

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, 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
5/20/2011

1. OGCC Operator Number: 100185	4. Contact Name: Chris Hines	Complete the Attachment Checklist OP OGCC
2. Name of Operator: Encana Oil & Gas (USA) Inc.	Phone: (970) 285-2653	
3. Address: 2717 County Road 215 City: Parachute State: CO Zip: 81635	Fax: (970) 285-2705	
5. API Number: 05	OGCC Facility ID Number: 334657 (Location ID)	Survey Plat
6. Well/Facility Name: DAYBREAK FEDERAL-67S95W 7	Well/Facility Number: 30 SWNE	Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): SWNE, Sec 30, T7S, R9SW, 6th PM		Surface Equipmt Diagram
9. County: Garfield	10. Field Name: Parachute	Technical Info Page
11. Federal, Indian or State Lease Number: COC 019572		Other

General Notice

☐ 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: ☐ FNL/FSL ☐ FEL/FWL

Change of Surface Footage to Exterior Section Lines: ☐ ☐ ☐ ☐

Change of Bottomhole Footage from Exterior Section Lines: ☐ ☐ ☐ ☐

Change of Bottomhole Footage to Exterior Section Lines: ☐ ☐ ☐ ☐ attach directional survey

Bottomhole location Qtr/Sec, Twp, Rng, Mer

Latitude _____ Distance to nearest property line _____ Distance to nearest bldg, public rd, utility or RR _____

Longitude _____ Distance to nearest lease line _____ Is location in a High Density Area (rule 603b)? Yes/No ☐

Ground Elevation _____ Distance to nearest well same formation _____ Surface owner consultation date: _____

GPS DATA:

Date of Measurement _____ PDOP Reading _____ Instrument Operator's Name _____

☐ CHANGE SPACING UNIT

Formation _____ Formation Code _____ Spacing order number _____ Unit Acreage _____ Unit configuration _____

☐ Remove from surface bond
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):

Effective Date: _____

Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME

From: _____ NUMBER _____

To: _____

Effective Date: _____

☐ ABANDONED LOCATION:

Was location ever built? ☐ Yes ☐ No

Is site ready for inspection? ☐ Yes ☐ No

Date Ready for Inspection: _____

☐ NOTICE OF CONTINUED SHUT IN STATUS

Date well shut in or temporarily abandoned: _____

Has Production Equipment been removed from site? ☐ Yes ☐ No

MIT required if shut in longer than two years. Date of last MIT: _____

☐ SPUD DATE: _____

☐ REQUEST FOR CONFIDENTIAL STATUS (5 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK

Method used _____ Cementing tool setting/perf depth _____ Cement volume _____ Cement top _____ Cement bottom _____ Date _____

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.

Final reclamation will commence on approximately _____ ☐ Final reclamation is completed and site is ready for inspection.

PG 30 well pad
South Parachute

Technical Engineering/Environmental Notice

☐ Notice of Intent

Approximate Start Date: _____

☒ Report of Work Done

Date Work Completed: August 2010

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: On-site disposal of cuttings 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: Christopher C. Hines Date: 05-20-2011 Email: christopher.hines@encana.com

Print Name: Christopher C. Hines Title: Environmental Field Coordinator

COGCC Approved: Chris Camfield Title: FOR Date: 05/20/2011

CONDITIONS OF APPROVAL, IF ANY: Chris Camfield, EPS NW Region

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: _____ API Number: _____

2. Name of Operator: _____ OGCC Facility ID # _____

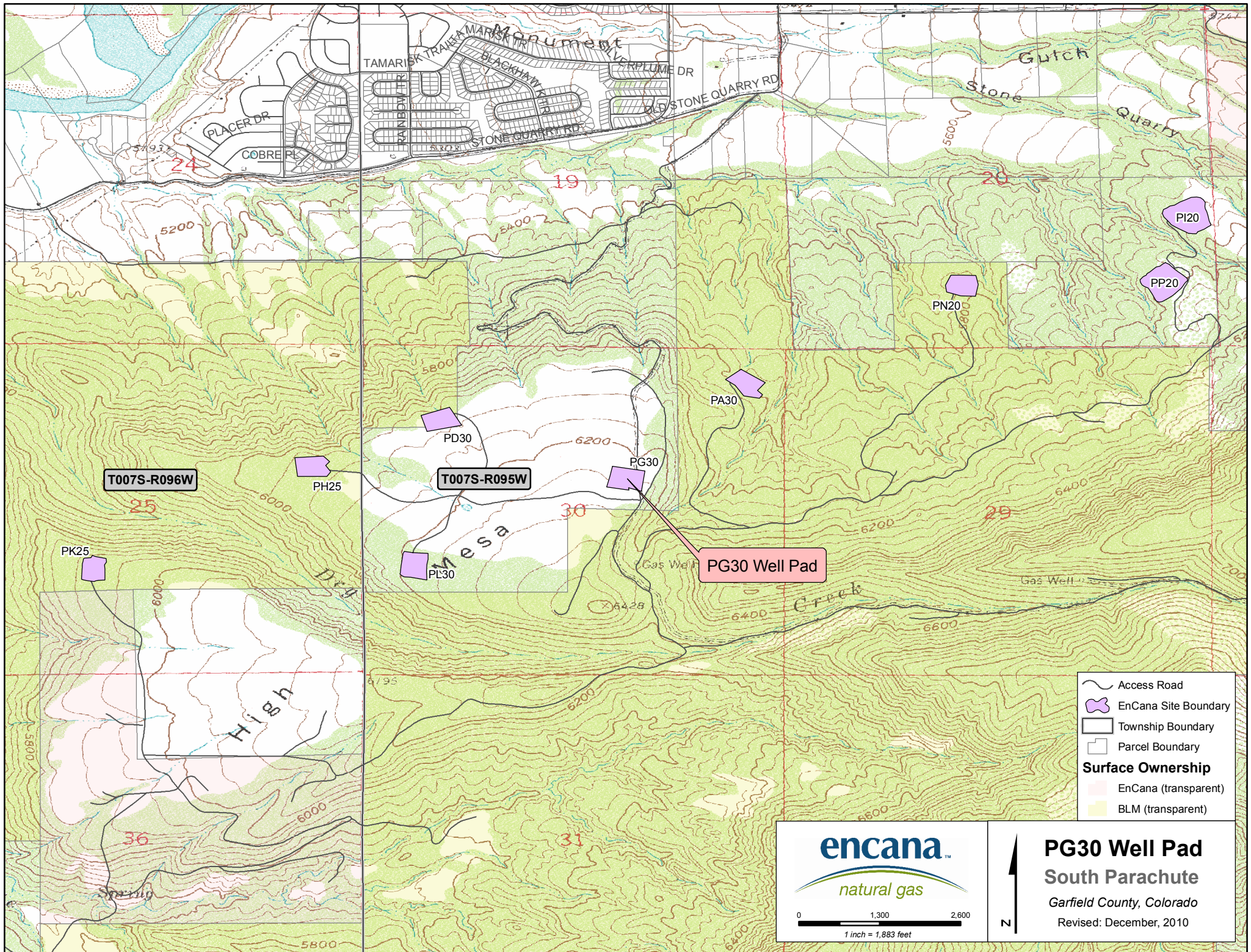
3. Well/Facility Name: _____ Well/Facility Number: _____

4. Location (QtrQtr, Sec, Twp, Rng, Meridian): _____

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



T007S-R096W

T007S-R095W

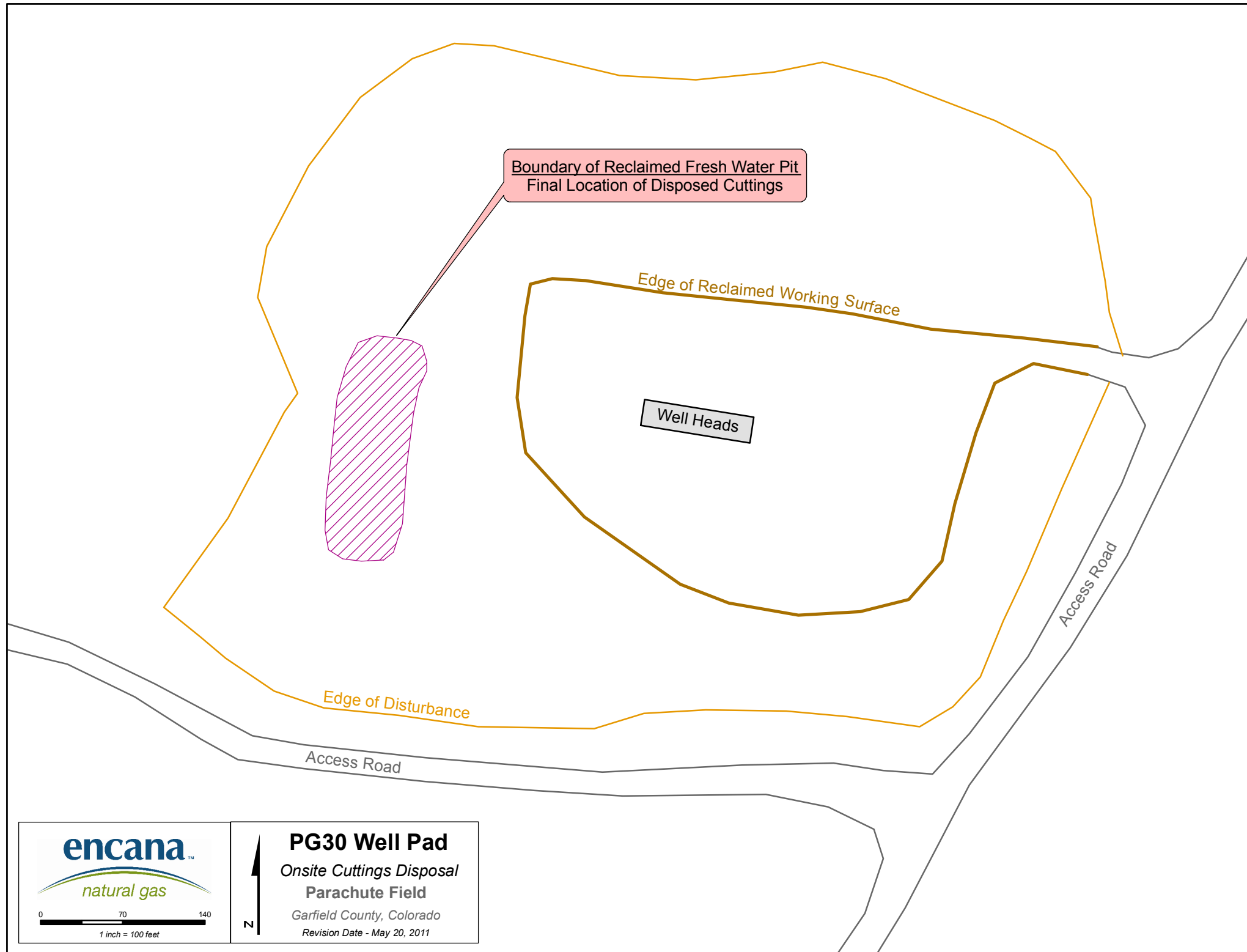
PG30 Well Pad

- Access Road
- EnCana Site Boundary
- Township Boundary
- Parcel Boundary
- Surface Ownership**
 - EnCana (transparent)
 - BLM (transparent)

encana
natural gas

0 1,300 2,600
1 inch = 1,883 feet

PG30 Well Pad
South Parachute
 Garfield County, Colorado
 Revised: December, 2010



Sample Tracking
Project Tracking

						Analytes (BDL = Below Detection Limit; ND = Non Detect)																	Inorganics in Soil												Metals in Soil (mg/kg [ppm])										
Allowable Concentration -->						Organic Compounds in Soil (mg/kg [ppm])																																							
Location	Field - Route	Lab	Sampler	Sample Date:	Sample Matrix	Matrix Notes	TPH (total volatile and extractable petroleum hydrocarbons)	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)	SAR (calculation)	pH	Arsenic	Barium - L&NR True Total Barium	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver	Zinc					
PA30	High Mesa	Accute	KR	09/22/09	Background		47.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.52	0.116	8.1	7.7	191		0.13	19.7	1.8	16.3	13	0.022	21.7	0.15	0.19	53.2					
PD30	High Mesa	Accute	KR	09/22/09	Background		12.92	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.999	0.11	7.5	5	158		0.075	17.1	1.4	13	12.4	0.018	14	0.14	0.1	46.6					
PG30	High Mesa	ESC	BK	05/27/09	Background		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.16	1.7	9.1	BDL	240		0.41	27	BDL	13	8.6	0.031	26	BDL	0.58						
PG30	High Mesa	Accute	BR	06/23/10	Background	Northwest background grab																						5.1																	
PG30	High Mesa	Accute	BR	06/23/10	Background	Southwest background grab																						5																	
PH25	High Mesa	ESC	BR	08/16/10	Background	SE background																						18																	
PH25	High Mesa	ESC	BR	08/16/10	Background	SW background																						16																	
PH25	High Mesa	ESC	BR	10/06/10	Background	collected from cuttings pit spoil																						6.1																	
PH25	High Mesa	ESC	BR	08/16/10	Background	S background																						12																	
PH25	High Mesa	ESC	BR	08/16/10	Background	NE background																						11																	
PI20	High Mesa	Accute	KR	07/09/09	Background		69.56	ND	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			0.14	0.54	7.4	7.1	187		0.7	12.5	4.9	14	15.5	0.022	13.3	0.7	0.21	55					
PK25	High Mesa	Accute	KR	09/22/09	Background		35.306	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		0.887	0.113	7.9	7	269		0.19	17.4	1	14.6	11.1	0.023	18.3	0.25	0.09	39.9					
PL30	High Mesa	ESC	BR	08/16/10	Background	SE background																							33																
PL30	High Mesa	ESC	BR	08/16/10	Background	E background																							15																
PL30	High Mesa	Accute	BR	09/30/10	Background	collected from cuttings pit spoil																							11.1																
PL30	High Mesa	ESC	BR	08/16/10	Background	SW background																							14																
PL30	High Mesa	ESC	BR	08/16/10	Background	W background																							8.5																
PN20	High Mesa	ESC	BR	08/16/10	Background	SE background																							9.7																
PN20	High Mesa	ESC	BR	08/16/10	Background	SW background																							7.3																
PN20	High Mesa	ESC	BR	08/16/10	Background	NW background																							5.4																
PP20	High Mesa	Accute	KR	09/22/09	Background		230.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		0.959	0.132	8.1	8.4	198		0.27	14.1	0.75	13.7	10.7	0.022	14.5	0.14	0.15	45.8					
PG30	High Mesa	Accute	KR	09/22/09	Cuttings		207.6	0.0067	0.017	0.0015	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.059	ND	1.62	16.4	8.9	6	9910		0.7	21.4	1.5	24.4	12.2	0.027	18.2	0.19	0.32	58.9					



10/13/09

Technical Report for

ENCANA

EnCana Oil & Gas (USA) Inc.

EnCana PG30 Cuttings

Accutest Job Number: T38127

Sampling Date: 09/22/09

Report to:

EnCana
2717 Co. Rd. 215
Parachute, CO 81635
brett.middleton@encana.com; christopher.hines@encana.com

ATTN: Chris Hines

Total number of pages in report: 59



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevaro

Paul Canevaro
Laboratory Director

Client Service contact: Sylvia Garza 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)
OK (9103) UT(7132714700)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

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Sample Summary

ENCANA

Job No: T38127

EnCana Oil & Gas (USA) Inc.
Project No: EnCana PG30 Cuttings

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
T38127-1	09/22/09	10:35 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209
T38127-1A	09/22/09	10:35 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209
T38127-1B	09/22/09	10:35 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209
T38127-1C	09/22/09	10:35 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: ENCANA_CUTTINGS_092209
Lab Sample ID: T38127-1
Matrix: SO - Soil
Method: SW846 8260B
Project: EnCana Oil & Gas (USA) Inc.

Date Sampled: 09/22/09
Date Received: 09/23/09
Percent Solids: 76.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0055838.D	1	10/01/09	AH	n/a	n/a	VX303
Run #2							

	Initial Weight	Final Volume
Run #1	5.11 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	6.7	6.4	0.89	ug/kg	
108-88-3	Toluene	16.9	6.4	1.2	ug/kg	
100-41-4	Ethylbenzene	1.5	6.4	1.2	ug/kg	J
1330-20-7	Xylene (total)	13.9	19	2.7	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-121%
2037-26-5	Toluene-D8	107%		76-132%
460-00-4	4-Bromofluorobenzene	130%		73-165%
17060-07-0	1,2-Dichloroethane-D4	90%		57-122%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: ENCANA_CUTTINGS_092209
Lab Sample ID: T38127-1
Matrix: SO - Soil
Method: SW846 8270C SW846 3550B
Project: EnCana Oil & Gas (USA) Inc.

Date Sampled: 09/22/09
Date Received: 09/23/09
Percent Solids: 76.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	H35204.D	1	09/30/09	SC	09/26/09	OP13100	EH1902
Run #2	J13531.D	20	10/01/09	SC	09/26/09	OP13100	EJ622

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2	30.0 g	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	220	60	ug/kg	
208-96-8	Acenaphthylene	ND	220	51	ug/kg	
120-12-7	Anthracene	ND	220	42	ug/kg	
56-55-3	Benzo(a)anthracene	ND	220	83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	220	34	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	220	53	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	220	51	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	220	40	ug/kg	
218-01-9	Chrysene	ND	220	47	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	220	120	ug/kg	
206-44-0	Fluoranthene	ND	220	45	ug/kg	
86-73-7	Fluorene	ND	220	59	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	220	78	ug/kg	
90-12-0	1-Methylnaphthalene	51.0	220	51	ug/kg	J
91-57-6	2-Methylnaphthalene	105	220	68	ug/kg	J
91-20-3	Naphthalene	58.6	220	43	ug/kg	J
85-01-8	Phenanthrene	ND	220	58	ug/kg	
129-00-0	Pyrene	ND	220	42	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%	49%	18-104%
321-60-8	2-Fluorobiphenyl	46%	68%	21-114%
1718-51-0	Terphenyl-d14	112%	80%	24-149%

(a) Internal standards are not within the advisory limits due to a matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209			Date Sampled:	09/22/09					
Lab Sample ID:	T38127-1			Date Received:	09/23/09					
Matrix:	SO - Soil			Percent Solids:	76.8					
Method:	SW846 8015									
Project:	EnCana Oil & Gas (USA) Inc.									

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE048105.D	1	10/02/09	FI	n/a	n/a	GEE2440
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.55 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	24.6	7.4	0.44	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	117%		46-127%
98-08-8	aaa-Trifluorotoluene	105%		44-120%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	ENCANA_CUTTINGS_092209	
Lab Sample ID:	T38127-1	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 76.8
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CC215364.D	5	09/30/09	SS	09/25/09	OP13084	GCC966
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	183	54	18	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0%		33-115%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38127-1	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	76.8
Project:	EnCana Oil & Gas (USA) Inc.		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.0	0.78	0.16	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Cadmium	0.70	0.39	0.078	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Chromium	22.9	0.78	0.054	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Copper	24.4	1.9	0.10	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Lead	12.2	0.78	0.31	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Mercury	0.027	0.020	0.00078	mg/kg	1	10/08/09	10/08/09	NS	SW846 7471A ¹ SW846 7471A ⁴
Nickel	18.2	3.1	0.10	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Selenium	0.19 U	0.78	0.19	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Silver	0.32 B	0.78	0.062	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³
Zinc	58.9	1.6	0.31	mg/kg	1	10/07/09	10/08/09	NS	SW846 6010B ² SW846 3050B ³

- (1) Instrument QC Batch: MA4325
- (2) Instrument QC Batch: MA4326
- (3) Prep QC Batch: MP10401
- (4) Prep QC Batch: MP10414

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209			Date Sampled:	09/22/09
Lab Sample ID:	T38127-1			Date Received:	09/23/09
Matrix:	SO - Soil			Percent Solids:	76.8
Project:	EnCana Oil & Gas (USA) Inc.				

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.5 B	2.0	mg/kg	1	10/07/09 12:00	KD	SW846 3060/7196A
Chromium, Trivalent ^a	21.4	2.8	mg/kg	1	10/08/09 22:22	NS	SW846 6010/7196A M
Solids, Percent	76.8		%	1	10/02/09	MR	SM 2540 G
Specific Conductivity	1620	1.0	umhos/cm	1	10/07/09 15:00	KD	EPA 120.1
pH	8.9		su	1	09/26/09 15:40	EV	SW846 9045C

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38127-1A	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	76.8
Project:	EnCana Oil & Gas (USA) Inc.		

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	1.25	0.20	0.0042	mg/l	1	10/07/09	10/11/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4329
(2) Prep QC Batch: MP10403

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38127-1B	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	76.8
Project:	EnCana Oil & Gas (USA) Inc.		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	9910	330	0.98	mg/kg	25	10/06/09	10/12/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4330
(2) Prep QC Batch: MP10395

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38127-1C	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	76.8
Project:	EnCana Oil & Gas (USA) Inc.		

SAR Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	799	25	0.18	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ³
Magnesium	54.3	25	0.039	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ³
Sodium	1780	50	1.3	mg/l	10	10/07/09	10/11/09 NS	SW846 6010B ²	SW846 3050B ³

- (1) Instrument QC Batch: MA4328
(2) Instrument QC Batch: MA4329
(3) Prep QC Batch: MP10393

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	ENCANA_CUTTINGS_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38127-1C	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	76.8
Project:	EnCana Oil & Gas (USA) Inc.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	16.4		ratio	1	10/11/09 04:08	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL: 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # T38127
Requested Analyses	
Matrix Codes	
DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank	
LAB USE ONLY	

Client / Reporting Information		Project Information	
Company Name Enlang Oil & Gas	Project Name Enlang PG-30 Cuttings		
Street Address 8717 County Rd 215 Suite 100	Street		
City Parachute Co	City		
State TX	State		
Zip 79635	Zip		
Project Contact Chris Hines	Project #		
Phone # 930 285 2453	Client Purchase Order #		
Sampler(s) Name(s) KLR	Project Manager		
Billing Information (If different from Report to)			
Company Name	Street Address		
City	City		
State	State		
Zip	Zip		
Attention:			
Collection			
Field ID / Point of Collection Enlang - Cuttings - 092209	Date 9/22/09		
Time 1035	Sampled By ICLR		
Matrix SO	# of bottles 3		
Number of preserved bottles			
<input type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZINC <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> DI Water <input type="checkbox"/> MICH <input type="checkbox"/> TSP <input type="checkbox"/> NALISA <input type="checkbox"/> ENCORE <input type="checkbox"/> OTHER			
Turnaround Time (Business days)			
Data Deliverable Information			
Comments / Special Instructions			
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day EMERGENCY Emergency & Rush T/A data available VIA Lablink			
Approved By (Accutest PM) / Date: _____ <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> TRRP <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> EDD Format <input type="checkbox"/> FULT1 (Level 3+4) <input type="checkbox"/> Other <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial "C" = Results + QC & Surrogate Summary			
Sample Custody must be documented below each time samples change possession, including courier delivery.			
Relinquished by Sampler: Chris Hines	Date Time: 9/22/09 1430		
Received By: SEI GX	Date Time: 9/23/09		
Relinquished by Sampler: 3	Date Time:		
Received By:	Date Time:		
Relinquished by Sampler: 5	Date Time:		
Received By:	Date Time:		
Custody Seal #	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		
Preserved where applicable	On Ice: 72.6°C		

T38127: Chain of Custody

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Organic Compounds in Soil

TPH (Total volatile and extractable petroleum hydrocarbons)

Benzene
Toluene
Ethylbenzene
Xylenes (Total)
Acetanaphene
Anthracene
Benzo(A)anthracene
Benz(a)fluoranthene
Benz(a)fluoranthene
Benz(a)pyrene
Chrysene
Dibenzo(A,H)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-C,D)pyrene
Naphthalene
Pyrene

Inorganics in Soils

Electronic Conductivity (EC)
Sodium Adsorption Ratio (SAR)

pH

Metals in Soils

Arsenic
Barium (LDNR True Total Barium)
Boron (Hot Water Soluble)
Calcium
Chromium (III)
Chromium (VI)
Copper
Lead (Inorganic)
Mercury
Nickel (soluble salt)
Selenium
Silver
Zinc

SAMPLE INSPECTION FORM

Accutest Job Number: T38127 Client: Escon Oil & Gas Date/Time Received: 9-23-9 930
 # of Coolers Received: 1 Thermometer #: IR-1 Temperature Adjustment Factor: + .4
 Cooler Temps: #1: 2.6 #2: 5 #3: #4: #5: #6: #7: #8:
 Method of Delivery: ☒ FEDEX ☐ UPS ☐ Accutest Courier ☐ Greyhound ☐ Delivery ☐ Other
 Airbill Numbers:

COOLER INFORMATION

- ☐ Custody seal missing or not intact
- ☐ Temperature criteria not met
- ☐ Wet ice received in cooler

CHAIN OF CUSTODY

- ☐ Chain of Custody not received
- ☐ Sample D/T unclear or missing
- ☐ Analyses unclear or missing
- ☐ COC not properly executed

SAMPLE INFORMATION

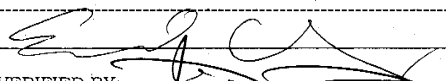
- ☐ Sample containers received broken
- ☐ VOC vials have headspace
- ☐ Sample labels missing or illegible
- ☐ ID on COC does not match label(s)
- ☐ D/T on COC does not match label(s)
- ☐ Sample/Bottles rcvd but no analysis on COC
- ☐ Sample listed on COC, but not received
- ☐ Bottles missing for requested analysis
- ☐ Insufficient volume for analysis
- ☐ Sample received improperly preserved

TRIP BLANK INFORMATION

- ☐ Trip Blank on COC but not received
- ☐ Trip Blank received but not on COC
- ☐ Trip Blank not intact
- ☐ Received Water Trip Blank
- ☐ Received Soil TB

Number of Encores?
 Number of 5035 kits?
 Number of lab-filtered metals?

Summary of Discrepancies:

TECHNICIAN SIGNATURE/DATE:  9-23-9

INFORMATION AND SAMPLE LABELING VERIFIED BY: 

CORRECTIVE ACTIONS

Client Representative Notified: Date:

By Accutest Representative: Via: ☐ Phone ☐ Email

Client Instructions:

I:\mwalker\forms\samplemanagement

T38127: Chain of Custody

Page 3 of 4

SAMPLE RECEIPT LOG

JOB #:

T30127

DATE/TIME RECEIVED:

9.23-9 930

CLIENT:

Esencia Oil & Gas

INITIALS:

50

[illegible]

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NaOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

T38127: Chain of Custody

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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX303-MB	X0055837.D	1	10/01/09	AH	n/a	n/a	VX303

The QC reported here applies to the following samples: Method: SW846 8260B

T38127-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.70	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.90	ug/kg	
108-88-3	Toluene	ND	5.0	0.95	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	100% 70-121%
2037-26-5	Toluene-D8	98% 76-132%
460-00-4	4-Bromofluorobenzene	90% 73-165%
17060-07-0	1,2-Dichloroethane-D4	94% 57-122%

Blank Spike Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX303-BS	X0055835.D	1	10/01/09	AH	n/a	n/a	VX303

The QC reported here applies to the following samples:

Method: SW846 8260B

T38127-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	42.6	85	70-114
100-41-4	Ethylbenzene	50	40.8	82	60-119
108-88-3	Toluene	50	40.9	82	68-115
1330-20-7	Xylene (total)	150	125	83	61-115

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	70-121%
2037-26-5	Toluene-D8	102%	76-132%
460-00-4	4-Bromofluorobenzene	94%	73-165%
17060-07-0	1,2-Dichloroethane-D4	92%	57-122%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T38127-1MS	X0055839.D	1	10/01/09	AH	n/a	n/a	VX303
T38127-1MSD	X0055840.D	1	10/01/09	AH	n/a	n/a	VX303
T38127-1	X0055838.D	1	10/01/09	AH	n/a	n/a	VX303

The QC reported here applies to the following samples:

Method: SW846 8260B

T38127-1

CAS No.	Compound	T38127-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	6.7		61.1	46.7	65*	45.9	67*	2	70-114/38
100-41-4	Ethylbenzene	1.5	J	61.1	42.4	67	41.8	69	1	60-119/40
108-88-3	Toluene	16.9		61.1	62.7	75	62.2	77	1	68-115/38
1330-20-7	Xylene (total)	13.9	J	183	130	63	130	66	0	61-115/39

CAS No.	Surrogate Recoveries	MS	MSD	T38127-1	Limits
1868-53-7	Dibromofluoromethane	94%	92%	98%	70-121%
2037-26-5	Toluene-D8	109%	107%	107%	76-132%
460-00-4	4-Bromofluorobenzene	134%	119%	130%	73-165%
17060-07-0	1,2-Dichloroethane-D4	85%	85%	90%	57-122%



GC/MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13100-MB	J13504.D	1	09/30/09	SC	09/26/09	OP13100	EJ621

The QC reported here applies to the following samples:

Method: SW846 8270C

T38127-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	46	ug/kg	
208-96-8	Acenaphthylene	ND	170	39	ug/kg	
120-12-7	Anthracene	ND	170	32	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	64	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	26	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	41	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	39	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	31	ug/kg	
218-01-9	Chrysene	ND	170	36	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	88	ug/kg	
206-44-0	Fluoranthene	ND	170	34	ug/kg	
86-73-7	Fluorene	ND	170	45	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	60	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	39	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	52	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	45	ug/kg	
129-00-0	Pyrene	ND	170	32	ug/kg	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	60% 26-124%
4165-62-2	Phenol-d5	65% 19-106%
118-79-6	2,4,6-Tribromophenol	55% 18-129%
4165-60-0	Nitrobenzene-d5	62% 18-104%
321-60-8	2-Fluorobiphenyl	54% 21-114%
1718-51-0	Terphenyl-d14	83% 24-149%

Blank Spike Summary

Page 1 of 1

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13100-BS	J13503.D	1	09/30/09	SC	09/26/09	OP13100	EJ621

The QC reported here applies to the following samples:

Method: SW846 8270C

T38127-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1240	74	53-106
208-96-8	Acenaphthylene	1670	1290	77	61-121
120-12-7	Anthracene	1670	1330	80	66-105
56-55-3	Benzo(a)anthracene	1670	1430	86	62-113
50-32-8	Benzo(a)pyrene	1670	1340	80	61-118
205-99-2	Benzo(b)fluoranthene	1670	1640	98	67-110
191-24-2	Benzo(g,h,i)perylene	1670	1300	78	57-124
207-08-9	Benzo(k)fluoranthene	1670	1720	103	65-116
218-01-9	Chrysene	1670	1460	88	71-106
53-70-3	Dibenzo(a,h)anthracene	1670	1260	76	59-123
206-44-0	Fluoranthene	1670	1360	82	64-114
86-73-7	Fluorene	1670	1200	72	65-99
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1280	77	51-133
90-12-0	1-Methylnaphthalene	1670	1250	75	56-94
91-57-6	2-Methylnaphthalene	1670	1340	80	48-101
91-20-3	Naphthalene	1670	1300	78	57-94
85-01-8	Phenanthrene	1670	1320	79	66-102
129-00-0	Pyrene	1670	1820	109	49-117

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	78%	26-124%
4165-62-2	Phenol-d5	86%	19-106%
118-79-6	2,4,6-Tribromophenol	75%	18-129%
4165-60-0	Nitrobenzene-d5	77%	18-104%
321-60-8	2-Fluorobiphenyl	73%	21-114%
1718-51-0	Terphenyl-d14	104%	24-149%



GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2440-MB	EE048101.D	1	10/02/09	FI	n/a	n/a	GEE2440

The QC reported here applies to the following samples:

Method: SW846 8015

T38127-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.0060	mg/l	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	101%
98-08-8	aaa-Trifluorotoluene	107%

Blank Spike/Blank Spike Duplicate Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2440-BS	EE048096.D	1	10/02/09	FI	n/a	n/a	GEE2440
GEE2440-BSD	EE048097.D	1	10/02/09	FI	n/a	n/a	GEE2440

The QC reported here applies to the following samples: Method: SW846 8015

T38127-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	0.4	0.381	95	0.377	94	1	78-115/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	100%	46-127%
98-08-8	aaa-Trifluorotoluene	111%	110%	44-120%



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13084-MB	CC215347.D 1		09/30/09	SS	09/25/09	OP13084	GCC966

The QC reported here applies to the following samples: Method: SW846 8015 M

T38127-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	8.2	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	49% 33-115%

Blank Spike Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13084-BS	CC215348.D	1	09/30/09	SS	09/25/09	OP13084	GCC966

The QC reported here applies to the following samples: Method: SW846 8015 M

T38127-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	33.1	24.6	74	45-107

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	52%	33-115%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38127
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13084-MS	CC215349.D	1	09/30/09	SS	09/25/09	OP13084	GCC966
OP13084-MSD	CC215350.D	1	09/30/09	SS	09/25/09	OP13084	GCC966
T37855-2	CC215351.D	1	09/30/09	SS	09/25/09	OP13084	GCC966

The QC reported here applies to the following samples: Method: SW846 8015 M

T38127-1

CAS No.	Compound	T37855-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	20.3		38.3	50.8	80	55.5	92	9	45-107/34

CAS No.	Surrogate Recoveries	MS	MSD	T37855-2	Limits
84-15-1	o-Terphenyl	48%	46%	53%	33-115%



Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10393
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 10/07/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	16	17		
Antimony	5.0	2.3	3		
Arsenic	5.0	1.8	2		
Barium	200	.14	2.7		
Beryllium	5.0	.11	.2		
Boron	100	1.1	2.1		
Cadmium	4.0	.25	.3		
Calcium	5000	5.4	35	1050	<5000
Chromium	10	1.1	1.9		
Cobalt	50	.5	.8		
Copper	25	.58	5.9		
Iron	100	13	13		
Lead	3.0	1.6	1.7		
Magnesium	5000	6.7	7.8	261	<5000
Manganese	15	.2	7.6		
Molybdenum	10	.96	1.3		
Nickel	40	.95	3.2		
Potassium	5000	53	53		
Selenium	5.0	3.2	3.2		
Silver	10	.85	.8		
Sodium	5000	130	130	427	<5000
Strontium	20	.17	.4		
Thallium	10	3.2	2.6		
Tin	20	1.8	2.9		
Titanium	20	.3	.3		
Vanadium	50	.6	.6		
Zinc	20	.49	4.1		

Associated samples MP10393: T38127-1C

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10393
 Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
 Units: ug/l

Prep Date: 10/07/09

Metal	T37909-1C Original DUP		RPD	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	458000	498000	8.4	0-20
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium	24100	20700	15.2	0-20
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium	2040000	2010000	7.2	0-20
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10393: T38127-1C

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.1.2
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10395
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/06/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.82	2.2		
Antimony	0.50	.11	.14		
Arsenic	0.50	.089	.1		
Barium	10	.007	.03	0.78	<10
Beryllium	0.25	.0055	.01		
Boron	5.0	.054	.11		
Cadmium	0.25	.013	.05		
Calcium	250	.27	.86		
Chromium	0.50	.055	.035		
Cobalt	2.5	.025	.09		
Copper	1.3	.029	.065		
Iron	5.0	.65	1.1		
Lead	0.50	.079	.2		
Magnesium	250	.34	.58		
Manganese	0.75	.01	.035		
Molybdenum	0.50	.048	.075		
Nickel	2.0	.048	.065		
Potassium	250	2.7	16		
Selenium	0.50	.16	.12		
Silver	0.50	.043	.04		
Sodium	250	6.5	13		
Strontium	1.0	.0085	.025		
Thallium	0.50	.16	.25		
Tin	1.0	.09	.12		
Titanium	1.0	.015	.045		
Vanadium	2.5	.03	.06		
Zinc	1.0	.025	.2		

Associated samples MP10395: T38127-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10395
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/06/09

10/06/09

Metal	T37909-1B Original	DUP	RPD	QC Limits	T37909-1B Original	MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium	20900	20300	2.9	0-20	20900	21500	2.4	25020.0a	80-120
Beryllium									
Boron									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP10395: T38127-1B

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10395
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/06/09

Metal	T37909-1B Original MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic					
Barium	20900	21700	0.48	166800.0a0.9	20
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP10395: T38127-1B

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/06/09

Metal	LCS Result	Spikelot MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10395
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/06/09

Metal	T37909-1B	QC
	Original	SDL 25:125%DIF Limits

Aluminum				
Antimony				
Arsenic				
Barium	349000	371000	6.5	0-10
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10395: T38127-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10401
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/07/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.82	2.2		
Antimony	0.50	.11	.14		
Arsenic	0.50	.089	.1	0.038	<0.50
Barium	10	.007	.03		
Beryllium	0.25	.0055	.01		
Boron	5.0	.054	.11		
Cadmium	0.25	.013	.05	-0.0025	<0.25
Calcium	250	.27	.86		
Chromium	0.50	.055	.035	-0.0020	<0.50
Cobalt	2.5	.025	.09		
Copper	1.3	.029	.065	-0.048	<1.3
Iron	5.0	.65	1.1		
Lead	0.50	.079	.2	0.038	<0.50
Magnesium	250	.34	.58		
Manganese	0.75	.01	.035		
Molybdenum	0.50	.048	.075		
Nickel	2.0	.048	.065	-0.069	<2.0
Potassium	250	2.7	16		
Selenium	0.50	.16	.12	0.017	<0.50
Silver	0.50	.043	.04	0.0040	<0.50
Sodium	250	6.5	13		
Strontium	1.0	.0085	.025		
Thallium	0.50	.16	.25		
Tin	1.0	.09	.12		
Titanium	1.0	.015	.045		
Vanadium	2.5	.03	.06		
Zinc	1.0	.025	.2	-0.0070	<1.0

Associated samples MP10401: T38127-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10401
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

10/07/09

10/07/09

Metal	T38111-1 Original	DUP	RPD	QC Limits	T38111-1 Original	MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic	4.4	4.0	9.5	0-20	4.4	34.2	29.6	100.6	80-120
Barium	anr								
Beryllium									
Boron									
Cadmium	0.56	0.54	3.6	0-20	0.56	28.5	29.6	94.3	80-120
Calcium									
Chromium	19.2	18.4	4.3	0-20	19.2	46.0	29.6	90.5	80-120
Cobalt									
Copper	31.9	29.2	8.8	0-20	31.9	61.0	29.6	98.3	80-120
Iron									
Lead	12.2	10.7	13.1	0-20	12.2	39.6	29.6	92.5	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	10.9	9.8	10.6	0-20	10.9	39.3	29.6	95.9	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	28.6	29.6	96.6	80-120
Silver	0.30	0.29	3.4	0-20	0.30	29.0	29.6	96.9	80-120
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	45.2	44.3	2.0	0-20	45.2	78.0	29.6	110.8	80-120

Associated samples MP10401: T38127-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10401
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/07/09

Metal	T38111-1 Original	MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	4.4	32.7	28	101.2	4.5	20
Barium	anr					
Beryllium						
Boron						
Cadmium	0.56	26.5	28	92.8	7.3	20
Calcium						
Chromium	19.2	44.1	28	89.1	4.2	20
Cobalt						
Copper	31.9	56.5	28	88.0	7.7	20
Iron						
Lead	12.2	37.0	28	88.7	6.8	20
Magnesium						
Manganese						
Molybdenum						
Nickel	10.9	37.8	28	96.2	3.9	20
Potassium						
Selenium	0.0	26.3	28	94.1	8.4	20
Silver	0.30	27.3	28	96.6	6.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	45.2	75.3	28	107.7	3.5	20

Associated samples MP10401: T38127-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T38127
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10401
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 10/07/09

Metal	LCS Result	Spikelot MPLCD054	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	156	158	98.7	82-118
Barium	anr			
Beryllium				
Boron				
Cadmium	183	187	97.9	82-118
Calcium				
Chromium	90.5	89.5	101.1	79-121
Cobalt				
Copper	140	129	108.5	84-117
Iron				
Lead	161	172	93.6	79-120
Magnesium				
Manganese				
Molybdenum				
Nickel	100	99	101.0	81-119
Potassium				
Selenium	145	148	98.0	78-121
Silver	65.9	66	99.8	66-134
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	382	394	97.0	80-119

Associated samples MP10401: T38127-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T38127
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10401
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/07/09

Metal	T38111-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	60.4	56.7	6.1	0-10
Barium	anr			
Beryllium				
Boron				
Cadmium	7.63	7.07	7.3	0-10
Calcium				
Chromium	264	268	1.8	0-10
Cobalt				
Copper	438	421	3.9	0-10
Iron				
Lead	167	177	6.3	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	149	148	0.6	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	4.14	0.00	100.0(a)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	620	649	4.8	0-10

Associated samples MP10401: T38127-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10403
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/07/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	400	33	34		
Antimony	10	4.5	6		
Arsenic	10	3.5	4		
Barium	400	.28	5.4		
Beryllium	10	.22	.4		
Boron	200	2.2	4.2	14.5	<200
Cadmium	8.0	.5	.6		
Calcium	10000	11	70		
Chromium	20	2.2	3.8		
Cobalt	100	1	1.6		
Copper	50	1.2	12		
Iron	200	26	26		
Lead	6.0	3.2	3.4		
Magnesium	10000	13	16		
Manganese	30	.4	15		
Molybdenum	20	1.9	2.6		
Nickel	80	1.9	6.4		
Potassium	10000	110	110		
Selenium	10	6.5	6.4		
Silver	20	1.7	1.6		
Sodium	10000	260	270		
Strontium	40	.34	.8		
Thallium	20	6.5	5.2		
Tin	40	3.6	5.8		
Titanium	40	.6	.6		
Vanadium	100	1.2	1.2		
Zinc	40	.98	8.2		

Associated samples MP10403: T38127-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10403
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

10/07/09

10/07/09

Metal	T37909-1A Original	DUP	RPD	QC Limits	T37909-1A Original MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Boron	1290	930	32.4*(a)	0-20	1290	2570	1000	64.0N 80-120
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Molybdenum								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Strontium								
Thallium								
Tin								
Titanium								
Vanadium								
Zinc								

Associated samples MP10403: T38127-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) High RPD due to possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10403
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/07/09

Metal	T37909-1A Original	MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron	1290	2470	1000	59.2N	4.0	20
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP10403: T38127-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.4.2
8

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/07/09

8.4.3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10403
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/07/09

Metal	T37909-1A Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	643	615	4.3	0-10
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10403: T38127-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10414
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/08/09

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.017	.0041	.00066	-0.00033	<0.017

Associated samples MP10414: T38127-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

85.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10414
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 10/08/09 10/08/09

Metal	T38111-1		QC	T38111-1		Spikelot	% Rec	QC
	Original	DUP	RPD	Original	MS	HGTXWS1		Limits
Mercury	0.036	0.047	26.5 (a)	0-20	0.036 0.31	0.305	89.9	75-125

Associated samples MP10414: T38127-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

8.5.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38127
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10414
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 10/08/09

Metal	T38111-1 Original	MSD	Spikelot HGTXWS1	% Rec	MSD RPD	QC Limit
Mercury	0.036	0.27	0.278	84.3	13.8	

Associated samples MP10414: T38127-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.5.2

8

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/08/09

Metal	LCS Result	Spikelot HGLCD054 % Rec	QC Limits
Mercury	6.7	7.34	91.3 72-128

Associated samples MP10414: T38127-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN18199	2.0	<2.0	mg/kg	40	39.4	98.6	80-120%
Specific Conductivity	GN18243	1.0	<1.0	umhos/cm				

Associated Samples:
Batch GN18199: T38127-1
Batch GN18243: T38127-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN18199	T38127-1	mg/kg	1.5 B	<2.0	1.8	0-20%
Solids, Percent	GN18194	T38116-1	%	83	82.3	0.8	0-5%
Specific Conductivity	GN18243	T38127-1	umhos/cm	1620	1620	0.0	0-20%
pH	GN18119	T38131-1	su	8.1	8.1	0.0	0-20%

Associated Samples:

Batch GN18119: T38127-1

Batch GN18194: T38127-1

Batch GN18199: T38127-1

Batch GN18243: T38127-1

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38127
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN18199	T38127-1	mg/kg	1.5 B	40	38.6	92.8	75-125%

Associated Samples:
Batch GN18199: T38127-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits



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Chris Hines or Brad Kieding
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Tuesday August 24, 2010

Report Number: L474153

Samples Received: 08/17/10

Client Project: PL30 BACKGROUND

Description: PL30 Background

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

Entire Report Reviewed By:

Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

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

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

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Est. 1970

REPORT OF ANALYSIS

Chris Hines or Brad Kieding
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

August 24, 2010

Date Received : August 17, 2010
Description : PL30 Background
Sample ID : PL30-W BACK-081610
Collected By : Blair Rollins
Collection Date : 08/16/10 12:50

ESC Sample # : L474153-01

Site ID :

Project # : PL30 BACKGROUND

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	8.5	1.0	mg/kg	6010B	08/18/10	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: 08/24/10 13:02 Printed: 08/24/10 13:03



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Parachute, CO 81635

August 24, 2010

Date Received : August 17, 2010
Description : PL30 Background
Sample ID : PL30-SW BACK-081610
Collected By : Blair Rollins
Collection Date : 08/16/10 13:00

ESC Sample # : L474153-02

Site ID :

Project # : PL30 BACKGROUND

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	14.	1.0	mg/kg	6010B	08/23/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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August 24, 2010

Date Received : August 17, 2010
Description : PL30 Background
Sample ID : PL30-SE BACK-081610
Collected By : Blair Rollins
Collection Date : 08/16/10 13:25

ESC Sample # : L474153-03

Site ID :

Project # : PL30 BACKGROUND

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	33.	1.0	mg/kg	6010B	08/23/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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2717 County Road 215, Suite 100
Parachute, CO 81635

August 24, 2010

Date Received : August 17, 2010
Description : PL30 Background
Sample ID : PL30-E BACK-081610
Collected By : Blair Rollins
Collection Date : 08/16/10 13:30

ESC Sample # : L474153-04

Site ID :

Project # : PL30 BACKGROUND

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	15.	1.0	mg/kg	6010B	08/23/10	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: 08/24/10 13:02 Printed: 08/24/10 13:03

Summary of Remarks For Samples Printed
08/24/10 at 13:03:03

TSR Signing Reports: 358
R5 - Desired TAT

Create p-keys for projects. Enter project name as Project Number and Project Name. Log all samples to separate L#s. See L471333 when COC says see attached list. PAHs = SV8270PAHSIM. BTEX = 8021.

Sample: L474153-01 Account: ENCANACO Received: 08/17/10 09:00 Due Date: 08/24/10 00:00 RPT Date: 08/24/10 13:02

Sample: L474153-02 Account: ENCANACO Received: 08/17/10 09:00 Due Date: 08/24/10 00:00 RPT Date: 08/24/10 13:02

Sample: L474153-03 Account: ENCANACO Received: 08/17/10 09:00 Due Date: 08/24/10 00:00 RPT Date: 08/24/10 13:02

Sample: L474153-04 Account: ENCANACO Received: 08/17/10 09:00 Due Date: 08/24/10 00:00 RPT Date: 08/24/10 13:02



YOUR LAB OF CHOICE

EnCana Oil & Gas Inc. - CO
Chris Hines or Brad Kieding
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report
Level II

L474153

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August 24, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed			
		Units	% Rec						
Arsenic	< 1	mg/kg			WG493924	08/18/10 11:13			
Arsenic	< 1	mg/kg			WG493925	08/23/10 13:11			
Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch		
		Result	Duplicate						
Arsenic	mg/kg	9.10	9.70	6.82	20	L474152-02	WG493924		
Arsenic	mg/kg	18.0	16.0	9.52	20	L474210-07	WG493925		
Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch			
		Known Val	Result						
Arsenic	mg/kg	192	168.	87.5	78.6-120.8	WG493924			
Arsenic	mg/kg	192	195.	102.	78.6-120.8	WG493925			
Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch	
			Ref Res	TV					
Arsenic	mg/kg	53.5	9.70	50	87.6	75-125	L474152-02	WG493924	
Arsenic	mg/kg	69.1	16.0	50	106.	75-125	L474210-07	WG493925	
Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Arsenic	mg/kg	56.7	53.5	94.0	75-125	5.81	20	L474152-02	WG493924
Arsenic	mg/kg	69.6	69.1	107.	75-125	0.721	20	L474210-07	WG493925

Batch number /Run number / Sample number cross reference

WG493924: R1336674: L474153-01
WG493925: R1343988 R1343989: L474153-03 02 04

* * 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.'



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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.