



November 2, 2012

Mr. Charlie Jensen
Encana Oil and Gas (USA) Inc.
143 Diamond Avenue
Parachute, Colorado 81635

**RE: Site Investigation Results (Remediation #6321)
Well Pad G29
Garfield County, Colorado**

Dear Mr. Jensen:

LT Environmental, Inc. (LTE) was contracted by Encana Oil and Gas (USA) Inc. (Encana) to conduct a site investigation at the G29 Well Pad Location (Site). The purpose of this site investigation was to collect subsurface soil samples to evaluate remedial progress of the passive soil vapor extraction (SVE) system the site. A site location map is included as Figure 1.

Site Assessment History

On June 29, 2010, Encana notified the Colorado Oil and Gas Conservation Commission (COGCC) via a Form 19 Spill Release Report of a liner failure from pits built before April 1, 2009. Laboratory analytical results indicated that the soil beneath the liner exceeded the COGCC Table 910-1 concentration level for total petroleum hydrocarbons (TPH). Subsequently, Encana advanced potholes beneath the floors of the two pits in June, August, September, and October 2010, to assess both the vertical and lateral extent of hydrocarbon impacted soil. The pits were then backfilled to match the existing grade of the pad.

On August 16 and 17, 2011, LTE advanced six soil borings at the Site to assess the vertical and horizontal extent of the hydrocarbon impact of soil identified during previous assessment activities. Soil borings were advanced within, cross-gradient, and down-gradient of the former pit locations. Additional information regarding the initial site assessment can be found in the LTE report *Site Investigation Results and Soil Vapor Extraction Pilot Test Work Plan* dated September 12, 2011.

Soil Boring Activities

On October 1, 2012, LTE advanced three soil borings (G29-SB07, G29-SB08, and G29-SB09) at the Site. All soil boring locations are presented on Figure 2. LTE contracted Site Services of Golden, Colorado, to install the soil borings using a CME-75 drill rig equipped with hollow stem augers.

The soil borings were logged by an LTE environmental scientist who inspected the soil for the presence or absence of petroleum hydrocarbon odor and/or staining. The soils were characterized



by visually inspecting the soil samples collected in 2-foot long split-spoon samplers and field-screening the soil headspace using a photo-ionization detector (PID) to monitor for the presence of volatile organic vapors. The soil boring logs are included in Attachment 1.

The general geology at the Site was identified as a sand gravel mixture with shale and sandstone fragments extending from the ground surface to 47 feet below ground surface (bgs). Groundwater was not encountered in any of the soil borings during assessment activities.

Soil Sampling

Soil samples were collected at various depths using a 2-foot long split-spoon sampler. Boring locations and sample depths were determined by using soil data collected during the August 17 and 18, 2011 site activities. Soil samples were collected at depths where there were previous detections of TPH above the COGCC allowable level. The soil samples were transferred into laboratory prepared 4-ounce wide mouth glass jars, placed on ice, and delivered with a completed chain-of custody form to ESC Lab Sciences of Mt. Juliet, Tennessee (ESC).

LTE advanced soil borings G29-SB07 in the eastern pit area at the Site near previous soil boring G29-SB02. Soil samples were collected at 19-21 feet (ft.) bgs, 39-41 ft. bgs, and 45-47 ft. bgs. Soil boring G29-SB08 was advanced in the western pit area near the previous soil boring G29-SB03. One soil sample was collected at 19-21 ft. bgs. Soil boring G29-SB09 was advanced in the western pit near the previous soil boring G29-SB04. One soil sample was collected 26-28 ft. bgs. During boring and sampling activities, no elevated PID readings were observed in any of the borings. Boring locations are depicted in Figure 2.

The soil samples were submitted to ESC for laboratory analysis of TPH by EPA Method 8015D and 3546. The TPH results were reported as gasoline range organics (GRO) and diesel range organics (DRO).

Soil Sample Analytical Results

Soil analytical results indicated that TPH concentrations in all samples collected were in compliance with the concentration levels listed in COGCC Table 910-1.

A cross-section diagram visually representing current TPH concentrations in the soil subsurface is provided as Figure 3. The analytical results for the soil samples collected from the soil borings are summarized in Table 1. The laboratory analytical report for the soil samples is included in Attachment 2.

Summary and Conclusions

A total of three soil borings (G29-SB07 through G29-SB09) were advanced at the site in order to document the attenuation of residual hydrocarbons in soil. Analytical data indicated residual hydrocarbon concentrations in the subsurface of the site are below the COGCC allowable levels. Therefore, the passive SVE system at the site has remediated residual hydrocarbons in the



subsurface of the site to concentrations below the concentration standard of 500 mg/kg. No groundwater was encountered during drilling activities. Due to the information presented in this report, Encana is requesting that the COGCC close the remediation number (#6321) associated with the site.

Please call us at (970) 285-9985 if you have any questions regarding this report.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Chris McKisson'.

Chris McKisson
Environmental Scientist

A handwritten signature in black ink, appearing to read 'Rob Fishburn'.

Rob Fishburn, P.G.
Senior Hydrogeologist

Attachments

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Cross-Section A-A'

Table 1 – Soil Analytical Data

Attachment 1 – Boring Logs
Attachment 2 – Laboratory Analytical Report

FIGURES

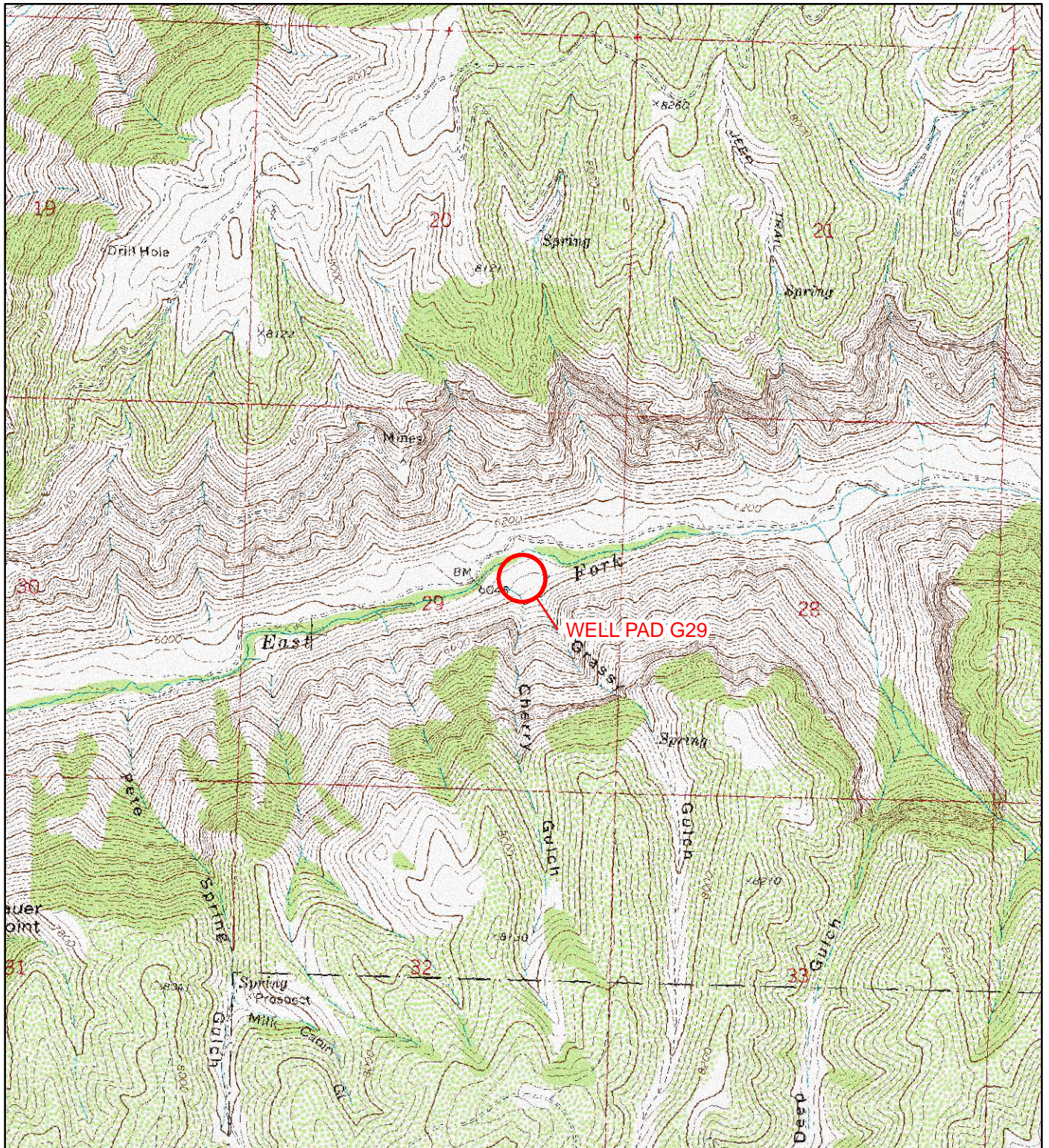


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

LEGEND

○ SITE LOCATION

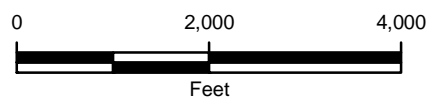


FIGURE 1
 SITE LOCATION MAP
 WELL PAD G29
 SWNE 29 5S 95W
 GARFIELD COUNTY, COLORADO
 ENCANA OIL AND GAS (USA) INC.





IMAGE COURTESY OF GOOGLE EARTH, 8/8/2011

LEGEND

- SOIL BORING (8/17/2011)
- SOIL BORING (10/01/2012)
- SOIL VAPOR EXTRACTION WELL
- OIL AND GAS WELL
- CROSS SECTION A-A'
- PIT BOUNDARY
- - - - - EDGE OF WORKING SURFACE AND PERIMETER CONTROLS
- EDGE OF DISTURBANCE
- - - - - EAST FORK PARACHUTE CREEK
- ACCESS ROAD

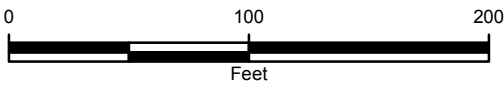
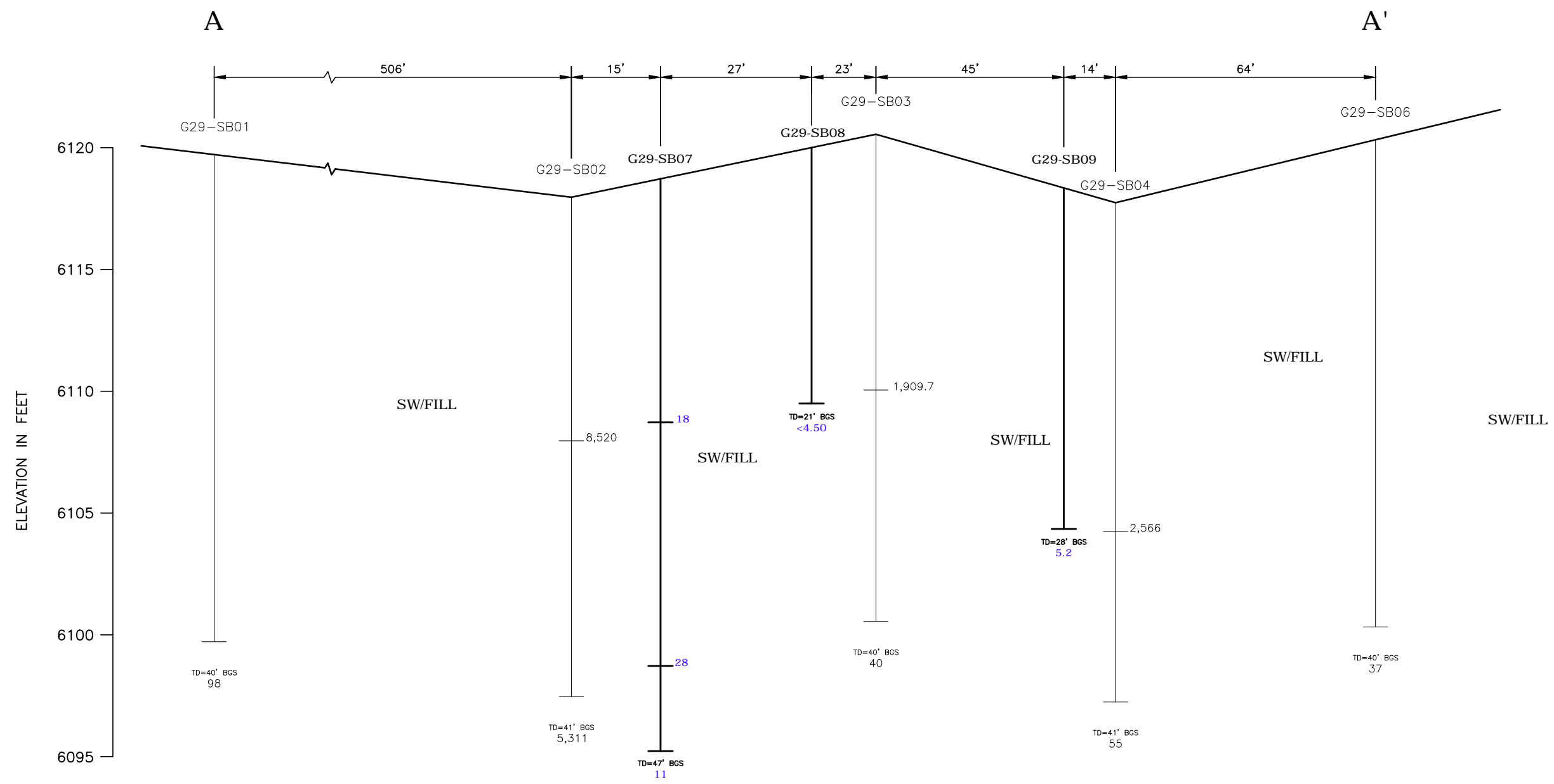


FIGURE 2
SITE MAP
WELL PAD G29
SWNE 29 5S 95W
GARFIELD COUNTY, COLORADO
ENCANA OIL AND GAS (USA) INC.






LEGEND

- SW/FILL WELL GRADED SANDS, GRAVELLY SANDS, LITTLE TO NO FINES, FILL MATERIAL
- GROUND SURFACE
- | BOREHOLE
- TD TOTAL DEPTH IN FEET BGS
- BGS BELOW GROUND SURFACE

98 TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGNICS/GASOLINE RANGE ORGNICS IN MILLIGRAMS PER KILOGRAM (mg/kg)

HORIZONTAL SCALE
1" = 30'
VERTICAL SCALE
1" = 10'

FIGURE 3
CROSS-SECTION A-A'
WELL PAD G29
SWNE 29 5S 95W
GARFIELD COUNTY, COLORADO
ENCANA OIL & GAS (USA) INC.


0334-1103103 10/12 ZJ

TABLES

TABLE 1
SOIL ANALYTICAL DATA
WELL PAD G29
GARFIELD COUNTY, COLORADO
ENCANA OIL & GAS (USA) INC.

Soil Sample ID	Date	Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH (mg/kg)
G29 SB01-38'- 40'	8/17/2011	38-40	<0.0050	<0.025	<0.0050	0.04	<0.5	98	98
G29 SB02-19'- 21'	8/16/2011	19-21	<0.050	<0.25	0.23	3.2	120	8,400	8,520
G29 SB02-39'- 41'	8/16/2011	39-41	<0.050	<0.25	<0.050	0.18	11	5,300	5,311
G29 SB03-20'- 22'	8/16/2011	20-22	<0.050	<0.25	<0.050	0.44	9.7	1,900	1,909.7
G29 SB03-38'- 40'	8/16/2011	38-40	<0.0050	<0.025	<0.0050	<0.015	<0.5	40	40
G29 SB04-26'- 28'	8/16/2011	26-28	<0.050	<0.25	<0.050	2	66	2,500	2,566
G29 SB04-39'- 41'	8/16/2011	39-41	<0.0050	<0.025	<0.0050	<0.015	<0.5	55	55
G29 SB05-38'- 40'	8/17/2011	38-40	<0.0050	<0.025	<0.0050	<0.015	<0.5	33	33
G29 SB06-38'- 40'	8/17/2011	38-40	<0.0050	<0.025	<0.0050	<0.015	<0.5	37	37
G29 SVE01	9/27/2011	49-50	<0.0050	<0.025	<0.0050	<0.015	<0.5	79	79
G29 SVE04	9/27/2011	50-52	<0.0050	<0.025	<0.0050	<0.015	<0.5	6.3	6.3
G29 SB07-19'- 21'	10/1/2012	19-21	NA	NA	NA	NA	<0.50	18	18
G29 SB07-39'- 41'	10/1/2012	39-41	NA	NA	NA	NA	<0.50	28	28
G29 SB07-45'- 47'	10/1/2012	45-47	NA	NA	NA	NA	<0.50	11	11
G29 SB08-19'- 21'	10/1/2012	19-21	NA	NA	NA	NA	<0.50	<4.0	<4.50
G29 SB09-26'- 28'	10/1/2012	26-28	NA	NA	NA	NA	<0.50	5.2	5.2
COGCC Allowable Level			0.17	85	100	175	--	--	500

NOTES:

mg/kg - milligrams per kilogram

ft bgs - feet below ground surface

TPH-GRO - Total petroleum hydrocarbons - gasoline range organics analyzed by EPA Modified Method 8015D

TPH-DRO - Total petroleum hydrocarbons - diesel range organics analyzed by EPA Method 3546

TPH - total petroleum hydrocarbons GRO/DRO

-- No standard

< - indicates result is less than the stated laboratory practical quantitation limit

NA - Not Analyzed

BOLD - indicates result exceeds the COGCC Allowable Level

COGCC - Colorado Oil and Gas Conservation Commission

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

COGCC Allowable Level taken from 2 CCR 404-1, Table 910-1, effective April 2009



ATTACHMENT 1

BORING LOGS



WELL HEADS



Compliance • Engineering • Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: **G29-SB07** Project: **G29 Pad**
Date: **10-1-12** Project Number: **033411031**
Logged By: **CM** Drilled By: **Site Services CME 75**

Elevation: **—** Detector: **Mini Rae 2000** Drilling Method: **Hollow Stem** Sampling Method: **Split Spoon**

Gravel Pack: **—** Seal: **—** Grout: **—**

Casing Type: **—** Diameter: **—** Length: **—** Hole Diameter: **8"** Depth to Liquid: **NA**

Screen Type: **—** Slot: **—** Diameter: **—** Length: **—** Total Depth: **47'** Depth to Water: **NA**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					4				
					8				
					12				
					16				
					20				
35 blows	semi moist	19.9	NO	19'-21'	20		SW Fill		
					24				
					28				
					32				
					36				
31 blows	moist	0.8	NO	39'-41'	40		SW Fill		
					44				
30 blows	slight moist	0.0	NO	45'-47'	48		SW Fill		
					52				
					56				
					58				

Colluvium, well graded sand, gravelly sand (shale and sandstone fragments), dark brown, orange/brown, moisture semi-moist to moist. No odor, no staining.

No groundwater encountered. Boring backfilled following completion.

WELLHEADS



Compliance « Engineering « Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: G29-SB08 Project: G29 Pad
 Date: 10-1-12 Project Number: 033411031
 Logged By: CM Drilled By: Site Services CME 75

Elevation: — Detector: Mini Rae 2000 Drilling Method: Hollow stem Sampling Method: Split Spoon
 Gravel Pack: — Seal: — Grout: —

Casing Type: — Diameter: — Length: — Hole Diameter: 8" Depth to Liquid: NA
 Screen Type: — Slot: — Diameter: — Length: — Total Depth: 21' Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					4				
					8				
					12				
					16				
					20				
30 blows	slight	3.4	NO	19'-21'	20		SW Fill	Colluvium, well graded sand gravelly sand (shale and sandstone fragments), dark brown, slight moisture, no odor, no staining.	
					24			No groundwater encountered	
					28			Boring was backfilled following completion.	
					32				
					36				
					40				
					44				
					48				
					52				
					56				
					58				



Compliance • Engineering • Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: G29-SB09 Project: G29 Pad
Date: 10-1-12 Project Number: 033411031
Logged By: CM Drilled By: Site Services CMETS
Drilling Method: Hollow Stem Sampling Method: Split Spoon

Elevation: Detector: Mini Rae 2000

Gravel Pack: Seal: Grout:

Casing Type: Diameter: Length: Hole Diameter: 8" Depth to Liquid: NA

Screen Type: Slot: Diameter: Length: Total Depth: 28' Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				
					4				
					8				
					12				
					16				
					20				
					24				
					28				
					32				
					36				
					40				
					44				
					48				
					52				
					56				
					58				

WELLHEADS

SB09

SVE03

Colluvium, well graded sand
gravelly sand, gravel sized
rocks (shale and sandstone
fragments) dark brown. no
staining, no odor

SW Fill

No groundwater encountered
Boring backfilled following
completion

30 bbs slight 3.4 NO

ATTACHMENT 2
LABORATORY ANALYTICAL REPORT



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

Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Tuesday October 09, 2012

Report Number: L598873

Samples Received: 10/03/12

Client Project:

Description: G29 Site Assessment

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.

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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REPORT OF ANALYSIS

October 09, 2012

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

Date Received : October 03, 2012
Description : G29 Site Assessment
Sample ID : G29-SB07-19-21FT
Collected By : Chris McKisson
Collection Date : 10/01/12 12:45

ESC Sample # : L598873-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	10/04/12	5
Surrogate Recovery (70-130)						
a,a,a-Trifluorotoluene(FID)	95.8		% Rec.	602/8015	10/04/12	5
TPH (GC/FID) High Fraction	18.	4.0	mg/kg	3546/DRO	10/05/12	1
Surrogate recovery(%)						
o-Terphenyl	70.3		% Rec.	3546/DRO	10/05/12	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: 10/09/12 16:54 Printed: 10/09/12 16:55



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REPORT OF ANALYSIS

October 09, 2012

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

Date Received : October 03, 2012
Description : G29 Site Assessment
Sample ID : G29-SB07-39-41FT
Collected By : Chris McKisson
Collection Date : 10/01/12 13:10

ESC Sample # : L598873-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	10/04/12	5
Surrogate Recovery (70-130)						
a,a,a-Trifluorotoluene(FID)	95.6		% Rec.	602/8015	10/04/12	5
TPH (GC/FID) High Fraction	28.	4.0	mg/kg	3546/DRO	10/05/12	1
Surrogate recovery(%)						
o-Terphenyl	65.2		% Rec.	3546/DRO	10/05/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 09, 2012

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

Date Received : October 03, 2012
Description : G29 Site Assessment
Sample ID : G29-SB07-45-47FT
Collected By : Chris McKisson
Collection Date : 10/01/12 13:20

ESC Sample # : L598873-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	10/04/12	5
Surrogate Recovery (70-130)						
a,a,a-Trifluorotoluene(FID)	95.1		% Rec.	602/8015	10/04/12	5
TPH (GC/FID) High Fraction	11.	4.0	mg/kg	3546/DRO	10/05/12	1
Surrogate recovery(%)						
o-Terphenyl	62.7		% Rec.	3546/DRO	10/05/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 09, 2012

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

Date Received : October 03, 2012
Description : G29 Site Assessment
Sample ID : G29-SB08-19-21FT
Collected By : Chris McKisson
Collection Date : 10/01/12 14:15

ESC Sample # : L598873-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	10/04/12	5
Surrogate Recovery (70-130)						
a,a,a-Trifluorotoluene(FID)	96.4		% Rec.	602/8015	10/04/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	10/05/12	1
Surrogate recovery(%)						
o-Terphenyl	70.2		% Rec.	3546/DRO	10/05/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 09, 2012

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

ESC Sample # : L598873-05

Date Received : October 03, 2012
Description : G29 Site Assessment

Site ID :

Sample ID : G29-SB09-26-28FT

Project # :

Collected By : Chris McKisson
Collection Date : 10/01/12 14:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	10/05/12	5
Surrogate Recovery (70-130)						
a,a,a-Trifluorotoluene(FID)	95.0		% Rec.	602/8015	10/05/12	5
TPH (GC/FID) High Fraction	5.2	4.0	mg/kg	3546/DRO	10/09/12	1
Surrogate recovery(%)						
o-Terphenyl	79.7		% Rec.	3546/DRO	10/09/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 10/09/12 16:54 Printed: 10/09/12 16:55

Summary of Remarks For Samples Printed
10/09/12 at 16:55:14

TSR Signing Reports: 358
R5 - Desired TAT

Try not to report benzene as BDL above a 250x dilution. ONLY log soil samples under this account. Waters get logged under ENCRCO. Log all PAHs as PAHSIM.

Sample: L598873-01 Account: ENCANACO Received: 10/03/12 09:00 Due Date: 10/10/12 00:00 RPT Date: 10/09/12 16:54

Sample: L598873-02 Account: ENCANACO Received: 10/03/12 09:00 Due Date: 10/10/12 00:00 RPT Date: 10/09/12 16:54

Sample: L598873-03 Account: ENCANACO Received: 10/03/12 09:00 Due Date: 10/10/12 00:00 RPT Date: 10/09/12 16:54

Sample: L598873-04 Account: ENCANACO Received: 10/03/12 09:00 Due Date: 10/10/12 00:00 RPT Date: 10/09/12 16:54

Sample: L598873-05 Account: ENCANACO Received: 10/03/12 09:00 Due Date: 10/10/12 00:00 RPT Date: 10/09/12 16:54



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L598873

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

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October 09, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG616138	10/04/12 13:47
a,a,a-Trifluorotoluene(FID)		% Rec.	98.28	59-128	WG616138	10/04/12 13:47
TPH (GC/FID) High Fraction	< 4	ppm			WG616405	10/05/12 15:04
o-Terphenyl		% Rec.	61.88	50-150	WG616405	10/05/12 15:04
TPH (GC/FID) High Fraction	< 4	ppm			WG616590	10/09/12 10:42
o-Terphenyl		% Rec.	88.56	50-150	WG616590	10/09/12 10:42

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.28	114.	67-135	WG616138
a,a,a-Trifluorotoluene(FID)				107.1	59-128	WG616138
TPH (GC/FID) High Fraction	ppm	60	48.8	81.4	50-150	WG616405
o-Terphenyl				65.60	50-150	WG616405
TPH (GC/FID) High Fraction	ppm	60	56.8	94.6	50-150	WG616590
o-Terphenyl				97.96	50-150	WG616590

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	6.33	6.28	115.	67-135	0.830	20	WG616138
a,a,a-Trifluorotoluene(FID)				106.8	59-128			WG616138
TPH (GC/FID) High Fraction	ppm	49.9	48.8	83.0	50-150	2.17	25	WG616405
o-Terphenyl				68.57	50-150			WG616405
TPH (GC/FID) High Fraction	ppm	48.5	56.8	81.0	50-150	15.7	23	WG616590
o-Terphenyl				87.07	50-150			WG616590

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/kg	287.	0	5.5	104.	55-109	L598747-05	WG616138
a,a,a-Trifluorotoluene(FID)					107.7	59-128		WG616138
TPH (GC/FID) High Fraction	ppm	51.9	0	60	86.5	50-150	L599137-01	WG616405
o-Terphenyl					71.11	50-150		WG616405

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	308.	287.	112.*	55-109	7.06	20	L598747-05	WG616138
a,a,a-Trifluorotoluene(FID)				109.1	59-128				WG616138
TPH (GC/FID) High Fraction	ppm	53.4	51.9	88.9	50-150	2.73	25	L599137-01	WG616405
o-Terphenyl				72.25	50-150				WG616405

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L598873

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

October 09, 2012

Batch number /Run number / Sample number cross reference

WG616138: R2377453: L598873-01 02 03 04 05

WG616405: R2377693: L598873-01 02 03 04

WG616590: R2382077: L598873-05

* * 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.