



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

Wednesday October 23, 2013

Report Number: L662092

Samples Received: 10/09/13

Client Project: VESSELS MINERALS E1

Description: Vessels Minerals E1 Spill

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

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

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

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

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

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REPORT OF ANALYSIS

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

October 23, 2013

Date Received : October 09, 2013
Description : Vessels Minerals E1 Spill
Sample ID : VESSELS MINERALS E1-UNDERTANK 100813
Collected By : Blake Ford
Collection Date : 10/08/13 10:00

ESC Sample # : L662092-01

Site ID : VESSELS MINERALS E1

Project # : VESSELS MINERALS E1

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.0050	0.0025	mg/kg	8021/8015	10/11/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	10/11/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	10/11/13	5
Total Xylene	0.010	0.0075	mg/kg	8021/8015	10/11/13	5
TPH (GC/FID) Low Fraction	0.95	0.50	mg/kg	GRO	10/11/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	93.3		% Rec.	8021/8015	10/11/13	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	10/11/13	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	10/10/13	1
Surrogate recovery(%)						
o-Terphenyl	68.9		% Rec.	3546/DRO	10/10/13	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: 10/23/13 17:13 Printed: 10/23/13 17:13



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October 23, 2013

Date Received : October 09, 2013
Description : Vessels Minerals E1 Spill
Sample ID : VESSELS MINERALS E1-UNDERTANK 100813
Collected By : Blake Ford
Collection Date : 10/08/13 10:00

ESC Sample # : L662092-02
Site ID : VESSELS MINERALS E1
Project # : VESSELS MINERALS E1

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	10/10/13	1
Chromium, Trivalent	17.	2.0	mg/kg	Calc.	10/23/13	1
ORP	-12.		mV	2580 B-2011	10/10/13	1
pH	8.1		su	9045D	10/15/13	1
Sodium Adsorption Ratio	18.			Calc.	10/17/13	1
Specific Conductance	1400		umhos/cm	9050AMod	10/16/13	1
Mercury	BDL	0.020	mg/kg	7471	10/14/13	1
Arsenic	4.3	1.0	mg/kg	6010B	10/23/13	1
Barium	98.	0.25	mg/kg	6010B	10/23/13	1
Cadmium	BDL	0.25	mg/kg	6010B	10/23/13	1
Chromium	17.	0.50	mg/kg	6010B	10/23/13	1
Copper	11.	1.0	mg/kg	6010B	10/23/13	1
Lead	10.	0.25	mg/kg	6010B	10/23/13	1
Nickel	8.6	1.0	mg/kg	6010B	10/23/13	1
Selenium	BDL	1.0	mg/kg	6010B	10/23/13	1
Silver	BDL	0.50	mg/kg	6010B	10/23/13	1
Zinc	35.	1.5	mg/kg	6010B	10/23/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	10/12/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	10/12/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	10/12/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	10/12/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L662092-02 (PH) - 8.1@20.3c



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Sample ID : VESSELS MINERALS E1-UNDERTANK 100813
Collected By : Blake Ford
Collection Date : 10/08/13 10:00

ESC Sample # : L662092-02

Site ID : VESSELS MINERALS E1

Project # : VESSELS MINERALS E1

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	10/12/13	1
Surrogate Recovery						
Nitrobenzene-d5	124.		% Rec.	8270C-SIM	10/12/13	1
2-Fluorobiphenyl	65.7		% Rec.	8270C-SIM	10/12/13	1
p-Terphenyl-d14	71.7		% Rec.	8270C-SIM	10/12/13	1

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Det. Limit - Practical Quantitation Limit(PQL)

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Reported: 10/23/13 17:13 Printed: 10/23/13 17:13
L662092-02 (PH) - 8.1@20.3c

Summary of Remarks For Samples Printed
10/23/13 at 17:13:56

TSR Signing Reports: 358
R3 - Rush: Two Day

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

Sample: L662092-01 Account: ENCANLCO Received: 10/09/13 09:30 Due Date: 10/11/13 00:00 RPT Date: 10/23/13 17:13

Sample: L662092-02 Account: ENCANLCO Received: 10/09/13 09:30 Due Date: 10/16/13 00:00 RPT Date: 10/23/13 17:13