

# NARRATIVE ATTACHMENT

## FORM 4 (SUNDRY NOTICE)

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### Culvert Pit Closure (Dragon Trail 1323)

Document Date-7/24/2013

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#### Introduction

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Form 4 Sundry Notice to request final closure status for the culvert pit associated with the Dragon Trail Unit #1323 (COGCC facility #315916, COGCC remediation #7190). The site investigation was conducted by a third party contractor as authorized by Encana personnel and in accordance with the approved Form 27 previously submitted for this location. All samples were collected in accordance with Encana's Environmental Compliance Group's Sampling Procedures. The analytical results for the respective soil samples are provided in Table 1 and Attachment A of this submittal. The text below provides the details of the site investigation. For a visual description of the site please refer to Figures 1, 2, and 3 – Site Maps.

#### Assessment Activities

July 30, 2012 - The excavated soil surrounding the culvert pit was screened utilizing a photoionization detector (PID) prior to collecting soil samples for laboratory analysis. The culvert pit (steel ring, soil, no cement bottom) was carefully removed using a trackhoe and placed onsite for later recycling or disposal. It should be noted that there was no liquid associated with the bottom of the culvert pit during the time of removal. A grab sample was collected directly from the lowest point of the culvert pit after excavation. In addition, four (4) grab samples were collected, one from each excavated sidewall. Approximately 1,000 cubic yards of excavated material (including the sludge) was removed from the pit and laid out in 1 foot tall (130' x 100') lift for evaluation of impacts. The excavated material was sampled by way of an eleven (11) point composite sample. Four (4) background samples were collected from approximately six (6) inches beneath the grounds surface for analysis with regards to arsenic.

#### Analytical Review

Sample results indicate that soil within the culvert pit footprint on Encana's Dragon Trail Unit #1323 well pad, had organic constituent concentrations of the excavated area below or within COGCC Table 910-1 except for Total Petroleum Hydrocarbons (TPH) on the east sidewall of the excavation (1,330 ppm). Analytical results indicated the excavated material exceeded COGCC Table 910-1 allowable concentrations for arsenic (3.7 ppm) and EC (4.3 mmhos/cm). Though the arsenic concentration in the soil is above the allowable concentration identified in Table 910-1, the concentration is below the range of arsenic background values (4.6 – 6.4 ppm) in 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 value(s) as the allowable concentration for this constituent. Please see Table 1 and Attachment A for the analytical results.

Though the elevated arsenic and EC levels of the returned spoil material within the excavated footprint area are above the allowable levels identified in Table 910-1; it will be buried greater than three feet bgs of existing pad footprint material to assure that material with elevated level of arsenic and EC will have no



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adverse effect on future re-vegetation efforts and receptors in the area. Please see Table 1 and Attachment A for analytical results.

The east sidewall that exceeded COGCC Table 910-1 analytical values was saturated with a Microblaze application. The east sidewall was sampled June 27, 2013 and analytical values indicated that it was below or within COGCC Table 910-1 allowable concentrations.

#### **Conclusion**

Based on the site investigation and analytical results, the culvert pit associated with the Dragon Trail Unit #1323 is in compliance with the standards specified within COGCC Table 910-1. Encana respectfully requests that final closure be granted for the respective pit, COGCC remediation #7190.

#### **Notification of Completion**

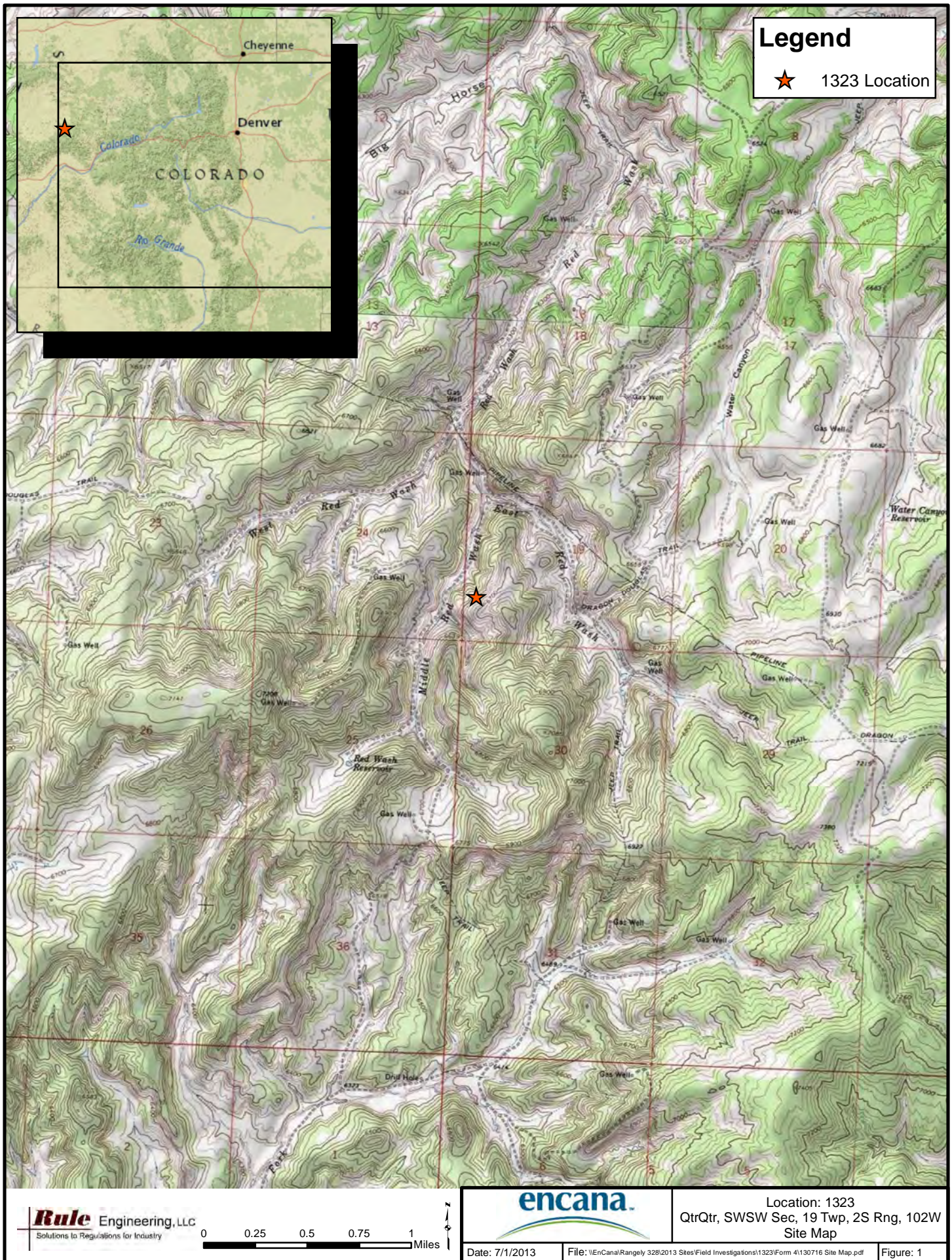
This Sundry Notice is also being submitted as the Notification of Completion for Remediation #7190. If the information provided here is satisfactory, please provide documentation of the closure of this remediation project.

#### **Attachments**

Topographic Location Map (Figure 1)  
1323 Aerial map with sample locations (Figure 2)  
1323 Site Diagram of Excavation and sample locations (Figure 3)  
Laboratory Results Summary Table 1 – 1323 Site Investigation (Table 1)  
Attachment A- Laboratory Reports



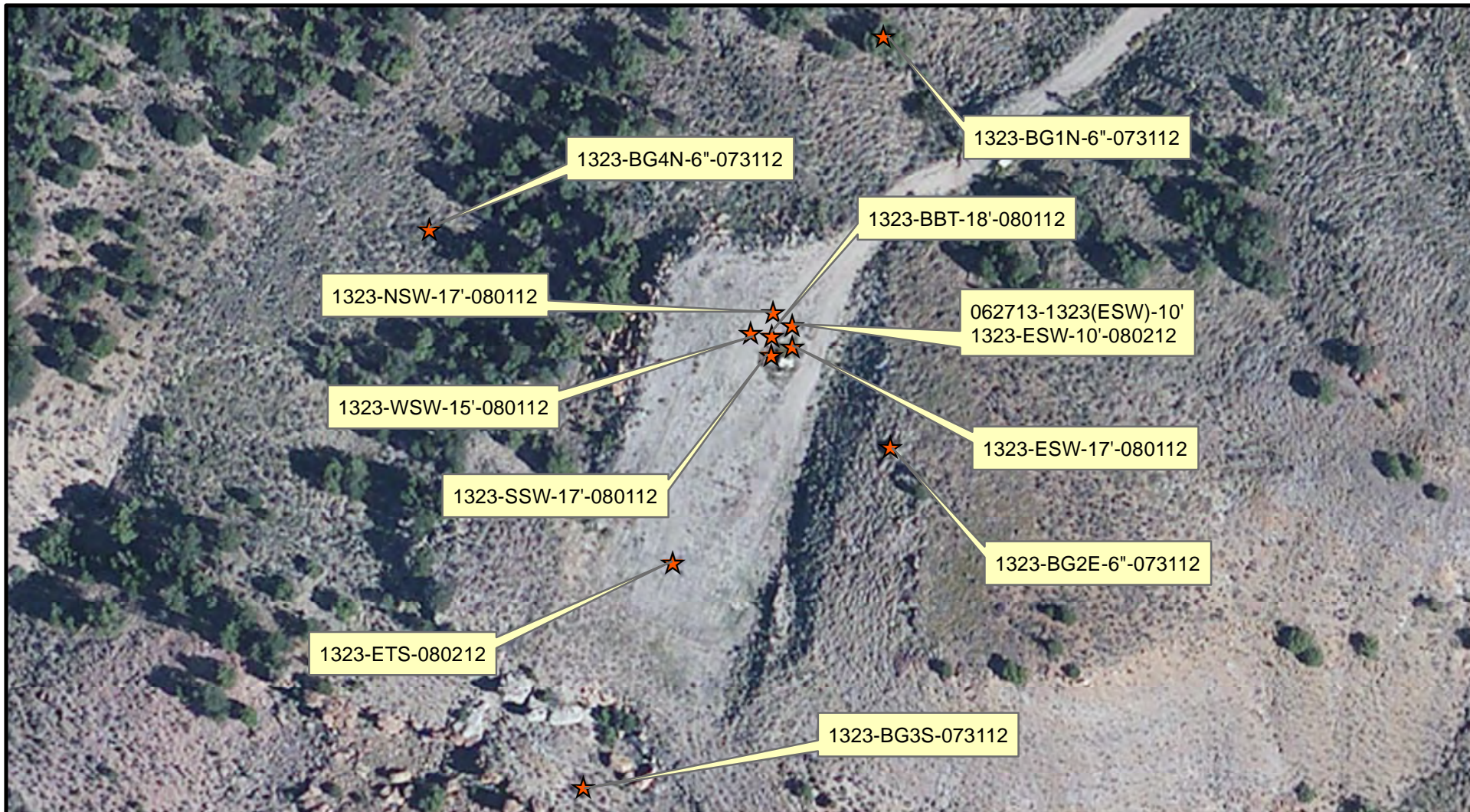




**Legend**

★ 1323 Location





## Legend

★ Soil Sample Location

0 50 100 200 300 Feet



**Rule** Engineering, LLC  
Solutions to Regulations for Industry

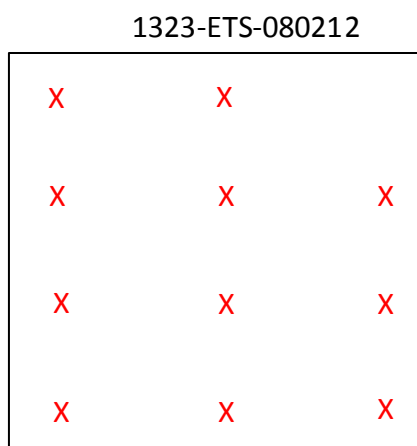
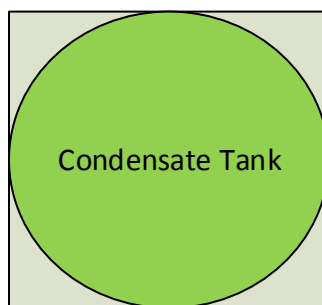
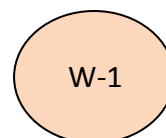
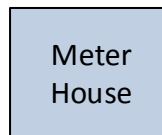
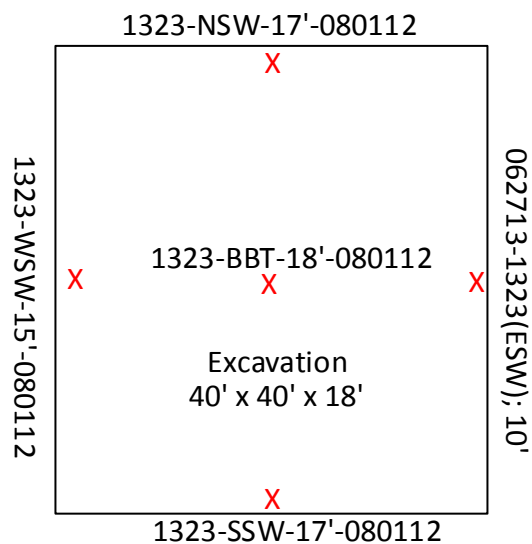


**1323**  
**Sample Location Map**

DATE: 7/16/2013 JG FILE: \\Encana\Rangely 328\2013 Sites\Field Investigations\1323\Form 4\130716 Sample Location Map.pdf FIGURE: 2



Direction of  
Flow



Lift  
130' x 100' x 1'

Legend  
X-Sample



Well: Figure 3. 1323 Site Diagram

Area: Dragon Trail Unit

Legal: SWSW, Sec 19, 02S, 102W, 6<sup>th</sup> PM

Date: 07/10/13

Drawn By: Brad Ward

Revision Date:

Scale: None

Rangely Site Clearance: Site 1323								Organics in Soil (mg/kg)																												Analytes (BDL = Below Detection Limit; NA = Not Applicable; ND =Non Detect; NS = Not Sampled)																Metals in Soil (mg/kg (ppm))																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Sample ID	Location Number ID	COC ID	Date:	Lab	Sampler:	Allowable Concentration -->		Field Screen Reading (PID ppm)	500	NA	NA	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	see below	<12				(6-9)	0.39	15000	15000	2 (mg/L)	NA	70	120000	23	3100	400	23	1600	390	390	23000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
						TPH	TPH-GRO (GC-CD) Low Fraction		TPH-GRO (CID-C28) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenz(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Pyrene	IE (<4 mmh2o/cm or 2x background)	SAR (calculation)	Calcium	Magnesium	Sodium	pH	Arsenic	Barium - LOHR True Total Barium	Barium - EPA Total Barium	Boron - Hot Water Soluble	Boron - EPA Total Boron	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1323-BG1N-6IN-073112	1323	L588405-01	7/31/2012	ESC	BW	Background	North Background	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
1323-BG2E-6IN-073112	1323	L588405-02	7/31/2012	ESC	BW	Background	East Background	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
1323-BG3S-6IN-073112	1323	L588405-03	7/31/2012	ESC	BW	Background	South Background	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
1323-BG4W-6IN-073112	1323	L588405-04	7/31/2012	ESC	BW	Background	West Background	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
1323-BBT-18FT-080112	1323	L588405-12	8/1/2012	ESC	BW	Culvert	Base below culvert at 18 feet after excavation	4	8.9	<0.50	8.9	<0.0025	<0.025	<0.0025	<0.0075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
1323-CETS-080112	1323	L588405-11	8/1/2012	ESC	BW	Culvert	9 point composite sample of spoil	NS	4.4	<0.50	4.4	<0.0025	<0.025	<0.0025	<0.0075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1323-ESW-17FT-080112	1323	L588405-06	8/1/2012	ESC	BW	Culvert	East Side Wall sample at 17 feet after excavation	20	13	<0.50	13	<0.0025	<0.025	<0.0025	<0.0075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1323-NSW-17FT-080112	1323	L588405-05	8/1/2012	ESC	BW	Culvert	North Side Wall sample at 17 feet after excavation	13	17	<0.50	17	<0.0025	<0.025	<0.0025	<0.0075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1323-SSW-17FT-080112	1323	L588405-07	8/1/2012	ESC	BW	Culvert	South Side Wall Sample at 17 feet after excavation	4	26	<0.50	26	<0.0025	<0.025	<0.0025	<0.0075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1323-WSW-17FT-080112	1323	L588405-08	8/1/2012	ESC	BW	Culvert	West Side Wall sample at 17 feet after excavation	2.6	<4.5	<0.50	<4.0	<0.0025	<0.025	<0.0025	<0.0075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1323-ESW-10FT-080212	1323	L588405-09	8/2/2012	ESC	BW	Culvert	East Side Wall sample at 10 feet after excavation	NS	1330	900	400	<2.5	<25	<2.5	<7.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1323-ETS-080212	1323	L588405-10	8/2/2012	ESC	BW	Culvert	9 point composite sample of spoil	NS	143	120	23	<0.025	<0.25	0.24	0.36	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0099	<0.0060	4.3	4.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS</

## **Appendix A**



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

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

## Report Summary

Monday August 13, 2012

Report Number: L588405

Samples Received: 08/04/12

Client Project: 1323

Description: 1323 Site Clearance

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

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

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

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





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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-BG1N-6IN-073112  
Collected By : Brad Ward  
Collection Date : 07/31/12 11:26

ESC Sample # : L588405-01

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	6.4	1.0	mg/kg	6010B	08/08/12	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: 08/13/12 14:26 Printed: 08/13/12 14:27



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-BG2E-6IN-073112  
Collected By : Brad Ward  
Collection Date : 07/31/12 11:44

ESC Sample # : L588405-02

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.9	1.0	mg/kg	6010B	08/08/12	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: 08/13/12 14:26 Printed: 08/13/12 14:27



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-BG3S-6IN-073112  
Collected By : Brad Ward  
Collection Date : 07/31/12 11:57

ESC Sample # : L588405-03

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.8	1.0	mg/kg	6010B	08/08/12	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: 08/13/12 14:26 Printed: 08/13/12 14:27





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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-BG4W-6IN-073112  
Collected By : Brad Ward  
Collection Date : 07/31/12 13:02

ESC Sample # : L588405-04

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.6	1.0	mg/kg	6010B	08/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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

.

Reported: 08/13/12 14:26 Printed: 08/13/12 14:27

REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-NSW-17FT-080112  
Collected By : Brad Ward  
Collection Date : 08/01/12 13:32

ESC Sample # : L588405-05

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/05/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/05/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/05/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	104.		% Rec.	8021/8015	08/05/12	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	08/05/12	5
TPH (GC/FID) High Fraction	17.	4.0	mg/kg	3546/DRO	08/07/12	1
Surrogate recovery(%)						
o-Terphenyl	55.6		% Rec.	3546/DRO	08/07/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-ESW-17FT-080112  
Collected By : Brad Ward  
Collection Date : 08/01/12 13:41

ESC Sample # : L588405-06

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/05/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/05/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/05/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	104.		% Rec.	8021/8015	08/05/12	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	08/05/12	5
TPH (GC/FID) High Fraction	13.	4.0	mg/kg	3546/DRO	08/07/12	1
Surrogate recovery(%)						
o-Terphenyl	67.2		% Rec.	3546/DRO	08/07/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-SSW-17FT-080112  
Collected By : Brad Ward  
Collection Date : 08/01/12 11:21

ESC Sample # : L588405-07

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/05/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/05/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/05/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	104.		% Rec.	8021/8015	08/05/12	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	08/05/12	5
TPH (GC/FID) High Fraction	26.	4.0	mg/kg	3546/DRO	08/08/12	1
Surrogate recovery(%)						
o-Terphenyl	54.7		% Rec.	3546/DRO	08/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-WSW-17FT-080112  
Collected By : Brad Ward  
Collection Date : 08/01/12 11:47

ESC Sample # : L588405-08

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/05/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/05/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/05/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	104.		% Rec.	8021/8015	08/05/12	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	08/05/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	08/08/12	1
Surrogate recovery(%)						
o-Terphenyl	69.3		% Rec.	3546/DRO	08/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-ESW-10FT-080212  
Collected By : Brad Ward  
Collection Date : 08/02/12 17:22

ESC Sample # : L588405-09

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	2.5	mg/kg	8021/8015	08/05/12	5000
Toluene	BDL	25.	mg/kg	8021/8015	08/05/12	5000
Ethylbenzene	BDL	2.5	mg/kg	8021/8015	08/05/12	5000
Total Xylene	BDL	7.5	mg/kg	8021/8015	08/05/12	5000
TPH (GC/FID) Low Fraction	900	500	mg/kg	GRO	08/05/12	5000
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	104.		% Rec.	8021/8015	08/05/12	5000
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	08/05/12	5000
TPH (GC/FID) High Fraction	430	80.	mg/kg	3546/DRO	08/08/12	20
Surrogate recovery(%)						
o-Terphenyl	51.6		% Rec.	3546/DRO	08/08/12	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L588405-09 (BTEXGRO) - Non-target compounds too high to run at a lower dilution.



REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-ETS-080212 3-9IN  
Collected By : Brad Ward  
Collection Date : 08/02/12 13:02

ESC Sample # : L588405-10

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	08/07/12	1
Chromium, Trivalent	11.	2.0	mg/kg	Calc.	08/08/12	1
ORP	110		mV	2580	08/08/12	1
pH	7.8		su	9045D	08/07/12	1
Sodium Adsorption Ratio	4.9			Calc.	08/09/12	1
Specific Conductance	4300		umhos/cm	9050AMod	08/08/12	1
Mercury	1.5	0.10	mg/kg	7471	08/08/12	5
Arsenic	3.7	1.0	mg/kg	6010B	08/08/12	1
Barium	200	0.25	mg/kg	6010B	08/08/12	1
Cadmium	0.56	0.25	mg/kg	6010B	08/10/12	1
Chromium	11.	0.50	mg/kg	6010B	08/08/12	1
Copper	12.	1.0	mg/kg	6010B	08/10/12	1
Lead	11.	0.25	mg/kg	6010B	08/10/12	1
Nickel	11.	1.0	mg/kg	6010B	08/10/12	1
Selenium	BDL	1.0	mg/kg	6010B	08/08/12	1
Silver	BDL	0.50	mg/kg	6010B	08/10/12	1
Zinc	41.	1.5	mg/kg	6010B	08/08/12	1
Benzene	BDL	0.025	mg/kg	8021/8015	08/08/12	50
Toluene	BDL	0.25	mg/kg	8021/8015	08/08/12	50
Ethylbenzene	0.24	0.025	mg/kg	8021/8015	08/08/12	50
Total Xylene	0.36	0.075	mg/kg	8021/8015	08/08/12	50
TPH (GC/FID) Low Fraction	120	5.0	mg/kg	GRO	08/08/12	50
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.6		% Rec.	8021/8015	08/08/12	50
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	08/08/12	50
TPH (GC/FID) High Fraction	23.	4.0	mg/kg	3546/DRO	08/08/12	1
Surrogate recovery(%)						
o-Terphenyl	50.1		% Rec.	3546/DRO	08/08/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L588405-10 (PH) - 7.8@20.4c



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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-ETS-080212 3-9IN  
Collected By : Brad Ward  
Collection Date : 08/02/12 13:02

ESC Sample # : L588405-10

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Naphthalene	0.0099	0.0060	mg/kg	8270C-SIM	08/07/12	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
1-Methylnaphthalene	0.018	0.0060	mg/kg	8270C-SIM	08/07/12	1
2-Methylnaphthalene	0.022	0.0060	mg/kg	8270C-SIM	08/07/12	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	08/07/12	1
Surrogate Recovery						
Nitrobenzene-d5	109.		% Rec.	8270C-SIM	08/07/12	1
2-Fluorobiphenyl	82.6		% Rec.	8270C-SIM	08/07/12	1
p-Terphenyl-d14	77.9		% Rec.	8270C-SIM	08/07/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L588405-10 (PH) - 7.8@20.4c



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Tax I.D. 62-0814289

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-CETS-080112 3-9IN  
Collected By : Brad Ward  
Collection Date : 08/01/12 15:49

ESC Sample # : L588405-11  
Site ID : 1323  
Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/05/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/05/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/05/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	103.		% Rec.	8021/8015	08/05/12	5
a,a,a-Trifluorotoluene(PID)	99.6		% Rec.	8021/8015	08/05/12	5
TPH (GC/FID) High Fraction	4.4	4.0	mg/kg	3546/DRO	08/08/12	1
Surrogate recovery(%)						
o-Terphenyl	59.3		% Rec.	3546/DRO	08/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 13, 2012

Date Received : August 04, 2012  
Description : 1323 Site Clearance  
Sample ID : 1323-BBT-18FT-080112  
Collected By : Brad Ward  
Collection Date : 08/01/12 14:02

ESC Sample # : L588405-12

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/05/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/05/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/05/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/05/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	97.2		% Rec.	8021/8015	08/05/12	5
a,a,a-Trifluorotoluene(PID)	104.		% Rec.	8021/8015	08/05/12	5
TPH (GC/FID) High Fraction	8.9	4.0	mg/kg	3546/DRO	08/08/12	1
Surrogate recovery(%)						
o-Terphenyl	53.8		% Rec.	3546/DRO	08/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L588405-08	WG606419	SAMP	TPH (GC/FID) High Fraction	R2294674	J3
L588405-09	WG606419	SAMP	o-Terphenyl	R2294674	J7
L588405-10	WG606308	SAMP	Lead	R2296334	B
	WG606403	SAMP	pH	R2293995	T8
L588405-12	WG606230	SAMP	TPH (GC/FID) Low Fraction	R2293477	J6J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

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

Definitions

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



Summary of Remarks For Samples Printed  
08/13/12 at 14:27:05

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L588405-01 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Sample: L588405-02 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Sample: L588405-03 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Sample: L588405-04 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Sample: L588405-05 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-06 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-07 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-08 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-09 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-10 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-11 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7  
Sample: L588405-12 Account: ENCANRCO Received: 08/04/12 09:00 Due Date: 08/10/12 00:00 RPT Date: 08/13/12 14:26  
Removed V8260 per JW MS 8/7



YOUR LAB OF CHOICE

EnCana Oil & Gas - Rangely, CO  
Blake Ford  
1125 Escalante Drive

Rangely, CO 81648-3600

Quality Assurance Report  
Level II

L588405

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August 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,1,1-Trichloroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,1,2-Trichloroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,1-Dichloroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,1-Dichloroethene	< .001	mg/kg			WG606208	08/04/12 21:40
1,1-Dichloropropene	< .001	mg/kg			WG606208	08/04/12 21:40
1,2,3-Trichlorobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,2,3-Trichloropropane	< .0025	mg/kg			WG606208	08/04/12 21:40
1,2,3-Trimethylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,2,4-Trichlorobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,2,4-Trimethylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG606208	08/04/12 21:40
1,2-Dibromoethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,2-Dichlorobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,2-Dichloroethane	< .001	mg/kg			WG606208	08/04/12 21:40
1,2-Dichloropropane	< .001	mg/kg			WG606208	08/04/12 21:40
1,3,5-Trimethylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,3-Dichlorobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
1,3-Dichloropropane	< .001	mg/kg			WG606208	08/04/12 21:40
1,4-Dichlorobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
2,2-Dichloropropane	< .001	mg/kg			WG606208	08/04/12 21:40
2-Butanone (MEK)	< .01	mg/kg			WG606208	08/04/12 21:40
2-Chloroethyl vinyl ether	< .05	mg/kg			WG606208	08/04/12 21:40
2-Chlorotoluene	< .001	mg/kg			WG606208	08/04/12 21:40
4-Chlorotoluene	< .001	mg/kg			WG606208	08/04/12 21:40
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG606208	08/04/12 21:40
Acetone	< .05	mg/kg			WG606208	08/04/12 21:40
Acrylonitrile	< .01	mg/kg			WG606208	08/04/12 21:40
Benzene	< .001	mg/kg			WG606208	08/04/12 21:40
Bromobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Bromodichloromethane	< .001	mg/kg			WG606208	08/04/12 21:40
Bromoform	< .001	mg/kg			WG606208	08/04/12 21:40
Bromomethane	< .005	mg/kg			WG606208	08/04/12 21:40
Carbon tetrachloride	< .001	mg/kg			WG606208	08/04/12 21:40
Chlorobenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Chlorodibromomethane	< .001	mg/kg			WG606208	08/04/12 21:40
Chloroethane	< .005	mg/kg			WG606208	08/04/12 21:40
Chloroform	< .005	mg/kg			WG606208	08/04/12 21:40
Chloromethane	< .0025	mg/kg			WG606208	08/04/12 21:40
cis-1,2-Dichloroethene	< .001	mg/kg			WG606208	08/04/12 21:40
cis-1,3-Dichloropropene	< .001	mg/kg			WG606208	08/04/12 21:40
Di-isopropyl ether	< .001	mg/kg			WG606208	08/04/12 21:40
Dibromomethane	< .001	mg/kg			WG606208	08/04/12 21:40
Dichlorodifluoromethane	< .005	mg/kg			WG606208	08/04/12 21:40
Ethylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Hexachloro-1,3-butadiene	< .001	mg/kg			WG606208	08/04/12 21:40
Isopropylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Methyl tert-butyl ether	< .001	mg/kg			WG606208	08/04/12 21:40
Methylene Chloride	< .005	mg/kg			WG606208	08/04/12 21:40
n-Butylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
n-Propylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Naphthalene	< .005	mg/kg			WG606208	08/04/12 21:40
p-Isopropyltoluene	< .001	mg/kg			WG606208	08/04/12 21:40
sec-Butylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Styrene	< .001	mg/kg			WG606208	08/04/12 21:40
tert-Butylbenzene	< .001	mg/kg			WG606208	08/04/12 21:40
Tetrachloroethane	< .001	mg/kg			WG606208	08/04/12 21:40

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Blake Ford  
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Rangely, CO 81648-3600

Quality Assurance Report  
Level II

L588405

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .005	mg/kg			WG606208	08/04/12 21:40
trans-1,2-Dichloroethene	< .001	mg/kg			WG606208	08/04/12 21:40
trans-1,3-Dichloropropene	< .001	mg/kg			WG606208	08/04/12 21:40
Trichloroethene	< .001	mg/kg			WG606208	08/04/12 21:40
Trichlorofluoromethane	< .005	mg/kg			WG606208	08/04/12 21:40
Vinyl chloride	< .001	mg/kg			WG606208	08/04/12 21:40
Xylenes, Total	< .003	mg/kg			WG606208	08/04/12 21:40
4-Bromofluorobenzene	% Rec.		95.27	67-133	WG606208	08/04/12 21:40
Dibromofluoromethane	% Rec.		97.62	72-135	WG606208	08/04/12 21:40
Toluene-d8	% Rec.		98.81	90-113	WG606208	08/04/12 21:40
Benzene	< .0005	mg/kg			WG606226	08/05/12 00:46
Ethylbenzene	< .0005	mg/kg			WG606226	08/05/12 00:46
Toluene	< .005	mg/kg			WG606226	08/05/12 00:46
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG606226	08/05/12 00:46
Total Xylene	< .0015	mg/kg			WG606226	08/05/12 00:46
a,a,a-Trifluorotoluene(FID)	% Rec.		104.0	59-128	WG606226	08/05/12 00:46
a,a,a-Trifluorotoluene(PID)	% Rec.		101.6	54-144	WG606226	08/05/12 00:46
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,1,1-Trichloroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,1,2-Trichloroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,1-Dichloroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,1-Dichloroethene	< .001	mg/kg			WG606336	08/06/12 12:15
1,1-Dichloropropene	< .001	mg/kg			WG606336	08/06/12 12:15
1,2,3-Trichlorobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,2,3-Trichloropropane	< .0025	mg/kg			WG606336	08/06/12 12:15
1,2,3-Trimethylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,2,4-Trichlorobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,2,4-Trimethylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG606336	08/06/12 12:15
1,2-Dibromoethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,2-Dichlorobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,2-Dichloroethane	< .001	mg/kg			WG606336	08/06/12 12:15
1,2-Dichloropropane	< .001	mg/kg			WG606336	08/06/12 12:15
1,3,5-Trimethylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,3-Dichlorobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
1,3-Dichloropropane	< .001	mg/kg			WG606336	08/06/12 12:15
1,4-Dichlorobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
2,2-Dichloropropane	< .001	mg/kg			WG606336	08/06/12 12:15
2-Butanone (MEK)	< .01	mg/kg			WG606336	08/06/12 12:15
2-Chloroethyl vinyl ether	< .05	mg/kg			WG606336	08/06/12 12:15
2-Chlorotoluene	< .001	mg/kg			WG606336	08/06/12 12:15
4-Chlorotoluene	< .001	mg/kg			WG606336	08/06/12 12:15
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG606336	08/06/12 12:15
Acetone	< .05	mg/kg			WG606336	08/06/12 12:15
Acrylonitrile	< .01	mg/kg			WG606336	08/06/12 12:15
Benzene	< .001	mg/kg			WG606336	08/06/12 12:15
Bromobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Bromodichloromethane	< .001	mg/kg			WG606336	08/06/12 12:15
Bromoform	< .001	mg/kg			WG606336	08/06/12 12:15
Bromomethane	< .005	mg/kg			WG606336	08/06/12 12:15
Carbon tetrachloride	< .001	mg/kg			WG606336	08/06/12 12:15
Chlorobenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Chlorodibromomethane	< .001	mg/kg			WG606336	08/06/12 12:15

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Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Chloroethane	< .005	mg/kg			WG606336	08/06/12 12:15
Chloroform	< .005	mg/kg			WG606336	08/06/12 12:15
Chloromethane	< .0025	mg/kg			WG606336	08/06/12 12:15
cis-1,2-Dichloroethene	< .001	mg/kg			WG606336	08/06/12 12:15
cis-1,3-Dichloropropene	< .001	mg/kg			WG606336	08/06/12 12:15
Di-isopropyl ether	< .001	mg/kg			WG606336	08/06/12 12:15
Dibromomethane	< .001	mg/kg			WG606336	08/06/12 12:15
Dichlorodifluoromethane	< .005	mg/kg			WG606336	08/06/12 12:15
Ethylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Hexachloro-1,3-butadiene	< .001	mg/kg			WG606336	08/06/12 12:15
Isopropylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Methyl tert-butyl ether	< .001	mg/kg			WG606336	08/06/12 12:15
Methylene Chloride	< .005	mg/kg			WG606336	08/06/12 12:15
n-Butylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
n-Propylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Naphthalene	< .005	mg/kg			WG606336	08/06/12 12:15
p-Isopropyltoluene	< .001	mg/kg			WG606336	08/06/12 12:15
sec-Butylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Styrene	< .001	mg/kg			WG606336	08/06/12 12:15
tert-Butylbenzene	< .001	mg/kg			WG606336	08/06/12 12:15
Tetrachloroethene	< .001	mg/kg			WG606336	08/06/12 12:15
Toluene	< .005	mg/kg			WG606336	08/06/12 12:15
trans-1,2-Dichloroethene	< .001	mg/kg			WG606336	08/06/12 12:15
trans-1,3-Dichloropropene	< .001	mg/kg			WG606336	08/06/12 12:15
Trichloroethene	< .001	mg/kg			WG606336	08/06/12 12:15
Trichlorofluoromethane	< .005	mg/kg			WG606336	08/06/12 12:15
Vinyl chloride	< .001	mg/kg			WG606336	08/06/12 12:15
Xylenes, Total	< .003	mg/kg			WG606336	08/06/12 12:15
4-Bromofluorobenzene		% Rec.	104.1	67-133	WG606336	08/06/12 12:15
Dibromofluoromethane		% Rec.	99.24	72-135	WG606336	08/06/12 12:15
Toluene-d8		% Rec.	104.4	90-113	WG606336	08/06/12 12:15
Benzene	< .0005	mg/kg			WG606230	08/05/12 16:26
Ethylbenzene	< .0005	mg/kg			WG606230	08/05/12 16:26
Toluene	< .005	mg/kg			WG606230	08/05/12 16:26
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG606230	08/05/12 16:26
Total Xylene	< .0015	mg/kg			WG606230	08/05/12 16:26
a,a,a-Trifluorotoluene(FID)		% Rec.	97.98	59-128	WG606230	08/05/12 16:26
a,a,a-Trifluorotoluene(PID)		% Rec.	104.8	54-144	WG606230	08/05/12 16:26
Chromium,Hexavalent	< 2	mg/kg			WG606214	08/07/12 14:16
pH	5.78	su			WG606403	08/07/12 15:45
Specific Conductance	1.63	umhos/cm			WG606278	08/08/12 09:21
TPH (GC/FID) High Fraction	< 4	ppm			WG606419	08/07/12 18:30
o-Terphenyl		% Rec.	64.21	50-150	WG606419	08/07/12 18:30
1-Methylnaphthalene	< .006	mg/kg			WG606382	08/07/12 11:27
2-Chloronaphthalene	< .006	mg/kg			WG606382	08/07/12 11:27
2-Methylnaphthalene	< .006	mg/kg			WG606382	08/07/12 11:27
Acenaphthene	< .006	mg/kg			WG606382	08/07/12 11:27

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Est. 1970

August 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Acenaphthylene	< .006	mg/kg			WG606382	08/07/12 11:27
Anthracene	< .006	mg/kg			WG606382	08/07/12 11:27
Benzo(a)anthracene	< .006	mg/kg			WG606382	08/07/12 11:27
Benzo(a)pyrene	< .006	mg/kg			WG606382	08/07/12 11:27
Benzo(b)fluoranthene	< .006	mg/kg			WG606382	08/07/12 11:27
Benzo(g,h,i)perylene	< .006	mg/kg			WG606382	08/07/12 11:27
Benzo(k)fluoranthene	< .006	mg/kg			WG606382	08/07/12 11:27
Chrysene	< .006	mg/kg			WG606382	08/07/12 11:27
Dibenz(a,h)anthracene	< .006	mg/kg			WG606382	08/07/12 11:27
Fluoranthene	< .006	mg/kg			WG606382	08/07/12 11:27
Fluorene	< .006	mg/kg			WG606382	08/07/12 11:27
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG606382	08/07/12 11:27
Naphthalene	< .006	mg/kg			WG606382	08/07/12 11:27
Phenanthrene	< .006	mg/kg			WG606382	08/07/12 11:27
Pyrene	< .006	mg/kg			WG606382	08/07/12 11:27
2-Fluorobiphenyl		% Rec.	80.12	34-129	WG606382	08/07/12 11:27
Nitrobenzene-d5		% Rec.	75.98	14-141	WG606382	08/07/12 11:27
p-Terphenyl-d14		% Rec.	77.85	25-139	WG606382	08/07/12 11:27
Benzene	< .0005	mg/kg			WG606414	08/07/12 16:58
Ethylbenzene	< .0005	mg/kg			WG606414	08/07/12 16:58
Toluene	< .005	mg/kg			WG606414	08/07/12 16:58
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG606414	08/07/12 16:58
Total Xylene	< .0015	mg/kg			WG606414	08/07/12 16:58
a,a,a-Trifluorotoluene(FID)		% Rec.	94.04	59-128	WG606414	08/07/12 16:58
a,a,a-Trifluorotoluene(PID)		% Rec.	100.7	54-144	WG606414	08/07/12 16:58
Mercury	< .02	mg/kg			WG606559	08/08/12 17:18
Arsenic	< 1	mg/kg			WG606308	08/08/12 17:09
Barium	< .25	mg/kg			WG606308	08/08/12 17:09
Chromium	< .5	mg/kg			WG606308	08/08/12 17:09
Selenium	< 1	mg/kg			WG606308	08/08/12 17:09
Zinc	< 1.5	mg/kg			WG606308	08/08/12 17:09
Cadmium	< .25	mg/kg			WG606308	08/08/12 19:46
Silver	< .5	mg/kg			WG606308	08/08/12 19:46
Copper	< 1	mg/kg			WG606308	08/10/12 02:22
Nickel	< 1	mg/kg			WG606308	08/10/12 02:22
Lead	0.260	mg/kg			WG606308	08/10/12 15:42

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
ORP	mV	210.	210.	0.475	20	L587564-01	WG606576
ORP	mV	110.	110.	3.70	20	L588405-10	WG606576
Chromium,Hexavalent	mg/kg	0	0	0	20	L587734-04	WG606214
pH	su	7.10	7.20	1.54*	1	L588425-02	WG606403
pH	su	6.20	6.10	0.816	1	L588454-01	WG606403
Specific Conductance	umhos/cm	2000	2000	0	20	L587460-02	WG606278
Specific Conductance	umhos/cm	4600	4300	7.78	20	L588405-10	WG606278

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Est. 1970

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
ORP	mV	210.	210.		0.475	20	L587564-01	WG606576
ORP	mV	110.	110.		3.70	20	L588405-10	WG606576
Mercury	mg/kg	0.0360	0.0380		4.30	20	L588504-01	WG606559
Arsenic	mg/kg	2.50	2.90		16.0	20	L588406-04	WG606308
Barium	mg/kg	120.	137.		13.2	20	L588406-04	WG606308
Chromium	mg/kg	19.0	27.7		39.3*	20	L588406-04	WG606308
Selenium	mg/kg	0	0.455		NA	20	L588406-04	WG606308
Zinc	mg/kg	22.0	24.7		9.77	20	L588406-04	WG606308
Cadmium	mg/kg	0.290	0		NA	20	L588406-04	WG606308
Copper	mg/kg	7.00	0		NA	20	L588406-04	WG606308
Nickel	mg/kg	21.0	0		NA	20	L588406-04	WG606308
Silver	mg/kg	0	0		0	20	L588406-04	WG606308
Lead	mg/kg	6.50	6.90		5.97	20	L588406-04	WG606308

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
ORP	mV	228	228.	100.	95.6-104.	WG606576
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0272	109.	77-129	WG606208
1,1,1-Trichloroethane	mg/kg	.025	0.0261	104.	70-127	WG606208
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0236	94.4	76-133	WG606208
1,1,2-Trichloroethane	mg/kg	.025	0.0252	101.	79-123	WG606208
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0277	111.	52-145	WG606208
1,1-Dichloroethane	mg/kg	.025	0.0239	95.7	74-121	WG606208
1,1-Dichloroethene	mg/kg	.025	0.0248	99.2	53-135	WG606208
1,1-Dichloropropene	mg/kg	.025	0.0246	98.5	67-127	WG606208
1,2,3-Trichlorobenzene	mg/kg	.025	0.0242	96.7	74-131	WG606208
1,2,3-Trichloropropane	mg/kg	.025	0.0252	101.	75-135	WG606208
1,2,3-Trimethylbenzene	mg/kg	.025	0.0240	95.9	76-128	WG606208
1,2,4-Trichlorobenzene	mg/kg	.025	0.0249	99.5	72-130	WG606208
1,2,4-Trimethylbenzene	mg/kg	.025	0.0263	105.	75-131	WG606208
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0213	85.2	55-142	WG606208
1,2-Dibromoethane	mg/kg	.025	0.0249	99.7	77-126	WG606208
1,2-Dichlorobenzene	mg/kg	.025	0.0240	96.2	80-123	WG606208
1,2-Dichloroethane	mg/kg	.025	0.0230	91.9	70-128	WG606208
1,2-Dichloropropane	mg/kg	.025	0.0236	94.4	74-125	WG606208
1,3,5-Trimethylbenzene	mg/kg	.025	0.0266	106.	77-129	WG606208
1,3-Dichlorobenzene	mg/kg	.025	0.0254	101.	76-128	WG606208
1,3-Dichloropropane	mg/kg	.025	0.0231	92.4	77-118	WG606208
1,4-Dichlorobenzene	mg/kg	.025	0.0241	96.5	77-119	WG606208
2,2-Dichloropropane	mg/kg	.025	0.0280	112.	60-132	WG606208
2-Butanone (MEK)	mg/kg	.125	0.131	104.	56-146	WG606208
2-Chloroethyl vinyl ether	mg/kg	.125	0.118	94.7	17-179	WG606208
2-Chlorotoluene	mg/kg	.025	0.0253	101.	76-125	WG606208
4-Chlorotoluene	mg/kg	.025	0.0251	100.	76-125	WG606208
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.121	96.7	55-148	WG606208
Acetone	mg/kg	.125	0.151	121.	47-155	WG606208
Acrylonitrile	mg/kg	.125	0.114	91.3	50-155	WG606208
Benzene	mg/kg	.025	0.0239	95.5	72-120	WG606208
Bromobenzene	mg/kg	.025	0.0239	95.8	74-122	WG606208
Bromodichloromethane	mg/kg	.025	0.0247	98.9	74-128	WG606208
Bromoform	mg/kg	.025	0.0283	113.	62-137	WG606208
Bromomethane	mg/kg	.025	0.0272	109.	38-180	WG606208

\* Performance of this Analyte is outside of established criteria.

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YOUR LAB OF CHOICE

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Blake Ford  
1125 Escalante Drive

Rangely, CO 81648-3600

Quality Assurance Report  
Level II

L588405

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Carbon tetrachloride	mg/kg	.025	0.0272	109.	62-130	WG606208
Chlorobenzene	mg/kg	.025	0.0252	101.	77-124	WG606208
Chlorodibromomethane	mg/kg	.025	0.0257	103.	74-128	WG606208
Chloroethane	mg/kg	.025	0.0253	101.	46-173	WG606208
Chloroform	mg/kg	.025	0.0249	99.6	76-122	WG606208
Chloromethane	mg/kg	.025	0.0235	94.1	49-143	WG606208
cis-1,2-Dichloroethene	mg/kg	.025	0.0243	97.2	73-123	WG606208
cis-1,3-Dichloropropene	mg/kg	.025	0.0239	95.7	73-126	WG606208
Di-isopropyl ether	mg/kg	.025	0.0235	93.9	64-131	WG606208
Dibromomethane	mg/kg	.025	0.0249	99.6	75-127	WG606208
Dichlorodifluoromethane	mg/kg	.025	0.0260	104.	30-177	WG606208
Ethylbenzene	mg/kg	.025	0.0259	104.	76-126	WG606208
Hexachloro-1,3-butadiene	mg/kg	.025	0.0248	99.2	71-134	WG606208
Isopropylbenzene	mg/kg	.025	0.0280	112.	70-128	WG606208
Methyl tert-butyl ether	mg/kg	.025	0.0240	95.9	66-127	WG606208
Methylene Chloride	mg/kg	.025	0.0240	96.0	67-124	WG606208
n-Butylbenzene	mg/kg	.025	0.0254	102.	71-133	WG606208
n-Propylbenzene	mg/kg	.025	0.0261	104.	76-126	WG606208
Naphthalene	mg/kg	.025	0.0228	91.3	68-136	WG606208
p-Isopropyltoluene	mg/kg	.025	0.0287	115.	75-134	WG606208
sec-Butylbenzene	mg/kg	.025	0.0271	108.	75-132	WG606208
Styrene	mg/kg	.025	0.0266	106.	68-148	WG606208
tert-Butylbenzene	mg/kg	.025	0.0273	109.	75-132	WG606208
Tetrachloroethene	mg/kg	.025	0.0267	107.	70-131	WG606208
Toluene	mg/kg	.025	0.0237	94.7	74-155	WG606208
trans-1,2-Dichloroethene	mg/kg	.025	0.0252	101.	63-126	WG606208
trans-1,3-Dichloropropene	mg/kg	.025	0.0224	89.8	68-126	WG606208
Trichloroethene	mg/kg	.025	0.0253	101.	75-121	WG606208
Trichlorofluoromethane	mg/kg	.025	0.0281	112.	48-170	WG606208
Vinyl chloride	mg/kg	.025	0.0254	101.	54-144	WG606208
Xylenes, Total	mg/kg	.075	0.0795	106.	76-126	WG606208
4-Bromofluorobenzene				101.0	67-133	WG606208
Dibromofluoromethane				101.0	72-135	WG606208
Toluene-d8				104.1	90-113	WG606208
Benzene	mg/kg	.05	0.0455	91.0	76-113	WG606226
Ethylbenzene	mg/kg	.05	0.0495	99.0	78-115	WG606226
Toluene	mg/kg	.05	0.0480	95.9	76-114	WG606226
Total Xylene	mg/kg	.15	0.154	102.	81-118	WG606226
a,a,a-Trifluorotoluene(PID)				99.59	54-144	WG606226
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.59	120.	67-135	WG606226
a,a,a-Trifluorotoluene(FID)				94.14	59-128	WG606226
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0281	112.	77-129	WG606336
1,1,1-Trichloroethane	mg/kg	.025	0.0268	107.	70-127	WG606336
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0259	103.	76-133	WG606336
1,1,2-Trichloroethane	mg/kg	.025	0.0275	110.	79-123	WG606336
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0310	124.	52-145	WG606336
1,1-Dichloroethane	mg/kg	.025	0.0262	105.	74-121	WG606336
1,1-Dichloroethene	mg/kg	.025	0.0310	124.	53-135	WG606336
1,1-Dichloropropene	mg/kg	.025	0.0263	105.	67-127	WG606336
1,2,3-Trichlorobenzene	mg/kg	.025	0.0272	109.	74-131	WG606336
1,2,3-Trichloropropane	mg/kg	.025	0.0259	104.	75-135	WG606336
1,2,3-Trimethylbenzene	mg/kg	.025	0.0262	105.	76-128	WG606336
1,2,4-Trichlorobenzene	mg/kg	.025	0.0274	109.	72-130	WG606336
1,2,4-Trimethylbenzene	mg/kg	.025	0.0283	113.	75-131	WG606336
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0241	96.5	55-142	WG606336

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Quality Assurance Report  
Level II

L588405

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Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2-Dibromoethane	mg/kg	.025	0.0270	108.	77-126	WG606336
1,2-Dichlorobenzene	mg/kg	.025	0.0266	106.	80-123	WG606336
1,2-Dichloroethane	mg/kg	.025	0.0244	97.8	70-128	WG606336
1,2-Dichloropropane	mg/kg	.025	0.0263	105.	74-125	WG606336
1,3,5-Trimethylbenzene	mg/kg	.025	0.0288	115.	77-129	WG606336
1,3-Dichlorobenzene	mg/kg	.025	0.0283	113.	76-128	WG606336
1,3-Dichloropropane	mg/kg	.025	0.0258	103.	77-118	WG606336
1,4-Dichlorobenzene	mg/kg	.025	0.0264	105.	77-119	WG606336
2,2-Dichloropropane	mg/kg	.025	0.0265	106.	60-132	WG606336
2-Butanone (MEK)	mg/kg	.125	0.119	95.2	56-146	WG606336
2-Chloroethyl vinyl ether	mg/kg	.125	0.129	103.	17-179	WG606336
2-Chlorotoluene	mg/kg	.025	0.0275	110.	76-125	WG606336
4-Chlorotoluene	mg/kg	.025	0.0272	109.	76-125	WG606336
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.117	93.3	55-148	WG606336
Acetone	mg/kg	.125	0.118	94.1	47-155	WG606336
Acrylonitrile	mg/kg	.125	0.135	108.	50-155	WG606336
Benzene	mg/kg	.025	0.0268	107.	72-120	WG606336
Bromobenzene	mg/kg	.025	0.0263	105.	74-122	WG606336
Bromodichloromethane	mg/kg	.025	0.0252	101.	74-128	WG606336
Bromoform	mg/kg	.025	0.0276	111.	62-137	WG606336
Bromomethane	mg/kg	.025	0.0263	105.	38-180	WG606336
Carbon tetrachloride	mg/kg	.025	0.0261	104.	62-130	WG606336
Chlorobenzene	mg/kg	.025	0.0278	111.	77-124	WG606336
Chlorodibromomethane	mg/kg	.025	0.0266	106.	74-128	WG606336
Chloroethane	mg/kg	.025	0.0261	104.	46-173	WG606336
Chloroform	mg/kg	.025	0.0253	101.	76-122	WG606336
Chloromethane	mg/kg	.025	0.0254	101.	49-143	WG606336
cis-1,2-Dichloroethene	mg/kg	.025	0.0270	108.	73-123	WG606336
cis-1,3-Dichloropropene	mg/kg	.025	0.0261	104.	73-126	WG606336
Di-isopropyl ether	mg/kg	.025	0.0266	107.	64-131	WG606336
Dibromomethane	mg/kg	.025	0.0261	104.	75-127	WG606336
Dichlorodifluoromethane	mg/kg	.025	0.0233	93.2	30-177	WG606336
Ethylbenzene	mg/kg	.025	0.0287	115.	76-126	WG606336
Hexachloro-1,3-butadiene	mg/kg	.025	0.0284	114.	71-134	WG606336
Isopropylbenzene	mg/kg	.025	0.0286	115.	70-128	WG606336
Methyl tert-butyl ether	mg/kg	.025	0.0265	106.	66-127	WG606336
Methylene Chloride	mg/kg	.025	0.0272	109.	67-124	WG606336
n-Butylbenzene	mg/kg	.025	0.0277	111.	71-133	WG606336
n-Propylbenzene	mg/kg	.025	0.0290	116.	76-126	WG606336
Naphthalene	mg/kg	.025	0.0247	98.7	68-136	WG606336
p-Isopropyltoluene	mg/kg	.025	0.0305	122.	75-134	WG606336
sec-Butylbenzene	mg/kg	.025	0.0297	119.	75-132	WG606336
Styrene	mg/kg	.025	0.0282	113.	68-148	WG606336
tert-Butylbenzene	mg/kg	.025	0.0299	120.	75-132	WG606336
Tetrachloroethene	mg/kg	.025	0.0291	116.	70-131	WG606336
Toluene	mg/kg	.025	0.0255	102.	74-155	WG606336
trans-1,2-Dichloroethene	mg/kg	.025	0.0280	112.	63-126	WG606336
trans-1,3-Dichloropropene	mg/kg	.025	0.0249	99.5	68-126	WG606336
Trichloroethene	mg/kg	.025	0.0275	110.	75-121	WG606336
Trichlorofluoromethane	mg/kg	.025	0.0273	109.	48-170	WG606336
Vinyl chloride	mg/kg	.025	0.0245	98.0	54-144	WG606336
Xylenes, Total	mg/kg	.075	0.0843	112.	76-126	WG606336
4-Bromofluorobenzene				103.4	67-133	WG606336
Dibromofluoromethane				99.89	72-135	WG606336
Toluene-d8				103.5	90-113	WG606336
Benzene	mg/kg	.05	0.0477	95.3	76-113	WG606230
Ethylbenzene	mg/kg	.05	0.0530	106.	78-115	WG606230

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L588405

August 13, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Toluene	mg/kg	.05	0.0501	100.	76-114	WG606230
Total Xylene	mg/kg	.15	0.162	108.	81-118	WG606230
a,a,a-Trifluorotoluene(PID)				104.7	54-144	WG606230
TPH (GC/FID) Low Fraction	mg/kg	5.5	7.10	129.	67-135	WG606230
a,a,a-Trifluorotoluene(FID)				104.9	59-128	WG606230
Chromium,Hexavalent	mg/kg	150	132.	88.0	50-150	WG606214
pH	su	6.03	6.02	99.8	98-101	WG606403
Specific Conductance	umhos/cm	495	499.	101.	85-115	WG606278
TPH (GC/FID) High Fraction	ppm	60	47.7	79.5	50-150	WG606419
o-Terphenyl				70.30	50-150	WG606419
1-Methylnaphthalene	mg/kg	.033	0.0237	71.9	48-113	WG606382
2-Chloronaphthalene	mg/kg	.033	0.0243	73.8	51-114	WG606382
2-Methylnaphthalene	mg/kg	.033	0.0233	70.6	44-109	WG606382
Acenaphthene	mg/kg	.033	0.0247	75.0	52-108	WG606382
Acenaphthylene	mg/kg	.033	0.0253	76.6	51-110	WG606382
Anthracene	mg/kg	.033	0.0276	83.6	58-120	WG606382
Benzo(a)anthracene	mg/kg	.033	0.0279	84.4	54-110	WG606382
Benzo(a)pyrene	mg/kg	.033	0.0263	79.7	56-118	WG606382
Benzo(b)fluoranthene	mg/kg	.033	0.0283	85.6	55-114	WG606382
Benzo(g,h,i)perylene	mg/kg	.033	0.0308	93.2	48-130	WG606382
Benzo(k)fluoranthene	mg/kg	.033	0.0267	81.0	55-122	WG606382
Chrysene	mg/kg	.033	0.0267	80.8	57-118	WG606382
Dibenz(a,h)anthracene	mg/kg	.033	0.0306	92.6	53-122	WG606382
Fluoranthene	mg/kg	.033	0.0272	82.3	58-118	WG606382
Fluorene	mg/kg	.033	0.0254	76.9	54-109	WG606382
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0309	93.6	51-125	WG606382
Naphthalene	mg/kg	.033	0.0230	69.8	45-105	WG606382
Phenanthrene	mg/kg	.033	0.0251	76.0	53-114	WG606382
Pyrene	mg/kg	.033	0.0246	74.5	53-121	WG606382
2-Fluorobiphenyl				79.44	34-129	WG606382
Nitrobenzene-d5				72.07	14-141	WG606382
p-Terphenyl-d14				76.60	25-139	WG606382
Benzene	mg/kg	.05	0.0454	90.8	76-113	WG606414
Ethylbenzene	mg/kg	.05	0.0506	101.	78-115	WG606414
Toluene	mg/kg	.05	0.0485	97.1	76-114	WG606414
Total Xylene	mg/kg	.15	0.159	106.	81-118	WG606414
a,a,a-Trifluorotoluene(PID)				100.6	54-144	WG606414
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.76	123.	67-135	WG606414
a,a,a-Trifluorotoluene(FID)				100.4	59-128	WG606414
ORP	mV	228	228.	100.	95.6-104.	WG606576
Mercury	mg/kg	12.4	15.6	126.	71.6-128	WG606559

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August 13, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	237	232.	97.9	83.1-117	WG606308
Barium	mg/kg	252	256.	102.	84.1-116	WG606308
Chromium	mg/kg	128	128.	100.	81.3-118	WG606308
Selenium	mg/kg	110	108.	98.2	78.7-122	WG606308
Zinc	mg/kg	183	178.	97.3	82-118	WG606308
Cadmium	mg/kg	191	188.	98.4	83.2-117	WG606308
Silver	mg/kg	47.3	43.8	92.6	66.2-134	WG606308
Copper	mg/kg	123	126.	102.	83.7-116	WG606308
Nickel	mg/kg	118	123.	104.	82-118	WG606308
Lead	mg/kg	103	99.7	96.8	83.1-117	WG606308

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
ORP	mV	229.	228.	100.	95.6-104.	0.438	20	WG606576
1,1,1,2-Tetrachloroethane	mg/kg	0.0266	0.0272	106.	77-129	2.09	20	WG606208
1,1,1-Trichloroethane	mg/kg	0.0264	0.0261	106.	70-127	1.08	20	WG606208
1,1,2,2-Tetrachloroethane	mg/kg	0.0250	0.0236	100.	76-133	5.65	20	WG606208
1,1,2-Trichloroethane	mg/kg	0.0244	0.0252	98.0	79-123	3.01	20	WG606208
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0279	0.0277	112.	52-145	0.740	20	WG606208
1,1-Dichloroethane	mg/kg	0.0244	0.0239	98.0	74-121	2.03	20	WG606208
1,1-Dichloroethene	mg/kg	0.0248	0.0248	99.0	53-135	0.0500	20	WG606208
1,1-Dichloropropene	mg/kg	0.0242	0.0246	97.0	67-127	1.85	20	WG606208
1,2,3-Trichlorobenzene	mg/kg	0.0250	0.0242	100.	74-131	3.39	20	WG606208
1,2,3-Trichloropropane	mg/kg	0.0263	0.0252	105.	75-135	4.43	20	WG606208
1,2,3-Trimethylbenzene	mg/kg	0.0243	0.0240	97.0	76-128	1.48	20	WG606208
1,2,4-Trichlorobenzene	mg/kg	0.0266	0.0249	106.	72-130	6.62	20	WG606208
1,2,4-Trimethylbenzene	mg/kg	0.0259	0.0263	104.	75-131	1.49	20	WG606208
1,2-Dibromo-3-Chloropropane	mg/kg	0.0246	0.0213	98.0	55-142	14.4	20	WG606208
1,2-Dibromoethane	mg/kg	0.0246	0.0249	98.0	77-126	1.12	20	WG606208
1,2-Dichlorobenzene	mg/kg	0.0246	0.0240	98.0	80-123	2.48	20	WG606208
1,2-Dichloroethane	mg/kg	0.0239	0.0230	96.0	70-128	4.02	20	WG606208
1,2-Dichloropropane	mg/kg	0.0243	0.0236	97.0	74-125	3.02	20	WG606208
1,3,5-Trimethylbenzene	mg/kg	0.0259	0.0266	104.	77-129	2.57	20	WG606208
1,3-Dichlorobenzene	mg/kg	0.0249	0.0254	100.	76-128	1.68	20	WG606208
1,3-Dichloropropane	mg/kg	0.0228	0.0231	91.0	77-118	1.20	20	WG606208
1,4-Dichlorobenzene	mg/kg	0.0245	0.0241	98.0	77-119	1.37	20	WG606208
2,2-Dichloropropane	mg/kg	0.0271	0.0280	108.	60-132	3.24	20	WG606208
2-Butanone (MEK)	mg/kg	0.143	0.131	114.	56-146	9.30	20	WG606208
2-Chloroethyl vinyl ether	mg/kg	0.122	0.118	97.0	17-179	2.67	22	WG606208
2-Chlorotoluene	mg/kg	0.0249	0.0253	99.0	76-125	1.54	20	WG606208
4-Chlorotoluene	mg/kg	0.0244	0.0251	98.0	76-125	2.60	20	WG606208
4-Methyl-2-pentanone (MIBK)	mg/kg	0.129	0.121	104.	55-148	6.81	20	WG606208
Acetone	mg/kg	0.168	0.151	134.	47-155	10.4	22	WG606208
Acrylonitrile	mg/kg	0.126	0.114	101.	50-155	10.1	20	WG606208
Benzene	mg/kg	0.0242	0.0239	97.0	72-120	1.37	20	WG606208
Bromobenzene	mg/kg	0.0235	0.0239	94.0	74-122	1.65	20	WG606208
Bromodichloromethane	mg/kg	0.0252	0.0247	101.	74-128	1.90	20	WG606208
Bromoform	mg/kg	0.0282	0.0283	113.	62-137	0.420	20	WG606208
Bromomethane	mg/kg	0.0281	0.0272	112.	38-180	3.57	20	WG606208
Carbon tetrachloride	mg/kg	0.0271	0.0272	108.	62-130	0.380	20	WG606208
Chlorobenzene	mg/kg	0.0251	0.0252	100.	77-124	0.330	20	WG606208
Chlorodibromomethane	mg/kg	0.0263	0.0257	105.	74-128	2.12	20	WG606208
Chloroethane	mg/kg	0.0250	0.0253	100.	46-173	1.17	20	WG606208
Chloroform	mg/kg	0.0257	0.0249	103.	76-122	3.16	20	WG606208
Chloromethane	mg/kg	0.0239	0.0235	96.0	49-143	1.70	20	WG606208
cis-1,2-Dichloroethene	mg/kg	0.0247	0.0243	99.0	73-123	1.47	20	WG606208

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Level II

L588405

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
cis-1,3-Dichloropropene	mg/kg	0.0250	0.0239	100.		73-126	4.32	20	WG606208
Di-isopropyl ether	mg/kg	0.0245	0.0235	98.0		64-131	4.25	20	WG606208
Dibromomethane	mg/kg	0.0250	0.0249	100.		75-127	0.530	20	WG606208
Dichlorodifluoromethane	mg/kg	0.0256	0.0260	102.		30-177	1.56	20	WG606208
Ethylbenzene	mg/kg	0.0251	0.0259	100.		76-126	2.95	20	WG606208
Hexachloro-1,3-butadiene	mg/kg	0.0249	0.0248	100.		71-134	0.490	20	WG606208
Isopropylbenzene	mg/kg	0.0268	0.0280	107.		70-128	4.26	20	WG606208
Methyl tert-butyl ether	mg/kg	0.0255	0.0240	102.		66-127	6.15	20	WG606208
Methylene Chloride	mg/kg	0.0243	0.0240	97.0		67-124	1.39	20	WG606208
n-Butylbenzene	mg/kg	0.0256	0.0254	102.		71-133	0.800	20	WG606208
n-Propylbenzene	mg/kg	0.0248	0.0261	99.0		76-126	4.88	20	WG606208
Napthalene	mg/kg	0.0247	0.0228	99.0		68-136	7.80	20	WG606208
p-Isopropyltoluene	mg/kg	0.0269	0.0287	107.		75-134	6.59	20	WG606208
sec-Butylbenzene	mg/kg	0.0262	0.0271	105.		75-132	3.47	20	WG606208
Styrene	mg/kg	0.0254	0.0266	102.		68-148	4.44	20	WG606208
tert-Butylbenzene	mg/kg	0.0262	0.0273	105.		75-132	4.28	20	WG606208
Tetrachloroethene	mg/kg	0.0249	0.0267	100.		70-131	6.89	20	WG606208
Toluene	mg/kg	0.0237	0.0237	95.0		74-155	0	20	WG606208
trans-1,2-Dichloroethene	mg/kg	0.0247	0.0252	99.0		63-126	2.02	20	WG606208
trans-1,3-Dichloropropene	mg/kg	0.0218	0.0224	87.0		68-126	2.94	20	WG606208
Trichloroethene	mg/kg	0.0254	0.0253	101.		75-121	0.410	20	WG606208
Trichlorofluoromethane	mg/kg	0.0278	0.0281	111.		48-170	0.950	20	WG606208
Vinyl chloride	mg/kg	0.0243	0.0254	97.0		54-144	4.11	20	WG606208
Xylenes, Total	mg/kg	0.0775	0.0795	103.		76-126	2.50	20	WG606208
4-Bromofluorobenzene				98.19		67-133			WG606208
Dibromofluoromethane				101.4		72-135			WG606208
Toluene-d8				101.9		90-113			WG606208
Benzene	mg/kg	0.0456	0.0455	91.0		76-113	0.240	20	WG606226
Ethylbenzene	mg/kg	0.0495	0.0495	99.0		78-115	0.100	20	WG606226
Toluene	mg/kg	0.0479	0.0480	96.0		76-114	0.210	20	WG606226
Total Xylene	mg/kg	0.154	0.154	103.		81-118	0.390	20	WG606226
a,a,a-Trifluorotoluene(PID)				99.55		54-144			WG606226
TPH (GC/FID) Low Fraction	mg/kg	6.81	6.59	124.		67-135	3.23	20	WG606226
a,a,a-Trifluorotoluene(FID)				97.03		59-128			WG606226
1,1,1,2-Tetrachloroethane	mg/kg	0.0236	0.0281	94.0		77-129	17.5	20	WG606336
1,1,1-Trichloroethane	mg/kg	0.0226	0.0268	90.0		70-127	17.3	20	WG606336
1,1,2,2-Tetrachloroethane	mg/kg	0.0223	0.0259	89.0		76-133	14.7	20	WG606336
1,1,2-Trichloroethane	mg/kg	0.0230	0.0275	92.0		79-123	17.9	20	WG606336
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0287	0.0310	115.		52-145	7.52	20	WG606336
1,1-Dichloroethane	mg/kg	0.0227	0.0262	91.0		74-121	14.2	20	WG606336
1,1-Dichloroethene	mg/kg	0.0263	0.0310	105.		53-135	16.2	20	WG606336
1,1-Dichloropropene	mg/kg	0.0220	0.0263	88.0		67-127	17.8	20	WG606336
1,2,3-Trichlorobenzene	mg/kg	0.0239	0.0272	96.0		74-131	12.8	20	WG606336
1,2,3-Trichloropropane	mg/kg	0.0223	0.0259	89.0		75-135	14.7	20	WG606336
1,2,3-Trimethylbenzene	mg/kg	0.0220	0.0262	88.0		76-128	17.6	20	WG606336
1,2,4-Trichlorobenzene	mg/kg	0.0236	0.0274	94.0		72-130	14.7	20	WG606336
1,2,4-Trimethylbenzene	mg/kg	0.0235	0.0283	94.0		75-131	18.7	20	WG606336
1,2-Dibromo-3-Chloropropane	mg/kg	0.0206	0.0241	82.0		55-142	15.9	20	WG606336
1,2-Dibromoethane	mg/kg	0.0231	0.0270	92.0		77-126	15.7	20	WG606336
1,2-Dichlorobenzene	mg/kg	0.0227	0.0266	91.0		80-123	15.9	20	WG606336
1,2-Dichloroethane	mg/kg	0.0214	0.0244	85.0		70-128	13.4	20	WG606336
1,2-Dichloropropane	mg/kg	0.0220	0.0263	88.0		74-125	17.6	20	WG606336
1,3,5-Trimethylbenzene	mg/kg	0.0239	0.0288	95.0		77-129	18.9	20	WG606336
1,3-Dichlorobenzene	mg/kg	0.0241	0.0283	96.0		76-128	16.3	20	WG606336
1,3-Dichloropropane	mg/kg	0.0218	0.0258	87.0		77-118	16.9	20	WG606336

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Est. 1970

August 13, 2012

Analyte	Units	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref		%Rec					
1,4-Dichlorobenzene	mg/kg	0.0219	0.0264		88.0	77-119	18.6	20	WG606336	
2,2-Dichloropropane	mg/kg	0.0227	0.0265		91.0	60-132	15.4	20	WG606336	
2-Butanone (MEK)	mg/kg	0.101	0.119		81.0	56-146	16.1	20	WG606336	
2-Chloroethyl vinyl ether	mg/kg	0.111	0.129		88.0	17-179	15.5	22	WG606336	
2-Chlorotoluene	mg/kg	0.0229	0.0275		92.0	76-125	18.2	20	WG606336	
4-Chlorotoluene	mg/kg	0.0228	0.0272		91.0	76-125	17.8	20	WG606336	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.104	0.117		84.0	55-148	11.0	20	WG606336	
Acetone	mg/kg	0.0964	0.118		77.0	47-155	19.8	22	WG606336	
Acrylonitrile	mg/kg	0.120	0.135		96.0	50-155	11.7	20	WG606336	
Benzene	mg/kg	0.0228	0.0268		91.0	72-120	16.0	20	WG606336	
Bromobenzene	mg/kg	0.0216	0.0263		86.0	74-122	19.3	20	WG606336	
Bromodichloromethane	mg/kg	0.0215	0.0252		86.0	74-128	15.8	20	WG606336	
Bromoform	mg/kg	0.0241	0.0276		96.0	62-137	13.7	20	WG606336	
Bromomethane	mg/kg	0.0221	0.0263		88.0	38-180	17.4	20	WG606336	
Carbon tetrachloride	mg/kg	0.0228	0.0261		91.0	62-130	13.6	20	WG606336	
Chlorobenzene	mg/kg	0.0234	0.0278		93.0	77-124	17.5	20	WG606336	
Chlorodibromomethane	mg/kg	0.0229	0.0266		91.0	74-128	15.0	20	WG606336	
Chloroethane	mg/kg	0.0233	0.0261		93.0	46-173	11.6	20	WG606336	
Chloroform	mg/kg	0.0221	0.0253		88.0	76-122	13.4	20	WG606336	
Chloromethane	mg/kg	0.0212	0.0254		85.0	49-143	17.6	20	WG606336	
cis-1,2-Dichloroethene	mg/kg	0.0236	0.0270		94.0	73-123	13.3	20	WG606336	
cis-1,3-Dichloropropene	mg/kg	0.0218	0.0261		87.0	73-126	17.9	20	WG606336	
Di-isopropyl ether	mg/kg	0.0231	0.0266		92.0	64-131	14.4	20	WG606336	
Dibromomethane	mg/kg	0.0226	0.0261		90.0	75-127	14.5	20	WG606336	
Dichlorodifluoromethane	mg/kg	0.0203	0.0233		81.0	30-177	13.6	20	WG606336	
Ethylbenzene	mg/kg	0.0233	0.0287		93.0	76-126	20.7*	20	WG606336	
Hexachloro-1,3-butadiene	mg/kg	0.0235	0.0284		94.0	71-134	18.8	20	WG606336	
Isopropylbenzene	mg/kg	0.0238	0.0286		95.0	70-128	18.3	20	WG606336	
Methyl tert-butyl ether	mg/kg	0.0234	0.0265		94.0	66-127	12.5	20	WG606336	
Methylene Chloride	mg/kg	0.0239	0.0272		96.0	67-124	13.0	20	WG606336	
n-Butylbenzene	mg/kg	0.0231	0.0277		92.0	71-133	17.9	20	WG606336	
n-Propylbenzene	mg/kg	0.0237	0.0290		95.0	76-126	20.2*	20	WG606336	
Naphthalene	mg/kg	0.0220	0.0247		88.0	68-136	11.6	20	WG606336	
p-Isopropyltoluene	mg/kg	0.0254	0.0305		102.	75-134	18.2	20	WG606336	
sec-Butylbenzene	mg/kg	0.0246	0.0297		98.0	75-132	18.7	20	WG606336	
Styrene	mg/kg	0.0233	0.0282		93.0	68-148	18.7	20	WG606336	
tert-Butylbenzene	mg/kg	0.0250	0.0299		100.	75-132	17.9	20	WG606336	
Tetrachloroethene	mg/kg	0.0238	0.0291		95.0	70-131	20.1*	20	WG606336	
Toluene	mg/kg	0.0214	0.0255		86.0	74-155	17.5	20	WG606336	
trans-1,2-Dichloroethene	mg/kg	0.0236	0.0280		94.0	63-126	17.0	20	WG606336	
trans-1,3-Dichloropropene	mg/kg	0.0218	0.0249		87.0	68-126	13.1	20	WG606336	
Trichloroethene	mg/kg	0.0233	0.0275		93.0	75-121	16.5	20	WG606336	
Trichlorofluoromethane	mg/kg	0.0229	0.0273		92.0	48-170	17.3	20	WG606336	
Vinyl chloride	mg/kg	0.0215	0.0245		86.0	54-144	12.9	20	WG606336	
Xylenes, Total	mg/kg	0.0694	0.0843		92.0	76-126	19.4	20	WG606336	
4-Bromofluorobenzene					103.0	67-133			WG606336	
Dibromofluoromethane					102.0	72-135			WG606336	
Toluene-d8					104.1	90-113			WG606336	
Benzene	mg/kg	0.0488	0.0477		98.0	76-113	2.36	20	WG606230	
Ethylbenzene	mg/kg	0.0518	0.0530		104.	78-115	2.28	20	WG606230	
Toluene	mg/kg	0.0502	0.0501		100.	76-114	0.230	20	WG606230	
Total Xylene	mg/kg	0.161	0.162		107.	81-118	0.430	20	WG606230	
a,a,a-Trifluorotoluene(PID)					105.6	54-144			WG606230	
TPH (GC/FID) Low Fraction	mg/kg	7.05	7.10		128.	67-135	0.710	20	WG606230	
a,a,a-Trifluorotoluene(FID)					104.6	59-128			WG606230	

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Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chromium, Hexavalent	mg/kg	141.	132.	94.0	50-150	6.59	20	WG606214
pH	su	6.03	6.02	100.	98-101	0.166	20	WG606403
Specific Conductance	umhos/	494.	499.	100.	85-115	1.01	20	WG606278
TPH (GC/FID) High Fraction	ppm	49.4	47.7	82.0	50-150	3.41	23	WG606419
o-Terphenyl				67.29	50-150			WG606419
1-Methylnaphthalene	mg/kg	0.0241	0.0237	73.0	48-113	1.58	24	WG606382
2-Chloronaphthalene	mg/kg	0.0233	0.0243	71.0	51-114	4.36	24	WG606382
2-Methylnaphthalene	mg/kg	0.0231	0.0233	70.0	44-109	0.751	24	WG606382
Acenaphthene	mg/kg	0.0249	0.0247	75.0	52-108	0.581	22	WG606382
Acenaphthylene	mg/kg	0.0242	0.0253	73.0	51-110	4.33	21	WG606382
Anthracene	mg/kg	0.0258	0.0276	78.0	58-120	6.53	20	WG606382
Benzo(a)anthracene	mg/kg	0.0273	0.0279	83.0	54-110	1.95	22	WG606382
Benzo(a)pyrene	mg/kg	0.0260	0.0263	79.0	56-118	1.06	21	WG606382
Benzo(b)fluoranthene	mg/kg	0.0263	0.0283	80.0	55-114	6.96	20	WG606382
Benzo(g,h,i)perylene	mg/kg	0.0280	0.0308	85.0	48-130	9.43	20	WG606382
Benzo(k)fluoranthene	mg/kg	0.0264	0.0267	80.0	55-122	1.38	25	WG606382
Chrysene	mg/kg	0.0264	0.0267	80.0	57-118	1.04	20	WG606382
Dibenz(a,h)anthracene	mg/kg	0.0286	0.0306	87.0	53-122	6.70	20	WG606382
Fluoranthene	mg/kg	0.0260	0.0272	79.0	58-118	4.34	20	WG606382
Fluorene	mg/kg	0.0253	0.0254	77.0	54-109	0.362	20	WG606382
Indeno(1,2,3-cd)pyrene	mg/kg	0.0284	0.0309	86.0	51-125	8.40	21	WG606382
Naphthalene	mg/kg	0.0228	0.0230	69.0	45-105	1.25	24	WG606382
Phenanthrene	mg/kg	0.0238	0.0251	72.0	53-114	5.31	20	WG606382
Pyrene	mg/kg	0.0266	0.0246	80.0	53-121	7.73	20	WG606382
2-Fluorobiphenyl				76.32	34-129			WG606382
Nitrobenzene-d5				69.63	14-141			WG606382
p-Terphenyl-d14				80.89	25-139			WG606382
Benzene	mg/kg	0.0451	0.0454	90.0	76-113	0.660	20	WG606414
Ethylbenzene	mg/kg	0.0499	0.0506	100.	78-115	1.31	20	WG606414
Toluene	mg/kg	0.0474	0.0485	95.0	76-114	2.35	20	WG606414
Total Xylene	mg/kg	0.157	0.159	104.	81-118	1.77	20	WG606414
a,a,a-Trifluorotoluene(PID)				99.91	54-144			WG606414
TPH (GC/FID) Low Fraction	mg/kg	6.71	6.76	122.	67-135	0.770	20	WG606414
a,a,a-Trifluorotoluene(FID)				100.2	59-128			WG606414
ORP	mV	229.	228.	100.	95.6-104.	0.438	20	WG606576

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/kg	0.122	0	.025	97.7	49-135	L588400-01	WG606208
1,1,1-Trichloroethane	mg/kg	0.123	0	.025	98.3	43-142	L588400-01	WG606208
1,1,2,2-Tetrachloroethane	mg/kg	0.109	0	.025	87.1	42-147	L588400-01	WG606208
1,1,2-Trichloroethane	mg/kg	0.116	0	.025	92.9	51-134	L588400-01	WG606208
1,1,2-Trichlorotrifluoroethane	mg/kg	0.128	0	.025	102.	25-156	L588400-01	WG606208
1,1-Dichloroethane	mg/kg	0.115	0	.025	92.0	50-131	L588400-01	WG606208
1,1-Dichloroethene	mg/kg	0.118	0	.025	94.5	29-145	L588400-01	WG606208
1,1-Dichloropropene	mg/kg	0.117	0	.025	93.7	40-136	L588400-01	WG606208

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,3-Trichlorobenzene	mg/kg	0.120	0	.025	95.8	13-142	L588400-01	WG606208
1,2,3-Trichloropropane	mg/kg	0.123	0	.025	98.6	41-149	L588400-01	WG606208
1,2,3-Trimethylbenzene	mg/kg	0.115	0	.025	91.9	33-146	L588400-01	WG606208
1,2,4-Trichlorobenzene	mg/kg	0.122	0	.025	97.6	12-140	L588400-01	WG606208
1,2,4-Trimethylbenzene	mg/kg	0.117	0	.025	93.3	29-143	L588400-01	WG606208
1,2-Dibromo-3-Chloropropane	mg/kg	0.113	0	.025	90.3	29-151	L588400-01	WG606208
1,2-Dibromoethane	mg/kg	0.115	0	.025	91.8	48-133	L588400-01	WG606208
1,2-Dichlorobenzene	mg/kg	0.118	0	.025	94.5	37-136	L588400-01	WG606208
1,2-Dichloroethane	mg/kg	0.114	0	.025	90.9	49-131	L588400-01	WG606208
1,2-Dichloropropane	mg/kg	0.110	0	.025	88.0	50-132	L588400-01	WG606208
1,3,5-Trimethylbenzene	mg/kg	0.117	0	.025	93.3	29-144	L588400-01	WG606208
1,3-Dichlorobenzene	mg/kg	0.110	0	.025	88.1	26-140	L588400-01	WG606208
1,3-Dichloropropane	mg/kg	0.105	0	.025	83.6	50-126	L588400-01	WG606208
1,4-Dichlorobenzene	mg/kg	0.117	0	.025	93.3	34-132	L588400-01	WG606208
2,2-Dichloropropane	mg/kg	0.125	0	.025	100.	35-148	L588400-01	WG606208
2-Butanone (MEK)	mg/kg	0.667	0	.125	107.	40-149	L588400-01	WG606208
2-Chloroethyl vinyl ether	mg/kg	0.553	0	.125	88.6	10-173	L588400-01	WG606208
2-Chlorotoluene	mg/kg	0.111	0	.025	88.7	34-136	L588400-01	WG606208
4-Chlorotoluene	mg/kg	0.109	0	.025	87.0	31-137	L588400-01	WG606208
4-Methyl-2-pentanone (MIBK)	mg/kg	0.601	0	.125	96.1	37-153	L588400-01	WG606208
Acetone	mg/kg	0.827	0	.125	132.	10-177	L588400-01	WG606208
Acrylonitrile	mg/kg	0.612	0	.125	97.9	33-159	L588400-01	WG606208
Benzene	mg/kg	0.115	0	.025	91.8	44-131	L588400-01	WG606208
Bromobenzene	mg/kg	0.105	0	.025	84.4	36-132	L588400-01	WG606208
Bromodichloromethane	mg/kg	0.117	0	.025	93.6	48-134	L588400-01	WG606208
Bromoform	mg/kg	0.129	0	.025	103.	34-141	L588400-01	WG606208
Bromomethane	mg/kg	0.128	0	.025	102.	19-173	L588400-01	WG606208
Carbon tetrachloride	mg/kg	0.126	0	.025	101.	36-140	L588400-01	WG606208
Chlorobenzene	mg/kg	0.112	0	.025	89.9	42-133	L588400-01	WG606208
Chlorodibromomethane	mg/kg	0.120	0	.025	96.3	45-135	L588400-01	WG606208
Chloroethane	mg/kg	0.121	0	.025	96.8	16-178	L588400-01	WG606208
Chloroform	mg/kg	0.120	0	.025	96.2	52-130	L588400-01	WG606208
Chloromethane	mg/kg	0.110	0	.025	88.0	28-147	L588400-01	WG606208
cis-1,2-Dichloroethene	mg/kg	0.115	0	.025	92.4	52-128	L588400-01	WG606208
cis-1,3-Dichloropropene	mg/kg	0.112	0	.025	89.6	46-131	L588400-01	WG606208
Di-isopropyl ether	mg/kg	0.110	0	.025	88.4	46-134	L588400-01	WG606208
Dibromomethane	mg/kg	0.116	0	.025	92.8	51-133	L588400-01	WG606208
Dichlorodifluoromethane	mg/kg	0.123	0	.025	98.5	12-179	L588400-01	WG606208
Ethylbenzene	mg/kg	0.115	0	.025	92.2	38-139	L588400-01	WG606208
Hexachloro-1,3-butadiene	mg/kg	0.116	0	.025	92.9	10-147	L588400-01	WG606208
Isopropylbenzene	mg/kg	0.123	0	.025	98.6	34-137	L588400-01	WG606208
Methyl tert-butyl ether	mg/kg	0.120	0	.025	95.6	45-134	L588400-01	WG606208
Methylene Chloride	mg/kg	0.113	0	.025	90.5	41-133	L588400-01	WG606208
n-Butylbenzene	mg/kg	0.120	0	.025	95.6	19-149	L588400-01	WG606208
n-Propylbenzene	mg/kg	0.114	0	.025	91.0	27-142	L588400-01	WG606208
Naphthalene	mg/kg	0.119	0	.025	95.1	19-146	L588400-01	WG606208
p-Isopropyltoluene	mg/kg	0.123	0	.025	98.1	21-150	L588400-01	WG606208
sec-Butylbenzene	mg/kg	0.117	0	.025	93.7	25-148	L588400-01	WG606208
Styrene	mg/kg	0.114	0	.025	90.9	30-156	L588400-01	WG606208
tert-Butylbenzene	mg/kg	0.118	0	.025	94.2	32-146	L588400-01	WG606208
Tetrachloroethene	mg/kg	0.115	0	.025	92.3	35-139	L588400-01	WG606208
Toluene	mg/kg	0.108	0	.025	86.0	43-127	L588400-01	WG606208
trans-1,2-Dichloroethene	mg/kg	0.117	0	.025	93.4	41-132	L588400-01	WG606208
trans-1,3-Dichloropropene	mg/kg	0.0997	0	.025	79.7	43-129	L588400-01	WG606208
Trichloroethene	mg/kg	0.122	0	.025	97.7	42-136	L588400-01	WG606208
Trichlorofluoromethane	mg/kg	0.130	0	.025	104.	20-178	L588400-01	WG606208
Vinyl chloride	mg/kg	0.116	0	.025	92.6	30-157	L588400-01	WG606208
Xylenes, Total	mg/kg	0.351	0	.075	93.7	38-137	L588400-01	WG606208
4-Bromofluorobenzene					91.89	67-133		WG606208

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YOUR LAB OF CHOICE

EnCana Oil & Gas - Rangely, CO  
Blake Ford  
1125 Escalante Drive

Rangely, CO 81648-3600

Quality Assurance Report  
Level II

L588405

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

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Dibromofluoromethane					104.6	72-135		
Toluene-d8					99.98	90-113		
Benzene	mg/kg	0.215	0	.05	85.9	32-137	L588338-07	WG606226
Ethylbenzene	mg/kg	0.242	0	.05	96.6	10-150	L588338-07	WG606226
Toluene	mg/kg	0.240	0	.05	95.8	20-142	L588338-07	WG606226
Total Xylene	mg/kg	0.754	0	.15	100.	16-141	L588338-07	WG606226
a,a,a-Trifluorotoluene(PID)					99.74	54-144		WG606226
TPH (GC/FID) Low Fraction	mg/kg	23.5	0	5.5	85.4	55-109	L588338-07	WG606226
a,a,a-Trifluorotoluene(FID)					80.33	59-128		WG606226
1,1,1,2-Tetrachloroethane	mg/kg	0.0245	0	.025	97.8	49-135	L588397-01	WG606336
1,1,1-Trichloroethane	mg/kg	0.0244	0	.025	97.4	43-142	L588397-01	WG606336
1,1,2,2-Tetrachloroethane	mg/kg	0.0229	0	.025	91.5	42-147	L588397-01	WG606336
1,1,2-Trichloroethane	mg/kg	0.0240	0	.025	96.2	51-134	L588397-01	WG606336
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0291	0	.025	116.	25-156	L588397-01	WG606336
1,1-Dichloroethane	mg/kg	0.0237	0	.025	94.8	50-131	L588397-01	WG606336
1,1-Dichloroethene	mg/kg	0.0280	0	.025	112.	29-145	L588397-01	WG606336
1,1-Dichloropropene	mg/kg	0.0246	0	.025	98.5	40-136	L588397-01	WG606336
1,2,3-Trichlorobenzene	mg/kg	0.0241	0	.025	96.3	13-142	L588397-01	WG606336
1,2,3-Trichloropropane	mg/kg	0.0236	0	.025	94.3	41-149	L588397-01	WG606336
1,2,3-Trimethylbenzene	mg/kg	0.0230	0	.025	92.0	33-146	L588397-01	WG606336
1,2,4-Trichlorobenzene	mg/kg	0.0245	0	.025	97.8	12-140	L588397-01	WG606336
1,2,4-Trimethylbenzene	mg/kg	0.0242	0	.025	96.6	29-143	L588397-01	WG606336
1,2-Dibromo-3-Chloropropane	mg/kg	0.0214	0	.025	85.6	29-151	L588397-01	WG606336
1,2-Dibromoethane	mg/kg	0.0237	0	.025	94.8	48-133	L588397-01	WG606336
1,2-Dichlorobenzene	mg/kg	0.0228	0	.025	91.0	37-136	L588397-01	WG606336
1,2-Dichloroethane	mg/kg	0.0217	0	.025	87.0	49-131	L588397-01	WG606336
1,2-Dichloropropane	mg/kg	0.0230	0	.025	92.1	50-132	L588397-01	WG606336
1,3,5-Trimethylbenzene	mg/kg	0.0250	0	.025	100.	29-144	L588397-01	WG606336
1,3-Dichlorobenzene	mg/kg	0.0244	0	.025	97.5	26-140	L588397-01	WG606336
1,3-Dichloropropane	mg/kg	0.0227	0	.025	91.0	50-126	L588397-01	WG606336
1,4-Dichlorobenzene	mg/kg	0.0227	0	.025	90.7	34-132	L588397-01	WG606336
2,2-Dichloropropane	mg/kg	0.0240	0	.025	96.0	35-148	L588397-01	WG606336
2-Butanone (MEK)	mg/kg	0.114	0	.125	90.9	40-149	L588397-01	WG606336
2-Chloroethyl vinyl ether	mg/kg	0.118	0	.125	94.1	10-173	L588397-01	WG606336
2-Chlorotoluene	mg/kg	0.0240	0	.025	95.9	34-136	L588397-01	WG606336
4-Chlorotoluene	mg/kg	0.0237	0	.025	94.7	31-137	L588397-01	WG606336
4-Methyl-2-pentanone (MIBK)	mg/kg	0.111	0	.125	88.6	37-153	L588397-01	WG606336
Acetone	mg/kg	0.107	0	.125	85.6	10-177	L588397-01	WG606336
Acrylonitrile	mg/kg	0.121	0	.125	96.8	33-159	L588397-01	WG606336
Benzene	mg/kg	0.0236	0	.025	94.6	44-131	L588397-01	WG606336
Bromobenzene	mg/kg	0.0225	0	.025	89.8	36-132	L588397-01	WG606336
Bromodichloromethane	mg/kg	0.0221	0	.025	88.6	48-134	L588397-01	WG606336
Bromoform	mg/kg	0.0250	0	.025	100.	34-141	L588397-01	WG606336
Bromomethane	mg/kg	0.0236	0	.025	94.4	19-173	L588397-01	WG606336
Carbon tetrachloride	mg/kg	0.0243	0	.025	97.4	36-140	L588397-01	WG606336
Chlorobenzene	mg/kg	0.0240	0	.025	96.1	42-133	L588397-01	WG606336
Chlorodibromomethane	mg/kg	0.0233	0	.025	93.3	45-135	L588397-01	WG606336
Chloroethane	mg/kg	0.0243	0	.025	97.2	16-178	L588397-01	WG606336
Chloroform	mg/kg	0.0222	0	.025	88.9	52-130	L588397-01	WG606336
Chloromethane	mg/kg	0.0235	0	.025	94.0	28-147	L588397-01	WG606336
cis-1,2-Dichloroethene	mg/kg	0.0243	0	.025	97.2	52-128	L588397-01	WG606336
cis-1,3-Dichloropropene	mg/kg	0.0229	0	.025	91.6	46-131	L588397-01	WG606336
Di-isopropyl ether	mg/kg	0.0236	0	.025	94.4	46-134	L588397-01	WG606336
Dibromomethane	mg/kg	0.0241	0	.025	96.5	51-133	L588397-01	WG606336
Dichlorodifluoromethane	mg/kg	0.0233	0	.025	93.0	12-179	L588397-01	WG606336
Ethylbenzene	mg/kg	0.0252	0	.025	101.	38-139	L588397-01	WG606336
Hexachloro-1,3-butadiene	mg/kg	0.0246	0	.025	98.4	10-147	L588397-01	WG606336

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**YOUR LAB OF CHOICE**

EnCana Oil & Gas - Rangely, CO  
Blake Ford  
1125 Escalante Drive  
Rangely, CO 81648-3600

Quality Assurance Report  
Level II

L588405

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Isopropylbenzene	mg/kg	0.0251	0	.025	100.	34-137	L588397-01	WG606336
Methyl tert-butyl ether	mg/kg	0.0240	0	.025	95.8	45-134	L588397-01	WG606336
Methylene Chloride	mg/kg	0.0244	0	.025	97.7	41-133	L588397-01	WG606336
n-Butylbenzene	mg/kg	0.0247	0	.025	98.8	19-149	L588397-01	WG606336
n-Propylbenzene	mg/kg	0.0253	0	.025	101.	27-142	L588397-01	WG606336
Napthalene	mg/kg	0.0224	0	.025	89.8	19-146	L588397-01	WG606336
p-Isopropyltoluene	mg/kg	0.0266	0	.025	106.	21-150	L588397-01	WG606336
sec-Butylbenzene	mg/kg	0.0260	0	.025	104.	25-148	L588397-01	WG606336
Styrene	mg/kg	0.0243	0	.025	97.3	30-156	L588397-01	WG606336
tert-Butylbenzene	mg/kg	0.0258	0	.025	103.	32-146	L588397-01	WG606336
Tetrachloroethene	mg/kg	0.0258	0	.025	103.	35-139	L588397-01	WG606336
Toluene	mg/kg	0.0230	0	.025	91.8	43-127	L588397-01	WG606336
trans-1,2-Dichloroethene	mg/kg	0.0258	0	.025	103.	41-132	L588397-01	WG606336
trans-1,3-Dichloropropene	mg/kg	0.0228	0	.025	91.0	43-129	L588397-01	WG606336
Trichloroethene	mg/kg	0.0249	0	.025	99.6	42-136	L588397-01	WG606336
Trichlorofluoromethane	mg/kg	0.0259	0	.025	103.	20-178	L588397-01	WG606336
Vinyl chloride	mg/kg	0.0233	0	.025	93.1	30-157	L588397-01	WG606336
Xylenes, Total	mg/kg	0.0739	0	.075	98.6	38-137	L588397-01	WG606336
4-Bromofluorobenzene					103.7	67-133		WG606336
Dibromofluoromethane					101.7	72-135		WG606336
Toluene-d8					105.9	90-113		WG606336
Benzene	mg/kg	0.235	0	.05	93.9	32-137	L588405-12	WG606230
Ethylbenzene	mg/kg	0.249	0	.05	99.6	10-150	L588405-12	WG606230
Toluene	mg/kg	0.248	0	.05	99.2	20-142	L588405-12	WG606230
Total Xylene	mg/kg	0.779	0	.15	104.	16-141	L588405-12	WG606230
a,a,a-Trifluorotoluene(PID)					104.5	54-144		WG606230
TPH (GC/FID) Low Fraction	mg/kg	28.3	0	5.5	103.	55-109	L588405-12	WG606230
a,a,a-Trifluorotoluene(FID)					102.4	59-128		WG606230
Chromium,Hexavalent	mg/kg	18.0	0	20	90.0	50-150	L587734-04	WG606214
1-Methylnaphthalene	mg/kg	0.0345	0.0110	.033	71.2	25-155	L588416-01	WG606382
2-Chloronaphthalene	mg/kg	0.0230	0	.033	69.8	31-153	L588416-01	WG606382
2-Methylnaphthalene	mg/kg	0.0419	0.0190	.033	69.3	22-172	L588416-01	WG606382
Acenaphthene	mg/kg	0.0242	0	.033	73.3	43-133	L588416-01	WG606382
Acenaphthylene	mg/kg	0.0261	0	.033	79.0	42-146	L588416-01	WG606382
Anthracene	mg/kg	0.0236	0	.033	71.6	38-153	L588416-01	WG606382
Benzo(a)anthracene	mg/kg	0.0230	0	.033	69.8	31-142	L588416-01	WG606382
Benzo(a)pyrene	mg/kg	0.0223	0	.033	67.4	26-152	L588416-01	WG606382
Benzo(b)fluoranthene	mg/kg	0.0244	0	.033	74.0	10-188	L588416-01	WG606382
Benzo(g,h,i)perylene	mg/kg	0.00921	0	.033	27.9	10-176	L588416-01	WG606382
Benzo(k)fluoranthene	mg/kg	0.0242	0	.033	73.2	22-163	L588416-01	WG606382
Chrysene	mg/kg	0.0221	0	.033	66.9	26-146	L588416-01	WG606382
Dibenz(a,h)anthracene	mg/kg	0.0112	0	.033	33.9	10-160	L588416-01	WG606382
Fluoranthene	mg/kg	0.0281	0	.033	85.1	23-160	L588416-01	WG606382
Fluorene	mg/kg	0.0237	0	.033	71.9	44-143	L588416-01	WG606382
Indeno(1,2,3-cd)pyrene	mg/kg	0.0112	0	.033	33.9	10-157	L588416-01	WG606382
Naphthalene	mg/kg	0.0296	0.00820	.033	64.9	22-156	L588416-01	WG606382
Phenanthrene	mg/kg	0.0238	0	.033	72.2	23-164	L588416-01	WG606382
Pyrene	mg/kg	0.0232	0	.033	70.4	12-170	L588416-01	WG606382
2-Fluorobiphenyl					71.19	34-129		WG606382
Nitrobenzene-d5					72.11	14-141		WG606382
p-Terphenyl-d14					62.75	25-139		WG606382

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Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Benzene	mg/kg	0.0413	0	.05	82.6	32-137	L588412-01	WG606414
Ethylbenzene	mg/kg	0.0463	0	.05	92.6	10-150	L588412-01	WG606414
Toluene	mg/kg	0.0450	0	.05	89.9	20-142	L588412-01	WG606414
Total Xylene	mg/kg	0.146	0	.15	97.5	16-141	L588412-01	WG606414
a,a,a-Trifluorotoluene(PID)					99.99	54-144		WG606414
TPH (GC/FID) Low Fraction	mg/kg	329.	0	5.5	119.*	55-109	L588373-01	WG606414
a,a,a-Trifluorotoluene(FID)					91.96	59-128		WG606414
Mercury	mg/kg	0.313	0.0380	.25	110.	80-120	L588504-01	WG606559
Arsenic	mg/kg	46.5	2.90	50	87.2	75-125	L588406-04	WG606308
Barium	mg/kg	174.	137.	50	74.0*	75-125	L588406-04	WG606308
Chromium	mg/kg	64.4	27.7	50	73.4*	75-125	L588406-04	WG606308
Selenium	mg/kg	42.1	0.455	50	83.3	75-125	L588406-04	WG606308
Zinc	mg/kg	68.8	24.7	50	88.2	75-125	L588406-04	WG606308
TPH (GC/FID) High Fraction	ppm	45.8	0	60	76.4	50-150	L588405-08	WG606419
o-Terphenyl					60.10	50-150		WG606419
Cadmium	mg/kg	46.5	0	50	93.0	75-125	L588406-04	WG606308
Copper	mg/kg	55.8	0	50	112.	75-125	L588406-04	WG606308
Nickel	mg/kg	56.7	0	50	113.	75-125	L588406-04	WG606308
Silver	mg/kg	48.4	0	50	96.8	75-125	L588406-04	WG606308
Lead	mg/kg	51.0	6.90	50	88.2	75-125	L588406-04	WG606308

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/kg	0.111	0.122	88.8	49-135	9.57	23	L588400-01	WG606208
1,1,1-Trichloroethane	mg/kg	0.106	0.123	84.7	43-142	14.9	24	L588400-01	WG606208
1,1,2,2-Tetrachloroethane	mg/kg	0.108	0.109	86.6	42-147	0.520	25	L588400-01	WG606208
1,1,2-Trichloroethane	mg/kg	0.111	0.116	88.9	51-134	4.33	21	L588400-01	WG606208
1,1,2-Trichlorotrifluoroethane	mg/kg	0.110	0.128	87.9	25-156	15.3	29	L588400-01	WG606208
1,1-Dichloroethane	mg/kg	0.101	0.115	80.6	50-131	13.2	21	L588400-01	WG606208
1,1-Dichloroethene	mg/kg	0.102	0.118	81.4	29-145	14.8	28	L588400-01	WG606208
1,1-Dichloropropene	mg/kg	0.103	0.117	82.3	40-136	13.0	24	L588400-01	WG606208
1,2,3-Trichlorobenzene	mg/kg	0.103	0.120	82.7	13-142	14.7	33	L588400-01	WG606208
1,2,3-Trichloropropane	mg/kg	0.120	0.123	96.1	41-149	2.64	28	L588400-01	WG606208
1,2,3-Trimethylbenzene	mg/kg	0.101	0.115	80.4	33-146	13.3	27	L588400-01	WG606208
1,2,4-Trichlorobenzene	mg/kg	0.103	0.122	82.4	12-140	16.9	32	L588400-01	WG606208
1,2,4-Trimethylbenzene	mg/kg	0.101	0.117	81.2	29-143	13.9	30	L588400-01	WG606208
1,2-Dibromo-3-Chloropropane	mg/kg	0.116	0.113	92.6	29-151	2.50	31	L588400-01	WG606208
1,2-Dibromoethane	mg/kg	0.113	0.115	90.6	48-133	1.30	22	L588400-01	WG606208
1,2-Dichlorobenzene	mg/kg	0.103	0.118	82.4	37-136	13.7	25	L588400-01	WG606208
1,2-Dichloroethane	mg/kg	0.109	0.114	87.2	49-131	4.19	20	L588400-01	WG606208
1,2-Dichloropropane	mg/kg	0.105	0.110	83.8	50-132	4.86	21	L588400-01	WG606208
1,3,5-Trimethylbenzene	mg/kg	0.0990	0.117	79.2	29-144	16.4	30	L588400-01	WG606208
1,3-Dichlorobenzene	mg/kg	0.0989	0.110	79.1	26-140	10.7	28	L588400-01	WG606208
1,3-Dichloropropane	mg/kg	0.100	0.105	80.0	50-126	4.38	22	L588400-01	WG606208
1,4-Dichlorobenzene	mg/kg	0.101	0.117	80.8	34-132	14.4	26	L588400-01	WG606208
2,2-Dichloropropane	mg/kg	0.112	0.125	90.0	35-148	11.0	26	L588400-01	WG606208
2-Butanone (MEK)	mg/kg	0.730	0.667	117.	40-149	9.04	27	L588400-01	WG606208
2-Chloroethyl vinyl ether	mg/kg	0.584	0.553	93.4	10-173	5.29	33	L588400-01	WG606208
2-Chlorotoluene	mg/kg	0.0976	0.111	78.0	34-136	12.8	28	L588400-01	WG606208
4-Chlorotoluene	mg/kg	0.0977	0.109	78.2	31-137	10.8	27	L588400-01	WG606208

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Quality Assurance Report  
Level II

L588405

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

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
4-Methyl-2-pentanone (MIBK)	mg/kg	0.649	0.601	104.	37-153	7.77	27	L588400-01	WG606208
Acetone	mg/kg	0.872	0.827	139.	10-177	5.24	28	L588400-01	WG606208
Acrylonitrile	mg/kg	0.648	0.612	104.	33-159	5.71	26	L588400-01	WG606208
Benzene	mg/kg	0.104	0.115	82.8	44-131	10.2	21	L588400-01	WG606208
Bromobenzene	mg/kg	0.0975	0.105	78.0	36-132	7.87	26	L588400-01	WG606208
Bromodichloromethane	mg/kg	0.110	0.117	87.7	48-134	6.54	20	L588400-01	WG606208
Bromoform	mg/kg	0.131	0.129	105.	34-141	1.55	24	L588400-01	WG606208
Bromomethane	mg/kg	0.119	0.128	95.1	19-173	7.37	25	L588400-01	WG606208
Carbon tetrachloride	mg/kg	0.109	0.126	87.0	36-140	14.9	26	L588400-01	WG606208
Chlorobenzene	mg/kg	0.102	0.112	81.4	42-133	9.92	24	L588400-01	WG606208
Chlorodibromomethane	mg/kg	0.111	0.120	89.2	45-135	7.64	23	L588400-01	WG606208
Chloroethane	mg/kg	0.105	0.121	83.9	16-178	14.3	25	L588400-01	WG606208
Chloroform	mg/kg	0.108	0.120	86.4	52-130	10.8	21	L588400-01	WG606208
Chloromethane	mg/kg	0.0964	0.110	77.1	28-147	13.2	23	L588400-01	WG606208
cis-1,2-Dichloroethene	mg/kg	0.108	0.115	86.2	52-128	6.94	21	L588400-01	WG606208
cis-1,3-Dichloropropene	mg/kg	0.111	0.112	89.1	46-131	0.520	21	L588400-01	WG606208
Di-isopropyl ether	mg/kg	0.105	0.110	83.6	46-134	5.54	20	L588400-01	WG606208
Dibromomethane	mg/kg	0.116	0.116	92.8	51-133	0.0100	21	L588400-01	WG606208
Dichlorodifluoromethane	mg/kg	0.106	0.123	84.4	12-179	15.4	27	L588400-01	WG606208
Ethylbenzene	mg/kg	0.0980	0.115	78.4	38-139	16.2	27	L588400-01	WG606208
Hexachloro-1,3-butadiene	mg/kg	0.0902	0.116	72.1	10-147	25.2	37	L588400-01	WG606208
Isopropylbenzene	mg/kg	0.104	0.123	83.6	34-137	16.5	29	L588400-01	WG606208
Methyl tert-butyl ether	mg/kg	0.118	0.120	94.2	45-134	1.52	22	L588400-01	WG606208
Methylene Chloride	mg/kg	0.107	0.113	85.5	41-133	5.71	28	L588400-01	WG606208
n-Butylbenzene	mg/kg	0.0973	0.120	77.8	19-149	20.5	32	L588400-01	WG606208
n-Propylbenzene	mg/kg	0.0977	0.114	78.1	27-142	15.2	29	L588400-01	WG606208
Naphthalene	mg/kg	0.111	0.119	88.6	19-146	7.03	30	L588400-01	WG606208
p-Isopropyltoluene	mg/kg	0.104	0.123	82.9	21-150	16.8	31	L588400-01	WG606208
sec-Butylbenzene	mg/kg	0.0987	0.117	78.9	25-148	17.1	31	L588400-01	WG606208
Styrene	mg/kg	0.104	0.114	83.4	30-156	8.61	26	L588400-01	WG606208
tert-Butylbenzene	mg/kg	0.100	0.118	80.3	32-146	16.0	30	L588400-01	WG606208
Tetrachloroethene	mg/kg	0.0959	0.115	76.7	35-139	18.4	27	L588400-01	WG606208
Toluene	mg/kg	0.0996	0.108	79.7	43-127	7.61	21	L588400-01	WG606208
trans-1,2-Dichloroethene	mg/kg	0.103	0.117	82.0	41-132	13.0	23	L588400-01	WG606208
trans-1,3-Dichloropropene	mg/kg	0.103	0.0997	82.5	43-129	3.45	23	L588400-01	WG606208
Trichloroethene	mg/kg	0.108	0.122	86.4	42-136	12.3	23	L588400-01	WG606208
Trichlorofluoromethane	mg/kg	0.114	0.130	90.8	20-178	13.7	30	L588400-01	WG606208
Vinyl chloride	mg/kg	0.101	0.116	80.7	30-157	13.8	24	L588400-01	WG606208
Xylenes, Total	mg/kg	0.307	0.351	81.9	38-137	13.4	26	L588400-01	WG606208
4-Bromofluorobenzene				94.32	67-133				WG606208
Dibromofluoromethane				99.91	72-135				WG606208
Toluene-d8				102.5	90-113				WG606208
Benzene	mg/kg	0.206	0.215	82.6	32-137	3.92	39	L588338-07	WG606226
Ethylbenzene	mg/kg	0.215	0.242	86.1	10-150	11.5	44	L588338-07	WG606226
Toluene	mg/kg	0.214	0.240	85.5	20-142	11.3	42	L588338-07	WG606226
Total Xylene	mg/kg	0.670	0.754	89.3	16-141	11.9	46	L588338-07	WG606226
a,a,a-Trifluorotoluene(PID)				99.00	54-144				WG606226
TPH (GC/FID) Low Fraction	mg/kg	22.5	23.5	81.9	55-109	4.15	20	L588338-07	WG606226
a,a,a-Trifluorotoluene(FID)				83.29	59-128				WG606226
1,1,1,2-Tetrachloroethane	mg/kg	0.0236	0.0245	94.6	49-135	3.43	23	L588397-01	WG606336
1,1,1-Trichloroethane	mg/kg	0.0229	0.0244	91.6	43-142	6.19	24	L588397-01	WG606336
1,1,2,2-Tetrachloroethane	mg/kg	0.0242	0.0229	96.7	42-147	5.59	25	L588397-01	WG606336
1,1,2-Trichloroethane	mg/kg	0.0239	0.0240	95.5	51-134	0.660	21	L588397-01	WG606336
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0270	0.0291	108.	25-156	7.53	29	L588397-01	WG606336
1,1-Dichloroethane	mg/kg	0.0231	0.0237	92.6	50-131	2.31	21	L588397-01	WG606336

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Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1-Dichloroethene	mg/kg	0.0269	0.0280	108.	29-145	4.03	28	L588397-01	WG606336
1,1-Dichloropropene	mg/kg	0.0231	0.0246	92.2	40-136	6.52	24	L588397-01	WG606336
1,2,3-Trichlorobenzene	mg/kg	0.0242	0.0241	96.8	13-142	0.520	33	L588397-01	WG606336
1,2,3-Trichloropropane	mg/kg	0.0240	0.0236	95.8	41-149	1.62	28	L588397-01	WG606336
1,2,3-Trimethylbenzene	mg/kg	0.0223	0.0230	89.1	33-146	3.25	27	L588397-01	WG606336
1,2,4-Trichlorobenzene	mg/kg	0.0236	0.0245	94.6	12-140	3.41	32	L588397-01	WG606336
1,2,4-Trimethylbenzene	mg/kg	0.0233	0.0242	93.3	29-143	3.50	30	L588397-01	WG606336
1,2-Dibromo-3-Chloropropane	mg/kg	0.0232	0.0214	92.7	29-151	8.04	31	L588397-01	WG606336
1,2-Dibromoethane	mg/kg	0.0241	0.0237	96.4	48-133	1.73	22	L588397-01	WG606336
1,2-Dichlorobenzene	mg/kg	0.0232	0.0228	92.8	37-136	1.92	25	L588397-01	WG606336
1,2-Dichloroethane	mg/kg	0.0223	0.0217	89.3	49-131	2.65	20	L588397-01	WG606336
1,2-Dichloropropane	mg/kg	0.0222	0.0230	89.0	50-132	3.47	21	L588397-01	WG606336
1,3,5-Trimethylbenzene	mg/kg	0.0234	0.0250	93.5	29-144	6.75	30	L588397-01	WG606336
1,3-Dichlorobenzene	mg/kg	0.0237	0.0244	94.9	26-140	2.70	28	L588397-01	WG606336
1,3-Dichloropropane	mg/kg	0.0230	0.0227	92.0	50-126	1.07	22	L588397-01	WG606336
1,4-Dichlorobenzene	mg/kg	0.0213	0.0227	85.3	34-132	6.14	26	L588397-01	WG606336
2,2-Dichloropropane	mg/kg	0.0230	0.0240	92.1	35-148	4.20	26	L588397-01	WG606336
2-Butanone (MEK)	mg/kg	0.122	0.114	97.4	40-149	6.86	27	L588397-01	WG606336
2-Chloroethyl vinyl ether	mg/kg	0.120	0.118	95.9	10-173	1.88	33	L588397-01	WG606336
2-Chlorotoluene	mg/kg	0.0226	0.0240	90.3	34-136	5.98	28	L588397-01	WG606336
4-Chlorotoluene	mg/kg	0.0225	0.0237	89.9	31-137	5.29	27	L588397-01	WG606336
4-Methyl-2-pentanone (MIBK)	mg/kg	0.121	0.111	96.7	37-153	8.75	27	L588397-01	WG606336
Acetone	mg/kg	0.118	0.107	94.4	10-177	9.76	28	L588397-01	WG606336
Acrylonitrile	mg/kg	0.131	0.121	105.	33-159	8.08	26	L588397-01	WG606336
Benzene	mg/kg	0.0229	0.0236	91.5	44-131	3.31	21	L588397-01	WG606336
Bromobenzene	mg/kg	0.0218	0.0225	87.2	36-132	2.95	26	L588397-01	WG606336
Bromodichloromethane	mg/kg	0.0217	0.0221	86.9	48-134	1.93	20	L588397-01	WG606336
Bromoform	mg/kg	0.0253	0.0250	101.	34-141	1.32	24	L588397-01	WG606336
Bromomethane	mg/kg	0.0231	0.0236	92.5	19-173	2.04	25	L588397-01	WG606336
Carbon tetrachloride	mg/kg	0.0231	0.0243	92.5	36-140	5.15	26	L588397-01	WG606336
Chlorobenzene	mg/kg	0.0234	0.0240	93.6	42-133	2.65	24	L588397-01	WG606336
Chlorodibromomethane	mg/kg	0.0231	0.0233	92.4	45-135	1.04	23	L588397-01	WG606336
Chloroethane	mg/kg	0.0230	0.0243	92.0	16-178	5.52	25	L588397-01	WG606336
Chloroform	mg/kg	0.0219	0.0222	87.8	52-130	1.24	21	L588397-01	WG606336
Chloromethane	mg/kg	0.0226	0.0235	90.2	28-147	4.14	23	L588397-01	WG606336
cis-1,2-Dichloroethene	mg/kg	0.0234	0.0243	93.5	52-128	3.87	21	L588397-01	WG606336
cis-1,3-Dichloropropene	mg/kg	0.0223	0.0229	89.4	46-131	2.46	21	L588397-01	WG606336
Di-isopropyl ether	mg/kg	0.0234	0.0236	93.6	46-134	0.900	20	L588397-01	WG606336
Dibromomethane	mg/kg	0.0239	0.0241	95.8	51-133	0.710	21	L588397-01	WG606336
Dichlorodifluoromethane	mg/kg	0.0215	0.0233	86.2	12-179	7.63	27	L588397-01	WG606336
Ethylbenzene	mg/kg	0.0233	0.0252	93.2	38-139	7.62	27	L588397-01	WG606336
Hexachloro-1,3-butadiene	mg/kg	0.0235	0.0246	93.8	10-147	4.79	37	L588397-01	WG606336
Isopropylbenzene	mg/kg	0.0238	0.0251	95.2	34-137	5.51	29	L588397-01	WG606336
Methyl tert-butyl ether	mg/kg	0.0256	0.0240	102.	45-134	6.42	22	L588397-01	WG606336
Methylene Chloride	mg/kg	0.0239	0.0244	95.8	41-133	1.97	28	L588397-01	WG606336
n-Butylbenzene	mg/kg	0.0228	0.0247	91.2	19-149	8.06	32	L588397-01	WG606336
n-Propylbenzene	mg/kg	0.0235	0.0253	94.1	27-142	7.27	29	L588397-01	WG606336
Naphthalene	mg/kg	0.0240	0.0224	95.8	19-146	6.53	30	L588397-01	WG606336
p-Isopropyltoluene	mg/kg	0.0249	0.0266	99.7	21-150	6.47	31	L588397-01	WG606336
sec-Butylbenzene	mg/kg	0.0243	0.0260	97.1	25-148	6.67	31	L588397-01	WG606336
Styrene	mg/kg	0.0234	0.0243	93.7	30-156	3.77	26	L588397-01	WG606336
tert-Butylbenzene	mg/kg	0.0247	0.0258	98.6	32-146	4.56	30	L588397-01	WG606336
Tetrachloroethene	mg/kg	0.0244	0.0258	97.5	35-139	5.62	27	L588397-01	WG606336
Toluene	mg/kg	0.0216	0.0230	86.5	43-127	5.94	21	L588397-01	WG606336
trans-1,2-Dichloroethene	mg/kg	0.0244	0.0258	97.4	41-132	5.86	23	L588397-01	WG606336
trans-1,3-Dichloropropene	mg/kg	0.0226	0.0228	90.5	43-129	0.590	23	L588397-01	WG606336
Trichloroethene	mg/kg	0.0237	0.0249	94.9	42-136	4.79	23	L588397-01	WG606336
Trichlorofluoromethane	mg/kg	0.0234	0.0259	93.7	20-178	9.89	30	L588397-01	WG606336
Vinyl chloride	mg/kg	0.0222	0.0233	88.6	30-157	4.93	24	L588397-01	WG606336

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Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Xylenes, Total	mg/kg	0.0703	0.0739	93.8	38-137	4.99	26	L588397-01	WG606336
4-Bromofluorobenzene				104.0	67-133				WG606336
Dibromofluoromethane				103.4	72-135				WG606336
Toluene-d8				103.4	90-113				WG606336
Benzene	mg/kg	0.239	0.235	95.5	32-137	1.74	39	L588405-12	WG606230
Ethylbenzene	mg/kg	0.252	0.249	101.	10-150	1.21	44	L588405-12	WG606230
Toluene	mg/kg	0.244	0.248	97.8	20-142	1.47	42	L588405-12	WG606230
Total Xylene	mg/kg	0.783	0.779	104.	16-141	0.480	46	L588405-12	WG606230
a,a,a-Trifluorotoluene(PID)				103.6	54-144				WG606230
TPH (GC/FID) Low Fraction	mg/kg	12.9	28.3	47.0*	55-109	74.6*	20	L588405-12	WG606230
a,a,a-Trifluorotoluene(FID)				96.76	59-128				WG606230
Chromium,Hexavalent	mg/kg	20.4	18.0	102.	50-150	12.5	20	L587734-04	WG606214
1-Methylnaphthalene	mg/kg	0.0281	0.0345	51.7	25-155	20.6	27	L588416-01	WG606382
2-Chloronaphthalene	mg/kg	0.0200	0.0230	60.5	31-153	14.2	22	L588416-01	WG606382
2-Methylnaphthalene	mg/kg	0.0321	0.0419	39.8	22-172	26.4	29	L588416-01	WG606382
Acenaphthene	mg/kg	0.0203	0.0242	61.6	43-133	17.3	26	L588416-01	WG606382
Acenaphthylene	mg/kg	0.0203	0.0261	61.6	42-146	24.7*	22	L588416-01	WG606382
Anthracene	mg/kg	0.0209	0.0236	63.5	38-153	12.0	27	L588416-01	WG606382
Benzo(a)anthracene	mg/kg	0.0193	0.0230	58.6	31-142	17.4	31	L588416-01	WG606382
Benzo(a)pyrene	mg/kg	0.0197	0.0223	59.8	26-152	12.0	32	L588416-01	WG606382
Benzo(b)fluoranthene	mg/kg	0.0223	0.0244	67.5	10-188	9.08	33	L588416-01	WG606382
Benzo(g,h,i)perylene	mg/kg	0.00704	0.00921	21.3	10-176	26.8	30	L588416-01	WG606382
Benzo(k)fluoranthene	mg/kg	0.0238	0.0242	72.2	22-163	1.38	29	L588416-01	WG606382
Chrysene	mg/kg	0.0189	0.0221	57.3	26-146	15.4	30	L588416-01	WG606382
Dibenz(a,h)anthracene	mg/kg	0.00907	0.0112	27.5	10-160	20.9	39	L588416-01	WG606382
Fluoranthene	mg/kg	0.0233	0.0281	70.6	23-160	18.6	22	L588416-01	WG606382
Fluorene	mg/kg	0.0204	0.0237	62.0	44-143	14.9	23	L588416-01	WG606382
Indeno(1,2,3-cd)pyrene	mg/kg	0.00910	0.0112	27.6	10-157	20.5	40	L588416-01	WG606382
Naphthalene	mg/kg	0.0233	0.0296	45.9	22-156	23.7	27	L588416-01	WG606382
Phenanthrene	mg/kg	0.0202	0.0238	61.3	23-164	16.3	25	L588416-01	WG606382
Pyrene	mg/kg	0.0210	0.0232	63.7	12-170	10.0	24	L588416-01	WG606382
2-Fluorobiphenyl				62.81	34-129				WG606382
Nitrobenzene-d5				62.26	14-141				WG606382
p-Terphenyl-d14				60.31	25-139				WG606382
Benzene	mg/kg	0.0416	0.0413	83.2	32-137	0.720	39	L588412-01	WG606414
Ethylbenzene	mg/kg	0.0462	0.0463	92.4	10-150	0.220	44	L588412-01	WG606414
Toluene	mg/kg	0.0441	0.0450	88.2	20-142	1.89	42	L588412-01	WG606414
Total Xylene	mg/kg	0.145	0.146	96.5	16-141	1.01	46	L588412-01	WG606414
a,a,a-Trifluorotoluene(PID)				99.49	54-144				WG606414
TPH (GC/FID) Low Fraction	mg/kg	339.	329.	123.*	55-109	3.10	20	L588373-01	WG606414
a,a,a-Trifluorotoluene(FID)				92.07	59-128				WG606414
Mercury	mg/kg	0.307	0.313	108.	80-120	1.94	20	L588504-01	WG606559
Arsenic	mg/kg	47.7	46.5	89.6	75-125	2.55	20	L588406-04	WG606308
Barium	mg/kg	150.	174.	26.0*	75-125	14.8	20	L588406-04	WG606308
Chromium	mg/kg	74.8	64.4	94.2	75-125	14.9	20	L588406-04	WG606308
Selenium	mg/kg	45.3	42.1	89.7	75-125	7.32	20	L588406-04	WG606308
Zinc	mg/kg	66.9	68.8	84.4	75-125	2.80	20	L588406-04	WG606308

\* Performance of this Analyte is outside of established criteria.

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



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EnCana Oil & Gas - Rangely, CO  
Blake Ford  
1125 Escalante Drive

Rangely, CO 81648-3600

Quality Assurance Report  
Level II

L588405

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

Tax I.D. 62-0814289

Est. 1970

August 13, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	ppm	58.3	45.8	97.2	50-150	23.9	25	L588405-08	WG606419
o-Terphenyl				76.54	50-150				WG606419
Cadmium	mg/kg	45.0	46.5	90.0	75-125	3.28	20	L588406-04	WG606308
Copper	mg/kg	56.8	55.8	114.	75-125	1.78	20	L588406-04	WG606308
Nickel	mg/kg	53.4	56.7	107.	75-125	5.99	20	L588406-04	WG606308
Silver	mg/kg	47.8	48.4	95.6	75-125	1.25	20	L588406-04	WG606308
Lead	mg/kg	48.3	51.0	82.8	75-125	5.44	20	L588406-04	WG606308

Batch number /Run number / Sample number cross reference

WG606208: R2289594: L588405-05 06 07 08 10 11 12  
WG606226: R2291633: L588405-05 06 07 08 09 11  
WG606336: R2292553: L588405-09  
WG606230: R2293477: L588405-12  
WG606214: R2293994: L588405-10  
WG606403: R2293995: L588405-10  
WG606278: R2294633: L588405-10  
WG606419: R2294674: L588405-05 06 07 08 09 10 11 12  
WG606382: R2295113: L588405-10  
WG606414: R2295334: L588405-10  
WG606576: R2295493: L588405-10  
WG606559: R2296134: L588405-10  
WG606308: R2296334: L588405-01 02 03 04 10  
WG606396: R2299537: L588405-10

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

\* Performance of this Analyte is outside of established criteria.

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

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

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

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

Company Name/Address <b>*ENCANRCO-HRL*</b> <b>Encana Oil &amp; Gas</b> 1125 Escalante Drive Rangely, CO 81648-3600  <b>*ENCANRCO-RULEENG*</b>				Billing Information Blake Ford 1125 Escalante Drive Rangely, CO 81648-3600  Report to: Blake Ford E-mail to: Blake Ford, Scotty Mann, Brad Ward				Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEXGRO / DRO - 8260/8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SV8270PAHSIM - 8270SIM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SPCON - 9050AMod</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA8 Metals + Cu, Ni, and Zn - 6010/7470</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR6SS - 3060A/7196</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR3 - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">As</div> </div>										Chain of Custody Page_1_of_1		
Project Description: 1323 Site Clearance				Rangely, CO				Prepared by: <b>ENVIRONMENTAL Science corp</b> 12065 Lebanon Road Mt. Juliet TN 37122  Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859												
PHONE:		FAX:		Client Project No. 1323		ENCANRCO-RULEENG														
Collected by: Brad Ward		Site/Facility ID# 1323		P.O.#																
Collected by (signature): 				<div style="border: 1px solid black; padding: 2px;"> <b>Rush?</b> (Lab MUST be Notified)         </div> <div style="margin-left: 20px;">           Same Day.....200%            Next Day.....100%            Two Day.....50%         </div>				Date Results Needed Email? ___ No ___ X Yes FAX? ___ No ___ Yes				No of Cntrs		CoCode (lab use only) <b>*ENCANRCO-RULEENG*</b> Template/Prelogin Shipped Via:						
Immediately Packed on Ice N ___ Y ___ X ___																				
Sample ID		Comp/Grab	Matrix	Depth	Date	Time	Cntrs											Remarks/contaminant	Sample # (lab only)	
1323-BG1N-6"-073112		Grab	SS	6"	7/31/12	1126	1											x	L588405	-01
1323-BG2E-6"-073112		Grab	SS	6"	7/31/12	1144	1											x		-02
1323-BG3S-6"-073112		Grab	SS	6"	7/31/12	1157	1											x		-03
1323-BG4W-6"-073112		Grab	SS	6"	7/31/12	1302	1											x		-04
1323-NSW-17'-080112		Grab	SS	17'	8/1/12	1332	2	x												-05
1323-ESW-17'-080112		Grab	SS	17'	8/1/12	1341	2	x												-06
1323-SSW-17'-080112		Grab	SS	17'	8/1/12	1121	2	x												-07
1323-WSW-15'-080112		Grab	SS	15'	8/1/12	1147	2	x												-08
1323-ESW-10'-080212		Grab	SS	10'	8/2/12	1722	2	x												-09
1323-ETS-080212		Comp	SS	3-9"	8/2/12	1302	3	x	x	x	x	x	x	x	x	x		-10		
1323-CETS-080112		Comp	SS	3-9"	8/1/12	1549	2	x												-11
1323-BBT-18'-080112		Grab	SS	18'	8/1/12	1402	2	x												-12

Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT-Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks:

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquisher by: (Signature)	Date: 8/3/12	Time: 0700	Received by: (Signature)	Samples returned via: FedEx UPS Other	Condition (lab use only)
				5070 0633 61276	MS COC Seals Intact <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquisher by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.10	
Relinquisher by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/4/12	Time: 0900
					pH Checked: NCF:



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Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

## Report Summary

Sunday November 18, 2012

Report Number: L605478


Samples Received: 11/09/12

Client Project:

Description: 1323 Pit Project

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

Entire Report Reviewed By:

  
Jarred Willis , ESC Representative

### Laboratory Certification Numbers

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

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

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

November 18, 2012

Date Received : November 09, 2012  
Description : 1323 Pit Project  
Sample ID : 1323-ESW-110712  
Collected By : Chantae Pennell  
Collection Date : 11/07/12 13:06

ESC Sample # : L605478-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.25	mg/kg	8021/8015	11/14/12	500
Toluene	BDL	2.5	mg/kg	8021/8015	11/14/12	500
Ethylbenzene	1.1	0.25	mg/kg	8021/8015	11/14/12	500
Total Xylene	3.1	0.75	mg/kg	8021/8015	11/14/12	500
TPH (GC/FID) Low Fraction	560	50.	mg/kg	GRO	11/14/12	500
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	8021/8015	11/14/12	500
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	11/14/12	500
TPH (GC/FID) High Fraction	930	80.	mg/kg	3546/DRO	11/17/12	20
Surrogate recovery(%)						
o-Terphenyl	38.0		% Rec.	3546/DRO	11/17/12	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: 11/18/12 14:33 Printed: 11/18/12 14:33

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L605478-01	WG623046	SAMP	TPH (GC/FID) High Fraction	R2446578	J3
	WG623046	SAMP	o-Terphenyl	R2446578	J7



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

Qualifier Report Information

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

Definitions

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

Summary of Remarks For Samples Printed  
11/18/12 at 14:33:49

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L605478-01 Account: ENCANRCO Received: 11/09/12 09:30 Due Date: 11/16/12 00:00 RPT Date: 11/18/12 14:33



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EnCana Oil & Gas - Rangely, CO  
Blake Ford  
1125 Escalante Drive

Rangely, CO 81648-3600

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Level II

L605478

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November 18, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG622397	11/14/12 01:19
Ethylbenzene	< .0005	mg/kg			WG622397	11/14/12 01:19
Toluene	< .005	mg/kg			WG622397	11/14/12 01:19
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG622397	11/14/12 01:19
Total Xylene	< .0015	mg/kg			WG622397	11/14/12 01:19
a,a,a-Trifluorotoluene(FID)		% Rec.	97.80	59-128	WG622397	11/14/12 01:19
a,a,a-Trifluorotoluene(PID)		% Rec.	101.9	54-144	WG622397	11/14/12 01:19
TPH (GC/FID) High Fraction	< 4	mg/kg			WG623046	11/16/12 17:13
o-Terphenyl		% Rec.	68.90	50-150	WG623046	11/16/12 17:13

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0499	99.8	76-113	WG622397
Ethylbenzene	mg/kg	.05	0.0558	112.	78-115	WG622397
Toluene	mg/kg	.05	0.0535	107.	76-114	WG622397
Total Xylene	mg/kg	.15	0.166	110.	81-118	WG622397
a,a,a-Trifluorotoluene(PID)				99.92	54-144	WG622397
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.68	103.	67-135	WG622397
a,a,a-Trifluorotoluene(FID)				93.96	59-128	WG622397
TPH (GC/FID) High Fraction	mg/kg	60	37.3	62.2	50-150	WG623046
o-Terphenyl				66.90	50-150	WG623046

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0464	0.0499	93.0	76-113	7.14	20	WG622397
Ethylbenzene	mg/kg	0.0515	0.0558	103.	78-115	7.98	20	WG622397
Toluene	mg/kg	0.0494	0.0535	99.0	76-114	8.12	20	WG622397
Total Xylene	mg/kg	0.152	0.166	101.	81-118	8.50	20	WG622397
a,a,a-Trifluorotoluene(PID)				99.13	54-144			WG622397
TPH (GC/FID) Low Fraction	mg/kg	5.90	5.68	107.	67-135	3.81	20	WG622397
a,a,a-Trifluorotoluene(FID)				94.31	59-128			WG622397
TPH (GC/FID) High Fraction	mg/kg	48.9	37.3	82.0	50-150	26.9*	20	WG623046
o-Terphenyl				76.80	50-150			WG623046

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Benzene	mg/kg	0.225	0	.05	89.8	32-137	L605499-02	WG622397
Ethylbenzene	mg/kg	0.255	0	.05	102.	10-150	L605499-02	WG622397
Toluene	mg/kg	0.247	0	.05	98.8	20-142	L605499-02	WG622397
Total Xylene	mg/kg	0.764	0	.15	102.	16-141	L605499-02	WG622397
a,a,a-Trifluorotoluene(PID)					99.09	54-144		WG622397
TPH (GC/FID) Low Fraction	mg/kg	26.3	0	5.5	95.8	55-109	L605499-02	WG622397
a,a,a-Trifluorotoluene(FID)					93.06	59-128		WG622397
TPH (GC/FID) High Fraction	mg/kg	856.	830.	12	43.0*	50-150	L605485-01	WG623046
o-Terphenyl					52.50	50-150		WG623046

\* Performance of this Analyte is outside of established criteria.  
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November 18, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Benzene	mg/kg	0.228	0.225	91.1	32-137	1.34	39	L605499-02	WG622397	
Ethylbenzene	mg/kg	0.249	0.255	99.4	10-150	2.46	44	L605499-02	WG622397	
Toluene	mg/kg	0.241	0.247	96.5	20-142	2.36	42	L605499-02	WG622397	
Total Xylene	mg/kg	0.737	0.764	98.2	16-141	3.65	46	L605499-02	WG622397	
a,a,a-Trifluorotoluene(PID)				98.65	54-144					
TPH (GC/FID) Low Fraction	mg/kg	24.1	26.3	87.5	55-109	9.03	20	L605499-02	WG622397	
a,a,a-Trifluorotoluene(FID)				92.91	59-128					
TPH (GC/FID) High Fraction	mg/kg	1370	856.	899.*	50-150	46.2*	20	L605485-01	WG623046	
o-Terphenyl				52.80	50-150					

Batch number /Run number / Sample number cross reference

WG622397: R2442277: L605478-01

WG623046: R2446578: L605478-01

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

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

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.

[illegible]



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

Tax I.D. 62-0814289

Est. 1970

Charles Jensen  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

## Report Summary

Thursday July 11, 2013

Report Number: L644231


Samples Received: 06/29/13

Client Project: 1323

Description: 1323 - Site Clearance

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

Entire Report Reviewed By:

  
Jarred Willis , ESC Representative

### Laboratory Certification Numbers

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

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

Charles Jensen  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

July 11, 2013

Date Received : June 29, 2013  
Description : 1323 - Site Clearance  
Sample ID : 062713-1323(ESW)-10FT  
Collected By : Brad Ward  
Collection Date : 06/27/13 12:22

ESC Sample # : L644231-01

Site ID : 1323

Project # : 1323

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/04/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/04/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	96.9		% Rec.	8021/8015	07/04/13	5
a,a,a-Trifluorotoluene(PID)	96.4		% Rec.	8021/8015	07/04/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	07/11/13	1
Surrogate recovery(%)						
o-Terphenyl	50.9		% Rec.	3546/DRO	07/11/13	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: 07/11/13 17:14 Printed: 07/11/13 17:14



Summary of Remarks For Samples Printed  
07/11/13 at 17:14:43

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L644231-01 Account: ENCANRGO Received: 06/29/13 09:00 Due Date: 07/09/13 00:00 RPT Date: 07/11/13 17:14

