

# NARRATIVE ATTACHMENT

## FORM 4 (SUNDRY NOTICE)

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### Earthen Pit (Fiberglass Tank) Closure (Cathedral Federal Unit #33-2)

Document Date-7/31/2014

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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 earthen pit (w/fiberglass tank) associated with the Cathedral Federal Unit #33-2 1<sup>st</sup> Mancos (COGCC facility #315287, COGCC remediation #8468). 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

June 9, 2014 - The excavated soil surrounding the earthen pit (w/fiberglass tank) was screened utilizing a photoionization detector (PID) prior to collecting soil samples for laboratory analysis. The fiberglass tank was carefully removed using a trackhoe and placed onsite for later recycling or disposal. It should be noted that the fiberglass tank was pumped out prior to removal. A grab sample was collected directly from the lowest point of the pit after excavation. In addition, four (4) grab samples were collected, one from each excavated sidewall. Approximately 110 cubic yards of excavated material was removed from the pit and laid out in 2 foot tall (45' x 33') 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 earthen pit (w/fiberglass tank) footprint on Encana's Cathedral Federal Unit #33-2 1<sup>st</sup> Mancos well pad, had organic constituent concentrations of the excavated area and excavated material below or within COGCC Table 910-1. Analytical results indicated the excavated material exceeded COGCC Table 910-1 allowable concentrations for arsenic (7.4 ppm) and SAR (18). Though the arsenic concentration in the soil is above the allowable concentration identified in Table 910-1, the concentration is close to the range of arsenic background values (4.1 – 5.5 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 and SAR levels 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 and SAR 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.



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#### Conclusion

Based on the site investigation and analytical results, the pit associated with the Cathedral Federal Unit #33-2 1<sup>st</sup> Mancos 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 #8468.

#### Notification of Completion

This Sundry Notice is also being submitted as the Notification of Completion for Remediation #8468. If the information provided here is satisfactory, please provide documentation of the closure of this remediation project.

#### Attachments

Topographic Location Map (Figure 1)  
33-2 Aerial map with sample locations (Figure 2)  
33-2 Site Diagram of Excavation and sample locations (Figure 3)  
Laboratory Results Summary Table 1 – 33-2 Site Investigation (Table 1)  
Attachment A- Laboratory Reports





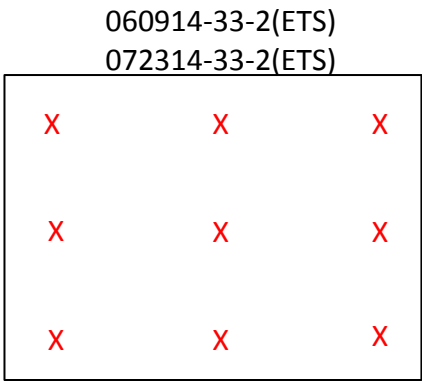
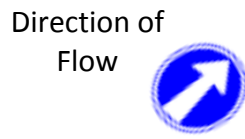
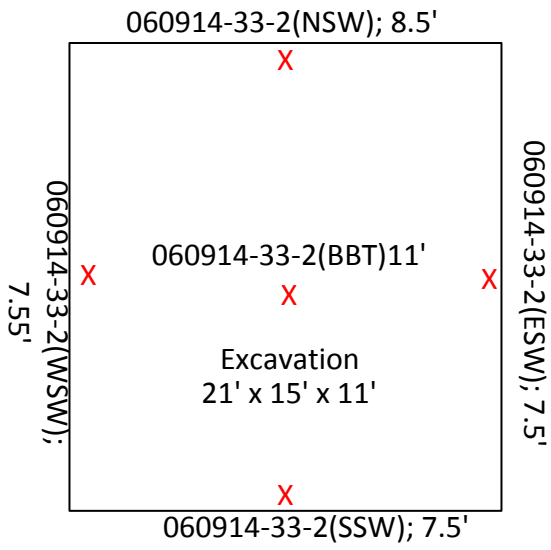
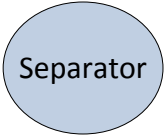
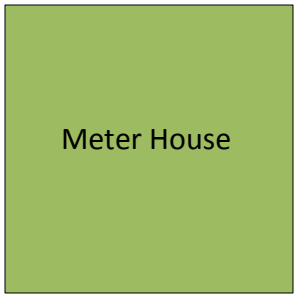


Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, ICP, swisstopo, and the GIS User Community

**Legend**

★ Soil Sample Location





Lift  
45' x 33' x 2'



Legend  
X-Sample



Well: Figure 3. 33-2 Site Diagram	
Area: Cathedral Federal Unit	
Legal: SWSE, Sec 33, 02S, 101W, 6 <sup>th</sup> PM	
Date: 07/23/14	Drawn By: Shad Johnson
Revision Date:	Scale: None



# **APPENDIX A**



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

Tax I.D. 62-0814289

Est. 1970

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Tuesday June 17, 2014

Report Number: L703697


Samples Received: 06/10/14

Client Project:

Description: 33-2 (1st Mancos) - 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-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, EPA - TN002

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

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 17, 2014

Date Received : June 10, 2014  
Description : 33-2 (1st Mancos) - Site Clearance  
Sample ID : 060914-33-2 (NSW) 8.5FT  
Collected By : Chris Bak  
Collection Date : 06/09/14 13:30

ESC Sample # : L703697-01  
Site ID : 33-2  
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Toluene	BDL	0.025	mg/kg	8021	06/12/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Total Xylene	BDL	0.0075	mg/kg	8021	06/12/14	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015	06/12/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.5		% Rec.	8021/8015	06/12/14	5
a,a,a-Trifluorotoluene(PID)	97.6		% Rec.	8021/8015	06/12/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	06/13/14	1
Surrogate recovery(%)						
o-Terphenyl	68.4		% Rec.	8015D/DRO	06/13/14	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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Chris Hines  
 EnCana Oil & Gas - Parachute, CO  
 143 Diamond Avenue  
 Parachute, CO 81635

June 17, 2014

Date Received : June 10, 2014  
 Description : 33-2 (1st Mancos) - Site Clearance  
 Sample ID : 060914-33-2 (ESW) 7.5FT  
 Collected By : Chris Bak  
 Collection Date : 06/09/14 13:00

ESC Sample # : L703697-02  
 Site ID : 33-2  
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Toluene	BDL	0.025	mg/kg	8021	06/12/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Total Xylene	BDL	0.0075	mg/kg	8021	06/12/14	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015	06/12/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.3		% Rec.	8021/8015	06/12/14	5
a,a,a-Trifluorotoluene(PID)	99.0		% Rec.	8021/8015	06/12/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	06/13/14	1
Surrogate recovery(%)						
o-Terphenyl	64.3		% Rec.	8015D/DRO	06/13/14	1

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REPORT OF ANALYSIS

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 EnCana Oil & Gas - Parachute, CO  
 143 Diamond Avenue  
 Parachute, CO 81635

June 17, 2014

Date Received : June 10, 2014  
 Description : 33-2 (1st Mancos) - Site Clearance  
 Sample ID : 060914-33-2 (SSW) 7.5FT  
 Collected By : Chris Bak  
 Collection Date : 06/09/14 12:30

ESC Sample # : L703697-03  
 Site ID : 33-2  
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Toluene	BDL	0.025	mg/kg	8021	06/12/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Total Xylene	BDL	0.0075	mg/kg	8021	06/12/14	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015	06/12/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	8021/8015	06/12/14	5
a,a,a-Trifluorotoluene(PID)	98.9		% Rec.	8021/8015	06/12/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	06/13/14	1
Surrogate recovery(%)						
o-Terphenyl	61.3		% Rec.	8015D/DRO	06/13/14	1

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Chris Hines  
 EnCana Oil & Gas - Parachute, CO  
 143 Diamond Avenue  
 Parachute, CO 81635

June 17, 2014

Date Received : June 10, 2014  
 Description : 33-2 (1st Mancos) - Site Clearance  
 Sample ID : 060914-33-2 (WSW) 7.5FT  
 Collected By : Chris Bak  
 Collection Date : 06/09/14 12:45

ESC Sample # : L703697-04  
 Site ID : 33-2  
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Toluene	BDL	0.025	mg/kg	8021	06/12/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	06/12/14	5
Total Xylene	BDL	0.0075	mg/kg	8021	06/12/14	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015	06/12/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.4		% Rec.	8021/8015	06/12/14	5
a,a,a-Trifluorotoluene(PID)	98.8		% Rec.	8021/8015	06/12/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	8015D/DRO	06/13/14	1
Surrogate recovery(%)						
o-Terphenyl	60.2		% Rec.	8015D/DRO	06/13/14	1

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 143 Diamond Avenue  
 Parachute, CO 81635

June 17, 2014

Date Received : June 10, 2014  
 Description : 33-2 (1st Mancos) - Site Clearance  
 Sample ID : 060914-33-2 (BBT) 11FT  
 Collected By : Chris Bak  
 Collection Date : 06/09/14 13:45

ESC Sample # : L703697-05  
 Site ID : 33-2  
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.016	0.012	mg/kg	8021	06/12/14	25
Toluene	BDL	0.12	mg/kg	8021	06/12/14	25
Ethylbenzene	BDL	0.012	mg/kg	8021	06/12/14	25
Total Xylene	0.34	0.038	mg/kg	8021	06/12/14	25
TPH (GC/FID) Low Fraction	9.0	2.5	mg/kg	8015	06/12/14	25
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.5		% Rec.	8021/8015	06/12/14	25
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	06/12/14	25
TPH (GC/FID) High Fraction	11.	4.0	mg/kg	8015D/DRO	06/13/14	1
Surrogate recovery(%)						
o-Terphenyl	61.6		% Rec.	8015D/DRO	06/13/14	1

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 Det. Limit - Practical Quantitation Limit(PQL)  
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REPORT OF ANALYSIS

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 EnCana Oil & Gas - Parachute, CO  
 143 Diamond Avenue  
 Parachute, CO 81635

June 17, 2014

Date Received : June 10, 2014  
 Description : 33-2 (1st Mancos) - Site Clearance  
 Sample ID : 060914-33-2 (ETS) 3-9IN  
 Collected By : Chris Bak  
 Collection Date : 06/09/14 14:00

ESC Sample # : L703697-06  
 Site ID : 33-2  
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/13/14	1
Chromium,Trivalent	9.3	2.0	mg/kg	Calc.	06/17/14	1
ORP	-10.		mV	2580 B-2011	06/13/14	1
pH	7.9		su	9045D	06/11/14	1
Sodium Adsorption Ratio	18.			Calc.	06/12/14	1
Specific Conductance	1700		umhos/cm	9050AMod	06/13/14	1
Mercury	BDL	0.020	mg/kg	7471	06/11/14	1
Arsenic	47.	2.0	mg/kg	6010B	06/11/14	1
Barium	81.	0.50	mg/kg	6010B	06/11/14	1
Cadmium	0.94	0.50	mg/kg	6010B	06/11/14	1
Chromium	9.3	1.0	mg/kg	6010B	06/11/14	1
Copper	13.	2.0	mg/kg	6010B	06/11/14	1
Lead	13.	0.50	mg/kg	6010B	06/11/14	1
Nickel	15.	2.0	mg/kg	6010B	06/11/14	1
Selenium	BDL	2.0	mg/kg	6010B	06/11/14	1
Silver	BDL	1.0	mg/kg	6010B	06/11/14	1
Zinc	97.	3.0	mg/kg	6010B	06/11/14	1
Benzene	0.0034	0.0025	mg/kg	8021	06/17/14	5
Toluene	BDL	0.025	mg/kg	8021	06/17/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	06/17/14	5
Total Xylene	BDL	0.0075	mg/kg	8021	06/17/14	5
TPH (GC/FID) Low Fraction	5.6	0.50	mg/kg	8015	06/17/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.7		% Rec.	8021/8015	06/17/14	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	06/17/14	5
TPH (GC/FID) High Fraction	21.	4.0	mg/kg	8015D/DRO	06/13/14	1
Surrogate recovery(%)						
o-Terphenyl	57.0		% Rec.	8015D/DRO	06/13/14	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1

BDL - Below Detection Limit  
 Det. Limit - Practical Quantitation Limit(PQL)  
 L703697-06 (PH) - 7.9@21.4c



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143 Diamond Avenue  
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June 17, 2014

Date Received : June 10, 2014  
Description : 33-2 (1st Mancos) - Site Clearance  
Sample ID : 060914-33-2 (ETS) 3-9IN  
Collected By : Chris Bak  
Collection Date : 06/09/14 14:00

ESC Sample # : L703697-06  
Site ID : 33-2  
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	06/12/14	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/12/14	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	06/12/14	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	06/12/14	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	06/12/14	1
Surrogate Recovery						
p-Terphenyl-d14	70.0		% Rec.	8270C-SIM	06/12/14	1
Nitrobenzene-d5	95.0		% Rec.	8270C-SIM	06/12/14	1
2-Fluorobiphenyl	66.9		% Rec.	8270C-SIM	06/12/14	1

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Det. Limit - Practical Quantitation Limit(PQL)  
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Reported: 06/17/14 17:27 Printed: 06/17/14 17:27  
L703697-06 (PH) - 7.9@21.4c

Summary of Remarks For Samples Printed  
06/17/14 at 17:27:34

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).

Sample: L703697-01 Account: ENCANACO Received: 06/10/14 09:00 Due Date: 06/17/14 00:00 RPT Date: 06/17/14 17:27

Sample: L703697-02 Account: ENCANACO Received: 06/10/14 09:00 Due Date: 06/17/14 00:00 RPT Date: 06/17/14 17:27

Sample: L703697-03 Account: ENCANACO Received: 06/10/14 09:00 Due Date: 06/17/14 00:00 RPT Date: 06/17/14 17:27

Sample: L703697-04 Account: ENCANACO Received: 06/10/14 09:00 Due Date: 06/17/14 00:00 RPT Date: 06/17/14 17:27

Sample: L703697-05 Account: ENCANACO Received: 06/10/14 09:00 Due Date: 06/17/14 00:00 RPT Date: 06/17/14 17:27

Sample: L703697-06 Account: ENCANACO Received: 06/10/14 09:00 Due Date: 06/17/14 00:00 RPT Date: 06/17/14 17:27

**Encana Oil & Gas (USA)**  
**143 Diamond Ave.**  
**Parachute, CO 81635**  
**\*ENCANRCO-RULEENG\***

Billing Information:  
 Charlie Jensen  
 143 Diamond Ave  
 Parachute, CO 81635

Report to: Charlie Jensen  
 Email to: charles.jensen@encana.com

Analysis/Container/Preservative

BTEXGRO / DRO - 8021/8015  
 SV8270PAHSIM - 8270SIM  
 SPCON - 9050AMod  
 SAR - Calc.  
 RCRA8 Metals + Cu, Ni, and Zn - 6010/7470  
 CR6SS - 3060A/7196  
 CR3 - Calc.  
 AS



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Phone: (800) 767-5859  
 Phone: (615) 758-5858  
 Fax: (615) 758-5850  
 C189

Project Description: 33-2 (1st Mancos) - SITE CLEARANCE  
 City/State Collected: Rangely, CO  
 Phone: 970-285-2735  
 Client Project #: ESC Key: ENCANRCO-RULEENG  
 FAX: Client Project #:

Collected by: Chris Bak  
 Site/Facility ID#: 33-2  
 P.O.#:

Collected by (signature): *Chris Bak*  
 Immediately Packed on Ice N *Ⓚ*  
**Rush?** ( Lab MUST Be Notified )  
 \_\_\_ Same Day . . . . . 200%  
 \_\_\_ Next Day . . . . . 100%  
 \_\_\_ Two Day . . . . . 50%  
 \_\_\_ Three Day . . . . . 25%  
 Date Results Needed:  
 Email? \_\_\_ No  Yes  
 FAX?  No \_\_\_ Yes

CoCode ENCANACO (lab use only)  
 Template/Prelogin  
 Shipped Via: T70530

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	BTEXGRO / DRO	SV8270PAHSIM	SPCON	SAR	RCRA8 Metals + Cu, Ni, and Zn	CR6SS	CR3	AS	Remarks/Contaminant	Sample # (lab only)
060914-33-2 (NSW); 8.5'	Grab	SS	8.5'	6-09-14	1330	2	x								L703697	-01
060914-33-2 (ESW); 7.5'	Grab	SS	7.5'		1300	2	x									-02
060914-33-2 (SSW); 7.5'	Grab	SS	7.5'		1230	2	x									-03
060914-33-2 (WSW); 7.5'	Grab	SS	7.5'		1245	2	x									-04
060914-33-2 (BBT); 11'	Grab	SS	11'		1345	2	x									-05
060914-33-2 (ETS); 3-9"	Comp	SS	3-9"		1400	3	x	x	x	X	x	x	x			-06

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

5939 9648 2871

Relinquished by: (Signature) <i>Chris Bak</i>	Date: 6/9/14	Time: 1700	Received by: (Signature) _____	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature) _____	Date: _____	Time: _____	Received by: (Signature) _____	Temp: 32	Bottles Received: 13
Relinquished by: (Signature) _____	Date: _____	Time: _____	Received for lab by: (Signature) <i>Michael Anghee</i>	Date: 6-10-14	Time: 0900

CoC Seals Intact: \_\_\_ Y \_\_\_ N \_\_\_ NA  
 pH Checked: \_\_\_\_\_ NCF: \_\_\_\_\_



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Wednesday June 18, 2014

Report Number: L703703

Samples Received: 06/10/14

Client Project:

Description: 33-2 (1st Mancos) - 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, EPA - TN002

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REPORT OF ANALYSIS

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

June 18, 2014

Date Received : June 10, 2014  
Description : 33-2 (1st Mancos) - Site Clearance  
Sample ID : 060914-33-2 (BGIN) 6IN  
Collected By : Chris Bak  
Collection Date : 06/09/14 10:30

ESC Sample # : L703703-01

Site ID : 33-2

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.9	2.0	mg/kg	6010B	06/11/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/11/14 17:40 Revised: 06/18/14 09:35



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REPORT OF ANALYSIS

June 18, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : June 10, 2014  
Description : 33-2 (1st Mancos) - Site Clearance  
Sample ID : 060914-33-2 (BG2E) 6IN  
Collected By : Chris Bak  
Collection Date : 06/09/14 11:00

ESC Sample # : L703703-02  
Site ID : 33-2  
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.1	2.0	mg/kg	6010B	06/11/14	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
Note:  
The reported analytical results relate only to the sample submitted.  
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Reported: 06/11/14 17:40 Revised: 06/18/14 09:35



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REPORT OF ANALYSIS

June 18, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : June 10, 2014  
Description : 33-2 (1st Mancos) - Site Clearance  
Sample ID : 060914-33-2 (BG3S) 6IN  
Collected By : Chris Bak  
Collection Date : 06/09/14 10:50

ESC Sample # : L703703-03  
Site ID : 33-2  
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	5.5	2.0	mg/kg	6010B	06/11/14	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
Note:  
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Reported: 06/11/14 17:40 Revised: 06/18/14 09:35



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REPORT OF ANALYSIS

June 18, 2014

Chris Hines  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : June 10, 2014  
Description : 33-2 (1st Mancos) - Site Clearance  
Sample ID : 060914-33-2 (BG4W) 6IN  
Collected By : Chris Bak  
Collection Date : 06/09/14 10:40

ESC Sample # : L703703-04  
Site ID : 33-2  
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.7	2.0	mg/kg	6010B	06/11/14	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
Note:  
The reported analytical results relate only to the sample submitted.  
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/11/14 17:40 Revised: 06/18/14 09:35

Encana Oil & Gas (USA)  
 143 Diamond Ave.  
 Parachute, CO 81635  
 \*ENCANRCO-RULEENG\*

Billing Information:  
 Charlie Jensen  
 143 Diamond Ave  
 Parachute, CO 81635

Report to: Charlie Jensen  
 Email to: charles.jensen@encana.com

Analysis/Container/Preservative

Chain of Custody  
 Page 1 of 1



12065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone: (800) 767-5859  
 Phone: (615) 758-5858  
 Fax: (615) 758-5859

C188

Project Description: 33-2 (1st Mancos) - SITE CLEARANCE  
 City/State Collected: Rangely, CO  
 Phone: 970-285-2735  
 Client Project #: ESC Key: ENCANRCO-RULEENG  
 FAX: 970-285-2735

Collected by: Chris Bak  
 Site/Facility ID#: 33-2  
 P.O.#:

Collected by (signature): *[Signature]*  
 Immediately Packed on Ice N  
**Rush?** ( Lab MUST Be Notified )  
 \_\_\_ Same Day.....200%  
 \_\_\_ Next Day.....100%  
 \_\_\_ Two Day.....50%  
 \_\_\_ Three Day.....25%  
 Date Results Needed:  
 Email? \_\_\_No\_\_\_Yes  
 FAX? \_\_\_No\_\_\_Yes

BTEXGRO / DRO - 8021/8015  
 SV8270PAHSIM - 8270SIM  
 SPCON - 9050AMod  
 SAR - Calc.  
 RCRAB Metals + Cu, Ni, and Zn - 6010/7470  
 CR6SS - 3060A/7196  
 CR3 - Calc.

CoCode ENCANACO (lab use only)  
 Template/Prelogin  
 Shipped Via: T70530

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	AS	Remarks/Contaminant	Sample # (lab only)
060914-33-2 (BG1N)-6"	Grab	SS	6"	6-09-14	1030	1	x	L703703 -01	06/02/03/04/05
060914-33-2 (BG2E)-6"	Grab	SS	6"		1100	1	x		06/07/08/09/10
060914-33-2 (BG3S)-6"	Grab	SS	6"		1050	1	x		11/07/13/14/15
060914-33-2 (BG4W)-6"	Grab	SS	6"		1040	1	x		15/17/18/19/20
						2			

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_  
 Remarks: pH \_\_\_\_\_ Temp \_\_\_\_\_  
 5939 9648 2871 Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <i>[Signature]</i>	Date: 6/9/14	Time: 1700	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) M3
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.2	Bottles Received: 4
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Michael Hughes	Date: 6-10-14	Time: 0900
				pH Checked:	NCF:
				CoC Seals Intact: ___ Y ___ N ___ NA	



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Est. 1970

Charles Jensen  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

## Report Summary

Wednesday July 30, 2014

Report Number: L712005


Samples Received: 07/24/14

Client Project: 33-2

Description: 33-2 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, CAL - 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, EPA - TN002

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Est. 1970

REPORT OF ANALYSIS

July 30, 2014

Charles Jensen  
EnCana Oil & Gas - Parachute, CO  
143 Diamond Avenue  
Parachute, CO 81635

Date Received : July 24, 2014  
Description : 33-2 Site Clearance  
Sample ID : 072314-33-2 3-9IN  
Collected By : Chris Bak  
Collection Date : 07/23/14 09:00

ESC Sample # : L712005-01

Site ID : 33-2

Project # : 33-2

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	7.4	2.0	mg/kg	6010B	07/30/14	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: 07/30/14 08:22 Printed: 07/30/14 08:22

Summary of Remarks For Samples Printed  
07/30/14 at 08:22:37

TSR Signing Reports: 358  
R5 - Desired TAT

Log all PAHs as PAHSIM. Log all BTEX waters by 8260. Log ALL samples for EDD (COGCC EDD).

Sample: L712005-01 Account: ENCANACO Received: 07/24/14 09:00 Due Date: 07/31/14 00:00 RPT Date: 07/30/14 08:22

**Encana Oil & Gas (USA)**  
 143 Diamond Ave.  
 Parachute, CO 81635  
 \*ENCANRCO-RULEENG\*

Billing Information:  
 Charlie Jensen  
 143 Diamond Ave  
 Parachute, CO 81635

Report to: Charlie Jensen

Email to: charles.jensen@encana.com



2065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone: (800) 767-5859  
 Phone: (615) 758-5858  
 Fax: (615) 758-5859

Project Description: 33-2 - SITE CLEARANCE

City/State Collected: Rangely, CO

ESC Key: ENCANRCO-RULEENG

Phone: 970-285-2735  
 FAX:

Client Project #: 33-2

Collected by: Chris Bak

Site/Facility ID#: 33-2

P.O.#:

Collected by (signature):

Immediately Packed on Ice  N

**Rush?** ( Lab MUST Be Notified )

\_\_\_ Same Day ..... 200%

\_\_\_ Next Day ..... 100%

\_\_\_ Two Day ..... 50%

\_\_\_ Three Day ..... 25%

Date Results Needed:

Email?  No  Yes

FAX?  No  Yes

Analysis/Container/Preservative

BTEXGRO / DRO - 8021/8015	SV8270PAHSIM - 8270SIM	SPCON - 9050AMod	SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 6010/7470	CR6SS - 3060A/7196	CR3 - Calc.	Arsenic
---------------------------	------------------------	------------------	-------------	---	--------------------	-------------	---------

CoCode ENCANACO (lab use only)

Template/Prelogin

Shipped Via: T70530

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Remarks/Contaminant	Sample # (lab only)
072314-33-2(ETS); 3-9"	Comp	SS	3-9"	7/23/14	0900	2	L7/2005	-01
STB								

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

Remarks:

6051 2428 7922

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

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

Relinquished by: (Signature)	Date: 7/23/14	Time: 1700	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 28°	Bottles Received: 2-407
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7-24-14	Time: 0900
				pH Checked:	NCF: