromethane	103.		% Rec.	8260B	06/07/11	5
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	06/07/11	5
4-Bromofluorobenzene	106.		% Rec.	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-03 (PH) - 7.8@20.6c

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN3-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:53

ESC Sample # : L519513-03

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) High Fraction	1300	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%)						
o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Naphthalene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Phenanthrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
1-Methylnaphthalene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
2-Methylnaphthalene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	06/13/11	10
Surrogate Recovery						
Nitrobenzene-d5	102.		% Rec.	8270C-SIM	06/13/11	10
2-Fluorobiphenyl	87.1		% Rec.	8270C-SIM	06/13/11	10
p-Terphenyl-d14	77.9		% Rec.	8270C-SIM	06/13/11	10

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: 06/15/11 13:14 Printed: 06/15/11 13:15  
L519513-03 (PH) - 7.8@20.6c



REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN4-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:57

ESC Sample # : L519513-04

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/14/11	1
Chromium, Trivalent	21.	2.0	mg/kg	Calc.	06/08/11	1
ORP	73.		mV	2580	06/08/11	1
pH	8.4		su	9045D	06/09/11	1
Sodium Adsorption Ratio	0.98			Calc.	06/12/11	1
Specific Conductance	150		umhos/cm	9050AMod	06/09/11	1
Mercury	BDL	0.020	mg/kg	7471	06/09/11	1
Arsenic	4.4	1.0	mg/kg	6010B	06/08/11	1
Barium	6500	1.2	mg/kg	6010B	06/08/11	5
Cadmium	0.60	0.25	mg/kg	6010B	06/08/11	1
Chromium	21.	0.50	mg/kg	6010B	06/08/11	1
Copper	7.1	5.0	mg/kg	6010B	06/08/11	5
Lead	6.3	1.2	mg/kg	6010B	06/08/11	5
Nickel	9.5	1.0	mg/kg	6010B	06/08/11	1
Selenium	BDL	1.0	mg/kg	6010B	06/08/11	1
Silver	BDL	5.0	mg/kg	6010B	06/09/11	10
Zinc	48.	1.5	mg/kg	6010B	06/08/11	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/08/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	91.6		% Rec.	602/8015	06/08/11	5
Volatile Organics						
Acetone	BDL	0.25	mg/kg	8260B	06/07/11	5
Benzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromochloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromodichloromethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromoform	BDL	0.0050	mg/kg	8260B	06/07/11	5
Bromomethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Carbon disulfide	BDL	0.0050	mg/kg	8260B	06/07/11	5
Carbon tetrachloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chlorodibromomethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Chloroethane	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloroform	BDL	0.025	mg/kg	8260B	06/07/11	5
Chloromethane	BDL	0.012	mg/kg	8260B	06/07/11	5
Cyclohexane	BDL	0.0050	mg/kg	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-04 (PH) - 8.4@20.6c

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN4-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:57

ESC Sample # : L519513-04

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2-Dibromoethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Dichlorodifluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,3-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,4-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2-Dichloropropane	BDL	0.0050	mg/kg	8260B	06/07/11	5
cis-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
trans-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
n-Hexane	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Hexanone	BDL	0.050	mg/kg	8260B	06/07/11	5
Isopropylbenzene	BDL	0.050	mg/kg	8260B	06/07/11	5
2-Butanone (MEK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl Acetate	BDL	0.10	mg/kg	8260B	06/07/11	5
Methyl Cyclohexane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Methylene Chloride	BDL	0.025	mg/kg	8260B	06/07/11	5
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/kg	8260B	06/07/11	5
Methyl tert-butyl ether	BDL	0.0050	mg/kg	8260B	06/07/11	5
Styrene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2,2-Tetrachloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Tetrachloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Toluene	BDL	0.025	mg/kg	8260B	06/07/11	5
1,2,3-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,2,4-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,1-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
1,1,2-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichloroethene	BDL	0.0050	mg/kg	8260B	06/07/11	5
Trichlorofluoromethane	BDL	0.025	mg/kg	8260B	06/07/11	5
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0050	mg/kg	8260B	06/07/11	5
Vinyl chloride	BDL	0.0050	mg/kg	8260B	06/07/11	5
o-Xylene	BDL	0.0050	mg/kg	8260B	06/07/11	5
m&p-Xylene	BDL	0.010	mg/kg	8260B	06/07/11	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	06/07/11	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/07/11	5
Dibromofluoromethane	103.		% Rec.	8260B	06/07/11	5
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/07/11	5
4-Bromofluorobenzene	100.		% Rec.	8260B	06/07/11	5

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L519513-04 (PH) - 8.4@20.6c

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN4-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 10:57

ESC Sample # : L519513-04

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) High Fraction	220	80.	mg/kg	3546/DRO	06/10/11	20
Surrogate recovery(%)						
o-Terphenyl	0.00		% Rec.	3546/DRO	06/10/11	20
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
2-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Surrogate Recovery						
Nitrobenzene-d5	75.3		% Rec.	8270C-SIM	06/13/11	1
2-Fluorobiphenyl	73.6		% Rec.	8270C-SIM	06/13/11	1
p-Terphenyl-d14	63.6		% Rec.	8270C-SIM	06/13/11	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: 06/15/11 13:14 Printed: 06/15/11 13:15  
L519513-04 (PH) - 8.4@20.6c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN5-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 11:02

ESC Sample # : L519513-05

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/14/11	1
Chromium,Trivalent	25.	2.0	mg/kg	Calc.	06/08/11	1
ORP	94.		mV	2580	06/08/11	1
pH	8.4		su	9045D	06/09/11	1
Sodium Adsorption Ratio	0.75			Calc.	06/12/11	1
Specific Conductance	140		umhos/cm	9050AMod	06/09/11	1
Mercury	BDL	0.020	mg/kg	7471	06/09/11	1
Arsenic	3.3	1.0	mg/kg	6010B	06/08/11	1
Barium	1400	0.25	mg/kg	6010B	06/08/11	1
Cadmium	0.56	0.25	mg/kg	6010B	06/08/11	1
Chromium	25.	0.50	mg/kg	6010B	06/08/11	1
Copper	12.	5.0	mg/kg	6010B	06/08/11	5
Lead	4.4	1.2	mg/kg	6010B	06/08/11	5
Nickel	10.	1.0	mg/kg	6010B	06/08/11	1
Selenium	BDL	1.0	mg/kg	6010B	06/08/11	1
Silver	BDL	0.50	mg/kg	6010B	06/08/11	1
Zinc	46.	1.5	mg/kg	6010B	06/08/11	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/08/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	91.3		% Rec.	602/8015	06/08/11	5
Volatile Organics						
Acetone	BDL	0.25	mg/kg	8260B	06/08/11	5
Benzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
Bromochloromethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Bromodichloromethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Bromoform	BDL	0.0050	mg/kg	8260B	06/08/11	5
Bromomethane	BDL	0.025	mg/kg	8260B	06/08/11	5
Carbon disulfide	BDL	0.0050	mg/kg	8260B	06/08/11	5
Carbon tetrachloride	BDL	0.0050	mg/kg	8260B	06/08/11	5
Chlorobenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
Chlorodibromomethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Chloroethane	BDL	0.025	mg/kg	8260B	06/08/11	5
Chloroform	BDL	0.025	mg/kg	8260B	06/08/11	5
Chloromethane	BDL	0.012	mg/kg	8260B	06/08/11	5
Cyclohexane	BDL	0.0050	mg/kg	8260B	06/08/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L519513-05 (PH) - 8.4@20.7c

L519513-05 (DRO) - Previous run also had low SURR recovery. Matrix effect.

REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN5-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 11:02

ESC Sample # : L519513-05

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	BDL	0.025	mg/kg	8260B	06/08/11	5
1,2-Dibromoethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Dichlorodifluoromethane	BDL	0.025	mg/kg	8260B	06/08/11	5
1,1-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,2-Dichloroethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,2-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,3-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,4-Dichlorobenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,1-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/08/11	5
cis-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/08/11	5
trans-1,2-Dichloroethene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,2-Dichloropropane	BDL	0.0050	mg/kg	8260B	06/08/11	5
cis-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/08/11	5
trans-1,3-Dichloropropene	BDL	0.0050	mg/kg	8260B	06/08/11	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
n-Hexane	BDL	0.050	mg/kg	8260B	06/08/11	5
2-Hexanone	BDL	0.050	mg/kg	8260B	06/08/11	5
Isopropylbenzene	BDL	0.050	mg/kg	8260B	06/08/11	5
2-Butanone (MEK)	BDL	0.050	mg/kg	8260B	06/08/11	5
Methyl Acetate	BDL	0.10	mg/kg	8260B	06/08/11	5
Methyl Cyclohexane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Methylene Chloride	BDL	0.025	mg/kg	8260B	06/08/11	5
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/kg	8260B	06/08/11	5
Methyl tert-butyl ether	BDL	0.0050	mg/kg	8260B	06/08/11	5
Styrene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,1,2,2-Tetrachloroethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Tetrachloroethene	BDL	0.0050	mg/kg	8260B	06/08/11	5
Toluene	BDL	0.025	mg/kg	8260B	06/08/11	5
1,2,3-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,2,4-Trichlorobenzene	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,1,1-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
1,1,2-Trichloroethane	BDL	0.0050	mg/kg	8260B	06/08/11	5
Trichloroethene	BDL	0.0050	mg/kg	8260B	06/08/11	5
Trichlorofluoromethane	BDL	0.025	mg/kg	8260B	06/08/11	5
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0050	mg/kg	8260B	06/08/11	5
Vinyl chloride	BDL	0.0050	mg/kg	8260B	06/08/11	5
o-Xylene	BDL	0.0050	mg/kg	8260B	06/08/11	5
m&p-Xylene	BDL	0.010	mg/kg	8260B	06/08/11	5
Xylenes, Total	BDL	0.015	mg/kg	8260B	06/08/11	5
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	06/08/11	5
Dibromofluoromethane	100.		% Rec.	8260B	06/08/11	5
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/08/11	5
4-Bromofluorobenzene	98.8		% Rec.	8260B	06/08/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L519513-05 (PH) - 8.4@20.7c

L519513-05 (DRO) - Previous run also had low SURR recovery. Matrix effect.



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

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

June 15, 2011

Date Received : June 07, 2011  
Description : E06  
Sample ID : E06-PITN5-060611 10-12 IN  
Collected By :  
Collection Date : 06/06/11 11:02

ESC Sample # : L519513-05

Site ID : E06

Project # : E06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	06/12/11	1
Surrogate recovery(%)						
o-Terphenyl	47.4		% Rec.	3546/DRO	06/12/11	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
2-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/13/11	1
Surrogate Recovery						
Nitrobenzene-d5	70.7		% Rec.	8270C-SIM	06/13/11	1
2-Fluorobiphenyl	68.0		% Rec.	8270C-SIM	06/13/11	1
p-Terphenyl-d14	67.3		% Rec.	8270C-SIM	06/13/11	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: 06/15/11 13:14 Printed: 06/15/11 13:15

L519513-05 (PH) - 8.4@20.7c

L519513-05 (DRO) - Previous run also had low SURR recovery. Matrix effect.

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L519513-01	WG539308	SAMP	Styrene	R1715373	J4
	WG539363	SAMP	o-Terphenyl	R1718451	J7
L519513-02	WG539308	SAMP	Styrene	R1715373	J4
L519513-03	WG539471	SAMP	Anthracene	R1719431	O
	WG539471	SAMP	Acenaphthene	R1719431	O
	WG539471	SAMP	Acenaphthylene	R1719431	O
	WG539471	SAMP	Benzo(a)anthracene	R1719431	O
	WG539471	SAMP	Benzo(a)pyrene	R1719431	O
	WG539471	SAMP	Benzo(b)fluoranthene	R1719431	O
	WG539471	SAMP	Benzo(g,h,i)perylene	R1719431	O
	WG539471	SAMP	Benzo(k)fluoranthene	R1719431	O
	WG539471	SAMP	Chrysene	R1719431	O
	WG539471	SAMP	Dibenz(a,h)anthracene	R1719431	O
	WG539471	SAMP	Fluoranthene	R1719431	O
	WG539471	SAMP	Fluorene	R1719431	O
	WG539471	SAMP	Indeno(1,2,3-cd)pyrene	R1719431	O
	WG539471	SAMP	Naphthalene	R1719431	O
	WG539471	SAMP	Phenanthrene	R1719431	O
	WG539471	SAMP	Pyrene	R1719431	O
	WG539471	SAMP	1-Methylnaphthalene	R1719431	O
	WG539471	SAMP	2-Methylnaphthalene	R1719431	O
	WG539471	SAMP	2-Chloronaphthalene	R1719431	O
	WG539308	SAMP	Styrene	R1715373	J4
	WG539363	SAMP	o-Terphenyl	R1718451	J7
L519513-04	WG539339	SAMP	Silver	R1716850	O
	WG539308	SAMP	Styrene	R1715373	J4
	WG539363	SAMP	o-Terphenyl	R1718451	J7
L519513-05	WG539308	SAMP	Styrene	R1715373	J4
	WG539845	SAMP	o-Terphenyl	R1719951	J2

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J4	The associated batch QC was outside the established quality control range for accuracy.
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out
O	(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  
06/15/11 at 13:15:44

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L519513-01 Account: ENCANACO Received: 06/07/11 09:00 Due Date: 06/14/11 00:00 RPT Date: 06/15/11 13:14  
Added CR3 PER JW. AV 6/9  
Sample: L519513-02 Account: ENCANACO Received: 06/07/11 09:00 Due Date: 06/14/11 00:00 RPT Date: 06/15/11 13:14  
Added CR3 PER JW. AV 6/9  
Sample: L519513-03 Account: ENCANACO Received: 06/07/11 09:00 Due Date: 06/14/11 00:00 RPT Date: 06/15/11 13:14  
Added CR3 PER JW. AV 6/9  
Sample: L519513-04 Account: ENCANACO Received: 06/07/11 09:00 Due Date: 06/14/11 00:00 RPT Date: 06/15/11 13:14  
Added CR3 PER JW. AV 6/9  
Sample: L519513-05 Account: ENCANACO Received: 06/07/11 09:00 Due Date: 06/14/11 00:00 RPT Date: 06/15/11 13:14  
Added CR3 PER JW. AV 6/9



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Quality Assurance Report  
Level II

L519513

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

Tax I.D. 62-0814289

Est. 1970

June 15, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1-Trichloroethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,1,2-Trichloroethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,1-Dichloroethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,1-Dichloroethene	< .001	mg/kg			WG539308	06/07/11 20:22
1,2,3-Trichlorobenzene	< .001	mg/kg			WG539308	06/07/11 20:22
1,2,4-Trichlorobenzene	< .001	mg/kg			WG539308	06/07/11 20:22
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG539308	06/07/11 20:22
1,2-Dibromoethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,2-Dichlorobenzene	< .001	mg/kg			WG539308	06/07/11 20:22
1,2-Dichloroethane	< .001	mg/kg			WG539308	06/07/11 20:22
1,2-Dichloropropane	< .001	mg/kg			WG539308	06/07/11 20:22
1,3-Dichlorobenzene	< .001	mg/kg			WG539308	06/07/11 20:22
1,4-Dichlorobenzene	< .001	mg/kg			WG539308	06/07/11 20:22
2-Butanone (MEK)	< .01	mg/kg			WG539308	06/07/11 20:22
2-Hexanone	< .01	mg/kg			WG539308	06/07/11 20:22
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG539308	06/07/11 20:22
Acetone	< .05	mg/kg			WG539308	06/07/11 20:22
Benzene	< .001	mg/kg			WG539308	06/07/11 20:22
Bromochloromethane	< .001	mg/kg			WG539308	06/07/11 20:22
Bromodichloromethane	< .001	mg/kg			WG539308	06/07/11 20:22
Bromoform	< .001	mg/kg			WG539308	06/07/11 20:22
Bromomethane	< .005	mg/kg			WG539308	06/07/11 20:22
Carbon disulfide	< .001	mg/kg			WG539308	06/07/11 20:22
Carbon tetrachloride	< .001	mg/kg			WG539308	06/07/11 20:22
Chlorobenzene	< .001	mg/kg			WG539308	06/07/11 20:22
Chlorodibromomethane	< .001	mg/kg			WG539308	06/07/11 20:22
Chloroethane	< .005	mg/kg			WG539308	06/07/11 20:22
Chloroform	< .005	mg/kg			WG539308	06/07/11 20:22
Chloromethane	< .0025	mg/kg			WG539308	06/07/11 20:22
cis-1,2-Dichloroethene	< .001	mg/kg			WG539308	06/07/11 20:22
cis-1,3-Dichloropropene	< .001	mg/kg			WG539308	06/07/11 20:22
Cyclohexane	< .001	mg/kg			WG539308	06/07/11 20:22
Dichlorodifluoromethane	< .005	mg/kg			WG539308	06/07/11 20:22
Ethylbenzene	< .001	mg/kg			WG539308	06/07/11 20:22
Isopropylbenzene	< .001	mg/kg			WG539308	06/07/11 20:22
m&p-Xylene	< .002	mg/kg			WG539308	06/07/11 20:22
Methyl Acetate	< .02	mg/kg			WG539308	06/07/11 20:22
Methyl Cyclohexane	< .001	mg/kg			WG539308	06/07/11 20:22
Methyl tert-butyl ether	< .001	mg/kg			WG539308	06/07/11 20:22
Methylene Chloride	< .005	mg/kg			WG539308	06/07/11 20:22
n-Hexane	< .01	mg/kg			WG539308	06/07/11 20:22
o-Xylene	< .001	mg/kg			WG539308	06/07/11 20:22
Styrene	< .001	mg/kg			WG539308	06/07/11 20:22
Tetrachloroethene	< .001	mg/kg			WG539308	06/07/11 20:22
Toluene	< .005	mg/kg			WG539308	06/07/11 20:22
trans-1,2-Dichloroethene	< .001	mg/kg			WG539308	06/07/11 20:22
trans-1,3-Dichloropropene	< .001	mg/kg			WG539308	06/07/11 20:22
Trichloroethene	< .001	mg/kg			WG539308	06/07/11 20:22
Trichlorofluoromethane	< .005	mg/kg			WG539308	06/07/11 20:22
Vinyl chloride	< .001	mg/kg			WG539308	06/07/11 20:22
Xylenes, Total	< .003	mg/kg			WG539308	06/07/11 20:22
4-Bromofluorobenzene		% Rec.	96.30	59-140	WG539308	06/07/11 20:22
Dibromofluoromethane		% Rec.	97.05	63-139	WG539308	06/07/11 20:22
Toluene-d8		% Rec.	101.0	84-116	WG539308	06/07/11 20:22
a,a,a-Trifluorotoluene		% Rec.	103.7	80-118	WG539308	06/07/11 20:22

\* 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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Tax I.D. 62-0814289

Est. 1970

June 15, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG539320	06/07/11 19:33
a,a,a-Trifluorotoluene(FID)		% Rec.	92.40	59-128	WG539320	06/07/11 19:33
Methyl Cyclohexane	< .001	mg/kg			WG539417	06/08/11 11:41
4-Bromofluorobenzene		% Rec.	90.89	59-140	WG539417	06/08/11 11:41
Dibromofluoromethane		% Rec.	120.2	63-139	WG539417	06/08/11 11:41
Toluene-d8		% Rec.	110.1	84-116	WG539417	06/08/11 11:41
a,a,a-Trifluorotoluene		% Rec.	100.2	80-118	WG539417	06/08/11 11:41
Specific Conductance	0.800	umhos/cm			WG539344	06/08/11 18:13
Arsenic	< 1	mg/kg			WG539339	06/08/11 14:34
Barium	< .25	mg/kg			WG539339	06/08/11 14:34
Cadmium	< .25	mg/kg			WG539339	06/08/11 14:34
Chromium	< .5	mg/kg			WG539339	06/08/11 14:34
Copper	< 1	mg/kg			WG539339	06/08/11 14:34
Lead	< .25	mg/kg			WG539339	06/08/11 14:34
Nickel	< 1	mg/kg			WG539339	06/08/11 14:34
Selenium	< 1	mg/kg			WG539339	06/08/11 14:34
Silver	< .5	mg/kg			WG539339	06/08/11 14:34
Zinc	< 1.5	mg/kg			WG539339	06/08/11 14:34
pH	4.70	su			WG539465	06/09/11 11:56
Mercury	< .02	mg/kg			WG539397	06/09/11 08:40
Specific Conductance	1.10	umhos/cm			WG539561	06/09/11 15:12
TPH (GC/FID) High Fraction	< 4	ppm			WG539363	06/09/11 16:41
o-Terphenyl		% Rec.	85.27	50-150	WG539363	06/09/11 16:41
Mercury	< .02	mg/kg			WG539398	06/09/11 13:31
1-Methylnaphthalene	< .006	mg/kg			WG539471	06/10/11 10:48
2-Chloronaphthalene	< .006	mg/kg			WG539471	06/10/11 10:48
2-Methylnaphthalene	< .006	mg/kg			WG539471	06/10/11 10:48
Acenaphthene	< .006	mg/kg			WG539471	06/10/11 10:48
Acenaphthylene	< .006	mg/kg			WG539471	06/10/11 10:48
Anthracene	< .006	mg/kg			WG539471	06/10/11 10:48
Benzo(a)anthracene	< .006	mg/kg			WG539471	06/10/11 10:48
Benzo(a)pyrene	< .006	mg/kg			WG539471	06/10/11 10:48
Benzo(b)fluoranthene	< .006	mg/kg			WG539471	06/10/11 10:48
Benzo(g,h,i)perylene	< .006	mg/kg			WG539471	06/10/11 10:48
Benzo(k)fluoranthene	< .006	mg/kg			WG539471	06/10/11 10:48
Chrysene	< .006	mg/kg			WG539471	06/10/11 10:48
Dibenz(a,h)anthracene	< .006	mg/kg			WG539471	06/10/11 10:48
Fluoranthene	< .006	mg/kg			WG539471	06/10/11 10:48
Fluorene	< .006	mg/kg			WG539471	06/10/11 10:48
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG539471	06/10/11 10:48
Naphthalene	< .006	mg/kg			WG539471	06/10/11 10:48

\* 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**

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Est. 1970

June 15, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Phenanthrene	< .006	mg/kg			WG539471	06/10/11 10:48
Pyrene	< .006	mg/kg			WG539471	06/10/11 10:48
2-Fluorobiphenyl		% Rec.	78.71	21-120	WG539471	06/10/11 10:48
Nitrobenzene-d5		% Rec.	65.83	33-114	WG539471	06/10/11 10:48
p-Terphenyl-d14		% Rec.	82.61	18-142	WG539471	06/10/11 10:48
TPH (GC/FID) High Fraction	< 4	ppm			WG539845	06/11/11 10:21
o-Terphenyl		% Rec.	60.50	50-150	WG539845	06/11/11 10:21
Chromium,Hexavalent	< 2	mg/kg			WG539674	06/14/11 14:17

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
ORP	mV	110.	110.	0	20	L519409-03	WG539331
ORP	mV	74.0	60.0	20.9*	20	L519513-03	WG539331
Specific Conductance	umhos/cm	1500	1400	5.15	20	L518791-03	WG539344
Specific Conductance	umhos/cm	140.	140.	0.499	20	L519132-02	WG539344
Cadmium	mg/kg	1.00	1.00	1.98	20	L519516-01	WG539339
Copper	mg/kg	370.	350.	5.56	20	L519516-01	WG539339
Selenium	mg/kg	17.0	19.0	11.1	20	L519516-01	WG539339
Zinc	mg/kg	190.	191.	0.525	20	L519516-01	WG539339
Arsenic	mg/kg	17.0	17.0	0.590	20	L519516-01	WG539339
Barium	mg/kg	160.	180.	9.30	20	L519516-01	WG539339
Chromium	mg/kg	3500	3500	0.573	20	L519516-01	WG539339
Lead	mg/kg	850.	1200	33.9*	20	L519516-01	WG539339
Nickel	mg/kg	750.	791.	4.79	20	L519516-01	WG539339
Silver	mg/kg	0	0	0	20	L519516-01	WG539339
pH	su	5.80	5.80	0	1	L519380-01	WG539465
pH	su	13.0	13.0	0	1	L519536-02	WG539465
Mercury	mg/kg	0	0	0	20	L519411-01	WG539397
Specific Conductance	umhos/cm	4700	5000	7.04	20	L519614-03	WG539561
Specific Conductance	umhos/cm	0	440.	NA	20	L519784-05	WG539561
Mercury	mg/kg	0	0	0	20	L519614-02	WG539398
Chromium,Hexavalent	mg/kg	0	0	0	20	L519501-03	WG539674
Chromium,Hexavalent	mg/kg	0	0	0	20	L519783-05	WG539674

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	mg/kg	.025	0.0249	99.8	62-135	WG539308
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0245	98.0	74-129	WG539308
1,1,2-Trichloroethane	mg/kg	.025	0.0259	104.	77-124	WG539308

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L519513

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Mt. Juliet, TN 37122  
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Est. 1970

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.025	0.0313	125.	49-155	WG539308
1,1-Dichloroethane	mg/kg	.025	0.0262	105.	61-134	WG539308
1,1-Dichloroethene	mg/kg	.025	0.0294	118.	53-136	WG539308
1,2,3-Trichlorobenzene	mg/kg	.025	0.0236	94.5	62-146	WG539308
1,2,4-Trichlorobenzene	mg/kg	.025	0.0254	102.	61-148	WG539308
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0252	101.	61-134	WG539308
1,2-Dibromoethane	mg/kg	.025	0.0262	105.	76-127	WG539308
1,2-Dichlorobenzene	mg/kg	.025	0.0243	97.0	77-123	WG539308
1,2-Dichloroethane	mg/kg	.025	0.0256	103.	58-141	WG539308
1,2-Dichloropropane	mg/kg	.025	0.0249	99.8	71-128	WG539308
1,3-Dichlorobenzene	mg/kg	.025	0.0247	98.8	71-132	WG539308
1,4-Dichlorobenzene	mg/kg	.025	0.0250	99.8	72-123	WG539308
2-Butanone (MEK)	mg/kg	.125	0.142	113.	51-131	WG539308
2-Hexanone	mg/kg	.125	0.138	110.	62-145	WG539308
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.135	108.	61-143	WG539308
Acetone	mg/kg	.125	0.142	114.	44-140	WG539308
Benzene	mg/kg	.025	0.0257	103.	65-128	WG539308
Bromochloromethane	mg/kg	.025	0.0251	100.	73-130	WG539308
Bromodichloromethane	mg/kg	.025	0.0239	95.6	66-126	WG539308
Bromoform	mg/kg	.025	0.0248	99.2	64-139	WG539308
Bromomethane	mg/kg	.025	0.0287	115.	41-175	WG539308
Carbon disulfide	mg/kg	.025	0.0304	122.	36-161	WG539308
Carbon tetrachloride	mg/kg	.025	0.0242	96.6	60-140	WG539308
Chlorobenzene	mg/kg	.025	0.0247	98.9	75-125	WG539308
Chlorodibromomethane	mg/kg	.025	0.0243	97.4	72-137	WG539308
Chloroethane	mg/kg	.025	0.0240	96.1	44-159	WG539308
Chloroform	mg/kg	.025	0.0253	101.	63-123	WG539308
Chloromethane	mg/kg	.025	0.0244	97.5	42-149	WG539308
cis-1,2-Dichloroethene	mg/kg	.025	0.0255	102.	71-129	WG539308
cis-1,3-Dichloropropene	mg/kg	.025	0.0256	102.	73-132	WG539308
Dichlorodifluoromethane	mg/kg	.025	0.0230	91.9	26-186	WG539308
Ethylbenzene	mg/kg	.025	0.0241	96.5	74-128	WG539308
Isopropylbenzene	mg/kg	.025	0.0264	106.	73-130	WG539308
m&p-Xylene	mg/kg	.05	0.0487	97.5	73-127	WG539308
Methyl tert-butyl ether	mg/kg	.025	0.0272	109.	44-148	WG539308
Methylene Chloride	mg/kg	.025	0.0238	95.2	57-129	WG539308
n-Hexane	mg/kg	.025	0.0255	102.	28-169	WG539308
o-Xylene	mg/kg	.025	0.0239	95.5	75-129	WG539308
Styrene	mg/kg	.025	0.0175	69.9*	76-133	WG539308
Tetrachloroethene	mg/kg	.025	0.0252	101.	65-135	WG539308
Toluene	mg/kg	.025	0.0250	100.	70-120	WG539308
trans-1,2-Dichloroethene	mg/kg	.025	0.0254	102.	61-133	WG539308
trans-1,3-Dichloropropene	mg/kg	.025	0.0269	108.	70-135	WG539308
Trichloroethene	mg/kg	.025	0.0257	103.	71-126	WG539308
Trichlorofluoromethane	mg/kg	.025	0.0240	96.2	52-147	WG539308
Vinyl chloride	mg/kg	.025	0.0239	95.6	50-151	WG539308
Xylenes, Total	mg/kg	.075	0.0726	96.8	74-127	WG539308
4-Bromofluorobenzene				99.00	59-140	WG539308
Dibromofluoromethane				100.1	63-139	WG539308
Toluene-d8				100.1	84-116	WG539308
a,a,a-Trifluorotoluene				99.52	80-118	WG539308
ORP	mV	229	220.	96.1	95.6-104.37	WG539331
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.85	106.	67-135	WG539320
a,a,a-Trifluorotoluene(FID)				94.68	59-128	WG539320

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Specific Conductance	umhos/cm	556	560.	101.	85-115	WG539344
Arsenic	mg/kg	192	159.	82.8	78.6-120.8	WG539339
Barium	mg/kg	420	353.	84.0	78.8-121.4	WG539339
Cadmium	mg/kg	70.1	57.7	82.3	78.5-121.5	WG539339
Chromium	mg/kg	168	145.	86.3	80.4-120.2	WG539339
Copper	mg/kg	122	106.	86.9	81.6-119.7	WG539339
Lead	mg/kg	113	95.0	84.1	77.3-122.1	WG539339
Nickel	mg/kg	74.1	59.0	79.6	78.8-121.2	WG539339
Selenium	mg/kg	176	152.	86.4	75.6-125.0	WG539339
Silver	mg/kg	115	96.3	83.7	66-133.9	WG539339
Zinc	mg/kg	437	363.	83.1	78.5-121.7	WG539339
pH	su	6.3	6.30	100.	97.98-102.02	WG539465
Mercury	mg/kg	8.77	7.82	89.2	71.6-127.7	WG539397
Specific Conductance	umhos/cm	556	560.	101.	85-115	WG539561
TPH (GC/FID) High Fraction o-Terphenyl	ppm	60	50.1	83.5 73.59	50-150 50-150	WG539363 WG539363
Mercury	mg/kg	8.77	7.50	85.5	71.6-127.7	WG539398
1-Methylnaphthalene	mg/kg	.033	0.0279	84.6	41-110	WG539471
2-Chloronaphthalene	mg/kg	.033	0.0279	84.5	43-109	WG539471
2-Methylnaphthalene	mg/kg	.033	0.0268	81.3	38-104	WG539471
Acenaphthene	mg/kg	.033	0.0289	87.7	48-103	WG539471
Acenaphthylene	mg/kg	.033	0.0292	88.6	43-106	WG539471
Anthracene	mg/kg	.033	0.0281	85.1	51-110	WG539471
Benzo(a)anthracene	mg/kg	.033	0.0311	94.2	38-126	WG539471
Benzo(a)pyrene	mg/kg	.033	0.0316	95.9	47-118	WG539471
Benzo(b)fluoranthene	mg/kg	.033	0.0345	104.	47-118	WG539471
Benzo(g,h,i)perylene	mg/kg	.033	0.0351	106.	40-125	WG539471
Benzo(k)fluoranthene	mg/kg	.033	0.0277	84.0	45-121	WG539471
Chrysene	mg/kg	.033	0.0277	84.0	35-135	WG539471
Dibenz(a,h)anthracene	mg/kg	.033	0.0333	101.	41-124	WG539471
Fluoranthene	mg/kg	.033	0.0294	89.0	50-114	WG539471
Fluorene	mg/kg	.033	0.0297	90.0	49-109	WG539471
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0333	101.	40-126	WG539471
Naphthalene	mg/kg	.033	0.0280	84.8	36-100	WG539471
Phenanthrene	mg/kg	.033	0.0302	91.4	46-108	WG539471
Pyrene	mg/kg	.033	0.0287	87.0	30-136	WG539471
2-Fluorobiphenyl				82.49	33-114	WG539471
Nitrobenzene-d5				79.67	21-120	WG539471
p-Terphenyl-d14				85.50	18-142	WG539471
TPH (GC/FID) High Fraction o-Terphenyl	ppm	60	45.4	75.6 64.40	50-150 50-150	WG539845 WG539845

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Chromium, Hexavalent	mg/kg	132	120.	90.9	50-150	WG539674

Analyte	Units	Laboratory Control Result	Sample Duplicate Ref	%Rec	Limit	RPD	Limit	Batch
1,1,1-Trichloroethane	mg/kg	0.0249	0.0249	100.	62-135	0.180	20	WG539308
1,1,2,2-Tetrachloroethane	mg/kg	0.0253	0.0245	101.	74-129	3.20	20	WG539308
1,1,2-Trichloroethane	mg/kg	0.0260	0.0259	104.	77-124	0.330	20	WG539308
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0311	0.0313	124.	49-155	0.600	20	WG539308
1,1-Dichloroethane	mg/kg	0.0260	0.0262	104.	61-134	0.730	20	WG539308
1,1-Dichloroethene	mg/kg	0.0297	0.0294	119.	53-136	1.10	20	WG539308
1,2,3-Trichlorobenzene	mg/kg	0.0237	0.0236	95.0	62-146	0.350	20	WG539308
1,2,4-Trichlorobenzene	mg/kg	0.0249	0.0254	100.	61-148	1.90	20	WG539308
1,2-Dibromo-3-Chloropropane	mg/kg	0.0254	0.0252	102.	61-134	0.810	21	WG539308
1,2-Dibromoethane	mg/kg	0.0265	0.0262	106.	76-127	1.27	20	WG539308
1,2-Dichlorobenzene	mg/kg	0.0236	0.0243	94.0	77-123	2.96	20	WG539308
1,2-Dichloroethane	mg/kg	0.0255	0.0256	102.	58-141	0.750	20	WG539308
1,2-Dichloropropane	mg/kg	0.0250	0.0249	100.	71-128	0.200	20	WG539308
1,3-Dichlorobenzene	mg/kg	0.0251	0.0247	100.	71-132	1.77	20	WG539308
1,4-Dichlorobenzene	mg/kg	0.0243	0.0250	97.0	72-123	2.52	20	WG539308
2-Butanone (MEK)	mg/kg	0.149	0.142	119.	51-131	5.04	25	WG539308
2-Hexanone	mg/kg	0.145	0.138	116.	62-145	5.19	23	WG539308
4-Methyl-2-pentanone (MIBK)	mg/kg	0.141	0.135	113.	61-143	4.05	23	WG539308
Acetone	mg/kg	0.146	0.142	117.	44-140	3.14	25	WG539308
Benzene	mg/kg	0.0256	0.0257	102.	65-128	0.380	20	WG539308
Bromochloromethane	mg/kg	0.0247	0.0251	99.0	73-130	1.63	20	WG539308
Bromodichloromethane	mg/kg	0.0236	0.0239	94.0	66-126	1.40	20	WG539308
Bromoform	mg/kg	0.0256	0.0248	102.	64-139	3.19	20	WG539308
Bromomethane	mg/kg	0.0293	0.0287	117.	41-175	2.35	20	WG539308
Carbon disulfide	mg/kg	0.0303	0.0304	121.	36-161	0.430	20	WG539308
Carbon tetrachloride	mg/kg	0.0240	0.0242	96.0	60-140	0.590	20	WG539308
Chlorobenzene	mg/kg	0.0252	0.0247	101.	75-125	1.69	20	WG539308
Chlorodibromomethane	mg/kg	0.0246	0.0243	98.0	72-137	1.17	20	WG539308
Chloroethane	mg/kg	0.0239	0.0240	95.0	44-159	0.690	20	WG539308
Chloroform	mg/kg	0.0250	0.0253	100.	63-123	1.14	20	WG539308
Chloromethane	mg/kg	0.0240	0.0244	96.0	42-149	1.41	20	WG539308
cis-1,2-Dichloroethene	mg/kg	0.0249	0.0255	100.	71-129	2.29	20	WG539308
cis-1,3-Dichloropropene	mg/kg	0.0255	0.0256	102.	73-132	0.450	20	WG539308
Dichlorodifluoromethane	mg/kg	0.0228	0.0230	91.0	26-186	0.940	22	WG539308
Ethylbenzene	mg/kg	0.0247	0.0241	99.0	74-128	2.28	20	WG539308
Isopropylbenzene	mg/kg	0.0266	0.0264	106.	73-130	0.970	20	WG539308
m&p-Xylene	mg/kg	0.0495	0.0487	99.0	73-127	1.51	20	WG539308
Methyl tert-butyl ether	mg/kg	0.0270	0.0272	108.	44-148	0.760	20	WG539308
Methylene Chloride	mg/kg	0.0238	0.0238	95.0	57-129	0.150	20	WG539308
n-Hexane	mg/kg	0.0249	0.0255	100.	28-169	2.29	20	WG539308
o-Xylene	mg/kg	0.0238	0.0239	95.0	75-129	0.250	20	WG539308
Styrene	mg/kg	0.0175	0.0175	70*	76-133	0.430	20	WG539308
Tetrachloroethene	mg/kg	0.0251	0.0252	100.	65-135	0.400	20	WG539308
Toluene	mg/kg	0.0248	0.0250	99.0	70-120	1.13	20	WG539308
trans-1,2-Dichloroethene	mg/kg	0.0256	0.0254	102.	61-133	0.620	20	WG539308
trans-1,3-Dichloropropene	mg/kg	0.0268	0.0269	107.	70-135	0.650	20	WG539308
Trichloroethene	mg/kg	0.0249	0.0257	100.	71-126	2.86	20	WG539308
Trichlorofluoromethane	mg/kg	0.0239	0.0240	96.0	52-147	0.540	20	WG539308
Vinyl chloride	mg/kg	0.0241	0.0239	96.0	50-151	0.720	20	WG539308
Xylenes, Total	mg/kg	0.0733	0.0726	98.0	74-127	0.940	20	WG539308
4-Bromofluorobenzene				101.4	59-140			WG539308
Dibromofluoromethane				98.99	63-139			WG539308
Toluene-d8				100.1	84-116			WG539308

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
a,a,a-Trifluorotoluene				101.5	80-118			
ORP	mV	220.	220.	96.0	95.6-104.37	0	20	WG539331
TPH (GC/FID) Low Fraction	mg/kg	5.86	5.85	106.	67-135	0.150	20	WG539320
a,a,a-Trifluorotoluene(FID)				95.41	59-128			WG539320
Specific Conductance	umhos/	560.	560.	101.	85-115	0	20	WG539344
pH	su	6.30	6.30	100.	97.98-102.02	0	20	WG539465
Specific Conductance	umhos/	560.	560.	101.	85-115	0	20	WG539561
TPH (GC/FID) High Fraction	ppm	47.0	50.1	78.0	50-150	6.29	25	WG539363
o-Terphenyl				72.22	50-150			WG539363
1-Methylnaphthalene	mg/kg	0.0265	0.0279	80.0	41-110	5.20	24	WG539471
2-Chloronaphthalene	mg/kg	0.0261	0.0279	79.0	43-109	6.56	21	WG539471
2-Methylnaphthalene	mg/kg	0.0256	0.0268	77.0	38-104	4.87	24	WG539471
Acenaphthene	mg/kg	0.0268	0.0289	81.0	48-103	7.63	20	WG539471
Acenaphthylene	mg/kg	0.0269	0.0292	82.0	43-106	8.21	20	WG539471
Anthracene	mg/kg	0.0273	0.0281	83.0	51-110	2.71	22	WG539471
Benzo(a)anthracene	mg/kg	0.0303	0.0311	92.0	38-126	2.59	20	WG539471
Benzo(a)pyrene	mg/kg	0.0278	0.0316	84.0	47-118	13.1	20	WG539471
Benzo(b)fluoranthene	mg/kg	0.0296	0.0345	90.0	47-118	15.3	29	WG539471
Benzo(g,h,i)perylene	mg/kg	0.0340	0.0351	103.	40-125	3.26	20	WG539471
Benzo(k)fluoranthene	mg/kg	0.0300	0.0277	91.0	45-121	7.93	31	WG539471
Chrysene	mg/kg	0.0268	0.0277	81.0	35-135	3.49	20	WG539471
Dibenz(a,h)anthracene	mg/kg	0.0323	0.0333	98.0	41-124	3.17	20	WG539471
Fluoranthene	mg/kg	0.0284	0.0294	86.0	50-114	3.25	20	WG539471
Fluorene	mg/kg	0.0270	0.0297	82.0	49-109	9.62	19	WG539471
Indeno(1,2,3-cd)pyrene	mg/kg	0.0321	0.0333	97.0	40-126	3.85	20	WG539471
Naphthalene	mg/kg	0.0265	0.0280	80.0	36-100	5.45	24	WG539471
Phenanthrene	mg/kg	0.0278	0.0302	84.0	46-108	8.00	21	WG539471
Pyrene	mg/kg	0.0275	0.0287	83.0	30-136	4.24	20	WG539471
2-Fluorobiphenyl				77.15	33-114			WG539471
Nitrobenzene-d5				76.69	21-120			WG539471
p-Terphenyl-d14				81.49	18-142			WG539471
TPH (GC/FID) High Fraction	ppm	46.7	45.4	78.0	50-150	3.00	25	WG539845
o-Terphenyl				63.73	50-150			WG539845
Chromium,Hexavalent	mg/kg	120.	120.	91.0	50-150	0	20	WG539674

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1-Trichloroethane	mg/kg	0.0446	0	.025	35.7	23-147	L519501-01	WG539308
1,1,2-Tetrachloroethane	mg/kg	0.0369	0	.025	29.5	18-150	L519501-01	WG539308
1,1,2-Trichloroethane	mg/kg	0.0565	0	.025	45.2	35-140	L519501-01	WG539308
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0297	0	.025	23.8	10-145	L519501-01	WG539308
1,1-Dichloroethane	mg/kg	0.0626	0	.025	50.1	24-148	L519501-01	WG539308

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**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

L519513

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

June 15, 2011

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1-Dichloroethene	mg/kg	0.0543	0	.025	43.5	10-149	L519501-01	WG539308
1,2,3-Trichlorobenzene	mg/kg	0.0145	0	.025	11.6	10-129	L519501-01	WG539308
1,2,4-Trichlorobenzene	mg/kg	0.0143	0	.025	11.4	10-119	L519501-01	WG539308
1,2-Dibromo-3-Chloropropane	mg/kg	0.0368	0	.025	29.5	19-145	L519501-01	WG539308
1,2-Dibromoethane	mg/kg	0.0525	0	.025	42.0	24-145	L519501-01	WG539308
1,2-Dichlorobenzene	mg/kg	0.0203	0	.025	16.2	12-130	L519501-01	WG539308
1,2-Dichloroethane	mg/kg	0.0619	0	.025	49.5	21-155	L519501-01	WG539308
1,2-Dichloropropane	mg/kg	0.0555	0	.025	44.4	28-144	L519501-01	WG539308
1,3-Dichlorobenzene	mg/kg	0.0194	0	.025	15.5	10-129	L519501-01	WG539308
1,4-Dichlorobenzene	mg/kg	0.0202	0	.025	16.1	10-121	L519501-01	WG539308
2-Butanone (MEK)	mg/kg	0.319	0	.125	51.1	21-143	L519501-01	WG539308
2-Hexanone	mg/kg	0.312	0	.125	49.9	22-151	L519501-01	WG539308
4-Methyl-2-pentanone (MIBK)	mg/kg	0.316	0	.125	50.5	31-151	L519501-01	WG539308
Acetone	mg/kg	0.332	0	.125	53.1	13-158	L519501-01	WG539308
Benzene	mg/kg	0.0527	0	.025	42.1	16-143	L519501-01	WG539308
Bromochloromethane	mg/kg	0.0610	0	.025	48.8	25-152	L519501-01	WG539308
Bromodichloromethane	mg/kg	0.0534	0	.025	42.7	27-139	L519501-01	WG539308
Bromoform	mg/kg	0.0414	0	.025	33.1	21-144	L519501-01	WG539308
Bromomethane	mg/kg	0.0864	0	.025	69.2	0-180	L519501-01	WG539308
Carbon disulfide	mg/kg	0.0406	0	.025	32.5	10-156	L519501-01	WG539308
Carbon tetrachloride	mg/kg	0.0354	0	.025	28.3	12-149	L519501-01	WG539308
Chlorobenzene	mg/kg	0.0337	0	.025	27.0	17-134	L519501-01	WG539308
Chlorodibromomethane	mg/kg	0.0479	0	.025	38.3	28-147	L519501-01	WG539308
Chloroethane	mg/kg	0.0682	0	.025	54.6	0-172	L519501-01	WG539308
Chloroform	mg/kg	0.0582	0	.025	46.6	28-138	L519501-01	WG539308
Chloromethane	mg/kg	0.0728	0	.025	58.3	10-158	L519501-01	WG539308
cis-1,2-Dichloroethene	mg/kg	0.0577	0	.025	46.2	21-147	L519501-01	WG539308
cis-1,3-Dichloropropene	mg/kg	0.0527	0	.025	42.2	17-145	L519501-01	WG539308
Dichlorodifluoromethane	mg/kg	0.0555	0	.025	44.4	0-192	L519501-01	WG539308
Ethylbenzene	mg/kg	0.0265	0	.025	21.2	12-137	L519501-01	WG539308
Isopropylbenzene	mg/kg	0.0189	0	.025	15.2	14-134	L519501-01	WG539308
m&p-Xylene	mg/kg	0.0496	0	.05	19.8	10-135	L519501-01	WG539308
Methyl tert-butyl ether	mg/kg	0.0662	0	.025	53.0	21-157	L519501-01	WG539308
Methylene Chloride	mg/kg	0.0615	0	.025	49.2	12-149	L519501-01	WG539308
n-Hexane	mg/kg	0.0177	0	.025	14.2	10-129	L519501-01	WG539308
o-Xylene	mg/kg	0.0262	0	.025	20.9	14-140	L519501-01	WG539308
Styrene	mg/kg	0.0274	0	.025	21.9	10-140	L519501-01	WG539308
Tetrachloroethene	mg/kg	0.0225	0	.025	18.0	10-131	L519501-01	WG539308
Toluene	mg/kg	0.0376	0	.025	30.1	12-136	L519501-01	WG539308
trans-1,2-Dichloroethene	mg/kg	0.0536	0	.025	42.9	10-143	L519501-01	WG539308
trans-1,3-Dichloropropene	mg/kg	0.0526	0	.025	42.0	16-147	L519501-01	WG539308
Trichloroethene	mg/kg	0.0461	0	.025	36.8	10-155	L519501-01	WG539308
Trichlorofluoromethane	mg/kg	0.0461	0	.025	36.9	10-154	L519501-01	WG539308
Vinyl chloride	mg/kg	0.0686	0	.025	54.9	10-159	L519501-01	WG539308
Xylenes, Total	mg/kg	0.0758	0	.075	20.2	10-138	L519501-01	WG539308
4-Bromofluorobenzene					99.12	59-140		WG539308
Dibromofluoromethane					99.58	63-139		WG539308
Toluene-d8					98.60	84-116		WG539308
a,a,a-Trifluorotoluene					99.65	80-118		WG539308
TPH (GC/FID) Low Fraction	mg/kg	20.3	0	5.5	73.9	55-109	L519513-01	WG539320
a,a,a-Trifluorotoluene(FID)					91.83	59-128		WG539320
Cadmium	mg/kg	44.2	1.00	50	86.4	75-125	L519516-01	WG539339
Copper	mg/kg	506.	350.	50	312.*	75-125	L519516-01	WG539339
Selenium	mg/kg	57.3	19.0	50	76.6	75-125	L519516-01	WG539339
Zinc	mg/kg	239.	191.	50	96.0	75-125	L519516-01	WG539339

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Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Arsenic	mg/kg	60.6	17.0	50	17.4*	75-125	L519516-01	WG539339
Barium	mg/kg	236.	180.	50	22.4*	75-125	L519516-01	WG539339
Chromium	mg/kg	3700	3500	50	80.0	75-125	L519516-01	WG539339
Lead	mg/kg	825.	1200	50	0*	75-125	L519516-01	WG539339
Nickel	mg/kg	796.	791.	50	2.00*	75-125	L519516-01	WG539339
Silver	mg/kg	43.3	0	50	17.3*	75-125	L519516-01	WG539339
Mercury	mg/kg	0.268	0	.25	107.	70-130	L519411-01	WG539397
Mercury	mg/kg	0.270	0	.25	108.	70-130	L519614-02	WG539398
TPH (GC/FID) High Fraction	ppm	41.7	4.00	60	62.9	50-150	L519859-01	WG539845
o-Terphenyl					64.37	50-150		WG539845
1-Methylnaphthalene	mg/kg	0.0287	0.00540	.033	70.7	19-131	L519512-05	WG539471
2-Chloronaphthalene	mg/kg	0.0268	0	.033	81.2	38-117	L519512-05	WG539471
2-Methylnaphthalene	mg/kg	0.0322	0.00810	.033	72.9	18-125	L519512-05	WG539471
Acenaphthene	mg/kg	0.0270	0	.033	81.8	31-120	L519512-05	WG539471
Acenaphthylene	mg/kg	0.0287	0	.033	87.0	34-116	L519512-05	WG539471
Anthracene	mg/kg	0.0297	0.00160	.033	85.2	32-131	L519512-05	WG539471
Benzo(a)anthracene	mg/kg	0.0303	0.00220	.033	85.0	32-131	L519512-05	WG539471
Benzo(a)pyrene	mg/kg	0.0302	0.00290	.033	82.8	28-130	L519512-05	WG539471
Benzo(b)fluoranthene	mg/kg	0.0318	0.00370	.033	85.2	37-130	L519512-05	WG539471
Benzo(g,h,i)perylene	mg/kg	0.0320	0.00350	.033	86.4	10-134	L519512-05	WG539471
Benzo(k)fluoranthene	mg/kg	0.0288	0.00160	.033	82.5	31-129	L519512-05	WG539471
Chrysene	mg/kg	0.0293	0.00250	.033	81.1	25-137	L519512-05	WG539471
Dibenz(a,h)anthracene	mg/kg	0.0273	0	.033	82.8	20-134	L519512-05	WG539471
Fluoranthene	mg/kg	0.0314	0.00370	.033	83.8	27-138	L519512-05	WG539471
Fluorene	mg/kg	0.0299	0	.033	90.5	26-136	L519512-05	WG539471
Indeno(1,2,3-cd)pyrene	mg/kg	0.0298	0.00210	.033	83.8	16-135	L519512-05	WG539471
Naphthalene	mg/kg	0.0294	0.00400	.033	76.8	22-121	L519512-05	WG539471
Phenanthrene	mg/kg	0.0309	0.00300	.033	84.5	27-133	L519512-05	WG539471
Pyrene	mg/kg	0.0335	0.00420	.033	88.6	22-133	L519512-05	WG539471
2-Fluorobiphenyl					86.43	33-114		WG539471
Nitrobenzene-d5					81.48	21-120		WG539471
p-Terphenyl-d14					74.61	18-142		WG539471
Chromium,Hexavalent	mg/kg	0	0	20	0*	50-150	L519501-04	WG539674

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1-Trichloroethane	mg/kg	0.0976	0.0446	78.1	23-147	74.5*	32	L519501-01	WG539308
1,1,2,2-Tetrachloroethane	mg/kg	0.0545	0.0369	43.6	18-150	38.4*	33	L519501-01	WG539308
1,1,2-Trichloroethane	mg/kg	0.119	0.0565	95.0	35-140	71.0*	29	L519501-01	WG539308
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0752	0.0297	60.1	10-145	86.6*	35	L519501-01	WG539308
1,1-Dichloroethane	mg/kg	0.114	0.0626	91.1	24-148	58.1*	31	L519501-01	WG539308
1,1-Dichloroethene	mg/kg	0.101	0.0543	80.5	10-149	59.8*	34	L519501-01	WG539308
1,2,3-Trichlorobenzene	mg/kg	0.0358	0.0145	28.6	10-129	84.6*	43	L519501-01	WG539308
1,2,4-Trichlorobenzene	mg/kg	0.0355	0.0143	28.4	10-119	85.1*	44	L519501-01	WG539308
1,2-Dibromo-3-Chloropropane	mg/kg	0.104	0.0368	82.8	19-145	95.0*	35	L519501-01	WG539308
1,2-Dibromoethane	mg/kg	0.114	0.0525	90.9	24-145	73.5*	31	L519501-01	WG539308
1,2-Dichlorobenzene	mg/kg	0.0593	0.0203	47.5	12-130	98.1*	35	L519501-01	WG539308
1,2-Dichloroethane	mg/kg	0.120	0.0619	96.2	21-155	64.0*	29	L519501-01	WG539308

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Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichloropropane	mg/kg	0.111	0.0555	89.0	28-144	66.8*	30	L519501-01	WG539308
1,3-Dichlorobenzene	mg/kg	0.0562	0.0194	44.9	10-129	97.5*	38	L519501-01	WG539308
1,4-Dichlorobenzene	mg/kg	0.0581	0.0202	46.5	10-121	97.0*	36	L519501-01	WG539308
2-Butanone (MEK)	mg/kg	0.719	0.319	115.	21-143	77.0*	37	L519501-01	WG539308
2-Hexanone	mg/kg	0.653	0.312	104.	22-151	70.8*	38	L519501-01	WG539308
4-Methyl-2-pentanone (MIBK)	mg/kg	0.690	0.316	110.	31-151	74.4*	36	L519501-01	WG539308
Acetone	mg/kg	0.715	0.332	114.	13-158	73.3*	34	L519501-01	WG539308
Benzene	mg/kg	0.106	0.0527	84.6	16-143	67.1*	31	L519501-01	WG539308
Bromochloromethane	mg/kg	0.113	0.0610	90.8	25-152	60.1*	29	L519501-01	WG539308
Bromodichloromethane	mg/kg	0.112	0.0534	89.4	27-139	70.7*	30	L519501-01	WG539308
Bromoform	mg/kg	0.103	0.0414	82.5	21-144	85.4*	34	L519501-01	WG539308
Bromomethane	mg/kg	0.127	0.0864	102.	0-180	38.0	41	L519501-01	WG539308
Carbon disulfide	mg/kg	0.0752	0.0406	60.1	10-156	59.7*	38	L519501-01	WG539308
Carbon tetrachloride	mg/kg	0.0849	0.0354	67.9	12-149	82.2*	34	L519501-01	WG539308
Chlorobenzene	mg/kg	0.0821	0.0337	65.7	17-134	83.7*	34	L519501-01	WG539308
Chlorodibromomethane	mg/kg	0.107	0.0479	85.3	28-147	76.0*	32	L519501-01	WG539308
Chloroethane	mg/kg	0.111	0.0682	89.0	0-172	48.0*	38	L519501-01	WG539308
Chloroform	mg/kg	0.112	0.0582	89.2	28-138	62.9*	30	L519501-01	WG539308
Chloromethane	mg/kg	0.109	0.0728	87.2	10-158	39.8*	35	L519501-01	WG539308
cis-1,2-Dichloroethene	mg/kg	0.107	0.0577	85.8	21-147	60.1*	31	L519501-01	WG539308
cis-1,3-Dichloropropene	mg/kg	0.109	0.0527	87.1	17-145	69.5*	32	L519501-01	WG539308
Dichlorodifluoromethane	mg/kg	0.0986	0.0555	78.8	0-192	55.9*	38	L519501-01	WG539308
Ethylbenzene	mg/kg	0.0717	0.0265	57.4	12-137	92.1*	36	L519501-01	WG539308
Isopropylbenzene	mg/kg	0.0576	0.0189	46.1	14-134	101.*	37	L519501-01	WG539308
m&p-Xylene	mg/kg	0.139	0.0496	55.6	10-135	94.9*	37	L519501-01	WG539308
Methyl tert-butyl ether	mg/kg	0.126	0.0662	100.	21-157	62.0*	31	L519501-01	WG539308
Methylene Chloride	mg/kg	0.104	0.0615	83.1	12-149	51.3*	31	L519501-01	WG539308
n-Hexane	mg/kg	0.0428	0.0177	34.2	10-129	82.9*	42	L519501-01	WG539308
o-Xylene	mg/kg	0.0720	0.0262	57.6	14-140	93.4*	35	L519501-01	WG539308
Styrene	mg/kg	0.0739	0.0274	59.1	10-140	91.8*	35	L519501-01	WG539308
Tetrachloroethene	mg/kg	0.0642	0.0225	51.3	10-131	96.3*	35	L519501-01	WG539308
Toluene	mg/kg	0.0902	0.0376	72.2	12-136	82.3*	32	L519501-01	WG539308
trans-1,2-Dichloroethene	mg/kg	0.0976	0.0536	78.1	10-143	58.1*	33	L519501-01	WG539308
trans-1,3-Dichloropropene	mg/kg	0.117	0.0526	93.5	16-147	76.0*	32	L519501-01	WG539308
Trichloroethene	mg/kg	0.132	0.0461	105.	10-155	96.4*	33	L519501-01	WG539308
Trichlorofluoromethane	mg/kg	0.0927	0.0461	74.1	10-154	67.0*	32	L519501-01	WG539308
Vinyl chloride	mg/kg	0.110	0.0686	88.2	10-159	46.5*	36	L519501-01	WG539308
Xylenes, Total	mg/kg	0.211	0.0758	56.3	10-138	94.4*	36	L519501-01	WG539308
4-Bromofluorobenzene				99.01	59-140				WG539308
Dibromofluoromethane				101.2	63-139				WG539308
Toluene-d8				99.07	84-116				WG539308
a,a,a-Trifluorotoluene				97.59	80-118				WG539308
TPH (GC/FID) Low Fraction	mg/kg	21.6	20.3	78.7	55-109	6.28	20	L519513-01	WG539320
a,a,a-Trifluorotoluene(FID)				91.34	59-128				WG539320
Cadmium	mg/kg	44.9	44.2	87.8	75-125	1.57	20	L519516-01	WG539339
Copper	mg/kg	386.	506.	72.0*	75-125	26.9*	20	L519516-01	WG539339
Selenium	mg/kg	58.6	57.3	79.2	75-125	2.24	20	L519516-01	WG539339
Zinc	mg/kg	268.	239.	154.*	75-125	11.4	20	L519516-01	WG539339
Arsenic	mg/kg	61.2	60.6	17.7*	75-125	0.985	20	L519516-01	WG539339
Barium	mg/kg	212.	236.	12.8*	75-125	10.7	20	L519516-01	WG539339
Chromium	mg/kg	3780	3700	112.	75-125	2.14	20	L519516-01	WG539339
Lead	mg/kg	6390	825.	2080*	75-125	154.*	20	L519516-01	WG539339
Nickel	mg/kg	741.	796.	0*	75-125	7.16	20	L519516-01	WG539339
Silver	mg/kg	47.7	43.3	19.1*	75-125	9.67	20	L519516-01	WG539339

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/kg	0.232	0.268	92.8	70-130	14.4	20	L519411-01	WG539397
Mercury	mg/kg	0.286	0.270	114.	70-130	5.76	20	L519614-02	WG539398
TPH (GC/FID) High Fraction o-Terphenyl	ppm	41.5	41.7	62.5 65.73	50-150 50-150	0.493	25	L519859-01	WG539845 WG539845
1-Methylnaphthalene	mg/kg	0.0233	0.0287	54.1	19-131	21.0	30	L519512-05	WG539471
2-Chloronaphthalene	mg/kg	0.0226	0.0268	68.6	38-117	16.8	26	L519512-05	WG539471
2-Methylnaphthalene	mg/kg	0.0236	0.0322	46.9	18-125	30.8*	29	L519512-05	WG539471
Acenaphthene	mg/kg	0.0225	0.0270	68.2	31-120	18.1	30	L519512-05	WG539471
Acenaphthylene	mg/kg	0.0236	0.0287	71.4	34-116	19.7	29	L519512-05	WG539471
Anthracene	mg/kg	0.0241	0.0297	68.1	32-131	21.0	26	L519512-05	WG539471
Benzo(a)anthracene	mg/kg	0.0269	0.0303	74.7	32-131	11.9	31	L519512-05	WG539471
Benzo(a)pyrene	mg/kg	0.0265	0.0302	71.5	28-130	13.1	28	L519512-05	WG539471
Benzo(b)fluoranthene	mg/kg	0.0267	0.0318	69.5	37-130	17.6	41	L519512-05	WG539471
Benzo(g,h,i)perylene	mg/kg	0.0298	0.0320	79.8	10-134	6.99	26	L519512-05	WG539471
Benzo(k)fluoranthene	mg/kg	0.0248	0.0288	70.4	31-129	14.9	42	L519512-05	WG539471
Chrysene	mg/kg	0.0244	0.0293	66.4	25-137	18.0	22	L519512-05	WG539471
Dibenz(a,h)anthracene	mg/kg	0.0239	0.0273	72.5	20-134	13.2	25	L519512-05	WG539471
Fluoranthene	mg/kg	0.0264	0.0314	68.9	27-138	17.1	35	L519512-05	WG539471
Fluorene	mg/kg	0.0242	0.0299	73.3	26-136	21.0	30	L519512-05	WG539471
Indeno(1,2,3-cd)pyrene	mg/kg	0.0264	0.0298	73.6	16-135	12.0	26	L519512-05	WG539471
Naphthalene	mg/kg	0.0218	0.0294	54.0	22-121	29.4	30	L519512-05	WG539471
Phenanthrene	mg/kg	0.0258	0.0309	69.2	27-133	17.8	36	L519512-05	WG539471
Pyrene	mg/kg	0.0282	0.0335	72.8	22-133	17.0	33	L519512-05	WG539471
2-Fluorobiphenyl				63.89	33-114				WG539471
Nitrobenzene-d5				67.29	21-120				WG539471
p-Terphenyl-d14				61.69	18-142				WG539471
Chromium,Hexavalent	mg/kg	0	0	0*	50-150	0	20	L519501-04	WG539674

Batch number /Run number / Sample number cross reference

WG539308: R1715373: L519513-01 02 03 04 05  
WG539331: R1716209: L519513-01 02 03 04 05  
WG539320: R1716249: L519513-01 02 03 04 05  
WG539417: R1716609: L519513-03  
WG539344: R1716669: L519513-01 02  
WG539339: R1716850: L519513-01 02 03 04 05  
WG539465: R1717229: L519513-01 02 03 04 05  
WG539397: R1717389: L519513-01  
WG539561: R1717770: L519513-03 04 05  
WG539363: R1718451: L519513-01 02 03 04  
WG539398: R1719370: L519513-02 03 04 05  
WG539471: R1719431: L519513-01 02 03 04 05  
WG539845: R1719951: L519513-05  
WG539341: R1721009: L519513-01 02 03 04 05  
WG539674: R1722909: L519513-01 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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Chris Hines  
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L519513

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Mt. Juliet, TN 37122  
(615) 758-5858  
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June 15, 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

Tuesday August 09, 2011

Report Number: L529528

Samples Received: 08/05/11

Client Project:

Description: E06-Pit Excavation

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

August 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-SP-WW-072811 2-4 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 12:16

ESC Sample # : L529528-01

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.1		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	160	4.0	mg/kg	3546/DRO	08/07/11	1
Surrogate recovery(%) o-Terphenyl	81.2		% Rec.	3546/DRO	08/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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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 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-SP-SB-072811 0-2 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 12:51

ESC Sample # : L529528-02

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.2		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	39.	4.0	mg/kg	3546/DRO	08/07/11	1
Surrogate recovery(%) o-Terphenyl	85.7		% Rec.	3546/DRO	08/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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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 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-SP-NB-072811 4-6 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:00

ESC Sample # : L529528-03

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	95.9		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	1600	80.	mg/kg	3546/DRO	08/08/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	08/08/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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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 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-SP-EW-072811 1-3 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:04

ESC Sample # : L529528-04

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	96.7		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	950	80.	mg/kg	3546/DRO	08/08/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	08/08/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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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 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-NP-SB-072811 0-1 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:20

ESC Sample # : L529528-05

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	95.4		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	150	4.0	mg/kg	3546/DRO	08/07/11	1
Surrogate recovery(%) o-Terphenyl	54.8		% Rec.	3546/DRO	08/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

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

August 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-NP-EW-072811 2-4 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:26

ESC Sample # : L529528-06

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	91.7		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	52.	4.0	mg/kg	3546/DRO	08/07/11	1
Surrogate recovery(%) o-Terphenyl	87.6		% Rec.	3546/DRO	08/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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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 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-NP-NB-072811 3-5 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:27

ESC Sample # : L529528-07

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	97.2		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	7.3	4.0	mg/kg	3546/DRO	08/07/11	1
Surrogate recovery(%) o-Terphenyl	71.2		% Rec.	3546/DRO	08/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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

August 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-NP-NWW-072811 4-6 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:28

ESC Sample # : L529528-08

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	85.5		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	240	4.0	mg/kg	3546/DRO	08/07/11	1
Surrogate recovery(%) o-Terphenyl	71.4		% Rec.	3546/DRO	08/07/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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2717 County Road 215, Suite 100  
Parachute, CO 81635

August 09, 2011

Date Received : August 05, 2011  
Description : E06-Pit Excavation  
Sample ID : E06-PITX-SPOIL-072811 6-8 IN  
Collected By : Brennan Graff  
Collection Date : 07/28/11 13:44

ESC Sample # : L529528-09

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/06/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	98.3		% Rec.	602/8015	08/06/11	5
TPH (GC/FID) High Fraction	1100	80.	mg/kg	3546/DRO	08/08/11	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	08/08/11	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 08/09/11 10:22 Printed: 08/09/11 14:04

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L529528-03	WG549272	SAMP	o-Terphenyl	R1806091	J7
L529528-04	WG549272	SAMP	o-Terphenyl	R1806091	J7
L529528-09	WG549272	SAMP	o-Terphenyl	R1806091	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.



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

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Quality Assurance Report  
Level II

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August 09, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG549184	08/05/11 17:31
a,a,a-Trifluorotoluene(FID)		% Rec.	96.77	59-128	WG549184	08/05/11 17:31
TPH (GC/FID) High Fraction	< 4	ppm			WG549272	08/06/11 10:27
o-Terphenyl		% Rec.	82.02	50-150	WG549272	08/06/11 10:27

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.99	127.	67-135	WG549184
a,a,a-Trifluorotoluene(FID)				103.9	59-128	WG549184
TPH (GC/FID) High Fraction	ppm	60	49.3	82.1	50-150	WG549272
o-Terphenyl				64.76	50-150	WG549272

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	7.06	6.99	128.	67-135	0.990	20	WG549184
a,a,a-Trifluorotoluene(FID)				101.2	59-128			WG549184
TPH (GC/FID) High Fraction	ppm	46.8	49.3	78.0	50-150	5.09	25	WG549272
o-Terphenyl				70.65	50-150			WG549272

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	34.1	2.47	5.5	115.*	55-109	L529468-04	WG549184
a,a,a-Trifluorotoluene(FID)					101.3	59-128		WG549184

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	33.2	34.1	112.*	55-109	2.65	20	L529468-04	WG549184
a,a,a-Trifluorotoluene(FID)				99.98	59-128				WG549184

Batch number /Run number / Sample number cross reference

WG549184: R1805210: L529528-01 02 03 04 05 06 07 08 09  
WG549272: R1806091: L529528-01 02 03 04 05 06 07 08 09

\* \* 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 / Jake Harris  
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L529528

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 09, 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.

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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

Friday August 05, 2011

Report Number: L529010

Samples Received: 08/03/11

Client Project:

Description: E06 Pit Excavation

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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# REPORT OF ANALYSIS

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

August 05, 2011

Date Received : August 03, 2011  
Description : E06 Pit Excavation  
Sample ID : E06-PITX-PBC-080211 0-2IN  
Collected By : Brennen Graff  
Collection Date : 08/02/11 09:40

ESC Sample # : L529010-01

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	106.		% Rec.	602/8015	08/03/11	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	08/04/11	1
Surrogate recovery(%) o-Terphenyl	83.0		% Rec.	3546/DRO	08/04/11	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: 08/05/11 12:38 Printed: 08/05/11 16:32



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2717 County Road 215, Suite 100

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Quality Assurance Report  
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L529010

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August 05, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG548761	08/03/11 12:50
a,a,a-Trifluorotoluene(FID)		% Rec.	108.0	59-128	WG548761	08/03/11 12:50
TPH (GC/FID) High Fraction	< 4	ppm			WG548815	08/04/11 22:13
o-Terphenyl		% Rec.	83.92	50-150	WG548815	08/04/11 22:13

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.68	122.	67-135	WG548761
a,a,a-Trifluorotoluene(FID)				117.1	59-128	WG548761
TPH (GC/FID) High Fraction	ppm	60	51.2	85.4	50-150	WG548815
o-Terphenyl				74.97	50-150	WG548815

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	6.80	6.68	124.	67-135	1.74	20	WG548761
a,a,a-Trifluorotoluene(FID)				117.6	59-128			WG548761
TPH (GC/FID) High Fraction	ppm	52.4	51.2	87.0	50-150	2.22	25	WG548815
o-Terphenyl				74.49	50-150			WG548815

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	27.4	0	5.5	99.8	55-109	L529010-01	WG548761
a,a,a-Trifluorotoluene(FID)					112.5	59-128		WG548761

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	26.5	27.4	96.4	55-109	3.48	20	L529010-01	WG548761
a,a,a-Trifluorotoluene(FID)				112.1	59-128				WG548761

Batch number /Run number / Sample number cross reference

WG548761: R1802190: L529010-01  
WG548815: R1804192: L529010-01

\* \* Calculations are performed prior to rounding of reported values.  
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For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Parachute, CO 81635

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Level II

L529010

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August 05, 2011

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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.

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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

Friday August 12, 2011

Report Number: L530208

Samples Received: 08/10/11

Client Project:

Description: E06 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  
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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

August 12, 2011

Date Received : August 10, 2011  
Description : E06 Pit Closure  
Sample ID : E06-PITX-SPOIL-080911 4-6IN  
Collected By : Brennen Graff  
Collection Date : 08/09/11 10:07

ESC Sample # : L530208-01

Site ID : E06

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/10/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	97.5		% Rec.	602/8015	08/10/11	5
TPH (GC/FID) High Fraction	340	4.0	mg/kg	3546/DRO	08/12/11	1
Surrogate recovery(%) o-Terphenyl	76.7		% Rec.	3546/DRO	08/12/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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

Summary of Remarks For Samples Printed  
08/12/11 at 17:08:46

TSR Signing Reports: 358  
R3 - Rush: Two Day

Sample: L530208-01 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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Chris Hines / Jake Harris  
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Parachute, CO 81635

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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			WG549816	08/10/11 15:34
a,a,a-Trifluorotoluene(FID)		% Rec.	98.13	59-128	WG549816	08/10/11 15:34
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	5.45	99.1	67-135	WG549816
a,a,a-Trifluorotoluene(FID)				105.0	59-128	WG549816
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	5.99	5.45	109.	67-135	9.39	20	WG549816
a,a,a-Trifluorotoluene(FID)				105.6	59-128			WG549816
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	24.6	0	5.5	89.5	55-109	L530126-01	WG549816
a,a,a-Trifluorotoluene(FID)					101.6	59-128		WG549816

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	22.4	24.6	81.6	55-109	9.21	20	L530126-01	WG549816
a,a,a-Trifluorotoluene(FID)				100.1	59-128				WG549816

Batch number /Run number / Sample number cross reference

WG549816: R1810457: L530208-01  
WG550202: R1812690: L530208-01

\* \* 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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## ANALYTICAL REPORT

Job Number: 280-5234-3

Job Description: E06 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 3:58 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](http://www.testamericainc.com)



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## **CASE NARRATIVE**

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

**Project: E06 CoP Diligence**

**Report Number: 280-5234-3**

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 Chain of Custody indicates one container was submitted for sample E06-CUTTINGS-070810 (280-5234-11), but three were received at the laboratory.

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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/16/2010.

Samples E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) exhibited surrogate recoveries above the control limits for 4-bromofluorobenzene due to matrix interferences.

The MS/MSD was performed on an unrelated sample and exhibited an RPD value above the control limits for ethylbenzene. 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 VOC analyses.

All other quality control parameters were within the acceptance limits.

### **SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 07/15/2010.

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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 07/13/2010.

Sample E06-CUTTINGS-070810 (280-5234-11) exhibited a surrogate recovery below the control limits for o-terphenyl due to matrix interference.

No other difficulties were encountered during the DRO analyses.

All other quality control parameters were within the acceptance limits.

#### **SODIUM ABSORPTION RATIO**

Samples E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 were 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.

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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 07/19/2010 and 07/26/2010.

The MS/MSD associated with analytical batch 23489 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.

The MS/MSD associated with analytical batch 24299 was performed on an unrelated sample and exhibited an RPD value 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 7196A. The samples were prepared 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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 E06-CUTTINGS-070810 (280-5234-11) and E06-BACK-070810 (280-5234-12) 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: 280-5234-3

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>280-5234-11</b>	<b>E06-CUTTINGS-070810</b>					
Benzene		0.0013	J	0.0048	mg/Kg	8260B
Toluene		0.0024	J	0.0048	mg/Kg	8260B
Pyrene		0.024	J	0.32	mg/Kg	8270C
Fluorene		0.024	J	0.32	mg/Kg	8270C
Naphthalene		0.14	J	0.32	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		11		1.2	mg/Kg	8015B
C10-C22		39		4.0	mg/Kg	8015D
C22-C36		57		12	mg/Kg	8015D
Barium		2500		0.90	mg/Kg	6010B
Cadmium		0.50		0.45	mg/Kg	6010B
Chromium		19	B	1.4	mg/Kg	6010B
Copper		17		1.8	mg/Kg	6010B
Lead		10		0.72	mg/Kg	6010B
Nickel		13		3.6	mg/Kg	6010B
Selenium		0.89	J	1.2	mg/Kg	6010B
Zinc		49		2.7	mg/Kg	6010B
Arsenic		7.3		0.57	mg/Kg	6020
Mercury		0.017		0.017	mg/Kg	7471A
Cr (III)		19		2.0	mg/Kg	7196A
<b><i>Soluble</i></b>						
Sodium Adsorption Ratio		10		1.2	No Unit	20B
pH adj. to 25 deg C-Soluble		10.1		0.0100	SU	9045C
Specific Conductance-Soluble		300		2.0	umhos/cm	9050A
<b>280-5234-12</b>	<b>E06-BACK-070810</b>					
Ethylbenzene		0.0044	J	0.0045	mg/Kg	8260B
Toluene		0.0014	J	0.0045	mg/Kg	8260B
Xylenes, Total		0.19		0.0045	mg/Kg	8260B
Gasoline Range Organics (GRO)-C6-C10		2.1		1.2	mg/Kg	8015B
C22-C36		7.4	J	12	mg/Kg	8015D
Barium		430		0.95	mg/Kg	6010B
Cadmium		0.71		0.48	mg/Kg	6010B
Chromium		19	B	1.4	mg/Kg	6010B
Copper		11		1.9	mg/Kg	6010B
Lead		8.2		0.76	mg/Kg	6010B
Nickel		16		3.8	mg/Kg	6010B
Zinc		63		2.9	mg/Kg	6010B
Arsenic		7.7		0.58	mg/Kg	6020
Mercury		0.020		0.017	mg/Kg	7471A
Cr (III)		19		2.0	mg/Kg	7196A
<b><i>Soluble</i></b>						
pH adj. to 25 deg C-Soluble		9.30		0.0100	SU	9045C
Specific Conductance-Soluble		41		2.0	umhos/cm	9050A

## METHOD SUMMARY

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

Job Number: 280-5234-3

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: 280-5234-3

Method	Analyst	Analyst ID
SW846 8260B	Dobransky, Michael E	MD
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 7471A	Stoltz, Katie	KS
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: 280-5234-3

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-5234-11	E06-CUTTINGS-070810	Solid	07/08/2010 1145	07/10/2010 0945
280-5234-12	E06-BACK-070810	Solid	07/08/2010 1100	07/10/2010 0945

# **SAMPLE RESULTS**

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-CUTTINGS-070810**

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

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:	J9586.D
Dilution:	1.0		Initial Weight/Volume:	5.236 g
Date Analyzed:	07/16/2010 1532		Final Weight/Volume:	5 mL
Date Prepared:	07/16/2010 1532			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		0.0013	J	0.00045	0.0048
Ethylbenzene		ND		0.00064	0.0048
Toluene		0.0024	J	0.00066	0.0048
Xylenes, Total		ND		0.00058	0.0048

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84		58 - 140
Toluene-d8 (Surr)	107		80 - 126
4-Bromofluorobenzene (Surr)	138	X	76 - 127
Dibromofluoromethane (Surr)	91		75 - 121

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-BACK-070810**

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

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:	J9587.D
Dilution:	1.0		Initial Weight/Volume:	5.560 g
Date Analyzed:	07/16/2010 1554		Final Weight/Volume:	5 mL
Date Prepared:	07/16/2010 1554			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		ND		0.00042	0.0045
Ethylbenzene		0.0044	J	0.00060	0.0045
Toluene		0.0014	J	0.00062	0.0045
Xylenes, Total		0.19		0.00055	0.0045

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		58 - 140
Toluene-d8 (Surr)	103		80 - 126
4-Bromofluorobenzene (Surr)	130	X	76 - 127
Dibromofluoromethane (Surr)	94		75 - 121



**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-CUTTINGS-070810**

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

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:	B9399.D
Dilution:	1.0		Initial Weight/Volume:	30.5 g
Date Analyzed:	08/02/2010 1749		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		0.024	J	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		0.027	0.32
Dibenz(a,h)anthracene		ND		0.019	0.32
Fluoranthene		ND		0.035	0.32
Fluorene		0.024	J	0.018	0.32
Indeno[1,2,3-cd]pyrene		ND		0.022	0.32
Naphthalene		0.14	J	0.030	0.32
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		68		50 - 120	
Nitrobenzene-d5		61		50 - 120	
Terphenyl-d14		74		55 - 120	

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-BACK-070810**

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

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:	B9398.D
Dilution:	1.0		Initial Weight/Volume:	30.1 g
Date Analyzed:	08/02/2010 1729		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		0.012	0.33
Acenaphthene		ND		0.010	0.33
Anthracene		ND		0.017	0.33
Benzo[a]anthracene		ND		0.020	0.33
Benzo[b]fluoranthene		ND		0.026	0.33
Benzo[k]fluoranthene		ND		0.040	0.33
Benzo[a]pyrene		ND		0.020	0.33
Chrysene		ND		0.027	0.33
Dibenz(a,h)anthracene		ND		0.019	0.33
Fluoranthene		ND		0.036	0.33
Fluorene		ND		0.018	0.33
Indeno[1,2,3-cd]pyrene		ND		0.022	0.33
Naphthalene		ND		0.031	0.33

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	67		50 - 120
Nitrobenzene-d5	67		50 - 120
Terphenyl-d14	83		55 - 120

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-CUTTINGS-070810**

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

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:	10.13 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 0304		Injection Volume:	5 mL
Date Prepared:	07/13/2010 1107		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		11		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	104		77 - 123

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-BACK-070810**

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

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:	10.29 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 1124		Injection Volume:	5 mL
Date Prepared:	07/13/2010 1107		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Gasoline Range Organics (GRO)-C6-C10		2.1		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	86		77 - 123

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-CUTTINGS-070810**

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

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 0411		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		39		0.99	4.0
C22-C36		57		3.9	12

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	25	X	49 - 115

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-BACK-070810**

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

Client Matrix: Solid

Date Received: 07/10/2010 0945

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**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:	1.0		Final Weight/Volume:	1000 uL
Date Analyzed:	07/13/2010 0444		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		ND		0.99	4.0
C22-C36		7.4	J	3.9	12

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	69		49 - 115

**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-CUTTINGS-070810**

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

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		10		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 0119		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		2500		0.068	0.90
Cadmium		0.50		0.037	0.45
Chromium		19	B	0.052	1.4
Copper		17		0.20	1.8
Lead		10		0.24	0.72
Nickel		13		0.11	3.6
Selenium		0.89	J	0.77	1.2
Silver		ND		0.14	0.90
Zinc		49		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:	139SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.06 g
Date Analyzed:	07/23/2010 0201		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		7.3		0.048	0.57

**7471A Mercury**

Method:	7471A	Analysis Batch: 280-24299	Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-23901	Lab File ID:	100726AA2.txt
Dilution:	1.0		Initial Weight/Volume:	0.61 g
Date Analyzed:	07/26/2010 1240		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 0830			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.017		0.0054	0.017

## Analytical Data

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

Job Number: 280-5234-3

**Client Sample ID:** E06-CUTTINGS-070810

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

Client Matrix: Solid

Date Received: 07/10/2010 0945

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7471A Mercury



**Analytical Data**

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

Job Number: 280-5234-3

**Client Sample ID: E06-BACK-070810**

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

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:	1.05 g
Date Analyzed:	07/22/2010 0122		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		430		0.072	0.95
Cadmium		0.71		0.039	0.48
Chromium		19	B	0.055	1.4
Copper		11		0.21	1.9
Lead		8.2		0.26	0.76
Nickel		16		0.12	3.8
Selenium		ND		0.82	1.2
Silver		ND		0.15	0.95
Zinc		63		0.38	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:	142SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.04 g
Date Analyzed:	07/23/2010 0209		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		7.7		0.049	0.58

**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:	0.61 g
Date Analyzed:	07/19/2010 1623		Final Weight/Volume:	50 mL
Date Prepared:	07/19/2010 0840			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.020		0.0054	0.017

## Analytical Data

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

Job Number: 280-5234-3

**Client Sample ID:** E06-BACK-070810

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

Client Matrix: Solid

Date Received: 07/10/2010 0945

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7471A Mercury

**Analytical Data**

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

Job Number: 280-5234-3

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**General Chemistry****Client Sample ID: E06-CUTTINGS-070810**

Lab Sample ID: 280-5234-11

Date Sampled: 07/08/2010 1145

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 1342 (End) 07/16/2010 1342				DryWt Corrected: N	
Prep Batch: 500-89751		Date Prepared: 07/16/2010 1148					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	19		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24415		Date Analyzed: 07/27/2010 1509				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	10.1		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1303				DryWt Corrected: N	
Specific Conductance-Soluble	300		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 &amp; Gas, Inc. (USA)

Job Number: 280-5234-3

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**General Chemistry****Client Sample ID: E06-BACK-070810**

Lab Sample ID: 280-5234-12

Date Sampled: 07/08/2010 1100

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	ND		mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1342 (End) 07/16/2010 1343				DryWt Corrected: N	
Prep Batch: 500-89751		Date Prepared: 07/16/2010 1148					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	19		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24415		Date Analyzed: 07/27/2010 1509				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	9.30		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1234				DryWt Corrected: N	
Specific Conductance-Soluble	41		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: 280-5234-3

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		
	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
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.
	X	Surrogate is outside control limits
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.
General Chemistry		
	F	MS or MSD exceeds the control limits
	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: 280-5234-3

### QC Association Summary

Lab Sample ID	Client Sample ID	Report			Prep Batch
		Basis	Client Matrix	Method	
GC/MS VOA					
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	
280-5234-11	E06-CUTTINGS-070810	T	Solid	8260B	
280-5234-12	E06-BACK-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

### GC/MS Semi VOA

<b>Prep Batch: 280-22524</b>					
LCS 280-22524/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-22524/1-A	Method Blank	T	Solid	3550C	
280-5234-A-2-B MS	Matrix Spike	T	Solid	3550C	
280-5234-A-2-C MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-5234-11	E06-CUTTINGS-070810	T	Solid	3550C	
280-5234-12	E06-BACK-070810	T	Solid	3550C	
<b>Analysis Batch:280-25217</b>					
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-A-2-B MS	Matrix Spike	T	Solid	8270C	280-22524
280-5234-A-2-C MSD	Matrix Spike Duplicate	T	Solid	8270C	280-22524
280-5234-11	E06-CUTTINGS-070810	T	Solid	8270C	280-22524
280-5234-12	E06-BACK-070810	T	Solid	8270C	280-22524

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5234-3

### 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	
280-5234-11	E06-CUTTINGS-070810	T	Solid	5030B	
280-5234-12	E06-BACK-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
280-5234-11	E06-CUTTINGS-070810	T	Solid	8015B	280-22749
280-5234-12	E06-BACK-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					
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	
280-5234-11	E06-CUTTINGS-070810	T	Solid	3550C	
280-5234-12	E06-BACK-070810	T	Solid	3550C	
280-5234-12MS	Matrix Spike	T	Solid	3550C	
280-5234-12MSD	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
280-5234-11	E06-CUTTINGS-070810	T	Solid	8015D	280-22529
280-5234-12	E06-BACK-070810	T	Solid	8015D	280-22529
280-5234-12MS	Matrix Spike	T	Solid	8015D	280-22529
280-5234-12MSD	Matrix Spike Duplicate	T	Solid	8015D	280-22529

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## Quality Control Results

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

Job Number: 280-5234-3

### 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	
280-5234-12	E06-BACK-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-A-2-L MS	Matrix Spike	T	Solid	3050B	
280-5234-A-2-M MSD	Matrix Spike Duplicate	T	Solid	3050B	
280-5234-11	E06-CUTTINGS-070810	T	Solid	3050B	
280-5234-12	E06-BACK-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-A-2-O MS	Matrix Spike	T	Solid	3050B	
280-5234-A-2-P MSD	Matrix Spike Duplicate	T	Solid	3050B	
280-5234-11	E06-CUTTINGS-070810	T	Solid	3050B	
280-5234-12	E06-BACK-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
280-5234-12	E06-BACK-070810	T	Solid	7471A	280-23340
Prep Batch: 280-23560					
MB 280-23560/1-A	Method Blank	S	Solid	20B	
280-5234-11	E06-CUTTINGS-070810	S	Solid	20B	
280-5234-12	E06-BACK-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-A-2-O MS	Matrix Spike	T	Solid	6010B	280-23479
280-5234-A-2-P MSD	Matrix Spike Duplicate	T	Solid	6010B	280-23479
280-5234-11	E06-CUTTINGS-070810	T	Solid	6010B	280-23479
280-5234-12	E06-BACK-070810	T	Solid	6010B	280-23479

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## Quality Control Results

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

Job Number: 280-5234-3

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
Metals					
Prep Batch: 280-23901					
LCS 280-23901/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-23901/1-A	Method Blank	T	Solid	7471A	
280-5234-A-8-I MS	Matrix Spike	T	Solid	7471A	
280-5234-A-8-J MSD	Matrix Spike Duplicate	T	Solid	7471A	
280-5234-11	E06-CUTTINGS-070810	T	Solid	7471A	
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-A-2-L MS	Matrix Spike	T	Solid	6020	280-23465
280-5234-A-2-M MSD	Matrix Spike Duplicate	T	Solid	6020	280-23465
280-5234-11	E06-CUTTINGS-070810	T	Solid	6020	280-23465
280-5234-12	E06-BACK-070810	T	Solid	6020	280-23465
Analysis Batch:280-24007					
MB 280-23560/1-A	Method Blank	S	Solid	20B	280-23560
280-5234-11	E06-CUTTINGS-070810	S	Solid	20B	280-23560
280-5234-12	E06-BACK-070810	S	Solid	20B	280-23560
Analysis Batch:280-24299					
LCS 280-23901/2-A	Lab Control Sample	T	Solid	7471A	280-23901
MB 280-23901/1-A	Method Blank	T	Solid	7471A	280-23901
280-5234-A-8-I MS	Matrix Spike	T	Solid	7471A	280-23901
280-5234-A-8-J MSD	Matrix Spike Duplicate	T	Solid	7471A	280-23901
280-5234-11	E06-CUTTINGS-070810	T	Solid	7471A	280-23901

#### Report Basis

S = Soluble

T = Total

## Quality Control Results

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

Job Number: 280-5234-3

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
General Chemistry					
Prep Batch: 280-22705					
280-5234-A-2-F DU	Duplicate	S	Solid	DI Leach	
280-5234-A-4-C DU	Duplicate	S	Solid	DI Leach	
280-5234-11	E06-CUTTINGS-070810	S	Solid	DI Leach	
280-5234-12	E06-BACK-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-A-2-F DU	Duplicate	S	Solid	9045C	
280-5234-A-4-C DU	Duplicate	S	Solid	9045C	
280-5234-11	E06-CUTTINGS-070810	S	Solid	9045C	
280-5234-12	E06-BACK-070810	S	Solid	9045C	
Prep Batch: 280-23203					
MB 280-23203/1-A	Method Blank	S	Solid	DI Leach	
280-5234-A-2-H DU	Duplicate	S	Solid	DI Leach	
280-5234-11	E06-CUTTINGS-070810	S	Solid	DI Leach	
280-5234-12	E06-BACK-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-A-2-H DU	Duplicate	S	Solid	9050A	
280-5234-11	E06-CUTTINGS-070810	S	Solid	9050A	
280-5234-12	E06-BACK-070810	S	Solid	9050A	
Analysis Batch:280-24415					
MB 280-24415/1	Method Blank	T	Solid	7196A	
280-5234-11	E06-CUTTINGS-070810	T	Solid	7196A	
280-5234-12	E06-BACK-070810	T	Solid	7196A	
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-D-7-B MS	Matrix Spike	T	Solid	300_Prep	
280-5234-D-7-C MSD	Matrix Spike Duplicate	T	Solid	300_Prep	
280-5234-11	E06-CUTTINGS-070810	T	Solid	300_Prep	
280-5234-12	E06-BACK-070810	T	Solid	300_Prep	

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## Quality Control Results

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

Job Number: 280-5234-3

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:500-89762</b>					
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-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
280-5234-11	E06-CUTTINGS-070810	T	Solid	7196A	500-89751
280-5234-12	E06-BACK-070810	T	Solid	7196A	500-89751

#### Report Basis

S = Soluble

T = Total

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

Job Number: 280-5234-3

**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
280-5234-11	E06-CUTTINGS-0708 10	84	107	138X	91
280-5234-12	E06-BACK-070810	93	103	130X	94
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 &amp; Gas, Inc. (USA)

Job Number: 280-5234-3

**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
280-5234-11	E06-CUTTINGS-0708 10	68	61	74
280-5234-12	E06-BACK-070810	67	67	83
MB 280-22524/1-A		72	69	82
LCS 280-22524/2-A		81	79	89
280-5234-A-2-B MS		71	68	81
280-5234-A-2-C 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 &amp; Gas, Inc. (USA)

Job Number: 280-5234-3

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

Lab Sample ID	Client Sample ID	TFT1 %Rec
280-5234-11	E06-CUTTINGS-0708 10	104
280-5234-12	E06-BACK-070810	86
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: 280-5234-3

## Surrogate Recovery Report

### 8015D Diesel Range Organics (DRO)

#### Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH2 %Rec
280-5234-11	E06-CUTTINGS-0708 10	25X
280-5234-12	E06-BACK-070810	69
MB 280-22529/1-A		76
LCS 280-22529/2-A		75
280-5234-12 MS	E06-BACK-070810 MS	80
280-5234-12 MSD	E06-BACK-070810 MSD	78

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115



## Quality Control Results

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

Job Number: 280-5234-3

### Method Blank - Batch: 280-23407

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

### Method: 8260B Preparation: 5030B

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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

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

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

MS Lab Sample ID: 280-5234-A-2-B MS  
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-A-2-C MSD  
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: 280-5234-3

### Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-22524

Method: 8270C

Preparation: 3550C

MS Lab Sample ID: 280-5234-A-2-B MS

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-A-2-C MSD

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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### Method Blank - Batch: 280-22529

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

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

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

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

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

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: 280-5234-3

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

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

MS Lab Sample ID: 280-5234-12  
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: 280-5234-12  
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: 280-5234-12  
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: 280-5234-12  
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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### Matrix Spike/

### Matrix Spike Duplicate Recovery Report - Batch: 280-23479

Method: 6010B

Preparation: 3050B

MS Lab Sample ID: 280-5234-A-2-O MS  
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-A-2-P MSD  
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: 280-5234-3

### Matrix Spike/

**Matrix Spike Duplicate Recovery Report - Batch: 280-23479**

**Method: 6010B**

**Preparation: 3050B**

MS Lab Sample ID: 280-5234-A-2-O MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2010 0043

Date Prepared: 07/21/2010 0900

MSD Lab Sample ID: 280-5234-A-2-P MSD

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: 280-5234-3

### Method Blank - Batch: 280-23465

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

Method: 6020  
Preparation: 3050B

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

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

Method: 6020  
Preparation: 3050B

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-A-2-L MS  
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-A-2-M MSD  
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: 280-5234-3

### Matrix Spike/

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

**Method: 6020**

**Preparation: 3050B**

MS Lab Sample ID: 280-5234-A-2-L MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/23/2010 0128

Date Prepared: 07/21/2010 0900

MSD Lab Sample ID: 280-5234-A-2-M MSD

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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### 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: 280-5234-3

### Method Blank - Batch: 280-23901

Lab Sample ID: MB 280-23901/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/26/2010 1222  
Date Prepared: 07/26/2010 0830

Analysis Batch: 280-24299  
Prep Batch: 280-23901  
Units: mg/Kg

### Method: 7471A Preparation: 7471A

Instrument ID: MT\_033  
Lab File ID: 100726AA2.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 - Batch: 280-23901

Lab Sample ID: LCS 280-23901/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/26/2010 1224  
Date Prepared: 07/26/2010 0830

Analysis Batch: 280-24299  
Prep Batch: 280-23901  
Units: mg/Kg

### Method: 7471A Preparation: 7471A

Instrument ID: MT\_033  
Lab File ID: 100726AA2.txt  
Initial Weight/Volume: 0.60 g  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.462	111	87 - 111	

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-23901

### Method: 7471A Preparation: 7471A

MS Lab Sample ID: 280-5234-A-8-I MS  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/26/2010 1231  
Date Prepared: 07/26/2010 0830

Analysis Batch: 280-24299  
Prep Batch: 280-23901

Instrument ID: MT\_033  
Lab File ID: 100726AA2.txt  
Initial Weight/Volume: 0.66 g  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-5234-A-8-J MSD  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/26/2010 1233  
Date Prepared: 07/26/2010 0830

Analysis Batch: 280-24299  
Prep Batch: 280-23901

Instrument ID: MT\_033  
Lab File ID: 100726AA2.txt  
Initial Weight/Volume: 0.68 g  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	109	121	87 - 111	7	20		F

## Quality Control Results

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

Job Number: 280-5234-3

### Matrix Spike/

**Matrix Spike Duplicate Recovery Report - Batch: 280-23901**

**Method: 7471A**

**Preparation: 7471A**

MS Lab Sample ID: 280-5234-A-8-I MS

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/26/2010 1231

Date Prepared: 07/26/2010 0830

MSD Lab Sample ID: 280-5234-A-8-J MSD

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/26/2010 1233

Date Prepared: 07/26/2010 0830

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.013	J	0.379	0.368	0.427	0.457 F

## Quality Control Results

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

Job Number: 280-5234-3

### Method Blank - Batch: 280-24415

Lab Sample ID: MB 280-24415/1  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/27/2010 1509  
Date Prepared: N/A

Analysis Batch: 280-24415  
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: 280-5234-3

### 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: 280-5234-3

### 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

Units: mg/Kg

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/16/2010 1337

Date Prepared: 07/15/2010 1300

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: 280-5234-3

**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: 280-5234-3

**Laboratory Control/  
Laboratory Duplicate Data 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

Units: SU

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  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 07/13/2010 1249  
Date Prepared: N/A

Units: SU

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: 280-5234-3

### Duplicate - Batch: 280-22764

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

Lab Sample ID: 280-5234-A-2-F DU  
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-A-4-C DU  
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: 280-5234-3

### Method Blank - Batch: 280-23232

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

**Method: 9050A**  
**Preparation: N/A**

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

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

**Method: 9050A**  
**Preparation: N/A**

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: 280-5234-3

### 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-A-2-H DU  
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: 280-5234-3

### Laboratory Chronicle

Lab ID: 280-5234-11

Client ID: E06-CUTTINGS-070810

Sample Date/Time: 07/08/2010 11:45

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-11		280-23407		07/16/2010 15:32	1	TAL DEN	MD
A:8260B	280-5234-B-11		280-23407		07/16/2010 15:32	1	TAL DEN	MD
P:3550C	280-5234-A-11-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-11-A		280-25217	280-22524	08/02/2010 17:49	1	TAL DEN	DCK
P:5030B	280-5234-B-11-A		280-23436	280-22749	07/13/2010 11:07	1	TAL DEN	TEM
A:8015B	280-5234-B-11-A		280-23436	280-22749	07/15/2010 03:04	1	TAL DEN	TEM
P:3550C	280-5234-A-11-B		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-11-B		280-22885	280-22529	07/13/2010 04:11	1	TAL DEN	MRB
P:20B	280-5234-A-11-G		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	280-5234-A-11-G		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	280-5234-A-11-F		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-11-F		280-23824	280-23479	07/22/2010 01:19	1	TAL DEN	DW
P:3050B	280-5234-A-11-E		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-11-E		280-23997	280-23465	07/23/2010 02:01	1	TAL DEN	TEL
P:7471A	280-5234-A-11-H		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-11-H		280-24299	280-23901	07/26/2010 12:40	1	TAL DEN	KS
P:300_Prep	280-5234-D-11-A		500-89762	500-89751	07/16/2010 11:48	1	TAL CHI	KD
A:7196A	280-5234-D-11-A		500-89762	500-89751	07/16/2010 13:42	1	TAL CHI	KD
A:7196A	280-5234-A-11		280-24415		07/27/2010 15:09	1	TAL DEN	JMB
A:9045C	280-5234-A-11-C		280-22764		07/13/2010 13:03	1	TAL DEN	LMK
A:9050A	280-5234-A-11-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP



## Quality Control Results

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

Job Number: 280-5234-3

### Laboratory Chronicle

Lab ID: 280-5234-12

Client ID: E06-BACK-070810

Sample Date/Time: 07/08/2010 11:00

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-12		280-23407		07/16/2010 15:54	1	TAL DEN	MD
A:8260B	280-5234-C-12		280-23407		07/16/2010 15:54	1	TAL DEN	MD
P:3550C	280-5234-A-12-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-12-A		280-25217	280-22524	08/02/2010 17:29	1	TAL DEN	DCK
P:5030B	280-5234-C-12-A		280-23436	280-22749	07/13/2010 11:07	1	TAL DEN	TEM
A:8015B	280-5234-C-12-A		280-23436	280-22749	07/15/2010 11:24	1	TAL DEN	TEM
P:3550C	280-5234-A-12-B		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-12-B		280-22885	280-22529	07/13/2010 04:44	1	TAL DEN	MRB
P:20B	280-5234-A-12-J		280-24007	280-23560	07/20/2010 15:00	10	TAL DEN	JW
A:20B	280-5234-A-12-J		280-24007	280-23560	07/23/2010 10:46	10	TAL DEN	JKH
P:3050B	280-5234-A-12-I		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-12-I		280-23824	280-23479	07/22/2010 01:22	1	TAL DEN	DW
P:3050B	280-5234-A-12-H		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-12-H		280-23997	280-23465	07/23/2010 02:09	1	TAL DEN	TEL
P:7471A	280-5234-A-12-G		280-23489	280-23340	07/19/2010 08:40	1	TAL DEN	KS
A:7471A	280-5234-A-12-G		280-23489	280-23340	07/19/2010 16:23	1	TAL DEN	CGG
P:300_Prep	280-5234-D-12-A		500-89762	500-89751	07/16/2010 11:48	1	TAL CHI	KD
A:7196A	280-5234-D-12-A		500-89762	500-89751	07/16/2010 13:42	1	TAL CHI	KD
A:7196A	280-5234-A-12		280-24415		07/27/2010 15:09	1	TAL DEN	JMB
A:9045C	280-5234-A-12-E		280-22764		07/13/2010 12:34	1	TAL DEN	LMK
A:9050A	280-5234-A-12-F		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: 280-5234-12 MS

Client ID: E06-BACK-070810

Sample Date/Time: 07/08/2010 11:00

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-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

Lab ID: 280-5234-12 MSD

Client ID: E06-BACK-070810

Sample Date/Time: 07/08/2010 11:00

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-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

## Quality Control Results

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

Job Number: 280-5234-3

### 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 280-23407/6		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:7471A	MB 280-23901/1-A		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	MB 280-23901/1-A		280-24299	280-23901	07/26/2010 12:22	1	TAL DEN	KS
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 280-24415/1		280-24415		07/27/2010 15:09	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: 280-5234-3

### 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 280-23407/4		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:7471A	LCS 280-23901/2-A		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	LCS 280-23901/2-A		280-24299	280-23901	07/26/2010 12:24	1	TAL DEN	KS
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 280-23407/5		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: 280-5234-3

### Laboratory Chronicle

Lab ID: MS

Client ID: N/A

Sample Date/Time: 07/08/2010 14:45

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5251-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: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: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: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
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:7471A	280-5234-A-8-I MS		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-8-I MS		280-24299	280-23901	07/26/2010 12:31	1	TAL DEN	KS
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: 07/08/2010 14:45

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5251-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: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: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: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
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:7471A	280-5234-A-8-J MSD		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-8-J MSD		280-24299	280-23901	07/26/2010 12:33	1	TAL DEN	KS
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

## Quality Control Results

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

Job Number: 280-5234-3

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

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:9045C	280-5234-A-4-C DU		280-22764		07/13/2010 12:54	1	TAL DEN	LMK
A:9050A	280-5234-A-2-H DU		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

#### Lab References:

TAL CHI = TestAmerica Chicago

TAL DEN = TestAmerica Denver

Arvada, CO 80002  
phone 303.736.0100 fax 303.431.7171

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

[illegible]

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# **Constituents of Concern: Allowable Concentrations and Analytical Methods (COGCC Table 910-1)**

CONTAMINANT OF CONCERN	CONCENTRATIONS <sup>1</sup>	ANALYTICAL METHOD (SW846)
<i>Organic Compounds in Soil</i>		
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg	8015
Benzene	0.17 mg/kg <sup>2</sup>	8260B
Toluene	85 mg/kg <sup>2</sup>	8260B
Ethylbenzene	100 mg/kg <sup>2</sup>	8260B
Xylenes (total)	175 mg/kg <sup>2</sup>	8260B
Acenaphthene	1,000 mg/kg <sup>2</sup>	8270C
Anthracene	1,000 mg/kg <sup>2</sup>	8270C
Benzo(A)anthracene	0.22 mg/kg <sup>2</sup>	8270C
Benzo(B)fluoranthene	0.22 mg/kg <sup>2</sup>	8270C
Benzo(K)fluoranthene	2.2 mg/kg <sup>2</sup>	8270C
Benzo(A)pyrene	0.022 mg/kg <sup>2</sup>	8270C
Chrysene	22 mg/kg <sup>2</sup>	8270C
Dibenzo(A,H)anthracene	0.022 mg/kg <sup>2</sup>	8270C
Fluoranthene	1,000 mg/kg <sup>2</sup>	8270C
Fluorene	1,000 mg/kg <sup>2</sup>	8270C
Indeno(1,2,3,C,D)pyrene	0.22 mg/kg <sup>2</sup>	8270C
Naphthalene	23 mg/kg <sup>2</sup>	8270C
Pyrene	1,000 mg/kg <sup>2</sup>	8270C
<i>Inorganics in Soils</i>		
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background	9050
Sodium Adsorption Ratio (SAR)	<12 <sup>5</sup>	LADNR29B
pH	6-9	9045C
<i>Metals in Soils</i>		
Arsenic	0.39 mg/kg <sup>2</sup>	6010B
Barium	15,000 mg/kg <sup>2</sup>	6010B
Cadmium	70 mg/kg <sup>3,6</sup>	6010B
Chromium (III)	120,000 mg/kg <sup>2</sup>	6010B
Chromium (VI)	23 mg/kg <sup>2,6</sup>	6010B
Copper	3,100 mg/kg <sup>2</sup>	6010B
Lead (inorganic)	400 mg/kg <sup>2</sup>	6010B
Mercury	23 mg/kg <sup>2</sup>	6010B
Nickel (soluble salts)	1,600 mg/kg <sup>2,6</sup>	6010B
Selenium	390 mg/kg <sup>2,6</sup>	6010B
Silver	390 mg/kg <sup>2</sup>	6010BB
Zinc	23,000 mg/kg <sup>2,6</sup>	6010B
<i>Liquid Hydrocarbons in Soils and Ground Water</i>		
Liquid hydrocarbons including condensate and oil	Below detection level	Visual

COGCC recommends that the latest version of EPA SW-846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

1 Consideration shall be given to background levels in native soils and ground water.

2 Concentrations taken from CDPHE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007).

3 Concentrations taken from CDPHE-WQCC Regulation 41 - The Basic Standards for Ground Water.

4 For this range of standards, the first number in the range is a strictly health-based value, based on the WQCC's established methodology for human health-based standards. The second number in the range is a maximum contaminant level (MCL), established under the Federal Safe Drinking Water Act which has been 900-22 As of April 1, 2009 900-23 As of April 1, 2009

determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. The WQCC intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range except as follows: 1) where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 14, 2004 (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range or the ground water quality resulting from such release, whichever is more protective, and 2) whenever the WQCC has adopted alternative, site-specific standards for the chemical, the site-specific standards shall apply instead of these statewide standards.

5 Analysis by USDA Agricultural Handbook 60 method (20B) with soluble cations determined by method (2). Method (20B) = estimation of exchangeable sodium percentage and exchangeable potassium percentage from soluble cations. Method (2) = saturated paste method (note: each analysis requires a unique sample of at least 500 grams). If soils are saturated, USDA Agricultural Handbook 60 with soluble cations determined by method (3A) saturation extraction method.

6 The table value for these inorganic constituents is taken from the CDPHE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007). However, because these values are high, it is possible that site-specific geochemical conditions may exist that could allow these constituents to migrate into ground water at levels exceeding ground water standards even though the concentrations are below the table values. Therefore, when these constituents are present as contaminants, a secondary evaluation of their leachability must be performed to ensure ground water protection.

## Login Sample Receipt Check List

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

Job Number: 280-5234-3

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: 280-5234-3

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	