



June 15, 2015

Mr. Chris Canfield
Department of Natural Resources
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203-2136

**RE: 2013/2014 Annual Report
Bangert 2-19 Tank Battery
API # 05-123-10664
Remediation # 6559
SENE Section 19, T2N R66W 6PM
40.127005, -104.813096
Weld County, Colorado**

Dear Mr. Canfield:

Attached is the 2013/2014 Annual Report for the Bangert 2-19 Tank Battery. This report details the monitoring activities conducted at the site. Please contact me directly if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Blake Ford". The signature is stylized with a large, looped "B" and a long, sweeping "F".

Blake Ford
Environmental Specialist
Encana Oil & Gas (USA) Inc.

Attachments:
2013/2014 Annual Report – Bangert 2-19 Tank Battery

Encana Services Company Ltd.

Republic Plaza 370 – 17th Street Suite 1700 Denver CO 80202 303.623.2300 encana.com

Encana Services Company Ltd. provides operational, corporate, administrative and advisory services to Encana Corporation and its subsidiaries.

June 15, 2015

Mr. Chris Canfield
Department of Natural Resources
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203-2136

**RE: Remediation Activity 2013/2014 Annual Report
Encana Oil & Gas (USA) Inc.
Bangert 2-19 Tank Battery
API # 05-123-10664
COGCC Remediation # 6559
Weld County, Colorado**

Dear Mr. Canfield:

Rule Engineering, LLC has prepared this report on behalf of Encana Oil and Gas (USA), Inc., to summarize activities conducted in 2013/2014 to address petroleum hydrocarbon impacts at the Bangert 2-19 Tank Battery (site). The site is located 0.25 miles north east of the intersection of County Road 18 ½ and Highway 85, Weld County, Colorado (Figure 1). A site map is included as Figure 2.

BACKGROUND

Following the discovery of petroleum impacted soils, a limited excavation was completed in December 2008 and January 2009. Soil analytical results collected from the excavation identified concentrations of total petroleum hydrocarbons (TPH) as total volatile hydrocarbons-gasoline range organics (GRO) and total volatile hydrocarbons-diesel range organics (DRO) above the COGCC Table 910 allowable limit. Once excavation activities were completed, three monitoring wells were installed. Groundwater monitoring has been conducted at the site since well installation.

A second excavation was completed on February 29, 2012. The excavation was approximately 40 feet east to west, 20 feet north to south and 15 feet deep. Approximately 450 cubic yards of soil were disposed of offsite. Soil samples were collected from the sidewalls; a floor sample was not collected due to the water table encountered in the excavation. Sidewall sample SS-02 was reported above the allowable limits for TPH at 1,010 mg/kg. Replacement one inch monitoring wells were installed once the excavation was complete.

ADDITIONAL ASSESSMENT

On July 1, 2014, four monitoring wells, MW-01 through MW-04, were installed. The wells were installed using a truck-mounted drill rig and hollow stem augers. Soil samples were collected from each well location. All soil samples were reported below the allowable limit for benzene, toluene, ethylbenzene, and xylene (BTEX) and TPH. Soil analytical data is included in Table 1 and laboratory reports are included as Attachment A. A Soil Analytical Map is included as Figure 3. Boring logs and well completion summaries are included as Attachment B.

2013 MONITORING RESULTS

Groundwater samples were collected from each well and analyzed quarterly for BTEX. Quarterly groundwater monitoring was conducted on January 16, 2013, April 5, 2013, August 12, 2013, and November 13, 2013. Benzene was reported above the COGCC Table 910 allowable limit in MW-01R for all four quarters of 2013. Xylenes were reported above the allowable limit in MW-02R during third quarter 2013.

2014 MONITORING RESULTS

Groundwater samples were collected from each well and analyzed quarterly for BTEX. Quarterly groundwater monitoring was conducted on the one-inch monitoring wells on March 10, 2014 and June 10, 2014. Groundwater monitoring was conducted on the two inch monitoring wells on September 10, 2014 and December 18, 2014. Prior to sampling, groundwater depth is measured in each well and temperature, specific conductivity, dissolved oxygen, pH, and oxidation reduction potential parameters are taken with a field instrument and recorded. The groundwater measurements and field parameters are summarized in Table 2. Groundwater ranged from a depth of 6.72 feet below ground surface (bgs) in MW-04 on September 10, 2014, to 15.01 feet bgs in MW-2 on December 19, 2014. Groundwater flow is to the west. Groundwater Elevation Maps from third and fourth quarter 2014 are included as Figure 4a and Figure 4b.

Monitoring wells MW-02R and MW-03R were reported below the COGCC Table 910 allowable limit during first and second quarter 2014. Benzene concentrations in MW-01R increased from first to second quarter 2014. The well was abandoned and replaced with MW-01 to the west and MW-02 to the east. BTEX concentrations in MW-02 increased from third to fourth quarter 2014, benzene was the only constituent observed above the allowable limit in fourth quarter 2014. Monitoring well MW-01 had benzene and xylenes reported above the allowable limit during third quarter 2014. BTEX was reported below the allowable limit in MW-01 during fourth quarter 2014. Monitoring wells MW-03 and MW-04 had xylenes reported above the allowable limit in third quarter 2014 and were reported below the allowable limit during fourth quarter 2014. Groundwater analytical data is summarized in Table 3. Groundwater analytical data for third and fourth quarter 2014 are shown on Figures 5a and 5b.

CONCLUSION

The majority of the impacted soils were removed from the site by the excavations. Soil sample SS-02 had a TPH concentration observed above the COGCC Table 910 allowable limit. Soil analytical data from MW-04, the closest well to the SS-02 sample location, was reported below the allowable limit for BTEX and TPH. Groundwater concentrations for BTEX from this monitoring well have decreased to below the allowable limit since well installation. Overall, BTEX concentrations in groundwater have decreased in the new wells installed July 2014, with the exception of MW-02. Per Water Quality Regulation 41, groundwater monitoring will continue until four consecutive quarters of groundwater samples below the Table 910 levels have been obtained in order to request closure.

If you have any questions or require additional information please contact me or Russell Knight at (303) 431-8500.

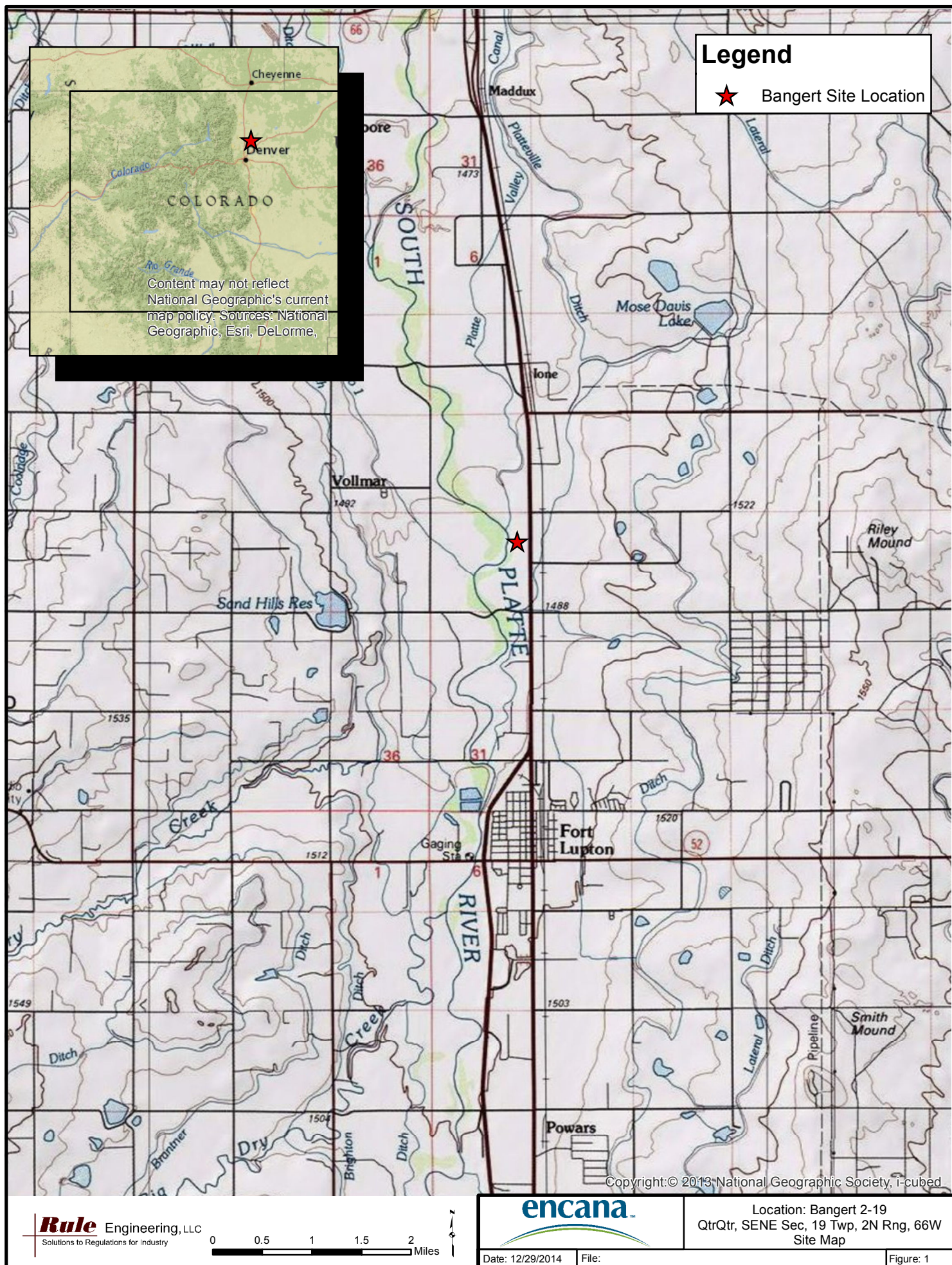
Sincerely,
Rule Engineering, LLC

Tracy Loftus

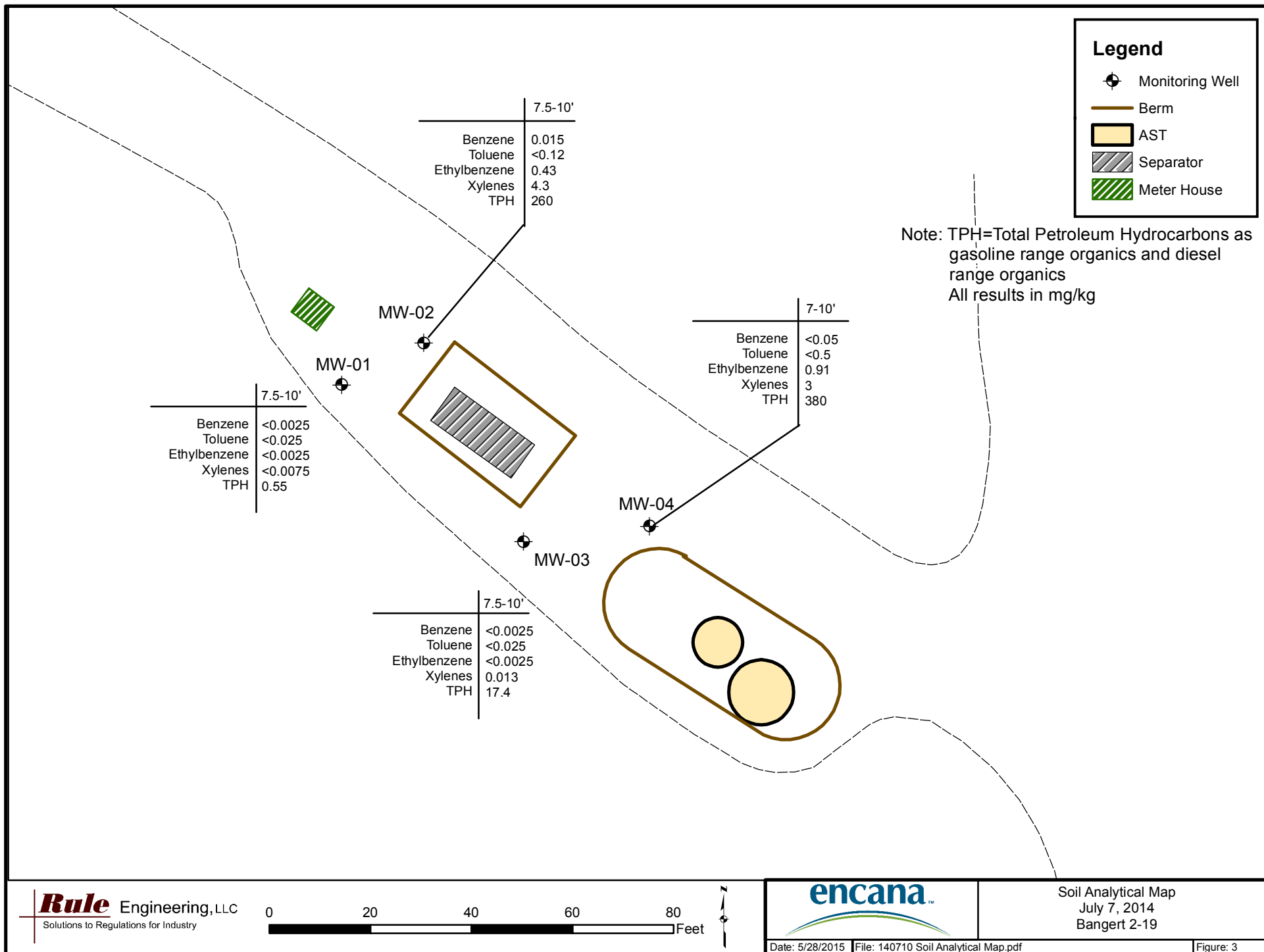
Tracy Loftus
Project Scientist

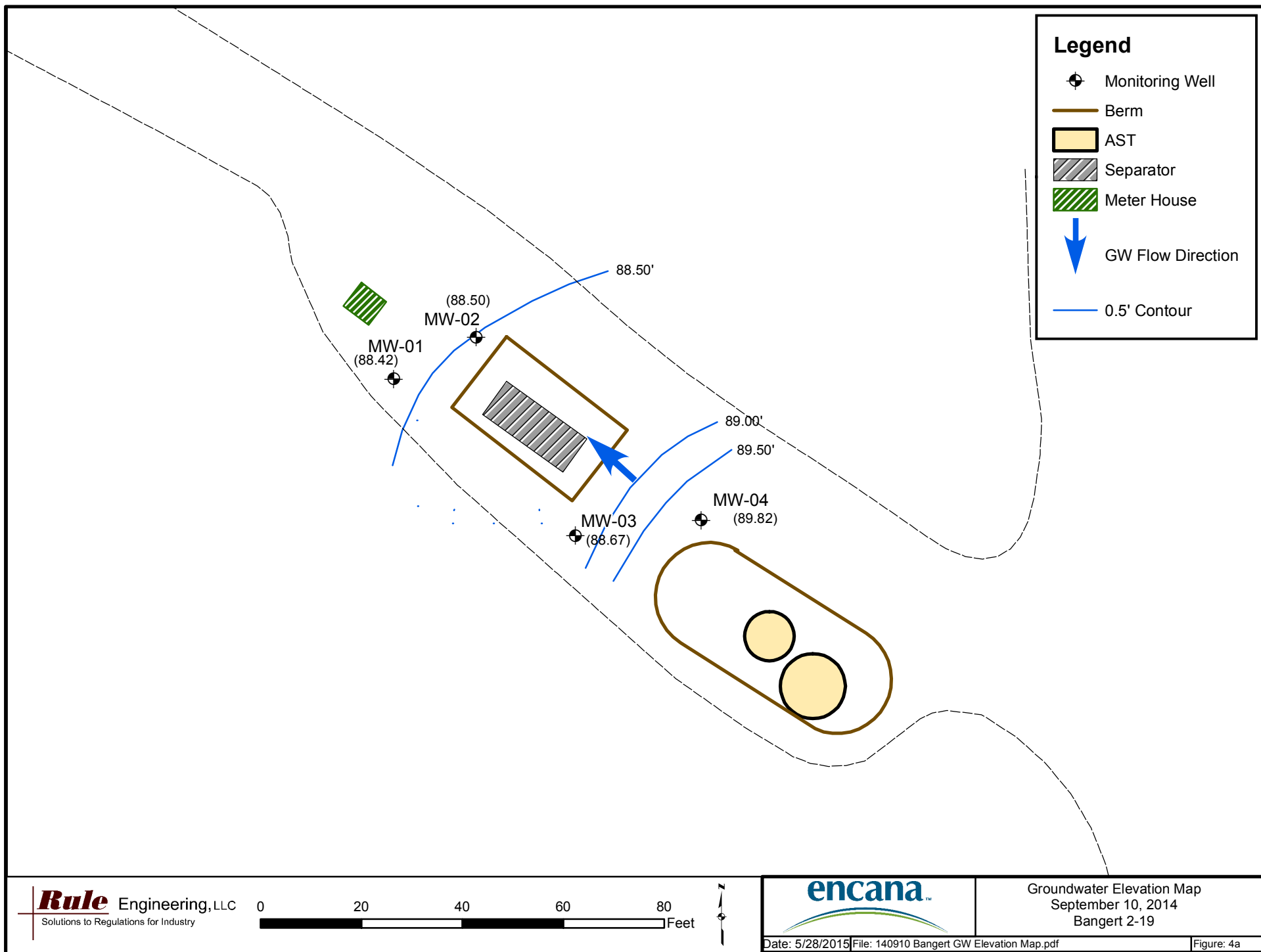
Cc: Blake Ford, Encana

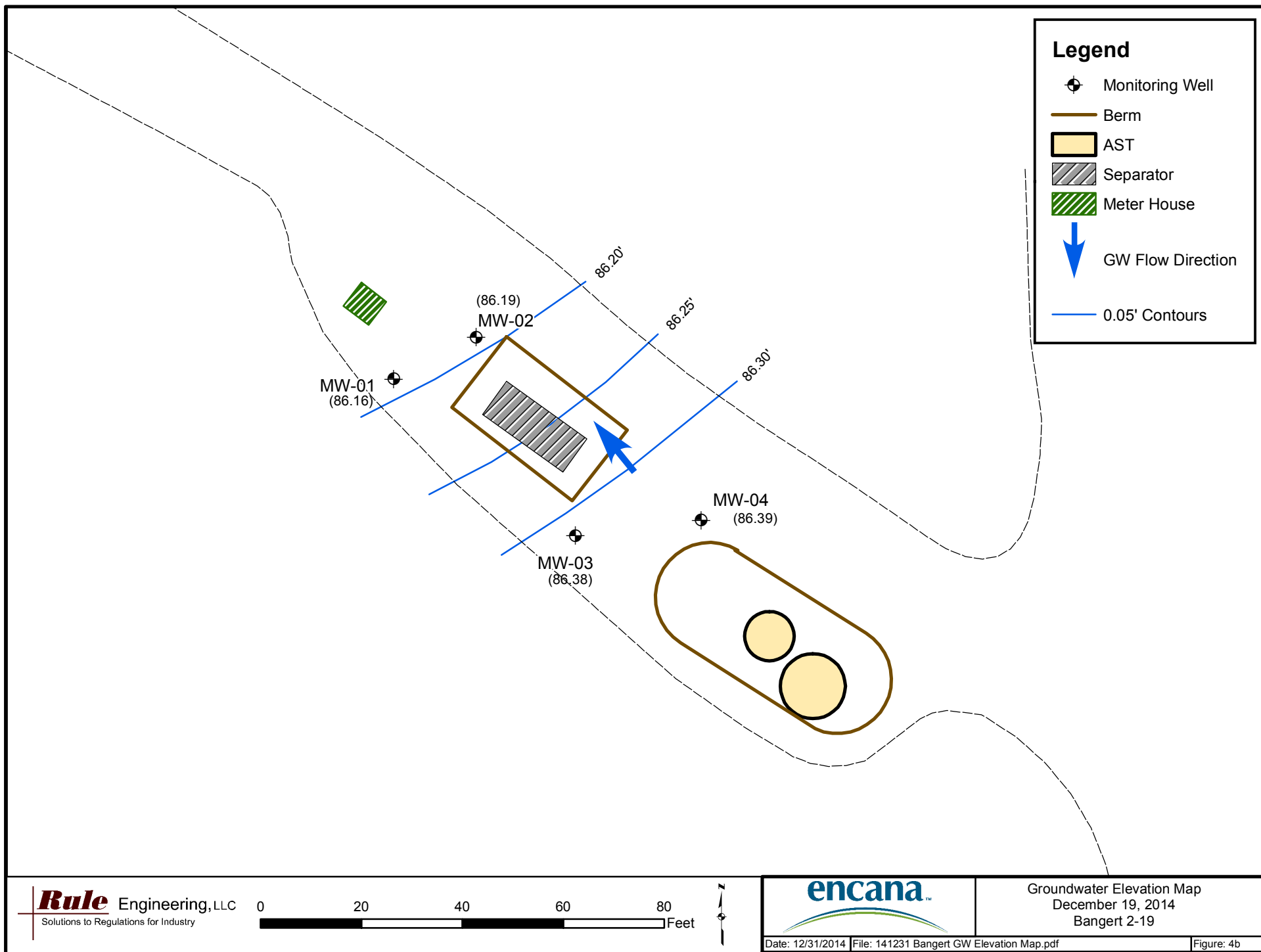
Attachment A- Laboratory Reports
Attachment B- Bore Logs







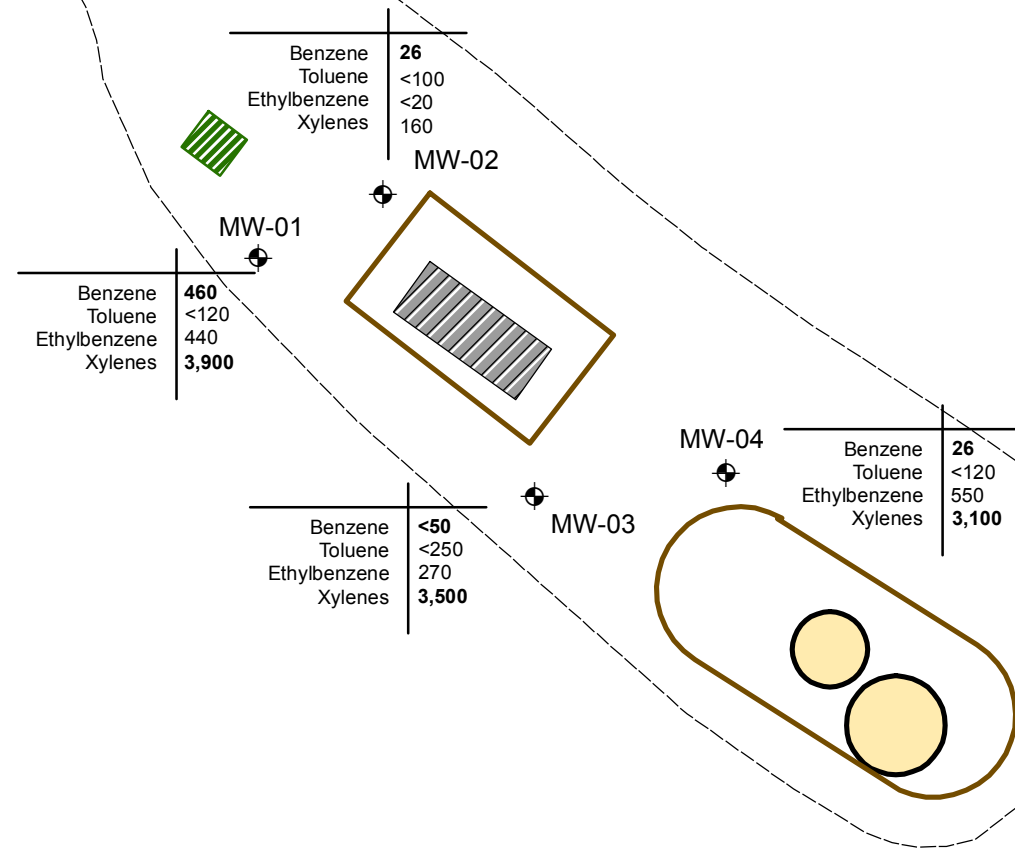









Legend

- Monitoring Well
- Berm
- AST
- Separator
- Meter House

Units: µg/L



Legend

-  Monitoring Well
-  Berm
-  AST
-  Separator
-  Meter House

Units: µg/L

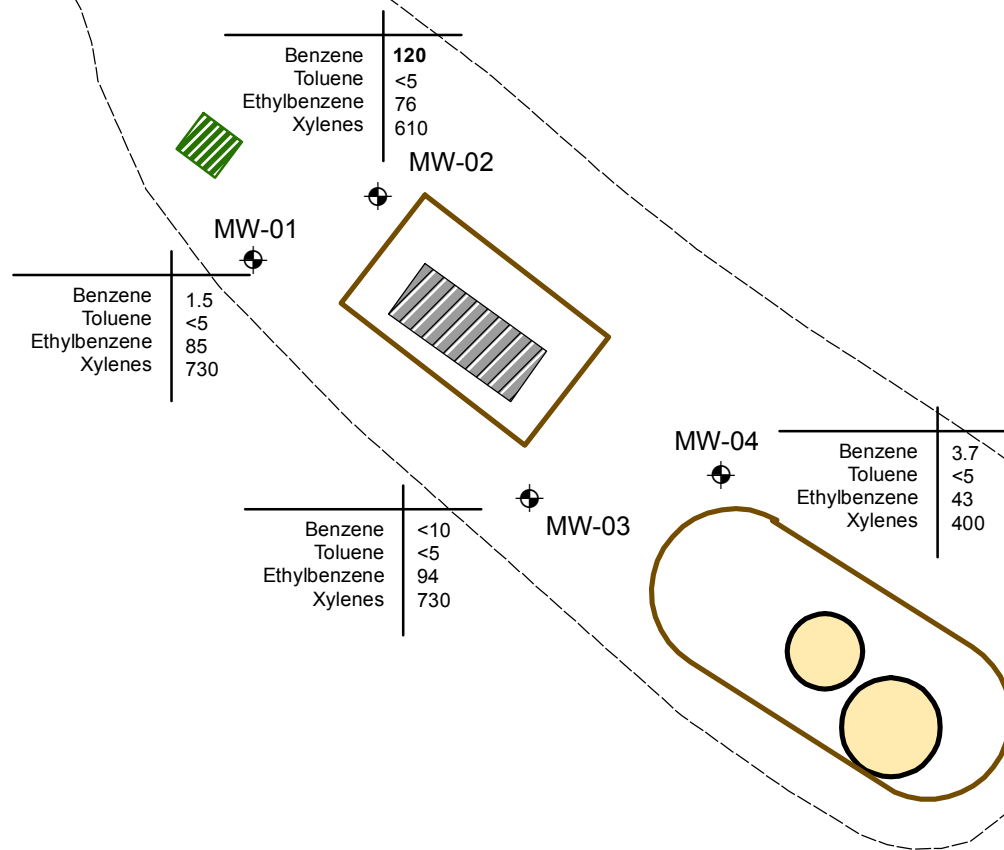


TABLE 1 - SOIL ANALYTICAL RESULTS
BANGERT 2-19 TANK BATTERY
WELD COUNTY, COLORADO
ENCANA OIL & GAS (USA) INC.

Sample ID	Date	Depth (Feet)	PID (ppm)	BTEX/TPH						
				Benzene	Toluene	Ethylbenzene	Total Xylene	TPH-GRO	TPH-DRO	TPH
COGCC Table 910-1 Limit				0.17	85	100	175			500
SS-01	2/29/2012	*	*	<0.005	<0.005	<0.005	<0.005	1.0	<50	1.0
SS-02	2/29/2012	*	*	<0.005	<0.005	0.93	15	510	500	1,010
SS-03	2/29/2012	*	*	0.012	<0.005	0.26	3.5	230	130	360
SS-04	2/29/2012	*	*	<0.005	<0.005	<0.005	0.14	7.6	96	103.6
MW01-071014	7/7/2014	7.5-10	*	<0.0025	<0.025	<0.0025	<0.0075	0.55	<4.0	0.55
MW02-071014	7/7/2014	7.5-10	*	0.015	<0.12	0.43	4.3	110	150	260
MW03-071014	7/7/2014	7.5-10	*	<0.0025	<0.025	<0.0025	0.013	2.4	15	17.4
MW04-071014	7/7/2014	7.5-10	*	<0.05	<0.5	0.91	3	240	140	380

Sample ID	Date	Inorganics				Metals											
		Electrical Conductance (umhos/cm)	ORP (mV)	pH (su)	Sodium Adsorption Ratio (calc)	Arsenic	Barium	Cadmium	Chromium III	Chromium VI	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
COGCC Table 910-1 Limit		≤4000		6-9	≤12 ⁵	0.39	15000	70	120000	23	3100	400	23	1600	390	390	23000
MW04-070114	7/10/2014	140		8.5	1.7	<2.0	11	<0.5	2.4	<2.0	2.1	3.2	<0.02	<2.0	<2.0	<1.0	16

Sample ID	Date	PAHs																		
		Anthracene	Acenaphthene	Acenaphthylene	Benzo(A)anthracene	Benzo(A)pyrene	Benzo(B)fluoranthene	Benzo(g,h,i)perylene	Benzo(K)fluoranthene	Chrysene	Dibenzo(A,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)pyrene	Naphthalene	Phenanthrene	Pyrene	1- Methyl naphthalene	2- Methyl naphthalene	2-Chloro naphthalene
		1000	1000		0.22	0.022	0.22		2.2	22	0.022	1000	1000	0.22	23		1000			
COGCC Table 910-1 Limit																				
MW04-070114	7/10/2014	<0.006	0.008	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.018	<0.006	0.13	0.012	<0.006	0.15	0.45	<0.02	

COGCC = Colorado Oil and Gas Conservation Commission

All units in mg/kg unless otherwise noted

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

Note: Values presented in bold typeface exceed their respective COGCC Table 910-1 Regulatory Limits.

< = indicates result is less than the stated laboratory reporting limit

* = data not available

TABLE 2- GROUNDWATER ELEVATION SUMMARY AND WATER QUALITY FIELD PARAMETERS
BANGERT 2-19 TANK BATTERY
WELD COUNTY, COLORADO
ENCANA OIL & GAS (USA) INC.

Sample ID	Date	Depth to Water (feet)	Groundwater Elevation (feet)	Groundwater Quality Field Parameters				
				Temperature (°C)	Conductivity (µS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	pH (SU)
MW-01	9/10/2014	11.27	88.42	*	*	*	*	*
MW-01	12/19/2014	13.53	86.16	13.76	1,178	-37.9	0.51	8.06
TOC Elevation (ft)	99.69							
MW-02	9/10/2014	12.70	88.50	*	*	*	*	*
MW-02	12/19/2014	15.01	86.19	14.49	1,186	-16.5	0.41	8.07
TOC Elevation (ft)	101.20							
MW-03	9/10/2014	11.99	88.67	*	*	*	*	*
MW-03	12/19/2014	14.28	86.38	13.58	1,155	-43.3	0.52	8.11
TOC Elevation (ft)	100.66							
MW-04	9/10/2014	7.80	89.82	*	*	*	*	*
MW-04	12/19/2014	11.23	86.39	14.37	1,242	-23.2	0.54	8.11
TOC Elevation (ft)	97.62							

NOTES:

TOC - top of casing

*- information not available

°C - degrees Celsius

µS/cm - microsiemens per centimeter

mV - millivolts

mg/L - milligram per liter

SU - standard unit

TABLE 3- GROUNDWATER ANALYTICAL RESULTS
BANGERT 2-19 TANK BATTERY
WELD COUNTY, COLORADO
ENCANA OIL & GAS (USA) INC.

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Limit		5	560	700	1,400
MW-01	9/10/2014	460	<120	440	3,900
	12/19/2014	1.5	<5	85	730
MW-02	9/10/2014	26	<100	<20	160
	12/19/2014	120	<5	76	610
MW-03	9/10/2014	<50	<250	270	3,500
	12/19/2014	<10	<5	94	730
MW-04	9/10/2014	26	<120	550	3,100
	12/19/2014	3.7	<5	43	400
MW-01R	4/12/2012	230	<1.0	160	1,200
	7/12/2012	96	<1.0	3.5	200
	10/3/2012	21.6	<1.0	3.73	11.5
	1/16/2013	58	<1.0	<1.0	32
	4/5/2013	15	<5.0	<1.0	9.1
	5/16/2013	12	<5.0	3.5	1.5
	8/12/2013	11	<5.0	170	260
	11/13/2013	67	<5.0	25	150
	3/10/2014	82	<5.0	10	67
	6/10/2014	<1.0	<5.0	<1.0	<3.0
MW-02R	4/12/2012	<1.0	<1.0	40	500
	7/12/2012	3.8	<1.0	<1.0	1,500
	10/3/2012	1.32	<1.0	76.6	440
	1/16/2013	1.0	<1.0	<1.0	490
	4/5/2013	<1.0	<5.0	1.2	26
	5/16/2013	<0.5	<5.0	<0.5	<1.5
	8/12/2013	2.3	<5.0	160	2,400
	11/13/2013	<0.5	<25	87	390
	3/10/2014	<0.5	<5.0	3.7	38
	6/10/2014	<1.0	<5.0	24	95
MW-03R	4/12/2012	<1.0	<1.0	<1.0	<1.0
	7/12/2012	<1.0	<1.0	<1.0	2.0
	10/3/2012	<1.0	<1.0	<1.0	<1.0
	1/16/2013	<1.0	<1.0	<1.0	<1.0
	4/5/2013	<1.0	<5.0	<1.0	<3.0
	5/16/2013	<0.5	<5.0	<0.5	<1.5
	8/12/2013	<1.0	<5.0	<1.0	<3.0
	11/13/2013	<1.0	<5.0	<1.0	<3.0
	3/10/2014	<1.0	<5.0	<1.0	<3.0
	6/10/2014	1.7	<5.0	<1.0	<3.0

NOTES:

µg/L - micrograms per liter

BOLD - indicates result exceeds the applicable standard

< - indicates result is less than the stated laboratory reporting limit

NS - not sampled

COGCC Table 910-1 - Colorado Oil and Gas Conservation Commission Table 910-1

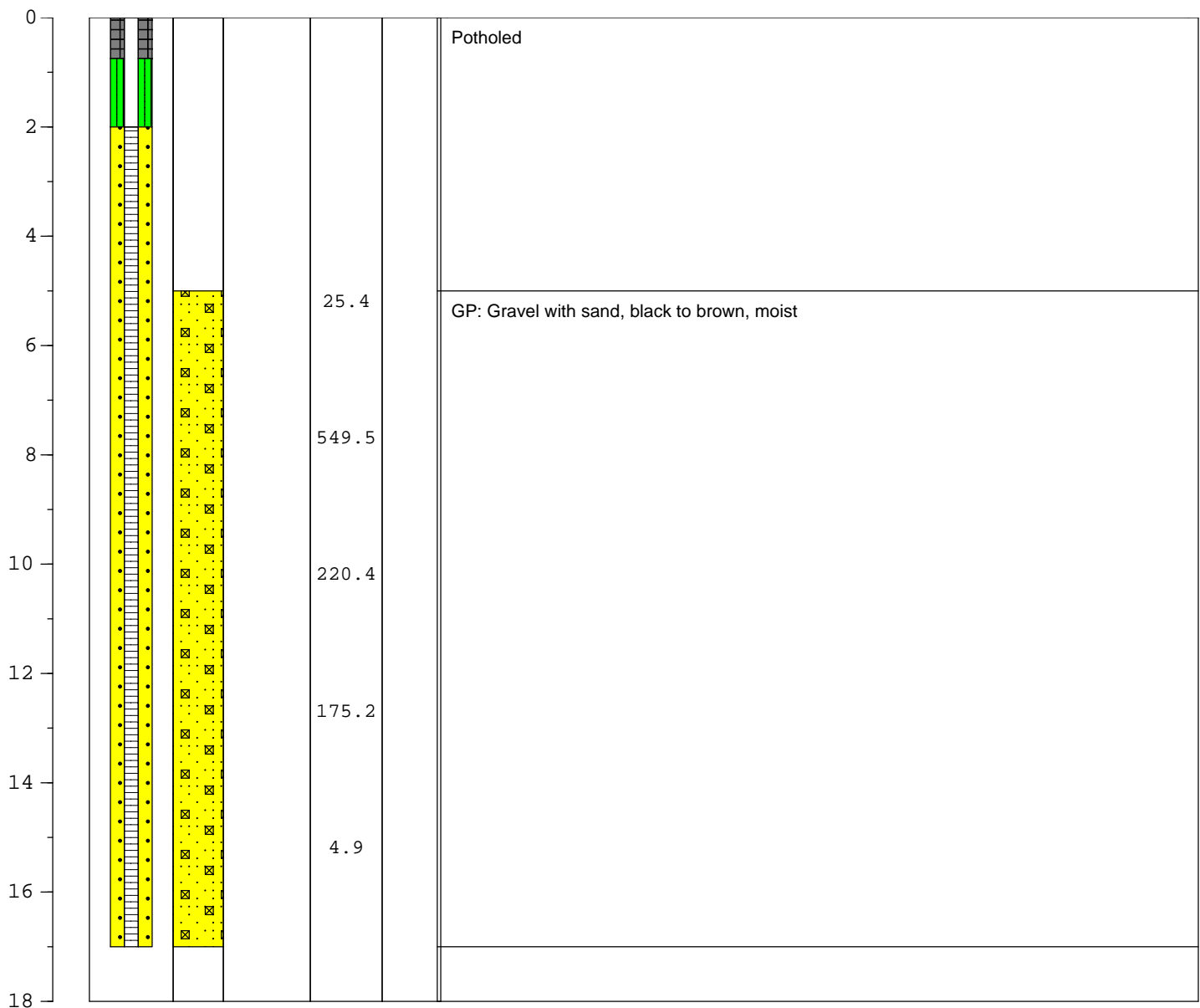
Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

Attachment A

Bore Logs

CLIENT:	Encana	PROJECT #:	335.012	NORTHING:	
DRILLING CO.:	Site Services, Inc.	LOGGED BY:	B. Ford	EASTING:	
DATE DRILLED:	07/07/2014	DRILLER:		SURFACE ELEV:	ft
LOCATION:	Bangert 2-19	DRILLING METHOD:	SSA	CASING ELEV:	ft
SCREEN DIAM:	2 in	SCREEN:	15 ft	SLOT SIZE:	0.01 in
CASING DIAM:	2 in	CAS LENGTH:	2 ft	TYPE:	PVC
BORING DEPTH:	17 ft	WELL DEPTH:	17 ft	BORING DIAM:	4 in
WELL TYPE:	Stick Up	SAMPLING METHOD:		DEPTH TO GW:	ft

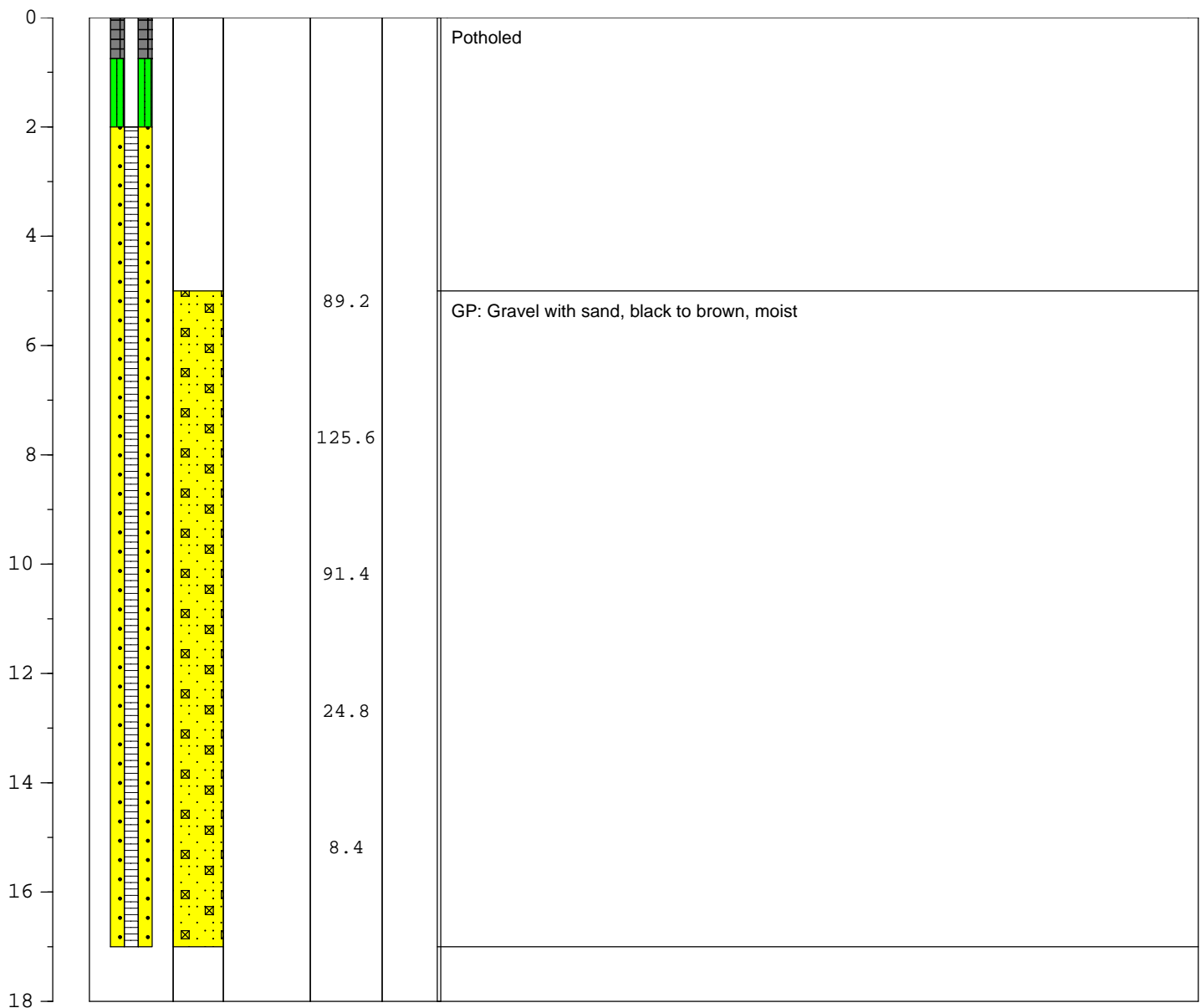
DEPTH (ft BGS)	WELL LOG	SOIL LOG	BLOWS / ft.	PID ppm	% REC	SOIL DESCRIPTION
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NOTES:

CLIENT:	Encana	PROJECT #:	335.012	NORTHING:	
DRILLING CO.:	Site Services, Inc.	LOGGED BY:	B. Ford	EASTING:	
DATE DRILLED:	07/07/2014	DRILLER:		SURFACE ELEV:	ft
LOCATION:	Bangert 2-19	DRILLING METHOD:	SSA	CASING ELEV:	ft
SCREEN DIAM:	2 in	SCREEN:	15 ft	SLOT SIZE:	0.01 in
CASING DIAM:	2 in	CAS LENGTH:	2 ft	TYPE:	PVC
BORING DEPTH:	17 ft	WELL DEPTH:	17 ft	BORING DIAM:	4 in
WELL TYPE:	Stick Up	SAMPLING METHOD:		DEPTH TO GW:	ft

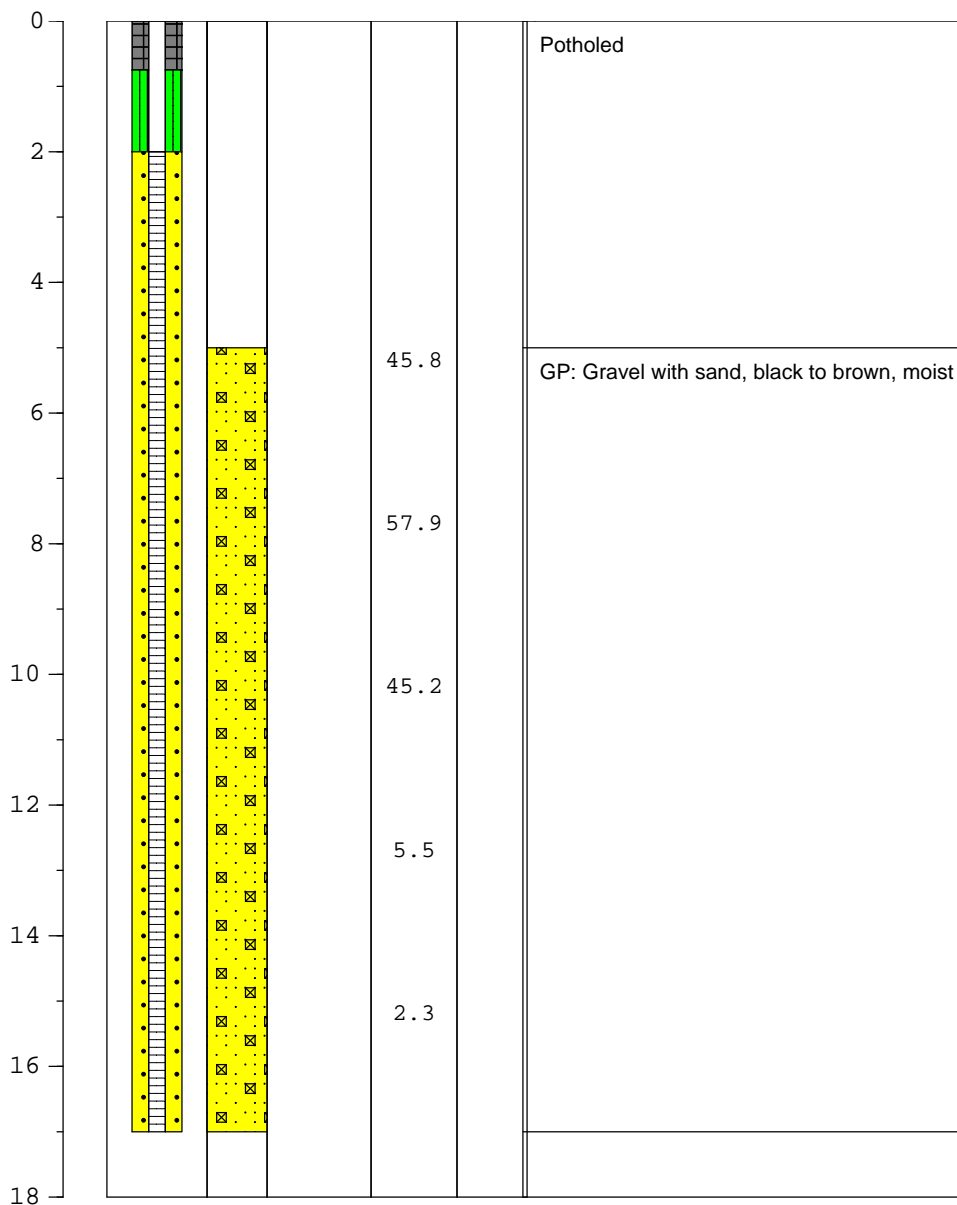
DEPTH (ft BGS)	WELL LOG	SOIL LOG	BLOWS / ft.	PID ppm	% REC	SOIL DESCRIPTION
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NOTES:

CLIENT:	Encana	PROJECT #:	335.012	NORTHING:	
DRILLING CO.:	Site Services, Inc.	LOGGED BY:	B. Ford	EASTING:	
DATE DRILLED:	07/07/2014	DRILLER:		SURFACE ELEV:	ft
LOCATION:	Bangert 2-19	DRILLING METHOD:	SSA	CASING ELEV:	ft
SCREEN DIAM:	2 in	SCREEN:	15 ft	SLOT SIZE:	0.01 in
CASING DIAM:	2 in	CAS LENGTH:	2 ft	TYPE:	PVC
BORING DEPTH:	17 ft	WELL DEPTH:	17 ft	BORING DIAM:	4 in
WELL TYPE:	Stick Up	SAMPLING METHOD:		DEPTH TO GW:	ft

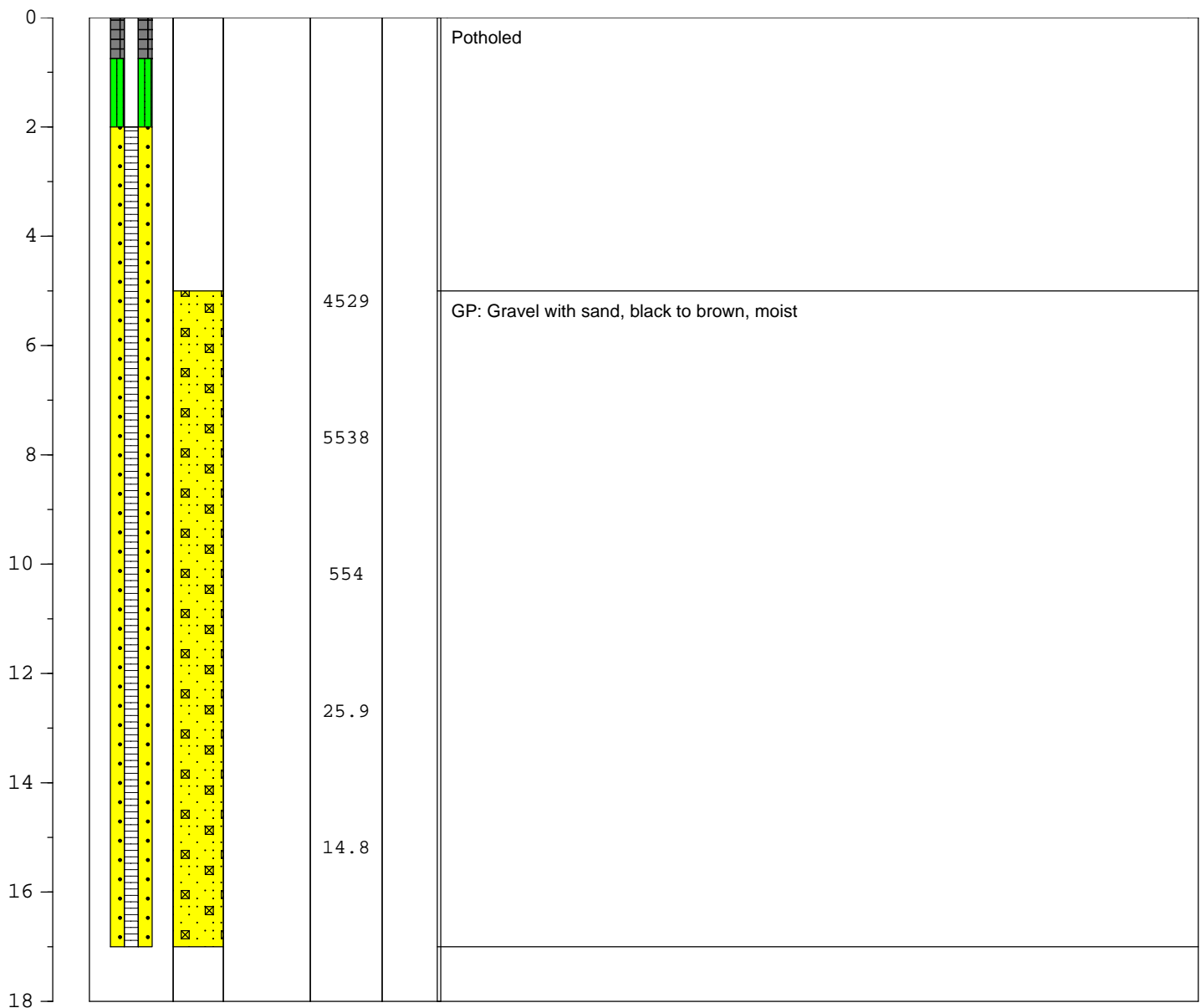
DEPTH (ft BGS)	WELL LOG	SOIL LOG	BLOWS / ft.	PID ppm	% REC	SOIL DESCRIPTION
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NOTES:

CLIENT:	Encana	PROJECT #:	335.012	NORTHING:	
DRILLING CO.:	Site Services, Inc.	LOGGED BY:	B. Ford	EASTING:	
DATE DRILLED:	07/07/2014	DRILLER:		SURFACE ELEV:	ft
LOCATION:	Bangert 2-19	DRILLING METHOD:	SSA	CASING ELEV:	ft
SCREEN DIAM:	2 in	SCREEN:	15 ft	SLOT SIZE:	0.01 in
CASING DIAM:	2 in	CAS LENGTH:	2 ft	TYPE:	PVC
BORING DEPTH:	17 ft	WELL DEPTH:	17 ft	BORING DIAM:	4 in
WELL TYPE:	Flush Mount	SAMPLING METHOD:		DEPTH TO GW:	ft

DEPTH (ft BGS)	WELL LOG	SOIL LOG	BLOWS / ft.	PID ppm	% REC	SOIL DESCRIPTION
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NOTES:

Attachment B

Laboratory Reports



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

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Report Summary

Monday March 17, 2014

Report Number: L687536

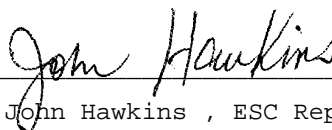
Samples Received: 03/12/14

Client Project: BANGERT 2-19

Description: Bangert 2-19

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:


John Hawkins , 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

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

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.



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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

March 17, 2014

Date Received : March 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW01R-031014
Collected By : Blake Ford
Collection Date : 03/10/14 16:40

ESC Sample # : L687536-01

Site ID :

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	82.	1.0	ug/l	8260B	03/14/14	1
Toluene	BDL	5.0	ug/l	8260B	03/14/14	1
Ethylbenzene	10.	1.0	ug/l	8260B	03/14/14	1
Total Xylenes	67.	3.0	ug/l	8260B	03/14/14	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	03/14/14	1
Dibromofluoromethane	98.1		% Rec.	8260B	03/14/14	1
a,a,a-Trifluorotoluene	99.4		% Rec.	8260B	03/14/14	1
4-Bromofluorobenzene	101.		% Rec.	8260B	03/14/14	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: 03/17/14 08:34 Printed: 03/17/14 08:34



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

March 17, 2014

Date Received : March 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW02R-031014
Collected By : Blake Ford
Collection Date : 03/10/14 15:48

ESC Sample # : L687536-02

Site ID :

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	03/15/14	1
Toluene	BDL	5.0	ug/l	8260B	03/15/14	1
Ethylbenzene	3.7	1.0	ug/l	8260B	03/15/14	1
Total Xylenes	38.	3.0	ug/l	8260B	03/15/14	1
Surrogate Recovery						
Toluene-d8	97.5		% Rec.	8260B	03/15/14	1
Dibromofluoromethane	101.		% Rec.	8260B	03/15/14	1
a,a,a-Trifluorotoluene	97.1		% Rec.	8260B	03/15/14	1
4-Bromofluorobenzene	100.		% Rec.	8260B	03/15/14	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: 03/17/14 08:34 Printed: 03/17/14 08:34



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

March 17, 2014

Date Received : March 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW03R-031014
Collected By : Blake Ford
Collection Date : 03/10/14 14:56

ESC Sample # : L687536-03

Site ID :

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	03/14/14	1
Toluene	BDL	5.0	ug/l	8260B	03/14/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	03/14/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	03/14/14	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	03/14/14	1
Dibromofluoromethane	104.		% Rec.	8260B	03/14/14	1
a,a,a-Trifluorotoluene	97.7		% Rec.	8260B	03/14/14	1
4-Bromofluorobenzene	97.1		% Rec.	8260B	03/14/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 03/17/14 08:34 Printed: 03/17/14 08:34

Summary of Remarks For Samples Printed
03/17/14 at 08:34:54

TSR Signing Reports: 358
R5 - Desired TAT

Log all BTEX waters as V8260BTEX unless specified otherwise. Try not to report benzene as BDL
above a 5x dilution. Enter depths for all samples as part of sample ID.

Sample: L687536-01 Account: ENCANLCO Received: 03/12/14 09:30 Due Date: 03/19/14 00:00 RPT Date: 03/17/14 08:34

Sample: L687536-02 Account: ENCANLCO Received: 03/12/14 09:30 Due Date: 03/19/14 00:00 RPT Date: 03/17/14 08:34

Sample: L687536-03 Account: ENCANLCO Received: 03/12/14 09:30 Due Date: 03/19/14 00:00 RPT Date: 03/17/14 08:34



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Est. 1970

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Report Summary

Tuesday June 17, 2014

Report Number: L703884

Samples Received: 06/11/14

Client Project: BANGERT 2-19

Description: Bangert 2-19

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

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

June 17, 2014

Date Received : June 11, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW01R-061014
Collected By : Charlie Jensen
Collection Date : 06/10/14 09:10

ESC Sample # : L703884-01

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	06/16/14	1
Toluene	BDL	5.0	ug/l	8260B	06/16/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/16/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	06/16/14	1
Surrogate Recovery						
Toluene-d8	98.2		% Rec.	8260B	06/16/14	1
Dibromofluoromethane	102.		% Rec.	8260B	06/16/14	1
a,a,a-Trifluorotoluene	95.7		% Rec.	8260B	06/16/14	1
4-Bromofluorobenzene	87.3		% Rec.	8260B	06/16/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

June 17, 2014

Date Received : June 11, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW02R-061014
Collected By : Charlie Jensen
Collection Date : 06/10/14 08:50

ESC Sample # : L703884-02

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	06/13/14	1
Toluene	BDL	5.0	ug/l	8260B	06/13/14	1
Ethylbenzene	24.	1.0	ug/l	8260B	06/13/14	1
Total Xylenes	95.	3.0	ug/l	8260B	06/13/14	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	06/13/14	1
Dibromofluoromethane	103.		% Rec.	8260B	06/13/14	1
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	06/13/14	1
4-Bromofluorobenzene	97.3		% Rec.	8260B	06/13/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/17/14 11:37 Printed: 06/17/14 11:37



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REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

June 17, 2014

Date Received : June 11, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW03R-061014
Collected By : Charlie Jensen
Collection Date : 06/10/14 08:30

ESC Sample # : L703884-03

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	1.7	1.0	ug/l	8260B	06/13/14	1
Toluene	BDL	5.0	ug/l	8260B	06/13/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/13/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	06/13/14	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	06/13/14	1
Dibromofluoromethane	104.		% Rec.	8260B	06/13/14	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/13/14	1
4-Bromofluorobenzene	97.0		% Rec.	8260B	06/13/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 06/17/14 11:37 Printed: 06/17/14 11:37

Summary of Remarks For Samples Printed
06/17/14 at 11:37:50

TSR Signing Reports: 358
R5 - Desired TAT

Log all BTEX waters as V8260BTEX unless specified otherwise. Enter depths for all samples as part of sample ID. Try not to report benzene as BDL above a 5x dilution.

Sample: L703884-01 Account: ENCANLCO Received: 06/11/14 09:00 Due Date: 06/18/14 00:00 RPT Date: 06/17/14 11:37

Sample: L703884-02 Account: ENCANLCO Received: 06/11/14 09:00 Due Date: 06/18/14 00:00 RPT Date: 06/17/14 11:37

Sample: L703884-03 Account: ENCANLCO Received: 06/11/14 09:00 Due Date: 06/18/14 00:00 RPT Date: 06/17/14 11:37



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Est. 1970

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Report Summary

Friday July 18, 2014

Report Number: L708932


Samples Received: 07/09/14

Client Project: BANGERT 2-19

Description: Bangert 2-19 Well Installation

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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

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REPORT OF ANALYSIS

July 18, 2014

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Date Received : July 09, 2014
Description : Bangert 2-19 Well Installation
Sample ID : BANGERT-MW01-070714 7.5-10FT
Collected By : Blake Ford
Collection Date : 07/07/14 11:51

ESC Sample # : L708932-01

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/11/14	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/11/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/11/14	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/11/14	5
TPH (GC/FID) Low Fraction	0.55	0.50	mg/kg	GRO	07/11/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.8		% Rec.	8021/8015	07/11/14	5
a,a,a-Trifluorotoluene(PID)	103.		% Rec.	8021/8015	07/11/14	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	07/13/14	1
Surrogate recovery(%)						
o-Terphenyl	57.3		% Rec.	3546/DRO	07/13/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

July 18, 2014

Date Received : July 09, 2014
Description : Bangert 2-19 Well Installation
Sample ID : BANGERT-MW02-070714 7.5-10FT
Collected By : Blake Ford
Collection Date : 07/07/14 14:43

ESC Sample # : L708932-02

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.015	0.012	mg/kg	8021/8015	07/15/14	25
Toluene	BDL	0.12	mg/kg	8021/8015	07/15/14	25
Ethylbenzene	0.43	0.012	mg/kg	8021/8015	07/15/14	25
Total Xylene	4.3	0.038	mg/kg	8021/8015	07/15/14	25
TPH (GC/FID) Low Fraction	110	2.5	mg/kg	GRO	07/15/14	25
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	8021/8015	07/15/14	25
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	07/15/14	25
TPH (GC/FID) High Fraction	150	4.0	mg/kg	3546/DRO	07/13/14	1
Surrogate recovery(%)						
o-Terphenyl	58.7		% Rec.	3546/DRO	07/13/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

July 18, 2014

Date Received : July 09, 2014
Description : Bangert 2-19 Well Installation
Sample ID : BANGERT-MW03-070714 7.5-10FT
Collected By : Blake Ford
Collection Date : 07/07/14 13:05

ESC Sample # : L708932-03

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/11/14	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/11/14	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/11/14	5
Total Xylene	0.013	0.0075	mg/kg	8021/8015	07/11/14	5
TPH (GC/FID) Low Fraction	2.4	0.50	mg/kg	GRO	07/11/14	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.2		% Rec.	8021/8015	07/11/14	5
a,a,a-Trifluorotoluene(PID)	103.		% Rec.	8021/8015	07/11/14	5
TPH (GC/FID) High Fraction	15.	4.0	mg/kg	3546/DRO	07/13/14	1
Surrogate recovery(%)						
o-Terphenyl	53.3		% Rec.	3546/DRO	07/13/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Est. 1970

REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

July 18, 2014

Date Received : July 09, 2014
Description : Bangert 2-19 Well Installation
Sample ID : BANGERT-MW04-070714 7.5-10FT
Collected By : Blake Ford
Collection Date : 07/07/14 10:15

ESC Sample # : L708932-04

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	07/15/14	1
Chromium, Trivalent	2.4	2.0	mg/kg	Calc.	07/16/14	1
ORP	90.		mV	2580 B-2011	07/11/14	1
pH	8.5		su	9045D	07/12/14	1
Sodium Adsorption Ratio	1.7			Calc.	07/18/14	1
Specific Conductance	140		umhos/cm	9050AMod	07/15/14	1
Mercury	BDL	0.020	mg/kg	7471	07/11/14	1
Arsenic	BDL	2.0	mg/kg	6010B	07/16/14	1
Barium	11.	0.50	mg/kg	6010B	07/16/14	1
Cadmium	BDL	0.50	mg/kg	6010B	07/16/14	1
Chromium	2.4	1.0	mg/kg	6010B	07/16/14	1
Copper	2.1	2.0	mg/kg	6010B	07/16/14	1
Lead	3.2	0.50	mg/kg	6010B	07/16/14	1
Nickel	BDL	2.0	mg/kg	6010B	07/16/14	1
Selenium	BDL	2.0	mg/kg	6010B	07/16/14	1
Silver	BDL	1.0	mg/kg	6010B	07/16/14	1
Zinc	16.	3.0	mg/kg	6010B	07/16/14	1
Benzene	BDL	0.050	mg/kg	8021/8015	07/15/14	100
Toluene	BDL	0.50	mg/kg	8021/8015	07/15/14	100
Ethylbenzene	0.91	0.050	mg/kg	8021/8015	07/15/14	100
Total Xylene	3.0	0.15	mg/kg	8021/8015	07/15/14	100
TPH (GC/FID) Low Fraction	240	10.	mg/kg	GRO	07/15/14	100
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	96.4		% Rec.	8021/8015	07/15/14	100
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	07/15/14	100
TPH (GC/FID) High Fraction	140	4.0	mg/kg	3546/DRO	07/13/14	1
Surrogate recovery(%)						
o-Terphenyl	64.0		% Rec.	3546/DRO	07/13/14	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Acenaphthene	0.0080	0.0060	mg/kg	8270C-SIM	07/15/14	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L708932-04 (PH) - 8.5@20.6c



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Est. 1970

REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

July 18, 2014

Date Received : July 09, 2014
Description : Bangert 2-19 Well Installation
Sample ID : BANGERT-MW04-070714 7.5-10FT
Collected By : Blake Ford
Collection Date : 07/07/14 10:15

ESC Sample # : L708932-04

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Fluorene	0.018	0.0060	mg/kg	8270C-SIM	07/15/14	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
Naphthalene	0.13	0.10	mg/kg	8270C-SIM	07/15/14	5
Phenanthrene	0.012	0.0060	mg/kg	8270C-SIM	07/15/14	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/15/14	1
1-Methylnaphthalene	0.15	0.10	mg/kg	8270C-SIM	07/15/14	5
2-Methylnaphthalene	0.45	0.10	mg/kg	8270C-SIM	07/15/14	5
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	07/15/14	1
Surrogate Recovery						
Nitrobenzene-d5	165.		% Rec.	8270C-SIM	07/15/14	5
2-Fluorobiphenyl	66.8		% Rec.	8270C-SIM	07/15/14	1
p-Terphenyl-d14	71.7		% Rec.	8270C-SIM	07/15/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 07/18/14 16:06 Printed: 07/18/14 16:06
L708932-04 (PH) - 8.5@20.6c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L708932-04	WG730937	SAMP	Naphthalene	R2962026	J5
	WG730937	SAMP	1-Methylnaphthalene	R2962026	J5
	WG730937	SAMP	2-Methylnaphthalene	R2962026	V
	WG730937	SAMP	Nitrobenzene-d5	R2962026	J1

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

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
07/18/14 at 16:06:45

TSR Signing Reports: 358
R5 - Desired TAT

Log all BTEX waters as V8260BTEX unless specified otherwise. Enter depths for all samples as part of sample ID. Try not to report benzene as BDL above a 5x dilution.

Sample: L708932-01 Account: ENCANLCO Received: 07/09/14 09:00 Due Date: 07/16/14 00:00 RPT Date: 07/18/14 16:06

Sample: L708932-02 Account: ENCANLCO Received: 07/09/14 09:00 Due Date: 07/16/14 00:00 RPT Date: 07/18/14 16:06

Sample: L708932-03 Account: ENCANLCO Received: 07/09/14 09:00 Due Date: 07/16/14 00:00 RPT Date: 07/18/14 16:06

Sample: L708932-04 Account: ENCANLCO Received: 07/09/14 09:00 Due Date: 07/16/14 00:00 RPT Date: 07/18/14 16:06



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Est. 1970

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Report Summary

Thursday September 18, 2014

Report Number: L721358


Samples Received: 09/12/14

Client Project: BANGERT 2-19

Description: Bangert 2-19

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

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REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

September 18, 2014

Date Received : September 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW01-091014
Collected By : Blake Ford
Collection Date : 09/10/14 16:15

ESC Sample # : L721358-01

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	460	25.	ug/l	8260B	09/14/14	25
Toluene	BDL	120	ug/l	8260B	09/14/14	25
Ethylbenzene	440	25.	ug/l	8260B	09/14/14	25
Total Xylenes	3900	75.	ug/l	8260B	09/14/14	25
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/14/14	25
Dibromofluoromethane	98.2		% Rec.	8260B	09/14/14	25
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	09/14/14	25
4-Bromofluorobenzene	97.6		% Rec.	8260B	09/14/14	25

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

September 18, 2014

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Date Received : September 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW02-091014
Collected By : Blake Ford
Collection Date : 09/10/14 15:40

ESC Sample # : L721358-02

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	26.	20.	ug/l	8260B	09/14/14	20
Toluene	BDL	100	ug/l	8260B	09/14/14	20
Ethylbenzene	BDL	20.	ug/l	8260B	09/14/14	20
Total Xylenes	160	60.	ug/l	8260B	09/14/14	20
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/14/14	20
Dibromofluoromethane	98.2		% Rec.	8260B	09/14/14	20
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	09/14/14	20
4-Bromofluorobenzene	98.7		% Rec.	8260B	09/14/14	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

September 18, 2014

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Date Received : September 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW03-091014
Collected By : Blake Ford
Collection Date : 09/10/14 14:51

ESC Sample # : L721358-03

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	50.	ug/l	8260B	09/14/14	50
Toluene	BDL	250	ug/l	8260B	09/14/14	50
Ethylbenzene	270	50.	ug/l	8260B	09/14/14	50
Total Xylenes	3500	150	ug/l	8260B	09/14/14	50
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/14/14	50
Dibromofluoromethane	97.6		% Rec.	8260B	09/14/14	50
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	09/14/14	50
4-Bromofluorobenzene	97.0		% Rec.	8260B	09/14/14	50

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

D Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

September 18, 2014

Date Received : September 12, 2014
Description : Bangert 2-19
Sample ID : BANGERT2-19-MW04-091014
Collected By : Blake Ford
Collection Date : 09/10/14 15:14

ESC Sample # : L721358-04

Site ID : BANGERT 2-19

Project # : BANGERT 2-19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	26.	25.	ug/l	8260B	09/14/14	25
Toluene	BDL	120	ug/l	8260B	09/14/14	25
Ethylbenzene	550	25.	ug/l	8260B	09/14/14	25
Total Xylenes	3100	75.	ug/l	8260B	09/14/14	25
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/14/14	25
Dibromofluoromethane	97.6		% Rec.	8260B	09/14/14	25
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	09/14/14	25
4-Bromofluorobenzene	97.3		% Rec.	8260B	09/14/14	25

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/18/14 14:19 Printed: 09/18/14 14:19

Summary of Remarks For Samples Printed
09/18/14 at 14:19:25

TSR Signing Reports: 358
R5 - Desired TAT

Log all BTEX waters as V8260BTEX unless specified otherwise. Enter depths for all samples as part of sample ID. Try not to report benzene as BDL above a 5x dilution.

Sample: L721358-01 Account: ENCANLCO Received: 09/12/14 09:00 Due Date: 09/19/14 00:00 RPT Date: 09/18/14 14:19

Sample: L721358-02 Account: ENCANLCO Received: 09/12/14 09:00 Due Date: 09/19/14 00:00 RPT Date: 09/18/14 14:19

Sample: L721358-03 Account: ENCANLCO Received: 09/12/14 09:00 Due Date: 09/19/14 00:00 RPT Date: 09/18/14 14:19

Sample: L721358-04 Account: ENCANLCO Received: 09/12/14 09:00 Due Date: 09/19/14 00:00 RPT Date: 09/18/14 14:19



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Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Report Summary

Tuesday December 30, 2014

Report Number: L740314


Samples Received: 12/20/14

Client Project: 335.012

Description: Bangert

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

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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,
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REPORT OF ANALYSIS

Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

December 30, 2014

Date Received : December 20, 2014
Description : Bangert
Sample ID : MW-01
Collected By : Erika Walters
Collection Date : 12/19/14 12:02

ESC Sample # : L740314-01

Site ID : BANGERT

Project # : 335.012

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	1.5	1.0	ug/l	8260B	12/24/14	1
Toluene	BDL	5.0	ug/l	8260B	12/24/14	1
Ethylbenzene	85.	1.0	ug/l	8260B	12/24/14	1
Total Xylenes	730	30.	ug/l	8260B	12/30/14	10
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	12/24/14	1
Dibromofluoromethane	89.0		% Rec.	8260B	12/24/14	1
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	12/24/14	1
4-Bromofluorobenzene	96.2		% Rec.	8260B	12/24/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

December 30, 2014

Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

Date Received : December 20, 2014
Description : Bangert
Sample ID : MW-02
Collected By : Erika Walters
Collection Date : 12/19/14 11:33

ESC Sample # : L740314-02

Site ID : BANGERT

Project # : 335.012

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	120	10.	ug/l	8260B	12/30/14	10
Toluene	BDL	5.0	ug/l	8260B	12/24/14	1
Ethylbenzene	76.	1.0	ug/l	8260B	12/24/14	1
Total Xylenes	610	30.	ug/l	8260B	12/30/14	10
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	12/24/14	1
Dibromofluoromethane	89.8		% Rec.	8260B	12/24/14	1
a,a,a-Trifluorotoluene	107.		% Rec.	8260B	12/24/14	1
4-Bromofluorobenzene	97.2		% Rec.	8260B	12/24/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Reported: 12/30/14 17:08 Printed: 12/30/14 17:09



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REPORT OF ANALYSIS

Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

December 30, 2014

Date Received : December 20, 2014
Description : Bangert
Sample ID : MW-03
Collected By : Erika Walters
Collection Date : 12/19/14 10:28

ESC Sample # : L740314-03

Site ID : BANGERT

Project # : 335.012

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	10.	ug/l	8260B	12/30/14	10
Toluene	BDL	5.0	ug/l	8260B	12/24/14	1
Ethylbenzene	94.	1.0	ug/l	8260B	12/24/14	1
Total Xylenes	730	30.	ug/l	8260B	12/30/14	10
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	12/24/14	1
Dibromofluoromethane	88.0		% Rec.	8260B	12/24/14	1
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	12/24/14	1
4-Bromofluorobenzene	97.7		% Rec.	8260B	12/24/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Reported: 12/30/14 17:08 Printed: 12/30/14 17:09



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REPORT OF ANALYSIS

Blake Ford
EnCana Oil & Gas - Longmont, CO
3601 Stagecoach Rd
Longmont, CO 80504

December 30, 2014

Date Received : December 20, 2014
Description : Bangert
Sample ID : MW-04
Collected By : Erika Walters
Collection Date : 12/19/14 10:59

ESC Sample # : L740314-04

Site ID : BANGERT

Project # : 335.012

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	3.7	1.0	ug/l	8260B	12/26/14	1
Toluene	BDL	5.0	ug/l	8260B	12/26/14	1
Ethylbenzene	43.	1.0	ug/l	8260B	12/26/14	1
Total Xylenes	400	30.	ug/l	8260B	12/30/14	10
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	12/26/14	1
Dibromofluoromethane	115.		% Rec.	8260B	12/26/14	1
a,a,a-Trifluorotoluene	96.2		% Rec.	8260B	12/26/14	1
4-Bromofluorobenzene	95.1		% Rec.	8260B	12/26/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 12/30/14 17:08 Printed: 12/30/14 17:09

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L740314-04	WG761345	SAMP	Ethylbenzene	R3012345	J6

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low

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.

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

Summary of Remarks For Samples Printed
12/30/14 at 17:09:21

TSR Signing Reports: 358
R5 - Desired TAT

Log all BTEX waters as V8260BTEX unless specified otherwise. Enter depths for all samples as part of sample ID. Try not to report benzene as BDL above a 5x dilution.

Sample: L740314-01 Account: ENCANLCO Received: 12/20/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/30/14 17:08

Sample: L740314-02 Account: ENCANLCO Received: 12/20/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/30/14 17:08

Sample: L740314-03 Account: ENCANLCO Received: 12/20/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/30/14 17:08

Sample: L740314-04 Account: ENCANLCO Received: 12/20/14 09:00 Due Date: 12/29/14 00:00 RPT Date: 12/30/14 17:08

