

EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L782564
Samples Received: 08/13/2015
Project Number: LONG 1-3
Description: Long 1-3 Pit
Site: LONG 1-3
Report To: Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Jarred Willis
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



¹Cp: Cover Page 1

²Tc: Table of Contents 2

³Ss: Sample Summary 3

⁴Cn: Case Narrative 5

⁵Sr: Sample Results 6

2015-0812-LONG 1-3 PIT (S WALL) 4FT L782564-01 6

2015-0812-LONG 1-3 PIT (W WALL) 4FT L782564-02 7

2015-0812-LONG 1-3 PIT (N WALL) 4FT L782564-03 8

2015-0812-LONG 1-3 PIT (E WALL) 4FT L782564-04 9

2015-0812-LONG 1-3 PIT (BOT) 6FT L782564-05 10

2015-0812-LONG 1-3 PIT (STOCKPILE) L782564-06 12

⁶Gl: Glossary of Terms 14

⁷Al: Accreditations & Locations 15

⁸Sc: Chain of Custody 16

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Gl

⁷Al

⁸Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



2015-0812-LONG 1-3 PIT (S WALL) 4FT L782564-01 Solid

			Collected by Matt Kasten	Collected date/time 08/12/15 12:30	Received date/time 08/13/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO	WG809269	1	08/14/15 16:49	08/15/15 01:03	CLG
Volatile Organic Compounds (GC) by Method 8021/8015	WG809082	5	08/13/15 23:16	08/14/15 07:30	MCB

¹ Cp

² Tc

³ Ss

2015-0812-LONG 1-3 PIT (W WALL) 4FT L782564-02 Solid

			Collected by Matt Kasten	Collected date/time 08/12/15 12:35	Received date/time 08/13/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO	WG809269	1	08/14/15 16:49	08/15/15 01:14	CLG
Volatile Organic Compounds (GC) by Method 8021/8015	WG809082	5	08/13/15 23:16	08/14/15 07:55	MCB

⁴ Cn

⁵ Sr

⁶ Gl

2015-0812-LONG 1-3 PIT (N WALL) 4FT L782564-03 Solid

			Collected by Matt Kasten	Collected date/time 08/12/15 12:40	Received date/time 08/13/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO	WG809269	1	08/14/15 16:49	08/15/15 01:25	CLG
Volatile Organic Compounds (GC) by Method 8021/8015	WG809082	5	08/13/15 23:16	08/14/15 14:57	MCB

⁷ Al

⁸ Sc

2015-0812-LONG 1-3 PIT (E WALL) 4FT L782564-04 Solid

			Collected by Matt Kasten	Collected date/time 08/12/15 12:45	Received date/time 08/13/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO	WG809269	1	08/14/15 16:49	08/15/15 01:36	CLG
Volatile Organic Compounds (GC) by Method 8021/8015	WG809082	5	08/13/15 23:16	08/14/15 15:22	MCB

2015-0812-LONG 1-3 PIT (BOT) 6FT L782564-05 Solid

			Collected by Matt Kasten	Collected date/time 08/12/15 12:50	Received date/time 08/13/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG808983	1	08/17/15 10:52	08/18/15 11:39	JDG
Calculated Results	WG809022	1	08/14/15 10:31	08/18/15 15:12	WBD
Mercury by Method 7471A	WG809114	1	08/14/15 09:20	08/15/15 09:53	BRJ
Metals (ICP) by Method 6010B	WG809022	1	08/14/15 10:31	08/14/15 15:34	WBD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG809337	1	08/15/15 02:43	08/18/15 11:28	KMF
Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO	WG809654	1	08/17/15 00:38	08/17/15 12:29	CLG
Volatile Organic Compounds (GC) by Method 8021/8015	WG809082	5	08/13/15 23:16	08/14/15 15:47	MCB
Wet Chemistry by Method 2580 B-2011	WG808966	1	08/14/15 08:56	08/14/15 10:00	JER
Wet Chemistry by Method 3060A/7196A	WG809424	1	08/16/15 05:00	08/17/15 08:49	JM
Wet Chemistry by Method 9045D	WG809245	1	08/17/15 14:00	08/17/15 14:00	SJM
Wet Chemistry by Method 9050AMod	WG809763	1	08/18/15 10:03	08/18/15 10:03	TOF

2015-0812-LONG 1-3 PIT (STOCKPILE) L782564-06 Solid

			Collected by Matt Kasten	Collected date/time 08/12/15 13:00	Received date/time 08/13/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG808983	1	08/17/15 10:52	08/18/15 11:39	JDG
Calculated Results	WG809022	1	08/14/15 10:31	08/18/15 15:12	WBD
Mercury by Method 7471A	WG809114	1	08/14/15 09:20	08/15/15 10:01	BRJ
Metals (ICP) by Method 6010B	WG809022	1	08/14/15 10:31	08/14/15 15:21	WBD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG809337	1	08/15/15 02:43	08/18/15 11:50	KMF
Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO	WG809269	1	08/14/15 16:49	08/15/15 02:21	CLG
Volatile Organic Compounds (GC) by Method 8021/8015	WG809082	5	08/13/15 23:16	08/14/15 16:12	MCB



2015-0812-LONG 1-3 PIT (STOCKPILE) L782564-06 Solid

Collected by
Matt KastenCollected date/time
08/12/15 13:00Received date/time
08/13/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Wet Chemistry by Method 2580 B-2011	WG808966	1	08/14/15 08:56	08/14/15 10:00	JER
Wet Chemistry by Method 3060A/7196A	WG809424	1	08/16/15 05:00	08/17/15 08:49	JM
Wet Chemistry by Method 9045D	WG809245	1	08/17/15 14:00	08/17/15 14:00	SJM
Wet Chemistry by Method 9050AMod	WG809763	1	08/18/15 10:03	08/18/15 10:03	TOF

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Gl⁷Al⁸Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the

Jarred Willis
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Gl

⁷ Al

⁸ Sc



Volatile Organic Compounds (GC) by Method 8021/8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	08/14/2015 07:30	WG809082
Toluene	ND		0.0250	5	08/14/2015 07:30	WG809082
Ethylbenzene	ND		0.00250	5	08/14/2015 07:30	WG809082
Total Xylene	0.0285	J6	0.00750	5	08/14/2015 07:30	WG809082
TPH (GC/FID) Low Fraction	0.882		0.500	5	08/14/2015 07:30	WG809082
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	95.8		59.0-128		08/14/2015 07:30	WG809082
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	102		54.0-144		08/14/2015 07:30	WG809082

Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	39.4		4.00	1	08/15/2015 01:03	WG809269
(S) <i>o</i> -Terphenyl	59.8		50.0-150		08/15/2015 01:03	WG809269

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc



Volatile Organic Compounds (GC) by Method 8021/8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	08/14/2015 07:55	WG809082
Toluene	ND		0.0250	5	08/14/2015 07:55	WG809082
Ethylbenzene	ND		0.00250	5	08/14/2015 07:55	WG809082
Total Xylene	ND		0.00750	5	08/14/2015 07:55	WG809082
TPH (GC/FID) Low Fraction	ND		0.500	5	08/14/2015 07:55	WG809082
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	94.6		59.0-128		08/14/2015 07:55	WG809082
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	102		54.0-144		08/14/2015 07:55	WG809082

Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	08/15/2015 01:14	WG809269
(S) <i>o</i> -Terphenyl	65.2		50.0-150		08/15/2015 01:14	WG809269

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc



Collected date/time: 08/12/15 12:40

L782564

Volatile Organic Compounds (GC) by Method 8021/8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00526		0.00250	5	08/14/2015 14:57	WG809082
Toluene	ND		0.0250	5	08/14/2015 14:57	WG809082
Ethylbenzene	0.0119		0.00250	5	08/14/2015 14:57	WG809082
Total Xylene	0.121		0.00750	5	08/14/2015 14:57	WG809082
TPH (GC/FID) Low Fraction	16.1		0.500	5	08/14/2015 14:57	WG809082
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	91.9		59.0-128		08/14/2015 14:57	WG809082
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	102		54.0-144		08/14/2015 14:57	WG809082

Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	08/15/2015 01:25	WG809269
(S) <i>o</i> -Terphenyl	59.1		50.0-150		08/15/2015 01:25	WG809269

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc



Collected date/time: 08/12/15 12:45

L782564

Volatile Organic Compounds (GC) by Method 8021/8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	08/14/2015 15:22	WG809082
Toluene	ND		0.0250	5	08/14/2015 15:22	WG809082
Ethylbenzene	ND		0.00250	5	08/14/2015 15:22	WG809082
Total Xylene	0.0124		0.00750	5	08/14/2015 15:22	WG809082
TPH (GC/FID) Low Fraction	ND		0.500	5	08/14/2015 15:22	WG809082
(S) a,a,a-Trifluorotoluene(FID)	95.8		59.0-128		08/14/2015 15:22	WG809082
(S) a,a,a-Trifluorotoluene(PID)	102		54.0-144		08/14/2015 15:22	WG809082

Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	43.4		4.00	1	08/15/2015 01:36	WG809269
(S) o-Terphenyl	61.3		50.0-150		08/15/2015 01:36	WG809269

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc



Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.65			1	08/18/2015 11:39	WG808983

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	34.2		2.00	1	08/18/2015 15:12	WG809022

Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	RDL	Dilution	Analysis date / time	Batch
ORP	136		1		08/14/2015 10:00	WG808966

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	ND		2.00	1	08/17/2015 08:49	WG809424

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	9.04		1		08/17/2015 14:00	WG809245

Sample Narrative:

9045D L782564-05 WG809245: 9.04 at 21.1c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1560		1		08/18/2015 10:03	WG809763

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	08/15/2015 09:53	WG809114

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.37		2.00	1	08/14/2015 15:34	WG809022
Barium	212		0.500	1	08/14/2015 15:34	WG809022
Cadmium	ND		0.500	1	08/14/2015 15:34	WG809022
Chromium	34.2		1.00	1	08/14/2015 15:34	WG809022
Copper	13.5		2.00	1	08/14/2015 15:34	WG809022
Lead	10.7		0.500	1	08/14/2015 15:34	WG809022
Nickel	20.0		2.00	1	08/14/2015 15:34	WG809022
Selenium	ND		2.00	1	08/14/2015 15:34	WG809022
Silver	ND		1.00	1	08/14/2015 15:34	WG809022
Zinc	21.9		5.00	1	08/14/2015 15:34	WG809022



Collected date/time: 08/12/15 12:50

L782564

Volatile Organic Compounds (GC) by Method 8021/8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0187		0.00250	5	08/14/2015 15:47	WG809082
Toluene	ND		0.0250	5	08/14/2015 15:47	WG809082
Ethylbenzene	0.0145		0.00250	5	08/14/2015 15:47	WG809082
Total Xylene	0.0420		0.00750	5	08/14/2015 15:47	WG809082
TPH (GC/FID) Low Fraction	10.2		0.500	5	08/14/2015 15:47	WG809082
(S) a,a,a-Trifluorotoluene(FID)	92.1		59.0-128		08/14/2015 15:47	WG809082
(S) a,a,a-Trifluorotoluene(PID)	103		54.0-144		08/14/2015 15:47	WG809082

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	48.8		4.00	1	08/17/2015 12:29	WG809654
(S) o-Terphenyl	67.9		50.0-150		08/17/2015 12:29	WG809654

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	08/18/2015 11:28	WG809337
Acenaphthene	0.0116		0.00600	1	08/18/2015 11:28	WG809337
Acenaphthylene	ND		0.00600	1	08/18/2015 11:28	WG809337
Benzo(a)anthracene	ND		0.00600	1	08/18/2015 11:28	WG809337
Benzo(a)pyrene	ND		0.00600	1	08/18/2015 11:28	WG809337
Benzo(b)fluoranthene	ND		0.00600	1	08/18/2015 11:28	WG809337
Benzo(g,h,i)perylene	ND		0.00600	1	08/18/2015 11:28	WG809337
Benzo(k)fluoranthene	ND		0.00600	1	08/18/2015 11:28	WG809337
Chrysene	ND		0.00600	1	08/18/2015 11:28	WG809337
Dibenz(a,h)anthracene	ND		0.00600	1	08/18/2015 11:28	WG809337
Fluoranthene	ND		0.00600	1	08/18/2015 11:28	WG809337
Fluorene	0.0255		0.00600	1	08/18/2015 11:28	WG809337
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/18/2015 11:28	WG809337
Naphthalene	0.0540		0.0200	1	08/18/2015 11:28	WG809337
Phenanthrene	0.0198		0.00600	1	08/18/2015 11:28	WG809337
Pyrene	ND		0.00600	1	08/18/2015 11:28	WG809337
1-Methylnaphthalene	0.148		0.0200	1	08/18/2015 11:28	WG809337
2-Methylnaphthalene	0.129		0.0200	1	08/18/2015 11:28	WG809337
2-Chloronaphthalene	ND		0.0200	1	08/18/2015 11:28	WG809337
(S) p-Terphenyl-d14	49.7		32.2-131		08/18/2015 11:28	WG809337
(S) Nitrobenzene-d5	49.0		22.1-146		08/18/2015 11:28	WG809337
(S) 2-Fluorobiphenyl	64.1		40.6-122		08/18/2015 11:28	WG809337



Collected date/time: 08/12/15 13:00

L782564

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.40			1	08/18/2015 11:39	WG808983

¹ Cp² Tc

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	17.4		2.00	1	08/18/2015 15:12	WG809022

³ Ss⁴ Cn

Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	RDL	Dilution	Analysis date / time	Batch
ORP	129		1		08/14/2015 10:00	WG808966

⁵ Sr⁶ Gl

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	ND		2.00	1	08/17/2015 08:49	WG809424

⁷ Al⁸ Sc

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	8.86		1		08/17/2015 14:00	WG809245

Sample Narrative:

9045D L782564-06 WG809245: 8.86 at 21.0c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1900		1		08/18/2015 10:03	WG809763

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	08/15/2015 10:01	WG809114

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.98		2.00	1	08/14/2015 15:21	WG809022
Barium	127	J5	0.500	1	08/14/2015 15:21	WG809022
Cadmium	ND		0.500	1	08/14/2015 15:21	WG809022
Chromium	17.4		1.00	1	08/14/2015 15:21	WG809022
Copper	13.2		2.00	1	08/14/2015 15:21	WG809022
Lead	12.8		0.500	1	08/14/2015 15:21	WG809022
Nickel	28.9		2.00	1	08/14/2015 15:21	WG809022
Selenium	ND		2.00	1	08/14/2015 15:21	WG809022
Silver	ND		1.00	1	08/14/2015 15:21	WG809022
Zinc	38.4		5.00	1	08/14/2015 15:21	WG809022



Collected date/time: 08/12/15 13:00

L782564

Volatile Organic Compounds (GC) by Method 8021/8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	08/14/2015 16:12	WG809082
Toluene	ND		0.0250	5	08/14/2015 16:12	WG809082
Ethylbenzene	0.00281		0.00250	5	08/14/2015 16:12	WG809082
Total Xylene	0.0491		0.00750	5	08/14/2015 16:12	WG809082
TPH (GC/FID) Low Fraction	0.706		0.500	5	08/14/2015 16:12	WG809082
(S) a,a,a-Trifluorotoluene(FID)	95.7		59.0-128		08/14/2015 16:12	WG809082
(S) a,a,a-Trifluorotoluene(PID)	103		54.0-144		08/14/2015 16:12	WG809082

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015D/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	31.3		4.00	1	08/15/2015 02:21	WG809269
(S) o-Terphenyl	67.9		50.0-150		08/15/2015 02:21	WG809269

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	08/18/2015 11:50	WG809337
Acenaphthene	ND		0.00600	1	08/18/2015 11:50	WG809337
Acenaphthylene	ND		0.00600	1	08/18/2015 11:50	WG809337
Benzo(a)anthracene	ND		0.00600	1	08/18/2015 11:50	WG809337
Benzo(a)pyrene	ND		0.00600	1	08/18/2015 11:50	WG809337
Benzo(b)fluoranthene	ND		0.00600	1	08/18/2015 11:50	WG809337
Benzo(g,h,i)perylene	ND		0.00600	1	08/18/2015 11:50	WG809337
Benzo(k)fluoranthene	ND		0.00600	1	08/18/2015 11:50	WG809337
Chrysene	ND		0.00600	1	08/18/2015 11:50	WG809337
Dibenz(a,h)anthracene	ND		0.00600	1	08/18/2015 11:50	WG809337
Fluoranthene	ND		0.00600	1	08/18/2015 11:50	WG809337
Fluorene	ND		0.00600	1	08/18/2015 11:50	WG809337
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/18/2015 11:50	WG809337
Naphthalene	ND		0.0200	1	08/18/2015 11:50	WG809337
Phenanthrene	ND		0.00600	1	08/18/2015 11:50	WG809337
Pyrene	ND		0.00600	1	08/18/2015 11:50	WG809337
1-Methylnaphthalene	0.0268		0.0200	1	08/18/2015 11:50	WG809337
2-Methylnaphthalene	0.0515		0.0200	1	08/18/2015 11:50	WG809337
2-Chloronaphthalene	ND		0.0200	1	08/18/2015 11:50	WG809337
(S) p-Terphenyl-d14	53.0		32.2-131		08/18/2015 11:50	WG809337
(S) Nitrobenzene-d5	82.9		22.1-146		08/18/2015 11:50	WG809337
(S) 2-Fluorobiphenyl	62.1		40.6-122		08/18/2015 11:50	WG809337



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Gl

⁷ Al

⁸ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

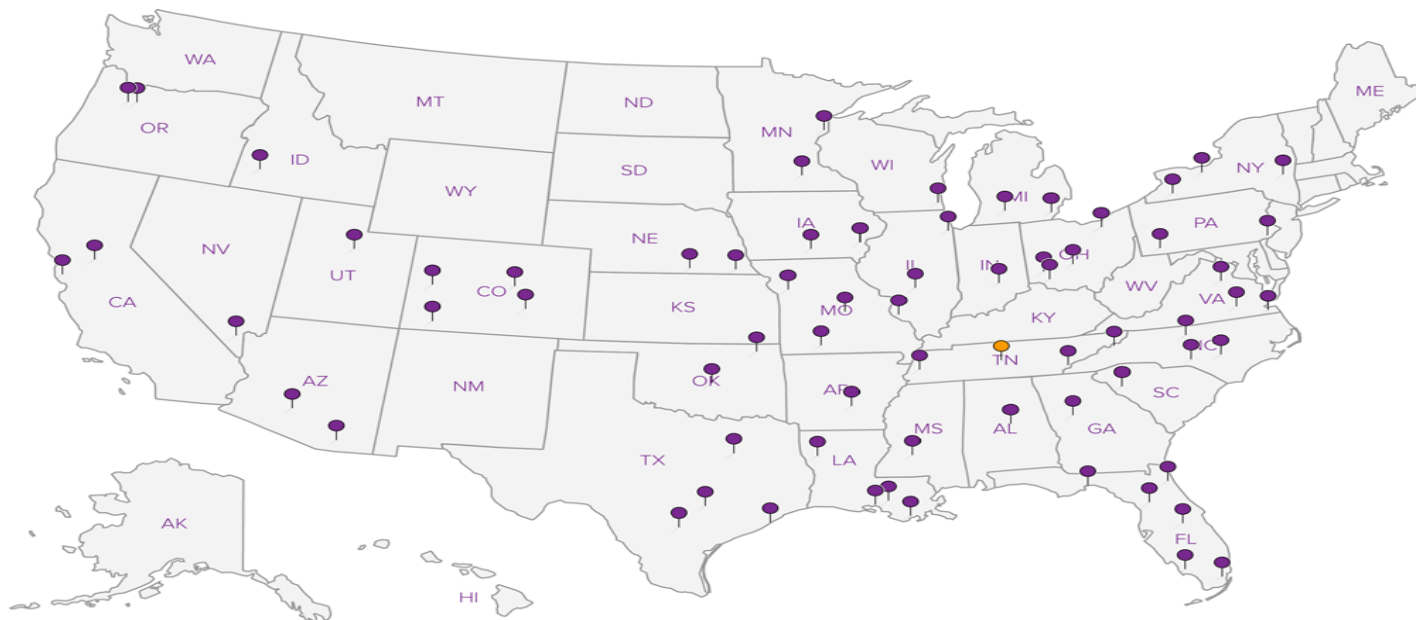
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable




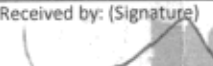
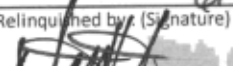
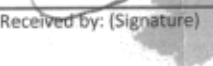
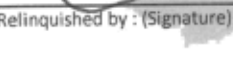
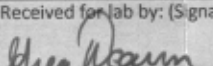
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address: Encana Oil & Gas (USA) 143 Diamond Avenue Parachute, CO 81635 *ENCANACO*		Billing Information: Brett Middleton 143 Diamond Avenue Parachute, CO 81635 970-285-2653		Analysis / Container / Preservative								Chain of Custody Page <u>1</u> of <u>1</u>  L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 								
Report to: Brett Middleton		Email To: brett.middleton@encana.com		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:10%;">BTEXGRO/DRO - 8021/8015</td></tr> <tr><td>SV8270PAHSIM - 8270SIM</td></tr> <tr><td>SPCON - 9050AMod</td></tr> <tr><td>SAR - Calc.</td></tr> <tr><td>RCRA8 Metals + Cu, Ni, and Zn - 60107470</td></tr> <tr><td>CR6SS - 3060A/7196</td></tr> <tr><td>CR3 - Calc.</td></tr> </table>								BTEXGRO/DRO - 8021/8015	SV8270PAHSIM - 8270SIM	SPCON - 9050AMod	SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 60107470	CR6SS - 3060A/7196	CR3 - Calc.	L# <u>6782564</u> H129 Acctnum: Template: Prelogin: TSR: PB: Shipped Via: Rem./Contaminant Sample # (lab only)	
BTEXGRO/DRO - 8021/8015																				
SV8270PAHSIM - 8270SIM																				
SPCON - 9050AMod																				
SAR - Calc.																				
RCRA8 Metals + Cu, Ni, and Zn - 60107470																				
CR6SS - 3060A/7196																				
CR3 - Calc.																				
Project Description: LONG 1-3 Pit		City/State Collected: Colorado, CO																		
Phone: 970-285-2739 Fax:		Client Project # LONG 1-3		Lab Project #																
Collected by (print): Matthew Kasta		Site/Facility ID # LONG 1-3		P.O. # BAM																
Collected by (signature): 		Rush? (Lab MUST Be Notified) Same Day200% Next Day100% Two Day50% Three Day25%		Date Results Needed Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes																
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		No. of Cntrs																		
Sample ID		Comp/Grab		Matrix *		Depth		Date		Time										
20150812 - Long 1-3 Pit (Summ)		Grab		SS		4'		8/12/15		1230										
20150812 - Long 1-3 Pit (Final)		↓		↓		4'		↓		1235										
20150812 - Long 1-3 Pit (Nash)		↓		↓		4'		↓		1240										
20150812 - Long 1-3 Pit (Final)		↓		↓		4'		↓		1245										
20150812 - Long 1-3 Pit (Bot)		↓		↓		6'		↓		1250										
20150812 - Long 1-3 Pit (Stockpile Comp)		↓		↓		-		↓		1300										
* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____		Remarks: 1294 4445 1800		Date: 8/12/15		Time: 1800		Received by: (Signature) 		Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____		Hold # Condition: <u>JS</u> (lab use only) <u>OK</u> COC Seal Intact: <u>Y</u> <u>N</u> <u>NA</u> pH Checked: NCF:								
Relinquished by: (Signature) 		Date: 8-12-15		Time: 1800		Received by: (Signature) 		Temp: 3.4 °C Bottles Received: 1044		Date: 8-13-15 Time: 0946										
Relinquished by: (Signature) 		Date:		Time:		Received for lab by: (Signature) 		Date:		Time:										