

## NARRATIVE ATTACHMENT

### FORM 4 (SUNDRY NOTICE)

#### Culvert Pit Closure (Lower Horse Draw Unit 2108)

Document Date-10/10/2013

#### 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 Lower Horse Draw Unit #2108 (COGCC facility #314308, COGCC remediation #7424). 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 11, 2013 - 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/sludge 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 200 cubic yards of excavated material was removed from the pit and laid out in 1.5 foot tall (150' x 24') lift for evaluation of impacts. The excavated material was sampled by way of a nine (9) 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 Lower Horse Draw Unit #2108 well pad, had organic constituent concentrations of the excavated area below or within COGCC Table 910-1 except for Total Petroleum Hydrocarbons (TPH) (862 ppm – east sidewall and 3,220 ppm – base). Analytical results indicated the excavated material exceeded COGCC Table 910-1 allowable concentrations for arsenic (3.9 ppm). 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 (4.2 – 6.5 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 level of the returned spoil material within the excavated footprint area is 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 will have no adverse effect on future re-vegetation efforts and receptors in the area. Please see Table 1 and Attachment A for analytical results.

# **NARRATIVE ATTACHMENT**

## **FORM 4 (SUNDRY NOTICE)**

### **Culvert Pit Closure (Lower Horse Draw Unit 2108)**

Document Date-10/10/2013

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The two samples (east sidewall and base) that exceeded COGCC Table 910-1 analytical value for TPH was resampled September 26, 2013 and analytical values indicated that they were below or within COGCC Table 910-1 allowable concentrations.

#### **Conclusion**

Based on the site investigation and analytical results, the culvert pit associated with the Lower Horse Draw Unit #2108 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 #7424.

#### **Notification of Completion**

This Sundry Notice is also being submitted as the Notification of Completion for Remediation #7424. If the information provided here is satisfactory, please provide documentation of the closure of this remediation project.

#### **Attachments**

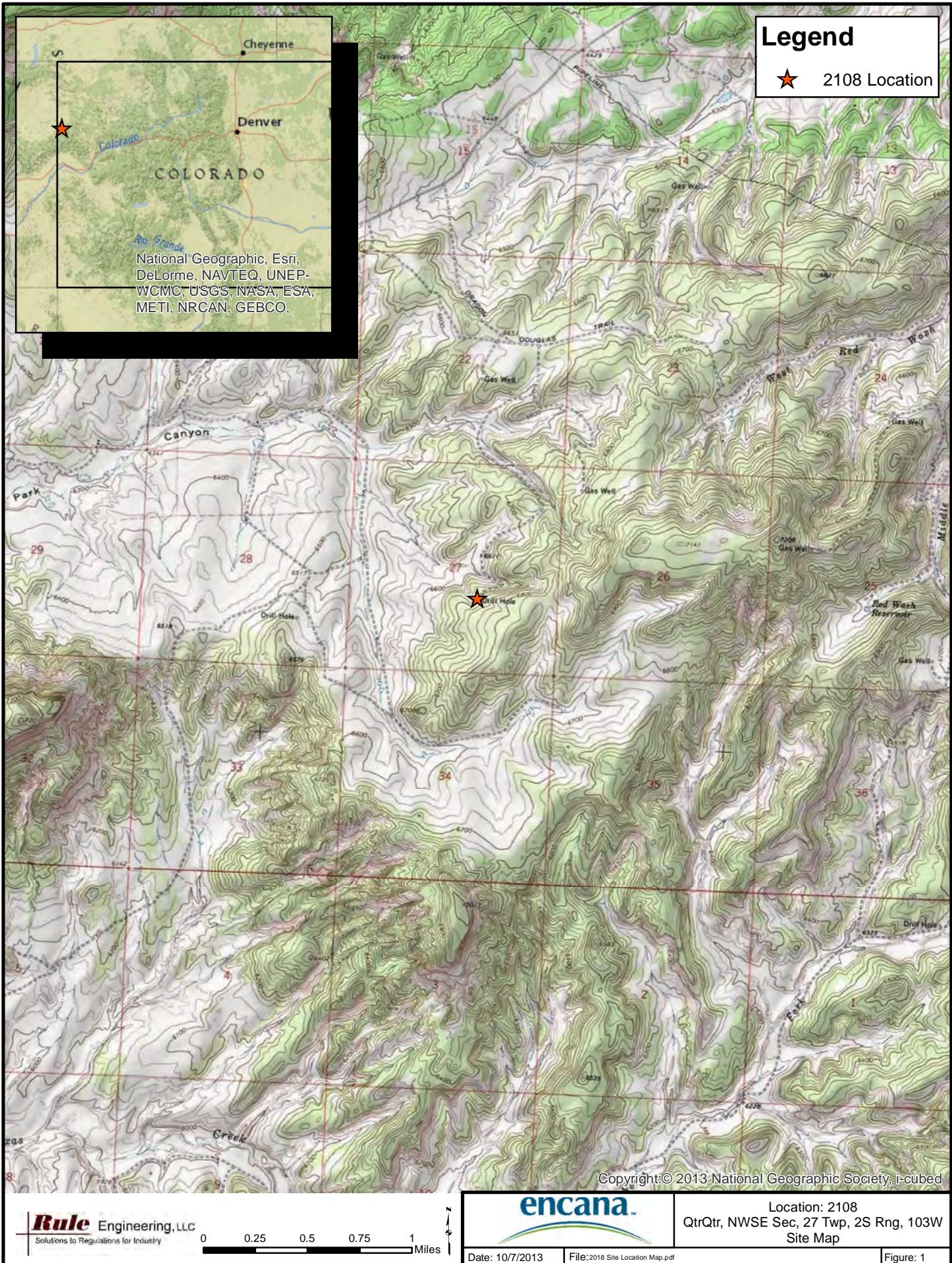
Topographic Location Map (Figure 1)

2108 Aerial map with sample locations (Figure 2)

2108 Site Diagram of Excavation and sample locations (Figure 3)

Laboratory Results Summary Table 1 – 2108 Site Investigation (Table 1)

Attachment A- Laboratory Reports



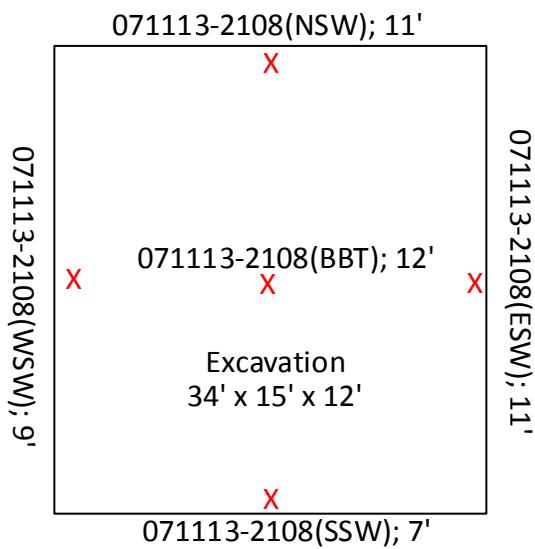


## Legend

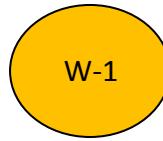
★ Soil Sample Location

0 37.5 75 150 225 Feet

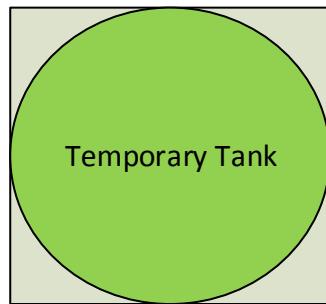




071113-2108(ESW); 11'



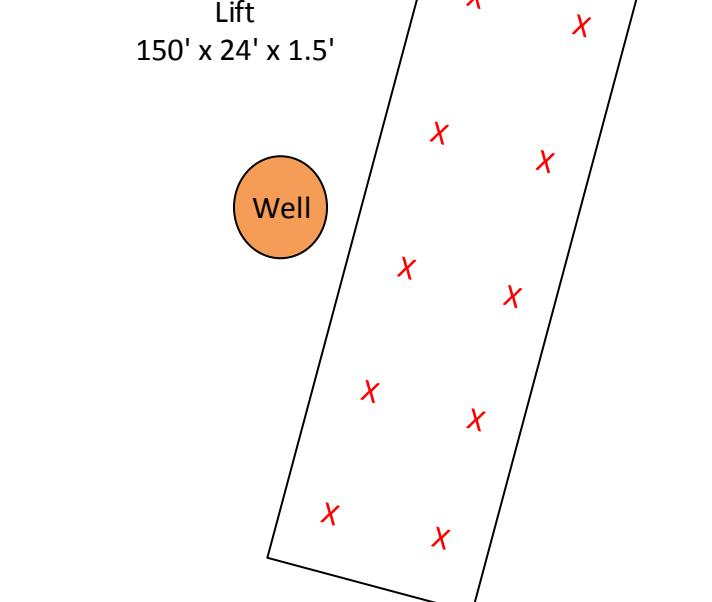
Direction of Flow



Lift  
150' x 24' x 1.5'



071113-2108(ETS); 3-9"





## **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

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

### Report Summary

Monday July 22, 2013

Report Number: L646436

Samples Received: 07/13/13

Client Project: 2108

Description: 2108-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:

T. Alan Harvill , 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, 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

July 22, 2013

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

Date Received : July 13, 2013 ESC Sample # : L646436-01  
Description : 2108-Site Clearance Site ID : 2108  
Sample ID : 071113-2108(NSW) 11 FT Project # : 2108  
Collected By : Brad Ward  
Collection Date : 07/11/13 14:36

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/14/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/14/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/14/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/14/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/14/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	07/14/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	07/14/13	5
TPH (GC/FID) High Fraction	22.	4.0	mg/kg	3546/DRO	07/19/13	1
Surrogate recovery(%)						
o-Terphenyl	65.1		% Rec.	3546/DRO	07/19/13	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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REPORT OF ANALYSIS

July 22, 2013

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

Date Received : July 13, 2013 ESC Sample # : L646436-02  
Description : 2108-Site Clearance Site ID : 2108  
Sample ID : 071113-2108(ESW) 11 FT Project # : 2108  
Collected By : Brad Ward  
Collection Date : 07/11/13 14:28

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.92	0.25	mg/kg	8021/8015	07/15/13	500
Toluene	5.2	2.5	mg/kg	8021/8015	07/15/13	500
Ethylbenzene	2.4	0.25	mg/kg	8021/8015	07/15/13	500
Total Xylene	24.	0.75	mg/kg	8021/8015	07/15/13	500
TPH (GC/FID) Low Fraction	850	50.	mg/kg	GRO	07/15/13	500
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	96.9		% Rec.	8021/8015	07/15/13	500
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	07/15/13	500
TPH (GC/FID) High Fraction	12.	4.0	mg/kg	3546/DRO	07/19/13	1
Surrogate recovery(%)						
o-Terphenyl	60.2		% Rec.	3546/DRO	07/19/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

July 22, 2013

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

Date Received : July 13, 2013 ESC Sample # : L646436-03  
Description : 2108-Site Clearance Site ID : 2108  
Sample ID : 071113-2108(SSW) 7 FT Project # : 2108  
Collected By : Brad Ward  
Collection Date : 07/11/13 14:44

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/15/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/15/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	102.		% Rec.	8021/8015	07/15/13	5
a,a,a-Trifluorotoluene(PID)	98.6		% Rec.	8021/8015	07/15/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	07/19/13	1
Surrogate recovery(%)						
o-Terphenyl	65.2		% Rec.	3546/DRO	07/19/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

July 22, 2013

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

Date Received : July 13, 2013 ESC Sample # : L646436-04  
Description : 2108-Site Clearance Site ID : 2108  
Sample ID : 071113-2108(WSW) 9 FT Project # : 2108  
Collected By : Brad Ward  
Collection Date : 07/11/13 14:53

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/15/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/15/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	102.		% Rec.	8021/8015	07/15/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	07/15/13	5
TPH (GC/FID) High Fraction	35.	4.0	mg/kg	3546/DRO	07/19/13	1
Surrogate recovery(%)						
o-Terphenyl	64.7		% Rec.	3546/DRO	07/19/13	1

BDL - Below Detection Limit

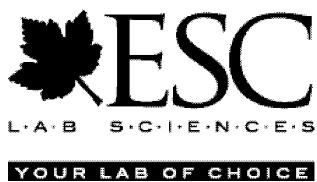
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

July 22, 2013

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

Date Received : July 13, 2013 ESC Sample # : L646436-05  
Description : 2108-Site Clearance Site ID : 2108  
Sample ID : 071113-2108(BBT) 12 FT Project # : 2108  
Collected By : Brad Ward  
Collection Date : 07/11/13 15:02

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	4.2	0.50	mg/kg	8021/8015	07/15/13	1000
Toluene	9.6	5.0	mg/kg	8021/8015	07/15/13	1000
Ethylbenzene	5.1	0.50	mg/kg	8021/8015	07/15/13	1000
Total Xylene	66.	1.5	mg/kg	8021/8015	07/15/13	1000
TPH (GC/FID) Low Fraction	2900	100	mg/kg	GRO	07/15/13	1000
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	94.5		% Rec.	8021/8015	07/15/13	1000
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	07/15/13	1000
TPH (GC/FID) High Fraction	320	4.0	mg/kg	3546/DRO	07/19/13	1
Surrogate recovery(%)						
o-Terphenyl	81.8		% Rec.	3546/DRO	07/19/13	1

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REPORT OF ANALYSIS

July 22, 2013

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

Date Received :	July 13, 2013	ESC Sample # :	L646436-06
Description :	2108-Site Clearance	Site ID :	2108
Sample ID :	071113-2108(ETS) 3-9 IN	Project # :	2108
Collected By :	Brad Ward		
Collection Date :	07/11/13 16:10		

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	07/18/13	1
Chromium, Trivalent	6.0	2.0	mg/kg	Calc.	07/20/13	1
ORP	240		mV	2580 B-2011	07/19/13	1
pH	8.0		su	9045D	07/18/13	1
Sodium Adsorption Ratio	1.8			Calc.	07/22/13	1
Specific Conductance	800		umhos/cm	9050AMod	07/19/13	1
Mercury	0.020	0.020	mg/kg	7471	07/16/13	1
Arsenic	3.9	1.0	mg/kg	6010B	07/20/13	1
Barium	62.	0.25	mg/kg	6010B	07/20/13	1
Cadmium	BDL	0.25	mg/kg	6010B	07/20/13	1
Chromium	6.0	0.50	mg/kg	6010B	07/20/13	1
Copper	7.9	1.0	mg/kg	6010B	07/20/13	1
Lead	7.2	0.25	mg/kg	6010B	07/20/13	1
Nickel	8.8	1.0	mg/kg	6010B	07/20/13	1
Selenium	BDL	1.0	mg/kg	6010B	07/20/13	1
Silver	BDL	0.50	mg/kg	6010B	07/20/13	1
Zinc	65.	1.5	mg/kg	6010B	07/20/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	07/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/15/13	5
Total Xylene	0.027	0.0075	mg/kg	8021/8015	07/15/13	5
TPH (GC/FID) Low Fraction	9.2	0.50	mg/kg	GRO	07/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	100.		% Rec.	8021/8015	07/15/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	07/15/13	5
TPH (GC/FID) High Fraction	31.	4.0	mg/kg	3546/DRO	07/19/13	1
Surrogate recovery(%)						
o-Terphenyl	60.6		% Rec.	3546/DRO	07/19/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Acenaphthene	0.0064	0.0060	mg/kg	8270C-SIM	07/17/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L646436-06 (PH) - 8.0@23.0c



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REPORT OF ANALYSIS

July 22, 2013

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

ESC Sample # : L646436-06

Date Received : July 13, 2013  
Description : 2108-Site Clearance  
Sample ID : 071113-2108(ETS) 3-9 IN  
Collected By : Brad Ward  
Collection Date : 07/11/13 16:10

Site ID : 2108

Project # : 2108

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Naphthalene	0.039	0.020	mg/kg	8270C-SIM	07/17/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/17/13	1
1-Methylnaphthalene	0.054	0.020	mg/kg	8270C-SIM	07/17/13	1
2-Methylnaphthalene	0.041	0.020	mg/kg	8270C-SIM	07/17/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	07/17/13	1
Surrogate Recovery						
Nitrobenzene-d5	104.		% Rec.	8270C-SIM	07/17/13	1
2-Fluorobiphenyl	74.5		% Rec.	8270C-SIM	07/17/13	1
p-Terphenyl-d14	85.1		% Rec.	8270C-SIM	07/17/13	1

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Reported: 07/22/13 14:35 Printed: 07/22/13 14:35  
L646436-06 (PH) - 8.0@23.0c

Summary of Remarks For Samples Printed  
07/22/13 at 14:35:58

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L646436-01 Account: ENCANCRCO Received: 07/13/13 09:30 Due Date: 07/19/13 00:00 RPT Date: 07/22/13 14:35  
Sample: L646436-02 Account: ENCANCRCO Received: 07/13/13 09:30 Due Date: 07/19/13 00:00 RPT Date: 07/22/13 14:35  
Sample: L646436-03 Account: ENCANCRCO Received: 07/13/13 09:30 Due Date: 07/19/13 00:00 RPT Date: 07/22/13 14:35  
Sample: L646436-04 Account: ENCANCRCO Received: 07/13/13 09:30 Due Date: 07/19/13 00:00 RPT Date: 07/22/13 14:35  
Sample: L646436-05 Account: ENCANCRCO Received: 07/13/13 09:30 Due Date: 07/19/13 00:00 RPT Date: 07/22/13 14:35  
Sample: L646436-06 Account: ENCANCRCO Received: 07/13/13 09:30 Due Date: 07/19/13 00:00 RPT Date: 07/22/13 14:35

Company Name/Address <b>*ENCANRCO-RULEENG*</b>  Encana Oil & Gas 143 DIAMOND AVE PARACHUTE, CO 81635		Billing Information  Charlie Jensen 143 Diamond Ave Parachute, CO 81635		Analysis/Container/Preservative		Chain of Custody Page 1 of 1							
<b>*ENCANRCO-RULEENG*</b>		Report to: Charlie Jensen				Prepared by:							
		E-mail to: Charlie Jensen, Shad Johnson, Brad Ward				G036  <b>ENVIRONMENTAL SCIENCE CORP</b> 12065 Lebanon Road Mt. Juliet TN 37122							
Project Description: <b>2108 - SITE CLEARANCE</b>						Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859							
PHONE: 970-285-2735	Client Project No.	ENCANRCO-RULEENG											
FAX:	<b>2108</b>												
Collected by: <b>Brad Ward</b>	Site/Facility ID# <b>2108</b>	P.O.#											
Collected by(signature): <i>Brw Ww</i>	Rush? (Lab MUST be Notified)  Same Day.....200% Next Day.....100% Two Day.....50%	Date Results Needed  Email? <u>No</u> <u>X</u> Yes FAX? <u>No</u> Yes		No of Cntrs	BTEXGRO / DRO - 8260/8015	SV8270PAHSIM - 8270SIM	SPCON - 9050AMod	SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 60107470	CR6SS - 3060A7196	CR3 - Calc.	As	CoCode (lab use only)
Immediately Packed on Ice N <u>Y</u> <u>X</u>													
Sample ID	Comp/Grab	Matrix	Depth	Date	Time								Remarks/contaminant Sample # (lab only)
071113-2108(NSW) 11'	GRAB	SS	11'	7/11/13	1436	2	X						646436-61
071113-2108(ESW) 11'	GRAB	SS	11'		1428	2	X						62
071113-2108(SSW) 7'	GRAB	SS	7'		1444	2	X						63
071113-2108(WSW) 9'	GRAB	SS	9'		1453	2	X						64
071113-2108(BBT) 12'	GRAB	SS	12'		1502	2	X						65
071113-2108(ETB) 3.9'	COMP	SS	3-9"	↓	1610	3	X X X X X X X X						66

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

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

Remarks:

**5086 5825 2271** Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquisher by:(Signature) <i>Brw Ww</i>	Date: <b>7/12/13</b>	Time: <b>715</b>	Received by:(Signature)	Samples returned via: FedEx <u>✓</u> UPS <u>✓</u> Other _____		Condition (lab use only)
Relinquisher by:(Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>32</b>	Bottles Received: <b>13 = 4oz</b>	COC Seals Intact <u>✓</u> Y <u>✓</u> N <u>✓</u> NA <b>MS</b>
Relinquisher by:(Signature)	Date:	Time:	Received for lab by: (Signature) <i>MCaw</i>	Date: <b>7/13/13</b>	Time: <b>0930</b>	pH Checked: <u>✓</u> NCF:



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Est. 1970

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

## Report Summary

Wednesday July 24, 2013

Report Number: L646437

Samples Received: 07/13/13

Client Project: 2108

Description: 2108-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:

  
Jared 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, 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

July 24, 2013

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

Date Received : July 13, 2013  
Description : 2108-Site Clearance  
Sample ID : 071213-2108-(BG1N) 6IN  
Collected By : Brad Ward  
Collection Date : 07/11/13 12:13

ESC Sample # : L646437-01

Site ID : 2108

Project # : 2108

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.2	1.0	mg/kg	6010B	07/24/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 07/24/13 16:19 Printed: 07/24/13 16:19



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REPORT OF ANALYSIS

July 24, 2013

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

ESC Sample # : L646437-02

Date Received : July 13, 2013  
Description : 2108-Site Clearance

Site ID : 2108

Sample ID : 071213-2108-(BG2E) 6IN

Project # : 2108

Collected By : Brad Ward  
Collection Date : 07/11/13 12:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.2	1.0	mg/kg	6010B	07/24/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 07/24/13 16:19 Printed: 07/24/13 16:19



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REPORT OF ANALYSIS

July 24, 2013

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

ESC Sample # : L646437-03

Date Received : July 13, 2013  
Description : 2108-Site Clearance

Site ID : 2108

Sample ID : 071213-2108-(BG4W) 6IN

Project # : 2108

Collected By : Brad Ward  
Collection Date : 07/11/13 12:37

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	6.5	1.0	mg/kg	6010B	07/24/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 07/24/13 16:19 Printed: 07/24/13 16:19



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REPORT OF ANALYSIS

July 24, 2013

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

Date Received : July 13, 2013  
Description : 2108-Site Clearance  
Sample ID : 071213-2108-(BG3S) 6IN  
Collected By : Brad Ward  
Collection Date : 07/11/13 12:29

ESC Sample # : L646437-04

Site ID : 2108

Project # : 2108

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.9	1.0	mg/kg	6010B	07/24/13	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 07/24/13 16:19 Printed: 07/24/13 16:19

Summary of Remarks For Samples Printed  
07/24/13 at 16:19:28

TSR Signing Reports: 358  
RX - Priority Rush

Sample: L646437-01 Account: ENCANRCO Received: 07/13/13 09:30 Due Date: 07/25/13 00:00 RPT Date: 07/24/13 16:19

Sample: L646437-02 Account: ENCANRCO Received: 07/13/13 09:30 Due Date: 07/25/13 00:00 RPT Date: 07/24/13 16:19

Sample: L646437-03 Account: ENCANRCO Received: 07/13/13 09:30 Due Date: 07/25/13 00:00 RPT Date: 07/24/13 16:19

Sample: L646437-04 Account: ENCANRCO Received: 07/13/13 09:30 Due Date: 07/25/13 00:00 RPT Date: 07/24/13 16:19

Company Name/Address <b>*ENCANRCO-RULEENG*</b>		Billing Information				Analysis/Container/Preservative				Chain of Custody Page <u>1</u> of <u>1</u>		
<b>Encana Oil &amp; Gas</b> <b>143 DIAMOND AVE</b> <b>PARACHUTE, CO 81635</b>		Charlie Jensen 143 Diamond Ave Parachute, CO 81635								Prepared by: <b>G035</b> <b>ENVIRONMENTAL SCIENCE CORP</b> 12065 Lebanon Road Mt. Juliet TN 37122		
<b>*ENCANRCO-RULEENG*</b>		Report to: Charlie Jensen  E-mail to: Charlie Jensen, Shad Johnson, Brad Ward										
Project Description: <u>2108 - SITE CLEARANCE</u>												
PHONE: 970-285-2735	Client Project No.	ENCANRCO-RULEENG								Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859		
FAX:	<u>2108</u>											
Collected by: <u>Brad Ward</u>	Site/Facility ID# <u>2108</u>	P.O.#								CoCode (lab use only)		
Collected by(signature): 	Rush? (Lab MUST be Notified) <input type="checkbox"/> Same Day.....200% <input type="checkbox"/> Next Day.....100% <input type="checkbox"/> Two Day.....50%	Date Results Needed				No of Cntrs					*ENCANRCO-RULEENG*	
Immediately Packed on ice N <u>Y</u> <u>X</u>							SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 60107470	CR6SS - 3060A7196	CR3 - Calc.	As	Template/Prelogin
Sample ID	Comp/Grab	Matrix	Depth	Date	Time		SV8270PAHSIM - 8270SIM	SPCON - 9050AMod				Shipped Via:
071213-2108 -(BG1N)-6"	GRAB	SS	6"	7/11/13	1213	1						Remarks/contaminant
071213-2108 -(BG2E)-6"	GRAB	SS	6"	7/11/13	1220	1						Sample # (lab only)
<del>BIW</del> 7/12/13-(G3N)-6"	GRAB	SS	6"			1						L646437-01
071213-2108 -(BG4W)-6"	GRAB	SS	6"	7/11/13	1237	1						02
071213-2108 -(BG3S)-6"	GRAB	SS	6"	7/11/13	1229	1						03
												04
Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other _____							pH _____	Temp _____	Flow _____	Other _____		
Remarks: <u>5026 5825 2271</u>												

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

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

Remarks:

Relinquisher by:(Signature) 	Date: <u>7/12/13</u>	Time: <u>715</u>	Received by:(Signature) 	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Other <input type="checkbox"/>	Condition <input type="checkbox"/> (lab use only)
Relinquisher by:(Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3.2</u>	Bottles Received: <u>4 = 402</u>
Relinquisher by:(Signature)	Date:	Time:	Received for lab by: (Signature) 	Date: <u>7-13-13</u>	Time: <u>0930</u>
COC Seals Intact		<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	pH Checked: <input type="checkbox"/> NCF: _____		



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

## Report Summary

Tuesday October 08, 2013

Report Number: L660204

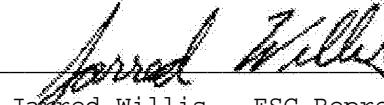
Samples Received: 09/27/13

Client Project: 2108

Description: 2108-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:

  
Jared Willis , ESC Representative

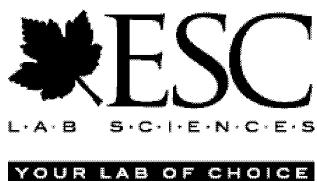
### Laboratory Certification Numbers

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, IA Lab #364

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REPORT OF ANALYSIS

October 08, 2013

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

Date Received : September 27, 2013  
Description : 2108-Site Clearance  
Sample ID : 092613-2108 ESW-11 FT  
Collected By : Shad Johnson  
Collection Date : 09/26/13 11:55

ESC Sample # : L660204-01

Site ID : 2108

Project # : 2108

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	10/02/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	10/02/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	10/02/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	10/02/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	10/02/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.2		% Rec.	8021/8015	10/02/13	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	10/02/13	5
TPH (GC/FID) High Fraction	17.	4.0	mg/kg	3546/DRO	10/04/13	1
Surrogate recovery(%)						
o-Terphenyl	79.0		% Rec.	3546/DRO	10/04/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/07/13 20:03 Revised: 10/08/13 09:05



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REPORT OF ANALYSIS

October 08, 2013

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

Date Received : September 27, 2013  
Description : 2108-Site Clearance  
Sample ID : 092613-2108 BBT-12 FT  
Collected By : Shad Johnson  
Collection Date : 09/26/13 12:05

ESC Sample # : L660204-02

Site ID : 2108

Project # : 2108

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	10/02/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	10/02/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	10/02/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	10/02/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	10/02/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.8		% Rec.	8021/8015	10/02/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	10/02/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	10/04/13	1
Surrogate recovery(%)						
o-Terphenyl	81.3		% Rec.	3546/DRO	10/04/13	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: 10/07/13 20:03 Revised: 10/08/13 09:05

\*ENCANRCO-RULEENG\*  
 Encana Oil & Gas  
 143 Diamond Avenue  
 Parachute, CO 81635  
 \*ENCANRCO-RULEENG\*

Project Description: 2108-Site Clearance

Billing Information:

Charles Jensen  
 143 Diamond Ave  
 Parachute, CO 81635

Report to:

Charles Jensen

Email to:

Charles Jensen, Shad Johnson

City/Sate Collected

Phone: 970-285-2735  
 FAX:

Client Project #: 2108

ESC Key:  
 ENCANRCO-RULEENG

Collected by: Shad Johnson

Collected by (Signature):  
**Rush?** ( Lab MUST Be Notified )  
 Same Day.....200%  
 Next Day.....100%  
 Two Day.....50%  
 Three Day.....25%

Immediately Packed on Ice N Y

Sample ID

Comp/Grab

Matrix\*

Depth

Date

Time

092613-2108(ESW)-11FT

Grab

SS

11'

9/26/13

1155

2

X

092613-2108(BBT)-12FT

Grab

SS

12'

9/26/13

1205

2

X

Analysis/Container/Preservative

	BTTEXGRO / DRO - 8260/8015	SV8270PAHSIM - 8270SIM	SPCON - 9050AMod	SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 60107470	CR6SS - 3060A/7196	CR3 - Calc.
No. of Cntrs							

Chain of Custody  
 Page 1 of 1



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 Mt. Juliet, TN 37122

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 Phone: (615) 758-5858  
 Fax: (615) 758-5859

E150

CoCode ENCRCO (lab use only)  
 Template/Prelogin

Shipped Via: 666207

Remarks/Contaminant

Sample # (lab only)

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

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

Remarks:

5413 4734 7100

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

Relinquished by: (Signature)

Date: 9-26-13

Time: 1500

Received by: (Signature)

Samples returned via:  UPS  
 FedEx  Courier

Condition: (lab use only) TD

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 39° Bottles Received: 4 402

CoC Seals Intact:  Y  N  NA

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Date: 9-27-13 Time: 0930

pH Checked: NCF: