

April 7, 2014

Encana Oil and Gas (USA) Inc.  
3601 Stagecoach Road North  
Longmont, Colorado 80504

Attention: Mr. Blake Ford

Subject: Miller 2-17 Tank Battery  
API Number: 05-123-16647  
Quarterly Ground Water Sampling Summary  
Weld County, Colorado  
Project Number E13366.EC

Dear Mr. Ford:

As requested, A. G. Wassenaar, Inc. (AGW) has conducted four quarterly ground water sampling rounds at the Miller 2-17 Tank Battery operated by Encana Oil and Gas (USA) Inc. (Encana). This letter summarizes sampling methods, analytical results, and conclusions.

### Background

The subject site is in a ranching area, approximately 1,600 feet southwest of the intersection of Weld County Road (WCR)-22 and WCR-17 in Weld County. It is in the Northeast 1/4 of the Northeast 1/4 of Section 17, Township 2 North, Range 67 West. Based on U. S. Geological Survey elevation survey data, the ground surface in the area generally slopes toward the northwest. Figure 1 in Attachment A illustrates the site location and topography.

The site includes a tank battery, separators, meter sheds, associated subsurface piping, and three ground water monitoring wells. An adjacent Machii-Ross tank battery is located northeast of the Encana tank battery. Figure 2 in attachment A illustrates the site features.

In December 2011, approximately 650 cubic yards of petroleum-impacted soils were excavated from the Miller 2-17 tank battery area for landfill disposal. Confirmation soil samples collected by LT Environmental, Inc. (LTE) from the excavation cavity walls at that time indicated compliance with Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standards for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH).

A ground water sample collected by LTE from the base of the excavation cavity exhibited benzene and xylene concentrations greater than their respective COGCC standards. Consequently, three ground water monitoring wells were installed in January 2012 and quarterly ground water sampling

was initiated by LTE. Figure 2 in Attachment A illustrates the site features and monitoring well locations. Quarterly analytical results from 2012 and 2013 identified benzene and xylene concentrations greater than COGCC standards in one of the monitoring wells, MW03.

Beginning in June 2013, AGW conducted four rounds of quarterly ground water BTEX sampling and measured various field parameters at all three monitoring wells to help evaluate plume characteristics and potential natural attenuation. The latest quarterly sampling round included additional analysis for total dissolved solids, nitrates, sulfates, and chlorides. Details regarding the sampling methods, field measurements, and analytical results for the last four quarterly ground water sampling rounds on June 20, September 23, December 16, 2013 and March 20, 2014 are presented below.

#### Ground Water Sampling Methods

To obtain reliable high quality data and comply with Encana requirements, AGW followed Encana's DJ Basin Environmental Group Sampling Standard Operating Procedures (SOP). These procedures address collection, shipment, and handling of water and soil samples in support of Encana's mandate for protection of the environment and compliance with applicable federal and state regulations.

Prior to conducting each ground water sampling round, AGW measured the depth to ground water at each monitoring well using a clean electronic water level indicator tape. To control potential cross contamination, the tape and probe were washed prior to use and between each borehole with a solution of municipal water and Alconox® detergent followed by a municipal water rinse and a distilled water rinse. Table 1 in Attachment B summarizes the ground water depth measurements. Based on topography in the area, the ground water flow direction is assumed to be to the north-northwest. The latest ground water measurements indicate that ground water at the monitoring well locations ranged from 2.81 to 4.27 feet below ground surface.

During the past four quarterly sampling rounds, AGW collected ground water samples from each of the monitoring wells using new plastic tubing with a low-flow peristaltic pump. The flow rate was adjusted to be less than 500 milliliters per minute (ml/min). During purging of the wells, AGW monitored temperature, dissolved oxygen (DO), specific conductance (SC), pH, and oxidation reduction potential (ORP) at three minute intervals to evaluate stabilization criteria. Following fifteen minutes of monitoring and recording these parameters while pumping, or when the parameters stabilized to meet SOP criteria, the samples were collected from the new tubing following the Encana SOP methods. AGW transferred each sample into new laboratory-supplied acid-preserved vials and immediately sealed, labeled, and placed them into a cooler with ice (a preservative) for laboratory submittal.

The samples were shipped to ESC Lab Sciences Laboratory (ESC) in Mount Juliet, Tennessee for analysis within required holding times. During this project, AGW followed chain-of-custody procedures in general accordance with U.S. Environmental Protection Agency (EPA) guidelines.

Ground Water Analytical Methods and Results

ESC analyzed the samples for BTEX following EPA Method 8260B. Samples from that latest sampling round on March 20, 2014 were also tested for total dissolved solids by EPA Method 2540 C-201, and for chloride, nitrate, and sulfate by EPA Method 9056. Quarterly ground water sampling results since 2012 are summarized on Table 2 in Attachment B. The BTEX results for the past four quarters are also summarized below on Table 3. Laboratory reports for the last four quarters are included in Attachment C. Figure 3 in Attachment A illustrates the latest BTEX analytical results.

**Table 3**  
**Ground Water BTEX Analytical Results**  
**Miller 2-17 Tank Battery**  
**June 2013 - March 2014**

Sample Number	Date Sampled	Benzene (ug/L)*	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)
MW01	6/20/13	<0.5	<5.0	<0.5	<1.5
	9/23/13	<1.0	<5.0	<1.0	<3.0
	12/16/13	<1.0	<5.0	<1.0	<3.0
	3/20/14	<1.0	<5.0	<1.0	<3.0
MW02	6/20/13	<0.5	<5.0	<0.5	<1.5
	9/23/13	<1.0	<5.0	<1.0	<3.0
	12/16/13	<1.0	<5.0	<1.0	<3.0
	3/20/14	<1.0	<5.0	<1.0	<3.0
MW03	6/20/13	<b>7.8</b>	<5.0	140	<b>2,900</b>
	9/23/13	<50	<250	260	<b>5,700</b>
	12/16/13	4.7	<50	110	<b>1,700</b>
	3/20/14	<5.0	<25	91	1,200
COGCC Standards**	---	5	560	700	1,400

\* ug/L = Micrograms per liter (parts per billion).

\*\* BTEX standards published by the COGCC on Table 910-1 of their rules, effective May 30, 2011.

To evaluate the BTEX ground water analytical results, AGW compared detected compound concentrations to the regulatory standards published by the COGCC in Table 910-1 of their 900 Series Rules.

Based on last four rounds of analytical results, no BTEX compounds were detected in the samples from MW01 and MW02. BTEX compounds were identified in the samples from MW03, including benzene and/or xylene concentrations greater than COGCC standards during the June, September, and December 2013 rounds. However, the results for the latest (March 2014) sampling round did not contain any BTEX compound concentrations greater than the COGCC standards. This represents the first quarterly sampling round with all three monitoring wells meeting the COGCC BTEX standards. MW03 is downgradient from the former remediation excavation area.

Chloride, nitrate, sulfate, and total dissolved solids analytical results from the March 2014 sampling round are summarized below on Table 4. The associated laboratory report is included in Attachment C. The March 2014 results are also illustrated on Figure 4 in Attachment A.

**Table 4**  
**Ground Water Chloride, Nitrate, Sulfate and**  
**Total Dissolved Solids Analytical Results**  
**Miller 2-17 Tank Battery**  
**March 20, 2014**

Sample Number	Chloride (ug/L)*	Nitrate (ug/L)	Sulfate (ug/L)	Total Dissolved Solids (ug/L)
MW01	96,000	4,300	97,000	570,000
MW02	45,000	52,000	350,000	1,200,000
MW03	23,000	<100	200,000	750,000
COGCC Standards**	<1.25 x background	(No COGCC standard)	1.25 x background	1.25 x background

\* ug/L = Micrograms per liter (parts per billion).

\*\* BTEX standards published by the COGCC on Table 910-1 of their rules, effective May 30, 2011.

Ground water results for chloride, sulfate, and total dissolved solids associated with COGCC regulated sites can be compared to the Table 910-1 standard which is 1.25 times the respective background concentration. The initial chloride, nitrate, sulfate, and total dissolved solids analytical results above can be used to help establish background/baseline concentrations and to help evaluate the potential for natural attenuation of BTEX to occur.

### Conclusions

Following excavation and landfill disposal of approximately 650 cubic yards of petroleum-impacted soils from the tank battery area in 2011. Installation of three monitoring wells and quarterly ground water monitoring was initiated at the Miller 2-17 Tank Battery. Concentrations of benzene and xylenes have historically exceeded COGCC standards at only one monitoring well, MW03. MW03 is downgradient from the former excavation area.

Beginning in June 2013, AGW conducted quarterly ground water sampling for BTEX and measured various field parameters at the three monitoring wells to help evaluate plume characteristics and potential natural attenuation. The latest quarterly sampling round included additional analysis for total dissolved solids, nitrates, sulfates, and chlorides.

Results from the past four quarterly sampling rounds identified BTEX compounds in MW03 only, including benzene and xylene concentrations greater than their respective COGCC standards during the June, September, and December 2013 events. The results for the latest (March 2014) sampling round did not contain any BTEX compound concentrations greater than their respective COGCC standards. This represents the first sampling round with all three monitoring wells meeting the COGCC BTEX standards.

Long-term comparison of analytical results since 2012 generally shows a reduction in BTEX concentration changes at MW03. This is likely related to the contaminant source removal completed in 2011 in conjunction with natural attenuation.

During the latest sampling round, analytical testing was conducted for chlorides, nitrates, sulfates, and total dissolved solids on all thirteen monitoring wells. The chloride, sulfate and total dissolved solids results can be used to identify background levels for future comparison to COGCC standards. In addition, these results can help evaluate the potential for natural attenuation of BTEX to occur.

Based on the project results, continued long-term natural attenuation of BTEX concentrations is anticipated at MW03. When results from four consecutive quarterly sampling rounds indicate compliance with COGCC standards, closure from the COGCC should be requested.

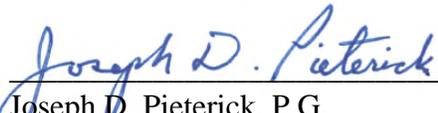
With your approval, AGW will continue quarterly ground water sampling at the three monitoring wells. The next quarterly ground water BTEX sampling round is scheduled for June 2014.

Miller 2-17 Tank Battery  
API Number: 05-123-16647  
Quarterly Ground Water Sampling Summary  
Project Number E13366.EC  
April 7, 2014  
Page 6

Thank you for the opportunity to assist you with this project. If you have any questions or require further information, please call us at (303) 759-8373.

Sincerely,

A. G. WASSENAAR, INC.

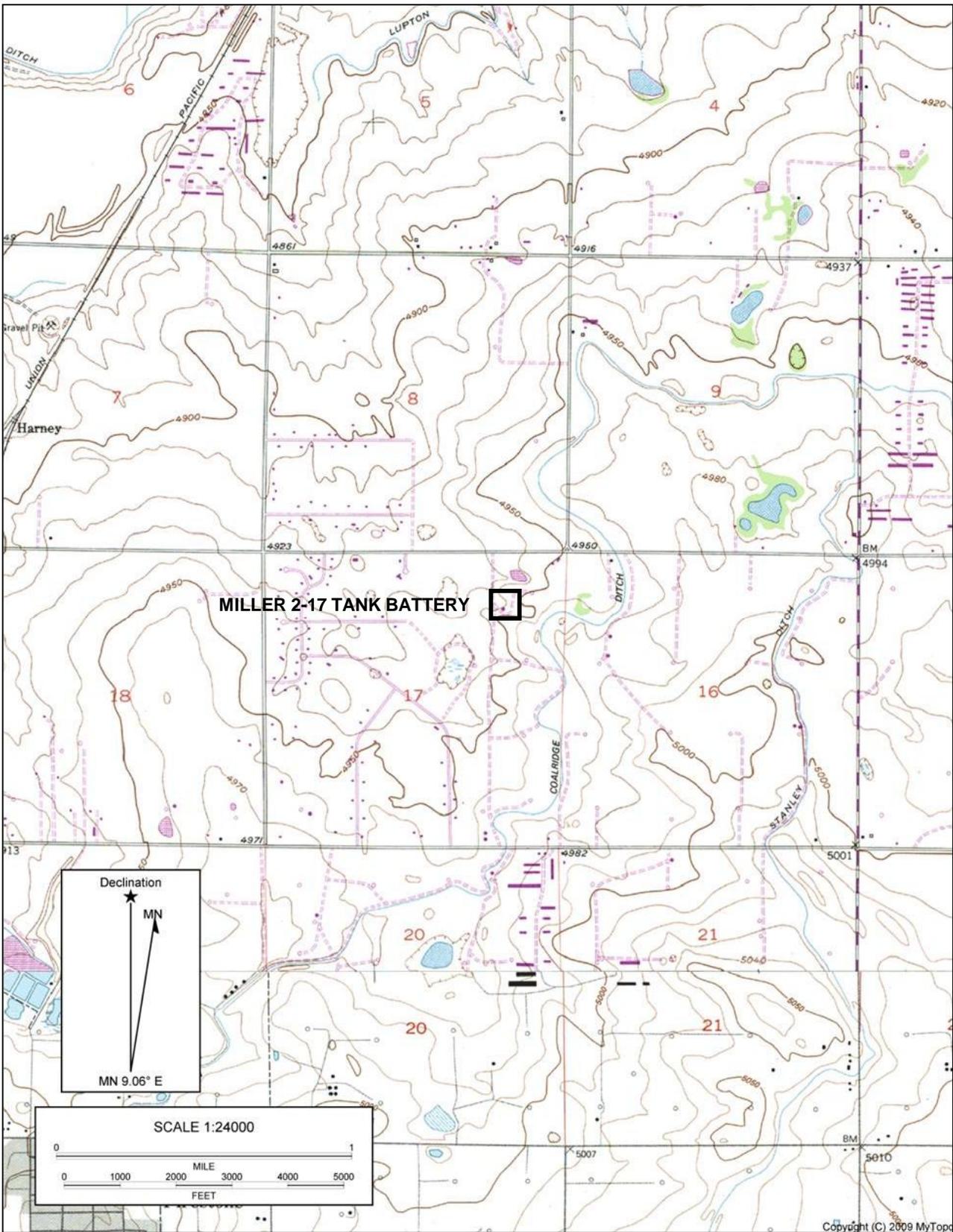
  
\_\_\_\_\_  
Joseph D. Pieterick, P.G.  
Senior Geologist

  
\_\_\_\_\_  
Brian J. Glade, P.E.  
Vice President

JDP/BJG/dd  
Attachments

**ATTACHMENT A**

**FIGURES**



**A.G. WASSENAAR** INC.  
 GEOTECHNICAL • ENVIRONMENTAL  
 CONSULTANTS

**MILLER 2-17 TANK BATTERY  
 NENE SEC17, 2N 67W  
 WELD COUNTY, COLORADO  
 ENCANA OIL & GAS (USA) INC.**

**FIGURE 1  
 SITE TOPOGRAPHY AND  
 LOCATION  
 PROJECT: E13366.EC**



**LEGEND**

- △ MONITORING WELL
- ✗ SUSPECTED RELEASE POINT
- M METER SHED
- - - - - FORMER EXCAVATION EXTENT
- - - - - FENCE
- |— SEPARATOR
- ▨ MACHII-ROSS INFRASTRUCTURE

AST: ABOVEGROUND STORAGE TANK (CONDENSATE)  
 PW: PRODUCED WATER TANK

ALL LOCATIONS ARE APPROXIMATE

**A.G. WASSENAAR** | **INC.**

GEOTECHNICAL • ENVIRONMENTAL  
 CONSULTANTS

MILLER 2-17 TANK BATTERY  
 NENE SEC17, 2N 67W  
 WELD COUNTY, COLORADO  
 ENCANA OIL & GAS (USA) INC.

FIGURE 2  
 SITE DIAGRAM  
 MARCH 20, 2014  
 PROJECT: E13366.EC

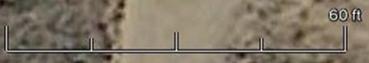


**MW03**  
 B: <5.0  
 T: <25  
 E: 91  
 X: 1200

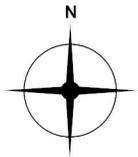
**MW02**  
 B: <1.0  
 T: <5.0  
 E: <1.0  
 X: <3.0

**MW01**  
 B: <1.0  
 T: <5.0  
 E: <1.0  
 X: <3.0

ESTIMATED  
 FLOW DIRECTION



© 2013 Google



**LEGEND**

- ▲ MONITORING WELL
- ▭ M METER SHED
- ▭ BERM
- ▭ SEPARATOR
- ▭ MACHI ROSS INFRASTRUCTURE
- ▭ FENCE
- ▭ FORMER EXCAVATION

SAMPLE ID  
 B: BENZENE  
 T: TOLUENE  
 E: ETHYLBENZENE  
 X: TOTAL XYLENES  
 AST: ABOVEGROUND STORAGE TANK (CONDENSATE)  
 ECD: EMISSION CONTROL DEVICE  
 PW: PRODUCED WATER TANK  
 < : BELOW LABORATORY DETECTION LIMITS

NOTE: ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER (ug/L).

ALL LOCATIONS ARE APPROXIMATE

**A.G. WASSENAAR** | INC.  
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 CONSULTANTS

MILLER 2-17 TANK BATTERY  
 NENE SEC17, 2N 67W  
 WELD COUNTY, COLORADO  
 ENCANA OIL & GAS (USA) INC.

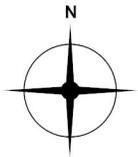
**FIGURE 3**  
 GROUND WATER  
 ANALYTICAL RESULTS  
 MARCH 20, 2014  
 PROJECT: E13366.EC



**MW03**  
 CH: 23,000  
 NI: ND  
 SU: 200,000  
 DS: 750,000

**MW02**  
 CH: 45,000  
 NI: 52,000  
 SU: 350,000  
 DS: 1,200,000

**MW01**  
 CH: 96,000  
 NI: 4,300  
 SU: 97,000  
 DS: 570,000



**LEGEND**

- MONITORING WELL
- FORMER EXCAVATION
- FENCE
- METER SHED
- BERM
- SEPARATOR

SAMPLE ID  
 CH: CHLORIDE  
 NI: NITRATE  
 SU: SULFATE  
 DS: DISSOLVED SOLIDS  
 ND: NOT DETECTED

AST: ABOVEGROUND STORAGE TANK (CONDENSATE)  
 PW: PRODUCED WATER TANK  
 CDOT: COLORADO DEPARTMENT OF TRANSPORTATION

NOTE: ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER (ug/L).

ALL LOCATIONS ARE APPROXIMATE

**A.G. WASSENAAR** | **INC.**  
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 CONSULTANTS

**MILLER 2-17 TANK BATTERY  
 NENE SEC17, 2N 67W  
 WELD COUNTY, COLORADO  
 ENCANA OIL & GAS (USA) INC.**

**FIGURE 4  
 GROUND WATER  
 ADDITIONAL ANALYTICAL  
 RESULTS  
 MARCH 20, 2014  
 PROJECT: E13366.EC**

**ATTACHMENT B**

**TABLES**

**TABLE 1**  
**Miller 2-17 Tank Battery Ground Water Elevations**

Well Name	Date Sampled	Depth to Ground Water from TOC (feet)	Well Casing Stick-up Height (feet)	Depth to Ground Water (feet bgs)
MW01	1/18/2012	11.22	1.95	9.27
MW01	4/13/2012	10.73	1.95	8.78
MW01	7/2/2012	10.97	1.95	9.02
MW01	10/3/2012	11.00	1.85	9.15
MW01	1/16/2013	10.08	1.85	8.23
MW01	6/20/2013	9.03	1.85	7.18
MW01	9/23/2013	8.46	1.85	6.61
MW01	12/16/2013	5.42	0.65	4.77
MW01	3/20/2014	4.92	0.65	4.27
MW02	1/18/2012	11.27	3.11	8.16
MW02	4/13/2012	10.80	3.11	7.69
MW02	7/2/2012	11.09	3.11	7.98
MW02	10/3/2012	11.09	3.16	7.93
MW02	1/16/2013	10.12	3.16	6.96
MW02	6/20/2013	9.20	3.16	6.04
MW02	9/23/2013	8.44	3.16	5.28
MW02	12/16/2013	6.81	3.16	3.65
MW02	3/20/2014	6.32	3.16	3.16
MW03	1/18/2012	10.76	2.95	7.81
MW03	4/13/2012	10.20	2.95	7.25
MW03	7/2/2012	10.45	2.95	7.50
MW03	10/3/2012	10.52	2.90	7.62
MW03	1/16/2013	9.61	2.90	6.71
MW03	6/20/2013	8.60	2.90	5.70
MW03	9/23/2013	7.74	2.90	4.84
MW03	12/16/2013	6.21	2.90	3.31
MW03	3/20/2014	5.71	2.90	2.81

TOC: Top of casing

**TABLE 2****Miller 2-17 Tank Battery Ground Water BTEX Results**

Well Name	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)
MW01	1/18/2012	< 1.0	1.6	< 1.0	< 1.0
MW01	4/13/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW01	7/2/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW01	10/3/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW01	1/16/2013	< 1.0	< 1.0	< 1.0	< 1.0
MW01	6/20/2013	< 0.50	< 5.0	< 0.50	< 1.50
MW01	9/23/2013	< 1.0	< 5.0	< 1.0	< 3.0
MW01	12/16/2013	< 1.0	< 5.0	< 1.0	< 3.0
MW01	3/20/2014	< 1.0	< 5.0	< 1.0	< 3.0
MW02	1/18/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW02	4/13/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW02	7/2/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW02	10/3/2012	< 1.0	< 1.0	< 1.0	< 1.0
MW02	1/16/2013	< 1.0	< 1.0	< 1.0	< 1.0
MW02	6/20/2013	< 0.50	< 5.0	< 0.50	< 1.50
MW02	9/23/2013	< 1.0	< 5.0	< 1.0	< 3.0
MW02	12/16/2013	< 1.0	< 5.0	< 1.0	< 3.0
MW02	3/20/2014	< 1.0	< 5.0	< 1.0	< 3.0
MW03	1/18/2012	<b>24</b>	< 1.0	150	<b>4,000</b>
MW03	4/13/2012	<b>45</b>	1.1	270	<b>3,700</b>
MW03	7/2/2012	<b>13</b>	< 1.0	86	<b>2,200</b>
MW03	10/3/2012	<b>7.5</b>	< 1.0	79	1,060
MW03	1/16/2013	<b>11</b>	< 1.0	19	<b>2,200</b>
MW03	6/20/2013	<b>7.8</b>	< 5.0	140	<b>2,900</b>
MW03	9/23/2013	< 50	< 250	260	<b>5,700</b>
MW03	12/16/2013	4.7	< 50	110	<b>1,700</b>
MW03	3/20/2014	< 5.0	< 25	91	1,200

COGCC Table 910-1 Standards:	5	560	700	1,400
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ug/L: Micrograms per liter

Note Values in bold font are greater than the COGCC Table 910-1 standards.

**ATTACHMENT C**  
**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

Blake Ford / Joe Pieterick  
Encana Oil & Gas- Longmont, CO  
3601 Stagecoach Rd  
Longmont, CO 80504

### Report Summary

Friday June 28, 2013

Report Number: L642849

Samples Received: 06/21/13

Client Project: E13366.EC

Description: Miller 2-17

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

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

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

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 Mt. Juliet, TN 37122  
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 Tax I.D. 62-0814289  
 Est. 1970

REPORT OF ANALYSIS

June 28, 2013

Blake Ford / Joe Pieterick  
 Encana Oil & Gas- Longmont, CO  
 3601 Stagecoach Rd  
 Longmont, CO 80504

ESC Sample # : L642849-01  
 Site ID : MILLER 2-17  
 Project # : E13366.EC

Date Received : June 21, 2013  
 Description : Miller 2-17  
 Sample ID : MILLER 2-17-MW01-062013  
 Collected By : Joseph D Pieteriak  
 Collection Date : 06/20/13 14:23

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.50	ug/l	8021B	06/23/13	1
Toluene	BDL	5.0	ug/l	8021B	06/23/13	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/23/13	1
Total Xylene	BDL	1.5	ug/l	8021B	06/23/13	1
Surrogate Recovery(%) a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021B	06/23/13	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: 06/28/13 13:51 Printed: 06/28/13 14:08



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

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

REPORT OF ANALYSIS

June 28, 2013

Blake Ford / Joe Pieterick  
Encana Oil & Gas- Longmont, CO  
3601 Stagecoach Rd  
Longmont, CO 80504

Date Received : June 21, 2013  
Description : Miller 2-17  
Sample ID : MILLER 2-17-MW02-062013  
Collected By : Joseph D Pieteriak  
Collection Date : 06/20/13 14:26

ESC Sample # : L642849-02  
Site ID : MILLER 2-17  
Project # : E13366.EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.50	ug/l	8021B	06/23/13	1
Toluene	BDL	5.0	ug/l	8021B	06/23/13	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/23/13	1
Total Xylene	BDL	1.5	ug/l	8021B	06/23/13	1
Surrogate Recovery(%) a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021B	06/23/13	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: 06/28/13 13:51 Printed: 06/28/13 14:08



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 Mt. Juliet, TN 37122  
 (615) 758-5858  
 1-800-767-5859  
 Fax (615) 758-5859  
 Tax I.D. 62-0814289  
 Est. 1970

REPORT OF ANALYSIS

June 28, 2013

Blake Ford / Joe Pieterick  
 Encana Oil & Gas- Longmont, CO  
 3601 Stagecoach Rd  
 Longmont, CO 80504

Date Received : June 21, 2013  
 Description : Miller 2-17  
 Sample ID : MILLER 2-17-MW03-062013  
 Collected By : Joseph D Pieteriak  
 Collection Date : 06/20/13 14:52

ESC Sample # : L642849-03  
 Site ID : MILLER 2-17  
 Project # : E13366.EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	7.8	0.50	ug/l	8021B	06/23/13	1
Toluene	BDL	5.0	ug/l	8021B	06/23/13	1
Ethylbenzene	140	0.50	ug/l	8021B	06/23/13	1
Total Xylene	2900	30.	ug/l	8021B	06/27/13	20
Surrogate Recovery(%) a,a,a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/23/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/28/13 13:51 Printed: 06/28/13 14:08

Summary of Remarks For Samples Printed  
06/28/13 at 14:08:08

TSR Signing Reports: 358  
R5 - Desired TAT

Try not to report benzene as BDL above a 250x dilution.

Sample: L642849-01 Account: ENCANLCO Received: 06/21/13 09:30 Due Date: 06/28/13 00:00 RPT Date: 06/28/13 13:51

Sample: L642849-02 Account: ENCANLCO Received: 06/21/13 09:30 Due Date: 06/28/13 00:00 RPT Date: 06/28/13 13:51

Sample: L642849-03 Account: ENCANLCO Received: 06/21/13 09:30 Due Date: 06/28/13 00:00 RPT Date: 06/28/13 13:51

Company Name/Address  
**ENCANLCO**  
 Encana Oil and Gas  
 3601 Stagecoach Rd.  
 Longmont, CO 80504

Alternate Billing  
 Encana Oil and Gas  
 Attn: Blake Ford  
 Longmont CO 80504

Report to: B. Ford, Joe Pietnick  
**CHARLIE JENSEN**

Project Description: **MILLER-2-17**

Client Project No. **E13366-ES**

Site/Facility ID# **MILLER-2-17**

Lab Project# **ENCANLCO-WASSENNAR**

PHONE: 970-379-5558  
 FAX: 303-791-2107 (JFK)

Collected by: **JOSEPH P. PIETNICK**

Collected by (signature): *Joseph P. Pietnick*

Packed on Ice  Y  N

Project Description: **MILLER-2-17**

Lab Project# **ENCANLCO-WASSENNAR**

P.O.#

Sample ID	Comp/Grab	Matrix	Depth	Date Results Needed			Cmrs
				Same Day.....200%	Next Day.....100%	Two Day.....50%	
MILLER-2-17-MW01-062013	GW	GW	~	06-20-13	14:23	2	2
MILLER-2-17-MW02-062013	GW	GW	~	06-20-13	14:26	2	2
MILLER-2-17-MW03-062013	GW	GW	~	06-20-13	14:52	2	2

Analysis/Container/Preservative	Remarks/contaminant	Sample # (lab only)
BTEx (2) 40ml Amp w/HCl		1642849-01
		02
		03

Company Name/Address  
**ENCANLCO**  
 Encana Oil and Gas  
 Attn: Blake Ford  
 Longmont CO 80504

Report to: B. Ford, Joe Pietnick  
**CHARLIE JENSEN**

Project Description: **MILLER-2-17**

Client Project No. **E13366-ES**

Site/Facility ID# **MILLER-2-17**

Lab Project# **ENCANLCO-WASSENNAR**

P.O.#

PHONE: 970-379-5558  
 FAX: 303-791-2107 (JFK)

Collected by: **JOSEPH P. PIETNICK**

Collected by (signature): *Joseph P. Pietnick*

Packed on Ice  Y  N

Project Description: **MILLER-2-17**

Lab Project# **ENCANLCO-WASSENNAR**

P.O.#

Chain of Custody  
 Page 1 of 1

Prepared by: **D235**

**ENVIRONMENTAL Science corp**  
 12065 Lebanon Road  
 Mt. Juliet TN 37122

Phone (615)758-5858  
 Phone (800) 767-5859  
 FAX (615)758-5859

CoCode (lab use only)  
**ENCANLCO**  
 Template/Prelogin

Shipped Via: Denver Service Center

Remarks/contaminant

Sample # (lab only)  
 1642849-01

1642849-02

1642849-03

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

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

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

Relinquisher by (Signature): *Joseph P. Pietnick*

Date: 6-20-13

Time: 16:12

Received by (Signature): *Charlie Jensen*

Date: 6-20-13

Time: 8:15

Relinquisher by (Signature): *Joe Pietnick*

Date: 6-21-13

Time: 09:30

Received by (Signature): *Charlie Jensen*

Date: 6-21-13

Time: 09:30

Condition: (lab use only) **02**

PH/Checked: NCF



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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 753-5859

Tax I.D. 62-0814289

Est. 1970

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

<p style="text-align: center;"><b>Report Summary</b></p> <p style="text-align: center;">Monday September 30, 2013</p> <p style="text-align: center;">Report Number: L659282</p> <p style="text-align: center;">Samples Received: 09/24/13</p> <p style="text-align: center;">Client Project: E13366.EC</p> <p style="text-align: center;">Description: MILLER 2-17</p>
--

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

Entire Report Reviewed By:

  
Jarred Willis, ESC Representative

**Laboratory Certification Numbers**

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

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

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

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Est. 1970

REPORT OF ANALYSIS

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

September 30, 2013

Date Received : September 24, 2013  
Description : MILLER 2-17  
Sample ID : MILLER2-17-MW01-092313  
Collected By : Joe Pieterick  
Collection Date : 09/23/13 15:15

ESC Sample # : L659282-01

Site ID : MILLER 2-17

Project # : E13366.EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	09/29/13	1
Toluene	BDL	5.0	ug/l	8260B	09/29/13	1
Ethylbenzene	BDL	1.0	ug/l	8260B	09/29/13	1
Total Xylenes	BDL	3.0	ug/l	8260B	09/29/13	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	09/29/13	1
Dibromofluoromethane	106.		% Rec.	8260B	09/29/13	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	09/29/13	1
4-Bromofluorobenzene	95.9		% Rec.	8260B	09/29/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/30/13 11:19 Printed: 09/30/13 11:19



L·A·B S·C·I·E·N·C·E·S

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Est. 1970

REPORT OF ANALYSIS

September 30, 2013

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

ESC Sample # : L659282-02

Date Received : September 24, 2013  
Description : MILLER 2-17

Site ID : MILLER 2-17

Sample ID : MILLER2-17-MW02-092313

Project # : E13366.EC

Collected By : Joe Pieterick  
Collection Date : 09/23/13 15:47

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	09/29/13	1
Toluene	BDL	5.0	ug/l	8260B	09/29/13	1
Ethylbenzene	BDL	1.0	ug/l	8260B	09/29/13	1
Total Xylenes	BDL	3.0	ug/l	8260B	09/29/13	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	09/29/13	1
Dibromofluoromethane	107.		% Rec.	8260B	09/29/13	1
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	09/29/13	1
4-Bromofluorobenzene	97.2		% Rec.	8260B	09/29/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 09/30/13 11:19 Printed: 09/30/13 11:19



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Est. 1970

REPORT OF ANALYSIS

September 30, 2013

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

ESC Sample # : L659282-03

Date Received : September 24, 2013  
 Description : MILLER 2-17  
 Sample ID : MILLER2-17-MW03-092313

Site ID : MILLER 2-17

Collected By : Joe Pieterick  
 Collection Date : 09/23/13 15:17

Project # : E13366.EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	50.	ug/l	8260B	09/29/13	50
Toluene	BDL	250	ug/l	8260B	09/29/13	50
Ethylbenzene	260	50.	ug/l	8260B	09/29/13	50
Total Xylenes	5700	150	ug/l	8260B	09/29/13	50
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	09/29/13	50
Dibromofluoromethane	105.		% Rec.	8260B	09/29/13	50
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	09/29/13	50
4-Bromofluorobenzene	94.6		% Rec.	8260B	09/29/13	50

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: 09/30/13 11:19 Printed: 09/30/13 11:19

Summary of Remarks For Samples Printed  
09/30/13 at 11:19:21

TSR Signing Reports: 358  
RS - Desired TAT

Log all BTEX waters as V826BTEX unless specified otherwise. Try not to report benzene as BDL  
above a 250x dilution.

Sample: L659282-01 Account: ENCANLCO Received: 09/24/13 16:00 Due Date: 10/01/13 00:00 RPT Date: 09/30/13 11:19

Sample: L659282-02 Account: ENCANLCO Received: 09/24/13 16:00 Due Date: 10/01/13 00:00 RPT Date: 09/30/13 11:19

Sample: L659282-03 Account: ENCANLCO Received: 09/24/13 16:00 Due Date: 10/01/13 00:00 RPT Date: 09/30/13 11:19



12005 Liberman Rd  
Mount Juliet, TN 37121  
Phone: 615-758-6338  
Fax: 615-798-6959

6657 292  
B022

Account: ENCANLCO  
Template:  
PreOpn:  
TSR:  
PB:

Shipped Via:  
Name, Concentration  
Jarable # (Barbary)

Analysis / Container / Preservative

ENCANLCO Oil & Gas 3601 Stagecoach Rd. Longmont, CO 80504	Encana Oil & Gas Blake Ford Attn: Longmont, CO	Miller 2-17 Sample ID MILLER2-17-ARW01-05 2313 MILLER2-17-ARW02-04 2313 MILLER2-17-ARW03-03 2313	Client Project # E13066EC Site/ Facility ID # MILLER 2-17 P.O. # 2137665	Lab Project # ENCANLCO-MASSENAAR	Matrix * GW GW GW	Depth 2 2 2	Date 9-23-17 9-23-17 9-23-17	Time 15:16 15:47 3:47	No. of Out:	Temp	Flow	Other	Condition (lab use only)
--	---	--	--	-------------------------------------	----------------------------	----------------------	---------------------------------------	--------------------------------	----------------	------	------	-------	--------------------------

Report to:  
B. Ford, Joe Pietrick, Charlie Jensen  
Project  
Description: MILLER 2-17  
Phone: 970-379-5558  
Fax:  
Collected by (primary)  
Joe Pietrick  
Collected by (secondary)  
Joe Jensen  
Irradiated  
Packaging Ice N Y X

Email To:  
David.Ford@encana.com, pietrickj@agussenmaar.com  
City/State  
Collected:  
Lab Project #  
ENCANLCO-MASSENAAR  
P.O. # 2137665

Rush? (Lab MUST be notified)  
Signature  
200%  
100%  
50%  
25%  
Date Results Needed

Remarks:  
\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other  
Relinquished by: (Signature)  
Requested by: (Signature)  
Relinquished by: (Signature)

Received by: (Signature)  
Time: 17:27  
Date: 9-23-17  
Received by: (Signature)  
Time: 6:45  
Date: 9-23-17  
Received by: (Signature)  
Time: 9:50  
Date: 9-23-17

GO (S) (Instat) Y N  
Checked NG



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Tax I.D. 62-0814289  
Est. 1970

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

<p style="text-align: center;"><b>Report Summary</b></p> <p style="text-align: center;">Tuesday December 24, 2013</p> <p style="text-align: center;">Report Number: L674274 Samples Received: 12/17/13 Client Project: E13366-EC Description: Miller 2-17</p>
---

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:

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

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Est. 1970

REPORT OF ANALYSIS

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

December 24, 2013

Date Received : December 17, 2013  
 Description : Miller 2-17

ESC Sample # : L674274-01

Sample ID : MILLER2-17-MW01-12-16-13

Site ID :

Collected By : Joe Pieterick  
 Collection Date : 12/16/13 13:58

Project # : E13366-EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	12/21/13	1
Toluene	BDL	5.0	ug/l	8260B	12/21/13	1
Ethylbenzene	BDL	1.0	ug/l	8260B	12/21/13	1
Total Xylenes	BDL	3.0	ug/l	8260B	12/21/13	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	12/21/13	1
Dibromofluoromethane	101.		% Rec.	8260B	12/21/13	1
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	12/21/13	1
4-Bromofluorobenzene	104.		% Rec.	8260B	12/21/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 12/23/13 16:01 Revised: 12/24/13 16:21



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

December 24, 2013

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

ESC Sample # : L674274-02

Date Received : December 17, 2013  
Description : Miller 2-17  
Sample ID : MILLER2-17-MW02-12-16-13  
Collected By : Joe Pieterick  
Collection Date : 12/16/13 14:05

Site ID :  
Project # : E13366-EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	1.0	ug/l	8260B	12/21/13	1
Toluene	BDL	5.0	ug/l	8260B	12/21/13	1
Ethylbenzene	BDL	1.0	ug/l	8260B	12/21/13	1
Total Xylenes	BDL	3.0	ug/l	8260B	12/21/13	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	12/21/13	1
Dibromofluoromethane	98.1		% Rec.	8260B	12/21/13	1
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	12/21/13	1
4-Bromofluorobenzene	103.		% Rec.	8260B	12/21/13	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: 12/23/13 16:01 Revised: 12/24/13 16:21



L.A.B S.C.I.E.N.C.E.S

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Est. 1970

REPORT OF ANALYSIS

December 24, 2013

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

ESC Sample # : L674274-03

Date Received : December 17, 2013  
Description : Miller 2-17  
Sample ID : MILLER2-17-MW03-12-16-13  
Collected By : Joe Pieterick  
Collection Date : 12/16/13 14:33

Site ID :  
Project # : E13366-EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	4.7	4.7	ug/l	8260B	12/21/13	10
Toluene	BDL	50.	ug/l	8260B	12/21/13	10
Ethylbenzene	110	10.	ug/l	8260B	12/21/13	10
Total Xylenes	1700	30.	ug/l	8260B	12/21/13	10
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	12/21/13	10
Dibromofluoromethane	102.		% Rec.	8260B	12/21/13	10
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	12/21/13	10
4-Bromofluorobenzene	104.		% Rec.	8260B	12/21/13	10

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: 12/23/13 16:01 Revised: 12/24/13 16:21

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L674274-03	WG697838	SAMP	Benzene	R2871204	J

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

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  
12/24/13 at 16:21:04

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.

Sample: L674274-01 Account: ENCANLCO Received: 12/17/13 10:00 Due Date: 12/24/13 00:00 RPT Date: 12/23/13 16:01

Sample: L674274-02 Account: ENCANLCO Received: 12/17/13 10:00 Due Date: 12/24/13 00:00 RPT Date: 12/23/13 16:01

Sample: L674274-03 Account: ENCANLCO Received: 12/17/13 10:00 Due Date: 12/24/13 00:00 RPT Date: 12/23/13 16:01



12065 Lebanon Rd  
 Mount Juliet, TN 37122  
 Phone: 615-758-5853  
 Phone: 800-787-5859  
 Fax: 615-758-5859

Lab Project #  
**E13366.EC**

Client Project #  
**ENCANLCO-WASSENAAAR**

Site/Facility ID #  
**13366.EC**

Project Description:  
**MILLER 2-17**

Report to:  
**B. Ford, Joe Pietrick, Charlie Jensen**

Company Name/Address:  
**ENCANLCO**  
 Encana Oil and Gas  
 3601 Stagecoach Rd.  
 Longmont, CO 80504

Billing Information:  
 Encana oil and Gas  
 Attn: Blake Ford  
 ENCANLCO-WASSENAAAR  
 Email To: **David.Ford@encana.com; pietrickj@encana.com**

Sample ID	Camp/Grab	Matrix *	Depth	Date Results Needed			Time	Chrs
				Email? <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>		
MILLER2-17-MW01-12-16-13	GW	GW				12/16/13	13:58	2
MILLER2-17-MW02-12-16-13	GW	GW				12/16/13	2:05	2
MILLER2-17-MW03-12-16-13	GW	GW				12/16/13	14:53	2

Matrix/Contaminant	Sample # (Lab use only)
Matrix: SS - Soil	
Contaminant: GW - Groundwater	
Contaminant: WW - WasteWater	
Contaminant: DW - Drinking Water	
Contaminant: OT - Other	

PH: \_\_\_\_\_ Temp: \_\_\_\_\_

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

Samples returned via:  UPS  FedEx  Courier  Other

Received by (Signature): *[Signature]* Date: 12-16-13 Time: 5:42

Received by (Signature): *[Signature]* Date: 12-16-13 Time: 5:30

Relinquished by (Signature): *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by (Signature): *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by (Signature): *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

562229801028

L674274  
 B061

Account: ENCANLCO  
 Template:  
 Prelogin:  
 TSR:  
 Cooler:  
 Shipped Via:  
 Rem./Contaminant: Sample # (Lab use only)



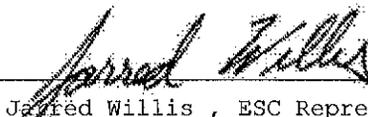
12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859  
Tax I.D. 62-0814289  
Est. 1970

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

**Report Summary**  
  
Tuesday April 01, 2014  
  
Report Number: L689243  
Samples Received: 03/21/14  
Client Project: E13366 EC  
  
Description: Miller 2-17

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

Entire Report Reviewed By:

  
Jarred Willis, ESC Representative

**Laboratory Certification Numbers**

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-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.

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REPORT OF ANALYSIS

April 01, 2014

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

ESC Sample # : L689243-01

Date Received : March 21, 2014  
 Description : Miller 2-17  
 Sample ID : MILLER2-17-MW01-032014  
 Collected By : Joe Pieterick  
 Collection Date : 03/20/14 10:46

Site ID :  
 Project # : E13366 EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	96000	1000	ug/l	9056	03/21/14	1
Nitrate	4300	100	ug/l	9056	03/21/14	1
Sulfate	97000	5000	ug/l	9056	03/21/14	1
Dissolved Solids	570000	10000	ug/l	2540 C-201	03/25/14	1
Benzene	BDL	1.0	ug/l	8260B	03/27/14	1
Toluene	BDL	5.0	ug/l	8260B	03/27/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	03/27/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	03/27/14	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	03/27/14	1
Dibromofluoromethane	101.		% Rec.	8260B	03/27/14	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	03/27/14	1
4-Bromofluorobenzene	99.4		% Rec.	8260B	03/27/14	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: 03/28/14 09:29 Revised: 04/01/14 10:13



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REPORT OF ANALYSIS

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

April 01, 2014

Date Received : March 21, 2014  
 Description : Miller 2-17  
 Sample ID : MILLER2-17-MW02-032014  
 Collected By : Joe Pieterick  
 Collection Date : 03/20/14 11:27

ESC Sample # : L689243-02  
 Site ID :  
 Project # : E13366 EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	45000	10000	ug/l	9056	03/21/14	10
Nitrate	52000	1000	ug/l	9056	03/21/14	10
Sulfate	350000	50000	ug/l	9056	03/21/14	10
Dissolved Solids	1200000	10000	ug/l	2540 C-201	03/25/14	1
Benzene	BDL	1.0	ug/l	8260B	03/27/14	1
Toluene	BDL	5.0	ug/l	8260B	03/27/14	1
Ethylbenzene	BDL	1.0	ug/l	8260B	03/27/14	1
Total Xylenes	BDL	3.0	ug/l	8260B	03/27/14	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	03/27/14	1
Dibromofluoromethane	104.		% Rec.	8260B	03/27/14	1
a, a, a-Trifluorotoluene	101.		% Rec.	8260B	03/27/14	1
4-Bromofluorobenzene	100.		% Rec.	8260B	03/27/14	1

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

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

April 01, 2014

Date Received : March 21, 2014  
 Description : Miller 2-17  
 Sample ID : MILLER2-17-MW03-032014  
 Collected By : Joe Pieterick  
 Collection Date : 03/20/14 12:15

ESC Sample # : L689243-03  
 Site ID :  
 Project # : E13366 EC

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	23000	1000	ug/l	9056	03/21/14	1
Nitrate	BDL	100	ug/l	9056	03/21/14	1
Sulfate	200000	25000	ug/l	9056	03/22/14	5
Dissolved Solids	750000	10000	ug/l	2540 C-201	03/25/14	1
Benzene	BDL	5.0	ug/l	8260B	03/29/14	5
Toluene	BDL	25.	ug/l	8260B	03/29/14	5
Ethylbenzene	91.	5.0	ug/l	8260B	03/29/14	5
Total Xylenes	1200	15.	ug/l	8260B	03/29/14	5
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	03/29/14	5
Dibromofluoromethane	92.6		% Rec.	8260B	03/29/14	5
a,a,a-Trifluorotoluene	106.		% Rec.	8260B	03/29/14	5
4-Bromofluorobenzene	112.		% Rec.	8260B	03/29/14	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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