

Page 1
FORM
4
Rev 12/05State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 601, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109



SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form). Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b).

RECEIVED
1/2/2013

1 OGCC Operator Number: 100185		4 Contact Name: Chris Hines		Complete the Attachment Checklist OF OGCC
2 Name of Operator: Encana Oil & Gas (USA) Inc.		Phone: (970) 285-2653		
3 Address: 143 Diamond Ave City: Parachute State: CO Zip: 81635		Fax: (970) 285-2619		
5 API Number 05- 335786 (Location ID)		OGCC Facility ID Number 277961		Survey Plat
6 Well/Facility Name: N, Parachute		7 Well/Facility Number WF07A H22		Directional Survey
8 Location (Qtr/Sec, Twp, Rng, Meridian): SENE, Sec 22, T5S, R96W, 6th PM				Surface Equip Diagram
9 County: Garfield		10 Field Name: Grand Valley		Technical Info Page
11 Federal, Indian or State Lease Number NA				Other

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines	<input type="checkbox"/> FHL/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines	<input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines	<input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines	<input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	is location in a High Density Area (rule 603b)? Yes/No
	Distance to nearest well same formation
	Surface owner consultation date
GPS DATA:	
Date of Measurement	PDOP Reading Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	
Formation	Formation Code Spacing order number Unit Acreage Unit configuration
<input type="checkbox"/> Remove from surface bond	
Signed surface use agreement attached	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	
Effective Date:	
Plugging Bond <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	
<input type="checkbox"/> CHANGE WELL NAME	
From:	
To:	
Effective Date:	
<input type="checkbox"/> ABANDONED LOCATION:	
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Ready for Inspection:	
<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS	
Date well shut in or temporarily abandoned:	
Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
MIT required if shut in longer than two years Date of last MIT	
<input type="checkbox"/> SPUD DATE:	
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)	
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	
Method used Cementing tool setting/perf depth Cement volume Cement top Cement bottom Date	
*submit cbl and cement job summaries	
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004	
Final reclamation will commence on approximately <input type="checkbox"/> Final reclamation is completed and site is ready for inspection	

Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent		<input checked="" type="checkbox"/> Report of Work Done	
Approximate Start Date:		Date Work Completed: March, 2012	
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)			
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input checked="" type="checkbox"/> E&P Waste Disposal	
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste	
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans	
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Pit closure	for Spills and Releases	

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete

Signed: Chris Hines Date: 01-02-13 Email: christopher.hines@encana.com
 Print Name: Christopher C. Hines Title: Environmental Field Coordinator

COGCC Approved: Chris Confield Title: FOR Date: 01/22/2013
 CONDITIONS OF APPROVAL, IF ANY:

Chris Confield
 E&P NW Region

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number:	100185	API Number:	335786 [Location ID]
2. Name of Operator:	Encana Oil & Gas (USA) Inc.	OGCC Facility ID #	277961
3. Well/Facility Name:	N. Parachute	Well/Facility Number:	WF07A H22
4. Location (QtrQtr, Sec, Twp, Rng, Meridian):	SENE, Sec 22, T5S, R96W, 6th PM		

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS

REPORT OF WORK COMPLETED

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Sundry Notice (Form 4) in conjunction with the final closure and backfilling of a lined earthen pit (Facility - 277961) on Encana's H22 well pad (Location - 335786) in Encana's North Parachute area of operation. In support of this effort, samples were collected in accordance with a Site Investigation and Remediation Workplan (Remediation - 6982).

The H22 well pad is not found within any of the COGCC 317B, Public Water System Protection areas. The location is within a sensitive area based on distance to surface water, however depth to groundwater is greater than 20 feet. According to the soil survey for this area there is no frequency of flooding or ponding at this location.

In accordance with COGCC Rule 907 for the management of exploration and production (E&P) waste, Encana collects representative samples of potentially impacted material on each of its locations for the purpose of comparing constituent levels to the allowable limits identified by the COGCC. All samples collected on behalf of Encana's Parachute Field Office are collected and documented in accordance with the Environmental Department's Sampling Procedures. Area background samples are also collected to establish a baseline for naturally occurring concentrations/levels for applicable constituents of concern. Field sampling documentation and laboratory reports not provided with this form are kept on file at the Parachute Field Office and are available upon request.

Initial below-liner samples were collected on March 18, 2012. Laboratory results indicated that Total Petroleum Hydrocarbons (TPH), benzene, Electrical Conductivity (EC), Sodium Absorption Ratio (SAR), pH, and arsenic values were above the allowable concentrations identified in COGCC Table 910-1. In accordance with Rule 905.c, a Form 19 was submitted on March 29, 2012 to document the liner failure (Spill #2223743). Conventional excavation of impacted material using heavy equipment was conducted between March 18 and March 20, 2012 to verify removal of TPH and benzene impacted material. Post-excavation samples indicated that SAR and arsenic values remained above the allowable levels identified in Table 910-1. Background arsenic values for the area range from 7.7 to 59 ppm and are included in the Laboratory Results Summary Table. Consistent with Footnote 1 to Table 910-1, Encana requests that the background values be considered as alternative to the limit identified in Table 910-1. Consistent with reclamation objectives and approved handling of material with high levels of EC, SAR, and pH, the pit bottom was covered by more than three feet (3') of clean native fill and topsoil during backfilling operations.

During conventional excavation of benzene and TPH impacted material, approximately 800 cubic yards of spoil was generated. The spoil was transported east-southeast 0.8 miles across Encana owned surface and roads to Encana's N23 well pad (Location # 335622) for remediation. Upon successful completion of remediation efforts, this material was buried in the open pit excavation on Encana's B26 well pad (Location # 335600), 0.5 miles southeast of the N23. Disposal in the B26 pit excavation will be documented in the Form 4 and Notification of Completion submitted as part of that pit closure.

NOTIFICATION OF COMPLETION

This Sundry Notice is also being submitted as the Notification of Completion for Remediation Project # 6982. If the information provided is satisfactory, please provide documentation of the closure of this remediation project and pit.

ATTACHMENTS

- Topographic Location Map
- H22 Site Diagram
- Laboratory Results Summary Table
- Laboratory Reports – Pit Investigation (Background Lab Reports available upon request)

H22 Storage Pit
Facility ID: 277961

West Fork
Grand Valley Field
(North Parachute Ranch)
Garfield County, Colorado
Revised: March 27, 2012

encana

natural gas

0 1,300 2,600 3,900
Feet

Encana Site Boundary

Access Road

Township Boundary

Surface Ownership

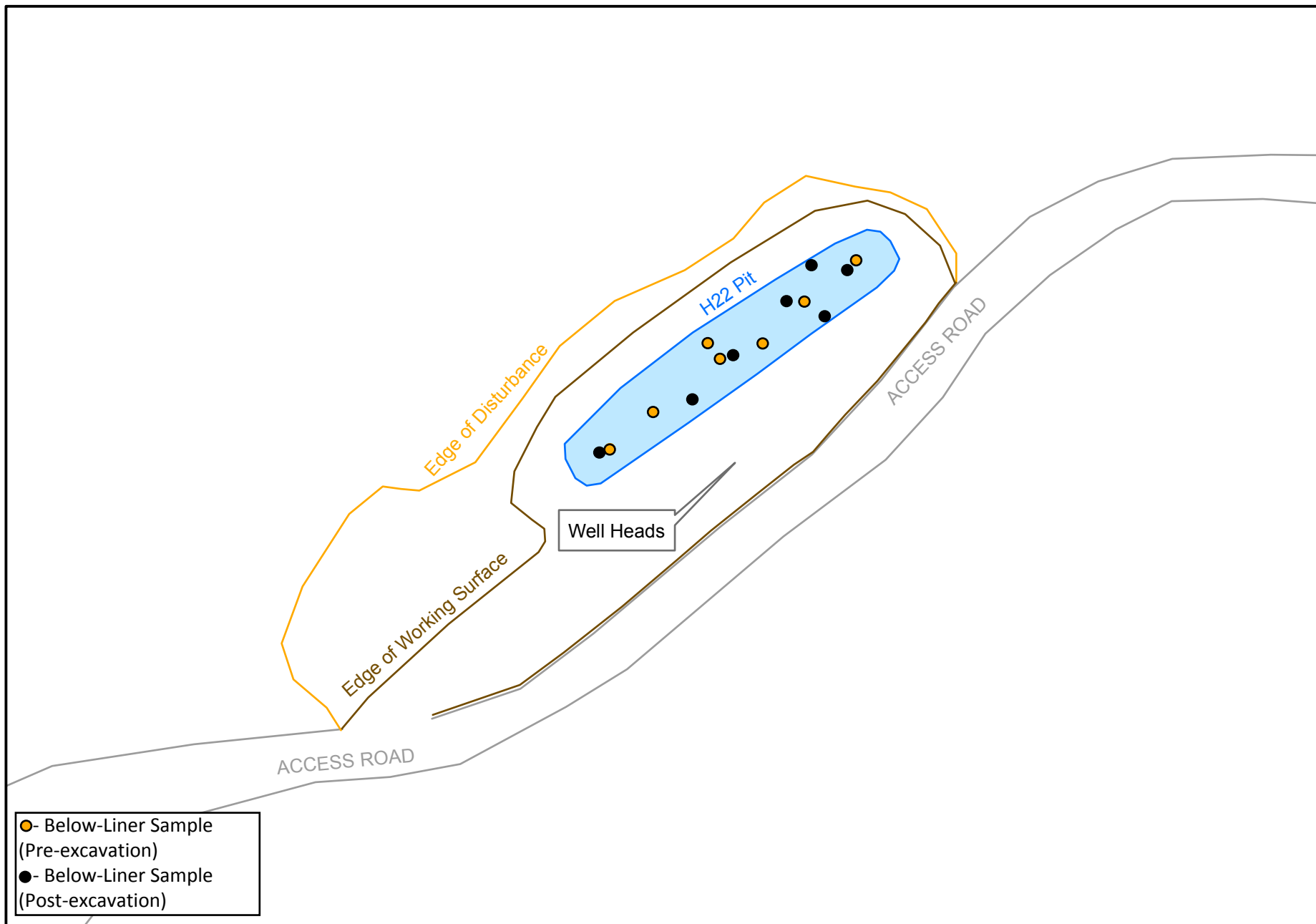
Not Identified Below (clear)

BLM (transparent)

CDOW (transparent)

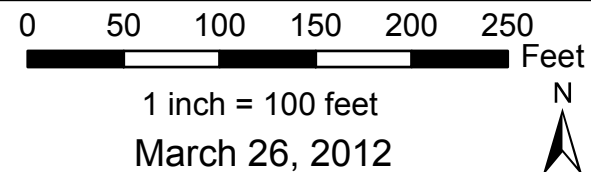
EnCana (transparent)

USFS (transparent)



Encana Oil and Gas

H22 Site Diagram
SENE, Section 22, T5S, R96W, 6th PM
Garfield County, Colorado



Laboratory Results Summary Table

Analytes (BDL = Below Detection Limit; ND = Non Detect)

Allowable Concentration →				Organic Compounds in Soil (mg/kg [ppm])																		Inorganics in Soil			Metals in Soil (mg/kg [ppm])													
Location	Sample Date:	Sample Matrix	Matrix Notes	TPH (total volatile and extractable petroleum hydrocarbons)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3,C,D)pyrene	Naphthalene	Pyrene	EC (<4 mmhos/cm or 2x background)	(<12)	(6-9)	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver	Zinc
H22	03/18/12	Pit	PIT PRE bottom	606	16	590	0.41	0.64	0.15	2.4	0.18	0.098	BDL	0.038	BDL	BDL	0.052	BDL	0.043	0.38	BDL	0.64	0.079	4.4	80	10	13	6100	0.54	20	BDL	21	29	0.038	14	BDL	BDL	53
H22	03/18/12	Pit	PIT PRE S wall	1931	31	1900																																
H22	03/18/12	Pit	PIT PRE N wall	302.8	2.8	300																																
H22	03/18/12	Pit	PIT PRE W toe	1934	34	1900																																
H22	03/18/12	Pit	PIT PRE W bottom	1050	110	940																																
H22	03/18/12	Pit	PIT PRE E bottom	3600	1100	2500																																
H22	03/18/12	Pit	PIT PRE NE	1020	550	470																																
H22	03/20/12	Pit	PIT X POST Center	24	BDL	24	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.9	38	8.6	25	370	1	30	BDL	29	20	0.02	13	BDL	BDL	58
H22	03/20/12	Pit	PIT X POST Sbottom	11	BDL	11	BDL	BDL	BDL	BDL																												
H22	03/20/12	Pit	PIT X POST Wwall	BDL	BDL	BDL	BDL	BDL	BDL	BDL																												
H22	03/20/12	Pit	PIT X POST N E wall	4.2	BDL	4.2	BDL	BDL	BDL	0.011																												
H22	03/20/12	Pit	PIT X POST N E bottom	BDL	BDL	BDL	BDL	BDL	BDL	BDL																												
H22	03/20/12	Pit	PIT X POST S E wall	26	BDL	26	BDL	BDL	BDL	BDL																												
H22	03/20/12	Pit	PIT X POST Ebottom	15	BDL	15	BDL	BDL	BDL	BDL																												
J22	07/17/09	Background		39			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.461	1.9	8.8	17.4		1.2	15.7	18.9	32.4	23.3	0.025	19.7	2.1	0.26	117
K22	07/22/09	Background		40.6			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.324	0.3	8.2	14.5		0.55	26.6	1	27.5	17.9	0.017	17.8	1.3	0.049	83.7
D23	06/29/10	Background	NW																																			
K22	11/10/10	Background	E																																			
H26	11/10/10	Background	SSW																																			
H26	11/10/10	Background	S																																			
H26	11/10/10	Background	SW																																			
H26	11/10/10	Background	SSE																																			
K22	11/10/10	Background	W																																			
K22	11/10/10	Background	SW																																			
K22	11/10/10	Background	N																																			
H26	11/10/10	Background	SE																																			
A15	05/17/11	Background	E																																			
A15	05/17/11	Background	NE																																			
H26A	08/26/11	Background	N																																			
H26A	08/26/11	Background	W																																			
H26A	08/26/11	Background	SE																																			
H26A	08/26/11	Background	SW																																			
F23	08/29/11	Background	NE																																			
F23	08/29/11	Background	N																																			
F23	08/29/11	Background	E																																			
H15	12/29/11	Background	N																																			



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

Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Wednesday March 28, 2012

Report Number: L565772

Samples Received: 03/20/12

Client Project: H22 PIT

Description: H22 Pit

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:

Jayred 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

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

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

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-S WALL-031812 2-8 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 11:24

ESC Sample # : L565772-01

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	31.	0.50	mg/kg	8015D/GRO	03/21/12	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	73.9		% Rec.	602/8015	03/21/12	5
TPH (GC/FID) High Fraction	1900	80.	mg/kg	3546/DRO	03/27/12	20
Surrogate recovery(%) o-Terphenyl	75.4		% Rec.	3546/DRO	03/27/12	20

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: 03/28/12 10:18 Printed: 03/28/12 10:19



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-N WALL-031812 1-6 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 11:42

ESC Sample # : L565772-02

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	2.8	0.50	mg/kg	8015D/GRO	03/21/12	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	101.		% Rec.	602/8015	03/21/12	5
TPH (GC/FID) High Fraction	300	40.	mg/kg	3546/DRO	03/27/12	10
Surrogate recovery(%) o-Terphenyl	85.5		% Rec.	3546/DRO	03/27/12	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: 03/28/12 10:18 Printed: 03/28/12 10:19



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-W TOE-031812 2-8 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 11:55

ESC Sample # : L565772-03

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	34.	0.50	mg/kg	8015D/GRO	03/21/12	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	88.9		% Rec.	602/8015	03/21/12	5
TPH (GC/FID) High Fraction	1900	80.	mg/kg	3546/DRO	03/27/12	20
Surrogate recovery(%) o-Terphenyl	158.		% Rec.	3546/DRO	03/27/12	20

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: 03/28/12 10:18 Printed: 03/28/12 10:19



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-W BOT-031812 1-6 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 12:09

ESC Sample # : L565772-04

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	110	10.	mg/kg	8015D/GRO	03/21/12	100
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	104.		% Rec.	602/8015	03/21/12	100
TPH (GC/FID) High Fraction	940	20.	mg/kg	3546/DRO	03/27/12	5
Surrogate recovery(%) o-Terphenyl	73.4		% Rec.	3546/DRO	03/27/12	5

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: 03/28/12 10:18 Printed: 03/28/12 10:19

REPORT OF ANALYSIS

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-BOT-031812 1-5 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 12:21

ESC Sample # : L565772-05

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	03/21/12	1
Chromium, Trivalent	20.	0.50	mg/kg	Calc.	03/22/12	1
ORP	180		mV	2580	03/23/12	1
pH	10.		su	9045D	03/22/12	1
Sodium Adsorption Ratio	80.			Calc.	03/22/12	1
Specific Conductance	4400		umhos/cm	9050AMod	03/22/12	1
Mercury	0.038	0.020	mg/kg	7471	03/22/12	1
Arsenic	13.	1.0	mg/kg	6010B	03/22/12	1
Barium	6100	0.25	mg/kg	6010B	03/22/12	1
Cadmium	0.54	0.25	mg/kg	6010B	03/22/12	1
Chromium	20.	0.50	mg/kg	6010B	03/22/12	1
Copper	21.	5.0	mg/kg	6010B	03/22/12	5
Lead	29.	1.2	mg/kg	6010B	03/22/12	5
Nickel	14.	1.0	mg/kg	6010B	03/22/12	1
Selenium	BDL	1.0	mg/kg	6010B	03/22/12	1
Silver	BDL	2.5	mg/kg	6010B	03/22/12	5
Zinc	53.	1.5	mg/kg	6010B	03/22/12	1
Benzene	0.41	0.0025	mg/kg	8021/8015	03/21/12	5
Toluene	0.64	0.025	mg/kg	8021/8015	03/21/12	5
Ethylbenzene	0.15	0.0025	mg/kg	8021/8015	03/21/12	5
Total Xylene	2.4	0.0075	mg/kg	8021/8015	03/21/12	5
TPH (GC/FID) Low Fraction	16.	0.50	mg/kg	GRO	03/21/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.5		% Rec.	8021/8015	03/21/12	5
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	03/21/12	5
TPH (GC/FID) High Fraction	590	20.	mg/kg	3546/DRO	03/27/12	5
Surrogate recovery(%)						
o-Terphenyl	72.6		% Rec.	3546/DRO	03/27/12	5
Polynuclear Aromatic Hydrocarbons						
Anthracene	0.098	0.030	mg/kg	8270C-SIM	03/22/12	5
Acenaphthene	0.18	0.030	mg/kg	8270C-SIM	03/22/12	5
Acenaphthylene	0.040	0.030	mg/kg	8270C-SIM	03/22/12	5
Benzo(a)anthracene	BDL	0.030	mg/kg	8270C-SIM	03/22/12	5
Benzo(a)pyrene	BDL	0.030	mg/kg	8270C-SIM	03/22/12	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L565772-05 (PH) - 10@20.4c



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-BOT-031812 1-5 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 12:21

ESC Sample # : L565772-05

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	0.038	0.030	mg/kg	8270C-SIM	03/22/12	5
Benzo(g,h,i)perylene	BDL	0.030	mg/kg	8270C-SIM	03/22/12	5
Benzo(k)fluoranthene	BDL	0.030	mg/kg	8270C-SIM	03/22/12	5
Chrysene	0.052	0.030	mg/kg	8270C-SIM	03/22/12	5
Dibenz(a,h)anthracene	BDL	0.030	mg/kg	8270C-SIM	03/22/12	5
Fluoranthene	0.043	0.030	mg/kg	8270C-SIM	03/22/12	5
Fluorene	0.38	0.030	mg/kg	8270C-SIM	03/22/12	5
Indeno(1,2,3-cd)pyrene	BDL	0.030	mg/kg	8270C-SIM	03/22/12	5
Naphthalene	0.64	0.12	mg/kg	8270C-SIM	03/23/12	20
Phenanthrene	0.39	0.030	mg/kg	8270C-SIM	03/22/12	5
Pyrene	0.079	0.030	mg/kg	8270C-SIM	03/22/12	5
1-Methylnaphthalene	0.77	0.12	mg/kg	8270C-SIM	03/23/12	20
2-Methylnaphthalene	1.8	0.12	mg/kg	8270C-SIM	03/23/12	20
2-Chloronaphthalene	BDL	0.12	mg/kg	8270C-SIM	03/23/12	20
Surrogate Recovery						
Nitrobenzene-d5	1050		% Rec.	8270C-SIM	03/23/12	20
2-Fluorobiphenyl	131.		% Rec.	8270C-SIM	03/22/12	5
p-Terphenyl-d14	95.2		% Rec.	8270C-SIM	03/22/12	5

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: 03/28/12 10:18 Printed: 03/28/12 10:19
L565772-05 (PH) - 10@20.4c



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-E BOT-031812 1-5 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 12:38

ESC Sample # : L565772-06

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	1100	25.	mg/kg	8015D/GRO	03/21/12	250
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	602/8015	03/21/12	250
TPH (GC/FID) High Fraction	2500	80.	mg/kg	3546/DRO	03/27/12	20
Surrogate recovery(%) o-Terphenyl	357.		% Rec.	3546/DRO	03/27/12	20

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: 03/28/12 10:18 Printed: 03/28/12 10:19



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

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

March 28, 2012

Date Received : March 20, 2012
Description : H22 Pit
Sample ID : H22-PIT-NE-031812 0-8 IN
Collected By : Robert Stockton
Collection Date : 03/18/12 12:50

ESC Sample # : L565772-07

Site ID :

Project # : H22 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	550	50.	mg/kg	8015D/GRO	03/21/12	500
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	108.		% Rec.	602/8015	03/21/12	500
TPH (GC/FID) High Fraction	470	20.	mg/kg	3546/DRO	03/27/12	5
Surrogate recovery(%) o-Terphenyl	80.2		% Rec.	3546/DRO	03/27/12	5

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: 03/28/12 10:18 Printed: 03/28/12 10:19

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L565772-01	WG584013	SAMP	o-Terphenyl	R2089833	J7
L565772-03	WG584013	SAMP	o-Terphenyl	R2089833	J7
L565772-05	WG583986	SAMP	Silver	R2085916	O
	WG583348	SAMP	Nitrobenzene-d5	R2086854	J7
	WG583348	SAMP	2-Fluorobiphenyl	R2086854	J1
	WG583982	SAMP	pH	R2084933	T8
	WG583995	SAMP	Specific Conductance	R2084833	J3
L565772-06	WG584013	SAMP	o-Terphenyl	R2089833	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

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
03/28/12 at 10:19:10

TSR Signing Reports: 358
R5 - Desired TAT

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

Sample: L565772-01 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18

Sample: L565772-02 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18

Sample: L565772-03 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18

Sample: L565772-04 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18

Sample: L565772-05 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18

Sample: L565772-06 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18

Sample: L565772-07 Account: ENCANACO Received: 03/20/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/28/12 10:18



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG583717	03/20/12 16:47
Ethylbenzene	< .0005	mg/kg			WG583717	03/20/12 16:47
Toluene	< .005	mg/kg			WG583717	03/20/12 16:47
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG583717	03/20/12 16:47
Total Xylene	< .0015	mg/kg			WG583717	03/20/12 16:47
a,a,a-Trifluorotoluene(FID)		% Rec.	96.86	59-128	WG583717	03/20/12 16:47
a,a,a-Trifluorotoluene(PID)		% Rec.	103.1	54-144	WG583717	03/20/12 16:47
Chromium,Hexavalent	< 2	mg/kg			WG583626	03/21/12 14:47
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG583855	03/21/12 10:19
a,a,a-Trifluorotoluene(FID)		% Rec.	106.7	59-128	WG583855	03/21/12 10:19
Specific Conductance	1.10	umhos/cm			WG583995	03/22/12 13:15
pH	6.07	su			WG583982	03/22/12 13:00
Mercury	< .02	mg/kg			WG583892	03/22/12 11:22
Arsenic	< 1	mg/kg			WG583986	03/22/12 11:37
Barium	< .25	mg/kg			WG583986	03/22/12 11:37
Cadmium	< .25	mg/kg			WG583986	03/22/12 11:37
Chromium	< .5	mg/kg			WG583986	03/22/12 11:37
Copper	< 1	mg/kg			WG583986	03/22/12 11:37
Lead	< .25	mg/kg			WG583986	03/22/12 11:37
Nickel	< 1	mg/kg			WG583986	03/22/12 11:37
Selenium	< 1	mg/kg			WG583986	03/22/12 11:37
Silver	< .5	mg/kg			WG583986	03/22/12 11:37
Zinc	< 1.5	mg/kg			WG583986	03/22/12 11:37
1-Methylnaphthalene	< .006	mg/kg			WG583348	03/21/12 23:16
2-Chloronaphthalene	< .006	mg/kg			WG583348	03/21/12 23:16
2-Methylnaphthalene	< .006	mg/kg			WG583348	03/21/12 23:16
Acenaphthene	< .006	mg/kg			WG583348	03/21/12 23:16
Acenaphthylene	< .006	mg/kg			WG583348	03/21/12 23:16
Anthracene	< .006	mg/kg			WG583348	03/21/12 23:16
Benzo(a)anthracene	< .006	mg/kg			WG583348	03/21/12 23:16
Benzo(a)pyrene	< .006	mg/kg			WG583348	03/21/12 23:16
Benzo(b)fluoranthene	< .006	mg/kg			WG583348	03/21/12 23:16
Benzo(g,h,i)perylene	< .006	mg/kg			WG583348	03/21/12 23:16
Benzo(k)fluoranthene	< .006	mg/kg			WG583348	03/21/12 23:16
Chrysene	< .006	mg/kg			WG583348	03/21/12 23:16
Dibenz(a,h)anthracene	< .006	mg/kg			WG583348	03/21/12 23:16
Fluoranthene	< .006	mg/kg			WG583348	03/21/12 23:16
Fluorene	< .006	mg/kg			WG583348	03/21/12 23:16
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG583348	03/21/12 23:16
Naphthalene	< .006	mg/kg			WG583348	03/21/12 23:16
Phenanthrene	< .006	mg/kg			WG583348	03/21/12 23:16
Pyrene	< .006	mg/kg			WG583348	03/21/12 23:16
2-Fluorobiphenyl		% Rec.	105.4	34-129	WG583348	03/21/12 23:16
Nitrobenzene-d5		% Rec.	105.4	14-141	WG583348	03/21/12 23:16
p-Terphenyl-d14		% Rec.	118.1	25-139	WG583348	03/21/12 23:16

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	ppm			WG584013	03/26/12 15:42
o-Terphenyl		% Rec.	65.98	50-150	WG584013	03/26/12 15:42
TPH (GC/FID) High Fraction	< 4	ppm			WG584884	03/27/12 16:03
o-Terphenyl		% Rec.	85.49	50-150	WG584884	03/27/12 16:03

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chromium,Hexavalent	mg/kg	0	0	0	20	L565293-06	WG583626
Chromium,Hexavalent	mg/kg	0	0	0	20	L564598-01	WG583626
Specific Conductance	umhos/cm	3600	4400	21.4*	20	L565772-05	WG583995
pH	su	8.30	8.40	1.56*	1	L565812-01	WG583982
pH	su	11.0	11.0	2.76*	1	L566009-01	WG583982
Mercury	mg/kg	0	0	0	20	L565685-08	WG583892
Arsenic	mg/kg	2.20	2.00	10.4	20	L565616-01	WG583986
Barium	mg/kg	26.0	25.0	2.76	20	L565616-01	WG583986
Cadmium	mg/kg	0	0.170	NA	20	L565616-01	WG583986
Chromium	mg/kg	7.20	7.00	2.54	20	L565616-01	WG583986
Nickel	mg/kg	4.90	5.02	2.62	20	L565616-01	WG583986
Selenium	mg/kg	0	0	0	20	L565616-01	WG583986
Zinc	mg/kg	14.0	14.3	1.39	20	L565616-01	WG583986
Copper	mg/kg	0	0	0	20	L565616-01	WG583986
Lead	mg/kg	5.40	6.40	17.9	20	L565616-01	WG583986
Silver	mg/kg	0	0	0	20	L565616-01	WG583986
ORP	mV	70.0	65.0	7.41	20	L566319-01	WG584412

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0468	93.6	76-113	WG583717
Ethylbenzene	mg/kg	.05	0.0497	99.5	78-115	WG583717
Toluene	mg/kg	.05	0.0493	98.6	76-114	WG583717
Total Xylene	mg/kg	.15	0.154	103.	81-118	WG583717
a,a,a-Trifluorotoluene(PID)				102.5	54-144	WG583717
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.63	121.	67-135	WG583717
a,a,a-Trifluorotoluene(FID)				102.5	59-128	WG583717
Chromium,Hexavalent	mg/kg	203	147.	72.4	50-150	WG583626
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.16	112.	67-135	WG583855
a,a,a-Trifluorotoluene(FID)				113.9	59-128	WG583855
Specific Conductance	umhos/cm	350	340.	97.1	85-115	WG583995

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
pH	su	7.98	7.97	99.9	98-101	WG583982
Mercury	mg/kg	3.77	3.05	80.9	71.6-128	WG583892
Arsenic	mg/kg	92.6	87.6	94.6	82.9-117	WG583986
Barium	mg/kg	169	169.	100.	82.8-117	WG583986
Cadmium	mg/kg	61.8	61.4	99.4	83.3-117	WG583986
Chromium	mg/kg	71.3	71.2	99.9	81.8-118	WG583986
Copper	mg/kg	81.2	80.8	99.5	83.9-116	WG583986
Lead	mg/kg	92.4	88.4	95.7	83.3-117	WG583986
Nickel	mg/kg	59.1	53.9	91.2	83.8-116	WG583986
Selenium	mg/kg	89.5	82.2	91.8	79-121	WG583986
Silver	mg/kg	34.4	33.4	97.1	66.3-134	WG583986
Zinc	mg/kg	141	142.	101.	80.9-119	WG583986
1-Methylnaphthalene	mg/kg	.033	0.0294	89.0	48-113	WG583348
2-Chloronaphthalene	mg/kg	.033	0.0313	94.9	51-114	WG583348
2-Methylnaphthalene	mg/kg	.033	0.0299	90.7	44-109	WG583348
Acenaphthene	mg/kg	.033	0.0278	84.4	52-108	WG583348
Acenaphthylene	mg/kg	.033	0.0316	95.7	51-110	WG583348
Anthracene	mg/kg	.033	0.0307	92.9	58-120	WG583348
Benzo(a)anthracene	mg/kg	.033	0.0364	110.*	54-110	WG583348
Benzo(a)pyrene	mg/kg	.033	0.0345	105.	56-118	WG583348
Benzo(b)fluoranthene	mg/kg	.033	0.0345	105.	55-114	WG583348
Benzo(g,h,i)perylene	mg/kg	.033	0.0369	112.	48-130	WG583348
Benzo(k)fluoranthene	mg/kg	.033	0.0356	108.	55-122	WG583348
Chrysene	mg/kg	.033	0.0353	107.	57-118	WG583348
Dibenz(a,h)anthracene	mg/kg	.033	0.0344	104.	53-122	WG583348
Fluoranthene	mg/kg	.033	0.0304	92.0	58-118	WG583348
Fluorene	mg/kg	.033	0.0320	96.9	54-109	WG583348
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0355	108.	51-125	WG583348
Naphthalene	mg/kg	.033	0.0272	82.4	45-105	WG583348
Phenanthrene	mg/kg	.033	0.0288	87.4	53-114	WG583348
Pyrene	mg/kg	.033	0.0356	108.	53-121	WG583348
2-Fluorobiphenyl				94.56	34-129	WG583348
Nitrobenzene-d5				88.48	14-141	WG583348
p-Terphenyl-d14				107.7	25-139	WG583348
ORP	mV	228	236.	104.	95.6-104.	WG584412
TPH (GC/FID) High Fraction	ppm	60	47.4	79.1	50-150	WG584013
o-Terphenyl				74.47	50-150	WG584013
TPH (GC/FID) High Fraction	ppm	60	39.7	66.1	50-150	WG584884
o-Terphenyl				83.99	50-150	WG584884

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0464	0.0468	93.0	76-113	0.820	20	WG583717
Ethylbenzene	mg/kg	0.0496	0.0497	99.0	78-115	0.220	20	WG583717
Toluene	mg/kg	0.0484	0.0493	97.0	76-114	1.79	20	WG583717

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Total Xylene	mg/kg	0.153	0.154	102.		81-118	0.890	20	WG583717
a,a,a-Trifluorotoluene(PID)				102.6		54-144			WG583717
TPH (GC/FID) Low Fraction	mg/kg	6.65	6.63	121.		67-135	0.220	20	WG583717
a,a,a-Trifluorotoluene(FID)				102.7		59-128			WG583717
Chromium,Hexavalent	mg/kg	155.	147.	76.0		50-150	5.30	20	WG583626
TPH (GC/FID) Low Fraction	mg/kg	6.05	6.16	110.		67-135	1.73	20	WG583855
a,a,a-Trifluorotoluene(FID)				114.4		59-128			WG583855
Specific Conductance	umhos/	350.	340.	100.		85-115	2.90	20	WG583995
pH	su	7.97	7.97	100.		98-101	0	20	WG583982
1-Methylnaphthalene	mg/kg	0.0282	0.0294	86.0		48-113	4.00	24	WG583348
2-Chloronaphthalene	mg/kg	0.0302	0.0313	91.0		51-114	3.73	24	WG583348
2-Methylnaphthalene	mg/kg	0.0294	0.0299	89.0		44-109	1.74	24	WG583348
Acenaphthene	mg/kg	0.0252	0.0278	76.0		52-108	9.92	22	WG583348
Acenaphthylene	mg/kg	0.0288	0.0316	87.0		51-110	9.32	21	WG583348
Anthracene	mg/kg	0.0297	0.0307	90.0		58-120	3.21	20	WG583348
Benzo(a)anthracene	mg/kg	0.0340	0.0364	103.		54-110	6.84	22	WG583348
Benzo(a)pyrene	mg/kg	0.0331	0.0345	100.		56-118	4.27	21	WG583348
Benzo(b)fluoranthene	mg/kg	0.0331	0.0345	100.		55-114	4.07	20	WG583348
Benzo(g,h,i)perylene	mg/kg	0.0344	0.0369	104.		48-130	6.90	20	WG583348
Benzo(k)fluoranthene	mg/kg	0.0341	0.0356	103.		55-122	4.22	25	WG583348
Chrysene	mg/kg	0.0335	0.0353	102.		57-118	5.20	20	WG583348
Dibenz(a,h)anthracene	mg/kg	0.0323	0.0344	98.0		53-122	6.22	20	WG583348
Fluoranthene	mg/kg	0.0309	0.0304	94.0		58-118	1.76	20	WG583348
Fluorene	mg/kg	0.0296	0.0320	90.0		54-109	7.89	20	WG583348
Indeno(1,2,3-cd)pyrene	mg/kg	0.0335	0.0355	102.		51-125	5.68	21	WG583348
Naphthalene	mg/kg	0.0269	0.0272	81.0		45-105	1.07	24	WG583348
Phenanthrene	mg/kg	0.0294	0.0288	89.0		53-114	1.96	20	WG583348
Pyrene	mg/kg	0.0332	0.0356	101.		53-121	6.96	20	WG583348
2-Fluorobiphenyl				87.56		34-129			WG583348
Nitrobenzene-d5				88.65		14-141			WG583348
p-Terphenyl-d14				102.2		25-139			WG583348
ORP	mV	235.	236.	103.		95.6-104.	0.425	20	WG584412
TPH (GC/FID) High Fraction	ppm	39.8	47.4	66.0		50-150	17.5	25	WG584013
o-Terphenyl				61.02		50-150			WG584013
TPH (GC/FID) High Fraction	ppm	43.1	39.7	72.0		50-150	8.19	25	WG584884
o-Terphenyl				92.59		50-150			WG584884

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.0400	0.0240	.05	32.0	32-137	L565255-11	WG583717
Ethylbenzene	mg/kg	0.0430	0.0770	.05	0*	10-150	L565255-11	WG583717
Toluene	mg/kg	0.0433	0.0690	.05	0*	20-142	L565255-11	WG583717

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Total Xylene	mg/kg	0.134	0.100	.15	22.4	16-141	L565255-11	WG583717
a,a,a-Trifluorotoluene(PID)					102.3	54-144		WG583717
Chromium,Hexavalent	mg/kg	0.760	0	20	3.80*	50-150	L565293-08	WG583626
TPH (GC/FID) Low Fraction	mg/kg	1.20	0.0521	5.5	20.8*	55-109	L565685-08	WG583855
a,a,a-Trifluorotoluene(FID)					101.6	59-128		WG583855
TPH (GC/FID) Low Fraction	mg/kg	4.49	0.716	5.5	68.6	55-109	L565255-11	WG583717
Mercury	mg/kg	0.273	0	.25	109.	70-130	L565685-08	WG583892
Arsenic	mg/kg	49.7	2.00	50	95.4	75-125	L565616-01	WG583986
Barium	mg/kg	72.3	25.0	50	94.6	75-125	L565616-01	WG583986
Cadmium	mg/kg	49.2	0.170	50	98.1	75-125	L565616-01	WG583986
Chromium	mg/kg	53.3	7.00	50	92.6	75-125	L565616-01	WG583986
Nickel	mg/kg	47.1	5.02	50	84.2	75-125	L565616-01	WG583986
Selenium	mg/kg	45.0	0	50	90.0	75-125	L565616-01	WG583986
Zinc	mg/kg	60.3	14.3	50	92.0	75-125	L565616-01	WG583986
Copper	mg/kg	42.1	0	5	84.2	75-125	L565616-01	WG583986
Lead	mg/kg	55.0	6.40	5	97.2	75-125	L565616-01	WG583986
Silver	mg/kg	32.0	0	2.5	64.0*	75-125	L565616-01	WG583986
1-Methylnaphthalene	mg/kg	0.0326	0	.033	98.9	25-155	L565435-21	WG583348
2-Chloronaphthalene	mg/kg	0.0349	0	.033	106.	31-153	L565435-21	WG583348
2-Methylnaphthalene	mg/kg	0.0339	0	.033	103.	22-172	L565435-21	WG583348
Acenaphthene	mg/kg	0.0293	0	.033	88.8	43-133	L565435-21	WG583348
Acenaphthylene	mg/kg	0.0333	0	.033	101.	42-146	L565435-21	WG583348
Anthracene	mg/kg	0.0336	0	.033	102.	38-153	L565435-21	WG583348
Benzo(a)anthracene	mg/kg	0.0363	0	.033	110.	31-142	L565435-21	WG583348
Benzo(a)pyrene	mg/kg	0.0347	0	.033	105.	26-152	L565435-21	WG583348
Benzo(b)fluoranthene	mg/kg	0.0343	0	.033	104.	10-188	L565435-21	WG583348
Benzo(g,h,i)perylene	mg/kg	0.0383	0	.033	116.	10-176	L565435-21	WG583348
Benzo(k)fluoranthene	mg/kg	0.0343	0	.033	104.	22-163	L565435-21	WG583348
Chrysene	mg/kg	0.0357	0	.033	108.	26-146	L565435-21	WG583348
Dibenz(a,h)anthracene	mg/kg	0.0358	0	.033	108.	10-160	L565435-21	WG583348
Fluoranthene	mg/kg	0.0331	0	.033	100.	23-160	L565435-21	WG583348
Fluorene	mg/kg	0.0329	0	.033	99.8	44-143	L565435-21	WG583348
Indeno(1,2,3-cd)pyrene	mg/kg	0.0377	0	.033	114.	10-157	L565435-21	WG583348
Naphthalene	mg/kg	0.0313	0	.033	95.0	22-156	L565435-21	WG583348
Phenanthrene	mg/kg	0.0317	0	.033	96.1	23-164	L565435-21	WG583348
Pyrene	mg/kg	0.0357	0	.033	108.	12-170	L565435-21	WG583348
2-Fluorobiphenyl					101.9	34-129		WG583348
Nitrobenzene-d5					100.7	14-141		WG583348
p-Terphenyl-d14					102.2	25-139		WG583348
TPH (GC/FID) High Fraction	ppm	38.3	0	60	63.8	50-150	L565835-03	WG584884
o-Terphenyl					76.42	50-150		WG584884

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



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.0404	0.0400	32.8	32-137	0.970	39	L565255-11	WG583717
Ethylbenzene	mg/kg	0.0433	0.0430	0*	10-150	0.610	44	L565255-11	WG583717
Toluene	mg/kg	0.0435	0.0433	0*	20-142	0.370	42	L565255-11	WG583717
Total Xylene	mg/kg	0.134	0.134	22.6	16-141	0.210	46	L565255-11	WG583717
a,a,a-Trifluorotoluene(PID)				102.2	54-144				WG583717
Chromium,Hexavalent	mg/kg	0.960	0.760	4.80*	50-150	23.3*	20	L565293-08	WG583626
TPH (GC/FID) Low Fraction	mg/kg	2.05	1.20	36.4*	55-109	52.6*	20	L565685-08	WG583855
a,a,a-Trifluorotoluene(FID)				104.6	59-128				WG583855
TPH (GC/FID) Low Fraction	mg/kg	4.28	4.49	64.8	55-109	4.72	20	L565255-11	WG583717
Mercury	mg/kg	0.204	0.273	81.6	70-130	28.9*	20	L565685-08	WG583892
Arsenic	mg/kg	52.3	49.7	101.	75-125	5.10	20	L565616-01	WG583986
Barium	mg/kg	70.3	72.3	90.6	75-125	2.81	20	L565616-01	WG583986
Cadmium	mg/kg	50.1	49.2	99.9	75-125	1.81	20	L565616-01	WG583986
Chromium	mg/kg	52.4	53.3	90.8	75-125	1.70	20	L565616-01	WG583986
Nickel	mg/kg	46.9	47.1	83.8	75-125	0.426	20	L565616-01	WG583986
Selenium	mg/kg	43.4	45.0	86.8	75-125	3.62	20	L565616-01	WG583986
Zinc	mg/kg	60.3	60.3	92.0	75-125	0	20	L565616-01	WG583986
Copper	mg/kg	44.3	42.1	88.6	75-125	5.09	20	L565616-01	WG583986
Lead	mg/kg	57.3	55.0	102.	75-125	4.10	20	L565616-01	WG583986
Silver	mg/kg	32.1	32.0	64.2*	75-125	0.312	20	L565616-01	WG583986
1-Methylnaphthalene	mg/kg	0.0326	0.0326	98.8	25-155	0.118	27	L565435-21	WG583348
2-Chloronaphthalene	mg/kg	0.0345	0.0349	105.	31-153	1.15	22	L565435-21	WG583348
2-Methylnaphthalene	mg/kg	0.0334	0.0339	101.	22-172	1.52	29	L565435-21	WG583348
Acenaphthene	mg/kg	0.0296	0.0293	89.6	43-133	0.910	26	L565435-21	WG583348
Acenaphthylene	mg/kg	0.0337	0.0333	102.	42-146	1.25	22	L565435-21	WG583348
Anthracene	mg/kg	0.0330	0.0336	100.	38-153	1.83	27	L565435-21	WG583348
Benzo(a)anthracene	mg/kg	0.0364	0.0363	110.	31-142	0.354	31	L565435-21	WG583348
Benzo(a)pyrene	mg/kg	0.0338	0.0347	102.	26-152	2.48	32	L565435-21	WG583348
Benzo(b)fluoranthene	mg/kg	0.0335	0.0343	102.	10-188	2.34	33	L565435-21	WG583348
Benzo(g,h,i)perylene	mg/kg	0.0356	0.0383	108.	10-176	7.43	30	L565435-21	WG583348
Benzo(k)fluoranthene	mg/kg	0.0337	0.0343	102.	22-163	1.88	29	L565435-21	WG583348
Chrysene	mg/kg	0.0355	0.0357	108.	26-146	0.525	30	L565435-21	WG583348
Dibenz(a,h)anthracene	mg/kg	0.0340	0.0358	103.	10-160	5.12	39	L565435-21	WG583348
Fluoranthene	mg/kg	0.0325	0.0331	98.6	23-160	1.86	22	L565435-21	WG583348
Fluorene	mg/kg	0.0330	0.0329	100.	44-143	0.194	23	L565435-21	WG583348
Indeno(1,2,3-cd)pyrene	mg/kg	0.0352	0.0377	106.	10-157	6.90	40	L565435-21	WG583348
Naphthalene	mg/kg	0.0303	0.0313	91.9	22-156	3.29	27	L565435-21	WG583348
Phenanthrene	mg/kg	0.0316	0.0317	95.7	23-164	0.479	25	L565435-21	WG583348
Pyrene	mg/kg	0.0358	0.0357	109.	12-170	0.395	24	L565435-21	WG583348
2-Fluorobiphenyl				102.5	34-129				WG583348
Nitrobenzene-d5				102.5	14-141				WG583348
p-Terphenyl-d14				105.0	25-139				WG583348
TPH (GC/FID) High Fraction	ppm	35.5	38.3	59.1	50-150	7.55	25	L565835-03	WG584884
o-Terphenyl				75.46	50-150				WG584884

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



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

Batch number /Run number / Sample number cross reference

WG583717: R2082614: L565772-05
WG583626: R2083133: L565772-05
WG583855: R2083414: L565772-01 02 03 04 06 07
WG583995: R2084833: L565772-05
WG583982: R2084933: L565772-05
WG583892: R2085014: L565772-05
WG583769: R2085896: L565772-05
WG583986: R2085916: L565772-05
WG583348: R2086854: L565772-05
WG584412: R2088033: L565772-05
WG584013: R2089833: L565772-01 03 04 05 06 07
WG584884: R2090973: L565772-02

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L565772

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

March 28, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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

Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Tuesday March 27, 2012

Report Number: L566358

Samples Received: 03/22/12

Client Project: H22 PITX

Description: H22 Pit X

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:

Jayred 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

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

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

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-SBOT-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 11:30

ESC Sample # : L566358-01

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.7		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	11.	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	71.3		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29

REPORT OF ANALYSIS

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-CENTER-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 13:30

ESC Sample # : L566358-02

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	03/27/12	1
Chromium, Trivalent	30.	0.50	mg/kg	Calc.	03/26/12	1
ORP	190		mV	2580	03/23/12	1
pH	8.6		su	9045D	03/27/12	1
Sodium Adsorption Ratio	38.			Calc.	03/27/12	1
Specific Conductance	2900		umhos/cm	9050AMod	03/23/12	1
Mercury	0.020	0.020	mg/kg	7471	03/24/12	1
Arsenic	25.	2.0	mg/kg	6010B	03/26/12	2
Barium	370	0.25	mg/kg	6010B	03/26/12	1
Cadmium	1.0	0.50	mg/kg	6010B	03/26/12	2
Chromium	30.	0.50	mg/kg	6010B	03/26/12	1
Copper	29.	1.0	mg/kg	6010B	03/26/12	1
Lead	20.	0.50	mg/kg	6010B	03/26/12	2
Nickel	13.	1.0	mg/kg	6010B	03/26/12	1
Selenium	BDL	2.0	mg/kg	6010B	03/26/12	2
Silver	BDL	0.50	mg/kg	6010B	03/26/12	1
Zinc	58.	1.5	mg/kg	6010B	03/26/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Phenanthrene	0.0081	0.0060	mg/kg	8270C-SIM	03/24/12	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
2-Methylnaphthalene	0.0093	0.0060	mg/kg	8270C-SIM	03/24/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L566358-02 (PH) - 8.6@19.6c

L566358-02 (CR6) - Sample has reducing characteristics with a pH of 8.6 SU and ORP value of 190mV.



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-CENTER-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 13:30

ESC Sample # : L566358-02

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	03/24/12	1
Surrogate Recovery						
Nitrobenzene-d5	105.		% Rec.	8270C-SIM	03/24/12	1
2-Fluorobiphenyl	110.		% Rec.	8270C-SIM	03/24/12	1
p-Terphenyl-d14	104.		% Rec.	8270C-SIM	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29

L566358-02 (PH) - 8.6@19.6c

L566358-02 (CR6) - Sample has reducing characteristics with a pH of 8.6 SU and ORP value of 190mV.



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-WWALL-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 14:10

ESC Sample # : L566358-03

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.3		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	92.3		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-NEWALL-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 14:30

ESC Sample # : L566358-04

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	0.011	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.1		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	4.2	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	72.8		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-NEBOT-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 14:50

ESC Sample # : L566358-05

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.5		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	89.2		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-SEWALL-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 15:20

ESC Sample # : L566358-06

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.2		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	26.	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	51.0		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-EBOT-032112
Collected By : Matt Kasten
Collection Date : 03/20/12 14:00

ESC Sample # : L566358-07

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.6		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	105.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	15.	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	90.0		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29



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

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

March 27, 2012

Date Received : March 22, 2012
Description : H22 Pit X
Sample ID : H22-PITX-CENTER-032012
Collected By : Matt Kasten
Collection Date : 03/20/12 13:30

ESC Sample # : L566358-08

Site ID : H22

Project # : H22 PITX

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	03/23/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	03/23/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	03/23/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	03/23/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.3		% Rec.	8021/8015	03/23/12	5
a,a,a-Trifluorotoluene(PID)	104.		% Rec.	8021/8015	03/23/12	5
TPH (GC/FID) High Fraction	24.	4.0	mg/kg	3546/DRO	03/24/12	1
Surrogate recovery(%)						
o-Terphenyl	73.7		% Rec.	3546/DRO	03/24/12	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: 03/27/12 16:28 Printed: 03/27/12 16:29

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L566358-02	WG584525	SAMP	Selenium	R2089013	O
	WG584213	SAMP	Chromium, Hexavalent	R2090573	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
0	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

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
03/27/12 at 16:29:14

TSR Signing Reports: 358
R3 - Rush: Two Day

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

Sample: L566358-01 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-02 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/27/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-03 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-04 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-05 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-06 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-07 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28
Sample: L566358-08 Account: ENCANACO Received: 03/22/12 09:00 Due Date: 03/26/12 00:00 RPT Date: 03/27/12 16:28



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG584343	03/23/12 10:57
Ethylbenzene	< .0005	mg/kg			WG584343	03/23/12 10:57
Toluene	< .005	mg/kg			WG584343	03/23/12 10:57
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG584343	03/23/12 10:57
Total Xylene	< .0015	mg/kg			WG584343	03/23/12 10:57
a,a,a-Trifluorotoluene(FID)		% Rec.	99.04	59-128	WG584343	03/23/12 10:57
a,a,a-Trifluorotoluene(PID)		% Rec.	105.4	54-144	WG584343	03/23/12 10:57
Mercury	< .02	mg/kg			WG584487	03/24/12 13:27
Specific Conductance	1.51	umhos/cm			WG584415	03/23/12 20:08
1-Methylnaphthalene	< .006	mg/kg			WG584334	03/24/12 10:05
2-Chloronaphthalene	< .006	mg/kg			WG584334	03/24/12 10:05
2-Methylnaphthalene	< .006	mg/kg			WG584334	03/24/12 10:05
Acenaphthene	< .006	mg/kg			WG584334	03/24/12 10:05
Acenaphthylene	< .006	mg/kg			WG584334	03/24/12 10:05
Anthracene	< .006	mg/kg			WG584334	03/24/12 10:05
Benzo(a)anthracene	< .006	mg/kg			WG584334	03/24/12 10:05
Benzo(a)pyrene	< .006	mg/kg			WG584334	03/24/12 10:05
Benzo(b)fluoranthene	< .006	mg/kg			WG584334	03/24/12 10:05
Benzo(g,h,i)perylene	< .006	mg/kg			WG584334	03/24/12 10:05
Benzo(k)fluoranthene	< .006	mg/kg			WG584334	03/24/12 10:05
Chrysene	< .006	mg/kg			WG584334	03/24/12 10:05
Dibenz(a,h)anthracene	< .006	mg/kg			WG584334	03/24/12 10:05
Fluoranthene	< .006	mg/kg			WG584334	03/24/12 10:05
Fluorene	< .006	mg/kg			WG584334	03/24/12 10:05
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG584334	03/24/12 10:05
Naphthalene	< .006	mg/kg			WG584334	03/24/12 10:05
Phenanthrene	< .006	mg/kg			WG584334	03/24/12 10:05
Pyrene	< .006	mg/kg			WG584334	03/24/12 10:05
2-Fluorobiphenyl		% Rec.	73.96	34-129	WG584334	03/24/12 10:05
Nitrobenzene-d5		% Rec.	70.91	14-141	WG584334	03/24/12 10:05
p-Terphenyl-d14		% Rec.	85.06	25-139	WG584334	03/24/12 10:05
TPH (GC/FID) High Fraction	< 4	ppm			WG584330	03/23/12 22:05
o-Terphenyl		% Rec.	85.94	50-150	WG584330	03/23/12 22:05
Arsenic	< 1	mg/kg			WG584525	03/26/12 13:03
Barium	< .25	mg/kg			WG584525	03/26/12 13:03
Cadmium	< .25	mg/kg			WG584525	03/26/12 13:03
Chromium	< .5	mg/kg			WG584525	03/26/12 13:03
Copper	< 1	mg/kg			WG584525	03/26/12 13:03
Lead	< .25	mg/kg			WG584525	03/26/12 13:03
Nickel	< 1	mg/kg			WG584525	03/26/12 13:03
Selenium	< 1	mg/kg			WG584525	03/26/12 13:03
Silver	< .5	mg/kg			WG584525	03/26/12 13:03
Zinc	< 1.5	mg/kg			WG584525	03/26/12 13:03
pH	6.18	su			WG584579	03/27/12 10:30
Chromium,Hexavalent	< 2	mg/kg			WG584213	03/27/12 12:07

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Mercury	mg/kg	0.120	0.0848		33.6*	20	L566343-12	WG584487
ORP	mV	70.0	65.0		7.41	20	L566319-01	WG584412
Specific Conductance	umhos/cm	320.	310.		1.92	20	L566319-01	WG584415
Arsenic	mg/kg	8.40	7.60		10.0	20	L565608-01	WG584525
Barium	mg/kg	58.0	62.0		7.01	20	L565608-01	WG584525
Cadmium	mg/kg	2.40	0.808		99.3*	20	L565608-01	WG584525
Chromium	mg/kg	18.0	17.6		4.99	20	L565608-01	WG584525
Copper	mg/kg	14.0	13.7		3.58	20	L565608-01	WG584525
Lead	mg/kg	29.0	25.0		15.2	20	L565608-01	WG584525
Nickel	mg/kg	17.0	16.1		3.66	20	L565608-01	WG584525
Selenium	mg/kg	0	0		0	20	L565608-01	WG584525
Silver	mg/kg	0	0		0	20	L565608-01	WG584525
Zinc	mg/kg	65.0	66.4		1.52	20	L565608-01	WG584525
pH	su	7.60	7.60		0.263	1	L566117-04	WG584579
pH	su	5.00	5.00		0.200	1	L566676-10	WG584579
Chromium, Hexavalent	mg/kg	19.0	16.0		19.2	20	L566256-01	WG584213

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0525	105.	76-113	WG584343
Ethylbenzene	mg/kg	.05	0.0528	106.	78-115	WG584343
Toluene	mg/kg	.05	0.0540	108.	76-114	WG584343
Total Xylene	mg/kg	.15	0.163	108.	81-118	WG584343
a,a,a-Trifluorotoluene(PID)				104.7	54-144	WG584343
TPH (GC/FID) Low Fraction	mg/kg	5.5	7.07	129.	67-135	WG584343
a,a,a-Trifluorotoluene(FID)				105.3	59-128	WG584343
Mercury	mg/kg	3.77	4.06	108.	71.6-128	WG584487
ORP	mV	228	236.	104.	95.6-104.	WG584412
Specific Conductance	umhos/cm	350	350.	100.	85-115	WG584415
1-Methylnaphthalene	mg/kg	.033	0.0248	75.1	48-113	WG584334
2-Chloronaphthalene	mg/kg	.033	0.0270	81.9	51-114	WG584334
2-Methylnaphthalene	mg/kg	.033	0.0251	75.9	44-109	WG584334
Acenaphthene	mg/kg	.033	0.0221	67.0	52-108	WG584334
Acenaphthylene	mg/kg	.033	0.0255	77.1	51-110	WG584334
Anthracene	mg/kg	.033	0.0281	85.2	58-120	WG584334
Benzo(a)anthracene	mg/kg	.033	0.0312	94.6	54-110	WG584334
Benzo(a)pyrene	mg/kg	.033	0.0310	93.9	56-118	WG584334
Benzo(b)fluoranthene	mg/kg	.033	0.0308	93.4	55-114	WG584334
Benzo(g,h,i)perylene	mg/kg	.033	0.0352	107.	48-130	WG584334
Benzo(k)fluoranthene	mg/kg	.033	0.0302	91.4	55-122	WG584334

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chrysene	mg/kg	.033	0.0310	93.8	57-118	WG584334
Dibenz(a,h)anthracene	mg/kg	.033	0.0339	103.	53-122	WG584334
Fluoranthene	mg/kg	.033	0.0290	87.8	58-118	WG584334
Fluorene	mg/kg	.033	0.0262	79.3	54-109	WG584334
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0349	106.	51-125	WG584334
Naphthalene	mg/kg	.033	0.0226	68.4	45-105	WG584334
Phenanthrene	mg/kg	.033	0.0261	79.0	53-114	WG584334
Pyrene	mg/kg	.033	0.0291	88.3	53-121	WG584334
2-Fluorobiphenyl				73.95	34-129	WG584334
Nitrobenzene-d5				72.02	14-141	WG584334
p-Terphenyl-d14				87.53	25-139	WG584334
TPH (GC/FID) High Fraction	ppm	60	47.9	79.8	50-150	WG584330
o-Terphenyl				94.93	50-150	WG584330
Arsenic	mg/kg	92.6	91.0	98.3	82.9-117	WG584525
Barium	mg/kg	169	180.	107.	82.8-117	WG584525
Cadmium	mg/kg	61.8	62.5	101.	83.3-117	WG584525
Chromium	mg/kg	71.3	78.4	110.	81.8-118	WG584525
Copper	mg/kg	81.2	81.9	101.	83.9-116	WG584525
Lead	mg/kg	92.4	91.3	98.8	83.3-117	WG584525
Nickel	mg/kg	59.1	58.1	98.3	83.8-116	WG584525
Selenium	mg/kg	89.5	88.7	99.1	79-121	WG584525
Silver	mg/kg	34.4	33.5	97.4	66.3-134	WG584525
Zinc	mg/kg	141	146.	104.	80.9-119	WG584525
pH	su	6.04	5.96	98.7	98-101	WG584579
Chromium, Hexavalent	mg/kg	150	152.	101.	50-150	WG584213

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0539	0.0525	108.	76-113	2.54	20	WG584343
Ethylbenzene	mg/kg	0.0544	0.0528	109.	78-115	2.96	20	WG584343
Toluene	mg/kg	0.0547	0.0540	109.	76-114	1.21	20	WG584343
Total Xylene	mg/kg	0.167	0.163	111.	81-118	2.73	20	WG584343
a,a,a-Trifluorotoluene(PID)				104.8	54-144			WG584343
TPH (GC/FID) Low Fraction	mg/kg	7.30	7.07	133.	67-135	3.09	20	WG584343
a,a,a-Trifluorotoluene(FID)				105.4	59-128			WG584343
ORP	mV	235.	236.	103.	95.6-104.	0.425	20	WG584412
Specific Conductance	umhos/	348.	350.	99.0	85-115	0.573	20	WG584415
1-Methylnaphthalene	mg/kg	0.0256	0.0248	78.0	48-113	3.38	24	WG584334
2-Chloronaphthalene	mg/kg	0.0279	0.0270	85.0	51-114	3.36	24	WG584334
2-Methylnaphthalene	mg/kg	0.0260	0.0251	79.0	44-109	3.68	24	WG584334
Acenaphthene	mg/kg	0.0233	0.0221	70.0	52-108	4.97	22	WG584334
Acenaphthylene	mg/kg	0.0267	0.0255	81.0	51-110	4.87	21	WG584334
Anthracene	mg/kg	0.0290	0.0281	88.0	58-120	3.03	20	WG584334
Benzo(a)anthracene	mg/kg	0.0308	0.0312	93.0	54-110	1.25	22	WG584334

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(a)pyrene	mg/kg	0.0309	0.0310	94.0	56-118	0.161	21	WG584334
Benzo(b)fluoranthene	mg/kg	0.0299	0.0308	90.0	55-114	3.14	20	WG584334
Benzo(g,h,i)perylene	mg/kg	0.0355	0.0352	107.	48-130	0.742	20	WG584334
Benzo(k)fluoranthene	mg/kg	0.0303	0.0302	92.0	55-122	0.591	25	WG584334
Chrysene	mg/kg	0.0303	0.0310	92.0	57-118	2.07	20	WG584334
Dibenz(a,h)anthracene	mg/kg	0.0336	0.0339	102.	53-122	0.972	20	WG584334
Fluoranthene	mg/kg	0.0295	0.0290	89.0	58-118	1.71	20	WG584334
Fluorene	mg/kg	0.0282	0.0262	85.0	54-109	7.37	20	WG584334
Indeno(1,2,3-cd)pyrene	mg/kg	0.0352	0.0349	107.	51-125	0.777	21	WG584334
Naphthalene	mg/kg	0.0235	0.0226	71.0	45-105	4.26	24	WG584334
Phenanthrene	mg/kg	0.0272	0.0261	82.0	53-114	4.14	20	WG584334
Pyrene	mg/kg	0.0290	0.0291	88.0	53-121	0.341	20	WG584334
2-Fluorobiphenyl				77.18	34-129			WG584334
Nitrobenzene-d5				72.97	14-141			WG584334
p-Terphenyl-d14				89.61	25-139			WG584334
TPH (GC/FID) High Fraction	ppm	43.9	47.9	73.0	50-150	8.79	25	WG584330
o-Terphenyl				89.65	50-150			WG584330
pH	su	5.95	5.96	98.0	98-101	0.168	20	WG584579
Chromium, Hexavalent	mg/kg	131.	152.	87.0	50-150	14.8	20	WG584213

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.205	0	.05	82.1	32-137	L566358-01	WG584343
Ethylbenzene	mg/kg	0.188	0	.05	75.0	10-150	L566358-01	WG584343
Toluene	mg/kg	0.205	0	.05	82.0	20-142	L566358-01	WG584343
Total Xylene	mg/kg	0.565	0	.15	75.3	16-141	L566358-01	WG584343
a,a,a-Trifluorotoluene(PID)					104.3	54-144		WG584343
TPH (GC/FID) Low Fraction	mg/kg	21.3	0	5.5	77.4	55-109	L566358-01	WG584343
a,a,a-Trifluorotoluene(FID)					101.8	59-128		WG584343
Mercury	mg/kg	0.288	0.0848	.25	81.3	70-130	L566343-12	WG584487
1-Methylnaphthalene	mg/kg	0.0317	0	.033	96.0	25-155	L566352-02	WG584334
2-Chloronaphthalene	mg/kg	0.0343	0	.033	104.	31-153	L566352-02	WG584334
2-Methylnaphthalene	mg/kg	0.0323	0	.033	97.8	22-172	L566352-02	WG584334
Acenaphthene	mg/kg	0.0286	0	.033	86.7	43-133	L566352-02	WG584334
Acenaphthylene	mg/kg	0.0326	0	.033	98.8	42-146	L566352-02	WG584334
Anthracene	mg/kg	0.0348	0	.033	105.	38-153	L566352-02	WG584334
Benzo(a)anthracene	mg/kg	0.0378	0	.033	114.	31-142	L566352-02	WG584334
Benzo(a)pyrene	mg/kg	0.0365	0	.033	110.	26-152	L566352-02	WG584334
Benzo(b)fluoranthene	mg/kg	0.0357	0	.033	108.	10-188	L566352-02	WG584334
Benzo(g,h,i)perylene	mg/kg	0.0314	0	.033	95.2	10-176	L566352-02	WG584334
Benzo(k)fluoranthene	mg/kg	0.0366	0	.033	111.	22-163	L566352-02	WG584334
Chrysene	mg/kg	0.0365	0	.033	111.	26-146	L566352-02	WG584334
Dibenz(a,h)anthracene	mg/kg	0.0323	0	.033	98.0	10-160	L566352-02	WG584334
Fluoranthene	mg/kg	0.0358	0	.033	108.	23-160	L566352-02	WG584334
Fluorene	mg/kg	0.0343	0	.033	104.	44-143	L566352-02	WG584334
Indeno(1,2,3-cd)pyrene	mg/kg	0.0335	0	.033	102.	10-157	L566352-02	WG584334
Naphthalene	mg/kg	0.0280	0	.033	84.8	22-156	L566352-02	WG584334
Phenanthrene	mg/kg	0.0327	0	.033	99.2	23-164	L566352-02	WG584334

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Pyrene	mg/kg	0.0333	0	.033	101.	12-170	L566352-02	WG584334
2-Fluorobiphenyl					100.1	34-129		WG584334
Nitrobenzene-d5					90.01	14-141		WG584334
p-Terphenyl-d14					101.5	25-139		WG584334
TPH (GC/FID) High Fraction	ppm	32.6	0	60	54.3	50-150	L566139-27	WG584330
o-Terphenyl					77.06	50-150		WG584330
Arsenic	mg/kg	54.1	7.60	50	93.0	75-125	L565608-01	WG584525
Barium	mg/kg	106.	62.0	50	88.0	75-125	L565608-01	WG584525
Cadmium	mg/kg	48.8	0.808	50	96.0	75-125	L565608-01	WG584525
Chromium	mg/kg	69.9	17.6	50	105.	75-125	L565608-01	WG584525
Copper	mg/kg	61.5	13.7	50	95.6	75-125	L565608-01	WG584525
Lead	mg/kg	75.6	25.0	50	101.	75-125	L565608-01	WG584525
Nickel	mg/kg	60.9	16.1	50	89.6	75-125	L565608-01	WG584525
Selenium	mg/kg	43.7	0	50	87.4	75-125	L565608-01	WG584525
Silver	mg/kg	45.7	0	50	91.4	75-125	L565608-01	WG584525
Zinc	mg/kg	114.	66.4	50	95.2	75-125	L565608-01	WG584525
Chromium, Hexavalent	mg/kg	5.48	0	20	27.4*	50-150	L566358-02	WG584213

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.203	0.205	81.3	32-137	0.900	39	L566358-01	WG584343
Ethylbenzene	mg/kg	0.211	0.188	84.6	10-150	12.0	44	L566358-01	WG584343
Toluene	mg/kg	0.207	0.205	82.7	20-142	0.790	42	L566358-01	WG584343
Total Xylene	mg/kg	0.625	0.565	83.4	16-141	10.2	46	L566358-01	WG584343
a,a,a-Trifluorotoluene (PID)				104.1	54-144				WG584343
TPH (GC/FID) Low Fraction	mg/kg	21.2	21.3	77.1	55-109	0.410	20	L566358-01	WG584343
a,a,a-Trifluorotoluene (FID)				101.7	59-128				WG584343
Mercury	mg/kg	0.314	0.288	91.7	70-130	8.64	20	L566343-12	WG584487
1-Methylnaphthalene	mg/kg	0.0335	0.0317	102.	25-155	5.70	27	L566352-02	WG584334
2-Chloronaphthalene	mg/kg	0.0375	0.0343	114.	31-153	8.81	22	L566352-02	WG584334
2-Methylnaphthalene	mg/kg	0.0349	0.0323	106.	22-172	7.72	29	L566352-02	WG584334
Acenaphthene	mg/kg	0.0311	0.0286	94.2	43-133	8.29	26	L566352-02	WG584334
Acenaphthylene	mg/kg	0.0349	0.0326	106.	42-146	6.78	22	L566352-02	WG584334
Anthracene	mg/kg	0.0359	0.0348	109.	38-153	3.30	27	L566352-02	WG584334
Benzo(a)anthracene	mg/kg	0.0396	0.0378	120.	31-142	4.58	31	L566352-02	WG584334
Benzo(a)pyrene	mg/kg	0.0382	0.0365	116.	26-152	4.59	32	L566352-02	WG584334
Benzo(b)fluoranthene	mg/kg	0.0385	0.0357	117.	10-188	7.79	33	L566352-02	WG584334
Benzo(g,h,i)perylene	mg/kg	0.0330	0.0314	99.9	10-176	4.78	30	L566352-02	WG584334
Benzo(k)fluoranthene	mg/kg	0.0375	0.0366	114.	22-163	2.44	29	L566352-02	WG584334
Chrysene	mg/kg	0.0389	0.0365	118.	26-146	6.38	30	L566352-02	WG584334
Dibenz(a,h)anthracene	mg/kg	0.0343	0.0323	104.	10-160	5.88	39	L566352-02	WG584334
Fluoranthene	mg/kg	0.0380	0.0358	115.	23-160	5.97	22	L566352-02	WG584334
Fluorene	mg/kg	0.0367	0.0343	111.	44-143	6.65	23	L566352-02	WG584334
Indeno(1,2,3-cd)pyrene	mg/kg	0.0353	0.0335	107.	10-157	5.09	40	L566352-02	WG584334
Naphthalene	mg/kg	0.0310	0.0280	93.9	22-156	10.2	27	L566352-02	WG584334
Phenanthrene	mg/kg	0.0345	0.0327	104.	23-164	5.09	25	L566352-02	WG584334
Pyrene	mg/kg	0.0346	0.0333	105.	12-170	3.65	24	L566352-02	WG584334
2-Fluorobiphenyl				108.4	34-129				WG584334

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Nitrobenzene-d5				97.70	14-141				
p-Terphenyl-d14				106.1	25-139				
TPH (GC/FID) High Fraction	ppm	34.0	32.6	56.6	50-150	4.25	25	L566139-27	WG584330
o-Terphenyl				82.37	50-150				WG584330
Arsenic	mg/kg	57.6	54.1	100.	75-125	6.27	20	L565608-01	WG584525
Barium	mg/kg	113.	106.	102.	75-125	6.39	20	L565608-01	WG584525
Cadmium	mg/kg	52.8	48.8	104.	75-125	7.87	20	L565608-01	WG584525
Chromium	mg/kg	73.8	69.9	112.	75-125	5.43	20	L565608-01	WG584525
Copper	mg/kg	65.4	61.5	103.	75-125	6.15	20	L565608-01	WG584525
Lead	mg/kg	82.4	75.6	115.	75-125	8.61	20	L565608-01	WG584525
Nickel	mg/kg	65.8	60.9	99.4	75-125	7.73	20	L565608-01	WG584525
Selenium	mg/kg	47.0	43.7	94.0	75-125	7.28	20	L565608-01	WG584525
Silver	mg/kg	49.3	45.7	98.6	75-125	7.58	20	L565608-01	WG584525
Zinc	mg/kg	123.	114.	113.	75-125	7.59	20	L565608-01	WG584525
Chromium, Hexavalent	mg/kg	5.80	5.48	29.0*	50-150	5.67	20	L566358-02	WG584213

Batch number /Run number / Sample number cross reference

WG584343: R2087317: L566358-01 03 04 05 06 07 08
WG584487: R2087515: L566358-02
WG584412: R2088033: L566358-02
WG584415: R2088035: L566358-02
WG584334: R2088453: L566358-02
WG584330: R2088656: L566358-01 03 04 05 06 07 08
WG584525: R2089013: L566358-02
WG584579: R2090253: L566358-02
WG584213: R2090573: L566358-02
WG584700: R2090873: L566358-02

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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

Parachute, CO 81635

Quality Assurance Report
Level II

L566358

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

March 27, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.