



**M34 496 (Location: 335927)**  
**Pit (Facility: 414440)**  
**Encana Oil & Gas (USA) Inc. (Operator: 100185)**

## **REPORT OF WORK COMPLETED**

- Form 27 (Doc: 2521864) (Rem: 5347)
- Form 19 (Spill Doc: 2521853)

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

Initial pit closure and characterization efforts were carried out in July, 2010. The pit was drained, and the liner and above liner solids were removed for offsite disposal. Below-liner soil conditions were assessed with field observations and each cell of the pit was characterized with a 5-point composite sample of the pit bottom submitted to a laboratory for analysis. Field observations noted staining and hydrocarbon odor in both cells of the pit, and sample results confirmed concentrations/levels above the allowable limits in COGCC Table 910-1 for TPH, Benzene, SAR, and arsenic. A Form 19 was submitted to document discovery of impacted soils beneath the liner. A composite sample of a drill cuttings stockpile visible onsite was also collected during initial sampling efforts.

Following identification of below-liner impacts, both pit cells were excavated to remove visually stained soils. Excavated material was blended and stockpiled on location for characterization and remediation if needed. Excavation efforts supported by sample collection were carried out until competent bedrock was encountered during the third excavation attempt, which prevented further vertical pursuit of soil impacts. After excavation efforts were completed, a composite sample of the material remaining on top of the bedrock was collected along with a grab sample from material remaining in a fracture visible in the bedrock.

The stockpiled material from the pit excavation was characterized with a composite sample and laid out to support bioremediation of hydrocarbon impacts. The initial characterization sample was above the allowable concentration, so the material was turned, and a follow up sample was collected.

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

## **NOTIFICATION OF COMPLETION**

The composite sample collected in the pit bottom was within the allowable limit in Table 910-1, but the grab sample from the fracture in the bedrock had a TPH result above the allowable limit. The presence of competent bedrock prevented further vertical excavation of impacted material.

Encana requests that the COGCC consider the following physical and temporal conditions associated with this pit closure project as an alternative to the allowable limit for TPH identified in Table 910-1:

- The grab sample in question was collected from unrecoverable material within a fracture in the bedrock. The sample is not representative of the bedrock or the geology beneath the bedrock, and only demonstrates that the removed material had hydrocarbon impacts.
- Encana has maintained an extensive water quality monitoring program in the North Parachute Properties for nearly a decade, which includes quarterly sampling at area springs and streams.

- During discussions about this project in 2010 a water quality monitoring plan was prepared and submitted by Encana and approved by the COGCC. Encana has nearly 4 years of sampling data since the closure of this pit without any water quality problems identified. See attached water quality monitoring plan from 2010 with map of sampling locations.

Arsenic concentrations in the pit bottom and stockpile, and drill cuttings stockpile are above the allowable concentration in Table 910-1, but are within the range of background values for this area. Based on these results and Footnote 1 to COGCC Table 910-1, Encana requests that the COGCC consider the higher range of background arsenic values as the allowable concentration for this constituent. With regards to the inorganic constituents (SAR, EC, pH), the material represented by these samples are within the former pit footprint, are greater than five feet below the current working surface, and will be at an even greater depth below the final reclaimed working surface where the constituents will have no effect on revegetation efforts.

After bedrock refusal, and receipt of laboratory results demonstrating compliance of the pit walls, the drill cuttings stockpile (approximately 900 cubic yards) and pit spoil stockpile were placed in the pit excavation.

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

#### **ATTACHMENTS**

1. Topographic Location Map
2. Laboratory Results Summary Table
3. Water Quality Monitoring Program (approved in 2010)
4. Laboratory Reports





# North Parachute Mountain

Garfield County, Colorado

0 3,200 6,400 Feet

1 inch = 3,000 feet



T004S-R097W

T005S-R097W

T004S-R096W

T005S-R096W

T004S-R095W

T005S-R095W

M34 Well Pad and Pit  
Location ID: 335927  
Facility IDs: 414440  
Rem #: 5347

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



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	Sample Date:	Sample Matrix	Matrix Notes	500		0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	<12)	(6-9)	0.39	15000	70	120000	23	3100	400	23	1600	390	390	23000	
				TPH (total volatile and extractable petroleum hydrocarbons)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3,C,D)pyrene	Naphthalene	Pyrene	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver
M34	07/08/10	Cuttings		140.3	5.3	135	0.00093	0.0019	ND	0.0013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.087	0.027	0.43	ND	10.9	4.4	1700	0.29	24	0.18	15	14	0.013	13	0.73	ND	46
M34	07/08/10	Pit	N pit bottom	3099	39	3060	ND	0.073	0.043	0.42	ND	0.065	ND	ND	ND	ND	ND	ND	0.15	ND	0.05	0.022	0.14	2	8.49	7.2	2200	0.12	29	ND	16	15	0.02	17	ND	ND	47
M34	07/08/10	Pit	S pit bottom	7670	40	7630	0.28	0.44	0.072	0.76	ND	0.14	ND	ND	ND	0.038	ND	ND	0.65	ND	0.36	0.045	1	ND	11.9	4.2	1900	0.67	18	0.069	14	13	0.017	11	0.92	ND	40
M34	08/17/10	Pit	N pit bottom	3000	BDL	3000																			5.9												
M34	08/17/10	Pit	pit spoil	1403.1	3.1	1400	BDL	BDL	0.0026	BDL															5.4												
M34	08/17/10	Pit	S pit bottom	2000	BDL	2000	BDL	BDL	BDL																3.6												
M34	09/13/10	Pit	N pit bottom	2600	BDL	2600																															
M34	09/13/10	Pit	S pit bottom	2502	2	2500																															
M34	09/28/10	Pit	pit spoil	3570	10	3560																															
M34	10/27/10	Pit	pit bottom composite	500	BDL	500																															
M34	10/27/10	Pit	pit bottom fracture - grab sample	2101	1	2100																															
M34	10/27/10	Pit	pit spoil	490.55	0.55	490																															



December 18, 2010

Carlos A. Luján, Ph.D.  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, CO 80203  
[carlos.lujan@state.co.us](mailto:carlos.lujan@state.co.us)  
720.272.2306

**RE: Proposed Water Quality Monitoring Points  
Condition of Approval for Pit Closures on Encana's E34, H04, H34, and M34**

**COGCC tracking/remediation numbers addressed in this letter.**

<b>Well Pad (Pit Location)</b>	<b>Form 27 Document Tracking #</b>	<b>Remediation Project #</b>
E34	32522041	5355
H04	2522039	5353
H34	2522025	5352
M34	2521864	5347

Dr. Luján:

This letter was prepared to present sampling locations added to Encana's existing water quality monitoring program for the North Parachute Mountain. These locations were selected to monitor all potentially affected streams, springs, and seeps in the area around the E34, H04, H34, and M34 well pads as agreed to by Encana in support of pit closure activities on these well pads.

These sampling locations are currently proposed and may be revised in the Spring of 2011 during the initial sampling event for these locations. Due to typical snowpack at this elevation, the locations identified in this letter will be sampled semiannually (Spring and Fall) for the attached analytical suite. Laboratory results will be kept on file at Encana's Parachute Field Office, and will be provided to the COGCC upon request, or upon discovery of water quality issues during semiannual sampling events.

If you have any questions about this project, or the information presented here, please don't hesitate to contact me at [christopher.hines@encana.com](mailto:christopher.hines@encana.com) or 970.261.1127.

Regards,

Christopher C. Hines  
*Natural Resources Specialist*  
*Contract Environmental Field Coordinator*

**Attachments:**

- Table of Proposed Water Quality Monitoring Locations
- Topographic Map of Proposed Water Quality Monitoring Locations
- Water Quality Analytical Suite

**Encana Oil & Gas (USA) Inc.**  
2717 County Road 215, Suite 100  
Parachute, Colorado  
United States 81635  
T 970.285.2600  
F 970.285.2705  
[www.encana.com](http://www.encana.com)

December 18, 2010



Sample ID	Sample Type	Location Description / Notes
ENPR4SP	Spring	Known spring location in unnamed intermittent tributary to West Fork Parachute Creek southwest of project locations.
ENPR22ST	Stream	Sampling point on West Fork Parachute Creek downstream from unnamed intermittent tributaries southeast and southwest of the project locations.
ENPR1WW	Water Well	Water well in the valley bottom of the Dry Fork of Stewart Gulch, north of the project locations.
ENPR23ST	Stream	Sampling point along the Dry Fork of Stewart Gulch, north of the project locations. As this stream is known to be intermittent, this location may not be viable in the Fall.
ENPR29SP	Spring	Spring along the East Fork of Stewart Gulch, north of the project locations.
East Stewart Spring	Spring	Spring along the East Fork of Stewart Gulch, north of the project locations. This sampling location was inherited from ConocoPhillips, and may undergo a name change as it is incorporated into Encana's monitoring program.
ENPR24ST	Stream	Sampling point along the East Fork of Stewart Gulch, north of the project locations.
ENPR30SP	Spring	Spring location along an unnamed intermittent tributary to Davis Gulch, east of the project locations.
ENPR25ST	Stream	Sampling point along Davis Gulch, east of the project locations.

**Encana Oil & Gas (USA) Inc.**

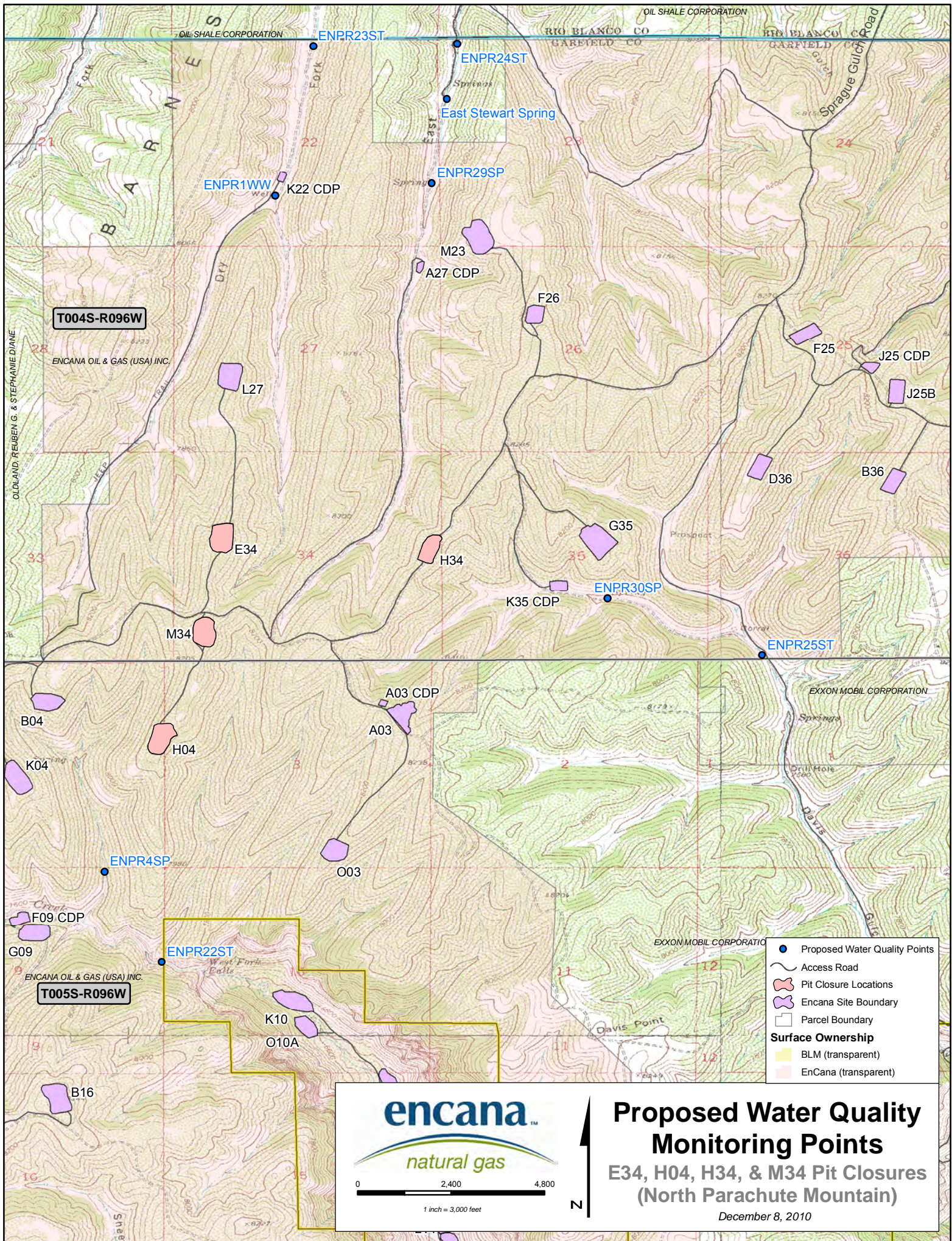
2717 County Road 215, Suite 100  
Parachute, Colorado  
United States 81635

t 970.285.2600

f 970.285.2705

[www.encana.com](http://www.encana.com)







Laboratory Analysis	Method
---------------------	--------

Methane	<b>RSK-175</b>
---------	----------------

Sulfide	
---------	--

MTBE	(Methyl-tert-butyl ether)	<b>8260B</b>
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BTEX -	<i>Benzene</i>	<b>8260B</b>
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	<i>Toluene</i>	<b>8260B</b>
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	<i>ethylbenzene</i>	<b>8260B</b>
--	---------------------	--------------

	<i>xylenes</i>	<b>8260B</b>
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Ammonia-N	
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Anions -	<i>Bromide</i>
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	<i>Chloride</i>
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	<i>Fluoride</i>
--	-----------------

	<i>Nitrate</i>
--	----------------

	<i>Nitrite</i>
--	----------------

	<i>Sulfate</i>
--	----------------

pH	
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Conductivity	
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TDS	(Total Dissolved Solids)
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Total Alkalinity	
------------------	--

	<i>Bicarbonate</i>
--	--------------------

	<i>Carbonate</i>
--	------------------

Dissolved Metals -	<i>Arsenic</i>
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	<i>Barium</i>
--	---------------

	<i>Cadmimum</i>
--	-----------------

	<i>Chromium</i>
--	-----------------

	<i>Copper</i>
--	---------------

	<i>Lead</i>
--	-------------

	<i>Silver</i>
--	---------------

	<i>Calcium</i>
--	----------------

	<i>Iron</i>
--	-------------

	<i>Potassium</i>
--	------------------

	<i>Magnesium</i>
--	------------------

	<i>Manganese</i>
--	------------------

	<i>Sodium</i>
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	<i>Selenium</i>
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## ANALYTICAL REPORT

Job Number: 280-5234-2

Job Description: M34 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 3:53 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: M34 CoP Diligence**

**Report Number: 280-5234-2**

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

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

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

### **RECEIPT**

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

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

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

Samples M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/15/2010 and 07/16/2010.

Sample M34-NE BACK-070810 (280-5234-7) exhibited a surrogate recovery above the control limits for 4-bromofluorobenzene. Sample M34-S. PIT BOTTOM-070810 (280-5234-10) exhibited a surrogate recovery below the control limits for dibromofluoromethane. The surrogate failures were due to matrix interferences.

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

The MS/MSD associated with analytical batch 23407 was performed on an unrelated sample and exhibited an RPD value above the control limits for ethylbenzene. The acceptable 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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 associated with analytical batch 23436 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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.

Samples M34-N. PIT BOTTOM-070810 (280-5234-9)[5X] and M34-S. PIT BOTTOM-070810 (280-5234-10)[20X] required dilution prior to analysis due to the abundance of target analytes. The reporting limits have been adjusted accordingly. Additionally the surrogate recoveries were below the control limits due to the dilutions performed.

No other difficulties were encountered during the DRO analyses.

All other quality control parameters were within the acceptance limits.

#### **SODIUM ABSORPTION RATIO**

Samples M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/21/2010 and analyzed on 07/22/2010.

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

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 M34-SE BACK-070810 (280-5234-6), M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 07/26/2010.

The MS/MSD was performed on sample M34-CUTTINGS-070810MSD (280-5234-8) and exhibited an RPD value above the control limits and a percent recovery in the MSD 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 7196A. The samples were prepared on 07/15/2010 and analyzed on 07/16/2010.

The MS/MSD was performed on sample M34-NE BACK-070810MSD (280-5234-7) 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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 M34-NE BACK-070810 (280-5234-7), M34-CUTTINGS-070810 (280-5234-8), M34-N. PIT BOTTOM-070810 (280-5234-9) and M34-S. PIT BOTTOM-070810 (280-5234-10) 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: 280-5234-2

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>280-5234-6</b>	<b>M34-SE BACK-070810</b>					
Arsenic		3.8		0.55	mg/Kg	6020
<b>280-5234-7</b>	<b>M34-NE BACK-070810</b>					
Gasoline Range Organics (GRO)-C6-C10		0.82	J	1.2	mg/Kg	8015B
C10-C22		1.2	J	4.0	mg/Kg	8015D
C22-C36		23		12	mg/Kg	8015D
Barium		510		0.94	mg/Kg	6010B
Cadmium		0.082	J	0.47	mg/Kg	6010B
Chromium		40	B	1.4	mg/Kg	6010B
Copper		12		1.9	mg/Kg	6010B
Lead		12		0.75	mg/Kg	6010B
Nickel		18		3.8	mg/Kg	6010B
Zinc		41		2.8	mg/Kg	6010B
Arsenic		3.1		0.57	mg/Kg	6020
Mercury		0.0075	J	0.016	mg/Kg	7471A
Cr (III)		40		2.0	mg/Kg	7196A
<b><i>Soluble</i></b>						
pH adj. to 25 deg C-Soluble		6.72		0.0100	SU	9045C
Specific Conductance-Soluble		19		2.0	umhos/cm	9050A

## EXECUTIVE SUMMARY - Detections

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

Job Number: 280-5234-2

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>280-5234-8</b>	<b>M34-CUTTINGS-070810</b>					
Benzene		0.00093	J	0.0050	mg/Kg	8260B
Toluene		0.0019	J	0.0050	mg/Kg	8260B
Xylenes, Total		0.0013	J	0.0050	mg/Kg	8260B
Pyrene		0.027	J	0.32	mg/Kg	8270C
Naphthalene		0.087	J	0.32	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		5.3		1.2	mg/Kg	8015B
C10-C22		83		4.0	mg/Kg	8015D
C22-C36		52		12	mg/Kg	8015D
Barium		1700		0.84	mg/Kg	6010B
Cadmium		0.29	J	0.42	mg/Kg	6010B
Chromium		24	B	1.3	mg/Kg	6010B
Copper		15		1.7	mg/Kg	6010B
Lead		14		0.67	mg/Kg	6010B
Nickel		13		3.4	mg/Kg	6010B
Selenium		0.73	J	1.1	mg/Kg	6010B
Zinc		46		2.5	mg/Kg	6010B
Arsenic		4.4		0.57	mg/Kg	6020
Mercury		0.013	J	0.016	mg/Kg	7471A
Cr (III)		24		2.0	mg/Kg	7196A
Chromium, hexavalent		0.18		0.099	mg/Kg	7196A
<b><i>Soluble</i></b>						
pH adj. to 25 deg C-Soluble		10.9		0.0100	SU	9045C
Specific Conductance-Soluble		430		2.0	umhos/cm	9050A



## EXECUTIVE SUMMARY - Detections

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

Job Number: 280-5234-2

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>280-5234-9</b>	<b>M34-N. PIT BOTTOM-070810</b>					
Ethylbenzene		43	J	250	ug/Kg	8260B
Toluene		73	J	250	ug/Kg	8260B
Xylenes, Total		420		250	ug/Kg	8260B
Pyrene		0.022	J	0.31	mg/Kg	8270C
Anthracene		0.065	J	0.31	mg/Kg	8270C
Fluorene		0.15	J	0.31	mg/Kg	8270C
Naphthalene		0.050	J	0.31	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		39		1.2	mg/Kg	8015B
C10-C22		2600		20	mg/Kg	8015D
C22-C36		460		59	mg/Kg	8015D
Barium		2200		0.98	mg/Kg	6010B
Cadmium		0.12	J	0.49	mg/Kg	6010B
Chromium		29	B	1.5	mg/Kg	6010B
Copper		16		2.0	mg/Kg	6010B
Lead		15		0.78	mg/Kg	6010B
Nickel		17		3.9	mg/Kg	6010B
Zinc		47		2.9	mg/Kg	6010B
Arsenic		7.2		0.54	mg/Kg	6020
Mercury		0.020		0.016	mg/Kg	7471A
Cr (III)		29		2.0	mg/Kg	7196A
<b><i>Soluble</i></b>						
Sodium Adsorption Ratio		2.0		0.12	No Unit	20B
pH adj. to 25 deg C-Soluble		8.49		0.0100	SU	9045C
Specific Conductance-Soluble		140		2.0	umhos/cm	9050A

## EXECUTIVE SUMMARY - Detections

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

Job Number: 280-5234-2

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>280-5234-10</b>	<b>M34-S. PIT BOTTOM-070810</b>				
Benzene		280	250	ug/Kg	8260B
Ethylbenzene		72 J	250	ug/Kg	8260B
Toluene		440	250	ug/Kg	8260B
Xylenes, Total		760	250	ug/Kg	8260B
Pyrene		0.045 J	0.31	mg/Kg	8270C
Anthracene		0.14 J	0.31	mg/Kg	8270C
Chrysene		0.038 J	0.31	mg/Kg	8270C
Fluorene		0.65	0.31	mg/Kg	8270C
Naphthalene		0.36	0.31	mg/Kg	8270C
Gasoline Range Organics (GRO)-C6-C10		40	1.2	mg/Kg	8015B
C10-C22		6900	79	mg/Kg	8015D
C22-C36		730	240	mg/Kg	8015D
Barium		1900	0.90	mg/Kg	6010B
Cadmium		0.67	0.45	mg/Kg	6010B
Chromium		18 B	1.4	mg/Kg	6010B
Copper		14	1.8	mg/Kg	6010B
Lead		13	0.72	mg/Kg	6010B
Nickel		11	3.6	mg/Kg	6010B
Selenium		0.92 J	1.2	mg/Kg	6010B
Zinc		40	2.7	mg/Kg	6010B
Arsenic		4.2	0.57	mg/Kg	6020
Mercury		0.017	0.015	mg/Kg	7471A
Cr (III)		18	2.0	mg/Kg	7196A
Chromium, hexavalent		0.069 J	0.097	mg/Kg	7196A
<b><i>Soluble</i></b>					
pH adj. to 25 deg C-Soluble		11.9	0.0100	SU	9045C
Specific Conductance-Soluble		1000	2.0	umhos/cm	9050A



## METHOD SUMMARY

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

Job Number: 280-5234-2

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: 280-5234-2

Method	Analyst	Analyst ID
SW846 8260B	Dobransky, Michael E	MD
SW846 8260B	Zhou, Huaqing	HZ
SW846 8270C	Kiekel, Daniel C	DCK
SW846 8015B	Moore, Tegan E	TEM
SW846 8015D	Birdsell, Matthew R	MRB
USDA 20B	Wells, David	DW
SW846 6010B	Wells, David	DW
SW846 6020	Lill, Thomas E	TEL
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: 280-5234-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-5234-6	M34-SE BACK-070810	Solid	07/08/2010 1450	07/10/2010 0945
280-5234-7	M34-NE BACK-070810	Solid	07/08/2010 1500	07/10/2010 0945
280-5234-8	M34-CUTTINGS-070810	Solid	07/08/2010 1615	07/10/2010 0945
280-5234-9	M34-N. PIT BOTTOM-070810	Solid	07/08/2010 1545	07/10/2010 0945
280-5234-10	M34-S. PIT BOTTOM-070810	Solid	07/08/2010 1520	07/10/2010 0945



# **SAMPLE RESULTS**

**Analytical Data**

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

Job Number: 280-5234-2

Client Sample ID: M34-NE BACK-070810

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

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:	J9584.D
Dilution:	1.0		Initial Weight/Volume:	5.860 g
Date Analyzed:	07/16/2010 1447		Final Weight/Volume:	5 mL
Date Prepared:	07/16/2010 1447			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		ND		0.00040	0.0043
Ethylbenzene		ND		0.00057	0.0043
Toluene		ND		0.00059	0.0043
Xylenes, Total		ND		0.00052	0.0043

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	82		58 - 140
Toluene-d8 (Surr)	107		80 - 126
4-Bromofluorobenzene (Surr)	134	X	76 - 127
Dibromofluoromethane (Surr)	91		75 - 121

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-CUTTINGS-070810**

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

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:	J9585.D
Dilution:	1.0		Initial Weight/Volume:	5.048 g
Date Analyzed:	07/16/2010 1509		Final Weight/Volume:	5 mL
Date Prepared:	07/16/2010 1509			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Benzene		0.00093	J	0.00047	0.0050
Ethylbenzene		ND		0.00066	0.0050
Toluene		0.0019	J	0.00068	0.0050
Xylenes, Total		0.0013	J	0.00060	0.0050

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	127		76 - 127
Dibromofluoromethane (Surr)	81		75 - 121



**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID:** M34-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

Client Matrix: Solid

Date Received: 07/10/2010 0945

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

Method:	8260B	Analysis Batch: 280-23266	Instrument ID:	MSV_P
Preparation:	5030B	Prep Batch: 280-22953	Lab File ID:	P9532.D
Dilution:	1.0		Initial Weight/Volume:	4.938 g
Date Analyzed:	07/15/2010 1354		Final Weight/Volume:	1000 mL
Date Prepared:	07/14/2010 1512			

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Benzene		ND		46	250
Ethylbenzene		43	J	34	250
Toluene		73	J	39	250
Xylenes, Total		420		35	250

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	66		50 - 139
Toluene-d8 (Surr)	81		68 - 143
4-Bromofluorobenzene (Surr)	84		62 - 133
Dibromofluoromethane (Surr)	71		60 - 133

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-S. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

Client Matrix: Solid

Date Received: 07/10/2010 0945

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

Method:	8260B	Analysis Batch: 280-23266	Instrument ID:	MSV_P
Preparation:	5030B	Prep Batch: 280-22953	Lab File ID:	P9533.D
Dilution:	1.0		Initial Weight/Volume:	4.927 g
Date Analyzed:	07/15/2010 1414		Final Weight/Volume:	1000 mL
Date Prepared:	07/14/2010 1512			

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Benzene		280		46	250
Ethylbenzene		72	J	35	250
Toluene		440		40	250
Xylenes, Total		760		36	250

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	62		50 - 139
Toluene-d8 (Surr)	72		68 - 143
4-Bromofluorobenzene (Surr)	77		62 - 133
Dibromofluoromethane (Surr)	15	X	60 - 133

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-NE BACK-070810**

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

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:	B9394.D
Dilution:	1.0		Initial Weight/Volume:	30.5 g
Date Analyzed:	08/02/2010 1608		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	0.32
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		ND		0.018	0.32
Indeno[1,2,3-cd]pyrene		ND		0.022	0.32
Naphthalene		ND		0.030	0.32

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		50 - 120
Nitrobenzene-d5	66		50 - 120
Terphenyl-d14	79		55 - 120



**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-CUTTINGS-070810**

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

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:	B9395.D
Dilution:	1.0		Initial Weight/Volume:	30.8 g
Date Analyzed:	08/02/2010 1629		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		0.027	J	0.012	0.32
Acenaphthene		ND		0.010	0.32
Anthracene		ND		0.017	0.32
Benzo[a]anthracene		ND		0.019	0.32
Benzo[b]fluoranthene		ND		0.026	0.32
Benzo[k]fluoranthene		ND		0.039	0.32
Benzo[a]pyrene		ND		0.019	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		0.087	J	0.030	0.32
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		70		50 - 120	
Nitrobenzene-d5		63		50 - 120	
Terphenyl-d14		78		55 - 120	

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-N. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

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:	B9396.D
Dilution:	1.0		Initial Weight/Volume:	32.4 g
Date Analyzed:	08/02/2010 1649		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		0.022	J	0.011	0.31
Acenaphthene		ND		0.0095	0.31
Anthracene		0.065	J	0.016	0.31
Benzo[a]anthracene		ND		0.019	0.31
Benzo[b]fluoranthene		ND		0.024	0.31
Benzo[k]fluoranthene		ND		0.037	0.31
Benzo[a]pyrene		ND		0.019	0.31
Chrysene		ND		0.025	0.31
Dibenz(a,h)anthracene		ND		0.018	0.31
Fluoranthene		ND		0.033	0.31
Fluorene		0.15	J	0.017	0.31
Indeno[1,2,3-cd]pyrene		ND		0.020	0.31
Naphthalene		0.050	J	0.029	0.31
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		72		50 - 120	
Nitrobenzene-d5		79		50 - 120	
Terphenyl-d14		76		55 - 120	

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-S. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

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:	B9397.D
Dilution:	1.0		Initial Weight/Volume:	31.9 g
Date Analyzed:	08/02/2010 1709		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		0.045	J	0.011	0.31
Acenaphthene		ND		0.0097	0.31
Anthracene		0.14	J	0.016	0.31
Benzo[a]anthracene		ND		0.019	0.31
Benzo[b]fluoranthene		ND		0.025	0.31
Benzo[k]fluoranthene		ND		0.038	0.31
Benzo[a]pyrene		ND		0.019	0.31
Chrysene		0.038	J	0.025	0.31
Dibenz(a,h)anthracene		ND		0.018	0.31
Fluoranthene		ND		0.034	0.31
Fluorene		0.65		0.017	0.31
Indeno[1,2,3-cd]pyrene		ND		0.021	0.31
Naphthalene		0.36		0.029	0.31
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		79		50 - 120	
Nitrobenzene-d5		85		50 - 120	
Terphenyl-d14		87		55 - 120	



**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-NE BACK-070810**

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

Client Matrix: Solid

Date Received: 07/10/2010 0945

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

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.03 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 0035		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		0.82	J	0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	78		77 - 123

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-CUTTINGS-070810**

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

Client Matrix: Solid

Date Received: 07/10/2010 0945

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

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.18 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 0112		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		5.3		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	83		77 - 123

## Analytical Data

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

Job Number: 280-5234-2

Client Sample ID: M34-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

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:	10.24 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 0150		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		39		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	82		77 - 123

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID:** M34-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

Client Matrix: Solid

Date Received: 07/10/2010 0945

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

Method:	8015B	Analysis Batch: 280-23436	Instrument ID:	GCV_L
Preparation:	5030B	Prep Batch: 280-22749	Initial Weight/Volume:	10.02 g
Dilution:	1.0		Final Weight/Volume:	500 mL
Date Analyzed:	07/15/2010 0227		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		40		0.32	1.2

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	84		77 - 123



**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-NE BACK-070810**

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

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 0054		Injection Volume:	1 uL
Date Prepared:	07/11/2010 1210		Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
C10-C22		1.2	J	0.99	4.0
C22-C36		23		3.9	12

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	70		49 - 115

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-CUTTINGS-070810**

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

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 0127		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		83		0.99	4.0
C22-C36		52		3.9	12

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	56		49 - 115

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-N. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

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:	30.5 g
Dilution:	5.0		Final Weight/Volume:	1000 uL
Date Analyzed:	07/13/2010 1916		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		2600		4.9	20
C22-C36		460		19	59

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

## Analytical Data

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

Job Number: 280-5234-2

Client Sample ID: M34-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

Client Matrix: Solid

Date Received: 07/10/2010 0945

### 8015D Diesel Range Organics (DRO)

Method:	8015D	Analysis Batch: 280-22885	Instrument ID:	GCS_U2
Preparation:	3550C	Prep Batch: 280-22529	Initial Weight/Volume:	30.2 g
Dilution:	20		Final Weight/Volume:	1000 uL
Date Analyzed:	07/13/2010 1949		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		6900		20	79
C22-C36		730		78	240
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		0	D	49 - 115	



## Analytical Data

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

Job Number: 280-5234-2

Client Sample ID: M34-SE BACK-070810

Lab Sample ID: 280-5234-6

Date Sampled: 07/08/2010 1450

Client Matrix: Solid

Date Received: 07/10/2010 0945

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### 6020 Metals (ICP/MS)

Method: 6020

Analysis Batch: 280-23997

Instrument ID: MT\_024

Preparation: 3050B

Prep Batch: 280-23465

Lab File ID: 134SMPL.D

Dilution: 1.0

Initial Weight/Volume: 1.09 g

Date Analyzed: 07/23/2010 0147

Final Weight/Volume: 100 mL

Date Prepared: 07/21/2010 0900

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		3.8		0.046	0.55

**Analytical Data**

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

Job Number: 280-5234-2

**Client Sample ID: M34-NE BACK-070810**

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

Client Matrix: Solid

Date Received: 07/10/2010 0945

**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 1806		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 2300			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		ND		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:	1.06 g
Date Analyzed:	07/22/2010 0058		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		510		0.072	0.94
Cadmium		0.082	J	0.039	0.47
Chromium		40	B	0.055	1.4
Copper		12		0.20	1.9
Lead		12		0.25	0.75
Nickel		18		0.12	3.8
Selenium		ND		0.81	1.2
Silver		ND		0.15	0.94
Zinc		41		0.38	2.8

**6020 Metals (ICP/MS)**

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	135SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.05 g
Date Analyzed:	07/23/2010 0150		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		3.1		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:	0.62 g
Date Analyzed:	07/26/2010 1226		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 0830			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0075	J	0.0054	0.016

## Analytical Data

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

Job Number: 280-5234-2

**Client Sample ID:** M34-NE BACK-070810

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

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: 280-5234-2

**Client Sample ID: M34-CUTTINGS-070810**

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

Client Matrix: Solid

Date Received: 07/10/2010 0945

**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 1809		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 2300			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		ND		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:	1.19 g
Date Analyzed:	07/22/2010 0111		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		1700		0.064	0.84
Cadmium		0.29	J	0.034	0.42
Chromium		24	B	0.049	1.3
Copper		15		0.18	1.7
Lead		14		0.23	0.67
Nickel		13		0.10	3.4
Selenium		0.73	J	0.72	1.1
Silver		ND		0.13	0.84
Zinc		46		0.33	2.5

**6020 Metals (ICP/MS)**

Method:	6020	Analysis Batch: 280-23997	Instrument ID:	MT_024
Preparation:	3050B	Prep Batch: 280-23465	Lab File ID:	136SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.05 g
Date Analyzed:	07/23/2010 0153		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		4.4		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:	0.65 g
Date Analyzed:	07/26/2010 1229		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 0830			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.013	J	0.0051	0.016



## Analytical Data

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

Job Number: 280-5234-2

**Client Sample ID:** M34-CUTTINGS-070810

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

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: 280-5234-2

**Client Sample ID: M34-N. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

Client Matrix: Solid

Date Received: 07/10/2010 0945

**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 1811		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 2300			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		2.0		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 0113		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		2200		0.075	0.98
Cadmium		0.12	J	0.040	0.49
Chromium		29	B	0.057	1.5
Copper		16		0.21	2.0
Lead		15		0.26	0.78
Nickel		17		0.12	3.9
Selenium		ND		0.84	1.3
Silver		ND		0.16	0.98
Zinc		47		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:	137SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.12 g
Date Analyzed:	07/23/2010 0156		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		7.2		0.045	0.54

**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:	0.64 g
Date Analyzed:	07/26/2010 1236		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 0830			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.020		0.0052	0.016

## Analytical Data

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

Job Number: 280-5234-2

**Client Sample ID:** M34-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

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: 280-5234-2

**Client Sample ID:** M34-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

Client Matrix: Solid

Date Received: 07/10/2010 0945

**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 1814		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 2300			

Analyte	DryWt Corrected: N	Result (No Unit)	Qualifier	RL	RL
Sodium Adsorption Ratio		ND		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:	1.11 g
Date Analyzed:	07/22/2010 0116		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		1900		0.068	0.90
Cadmium		0.67		0.037	0.45
Chromium		18	B	0.052	1.4
Copper		14		0.20	1.8
Lead		13		0.24	0.72
Nickel		11		0.11	3.6
Selenium		0.92	J	0.77	1.2
Silver		ND		0.14	0.90
Zinc		40		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:	138SMPL.D
Dilution:	1.0		Initial Weight/Volume:	1.05 g
Date Analyzed:	07/23/2010 0158		Final Weight/Volume:	100 mL
Date Prepared:	07/21/2010 0900			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		4.2		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:	0.68 g
Date Analyzed:	07/26/2010 1238		Final Weight/Volume:	50 mL
Date Prepared:	07/26/2010 0830			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.017		0.0049	0.015



## Analytical Data

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

Job Number: 280-5234-2

**Client Sample ID:** M34-S. PIT BOTTOM-070810

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

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: 280-5234-2

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**General Chemistry****Client Sample ID: M34-NE BACK-070810**

Lab Sample ID: 280-5234-7

Date Sampled: 07/08/2010 1500

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	ND		mg/Kg	0.020	0.10	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1336 (End) 07/16/2010 1337				DryWt Corrected: N	
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	40		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24413		Date Analyzed: 07/27/2010 1505				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	6.72		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1226				DryWt Corrected: N	
Specific Conductance-Soluble	19		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: 280-5234-2

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**General Chemistry****Client Sample ID: M34-CUTTINGS-070810**

Lab Sample ID: 280-5234-8

Date Sampled: 07/08/2010 1615

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.18		mg/Kg	0.020	0.099	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1338 (End) 07/16/2010 1339					DryWt Corrected: N
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	24		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24413		Date Analyzed: 07/27/2010 1505					DryWt Corrected: N
pH adj. to 25 deg C-Soluble	10.9		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1259					DryWt Corrected: N
Specific Conductance-Soluble	430		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: 280-5234-2

**General Chemistry****Client Sample ID:** M34-N. PIT BOTTOM-070810

Lab Sample ID: 280-5234-9

Date Sampled: 07/08/2010 1545

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 1339 (End) 07/16/2010 1340					DryWt Corrected: N
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	29		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24413		Date Analyzed: 07/27/2010 1505					DryWt Corrected: N
pH adj. to 25 deg C-Soluble	8.49		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1230					DryWt Corrected: N
Specific Conductance-Soluble	140		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: 280-5234-2

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**General Chemistry****Client Sample ID: M34-S. PIT BOTTOM-070810**

Lab Sample ID: 280-5234-10

Date Sampled: 07/08/2010 1520

Client Matrix: Solid

Date Received: 07/10/2010 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chromium, hexavalent	0.069	J	mg/Kg	0.019	0.097	1.0	7196A
Analysis Batch: 500-89762		Date Analyzed (Start): 07/16/2010 1340 (End) 07/16/2010 1340				DryWt Corrected: N	
Prep Batch: 500-89751		Date Prepared: 07/15/2010 1300					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cr (III)	18		mg/Kg	2.0	2.0	1.0	7196A
Analysis Batch: 280-24413		Date Analyzed: 07/27/2010 1505				DryWt Corrected: N	
pH adj. to 25 deg C-Soluble	11.9		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-22764		Date Analyzed: 07/13/2010 1301				DryWt Corrected: N	
Specific Conductance-Soluble	1000		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: 280-5234-2

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
	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		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
Metals		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



## DATA REPORTING QUALIFIERS

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

Job Number: 280-5234-2

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

# **QUALITY CONTROL RESULTS**

## Quality Control Results

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

Job Number: 280-5234-2

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS VOA					
Prep Batch: 280-22953					
LCS 280-22953/2-A	Lab Control Sample	T	Solid	5030B	
LCSD 280-22953/3-A	Lab Control Sample Duplicate	T	Solid	5030B	
MB 280-22953/1-A	Method Blank	T	Solid	5030B	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	5030B	
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	5030B	
280-5287-C-1-B MS	Matrix Spike	T	Solid	5030B	
280-5287-C-1-C MSD	Matrix Spike Duplicate	T	Solid	5030B	
Analysis Batch:280-23266					
LCS 280-22953/2-A	Lab Control Sample	T	Solid	8260B	280-22953
LCSD 280-22953/3-A	Lab Control Sample Duplicate	T	Solid	8260B	280-22953
MB 280-22953/1-A	Method Blank	T	Solid	8260B	280-22953
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	8260B	280-22953
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	8260B	280-22953
280-5287-C-1-B MS	Matrix Spike	T	Solid	8260B	280-22953
280-5287-C-1-C MSD	Matrix Spike Duplicate	T	Solid	8260B	280-22953
Analysis Batch:280-23407					
LCS 280-23407/4	Lab Control Sample	T	Solid	8260B	
LCSD 280-23407/5	Lab Control Sample Duplicate	T	Solid	8260B	
MB 280-23407/6	Method Blank	T	Solid	8260B	
280-5234-7	M34-NE BACK-070810	T	Solid	8260B	
280-5234-8	M34-CUTTINGS-070810	T	Solid	8260B	
280-5251-E-6 MS	Matrix Spike	T	Solid	8260B	
280-5251-E-6 MSD	Matrix Spike Duplicate	T	Solid	8260B	

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5234-2

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS Semi VOA					
Prep Batch: 280-22524					
LCS 280-22524/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-22524/1-A	Method Blank	T	Solid	3550C	
280-5234-A-2-B MS	Matrix Spike	T	Solid	3550C	
280-5234-A-2-C MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-5234-7	M34-NE BACK-070810	T	Solid	3550C	
280-5234-8	M34-CUTTINGS-070810	T	Solid	3550C	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	3550C	
Analysis Batch:280-25217					
LCS 280-22524/2-A	Lab Control Sample	T	Solid	8270C	280-22524
MB 280-22524/1-A	Method Blank	T	Solid	8270C	280-22524
280-5234-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
280-5234-7	M34-NE BACK-070810	T	Solid	8270C	280-22524
280-5234-8	M34-CUTTINGS-070810	T	Solid	8270C	280-22524
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	8270C	280-22524
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	8270C	280-22524

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5234-2

### 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	
280-5234-7	M34-NE BACK-070810	T	Solid	5030B	
280-5234-8	M34-CUTTINGS-070810	T	Solid	5030B	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	5030B	
280-5234-10	M34-S. PIT BOTTOM-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
280-5234-7	M34-NE BACK-070810	T	Solid	8015B	280-22749
280-5234-8	M34-CUTTINGS-070810	T	Solid	8015B	280-22749
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	8015B	280-22749
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	8015B	280-22749
280-5251-C-6-B MS	Matrix Spike	T	Solid	8015B	280-22749
280-5251-C-6-C MSD	Matrix Spike Duplicate	T	Solid	8015B	280-22749

#### Report Basis

T = Total

## Quality Control Results

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

Job Number: 280-5234-2

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC Semi VOA					
Prep Batch: 280-22529					
LCS 280-22529/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-22529/1-A	Method Blank	T	Solid	3550C	
280-5234-7	M34-NE BACK-070810	T	Solid	3550C	
280-5234-8	M34-CUTTINGS-070810	T	Solid	3550C	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	3550C	
280-5234-A-12-C MS	Matrix Spike	T	Solid	3550C	
280-5234-A-12-D MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-22885					
LCS 280-22529/2-A	Lab Control Sample	T	Solid	8015D	280-22529
MB 280-22529/1-A	Method Blank	T	Solid	8015D	280-22529
280-5234-7	M34-NE BACK-070810	T	Solid	8015D	280-22529
280-5234-8	M34-CUTTINGS-070810	T	Solid	8015D	280-22529
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	8015D	280-22529
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	8015D	280-22529
280-5234-A-12-C MS	Matrix Spike	T	Solid	8015D	280-22529
280-5234-A-12-D MSD	Matrix Spike Duplicate	T	Solid	8015D	280-22529

#### Report Basis

T = Total



## Quality Control Results

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

Job Number: 280-5234-2

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
Metals					
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	
280-5234-6	M34-SE BACK-070810	T	Solid	3050B	
280-5234-7	M34-NE BACK-070810	T	Solid	3050B	
280-5234-8	M34-CUTTINGS-070810	T	Solid	3050B	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	3050B	
280-5234-10	M34-S. PIT BOTTOM-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	
280-5234-7	M34-NE BACK-070810	T	Solid	3050B	
280-5234-8	M34-CUTTINGS-070810	T	Solid	3050B	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	3050B	
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	3050B	
Prep Batch: 280-23725					
MB 280-23725/1-A	Method Blank	S	Solid	20B	
280-5234-7	M34-NE BACK-070810	S	Solid	20B	
280-5234-8	M34-CUTTINGS-070810	S	Solid	20B	
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	20B	
280-5234-10	M34-S. PIT BOTTOM-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
280-5234-7	M34-NE BACK-070810	T	Solid	6010B	280-23479
280-5234-8	M34-CUTTINGS-070810	T	Solid	6010B	280-23479
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	6010B	280-23479
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	6010B	280-23479

## Quality Control Results

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

Job Number: 280-5234-2

### 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	
280-5234-7	M34-NE BACK-070810	T	Solid	7471A	
280-5234-8	M34-CUTTINGS-070810	T	Solid	7471A	
280-5234-8MS	Matrix Spike	T	Solid	7471A	
280-5234-8MSD	Matrix Spike Duplicate	T	Solid	7471A	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	7471A	
280-5234-10	M34-S. PIT BOTTOM-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
280-5234-6	M34-SE BACK-070810	T	Solid	6020	280-23465
280-5234-7	M34-NE BACK-070810	T	Solid	6020	280-23465
280-5234-8	M34-CUTTINGS-070810	T	Solid	6020	280-23465
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	6020	280-23465
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	6020	280-23465
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
280-5234-7	M34-NE BACK-070810	T	Solid	7471A	280-23901
280-5234-8	M34-CUTTINGS-070810	T	Solid	7471A	280-23901
280-5234-8MS	Matrix Spike	T	Solid	7471A	280-23901
280-5234-8MSD	Matrix Spike Duplicate	T	Solid	7471A	280-23901
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	7471A	280-23901
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	7471A	280-23901
Analysis Batch:280-24526					
MB 280-23725/1-A	Method Blank	S	Solid	20B	280-23725
280-5234-7	M34-NE BACK-070810	S	Solid	20B	280-23725
280-5234-8	M34-CUTTINGS-070810	S	Solid	20B	280-23725
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	20B	280-23725
280-5234-10	M34-S. PIT BOTTOM-070810	S	Solid	20B	280-23725
Analysis Batch:280-24582					
MB 280-23725/1-A	Method Blank	S	Solid	20B	280-23725
280-5234-7	M34-NE BACK-070810	S	Solid	20B	280-23725
280-5234-8	M34-CUTTINGS-070810	S	Solid	20B	280-23725
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	20B	280-23725
280-5234-10	M34-S. PIT BOTTOM-070810	S	Solid	20B	280-23725

TestAmerica Denver

## Quality Control Results

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

Job Number: 280-5234-2

### 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

## Quality Control Results

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

Job Number: 280-5234-2

### 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	
280-5234-7	M34-NE BACK-070810	S	Solid	DI Leach	
280-5234-8	M34-CUTTINGS-070810	S	Solid	DI Leach	
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	DI Leach	
280-5234-10	M34-S. PIT BOTTOM-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	
280-5234-7	M34-NE BACK-070810	S	Solid	9045C	
280-5234-8	M34-CUTTINGS-070810	S	Solid	9045C	
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	9045C	
280-5234-10	M34-S. PIT BOTTOM-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	
280-5234-7	M34-NE BACK-070810	S	Solid	DI Leach	
280-5234-8	M34-CUTTINGS-070810	S	Solid	DI Leach	
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	DI Leach	
280-5234-10	M34-S. PIT BOTTOM-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	
280-5234-7	M34-NE BACK-070810	S	Solid	9050A	
280-5234-8	M34-CUTTINGS-070810	S	Solid	9050A	
280-5234-9	M34-N. PIT BOTTOM-070810	S	Solid	9050A	
280-5234-10	M34-S. PIT BOTTOM-070810	S	Solid	9050A	
Analysis Batch:280-24413					
MB 280-24413/1	Method Blank	T	Solid	7196A	
280-5234-7	M34-NE BACK-070810	T	Solid	7196A	
280-5234-8	M34-CUTTINGS-070810	T	Solid	7196A	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	7196A	
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	7196A	

TestAmerica Denver

## Quality Control Results

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

Job Number: 280-5234-2

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
General Chemistry					
Prep Batch: 500-89751					
LCS 500-89751/2-A	Lab Control Sample	T	Solid	300_Prep	
MB 500-89751/1-A	Method Blank	T	Solid	300_Prep	
280-5234-7	M34-NE BACK-070810	T	Solid	300_Prep	
280-5234-7MS	Matrix Spike	T	Solid	300_Prep	
280-5234-7MSD	Matrix Spike Duplicate	T	Solid	300_Prep	
280-5234-8	M34-CUTTINGS-070810	T	Solid	300_Prep	
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	300_Prep	
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	300_Prep	
Analysis Batch:500-89762					
LCS 500-89751/2-A	Lab Control Sample	T	Solid	7196A	500-89751
MB 500-89751/1-A	Method Blank	T	Solid	7196A	500-89751
280-5234-7	M34-NE BACK-070810	T	Solid	7196A	500-89751
280-5234-7MS	Matrix Spike	T	Solid	7196A	500-89751
280-5234-7MSD	Matrix Spike Duplicate	T	Solid	7196A	500-89751
280-5234-8	M34-CUTTINGS-070810	T	Solid	7196A	500-89751
280-5234-9	M34-N. PIT BOTTOM-070810	T	Solid	7196A	500-89751
280-5234-10	M34-S. PIT BOTTOM-070810	T	Solid	7196A	500-89751

#### Report Basis

S = Soluble

T = Total

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

Job Number: 280-5234-2

**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
280-5234-7	M34-NE BACK-070810	82	107	134X	91
280-5234-8	M34-CUTTINGS-070 810	84	99	127	81
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: 280-5234-2

**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
280-5234-9	M34-N. PIT BOTTOM-070810	66	81	84	71
280-5234-10	M34-S. PIT BOTTOM-070810	62	72	77	15X
MB 280-22953/1-A		64	83	84	72
LCS 280-22953/2-A		67	84	86	78
LCSD 280-22953/3-A		68	85	83	82
280-5287-C-1-B MS		67	84	83	58X
280-5287-C-1-C MSD		68	81	80	56X

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



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

Job Number: 280-5234-2

**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
280-5234-7	M34-NE BACK-070810	69	66	79
280-5234-8	M34-CUTTINGS-070 810	70	63	78
280-5234-9	M34-N. PIT BOTTOM-070810	72	79	76
280-5234-10	M34-S. PIT BOTTOM-070810	79	85	87
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: 280-5234-2

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

Lab Sample ID	Client Sample ID	TFT1 %Rec
280-5234-7	M34-NE BACK-070810	78
280-5234-8	M34-CUTTINGS-070 810	83
280-5234-9	M34-N. PIT BOTTOM-070810	82
280-5234-10	M34-S. PIT BOTTOM-070810	84
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: 280-5234-2

## Surrogate Recovery Report

### 8015D Diesel Range Organics (DRO)

#### Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH2 %Rec
280-5234-7	M34-NE BACK-070810	70
280-5234-8	M34-CUTTINGS-070 810	56
280-5234-9	M34-N. PIT BOTTOM-070810	0D
280-5234-10	M34-S. PIT BOTTOM-070810	0D
MB 280-22529/1-A		76
LCS 280-22529/2-A		75
280-5234-A-12-C MS		80
280-5234-A-12-D MSD		78

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

## Quality Control Results

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

Job Number: 280-5234-2

### Method Blank - Batch: 280-22953

Method: 8260B

Preparation: 5030B

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

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

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

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

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

## Quality Control Results

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

Job Number: 280-5234-2

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

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

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

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

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

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

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

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

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

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

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

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

Units: ug/Kg

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

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

## Quality Control Results

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

Job Number: 280-5234-2

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

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

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

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

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

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

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

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

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

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

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

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

Units: ug/Kg

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

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

## Quality Control Results

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

Job Number: 280-5234-2

### Method Blank - Batch: 280-23407

Method: 8260B

Preparation: 5030B

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

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

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

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

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



## Quality Control Results

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

Job Number: 280-5234-2

**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: 280-5234-2

**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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

**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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

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

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

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

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

Instrument ID: GCS\_U2  
Lab File ID: 020B2001.D  
Initial Weight/Volume: 30.0 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

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

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

Instrument ID: GCS\_U2  
Lab File ID: 021B2101.D  
Initial Weight/Volume: 30.3 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

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

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

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

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

Units: mg/Kg

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

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

## Quality Control Results

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

Job Number: 280-5234-2

### 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: 280-5234-2

### Method Blank - Batch: 280-23479

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

Method: 6010B  
Preparation: 3050B

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

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

Method: 6010B  
Preparation: 3050B

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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-8  
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: 280-5234-8  
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: 280-5234-2

### Matrix Spike/

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

**Method: 7471A**

**Preparation: 7471A**

MS Lab Sample ID: 280-5234-8 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: 280-5234-8  
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: 280-5234-2

### Method Blank - Batch: 280-24413

Lab Sample ID: MB 280-24413/1  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 07/27/2010 1505  
Date Prepared: N/A

Analysis Batch: 280-24413  
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: 280-5234-2

### 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: 280-5234-7  
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: 280-5234-7  
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: 280-5234-2

### Matrix Spike/

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

**Method: 7196A**

**Preparation: 300\_Prep**

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

Units: mg/Kg

MSD Lab Sample ID: 280-5234-7  
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: 280-5234-2

**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: 280-5234-2

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

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

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

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

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

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

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

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

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

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



## Quality Control Results

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

Job Number: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### 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: 280-5234-2

### Laboratory Chronicle

Lab ID: 280-5234-6

Client ID: M34-SE BACK-070810

Sample Date/Time: 07/08/2010 14:50

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	280-5234-A-6-A		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-6-A		280-23997	280-23465	07/23/2010 01:47	1	TAL DEN	TEL

Lab ID: 280-5234-7

Client ID: M34-NE BACK-070810

Sample Date/Time: 07/08/2010 15:00

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-7		280-23407		07/16/2010 14:47	1	TAL DEN	MD
A:8260B	280-5234-C-7		280-23407		07/16/2010 14:47	1	TAL DEN	MD
P:3550C	280-5234-A-7-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-7-A		280-25217	280-22524	08/02/2010 16:08	1	TAL DEN	DCK
P:5030B	280-5234-C-7-A		280-23436	280-22749	07/13/2010 11:07	1	TAL DEN	TEM
A:8015B	280-5234-C-7-A		280-23436	280-22749	07/15/2010 00:35	1	TAL DEN	TEM
P:3550C	280-5234-A-7-B		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-7-B		280-22885	280-22529	07/13/2010 00:54	1	TAL DEN	MRB
P:20B	280-5234-A-7-G		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	280-5234-A-7-G		280-24582	280-23725	07/27/2010 18:06	1	TAL DEN	DW
P:3050B	280-5234-A-7-F		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-7-F		280-23824	280-23479	07/22/2010 00:58	1	TAL DEN	DW
P:3050B	280-5234-A-7-E		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-7-E		280-23997	280-23465	07/23/2010 01:50	1	TAL DEN	TEL
P:7471A	280-5234-A-7-H		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-7-H		280-24299	280-23901	07/26/2010 12:26	1	TAL DEN	KS
P:300_Prep	280-5234-D-7-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-7-A		500-89762	500-89751	07/16/2010 13:36	1	TAL CHI	KD
A:7196A	280-5234-A-7		280-24413		07/27/2010 15:05	1	TAL DEN	JMB
A:9045C	280-5234-A-7-C		280-22764		07/13/2010 12:26	1	TAL DEN	LMK
A:9050A	280-5234-A-7-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: 280-5234-7 MS

Client ID: M34-NE BACK-070810

Sample Date/Time: 07/08/2010 15:00

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
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

## Quality Control Results

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

Job Number: 280-5234-2

### Laboratory Chronicle

Lab ID: 280-5234-7 MSD

Client ID: M34-NE BACK-070810

Sample Date/Time: 07/08/2010 15:00

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:300_Prep	280-5234-D-7-C MSD		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-7-C MSD		500-89762	500-89751	07/16/2010 13:38	1	TAL CHI	KD

Lab ID: 280-5234-8

Client ID: M34-CUTTINGS-070810

Sample Date/Time: 07/08/2010 16:15

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5234-C-8		280-23407		07/16/2010 15:09	1	TAL DEN	MD
A:8260B	280-5234-C-8		280-23407		07/16/2010 15:09	1	TAL DEN	MD
P:3550C	280-5234-A-8-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-8-A		280-25217	280-22524	08/02/2010 16:29	1	TAL DEN	DCK
P:5030B	280-5234-C-8-A		280-23436	280-22749	07/13/2010 11:07	1	TAL DEN	TEM
A:8015B	280-5234-C-8-A		280-23436	280-22749	07/15/2010 01:12	1	TAL DEN	TEM
P:3550C	280-5234-A-8-B		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-8-B		280-22885	280-22529	07/13/2010 01:27	1	TAL DEN	MRB
P:20B	280-5234-A-8-G		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	280-5234-A-8-G		280-24582	280-23725	07/27/2010 18:09	1	TAL DEN	DW
P:3050B	280-5234-A-8-F		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-8-F		280-23824	280-23479	07/22/2010 01:11	1	TAL DEN	DW
P:3050B	280-5234-A-8-E		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-8-E		280-23997	280-23465	07/23/2010 01:53	1	TAL DEN	TEL
P:7471A	280-5234-A-8-H		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-8-H		280-24299	280-23901	07/26/2010 12:29	1	TAL DEN	KS
P:300_Prep	280-5234-D-8-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-8-A		500-89762	500-89751	07/16/2010 13:38	1	TAL CHI	KD
A:7196A	280-5234-A-8		280-24413		07/27/2010 15:05	1	TAL DEN	JMB
A:9045C	280-5234-A-8-C		280-22764		07/13/2010 12:59	1	TAL DEN	LMK
A:9050A	280-5234-A-8-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

Lab ID: 280-5234-8 MS

Client ID: M34-CUTTINGS-070810

Sample Date/Time: 07/08/2010 16:15

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
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

## Quality Control Results

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

Job Number: 280-5234-2

### Laboratory Chronicle

Lab ID: 280-5234-8 MSD

Client ID: M34-CUTTINGS-070810

Sample Date/Time: 07/08/2010 16:15

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
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

Lab ID: 280-5234-9

Client ID: M34-N. PIT BOTTOM-070810

Sample Date/Time: 07/08/2010 15:45

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-C-9-B		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5234-C-9-B		280-23266	280-22953	07/15/2010 13:54	1	TAL DEN	HZ
P:3550C	280-5234-A-9-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-9-A		280-25217	280-22524	08/02/2010 16:49	1	TAL DEN	DCK
P:5030B	280-5234-C-9-A		280-23436	280-22749	07/13/2010 11:07	1	TAL DEN	TEM
A:8015B	280-5234-C-9-A		280-23436	280-22749	07/15/2010 01:50	1	TAL DEN	TEM
P:3550C	280-5234-A-9-B		280-22885	280-22529	07/11/2010 12:10	5	TAL DEN	CDC
A:8015D	280-5234-A-9-B		280-22885	280-22529	07/13/2010 19:16	5	TAL DEN	MRB
P:20B	280-5234-A-9-G		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	280-5234-A-9-G		280-24582	280-23725	07/27/2010 18:11	1	TAL DEN	DW
P:3050B	280-5234-A-9-F		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-9-F		280-23824	280-23479	07/22/2010 01:13	1	TAL DEN	DW
P:3050B	280-5234-A-9-E		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-9-E		280-23997	280-23465	07/23/2010 01:56	1	TAL DEN	TEL
P:7471A	280-5234-A-9-H		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-9-H		280-24299	280-23901	07/26/2010 12:36	1	TAL DEN	KS
P:300_Prep	280-5234-D-9-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-9-A		500-89762	500-89751	07/16/2010 13:39	1	TAL CHI	KD
A:7196A	280-5234-A-9		280-24413		07/27/2010 15:05	1	TAL DEN	JMB
A:9045C	280-5234-A-9-C		280-22764		07/13/2010 12:30	1	TAL DEN	LMK
A:9050A	280-5234-A-9-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

## Quality Control Results

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

Job Number: 280-5234-2

### Laboratory Chronicle

Lab ID: 280-5234-10

Client ID: M34-S. PIT BOTTOM-070810

Sample Date/Time: 07/08/2010 15:20

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-10-B		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5234-B-10-B		280-23266	280-22953	07/15/2010 14:14	1	TAL DEN	HZ
P:3550C	280-5234-A-10-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	280-5234-A-10-A		280-25217	280-22524	08/02/2010 17:09	1	TAL DEN	DCK
P:5030B	280-5234-B-10-A		280-23436	280-22749	07/13/2010 11:07	1	TAL DEN	TEM
A:8015B	280-5234-B-10-A		280-23436	280-22749	07/15/2010 02:27	1	TAL DEN	TEM
P:3550C	280-5234-A-10-B		280-22885	280-22529	07/11/2010 12:10	20	TAL DEN	CDC
A:8015D	280-5234-A-10-B		280-22885	280-22529	07/13/2010 19:49	20	TAL DEN	MRB
P:20B	280-5234-A-10-G		280-24582	280-23725	07/26/2010 23:00	1	TAL DEN	JW
A:20B	280-5234-A-10-G		280-24582	280-23725	07/27/2010 18:14	1	TAL DEN	DW
P:3050B	280-5234-A-10-F		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	280-5234-A-10-F		280-23824	280-23479	07/22/2010 01:16	1	TAL DEN	DW
P:3050B	280-5234-A-10-E		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	280-5234-A-10-E		280-23997	280-23465	07/23/2010 01:58	1	TAL DEN	TEL
P:7471A	280-5234-A-10-H		280-24299	280-23901	07/26/2010 08:30	1	TAL DEN	KS
A:7471A	280-5234-A-10-H		280-24299	280-23901	07/26/2010 12:38	1	TAL DEN	KS
P:300_Prep	280-5234-D-10-A		500-89762	500-89751	07/15/2010 13:00	1	TAL CHI	KD
A:7196A	280-5234-D-10-A		500-89762	500-89751	07/16/2010 13:40	1	TAL CHI	KD
A:7196A	280-5234-A-10		280-24413		07/27/2010 15:05	1	TAL DEN	JMB
A:9045C	280-5234-A-10-C		280-22764		07/13/2010 13:01	1	TAL DEN	LMK
A:9050A	280-5234-A-10-D		280-23232		07/16/2010 13:30	1	TAL DEN	PMP

## Quality Control Results

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

Job Number: 280-5234-2

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 280-22953/1-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	MB 280-22953/1-A		280-23266	280-22953	07/15/2010 10:37	1	TAL DEN	HZ
P:5030B	MB 280-23407/6		280-23407		07/16/2010 10:43	1	TAL DEN	MD
A:8260B	MB 280-23407/6		280-23407		07/16/2010 10:43	1	TAL DEN	MD
P:3550C	MB 280-22524/1-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	MB 280-22524/1-A		280-25217	280-22524	08/02/2010 13:47	1	TAL DEN	DCK
P:5030B	MB 280-22749/3-A		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	MB 280-22749/3-A		280-23436	280-22749	07/14/2010 15:12	1	TAL DEN	TEM
P:3550C	MB 280-22529/1-A		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	MB 280-22529/1-A		280-22885	280-22529	07/12/2010 21:38	1	TAL DEN	MRB
P:20B	MB 280-23725/1-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 280-23901/1-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 280-24413/1		280-24413		07/27/2010 15:05	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: 280-5234-2

### Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 280-22953/2-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	LCS 280-22953/2-A		280-23266	280-22953	07/15/2010 10:56	1	TAL DEN	HZ
P:5030B	LCS 280-23407/4		280-23407		07/16/2010 09:36	1	TAL DEN	MD
A:8260B	LCS 280-23407/4		280-23407		07/16/2010 09:36	1	TAL DEN	MD
P:3550C	LCS 280-22524/2-A		280-25217	280-22524	07/11/2010 09:25	1	TAL DEN	CDC
A:8270C	LCS 280-22524/2-A		280-25217	280-22524	08/02/2010 14:07	1	TAL DEN	DCK
P:5030B	LCS 280-22749/1-A		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	LCS 280-22749/1-A		280-23436	280-22749	07/14/2010 13:28	1	TAL DEN	TEM
P:3550C	LCS 280-22529/2-A		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	LCS 280-22529/2-A		280-22885	280-22529	07/12/2010 22:11	1	TAL DEN	MRB
P:3050B	LCS 280-23479/2-A		280-23824	280-23479	07/21/2010 09:00	1	TAL DEN	JW
A:6010B	LCS 280-23479/2-A		280-23824	280-23479	07/22/2010 00:36	1	TAL DEN	DW
P:3050B	LCS 280-23465/2-A		280-23997	280-23465	07/21/2010 09:00	1	TAL DEN	JW
A:6020	LCS 280-23465/2-A		280-23997	280-23465	07/23/2010 01:14	1	TAL DEN	TEL
P:7471A	LCS 280-23901/2-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 280-22953/3-A		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	LCSD 280-22953/3-A		280-23266	280-22953	07/15/2010 11:16	1	TAL DEN	HZ
P:5030B	LCSD 280-23407/5		280-23407		07/16/2010 09:58	1	TAL DEN	MD
A:8260B	LCSD 280-23407/5		280-23407		07/16/2010 09:58	1	TAL DEN	MD
P:5030B	LCSD 280-22749/2-A		280-23436	280-22749	07/13/2010 11:02	1	TAL DEN	TEM
A:8015B	LCSD 280-22749/2-A		280-23436	280-22749	07/14/2010 14:34	1	TAL DEN	TEM
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: 280-5234-2

### Laboratory Chronicle

Lab ID: MS

Client ID: N/A

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

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5287-C-1-B MS		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5287-C-1-B MS		280-23266	280-22953	07/15/2010 12:35	1	TAL DEN	HZ
P:5030B	280-5251-E-6 MS		280-23407		07/16/2010 13:18	1	TAL DEN	MD
A:8260B	280-5251-E-6 MS		280-23407		07/16/2010 13:18	1	TAL DEN	MD
P: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:3550C	280-5234-A-12-C MS		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-12-C MS		280-22885	280-22529	07/13/2010 05:16	1	TAL DEN	MRB
P: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

Lab ID: MSD

Client ID: N/A

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

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

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-5287-C-1-C MSD		280-23266	280-22953	07/14/2010 15:12	1	TAL DEN	JS
A:8260B	280-5287-C-1-C MSD		280-23266	280-22953	07/15/2010 12:55	1	TAL DEN	HZ
P:5030B	280-5251-E-6 MSD		280-23407		07/16/2010 13:40	1	TAL DEN	MD
A:8260B	280-5251-E-6 MSD		280-23407		07/16/2010 13:40	1	TAL DEN	MD
P: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:3550C	280-5234-A-12-D MSD		280-22885	280-22529	07/11/2010 12:10	1	TAL DEN	CDC
A:8015D	280-5234-A-12-D MSD		280-22885	280-22529	07/13/2010 05:49	1	TAL DEN	MRB
P: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

## Quality Control Results

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

Job Number: 280-5234-2

### 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

# Chain of Custody Record

TestAmerica Laboratories, Inc.

Project Manager: Chris Hines Tel/Fax: 970.261.1127		Site Contact: Date: _____		COC No: _____ of _____ COCs	
Analysis Turnaround Time Calendar (C) or Work Days (W) _____ TAT if different from Below _____ <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Lab Contact: Carrier: _____		Job No. _____	
Sample Identification		Sample Type		Sample Specific Notes:	
M34 - SE Back - 070810	Sample Date	Sample Time	Matrix	# of Cont.	
M34 - NE Back - 070810	07/08/2010	1450	SS	1	
M34 - Cuttings - 070810	07/08/2010	1500	Comp	3	
M34 - N. Pit Bottom - 070810	07/08/2010	1615	Comp	3	
M34 - S. Pit Bottom - 070810	07/08/2010	1545	Comp	3	
	07/08/2010	1520	Comp	3	
<p>Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____</p> <p>Possible Hazard Identification  <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> </p>					
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months         </p>					
Special Instructions/QC Requirements & Comments:					
Relinquished by: <i>Ch. H.</i>		Company: ENCANA		Date/Time: 7-9-10 12:00	
Relinquished by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:	

# **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>2,5</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: 280-5234-2

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: 280-5234-2

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	



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 or Brad Kieding  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

## Report Summary

Monday August 23, 2010

Report Number: L474577

Samples Received: 08/19/10

Client Project: M34 PIT CLOSURE

Description: M34 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:

Jarred 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

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 or Brad Kieding  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

August 23, 2010

Date Received : August 19, 2010  
Description : M34 Pit Closure  
Sample ID : M34-SE BACK-081710  
Collected By : Blair Rollins  
Collection Date : 08/17/10 13:25

ESC Sample # : L474577-01

Site ID :

Project # : M34 PIT CLOSURE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.3	1.0	mg/kg	6010B	08/21/10	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.

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Reported: 08/23/10 16:47 Printed: 08/23/10 16:53



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Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 23, 2010

Date Received : August 19, 2010  
Description : M34 Pit Closure  
Sample ID : M34-S BACK-081710  
Collected By : Blair Rollins  
Collection Date : 08/17/10 13:30

ESC Sample # : L474577-02

Site ID :

Project # : M34 PIT CLOSURE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	14.	1.0	mg/kg	6010B	08/21/10	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: 08/23/10 16:47 Printed: 08/23/10 16:53



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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 23, 2010

Date Received : August 19, 2010  
Description : M34 Pit Closure  
Sample ID : M34-SW BACK-081710  
Collected By : Blair Rollins  
Collection Date : 08/17/10 13:35

ESC Sample # : L474577-03

Site ID :

Project # : M34 PIT CLOSURE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.1	1.0	mg/kg	6010B	08/21/10	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: 08/23/10 16:47 Printed: 08/23/10 16:53

REPORT OF ANALYSIS

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

August 23, 2010

Date Received : August 19, 2010  
Description : M34 Pit Closure  
Sample ID : M34-S PIT-081710  
Collected By : Blair Rollins  
Collection Date : 08/17/10 14:10

ESC Sample # : L474577-04

Site ID :

Project # : M34 PIT CLOSURE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.6	1.0	mg/kg	6010B	08/20/10	1
Benzene	BDL	0.0025	mg/kg	8021/8015	08/19/10	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/19/10	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/19/10	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/19/10	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/19/10	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	103.		% Rec.	8021/8015	08/19/10	5
a,a,a-Trifluorotoluene(PID)	107.		% Rec.	8021/8015	08/19/10	5
TPH (GC/FID) High Fraction	2000	80.	mg/kg	3546/DRO	08/22/10	20
Surrogate recovery(%)						
o-Terphenyl	0.00		% Rec.	3546/DRO	08/22/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 08/23/10 16:47 Printed: 08/23/10 16:53

REPORT OF ANALYSIS

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

August 23, 2010

Date Received : August 19, 2010  
Description : M34 Pit Closure  
Sample ID : M34-N PIT-081710  
Collected By : Blair Rollins  
Collection Date : 08/17/10 14:30

ESC Sample # : L474577-05

Site ID :

Project # : M34 PIT CLOSURE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.9	1.0	mg/kg	6010B	08/20/10	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	08/20/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	118.		% Rec.	602/8015	08/20/10	5
TPH (GC/FID) High Fraction	3000	80.	mg/kg	3546/DRO	08/22/10	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	08/22/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 08/23/10 16:47 Printed: 08/23/10 16:53



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

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

August 23, 2010

Date Received : August 19, 2010  
Description : M34 Pit Closure  
Sample ID : M34-SPOILS-081710  
Collected By : Blair Rollins  
Collection Date : 08/17/10 14:50

ESC Sample # : L474577-06

Site ID :

Project # : M34 PIT CLOSURE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.4	1.0	mg/kg	6010B	08/20/10	1
Benzene	BDL	0.0025	mg/kg	8021/8015	08/19/10	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/19/10	5
Ethylbenzene	0.0026	0.0025	mg/kg	8021/8015	08/19/10	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/19/10	5
TPH (GC/FID) Low Fraction	3.1	0.50	mg/kg	GRO	08/19/10	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	103.		% Rec.	8021/8015	08/19/10	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	08/19/10	5
TPH (GC/FID) High Fraction	1400	80.	mg/kg	3546/DRO	08/22/10	20
Surrogate recovery(%)						
o-Terphenyl	0.00		% Rec.	3546/DRO	08/22/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L474577-04	WG494373	SAMP	o-Terphenyl	R1338829	J7
L474577-05	WG494373	SAMP	o-Terphenyl	R1338829	J7
L474577-06	WG494373	SAMP	o-Terphenyl	R1338829	J7

Attachment B  
Explanation of QC Qualifier Codes

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

Qualifier Report Information

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

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
08/23/10 at 16:53:22

TSR Signing Reports: 358  
R3 - Rush: Two Day

Create p-keys for projects. Enter project name as Project Number and Project Name. Log all samples to separate L#s. See L471333 when COC says see attached list. PAHs = SV8270PAHSIM. BTEX = 8021.

Sample: L474577-01 Account: ENCANACO Received: 08/19/10 09:00 Due Date: 08/23/10 00:00 RPT Date: 08/23/10 16:47

Sample: L474577-02 Account: ENCANACO Received: 08/19/10 09:00 Due Date: 08/23/10 00:00 RPT Date: 08/23/10 16:47

Sample: L474577-03 Account: ENCANACO Received: 08/19/10 09:00 Due Date: 08/23/10 00:00 RPT Date: 08/23/10 16:47

Sample: L474577-04 Account: ENCANACO Received: 08/19/10 09:00 Due Date: 08/23/10 00:00 RPT Date: 08/23/10 16:47

Sample: L474577-05 Account: ENCANACO Received: 08/19/10 09:00 Due Date: 08/23/10 00:00 RPT Date: 08/23/10 16:47

Sample: L474577-06 Account: ENCANACO Received: 08/19/10 09:00 Due Date: 08/23/10 00:00 RPT Date: 08/23/10 16:47



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

Parachute, CO 81635

Quality Assurance Report  
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L474577

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG494211	08/19/10 14:24
Ethylbenzene	< .0005	mg/kg			WG494211	08/19/10 14:24
Toluene	< .005	mg/kg			WG494211	08/19/10 14:24
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG494211	08/19/10 14:24
Total Xylene	< .0015	mg/kg			WG494211	08/19/10 14:24
a,a,a-Trifluorotoluene(FID)		% Rec.	103.3	59-128	WG494211	08/19/10 14:24
a,a,a-Trifluorotoluene(PID)		% Rec.	106.9	54-144	WG494211	08/19/10 14:24
TPH (GC/FID) High Fraction	< 4	ppm			WG494373	08/20/10 08:06
o-Terphenyl		% Rec.	96.56	50-150	WG494373	08/20/10 08:06
Arsenic	< 1	mg/kg			WG494363	08/20/10 11:22
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG494250	08/19/10 15:02
a,a,a-Trifluorotoluene(FID)		% Rec.	117.4	59-128	WG494250	08/19/10 15:02
Arsenic	< 1	mg/kg			WG494361	08/21/10 13:00
Arsenic	< 1	mg/kg			WG494575	08/22/10 09:47

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Arsenic	mg/kg	4.20	4.31	2.35	20	L474594-04	WG494363
Arsenic	mg/kg	11.0	11.3	3.60	20	L474438-07	WG494361
Arsenic	mg/kg	16.0	14.0	12.1	20	L474577-02	WG494575

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0539	108.	76-113	WG494211
Ethylbenzene	mg/kg	.05	0.0539	108.	78-115	WG494211
Toluene	mg/kg	.05	0.0524	105.	76-114	WG494211
Total Xylene	mg/kg	.15	0.156	104.	81-118	WG494211
a,a,a-Trifluorotoluene(PID)				106.9	54-144	WG494211
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.53	101.	67-135	WG494211
a,a,a-Trifluorotoluene(FID)				108.0	59-128	WG494211
TPH (GC/FID) High Fraction	ppm	60	47.6	79.3	50-150	WG494373
o-Terphenyl				99.69	50-150	WG494373
Arsenic	mg/kg	192	163.	84.9	78.6-120.8	WG494363
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.90	89.1	67-135	WG494250
a,a,a-Trifluorotoluene(FID)				77.10	59-128	WG494250

\* 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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Parachute, CO 81635

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Mt. Juliet, TN 37122  
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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Arsenic	mg/kg	192	164.	85.4	78.6-120.8	WG494361
Arsenic	mg/kg	192	205.	107.	78.6-120.8	WG494575

Analyte	Units	Laboratory Control Result	Ref	Sample Duplicate %Rec	Limit	RPD	Limit	Batch
Benzene	mg/kg	0.0550	0.0539	110.	76-113	2.06	20	WG494211
Ethylbenzene	mg/kg	0.0536	0.0539	107.	78-115	0.590	20	WG494211
Toluene	mg/kg	0.0528	0.0524	106.	76-114	0.750	20	WG494211
Total Xylene	mg/kg	0.155	0.156	103.	81-118	0.640	20	WG494211
a,a,a-Trifluorotoluene(PID)				107.5	54-144			WG494211
TPH (GC/FID) Low Fraction	mg/kg	6.15	5.53	112.	67-135	10.7	20	WG494211
a,a,a-Trifluorotoluene(FID)				107.6	59-128			WG494211
TPH (GC/FID) High Fraction	ppm	47.2	47.6	79.0	50-150	0.877	25	WG494373
o-Terphenyl				102.4	50-150			WG494373
TPH (GC/FID) Low Fraction	mg/kg	5.00	4.90	91.0	67-135	1.95	20	WG494250
a,a,a-Trifluorotoluene(FID)				76.64	59-128			WG494250

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Benzene	mg/kg	0.224	0.00110	.05	89.2	32-137	L474297-01	WG494211
Ethylbenzene	mg/kg	0.172	0	.05	68.9	10-150	L474297-01	WG494211
Toluene	mg/kg	0.175	0	.05	69.9	20-142	L474297-01	WG494211
Total Xylene	mg/kg	0.510	0.0200	.15	65.3	16-141	L474297-01	WG494211
a,a,a-Trifluorotoluene(PID)					106.2	54-144		WG494211
TPH (GC/FID) Low Fraction	mg/kg	25.5	5.40	5.5	73.1	55-109	L474297-01	WG494211
a,a,a-Trifluorotoluene(FID)					104.7	59-128		WG494211
Arsenic	mg/kg	47.7	4.31	50	86.8	75-125	L474594-04	WG494363
TPH (GC/FID) Low Fraction	mg/kg	4.48	0.295	5.5	76.0	55-109	L474454-03	WG494250
a,a,a-Trifluorotoluene(FID)					81.92	59-128		WG494250
Arsenic	mg/kg	58.5	11.3	10	94.4	75-125	L474438-07	WG494361
Arsenic	mg/kg	56.2	14.0	50	84.4	75-125	L474577-02	WG494575

Analyte	Units	MSD	Ref	Matrix Spike Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/kg	0.233	0.224	92.7	32-137	3.79	39	L474297-01	WG494211
Ethylbenzene	mg/kg	0.182	0.172	73.0	10-150	5.76	44	L474297-01	WG494211
Toluene	mg/kg	0.180	0.175	72.0	20-142	2.88	42	L474297-01	WG494211
Total Xylene	mg/kg	0.528	0.510	67.7	16-141	3.47	46	L474297-01	WG494211
a,a,a-Trifluorotoluene(PID)				107.0	54-144				WG494211
TPH (GC/FID) Low Fraction	mg/kg	24.0	25.5	67.6	55-109	6.14	20	L474297-01	WG494211
a,a,a-Trifluorotoluene(FID)				104.6	59-128				WG494211

\* 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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Level II

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Arsenic	mg/kg	46.3	47.7	84.0	75-125	2.98	20	L474594-04	WG494363
TPH (GC/FID) Low Fraction	mg/kg	4.66	4.48	79.4	55-109	4.02	20	L474454-03	WG494250
a,a,a-Trifluorotoluene(FID)				82.92	59-128				WG494250
Arsenic	mg/kg	57.0	58.5	91.4	75-125	2.60	20	L474438-07	WG494361
Arsenic	mg/kg	57.6	56.2	87.2	75-125	2.46	20	L474577-02	WG494575

Batch number /Run number / Sample number cross reference

WG494211: R1338388: L474577-04 06  
WG494373: R1338829: L474577-04 05 06  
WG494363: R1339409: L474577-04 05 06  
WG494250: R1339648: L474577-05  
WG494361: R1341331: L474577-01 03  
WG494575: R1341551: L474577-02

\* \* Calculations are performed prior to rounding of reported values .  
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August 23, 2010

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 or Brad Kieding  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

## Report Summary

Thursday September 16, 2010

Report Number: L478532a

Samples Received: 09/14/10

Client Project:

Description:

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 or Brad Kieding  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

September 16, 2010

Date Received : September 14, 2010  
Description :

Sample ID : M34-N PIT BOTTOM

Collected By : C. Jensen  
Collection Date : 09/13/10 10:20

ESC Sample # : L478532-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	09/15/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	104.		% Rec.	602/8015	09/15/10	5
TPH (GC/FID) High Fraction	2600	80.	mg/kg	3546/DRO	09/15/10	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	09/15/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

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

September 16, 2010

Date Received : September 14, 2010  
Description :

Sample ID : M34-S PIT BOTTOM

Collected By : C. Jensen  
Collection Date : 09/13/10 00:00

ESC Sample # : L478532-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	2.0	0.50	mg/kg	8015D/GRO	09/14/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	103.		% Rec.	602/8015	09/14/10	5
TPH (GC/FID) High Fraction	2500	80.	mg/kg	3546/DRO	09/15/10	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	09/15/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/16/10 09:19 Printed: 09/16/10 09:19



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L478532-01	WG498283	SAMP	o-Terphenyl	R1377348	J7
L478532-02	WG498283	SAMP	o-Terphenyl	R1377348	J7

Attachment B  
Explanation of QC Qualifier Codes

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

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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  
09/16/10 at 09:19:39

TSR Signing Reports: 358  
R3 - Rush: Two Day

Sample: L478532-01 Account: ENCANACO Received: 09/14/10 09:00 Due Date: 09/16/10 00:00 RPT Date: 09/16/10 09:19  
Sample: L478532-02 Account: ENCANACO Received: 09/14/10 09:00 Due Date: 09/16/10 00:00 RPT Date: 09/16/10 09:19  
Sample: L478532-03 Account: ENCANACO Received: 09/14/10 09:00 Due Date: 09/16/10 00:00 RPT Date: 09/16/10 09:19  
Sample: L478532-04 Account: ENCANACO Received: 09/14/10 09:00 Due Date: 09/16/10 00:00 RPT Date: 09/16/10 09:19  
Sample: L478532-05 Account: ENCANACO Received: 09/14/10 09:00 Due Date: 09/16/10 00:00 RPT Date: 09/16/10 09:19



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September 16, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG498225	09/14/10 16:28
a,a,a-Trifluorotoluene(FID)		% Rec.	104.2	59-128	WG498225	09/14/10 16:28
TPH (GC/FID) High Fraction	< 4	ppm			WG498283	09/15/10 11:18
o-Terphenyl		% Rec.	58.76	50-150	WG498283	09/15/10 11:18
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG498364	09/15/10 12:48
a,a,a-Trifluorotoluene(FID)		% Rec.	101.4	59-128	WG498364	09/15/10 12:48

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.67	103.	67-135	WG498225
a,a,a-Trifluorotoluene(FID)				104.5	59-128	WG498225
TPH (GC/FID) High Fraction	ppm	60	48.2	80.3	50-150	WG498283
o-Terphenyl				69.39	50-150	WG498283
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.19	94.3	67-135	WG498364
a,a,a-Trifluorotoluene(FID)				108.8	59-128	WG498364

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	6.06	5.67	110.	67-135	6.66	20	WG498225
a,a,a-Trifluorotoluene(FID)				105.4	59-128			WG498225
TPH (GC/FID) High Fraction	ppm	47.0	48.2	78.0	50-150	2.60	25	WG498283
o-Terphenyl				69.67	50-150			WG498283
TPH (GC/FID) Low Fraction	mg/kg	5.58	5.19	101.	67-135	7.23	20	WG498364
a,a,a-Trifluorotoluene(FID)				110.7	59-128			WG498364

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	26.1	0	5.5	94.8	55-109	L478525-01	WG498225
a,a,a-Trifluorotoluene(FID)					101.7	59-128		WG498225
TPH (GC/FID) High Fraction	ppm	45.6	0	60	76.0	50-150	L478212-01	WG498283
o-Terphenyl					66.60	50-150		WG498283
TPH (GC/FID) Low Fraction	mg/kg	18.9	0	5.5	68.7	55-109	L478532-01	WG498364
a,a,a-Trifluorotoluene(FID)					103.7	59-128		WG498364

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	27.7	26.1	101.	55-109	5.95	20	L478525-01	WG498225
a,a,a-Trifluorotoluene(FID)				103.8	59-128				WG498225

\* 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 or Brad Kieding  
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L478532

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

September 16, 2010

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	ppm	45.5	45.6	75.9	50-150	0.188	25	L478212-01	WG498283
o-Terphenyl				67.69	50-150				WG498283
TPH (GC/FID) Low Fraction	mg/kg	18.5	18.9	67.4	55-109	1.89	20	L478532-01	WG498364
a,a,a-Trifluorotoluene(FID)				103.4	59-128				WG498364

Batch number /Run number / Sample number cross reference

WG498225: R1375668: L478532-02 03 04 05  
WG498283: R1377348: L478532-01 02 03 04 05  
WG498364: R1377408: L478532-01

\* \* 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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Est. 1970

September 16, 2010

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.



10/01/10

## Technical Report for

**ENCANA**

**M34 Spoils Pile**

**Accutest Job Number: T60781**

**Sampling Date: 09/28/10**

### Report to:

**EnCana  
2717 Co. Rd. 215  
Parachute, CO 81635  
christopher.hines@encana.com**

**ATTN: Chris Hines**

**Total number of pages in report: 18**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads 'Paul K Canevaro'.

**Paul Canevaro  
Laboratory Director**

**Client Service contact: Sylvia Garza 713-271-4700**

Certifications: TX (T104704220-09C-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)  
OK (9103)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

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Sample Summary

ENCANA

Job No: T60781

M34 Spoils Pile

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
T60781-1	09/28/10	10:20	09/29/10	SO	Soil	M34-SPOILS-092810

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** ENCANA

**Job No** T60781

**Site:** M34 Spoils Pile

**Report Date** 10/1/2010 3:04:45 PM

1 Sample(s), were collected on 09/28/2010 and were received at Accutest on 09/29/2010 properly preserved, at 4.4 Deg. C and intact. These Samples received an Accutest job number of T60781. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GC By Method SW846 8015

**Matrix** SO

**Batch ID:** GHH87

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T60778-1MS, T60778-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for TPH-GRO (C6-C10) are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for TPH-GRO (C6-C10) are outside control limits. Probable cause due to matrix interference.

### Extractables by GC By Method SW846 8015 M

**Matrix** SO

**Batch ID:** OP16217

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- T60781-1 for o-Terphenyl: Outside control limits due to dilution.

### Wet Chemistry By Method SM 2540 G

**Matrix** SO

**Batch ID:** GN25733

- Sample(s) T60548-7DUP were used as the QC samples for Solids, Percent.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

## Sample Results

## Report of Analysis

## Report of Analysis

<b>Client Sample ID:</b>	M34-SPOILS-092810	<b>Date Sampled:</b>	09/28/10
<b>Lab Sample ID:</b>	T60781-1	<b>Date Received:</b>	09/29/10
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	77.0
<b>Method:</b>	SW846 8015		
<b>Project:</b>	M34 Spoils Pile		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH0001712.D	1	10/01/10	LB	n/a	n/a	GHH87
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.22 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	Units	Q
	TPH-GRO (C6-C10)	10.0	7.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		46-127%
98-08-8	aaa-Trifluorotoluene	97%		44-120%

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	M34-SPOILS-092810		
<b>Lab Sample ID:</b>	T60781-1	<b>Date Sampled:</b>	09/28/10
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	09/29/10
<b>Method:</b>	SW846 8015 M SW846 3550B	<b>Percent Solids:</b>	77.0
<b>Project:</b>	M34 Spoils Pile		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ7203.D	10	09/30/10	EM	09/29/10	OP16217	GJB66
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	3560	43	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	0% <sup>a</sup>		33-115%	

(a) Outside control limits due to dilution.

ND = Not detected  
RL = Reporting Limit  
E = Indicates value exceeds calibration range

J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

## Misc. Forms

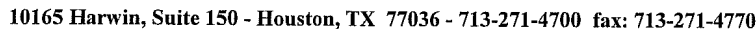
---

### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # 760781

Page 1 of 3

# SAMPLE INSPECTION FORM

Accutest Job Number: T60781 Client: Salena Oil & Gas (USA) INC. Date/Time Received: 9-29-10 9:15

# of Coolers Received: 1 Thermometer #: IR GUNNY Temperature Adjustment Factor: 0.0

Cooler Temperatures (initial/adjusted): #1: 4.4 °C #2: \_\_\_\_\_ #3: \_\_\_\_\_ #4: \_\_\_\_\_ #5: \_\_\_\_\_

#6: \_\_\_\_\_ #7: \_\_\_\_\_ #8: \_\_\_\_\_ #9: \_\_\_\_\_ #10: \_\_\_\_\_ #11: \_\_\_\_\_ #12: \_\_\_\_\_

Method of Delivery: FEDEX UPS Accutest Courier Greyhound Delivery Other

## COOLER INFORMATION

- ☐ Custody seal missing or not intact
- ☐ Temperature criteria not met
- ☐ Wet ice received in cooler

## CHAIN OF CUSTODY

- ☐ Chain of Custody not received
- ☐ Sample D/T unclear or missing
- ☐ Analyses unclear or missing
- ☐ COC not properly executed

## SAMPLE INFORMATION

- ☐ Sample containers received broken
- ☐ VOC vials have headspace
- ☐ Sample labels missing or illegible
- ☐ ID on COC does not match label(s)
- ☐ D/T on COC does not match label(s)
- ☐ Sample/Bottles rcvd but no analysis on COC
- ☐ Sample listed on COC, but not received
- ☐ Bottles missing for requested analysis
- ☐ Insufficient volume for analysis
- ☐ Sample received improperly preserved

## TRIP BLANK INFORMATION

- ☐ Trip Blank on COC but not received
- ☐ Trip Blank received but not on COC
- ☐ Trip Blank not intact
- ☐ Received Water Trip Blank
- ☐ Received Soil TB

Number of Encores? \_\_\_\_\_  
Number of 5035 kits? \_\_\_\_\_  
Number of lab-filtered metals? \_\_\_\_\_

Summary of Discrepancies:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TECHNICIAN SIGNATURE/DATE: [Signature] 9-29-10

INFORMATION AND SAMPLE LABELING VERIFIED BY: [Signature] 9/29/10

## CORRECTIVE ACTIONS

Client Representative Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Accutest Representative: \_\_\_\_\_

Via: Phone Email

Client Instructions: \_\_\_\_\_



## SAMPLE RECEIPT LOG

JOB #: 10001 DATE/TIME RECEIVED: 9.29.10 915  
 CLIENT: Esparco Oil & Gas (USA) INC. INITIALS: EC

[illegible]

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewp

## T60781: Chain of Custody

Page 3 of 3

## GC Volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T60781  
Account: ENCACOP ENCANA  
Project: M34 Spoils Pile

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GHH87-MB	HH0001709.D		10/01/10	LB	n/a	n/a	GHH87

The QC reported here applies to the following samples:

Method: SW846 8015

T60781-1

CAS No.	Compound	Result	RL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	90% 46-127%
98-08-8	aaa-Trifluorotoluene	99% 44-120%

Blank Spike Summary

Job Number: T60781  
Account: ENCACOP ENCANA  
Project: M34 Spoils Pile

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GHH87-BS	HH0001707.D		10/01/10	LB	n/a	n/a	GHH87

The QC reported here applies to the following samples: Method: SW846 8015

T60781-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	0.4	0.394	99	78-115

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	92%	46-127%
98-08-8	aaa-Trifluorotoluene	104%	44-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T60781  
Account: ENCACOP ENCANA  
Project: M34 Spoils Pile

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T60778-1MS	HH0001719.D		10/01/10	LB	n/a	n/a	GHH87
T60778-1MSD	HH0001720.D		10/01/10	LB	n/a	n/a	GHH87
T60778-1	HH0001710.D		10/01/10	LB	n/a	n/a	GHH87

The QC reported here applies to the following samples:

Method: SW846 8015

T60781-1

CAS No.	Compound	T60778-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	18.7		25.6	50.4	124*	50.7	125*	1	78-115/14

CAS No.	Surrogate Recoveries	MS	MSD	T60778-1	Limits
460-00-4	4-Bromofluorobenzene	122%	117%	111%	46-127%
98-08-8	aaa-Trifluorotoluene	106%	105%	99%	44-120%

## GC Semi-volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

Page 1 of 1

**Job Number:** T60781

**Account:** ENCACOP ENCANA

**Project:** M34 Spoils Pile

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP16217-MB	JJ7165.D	1	09/29/10	EM	09/29/10	OP16217	GJB66

The QC reported here applies to the following samples:

Method: SW846 8015 M

T60781-1

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	ND	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	94% 33-115%

## Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

**Job Number:** T60781

**Account:** ENCACOP ENCANA

**Project:** M34 Spoils Pile

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP16217-BS	JJ7166.D	1	09/29/10	EM	09/29/10	OP16217	GJF66
OP16217-BSD	JJ7167.D	1	09/29/10	EM	09/29/10	OP16217	GJB66

The QC reported here applies to the following samples:

Method: SW846 8015 M

T60781-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	33.1	27.0	82	27.2	82	1	45-107/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	67%	101%	33-115%





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

## Report Summary

Tuesday November 02, 2010

Report Number: L486217

Samples Received: 10/28/10

Client Project: M34

Description: M34

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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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 or Brad Kieding  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

November 02, 2010

Date Received : October 28, 2010  
Description : M34

Sample ID : M34-PB-102710

Collected By : Jake Harris  
Collection Date : 10/07/10 10:30

ESC Sample # : L486217-02

Site ID :

Project # : M34

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	10/30/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	89.9		% Rec.	602/8015	10/30/10	5
TPH (GC/FID) High Fraction	500	80.	mg/kg	3546/DRO	11/01/10	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	11/01/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/01/10 17:29 Revised: 11/02/10 07:01

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L486217-01	WG505878	SAMP	o-Terphenyl	R1451512	J7
L486217-02	WG505878	SAMP	o-Terphenyl	R1451512	J7
L486217-03	WG505878	SAMP	o-Terphenyl	R1451512	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

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YOUR LAB OF CHOICE

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Chris Hines or Brad Kieding  
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L486217

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

November 02, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG505874	10/30/10 08:38
a,a,a-Trifluorotoluene(FID)		% Rec.	91.69	59-128	WG505874	10/30/10 08:38
TPH (GC/FID) High Fraction	< 4	ppm			WG505878	10/30/10 14:34
o-Terphenyl		% Rec.	73.10	50-150	WG505878	10/30/10 14:34

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.38	97.8	67-135	WG505874
a,a,a-Trifluorotoluene(FID)				103.9	59-128	WG505874
TPH (GC/FID) High Fraction	ppm	60	56.9	94.8	50-150	WG505878
o-Terphenyl				79.27	50-150	WG505878

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.38	5.38	98.0	67-135	0.0200	20	WG505874
a,a,a-Trifluorotoluene(FID)				104.2	59-128			WG505874
TPH (GC/FID) High Fraction	ppm	58.5	56.9	98.0	50-150	2.87	20	WG505878
o-Terphenyl				80.30	50-150			WG505878

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	12.9	0	5.5	46.9*	55-109	L486212-01	WG505874
a,a,a-Trifluorotoluene(FID)					93.70	59-128		WG505874

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	11.1	12.9	40.3*	55-109	15.1	20	L486212-01	WG505874
a,a,a-Trifluorotoluene(FID)				93.64	59-128				WG505874

Batch number /Run number / Sample number cross reference

WG505874: R1449629: L486217-01 02 03  
WG505878: R1451512: L486217-01 02 03

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## Report Summary

Tuesday November 02, 2010

Report Number: L486217

Samples Received: 10/28/10

Client Project: M34

Description: M34

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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 or Brad Kieding  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

November 02, 2010

Date Received : October 28, 2010  
Description : M34

Sample ID : M34-PBC-102710

Collected By : Jake Harris  
Collection Date : 10/07/10 10:40

ESC Sample # : L486217-03

Site ID :

Project # : M34

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	1.0	0.50	mg/kg	8015D/GRO	10/30/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	89.6		% Rec.	602/8015	10/30/10	5
TPH (GC/FID) High Fraction	2100	80.	mg/kg	3546/DRO	11/01/10	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	11/01/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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.

Reported: 11/01/10 17:29 Revised: 11/02/10 07:01



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L486217-01	WG505878	SAMP	o-Terphenyl	R1451512	J7
L486217-02	WG505878	SAMP	o-Terphenyl	R1451512	J7
L486217-03	WG505878	SAMP	o-Terphenyl	R1451512	J7

Attachment B  
Explanation of QC Qualifier Codes

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

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG505874	10/30/10 08:38
a,a,a-Trifluorotoluene(FID)		% Rec.	91.69	59-128	WG505874	10/30/10 08:38
TPH (GC/FID) High Fraction	< 4	ppm			WG505878	10/30/10 14:34
o-Terphenyl		% Rec.	73.10	50-150	WG505878	10/30/10 14:34

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.38	97.8	67-135	WG505874
a,a,a-Trifluorotoluene(FID)				103.9	59-128	WG505874
TPH (GC/FID) High Fraction	ppm	60	56.9	94.8	50-150	WG505878
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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.38	5.38	98.0	67-135	0.0200	20	WG505874
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Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	12.9	0	5.5	46.9*	55-109	L486212-01	WG505874
a,a,a-Trifluorotoluene(FID)					93.70	59-128		WG505874

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
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TPH (GC/FID) Low Fraction	mg/kg	11.1	12.9	40.3*	55-109	15.1	20	L486212-01	WG505874
a,a,a-Trifluorotoluene(FID)				93.64	59-128				WG505874

Batch number /Run number / Sample number cross reference

WG505874: R1449629: L486217-01 02 03  
WG505878: R1451512: L486217-01 02 03

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Tuesday November 02, 2010

Report Number: L486217

Samples Received: 10/28/10

Client Project: M34

Description: M34

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# REPORT OF ANALYSIS

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

November 02, 2010

Date Received : October 28, 2010  
Description : M34

Sample ID : M34-SPOIL-102710

Collected By : Jake Harris  
Collection Date : 10/07/10 10:10

ESC Sample # : L486217-01

Site ID :

Project # : M34

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	0.55	0.50	mg/kg	8015D/GRO	10/30/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	90.8		% Rec.	602/8015	10/30/10	5
TPH (GC/FID) High Fraction	490	80.	mg/kg	3546/DRO	11/01/10	20
Surrogate recovery(%) o-Terphenyl	0.00		% Rec.	3546/DRO	11/01/10	20

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Reported: 11/01/10 17:29 Revised: 11/02/10 07:01

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L486217-02	WG505878	SAMP	o-Terphenyl	R1451512	J7
L486217-03	WG505878	SAMP	o-Terphenyl	R1451512	J7

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TPH (GC/FID) High Fraction	< 4	ppm			WG505878	10/30/10 14:34
o-Terphenyl		% Rec.	73.10	50-150	WG505878	10/30/10 14:34

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
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Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	12.9	0	5.5	46.9*	55-109	L486212-01	WG505874
a,a,a-Trifluorotoluene(FID)					93.70	59-128		WG505874

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		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	11.1	12.9	40.3*	55-109	15.1	20	L486212-01	WG505874
a,a,a-Trifluorotoluene(FID)				93.64	59-128				WG505874

Batch number /Run number / Sample number cross reference

WG505874: R1449629: L486217-01 02 03  
WG505878: R1451512: L486217-01 02 03

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