

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

Location	Sample Date:	Sample Matrix	Matrix Notes	TPH (total volatile and extractable petroleum hydrocarbons)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	Organic Compounds in Soil (mg/kg [ppm])																	Inorganics in Soil			Metals in Soil (mg/kg [ppm])											
							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
PK25	09/22/09	Cuttings		39.9	15.2	24.7	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	Silver	Zinc
PK25	03/17/10	Cuttings	resample for barium																					2.16	27.9	11	6.4	3800	0.33	25.9	1.4	32.5	30.1	0.029	19.7	0.69	0.24	67.3



Technical Report for

ENCANA

EnCana Oil & Gas (USA) Inc.

EnCana PK25 Cuttings & Background

Accutest Job Number: T38128

Sampling Date: 09/22/09

Report to:

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Total number of pages in report: 71



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.

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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: T38128

EnCana Oil & Gas (USA) Inc.
 Project No: EnCana PK25 Cuttings & Background

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
T38128-1	09/22/09	13:25 KLR	09/23/09	SO	Soil	ENCANA_BACKGROUND_092209
T38128-1A	09/22/09	13:25 KLR	09/23/09	SO	Soil	ENCANA_BACKGROUND_092209
T38128-1B	09/22/09	13:25 KLR	09/23/09	SO	Soil	ENCANA_BACKGROUND_092209
T38128-1C	09/22/09	13:25 KLR	09/23/09	SO	Soil	ENCANA_BACKGROUND_092209
T38128-2	09/22/09	13:00 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209
T38128-2A	09/22/09	13:00 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209
T38128-2B	09/22/09	13:00 KLR	09/23/09	SO	Soil	ENCANA_CUTTINGS_092209
T38128-2C	09/22/09	13:00 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_BACKGROUND_092209	
Lab Sample ID:	T38128-1	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8260B	Percent Solids: 94.9
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0055842.D	1	10/01/09	AH	n/a	n/a	VX303
Run #2							

	Initial Weight	Final Volume
Run #1	5.19 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.1	0.71	ug/kg	
108-88-3	Toluene	ND	5.1	0.96	ug/kg	
100-41-4	Ethylbenzene	ND	5.1	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-121%
2037-26-5	Toluene-D8	97%		76-132%
460-00-4	4-Bromofluorobenzene	105%		73-165%
17060-07-0	1,2-Dichloroethane-D4	87%		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:	T38128-1	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
Method:	SW846 8270C SW846 3550B	Percent Solids:	94.9
Project:	EnCana Oil & Gas (USA) Inc.		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	H35190.D	1	09/30/09	SC	09/26/09	OP13100	EH1902
Run #2	J13532.D	20	10/01/09	SC	09/26/09	OP13100	EJ622

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

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	34	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	67	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	28	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	33	ug/kg	
218-01-9	Chrysene	ND	170	38	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	93	ug/kg	
206-44-0	Fluoranthene	ND	170	36	ug/kg	
86-73-7	Fluorene	ND	170	48	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	63	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	41	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	55	ug/kg	
91-20-3	Naphthalene	ND	170	35	ug/kg	
85-01-8	Phenanthrene	ND	170	47	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	71%	56%	18-104%
321-60-8	2-Fluorobiphenyl	78%	87%	21-114%
1718-51-0	Terphenyl-d14	122%	75%	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_BACKGROUND_092209	
Lab Sample ID:	T38128-1	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015	Percent Solids: 94.9
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE047871.D	1	09/27/09	JL	n/a	n/a	GEE2430
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.05 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.406	5.5	0.33	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	107%		46-127%
98-08-8	aaa-Trifluorotoluene	104%		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:	T38128-1	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 94.9
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CC215406.D	1	10/01/09	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)	34.9	8.8	2.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	49%		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:	T38128-1	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	94.9
Project:	EnCana Oil & Gas (USA) Inc.		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	7.0	0.59	0.12	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Cadmium	0.19 B	0.29	0.059	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Chromium	18.4	0.59	0.041	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Copper	14.6	1.5	0.076	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Lead	11.1	0.59	0.23	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Mercury	0.023	0.016	0.00064	mg/kg	1	10/08/09	10/08/09 NS	SW846 7471A ¹	SW846 7471A ⁴
Nickel	18.3	2.3	0.076	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Selenium	0.25 B	0.59	0.14	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Silver	0.089 B	0.59	0.047	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Zinc	39.9	1.2	0.23	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	
Lab Sample ID:	T38128-1	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Project:	EnCana Oil & Gas (USA) Inc.	Percent Solids: 94.9

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.0 B	2.0	mg/kg	1	10/07/09 12:00	KD	SW846 3060/7196A
Chromium, Trivalent ^a	17.4	2.6	mg/kg	1	10/10/09 22:16	NS	SW846 6010/7196A M
Solids, Percent	94.9		%	1	10/02/09	MR	SM 2540 G
Specific Conductivity	887	1.0	umhos/cm	1	10/07/09 15:00	KD	EPA 120.1
pH	7.9		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_BACKGROUND_092209		
Lab Sample ID:	T38128-1A	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	94.9
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	2.67	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:	T38128-1B	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	94.9
Project:	EnCana Oil & Gas (USA) Inc.		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	269	11	0.032	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	Date Sampled:	09/22/09
Lab Sample ID:	T38128-1C	Date Received:	09/23/09
Matrix:	SO - Soil	Percent Solids:	94.9
Project:	EnCana Oil & Gas (USA) Inc.		

SAR Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	1900	25	0.18	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ²
Magnesium	134	25	0.039	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ²
Sodium	19.0 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:	T38128-1C	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Project:	EnCana Oil & Gas (USA) Inc.	Percent Solids: 94.9

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	0.113		ratio	1	10/10/09 03:13	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_CUTTINGS_092209		
Lab Sample ID:	T38128-2	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
Method:	SW846 8260B	Percent Solids:	69.6
Project:	EnCana Oil & Gas (USA) Inc.		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0055843.D	1	10/01/09	AH	n/a	n/a	VX303
Run #2 ^a	X0055948.D	1	10/05/09	JL	n/a	n/a	VX307

	Initial Weight	Final Volume
Run #1	5.01 g	5.0 ml
Run #2	5.53 g	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	30.0	7.2	1.0	ug/kg	
108-88-3	Toluene	40.9	7.2	1.4	ug/kg	
100-41-4	Ethylbenzene	2.1	7.2	1.3	ug/kg	J
1330-20-7	Xylene (total)	19.0	22	3.0	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	20% ^b	42% ^b	70-121%
2037-26-5	Toluene-D8	100%	91%	76-132%
460-00-4	4-Bromofluorobenzene	97%	84%	73-165%
17060-07-0	1,2-Dichloroethane-D4	87%	99%	57-122%

(a) Confirmation run for surrogate recoveries.

(b) Outside control limits due to 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		
Lab Sample ID:	T38128-2	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
Method:	SW846 8270C SW846 3550B	Percent Solids:	69.6
Project:	EnCana Oil & Gas (USA) Inc.		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H35191.D	1	09/30/09	SC	09/26/09	OP13100	EH1902
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	240	65	ug/kg	
208-96-8	Acenaphthylene	ND	240	56	ug/kg	
120-12-7	Anthracene	ND	240	46	ug/kg	
56-55-3	Benzo(a)anthracene	ND	240	91	ug/kg	
50-32-8	Benzo(a)pyrene	ND	240	37	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	240	58	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	240	56	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	240	44	ug/kg	
218-01-9	Chrysene	ND	240	52	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	240	130	ug/kg	
206-44-0	Fluoranthene	ND	240	49	ug/kg	
86-73-7	Fluorene	ND	240	65	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	240	85	ug/kg	
90-12-0	1-Methylnaphthalene	66.2	240	56	ug/kg	J
91-57-6	2-Methylnaphthalene	153	240	74	ug/kg	J
91-20-3	Naphthalene	85.7	240	47	ug/kg	J
85-01-8	Phenanthrene	ND	240	64	ug/kg	
129-00-0	Pyrene	ND	240	46	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	46%		18-104%
321-60-8	2-Fluorobiphenyl	43%		21-114%
1718-51-0	Terphenyl-d14	96%		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_CUTTINGS_092209
Lab Sample ID: T38128-2
Matrix: SO - Soil
Method: SW846 8015
Project: EnCana Oil & Gas (USA) Inc.

Date Sampled: 09/22/09
Date Received: 09/23/09
Percent Solids: 69.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE047872.D	1	09/27/09	JL	n/a	n/a	GEE2430
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.44 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	15.2	8.8	0.53	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		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:	T38128-2	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 69.6
Project:	EnCana Oil & Gas (USA) Inc.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CC215369.D	1	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)	24.7	12	3.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	33%		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: T38128-2	Date Received: 09/23/09
Matrix: SO - Soil	Percent Solids: 69.6
Project: EnCana Oil & Gas (USA) Inc.	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.4	0.87	0.17	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Cadmium	0.33 B	0.43	0.087	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Chromium	27.3	0.87	0.061	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Copper	32.5	2.2	0.11	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Lead	30.1	0.87	0.35	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Mercury	0.029	0.023	0.00091	mg/kg	1	10/08/09	10/08/09 NS	SW846 7471A ¹	SW846 7471A ⁴
Nickel	19.7	3.5	0.11	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Selenium	0.69 B	0.87	0.21	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Silver	0.24 B	0.87	0.069	mg/kg	1	10/07/09	10/10/09 NS	SW846 6010B ²	SW846 3050B ³
Zinc	67.3	1.7	0.35	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:	T38128-2	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
Project:	EnCana Oil & Gas (USA) Inc.	Percent Solids:	69.6

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	25.9	2.9	mg/kg	1	10/10/09 22:47	NS	SW846 6010/7196A M
Solids, Percent	69.6		%	1	10/02/09	MR	SM 2540 G
Specific Conductivity	2160	1.0	umhos/cm	1	10/07/09 15:00	KD	EPA 120.1
pH	11.0		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:	T38128-2A	Date Sampled:	09/22/09
Matrix:	SO - Soil	Date Received:	09/23/09
		Percent Solids:	69.6
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	1.05	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:	T38128-2B	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
Project:	EnCana Oil & Gas (USA) Inc.	Percent Solids: 69.6

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	22300	360	1.1	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: T38128-2C	Date Received: 09/23/09
Matrix: SO - Soil	Percent Solids: 69.6
Project: EnCana Oil & Gas (USA) Inc.	

SAR Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	529	25	0.18	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ³
Magnesium	2.76 B	25	0.039	mg/l	5	10/07/09	10/10/09 NS	SW846 6010B ¹	SW846 3050B ³
Sodium	2340	130	3.4	mg/l	25	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:	T38128-2C	Date Sampled: 09/22/09
Matrix:	SO - Soil	Date Received: 09/23/09
		Percent Solids: 69.6
Project:	EnCana Oil & Gas (USA) Inc.	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	27.9		ratio	1	10/11/09 04:14	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

Organic Compounds in Soil

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
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-c,d)pyrene
- Naphthalene
- Pyrene

Inorganics in Soils

Electric Conductivity (EC)
Sodium Adsorption Ratio (SAR)

pH

Metals in Soils

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

SAMPLE INSPECTION FORM

Accutest Job Number: T38128 Client: Encona Oil & Gas Date/Time Received: 9-23-9 9:30
 # of Coolers Received: 1 Thermometer #: IR-1 Temperature Adjustment Factor: + .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 recvd but no analysis on COC
- Sample listed on COC, but not received
- Bottles missing for requested analysis
- Insufficient volume for analysts
- 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: _____

H:\walker\form\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: T38128
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

T38128-1, T38128-2

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: T38128
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

T38128-1, T38128-2

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
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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38128
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

T38128-1, T38128-2

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		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%

4.3.1
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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: T38128
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

T38128-1, T38128-2

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: T38128
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

T38128-1, T38128-2

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%

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38128
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

T38128-1, T38128-2

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: T38128
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2430-MB	EE047859.D	1	09/27/09	JL	n/a	n/a	GEE2430

The QC reported here applies to the following samples:

Method: SW846 8015

T38128-1, T38128-2

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	101%	46-127%
98-08-8	aaa-Trifluorotoluene	104%	44-120%

Blank Spike Summary

Job Number: T38128
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2430-BS	EE047856.D	1	09/27/09	JL	n/a	n/a	GEE2430

The QC reported here applies to the following samples:

Method: SW846 8015

T38128-1, T38128-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	0.4	0.332	83	78-115

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

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T38128
Account: ENCACOP ENCANA
Project: EnCana Oil & Gas (USA) Inc.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T37855-2MS	EE047866.D	1	09/27/09	JL	n/a	n/a	GEE2430
T37855-2MSD	EE047867.D	1	09/27/09	JL	n/a	n/a	GEE2430
T37855-2	EE047865.D	1	09/27/09	JL	n/a	n/a	GEE2430

The QC reported here applies to the following samples:

Method: SW846 8015

T38128-1, T38128-2

CAS No.	Compound	T37855-2 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	4.43	J	25.8	27.4	89	28.0	91	2	78-115/14

CAS No.	Surrogate Recoveries	MS	MSD	T37855-2	Limits
460-00-4	4-Bromofluorobenzene	115%	115%	114%	46-127%
98-08-8	aaa-Trifluorotoluene	111%	112%	106%	44-120%

6.3.1
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: T38128
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

T38128-1, T38128-2

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%

7.1.1
7

Blank Spike Summary

Job Number: T38128
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

T38128-1, T38128-2

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: T38128
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

T38128-1, T38128-2

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%

7.3.1
7



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: T38128
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: T38128-1C, T38128-2C

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: T38128
 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: T38128-1C, T38128-2C

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: T38128
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: T38128-1B, T38128-2B

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: T38128
 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: T38128-1B, T38128-2B

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: T38128
 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: T38128-1B, T38128-2B

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: T38128
 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: T38128-1B, T38128-2B

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: T38128
 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: T38128-1B, T38128-2B

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: T38128
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: T38128-1A, T38128-2A

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: T38128
 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: T38128-1A, T38128-2A

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: T38128
 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: T38128-1A, T38128-2A

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: T38128
 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: T38128-1A, T38128-2A

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: T38128
 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: T38128-1A, T38128-2A

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: T38128
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: T38128-1, T38128-2

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: T38128
 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: T38128-1, T38128-2

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: T38128
 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: T38128-1, T38128-2

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: T38128
 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: T38128-1, T38128-2

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: T38128
 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: T38128-1, T38128-2

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: T38128
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: T38128-1, T38128-2

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: T38128
 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: T38128-1, T38128-2

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: T38128
 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: T38128-1, T38128-2

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: T38128
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: T38128-1, T38128-2

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: T38128
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: T38128-1, T38128-2

Batch GN18243: T38128-1, T38128-2

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38128
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: T38128-1, T38128-2

Batch GN18194: T38128-1, T38128-2

Batch GN18199: T38128-1, T38128-2

Batch GN18243: T38128-1, T38128-2

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T38128
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: T38128-1, T38128-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

ANALYTICAL REPORT

Job Number: 280-1486-5

Job Description: PK25-Cuttings-03/17/10

For:
EnCana Oil & Gas, Inc. (USA)
2717 County Road 215
Suite 100
Parachute, CO 81635
Attention: Chris Hines



Approved for release.
Lori A Parsons
Project Manager I
4/1/2010 1:40 PM

Lori A Parsons
Project Manager I
lori.parsons@testamericainc.com
04/01/2010

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com



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CASE NARRATIVE

Client: EnCana Oil & Gas, Inc. (USA)

Project: PK25-Cuttings-03/17/10

Report Number: 280-1486-5

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 03/18/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 C.

TOTAL METALS

Sample PK25-CUTTINGS-031710 (280-1486-5) was analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared and analyzed on 03/22/2010.

Barium was detected in method blank MB 280-8004/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The serial dilution performed for sample PK25-CUTTINGS-031710 (280-1486-5) was outside the control limits for barium.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
280-1486-5 Barium	PK25-CUTTINGS-031710	3800 B	1.0	mg/Kg	6010B

METHOD SUMMARY

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
RCRA Metals	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Method	Analyst	Analyst ID
SW846 6010B	Wells, David	DW

SAMPLE SUMMARY

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-1486-5	PK25-CUTTINGS-031710	Solid	03/17/2010 1440	03/18/2010 0900

SAMPLE RESULTS

Analytical Data

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Client Sample ID: PK25-CUTTINGS-031710

Lab Sample ID: 280-1486-5

Date Sampled: 03/17/2010 1440

Client Matrix: Solid

Date Received: 03/18/2010 0900

6010B RCRA Metals

Method:	6010B	Analysis Batch: 280-8193	Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-8004	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	1.00 g
Date Analyzed:	03/22/2010 2309		Final Weight/Volume:	100 mL
Date Prepared:	03/22/2010 0800			

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Barium		3800	B	0.076	1.0

DATA REPORTING QUALIFIERS

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Lab Section	Qualifier	Description
Metals	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-8004					
LCS 280-8004/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-8004/1-A	Method Blank	T	Solid	3050B	
280-1486-5	PK25-CUTTINGS-031710	T	Solid	3050B	
280-1547-A-6-F MS	Matrix Spike	T	Solid	3050B	
280-1547-A-6-G MSD	Matrix Spike Duplicate	T	Solid	3050B	
Analysis Batch:280-8193					
LCS 280-8004/2-A	Lab Control Sample	T	Solid	6010B	280-8004
MB 280-8004/1-A	Method Blank	T	Solid	6010B	280-8004
280-1486-5	PK25-CUTTINGS-031710	T	Solid	6010B	280-8004
280-1547-A-6-F MS	Matrix Spike	T	Solid	6010B	280-8004
280-1547-A-6-G MSD	Matrix Spike Duplicate	T	Solid	6010B	280-8004

Report Basis

T = Total

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Method Blank - Batch: 280-8004

**Method: 6010B
Preparation: 3050B**

Lab Sample ID: MB 280-8004/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2010 2232
Date Prepared: 03/22/2010 0800

Analysis Batch: 280-8193
Prep Batch: 280-8004
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Barium	0.244	J	0.076	1.0

Lab Control Sample - Batch: 280-8004

**Method: 6010B
Preparation: 3050B**

Lab Sample ID: LCS 280-8004/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2010 2234
Date Prepared: 03/22/2010 0800

Analysis Batch: 280-8193
Prep Batch: 280-8004
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	200	205	103	87 - 112	

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-8004**

**Method: 6010B
Preparation: 3050B**

MS Lab Sample ID: 280-1547-A-6-F MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2010 2241
Date Prepared: 03/22/2010 0800

Analysis Batch: 280-8193
Prep Batch: 280-8004

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1.14 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 280-1547-A-6-G MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2010 2243
Date Prepared: 03/22/2010 0800

Analysis Batch: 280-8193
Prep Batch: 280-8004

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1.09 g
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Barium	109	113	52 - 159	6	30		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

**Matrix Spike/
Matrix Spike Duplicate Data Report - Batch: 280-8004**

**Method: 6010B
Preparation: 3050B**

MS Lab Sample ID: 280-1547-A-6-F MS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2010 2241
Date Prepared: 03/22/2010 0800

Units: mg/Kg

MSD Lab Sample ID: 280-1547-A-6-G MSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2010 2243
Date Prepared: 03/22/2010 0800

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Barium	44	175	183	236	251

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Laboratory Chronicle

Lab ID: 280-1486-5

Client ID: PK25-CUTTINGS-031710

Sample Date/Time: 03/17/2010 14:40

Received Date/Time: 03/18/2010 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	280-1486-A-5-A		280-8193	280-8004	03/22/2010 08:00	1	TAL DEN	JW
A:6010B	280-1486-A-5-A		280-8193	280-8004	03/22/2010 23:09	1	TAL DEN	DW

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	MB 280-8004/1-A		280-8193	280-8004	03/22/2010 08:00	1	TAL DEN	JW
A:6010B	MB 280-8004/1-A		280-8193	280-8004	03/22/2010 22:32	1	TAL DEN	DW

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	LCS 280-8004/2-A		280-8193	280-8004	03/22/2010 08:00	1	TAL DEN	JW
A:6010B	LCS 280-8004/2-A		280-8193	280-8004	03/22/2010 22:34	1	TAL DEN	DW

Lab ID: MS

Client ID: N/A

Sample Date/Time: 03/18/2010 12:20

Received Date/Time: 03/18/2010 15:50

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	280-1547-A-6-F MS		280-8193	280-8004	03/22/2010 08:00	1	TAL DEN	JW
A:6010B	280-1547-A-6-F MS		280-8193	280-8004	03/22/2010 22:41	1	TAL DEN	DW

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 03/18/2010 12:20

Received Date/Time: 03/18/2010 15:50

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	280-1547-A-6-G MSD		280-8193	280-8004	03/22/2010 08:00	1	TAL DEN	JW
A:6010B	280-1547-A-6-G MSD		280-8193	280-8004	03/22/2010 22:43	1	TAL DEN	DW

Lab References:

TAL DEN = TestAmerica Denver

Login Sample Receipt Check List

Client: EnCana Oil & Gas, Inc. (USA)

Job Number: 280-1486-5

Login Number: 1486

List Source: TestAmerica Denver

Creator: Bindel, Aaron M

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	