

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

Location	Sample Date:	Sample Matrix	Matrix Notes	Organic Compounds in Soil (mg/kg [ppm])																	Inorganics in Soil			Metals in Soil (mg/kg [ppm])												
				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)	SAR (calculation)	pH	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium
Allowable Concentration -->	500			0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	<12	(6-9)	0.39	15000	70	120000	23	3100	400	23	1600	390	390	23000		
PD30	09/22/09	Cuttings		271.87	8.87	263	0.0057	0.0086	ND	0.0067	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.35	18.3	9.1	19.2		0.09	25.7	1.2	29	14.7	0.021	27.4	0.18	0.37	68.8	
PD30	06/10/10	Cuttings																					3	18000												
PD30	06/18/10	Cuttings																						5490												



Technical Report for

ENCANA

EnCana Oil & Gas (USA) Inc.

EnCana PD30 Cuttings & Background

Accutest Job Number: T38130

Sampling Date: 09/22/09

Report to:

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Parachute, CO 81635
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ATTN: Chris Hines

Total number of pages in report: 73



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

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Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)
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Test results relate only to samples analyzed.



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Sample Summary

ENCANA

Job No: T38130

EnCana Oil & Gas (USA) Inc.

Project No: EnCana PD30 Cuttings & Background

Sample Number	Collected		Matrix Code	Matrix Type	Received	Client Sample ID
	Date	Time By				
T38130-1	09/22/09	09:45 KLR	SO	Soil	09/23/09	ENCANA_CUTTINGS_092209
T38130-1A	09/22/09	09:45 KLR	SO	Soil	09/23/09	ENCANA_CUTTINGS_092209
T38130-1B	09/22/09	09:45 KLR	SO	Soil	09/23/09	ENCANA_CUTTINGS_092209
T38130-1C	09/22/09	09:45 KLR	SO	Soil	09/23/09	ENCANA_CUTTINGS_092209
T38130-2	09/22/09	10:05 KLR	SO	Soil	09/23/09	ENCANA_BACKGROUND_092209
T38130-2A	09/22/09	10:05 KLR	SO	Soil	09/23/09	ENCANA_BACKGROUND_092209
T38130-2B	09/22/09	10:05 KLR	SO	Soil	09/23/09	ENCANA_BACKGROUND_092209
T38130-2C	09/22/09	10:05 KLR	SO	Soil	09/23/09	ENCANA_BACKGROUND_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:	T38130-1	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
Method:	SW846 8260B	Percent Solids:	77.3
Project:	EnCana Oil & Gas (USA) Inc.		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0055845.D	1	10/01/09	AH	n/a	n/a	VX303
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5.7	6.4	0.90	ug/kg	J
108-88-3	Toluene	8.6	6.4	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	6.4	1.2	ug/kg	
1330-20-7	Xylene (total)	6.7	19	2.7	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-121%
2037-26-5	Toluene-D8	103%		76-132%
460-00-4	4-Bromofluorobenzene	115%		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: T38130-1	Date Sampled: 09/22/09
Matrix: SO - Soil	Date Received: 09/23/09
Method: SW846 8270C SW846 3550B	Percent Solids: 77.3
Project: EnCana Oil & Gas (USA) Inc.	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H35189.D	1	09/30/09	SC	09/26/09	OP13100	EH1902
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	210	59	ug/kg	
208-96-8	Acenaphthylene	ND	210	51	ug/kg	
120-12-7	Anthracene	ND	210	41	ug/kg	
56-55-3	Benzo(a)anthracene	ND	210	82	ug/kg	
50-32-8	Benzo(a)pyrene	ND	210	34	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	53	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	51	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	40	ug/kg	
218-01-9	Chrysene	ND	210	47	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	210	110	ug/kg	
206-44-0	Fluoranthene	ND	210	44	ug/kg	
86-73-7	Fluorene	ND	210	58	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	77	ug/kg	
90-12-0	1-Methylnaphthalene	ND	210	50	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	67	ug/kg	
91-20-3	Naphthalene	ND	210	43	ug/kg	
85-01-8	Phenanthrene	ND	210	57	ug/kg	
129-00-0	Pyrene	ND	210	42	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	39%		18-104%
321-60-8	2-Fluorobiphenyl	31%		21-114%
1718-51-0	Terphenyl-d14	96%		24-149%

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

Client Sample ID: ENCANA_CUTTINGS_092209		Date Sampled: 09/22/09
Lab Sample ID: T38130-1		Date Received: 09/23/09
Matrix: SO - Soil		Percent Solids: 77.3
Method: SW846 8015		
Project: EnCana Oil & Gas (USA) Inc.		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE047908.D	1	09/28/09	FI	n/a	n/a	GEE2432
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.47 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	8.87	7.4	0.44	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		46-127%
98-08-8	aaa-Trifluorotoluene	105%		44-120%

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:	T38130-1	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 77.3
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CC215371.D	5	09/30/09	SS	09/25/09	OP13084	GCC966
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	263	54	18	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	38%		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: T38130-1	Date Received: 09/23/09
Matrix: SO - Soil	Percent Solids: 77.3
Project: EnCana Oil & Gas (USA) Inc.	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	19.2	0.73	0.15	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Cadmium	0.089 B	0.37	0.073	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Chromium	26.9	0.73	0.051	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Copper	29.0	1.8	0.095	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Lead	14.7	0.73	0.29	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Mercury	0.021	0.021	0.00082	mg/kg	1	10/08/09	10/08/09 NS	SW846 7471A ¹	SW846 7471A ⁴
Nickel	27.4	2.9	0.095	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Selenium	0.18 U	0.73	0.18	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Silver	0.37 B	0.73	0.059	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Zinc	68.8	1.5	0.29	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³

- (1) Instrument QC Batch: MA4325
- (2) Instrument QC Batch: MA4329
- (3) Prep QC Batch: MP10412
- (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		
Lab Sample ID:	T38130-1	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	77.3
Project:	EnCana Oil & Gas (USA) Inc.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.2 B	2.0	mg/kg	1	10/07/09 12:00	KD	SW846 3060/7196A
Chromium, Trivalent ^a	25.7	2.7	mg/kg	1	10/10/09 23:00	NS	SW846 6010/7196A M
Solids, Percent	77.3		%	1	10/02/09	MR	SM 2540 G
Specific Conductivity	1350	1.0	umhos/cm	1	10/07/09 15:00	KD	EPA 120.1
pH	9.1		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		
Lab Sample ID:	T38130-1A	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	77.3
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	1.34	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		
Lab Sample ID:	T38130-1B	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	77.3
Project:	EnCana Oil & Gas (USA) Inc.		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	21100	320	0.97	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: T38130-1C	Date Received: 09/23/09
Matrix: SO - Soil	Percent Solids: 77.3
Project: EnCana Oil & Gas (USA) Inc.	

SAR Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	559	25	0.18	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ³
Magnesium	34.2	25	0.039	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ³
Sodium	1650	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	
Lab Sample ID:	T38130-1C	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
		Percent Solids: 77.3
Project:	EnCana Oil & Gas (USA) Inc.	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	18.3		ratio	1	10/11/09 04:20	NS	LADNR29B

(a) Calculated as: $(Na \text{ meq/L}) / \sqrt{[(Ca \text{ meq/L}) + (Mg \text{ meq/L})/2]}$

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ENCANA_BACKGROUND_092209	
Lab Sample ID:	T38130-2	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8260B	Percent Solids: 95.4
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0055846.D	1	10/01/09	AH	n/a	n/a	VX303
Run #2							

	Initial Weight	Final Volume
Run #1	5.45 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.67	ug/kg	
108-88-3	Toluene	ND	4.8	0.91	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	0.87	ug/kg	
1330-20-7	Xylene (total)	ND	14	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-121%
2037-26-5	Toluene-D8	97%		76-132%
460-00-4	4-Bromofluorobenzene	95%		73-165%
17060-07-0	1,2-Dichloroethane-D4	92%		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_BACKGROUND_092209		
Lab Sample ID:	T38130-2	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
Method:	SW846 8270C SW846 3550B	Percent Solids:	95.4
Project:	EnCana Oil & Gas (USA) Inc.		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H35188.D	1	09/30/09	SC	09/26/09	OP13100	EH1902
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	48	ug/kg	
208-96-8	Acenaphthylene	ND	170	41	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	67	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	43	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	41	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	32	ug/kg	
218-01-9	Chrysene	ND	170	38	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	92	ug/kg	
206-44-0	Fluoranthene	ND	170	36	ug/kg	
86-73-7	Fluorene	ND	170	47	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	62	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	41	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	54	ug/kg	
91-20-3	Naphthalene	ND	170	35	ug/kg	
85-01-8	Phenanthrene	ND	170	46	ug/kg	
129-00-0	Pyrene	ND	170	34	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		18-104%
321-60-8	2-Fluorobiphenyl	66%		21-114%
1718-51-0	Terphenyl-d14	95%		24-149%

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_BACKGROUND_092209	
Lab Sample ID:	T38130-2	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015	Percent Solids: 95.4
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE048060.D	1	10/01/09	FI	n/a	n/a	GEE2438
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.15 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.3	0.32	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		46-127%
98-08-8	aaa-Trifluorotoluene	108%		44-120%

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_BACKGROUND_092209	
Lab Sample ID:	T38130-2	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 95.4
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CC215372.D	1	09/30/09	SS	09/25/09	OP13084	GCC966
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	7.62	8.6	2.8	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	41%		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_BACKGROUND_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38130-2	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	95.4
Project:	EnCana Oil & Gas (USA) Inc.		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.0	0.60	0.12	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Cadmium	0.075 B	0.30	0.060	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Chromium	18.5	0.60	0.042	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Copper	13.0	1.5	0.078	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Lead	12.4	0.60	0.24	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Mercury	0.018	0.016	0.00065	mg/kg	1	10/08/09	10/08/09 NS	SW846 7471A ¹	SW846 7471A ⁴
Nickel	14.0	2.4	0.078	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Selenium	0.14 U	0.60	0.14	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Silver	0.097 B	0.60	0.048	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Zinc	46.6	1.2	0.24	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³

- (1) Instrument QC Batch: MA4325
- (2) Instrument QC Batch: MA4329
- (3) Prep QC Batch: MP10412
- (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_BACKGROUND_092209	Date Sampled:	09/22/09
Lab Sample ID:	T38130-2	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	95.4
Project:	EnCana Oil & Gas (USA) Inc.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.4 B	2.0	mg/kg	1	10/07/09 12:00	KD	SW846 3060/7196A
Chromium, Trivalent ^a	17.1	2.6	mg/kg	1	10/10/09 23:25	NS	SW846 6010/7196A M
Solids, Percent	95.4		%	1	10/02/09	MR	SM 2540 G
Specific Conductivity	999	1.0	umhos/cm	1	10/07/09 15:00	KD	EPA 120.1
pH	7.5		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_BACKGROUND_092209		
Lab Sample ID:	T38130-2A	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	95.4
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	1.10	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_BACKGROUND_092209	
Lab Sample ID:	T38130-2B	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Project:	EnCana Oil & Gas (USA) Inc.	Percent Solids: 95.4

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	158	10	0.031	mg/kg	1	10/06/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4328

(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_BACKGROUND_092209		
Lab Sample ID:	T38130-2C	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	95.4
Project:	EnCana Oil & Gas (USA) Inc.		

SAR Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	1500	25	0.18	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ²
Magnesium	220	25	0.039	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ²
Sodium	17.3 B	25	0.67	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4328

(2) 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_BACKGROUND_092209	
Lab Sample ID:	T38130-2C	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
		Percent Solids: 95.4
Project:	EnCana Oil & Gas (USA) Inc.	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	0.110		ratio	1	10/10/09 03:39	NS	LADNR29B

(a) Calculated as: $(Na \text{ meq/L}) / \sqrt{[(Ca \text{ meq/L}) + (Mg \text{ meq/L})/2]}$

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.acctest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # T33130

Client / Reporting Information		Project Information		Requested Analyses												Matrix Codes				
Company Name Enlana Oil & Gas		Project Name Enlana PD30 Cuttings & Background														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				
Street Address 2717 County Rd 215 Suite 100		Street																		
City, State, Zip Parahute CO 81635		Billing Information (if different from report to) City, State, Company Name																		
Project Contact Chris Hines		Project #, Street Address																		
Phone # 970 261 1727		Fax #, Client Purchase Order #, City, State, Zip																		
Sampler(s) Name(s) KLR		Phone #, Project Manager, Attention:														LAB USE ONLY				
Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	# of bottles	HCl	NO3	NO2	ZANICH	HNSO4	HNSO4	NONE	DI Water	MEQH		TSP	HAUSO4	ENDORE	OTHER
	Enlana Cuttings-092209	9/22/09	0945	KLR	SO	3														
	Enlana Background-092209	9/22/09	1005	KLR	SO	3														

SEE ATTACHED SHEET

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"/> Commercial "B" (Level 2) <input type="checkbox"/> FULT1 (Level 3+4) <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> Commercial "C"		<input type="checkbox"/> TRRP <input type="checkbox"/> EDD Format <input type="checkbox"/> Other	
Sample Custody must be documented below each time samples change possession, including courier delivery.							
Relinquished by Sampler:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:
3	9/22/09 1430	1		2	9/23/09	2	9/23/09
Relinquished by:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:
5		3		4		4	
Custody Seal #		<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Preserved where applicable		<input type="checkbox"/> On Ice <input type="checkbox"/> Cooler Temp.	

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3

Organic Compounds in Soil

TPH (total volatile and extractable petroleum hydrocarbons)

- Benzene
- Toluene
- Ethylbenzene
- Xylenes (Total)
- Acetophenone
- Anthracene
- Benzo(A)anthracene
- Benzo(B)fluoranthene
- Benzo(K)fluoranthene
- Benzo(A)pyrene
- Chrysene
- Dibenz(A,H)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-C)pyrene
- Naphthalene
- Pyrene

Inorganics in Soils

Electronic Conductivity (EC)
Sodium Adsorption Ratio (SAR)

pH

Metals in Soils

- Arsenic
- Berilium (LDR Trus 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: T33130 Client: Encona Oil & Gas Date/Time Received: 9-23-9 930
of Coolers Received: 1 Thermometer #: IR-1 Temperature Adjustment Factor: +0.4
Cooler Temps: #1: 2.6°C #2: _____ #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:  9-23-09

INFORMATION AND SAMPLE LABELING VERIFIED BY: 

CORRECTIVE ACTIONS

Client Representative Notified: _____ Date: _____

By Accutest Representative: _____ Via: Phone Email

Client Instructions: _____

\\nwalker\forms\samplemanagement

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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: T38130
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

T38130-1, T38130-2

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: T38130
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

T38130-1, T38130-2

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%

4.2.1
4

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38130
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

T38130-1, T38130-2

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

4.3.1
4



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

Job Number: T38130
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

T38130-1, T38130-2

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

Job Number: T38130
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

T38130-1, T38130-2

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%

5.2.1
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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38130
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13100-MS	J13787.D	20	10/13/09	SC	09/26/09	OP13100	EJ633
OP13100-MSD	J13788.D	20	10/13/09	SC	09/26/09	OP13100	EJ633
T37890-2	J13494.D	20	09/29/09	SC	09/26/09	OP13100	EJ620
T37890-2	J13507.D	80	09/30/09	SC	09/26/09	OP13100	EJ621

The QC reported here applies to the following samples:

Method: SW846 8270C

T38130-1, T38130-2

CAS No.	Compound	T37890-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	3140	1970	4320	60	4470	67	3	53-106/49
208-96-8	Acenaphthylene	ND	1970	ND	0*	ND	0*	nc	61-121/49
120-12-7	Anthracene	2360	1970	3280	47*	3280	47*	0	66-105/40
56-55-3	Benzo(a)anthracene	ND	1970	2040	104	1980	100	3	62-113/43
50-32-8	Benzo(a)pyrene	ND	1970	1560	79	1600	81	3	61-118/44
205-99-2	Benzo(b)fluoranthene	ND	1970	1720	87	1730	88	1	67-110/42
191-24-2	Benzo(g,h,i)perylene	ND	1970	1500	76	1530	77	2	57-124/50
207-08-9	Benzo(k)fluoranthene	ND	1970	1930	98	1950	99	1	65-116/37
218-01-9	Chrysene	ND	1970	1950	99	2020	102	4	71-106/39
53-70-3	Dibenzo(a,h)anthracene	ND	1970	ND	0*	ND	0*	nc	59-123/37
206-44-0	Fluoranthene	835	1970	3090	114	2800	99	10	64-114/45
86-73-7	Fluorene	4160	1970	5680	77	5520	69	3	65-99/42
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1970	1470	75	1550	78	5	51-133/55
90-12-0	1-Methylnaphthalene	45600	1970	47100	76	47400	91	1	56-94/49
91-57-6	2-Methylnaphthalene	95700 ^b	1970	107000	573* ^a	108000	623* ^a	1	48-101/48
91-20-3	Naphthalene	77400	1970	71000	-325* ^a	77300	-5* ^a	8	57-94/49
85-01-8	Phenanthrene	12600	1970	13900	66	14200	81	2	66-102/47
129-00-0	Pyrene	1290	1970	3200	97	3290	101	3	49-117/46

CAS No.	Surrogate Recoveries	MS	MSD	T37890-2	T37890-2	Limits
367-12-4	2-Fluorophenol	36%	45%	58%	0%* ^c	26-124%
4165-62-2	Phenol-d5	71%	79%	70%	0%* ^c	19-106%
118-79-6	2,4,6-Tribromophenol	71%	69%	64%	0%* ^c	18-129%
4165-60-0	Nitrobenzene-d5	17%* ^c	22%	118%* ^c	0%* ^c	18-104%
321-60-8	2-Fluorobiphenyl	92%	91%	91%	0%* ^c	21-114%
1718-51-0	Terphenyl-d14	95%	90%	93%	0%* ^c	24-149%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Result is from Run #2.

(c) Outside control limits due to dilution.



GC 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: T38130
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2432-MB	EE047906.D	1	09/28/09	FI	n/a	n/a	GEE2432

The QC reported here applies to the following samples:

Method: SW846 8015

T38130-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	0.30	mg/kg	

CAS No.	Surrogate Recoveries	Limits	
460-00-4	4-Bromofluorobenzene	101%	46-127%
98-08-8	aaa-Trifluorotoluene	106%	44-120%

Method Blank Summary

Job Number: T38130
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2438-MB	EE048043.D	1	10/01/09	FI	n/a	n/a	GEE2438

The QC reported here applies to the following samples:

Method: SW846 8015

T38130-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	0.30	mg/kg	

CAS No.	Surrogate Recoveries	Limits	
460-00-4	4-Bromofluorobenzene	103%	46-127%
98-08-8	aaa-Trifluorotoluene	109%	44-120%

Blank Spike Summary

Job Number: T38130
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2438-BS	EE048039.D	1	10/01/09	FI	n/a	n/a	GEE2438

The QC reported here applies to the following samples:

Method: SW846 8015

T38130-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	0.4	0.376	94	78-115

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	107%	46-127%
98-08-8	aaa-Trifluorotoluene	114%	44-120%

Blank Spike/Blank Spike Duplicate Summary

Job Number: T38130
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2432-BS	EE047900.D	1	09/28/09	FI	n/a	n/a	GEE2432
GEE2432-BSD	EE047901.D	1	09/28/09	FI	n/a	n/a	GEE2432

The QC reported here applies to the following samples:

Method: SW846 8015

T38130-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	0.4	0.399	100	0.394	99	1	78-115/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	106%	101%	46-127%
98-08-8	aaa-Trifluorotoluene	108%	109%	44-120%

6.3.1
6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38130
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T38412-2MS	EE048054.D	1	10/01/09	FI	n/a	n/a	GEE2438
T38412-2MSD	EE048055.D	1	10/01/09	FI	n/a	n/a	GEE2438
T38412-2	EE048053.D	1	10/01/09	FI	n/a	n/a	GEE2438

The QC reported here applies to the following samples:

Method: SW846 8015

T38130-2

CAS No.	Compound	T38412-2 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	19.9	28.7	44.3	85	43.5	82	2	78-115/14

CAS No.	Surrogate Recoveries	MS	MSD	T38412-2	Limits
460-00-4	4-Bromofluorobenzene	115%	115%	113%	46-127%
98-08-8	aaa-Trifluorotoluene	118%	117%	113%	44-120%

6.4.1

6



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: T38130
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

T38130-1, T38130-2

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: T38130
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

T38130-1, T38130-2

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%

7.2.1

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38130
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

T38130-1, T38130-2

CAS No.	Compound	T37855-2 mg/kg	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: T38130
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: T38130-1C, T38130-2C

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

8.1.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 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: T38130-1C, T38130-2C

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

8.12
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38130
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: T38130-1B, T38130-2B

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: T38130
 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: T38130-1B, T38130-2B

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.

8.2.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 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: T38130-1B, T38130-2B

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.

8.2.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T38130
 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	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				

Associated samples MP10395: T38130-1B, T38130-2B

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

8.2.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: T38130
 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: T38130-1B, T38130-2B

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: T38130
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: T38130-1A, T38130-2A

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

8.3.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 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: T38130-1A, T38130-2A

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.

8.3.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 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: T38130-1A, T38130-2A

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

8.3.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T38130
 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	LCS Result	Spikelot MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	2400	1000	120.0	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: T38130-1A, T38130-2A

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

8.3.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: T38130
 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
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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: T38130-1A, T38130-2A

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

8.3.4
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38130
Account: ENCACOP - ENCANA
Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10412
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	0.0040	<0.50
Barium	10	.007	.03		
Beryllium	0.25	.0055	.01		
Boron	5.0	.054	.11		
Cadmium	0.25	.013	.05	-0.0015	<0.25
Calcium	250	.27	.86		
Chromium	0.50	.055	.035	0.0085	<0.50
Cobalt	2.5	.025	.09		
Copper	1.3	.029	.065	0.017	<1.3
Iron	5.0	.65	1.1		
Lead	0.50	.079	.2	0.016	<0.50
Magnesium	250	.34	.58		
Manganese	0.75	.01	.035		
Molybdenum	0.50	.048	.075		
Nickel	2.0	.048	.065	-0.0090	<2.0
Potassium	250	2.7	16		
Selenium	0.50	.16	.12	-0.014	<0.50
Silver	0.50	.043	.04	-0.0075	<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	0.021	<1.0

Associated samples MP10412: T38130-1, T38130-2

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

8.4.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10412
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 10/07/09 10/07/09

Metal	T38128-1 Original	DUP	RPD	QC Limits	T38128-1 Original MS	Spikelot MPTW4	% Rec	QC Limits	
Aluminum	anr								
Antimony	anr								
Arsenic	7.0	7.1	1.4	0-20	7.0	28.9	24.9	87.8	80-120
Barium	anr								
Beryllium	anr								
Boron									
Cadmium	0.19	0.23	19.0	0-20	0.19	19.8	24.9	78.6N	80-120
Calcium	anr								
Chromium	18.4	18.9	2.7	0-20	18.4	38.0	24.9	78.6N	80-120
Cobalt	anr								
Copper	14.6	14.6	0.0	0-20	14.6	37.0	24.9	89.8	80-120
Iron	anr								
Lead	11.1	11.4	2.7	0-20	11.1	31.5	24.9	81.8	80-120
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	18.3	17.5	4.5	0-20	18.3	37.9	24.9	78.6N	80-120
Potassium	anr								
Selenium	0.25	0.0	200.0(a)	0-20	0.25	20.0	24.9	79.2N	80-120
Silver	0.089	0.11	21.1 (a)	0-20	0.089	11.4	24.9	45.4N	80-120
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	39.9	40.4	1.2	0-20	39.9	60.7	24.9	83.4	80-120

Associated samples MP10412: T38130-1, T38130-2

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.

8.4.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10412
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 10/07/09

Metal	T38128-1 Original	MSD	Spike/lot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	7.0	27.3	23.9	85.0	5.7	20
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.19	19.4	23.9	80.4	2.0	20
Calcium	anr					
Chromium	18.4	38.6	23.9	84.5	1.6	20
Cobalt	anr					
Copper	14.6	37.1	23.9	94.2	0.3	20
Iron	anr					
Lead	11.1	31.8	23.9	86.6	0.9	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	18.3	38.7	23.9	85.4	2.1	20
Potassium	anr					
Selenium	0.25	19.7	23.9	81.4	1.5	20
Silver	0.089	11.7	23.9	48.6N	2.6	20
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	39.9	62.4	23.9	94.2	2.8	20

Associated samples MP10412: T38130-1, T38130-2

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T38130
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10412
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 10/07/09

Metal	LCS Result	Spikelot MPLCD054	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	146	158	92.4	82-118
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	171	187	91.4	82-118
Calcium	anr			
Chromium	84.0	89.5	93.9	79-121
Cobalt	anr			
Copper	125	129	96.9	84-117
Iron	anr			
Lead	159	172	92.4	79-120
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	95.0	99	96.0	81-119
Potassium	anr			
Selenium	133	148	89.9	78-121
Silver	61.3	66	92.9	66-134
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	357	394	90.6	80-119

Associated samples MP10412: T38130-1, T38130-2

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

8.4.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: T38130
 Account: ENCACOP - ENCANA
 Project: EnCana Oil & Gas (USA) Inc.

QC Batch ID: MP10412
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/07/09

Metal	T38128-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	120	134	12.0*(a)	0-10
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	3.17	1.53	51.7 (b)	0-10
Calcium	anr			
Chromium	314	367	17.0*(a)	0-10
Cobalt	anr			
Copper	249	271	9.0	0-10
Iron	anr			
Lead	190	224	17.7*(a)	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	312	373	19.3*(a)	0-10
Potassium	anr			
Selenium	4.30	0.00	100.0(b)	0-10
Silver	1.52	0.00	100.0(b)	0-10
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	680	798	17.3*(a)	0-10

Associated samples MP10412: T38130-1, T38130-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

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

8.4.4
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T38130
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: T38130-1, T38130-2

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

8.5.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T38130
 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 Original	DUP	RPD	QC Limits	T38111-1 Original MS	Spikelot HGTXWS1	% Rec	QC Limits
Mercury	0.036	0.047	26.5 (a)	0-20	0.036 0.31	0.305	89.9	75-125

Associated samples MP10414: T38130-1, T38130-2

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: T38130
 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: T38130-1, T38130-2

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T38130
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	LCS Result	Spikelot HGLCD054 % Rec	QC Limits
Mercury	6.7	7.34	91.3 72-128

Associated samples MP10414: T38130-1, T38130-2

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

8.5.3
8



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: T38130
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: T38130-1, T38130-2

Batch GN18243: T38130-1, T38130-2

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38130
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: T38130-1, T38130-2

Batch GN18194: T38130-1, T38130-2

Batch GN18199: T38130-1, T38130-2

Batch GN18243: T38130-1, T38130-2

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38130
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: T38130-1, T38130-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



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Est. 1970

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

Report Summary

Tuesday June 15, 2010

Report Number: L463792

Samples Received: 06/11/10

Client Project:

Description: PD30 Drilling Cuttings

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
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REPORT OF ANALYSIS

June 15, 2010

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

ESC Sample # : L463792-01

Date Received : June 11, 2010
Description : PD30 Drilling Cuttings

Site ID : PARACHUTE

Sample ID : PD30 CUTTINGS 061010

Project # :

Collected By : Blair Rollins
Collection Date : 06/10/10 14:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.0	1.0	mg/kg	6010B	06/12/10	1
Barium	18000	1.2	mg/kg	6010B	06/12/10	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/15/10 11:13 Printed: 06/15/10 11:13

Summary of Remarks For Samples Printed
06/15/10 at 11:13:57

TSR Signing Reports: 358
R4 - Rush: Three Day

Sample: L463792-01 Account: ENCANACO Received: 06/11/10 09:00 Due Date: 06/16/10 00:00 RPT Date: 06/15/10 11:13



YOUR LAB OF CHOICE

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

Quality Assurance Report
 Level II

L463792

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June 15, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Arsenic	< 1	mg/kg			WG483167	06/12/10 14:56
Barium	< .25	mg/kg			WG483167	06/12/10 14:56

Analyte	Units	Duplicate			Limit	Ref Samp	Batch
		Result	Duplicate	RPD			
Arsenic	mg/kg	0	0	0	20	L463750-09	WG483167
Barium	mg/kg	48.0	51.3	7.27	20	L463750-09	WG483167

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	192	170.	88.5	78.6-120.8	WG483167
Barium	mg/kg	420	408.	97.1	78.8-121.4	WG483167

Analyte	Units	MS Res	Matrix Spike			Limit	Ref Samp	Batch
			Ref Res	TV	% Rec			
Arsenic	mg/kg	37.4	0	50	74.8*	75-125	L463750-09	WG483167
Barium	mg/kg	93.2	51.3	50	83.8	75-125	L463750-09	WG483167

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Arsenic	mg/kg	31.5	37.4	63.0*	75-125	17.1	20	L463750-09	WG483167
Barium	mg/kg	81.4	93.2	60.2*	75-125	13.5	20	L463750-09	WG483167

Batch number /Run number / Sample number cross reference

WG483167: R1250710: L463792-01

* * 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
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Parachute, CO 81635

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June 15, 2010

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.



Technical Report for

EnCana

PD30 Cuttings

Accutest Job Number: D14431

Sampling Date: 06/18/10

Report to:

EnCana
2717 CR 215 Suite 100
Parachute, CO 81635
christopher.hines@encana.com

ATTN: Chris Hines

Total number of pages in report: **19**



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.

Jesse L. Smith
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.



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Sample Summary

EnCana

Job No: D14431

PD30 Cuttings

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
D14431-1	06/18/10	14:00 BKR	06/19/10	SO	Soil	PD30-CUTTINGS-061810

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: EnCana

Job No D14431

Site: PD30 Cuttings

Report Dat 6/28/2010 3:56:32 PM

On 06/19/2010, one (1) sample, 0 Trip Blanks, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 4.0°C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D14431 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix SO	Batch ID: MP2172
------------------	-------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14509-1MS, D14509-1MSD, and D14509-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD for Barium is outside control limits for sample MP2172-SD1. The serial dilution indicates possible matrix interference.

Wet Chemistry By Method SM19 2540B M

Matrix SO	Batch ID: GN5070
------------------	-------------------------

- The data for SM19 2540B M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: PD30-CUTTINGS-061810	Date Sampled: 06/18/10
Lab Sample ID: D14431-1	Date Received: 06/19/10
Matrix: SO - Soil	Percent Solids: 75.5
Project: PD30 Cuttings	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	5490	9.9	mg/kg	10	06/25/10	06/27/10 JM	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA778

(2) Prep QC Batch: MP2172

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



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: D14431
Account: ENCACOP - EnCana
Project: PD30 Cuttings

QC Batch ID: MP2172
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/25/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	2		
Antimony	3.0	.17	.5		
Arsenic	2.5	.28	.72		
Barium	1.0	.014	.05	0.080	<1.0
Beryllium	1.0	.14	.21		
Boron	5.0	.35	.91		
Cadmium	1.0	.022	.12		
Calcium	40	1.7	2.7		
Chromium	1.0	.027	.18		
Cobalt	0.50	.048	.058		
Copper	0.50	.16	.38		
Iron	7.0	.77	.91		
Lead	5.0	.13	.24		
Lithium	0.20	.076	.09		
Magnesium	20	.58	.93		
Manganese	0.50	.021	.028		
Molybdenum	1.0	.041	.16		
Nickel	3.0	.038	.075		
Phosphorus	10	1.5	3.5		
Potassium	200	38	130		
Selenium	5.0	.28	.54		
Silicon	5.0	1.2	.68		
Silver	3.0	.098	.068		
Sodium	40	23	6.3		
Strontium	5.0	.0091	.02		
Thallium	1.0	.31	.21		
Tin	5.0	1.4	.56		
Titanium	1.0	.0098	.041		
Uranium	5.0	.22	.53		
Vanadium	1.0	.027	.034		
Zinc	3.0	.076	.49		

Associated samples MP2172: D14431-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D14431
Account: ENCACOP - EnCana
Project: PD30 Cuttings

QC Batch ID: MP2172
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

5.1.1

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14431
 Account: ENCACOP - EnCana
 Project: PD30 Cuttings

QC Batch ID: MP2172
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/25/10

Metal	D14509-1		SpikeLot		QC
	Original	MS	MPICPALL	% Rec	Limits
Aluminum					
Antimony					
Arsenic					
Barium	101	281	192	93.6	75-125
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron					
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Phosphorus					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP2172: D14431-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

5.1.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14431
Account: ENCACOP - EnCana
Project: PD30 Cuttings

QC Batch ID: MP2172
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14431
 Account: ENCACOP - EnCana
 Project: PD30 Cuttings

QC Batch ID: MP2172
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/25/10

Metal	D14509-1 Original MSD	Spikelot MPICPALL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic				
Barium	101	262	195	82.4
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP2172: D14431-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

5.1.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14431
Account: ENCACOP - EnCana
Project: PD30 Cuttings

QC Batch ID: MP2172
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14431
 Account: ENCACOP - EnCana
 Project: PD30 Cuttings

QC Batch ID: MP2172
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/25/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	187	200	93.5	80-120
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP2172: D14431-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

5.1.3
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14431
Account: ENCACOP - EnCana
Project: PD30 Cuttings

QC Batch ID: MP2172
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

5.1.3
5

SERIAL DILUTION RESULTS SUMMARY

Login Number: D14431
 Account: ENCACOP - EnCana
 Project: PD30 Cuttings

QC Batch ID: MP2172
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 06/25/10

Metal	D14509-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	1040	1160	12.1*(a)	0-10
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP2172: D14431-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

5.1.4
5

SERIAL DILUTION RESULTS SUMMARY

Login Number: D14431
Account: ENCACOP - EnCana
Project: PD30 Cuttings

QC Batch ID: MP2172
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

5.1.4

5