



10/27/11

Technical Report for**EnCana****F12E Domestic Well Sampling****Accutest Job Number: D28124****Sampling Date: 09/28/11****Report to:****EnCana****Aaron.Stacy@encana.com****ATTN: Aaron Stacy****Total number of pages in report: 61**

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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Laboratory Director**Client Service contact: 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: D28124

F12E Domestic Well Sampling

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D28124-1	09/28/11	08:00 SM	09/29/11	AQ	Ground Water	LANG9WW-092811
D28124-1F	09/28/11	08:00 SM	09/29/11	AQ	Groundwater Filtered	LANG9WW-092811
D28124-2	09/28/11	09:30 SM	09/29/11	AQ	Ground Water	LANG8WW-092811
D28124-2F	09/28/11	09:30 SM	09/29/11	AQ	Groundwater Filtered	LANG8WW-092811
D28124-3	09/28/11	10:30 SM	09/29/11	AQ	Ground Water	LANG7WW-092811
D28124-3F	09/28/11	10:30 SM	09/29/11	AQ	Groundwater Filtered	LANG7WW-092811
D28124-4	09/28/11	12:15 SM	09/29/11	AQ	Ground Water	STAUT2WW-092811
D28124-4F	09/28/11	12:15 SM	09/29/11	AQ	Groundwater Filtered	STAUT2WW-092811
D28124-5	09/28/11	13:30 SM	09/29/11	AQ	Ground Water	LANG-RH-WW-092811
D28124-5F	09/28/11	13:30 SM	09/29/11	AQ	Groundwater Filtered	LANG-RH-WW-092811
D28124-6	09/28/11	14:15 SM	09/29/11	AQ	Ground Water	ONEL1WW-092811
D28124-6F	09/28/11	14:15 SM	09/29/11	AQ	Groundwater Filtered	ONEL1WW-092811
D28124-7	09/28/11	15:00 SM	09/29/11	AQ	Ground Water	STAUT1WW-092811

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Sample Summary

(continued)

EnCana

Job No: D28124

F12E Domestic Well Sampling

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D28124-7F	09/28/11	15:00 SM	09/29/11	AQ	Groundwater Filtered	STAUT1WW-092811



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: EnCana

Job No D28124

Site: F12E Domestic Well Sampling

Report Dat 10/12/2011 3:07:18 PM

On 09/29/2011, 7 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D28124 was assigned to the project. The lab sample IDs, client sample IDs, 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.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ

Batch ID: V7V494

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28144-2MS, D28144-2MSD were used as the QC samples indicated.

Volatiles by GC By Method RSK175 MOD

Matrix AQ

Batch ID: GFB166

- All samples were analyzed within the recommended method holding time.
- Sample(s) D28124-1MS, D28124-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP5904

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28102-1FMS, D28102-1FMSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ

Batch ID: GP5616

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28049-3MS, D28049-3MSD were used as the QC samples for the anions analysis.
- D28124-3 for Bromide: Elevated detection limit due to matrix interference.
- D28124-1 and D28124-2 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

Matrix AQ

Batch ID: GP5665

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28265-4MS, D28265-4MSD were used as the QC samples for the Fluoride analysis.

Wet Chemistry By Method SM20 2320B**Matrix** AQ**Batch ID:** GN11926

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28134-5DUP, D28134-5MS, D28134-5MSD were used as the QC samples for the Alkalinity, Total as CaCO₃ analysis.

Matrix AQ**Batch ID:** GN11930

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ**Batch ID:** GN11932

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM20 2510B**Matrix** AQ**Batch ID:** GP5604

- Sample(s) D28102-3DUP were used as the QC samples for the Specific Conductivity analysis.

Wet Chemistry By Method SM20 2540C**Matrix** AQ**Batch ID:** GN11848

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28042-10DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 4500NH3 D**Matrix** AQ**Batch ID:** GP5628

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28124-4DUP, D28124-4MS, D28124-4MSD were used as the QC samples for the Nitrogen, Ammonia analysis.

Matrix AQ**Batch ID:** GP5648

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28134-1DUP, D28134-1MS, D28134-1MSD were used as the QC samples for the Nitrogen, Ammonia analysis.

Wet Chemistry By Method SM20 4500S2 CF**Matrix** AQ**Batch ID:** GN11887

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28124-1MS were used as the QC samples for the Sulfide analysis.

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

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Report of Analysis

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Client Sample ID:	LANG9WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-1	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09363.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		67-131%
2037-26-5	Toluene-D8	102%		65-130%
460-00-4	4-Bromofluorobenzene	87%		65-130%

ND = Not detected
 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

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Client Sample ID:	LANG9WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-1	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04924.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	90%		70-130%	

ND = Not detected
 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

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Client Sample ID: LANG9WW-092811

Lab Sample ID: D28124-1

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	417	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO ₃	417	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide	< 0.20	0.20	mg/l	1	09/29/11 14:23	JML	EPA 300/SW846 9056
Chloride	88.0	2.5	mg/l	5	09/29/11 16:28	JML	EPA 300/SW846 9056
Fluoride	1.7	0.40	mg/l	2	10/10/11 10:29	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	0.10	0.10	mg/l	1	10/05/11	JD	SM20 4500NH ₃ D
Nitrogen, Nitrate	8.9	0.45	mg/l	10	09/29/11 18:33	JML	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 0.31	0.31	mg/l	5	09/29/11 16:28	JML	EPA 300/SW846 9056
Solids, Total Dissolved	818	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	1030	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	83.3	2.5	mg/l	5	09/29/11 16:28	JML	EPA 300/SW846 9056
Sulfide	< 0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S ₂ CF
pH	7.44		su	1	09/29/11 15:24	JD	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

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Client Sample ID: LANG9WW-092811

Lab Sample ID: D28124-1F

Matrix: AQ - Groundwater Filtered

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analized By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.234	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	76.4	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	20.1	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	0.0093	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	< 1.0	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	171	0.40	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit

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Report of Analysis

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Client Sample ID:	LANG8WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-2	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09364.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		67-131%
2037-26-5	Toluene-D8	102%		65-130%
460-00-4	4-Bromofluorobenzene	89%		65-130%

ND = Not detected
 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

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Client Sample ID:	LANG8WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-2	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04925.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	0.00300	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	93%		70-130%	

ND = Not detected
 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

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Client Sample ID: LANG8WW-092811

Lab Sample ID: D28124-2

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	312	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	312	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide	0.39	0.20	mg/l	1	09/29/11 14:37	JML	EPA 300/SW846 9056
Chloride	75.8	2.5	mg/l	5	09/29/11 16:42	JML	EPA 300/SW846 9056
Fluoride	3.0	0.40	mg/l	2	10/10/11 10:54	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	< 0.10	0.10	mg/l	1	10/05/11	JD	SM20 4500NH3 D
Nitrogen, Nitrate	< 0.045	0.045	mg/l	1	09/29/11 14:37	JML	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 0.31	0.31	mg/l	5	09/29/11 16:42	JML	EPA 300/SW846 9056
Solids, Total Dissolved	548	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	720	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	29.9	0.50	mg/l	1	09/29/11 14:37	JML	EPA 300/SW846 9056
Sulfide	0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S2 CF
pH	8.33		su	1	09/29/11 15:24	JD	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

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Client Sample ID: LANG8WW-092811

Lab Sample ID: D28124-2F

Matrix: AQ - Groundwater Filtered

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.152	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	6.67	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	< 0.20	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	0.0133	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	< 1.0	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	199	0.40	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit

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Client Sample ID:	LANG7WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-3	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09365.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	94%		67-131%
2037-26-5	Toluene-D8	102%		65-130%
460-00-4	4-Bromofluorobenzene	88%		65-130%

ND = Not detected
 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

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Client Sample ID:	LANG7WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-3	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04926.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	0.00082	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	88%		70-130%	

ND = Not detected
 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

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Client Sample ID: LANG7WW-092811

Lab Sample ID: D28124-3

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	324	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO ₃	324	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide ^a	< 1.0	1.0	mg/l	5	09/29/11 16:56	JML	EPA 300/SW846 9056
Chloride	79.4	2.5	mg/l	5	09/29/11 16:56	JML	EPA 300/SW846 9056
Fluoride	1.2	0.40	mg/l	2	10/10/11 11:07	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	0.11	0.10	mg/l	1	10/05/11	JD	SM20 4500NH ₃ D
Nitrogen, Nitrate	0.42	0.23	mg/l	5	09/29/11 16:56	JML	EPA 300/SW846 9056
Nitrogen, Nitrite	0.58	0.31	mg/l	5	09/29/11 16:56	JML	EPA 300/SW846 9056
Solids, Total Dissolved	582	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	790	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	62.8	2.5	mg/l	5	09/29/11 16:56	JML	EPA 300/SW846 9056
Sulfide	< 0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S ₂ CF
pH	7.91		su	1	09/29/11 15:24	JD	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

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Client Sample ID: LANG7WW-092811

Lab Sample ID: D28124-3F

Matrix: AQ - Groundwater Filtered

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.0795	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	30.1	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	12.6	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	0.0275	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	< 1.0	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	165	0.40	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit

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Client Sample ID:	STAUT2WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-4	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09366.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		67-131%
2037-26-5	Toluene-D8	101%		65-130%
460-00-4	4-Bromofluorobenzene	86%		65-130%

ND = Not detected
 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

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Client Sample ID:	STAUT2WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-4	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04927.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	88%		70-130%	

ND = Not detected
 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

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Client Sample ID: STAUT2WW-092811

Lab Sample ID: D28124-4

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC 332		5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	332	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide	< 0.20	0.20	mg/l	1	09/29/11 15:04	JML	EPA 300/SW846 9056
Chloride	6.1	0.50	mg/l	1	09/29/11 15:04	JML	EPA 300/SW846 9056
Fluoride	0.88	0.40	mg/l	2	10/10/11 11:32	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	< 0.10	0.10	mg/l	1	10/05/11	JD	SM20 4500NH3 D
Nitrogen, Nitrate	1.8	0.23	mg/l	5	09/29/11 17:09	JML	EPA 300/SW846 9056
Nitrogen, Nitrite	< 0.061	0.061	mg/l	1	09/29/11 15:04	JML	EPA 300/SW846 9056
Solids, Total Dissolved	434	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	549	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	27.3	0.50	mg/l	1	09/29/11 15:04	JML	EPA 300/SW846 9056
Sulfide	< 0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S2 CF
pH	7.51		su	1	09/29/11 15:24	JD	SM20 4500H

RL = Reporting Limit

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Client Sample ID: STAUT2WW-092811

Lab Sample ID: D28124-4F

Matrix: AQ - Groundwater Filtered

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.113	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	77.6	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	25.6	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	< 0.0050	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	3.52	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	37.9	0.40	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit

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Client Sample ID:	LANG-RH-WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-5	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09367.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		67-131%
2037-26-5	Toluene-D8	103%		65-130%
460-00-4	4-Bromofluorobenzene	85%		65-130%

ND = Not detected
 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

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Client Sample ID:	LANG-RH-WW-092811	
Lab Sample ID:	D28124-5	Date Sampled: 09/28/11
Matrix:	AQ - Ground Water	Date Received: 09/29/11
Method:	RSK175 MOD	Percent Solids: n/a
Project:	F12E Domestic Well Sampling	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04928.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	89%		70-130%	

ND = Not detected
 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

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Client Sample ID: LANG-RH-WW-092811

Lab Sample ID: D28124-5

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	315	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	315	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide	< 0.20	0.20	mg/l	1	09/29/11 15:46	JML	EPA 300/SW846 9056
Chloride	8.1	0.50	mg/l	1	09/29/11 15:46	JML	EPA 300/SW846 9056
Fluoride	0.57	0.20	mg/l	1	10/10/11 12:22	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	< 0.10	0.10	mg/l	1	10/07/11	JK	SM20 4500NH3 D
Nitrogen, Nitrate	5.0	0.23	mg/l	5	09/29/11 17:23	JML	EPA 300/SW846 9056
Nitrogen, Nitrite	< 0.061	0.061	mg/l	1	09/29/11 15:46	JML	EPA 300/SW846 9056
Solids, Total Dissolved	442	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	553	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	27.1	0.50	mg/l	1	09/29/11 15:46	JML	EPA 300/SW846 9056
Sulfide	< 0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S2 CF
pH	7.33		su	1	09/29/11 15:24	JD	SM20 4500H

RL = Reporting Limit

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Client Sample ID: LANG-RH-WW-092811
 Lab Sample ID: D28124-5F
 Matrix: AQ - Groundwater Filtered
 Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11
 Date Received: 09/29/11
 Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.219	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	69.4	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	0.0237	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	24.2	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	< 0.0050	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	20.0	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	34.4	0.40	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit

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Client Sample ID:	ONEL1WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-6	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09368.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	117%		67-131%
2037-26-5	Toluene-D8	103%		65-130%
460-00-4	4-Bromofluorobenzene	85%		65-130%

ND = Not detected
 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

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Client Sample ID:	ONEL1WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-6	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04930.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	90%		70-130%	

ND = Not detected
 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

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Client Sample ID: ONEL1WW-092811

Lab Sample ID: D28124-6

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	324	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	324	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide	< 0.20	0.20	mg/l	1	09/29/11 16:00	JML	EPA 300/SW846 9056
Chloride	4.0	0.50	mg/l	1	09/29/11 16:00	JML	EPA 300/SW846 9056
Fluoride	0.72	0.20	mg/l	1	10/10/11 13:00	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	< 0.10	0.10	mg/l	1	10/07/11	JK	SM20 4500NH3 D
Nitrogen, Nitrate	0.42	0.23	mg/l	5	09/29/11 17:37	JML	EPA 300/SW846 9056
Nitrogen, Nitrite	< 0.061	0.061	mg/l	1	09/29/11 16:00	JML	EPA 300/SW846 9056
Solids, Total Dissolved	422	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	514	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	24.4	0.50	mg/l	1	09/29/11 16:00	JML	EPA 300/SW846 9056
Sulfide	< 0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S2 CF
pH	7.77		su	1	09/29/11 15:24	JD	SM20 4500H

RL = Reporting Limit

Accutest LabLink@5659 10:55 27-Oct-2011

Report of Analysis

Page 1 of 1

Client Sample ID: ONEL1WW-092811

Lab Sample ID: D28124-6F

Matrix: AQ - Groundwater Filtered

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.146	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	50.9	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	30.1	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	< 0.0050	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	3.19	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	49.8	0.40	mg/l	1	09/30/11	10/04/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit

Accutest LabLink@5659 10:55 27-Oct-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	STAUT1WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-7	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09369.D	1	09/30/11	BR	n/a	n/a	V7V494
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0020	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	mg/l	
1330-20-7	Xylene (total)	ND	0.0040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		67-131%
2037-26-5	Toluene-D8	102%		65-130%
460-00-4	4-Bromofluorobenzene	86%		65-130%

ND = Not detected
 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

Accutest LabLink@5659 10:55 27-Oct-2011

Report of Analysis

Page 1 of 1

Client Sample ID:	STAUT1WW-092811	Date Sampled:	09/28/11
Lab Sample ID:	D28124-7	Date Received:	09/29/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	F12E Domestic Well Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04931.D	1	10/04/11	CS	n/a	n/a	GFB166
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.00080	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
74-98-6	Propane	88%		70-130%	

ND = Not detected
 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

Accutest LabLink@5659 10:55 27-Oct-2011

Report of Analysis

Page 1 of 1

Client Sample ID: STAUT1WW-092811

Lab Sample ID: D28124-7

Matrix: AQ - Ground Water

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC 344		5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	344	5.0	mg/l	1	10/07/11	JD	SM20 2320B
Bromide	< 0.20	0.20	mg/l	1	09/29/11 16:14	JML	EPA 300/SW846 9056
Chloride	4.8	0.50	mg/l	1	09/29/11 16:14	JML	EPA 300/SW846 9056
Fluoride	0.67	0.20	mg/l	1	10/10/11 13:13	NS	EPA 300/SW846 9056
Nitrogen, Ammonia	< 0.10	0.10	mg/l	1	10/07/11	JK	SM20 4500NH3 D
Nitrogen, Nitrate	1.0	0.23	mg/l	5	09/29/11 17:51	JML	EPA 300/SW846 9056
Nitrogen, Nitrite	< 0.061	0.061	mg/l	1	09/29/11 16:14	JML	EPA 300/SW846 9056
Solids, Total Dissolved	428	10	mg/l	1	10/04/11	JD	SM20 2540C
Specific Conductivity	551	1.0	umhos/cm	1	10/03/11	CJ	SM20 2510B
Sulfate	22.1	0.50	mg/l	1	09/29/11 16:14	JML	EPA 300/SW846 9056
Sulfide	< 0.50	0.50	mg/l	1	10/05/11	CJ	SM20 4500S2 CF
pH	7.51		su	1	09/29/11 15:24	JD	SM20 4500H

RL = Reporting Limit

Accutest LabLink@5659 10:55 27-Oct-2011

Report of Analysis

Page 1 of 1

Client Sample ID: STAUT1WW-092811

Lab Sample ID: D28124-7F

Matrix: AQ - Groundwater Filtered

Project: F12E Domestic Well Sampling

Date Sampled: 09/28/11

Date Received: 09/29/11

Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	0.025	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	0.0948	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	64.3	0.40	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Copper	< 0.010	0.010	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	< 0.070	0.070	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	29.7	0.20	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	< 0.0050	0.0050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	2.89	1.0	mg/l	1	09/30/11	10/03/11 JM	SW846 6010B ²	SW846 3010A ³
Selenium	< 0.050	0.050	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 0.030	0.030	mg/l	1	09/30/11	09/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	42.5	0.40	mg/l	1	09/30/11	10/04/11 JM	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1866

(2) Instrument QC Batch: MA1868

(3) Prep QC Batch: MP5904

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

PAGE 1 OF 1

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.accutest.com

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)														Matrix Codes											
Company Name EnCana Oil & Gas (USA) Inc		Project Name: F12E Domestic Well Sampling																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 FS-Field Blank EB-Equipment Blank RB-Rinse Blank TB-Trip Blank											
Street Address 2717 County Road 215, Suite 100 Parachute, CO 81635		Street City State		Billing Information (if different from Report to) Same as Reporting Information																									
Project Contact Dan Prokop		Project # F12E		Street Address																									
Phone # 970-285-2739 970-623-0995		Client Purchase Order #		City																									
Sampler(s) Name(s) Scotty Mann		Project Manager Dan Prokop		Attention:																									
Accutest Sample #		Field ID / Point of Collection		MEOH/DI Val #		Date	Time	Sampled by	Matrix	# of bottles	PCL	Zn Acetate	HNO3	H2O4	NONE	DI Water	MeOH	MEOH	ENCORE	RSK175CH4	V8260BTXM	AMN	BRO, CHL.F, NO3, NO2, SO4	pH, SCON, TDS, XCARBICALK	Sulfide	Dissolved Metals (6010) see below	LAB USE ONLY		
			LANG9WW-092811			9/28/11	8:00	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		01
			LANG8WW-092811			9/28/11	9:30	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		02
			LANG7WW-092811			9/28/11	10:30	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		03
			STAUT2WW-092811			9/28/11	12:15	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		04
			LANG-RH-WW-092811			9/28/11	13:30	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		05
			ONEL1WW-092811			9/28/11	14:15	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		06
			STAUT1WW-092811			9/28/11	15:00	SM	GW	13		1	1	11						X	X	X	X	X	X	X	X		07
Turnaround Time (Business days)						Data Deliverable Information														Comments / Special Instructions									
<input type="checkbox"/> Std. 16 Business Days <input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day Emergency <input type="checkbox"/> 2 Day Emergency <input type="checkbox"/> 1 Day Emergency <input type="checkbox"/> 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 checked="" type="checkbox"/> COMMBN <input type="checkbox"/> COMMBN+ <input type="checkbox"/> Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial BN = Results/CV/Narrative (+ = chromatograms)														<input type="checkbox"/> State Forms Required <input type="checkbox"/> Send Forms to State <input type="checkbox"/> Report by Fax <input checked="" type="checkbox"/> Report by PDF <input checked="" type="checkbox"/> EDD Format Did not field filter Dissolved Metals (6010) Lab Filter: As, Ba, Cd, Cr, Cu, Pb, Ag, Ca, Fe, K, Mg, Mn, Na, Se Report out Total Xylenes Send report via email to: daniel.prokop@encana.com Please CC: smann@ruleengineering.com									
Relinquished by Sampler:		Date Time:		Received By:		Requined By:														Date Time:		Received By:							
1		9/28/11 1:530		1		2																2							
Relinquished by Sampler:		Date Time:		Received By:		Requined By:														Date Time:		Received By:							
3				3		4																4							
Relinquished by:		Date Time:		Received By:		Custody Seal #														Preserved where applicable		On Ice Cooler Temp.							
5				5		Co																3.0							

D28124: Chain of Custody

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D28124

Client: ENCANA

Immediate Client Services Action Required: No

Date / Time Received: 9/29/2011 12:30:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: F12E

Airbill #'s: CO

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments



GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D28124
 Account: ENCACOP EnCana
 Project: F12E Domestic Well Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V494-MB	7V09350.D	1	09/30/11	BR	n/a	n/a	V7V494

The QC reported here applies to the following samples:

Method: SW846 8260B

D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
1330-20-7	Xylene (total)	ND	4.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	96% 67-131%
2037-26-5	Toluene-D8	98% 65-130%
460-00-4	4-Bromofluorobenzene	89% 65-130%

Blank Spike Summary

Page 1 of 1

Job Number: D28124
 Account: ENCACOP EnCana
 Project: F12E Domestic Well Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V494-BS	7V09351.D	1	09/30/11	BR	n/a	n/a	V7V494

The QC reported here applies to the following samples:

Method: SW846 8260B

D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	48.2	96	70-130
100-41-4	Ethylbenzene	50	48.8	98	70-130
1634-04-4	Methyl Tert Butyl Ether	50	38.8	78	60-156
108-88-3	Toluene	50	48.6	97	70-130
1330-20-7	Xylene (total)	150	147	98	56-138

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	103%	67-131%
2037-26-5	Toluene-D8	101%	65-130%
460-00-4	4-Bromofluorobenzene	99%	65-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D28124
 Account: ENCACOP EnCana
 Project: F12E Domestic Well Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D28144-2MS	7V09354.D	40	09/30/11	BR	n/a	n/a	V7V494
D28144-2MSD	7V09355.D	40	09/30/11	BR	n/a	n/a	V7V494
D28144-2	7V09353.D	20	09/30/11	BR	n/a	n/a	V7V494

The QC reported here applies to the following samples:

Method: SW846 8260B

D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

CAS No.	Compound	D28144-2 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	222	2000	2160	97	2160	97	0	61-133/30
100-41-4	Ethylbenzene	51.3	2000	1910	93	1990	97	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	2000	1510	76	1450	73	4	57-159/30
108-88-3	Toluene	ND	2000	1880	94	1920	96	2	70-130/30
1330-20-7	Xylene (total)	478	6000	6070	93	6320	97	4	56-138/30

CAS No.	Surrogate Recoveries	MS	MSD	D28144-2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%	100%	98%	67-131%
2037-26-5	Toluene-D8	101%	100%	102%	65-130%
460-00-4	4-Bromofluorobenzene	97%	97%	89%	65-130%



GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D28124
Account: ENCACOP EnCana
Project: F12E Domestic Well Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB166-MB	FB04916.D	1	10/04/11	CS	n/a	n/a	GFB166

The QC reported here applies to the following samples:

Method: RSK175 MOD

D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.00080	mg/l	

CAS No.	Surrogate Recoveries	Limits
74-98-6	Propane	87% 70-130%

Blank Spike Summary

Page 1 of 1

Job Number: D28124
Account: ENCACOP EnCana
Project: F12E Domestic Well Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB166-BS	FB04917.D	10	10/04/11	CS	n/a	n/a	GFB166

The QC reported here applies to the following samples:

Method: RSK175 MOD

D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
74-82-8	Methane	.5094	0.624	122	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
74-98-6	Propane	92%	70-130%

6.2.1

6

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D28124
 Account: ENCACOP EnCana
 Project: F12E Domestic Well Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D28124-1MS	FB04939.D	10	10/04/11	CS	n/a	n/a	GFB166
D28124-1MSD	FB04940.D	10	10/04/11	CS	n/a	n/a	GFB166
D28124-1	FB04924.D	1	10/04/11	CS	n/a	n/a	GFB166

The QC reported here applies to the following samples:

Method: RSK175 MOD

D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

CAS No.	Compound	D28124-1 mg/l	Spike Q	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	ND	0.5094	0.597	117	0.596	117	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D28124-1	Limits
74-98-6	Propane	89%	90%	90%	70-130%



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 BlanksLogin Number: D28124
Account: ENCACOP - EnCana
Project: F12E Domestic Well SamplingQC Batch ID: MP5904
Matrix Type: AQUEOUSMethods: SW846 6010B
Units: ug/l

Prep Date: 09/30/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9	5.1	<25
Barium	10	1.1	1.1	0.20	<10
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27	-0.20	<10
Calcium	400	9.6	15	6.6	<400
Chromium	10	.18	.79	0.10	<10
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8	3.6	<10
Iron	70	3.4	13	2.9	<70
Lead	50	1.6	2.1	2.6	<50
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	1.8	<200
Manganese	5.0	.053	.31	0.60	<5.0
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	57.1	<1000
Selenium	50	3.8	3.8	4.6	<50
Silicon	50	3.8	3.8		
Silver	30	.18	.31	0.0	<30
Sodium	400	110	110	70.9	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP5904: D28124-1F, D28124-2F, D28124-3F, D28124-4F, D28124-5F, D28124-6F, D28124-7F

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28124
Account: ENCACOP - EnCana
Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

7.1.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28124
 Account: ENCACOP - EnCana
 Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 09/30/11

Metal	D28102-1F Original MS		SpikeLot MPICPALL % Rec	QC Limits	
Aluminum					
Antimony					
Arsenic	10.8	1070	1000	105.9	75-125
Barium	29.0	2020	2000	99.6	75-125
Beryllium					
Boron					
Cadmium	0.0	539	500	107.8	75-125
Calcium	10100	34600	25000	98.0	75-125
Chromium	2.1	463	500	92.2	75-125
Cobalt					
Copper	8.3	561	500	110.5	75-125
Iron	44.8	4520	5000	89.5	75-125
Lead	0.0	900	1000	90.0	75-125
Lithium					
Magnesium	9820	33000	25000	92.7	75-125
Manganese	6.6	454	500	89.5	75-125
Molybdenum					
Nickel					
Phosphorus					
Potassium	7690	35700	25000	112.0	75-125
Selenium	7.4	991	1000	98.4	75-125
Silicon					
Silver	0.30	239	200	119.4	75-125
Sodium	2960000	3040000	25000	168.0(a)	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP5904: D28124-1F, D28124-2F, D28124-3F, D28124-4F, D28124-5F, D28124-6F, D28124-7F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28124
Account: ENCACOP - EnCana
Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

- (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.

7.1.2

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28124
 Account: ENCACOP - EnCana
 Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 09/30/11

Metal	D28102-1F Original MSD		Spikelet MPICPALL % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	10.8	1070	1000	105.9	0.0	20
Barium	29.0	2040	2000	100.6	1.0	20
Beryllium						
Boron						
Cadmium	0.0	542	500	108.4	0.6	20
Calcium	10100	34800	25000	98.8	0.6	20
Chromium	2.1	467	500	93.0	0.9	20
Cobalt						
Copper	8.3	564	500	111.1	0.5	20
Iron	44.8	4530	5000	89.7	0.2	20
Lead	0.0	904	1000	90.4	0.4	20
Lithium						
Magnesium	9820	33100	25000	93.1	0.3	20
Manganese	6.6	458	500	90.3	0.9	20
Molybdenum						
Nickel						
Phosphorus						
Potassium	7690	36000	25000	113.2	0.8	20
Selenium	7.4	999	1000	99.2	0.8	20
Silicon						
Silver	0.30	241	200	120.4	0.8	20
Sodium	2960000	3030000	25000	144.0(a)	0.4	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP5904: D28124-1F, D28124-2F, D28124-3F, D28124-4F, D28124-5F, D28124-6F, D28124-7F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28124
Account: ENCACOP - EnCana
Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(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.

7.1.2

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28124
 Account: ENCACOP - EnCana
 Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 09/30/11

Metal	BSP Result	Spikelot MPICALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1000	1000	100.0	80-120
Barium	1950	2000	97.5	80-120
Beryllium				
Boron				
Cadmium	491	500	98.2	80-120
Calcium	25000	25000	100.0	80-120
Chromium	479	500	95.8	80-120
Cobalt				
Copper	506	500	101.2	80-120
Iron	4580	5000	91.6	80-120
Lead	977	1000	97.7	80-120
Lithium				
Magnesium	24300	25000	97.2	80-120
Manganese	469	500	93.8	80-120
Molybdenum				
Nickel				
Phosphorus				
Potassium	26800	25000	107.2	80-120
Selenium	1070	1000	107.0	80-120
Silicon				
Silver	211	200	105.5	80-120
Sodium	26200	25000	104.8	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP5904: D28124-1F, D28124-2F, D28124-3F, D28124-4F, D28124-5F, D28124-6F, D28124-7F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28124
Account: ENCACOP - EnCana
Project: F12E Domestic Well Sampling

QC Batch ID: MP5904
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

7.1.3

7



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: D28124
 Account: ENCACOP - EnCana
 Project: F12E Domestic Well Sampling

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN11930	5.0	0.0	mg/l	100	97.0	97.0	90-110%
Alkalinity, Carbonate	GN11932	5.0	0.0	mg/l	100	97.0	97.0	80-120%
Alkalinity, Total as CaCO3	GN11926	5.0	0.0	mg/l	100	97.0	97.0	90-110%
Bromide	GP5616/GN11866	0.20	0.0	mg/l	20	19.7	98.5	90-110%
Chloride	GP5616/GN11866	0.50	0.0	mg/l	20	19.7	98.5	90-110%
Fluoride	GP5665/GN11954	0.20	0.0	mg/l	10	9.39	93.9	90-110%
Nitrogen, Ammonia	GP5628/GN11881	0.10	0.0	mg/l	20	21.0	105.0	90-110%
Nitrogen, Ammonia	GP5648/GN11907	0.10	0.0	mg/l	20	19.5	97.6	90-110%
Nitrogen, Nitrate	GP5616/GN11866	0.045	0.0	mg/l	4.52	4.44	98.3	90-110%
Nitrogen, Nitrite	GP5616/GN11866	0.061	0.0	mg/l	6.09	6.13	100.7	90-110%
Solids, Total Dissolved	GN11848	10	0.0	mg/l	400	405	101.3	90-110%
Specific Conductivity	GP5604/GN11846			umhos/cm	99.3	102	102.3	90-110%
Sulfate	GP5616/GN11866	0.50	0.0	mg/l	30	29.2	97.3	90-110%
Sulfide	GN11887	0.50	0.0	mg/l	3.02	3.0	99.3	60-120%
pH	GN11795			su	8.00	7.97	99.6	99.3-100.7%
pH	GN11795			su	8.00	7.97	99.6	99.3-100.7%

Associated Samples:

Batch GN11795: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GN11848: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GN11887: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GN11926: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GN11930: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GN11932: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GP5604: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GP5616: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7
 Batch GP5628: D28124-1, D28124-2, D28124-3, D28124-4
 Batch GP5648: D28124-5, D28124-6, D28124-7
 Batch GP5665: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRYLogin Number: D28124
Account: ENCACOP - EnCana
Project: F12E Domestic Well Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO ₃	GN11926	D28134-5	mg/l	147	146	0.1	0-20%
Nitrogen, Ammonia	GP5628/GN11881	D28124-4	mg/l	0.080	0.070	13.3	0-20%
Nitrogen, Ammonia	GP5648/GN11907	D28134-1	mg/l	0.0	0.0	0.0	0-20%
Solids, Total Dissolved	GN11848	D28042-10	mg/l	62.0	68.0	9.2	0-25%
Specific Conductivity	GP5604/GN11846	D28102-3	umhos/cm	11100	11100	0.4	0-20%

Associated Samples:

Batch GN11848: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GN11926: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GP5604: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GP5628: D28124-1, D28124-2, D28124-3, D28124-4

Batch GP5648: D28124-5, D28124-6, D28124-7

(*) Outside of QC limits

8.2

8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28124
 Account: ENCACOP - EnCana
 Project: F12E Domestic Well Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO ₃	GN11926	D28134-5	mg/l	147	100	242	94.9	80-120%
Bromide	GP5616/GN11866	D28049-3	mg/l	0.33	12.5	12.5	97.4	80-120%
Chloride	GP5616/GN11866	D28049-3	mg/l	120	50	166	92.0	80-120%
Fluoride	GP5665/GN11954	D28265-4	mg/l	0.18	2.5	2.4	88.8	80-120%
Nitrogen, Ammonia	GP5628/GN11881	D28124-4	mg/l	0.080	10	11.4	114.4	80-120%
Nitrogen, Ammonia	GP5648/GN11907	D28134-1	mg/l	0.0	10	10.4	103.9	80-120%
Nitrogen, Nitrate	GP5616/GN11866	D28049-3	mg/l	1.3	2.83	4.1	99.1	80-120%
Nitrogen, Nitrite	GP5616/GN11866	D28049-3	mg/l	0.26	1.52	1.7	94.6	80-120%
Sulfate	GP5616/GN11866	D28049-3	mg/l	241	50	284	86.0	80-120%
Sulfide	GN11887	D28124-1	mg/l	0.40	3.02	2.6	72.8	60-120%

Associated Samples:

Batch GN11887: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GN11926: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GP5616: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GP5628: D28124-1, D28124-2, D28124-3, D28124-4

Batch GP5648: D28124-5, D28124-6, D28124-7

Batch GP5665: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28124
 Account: ENCACOP - EnCana
 Project: F12E Domestic Well Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP5616/GN11866	D28049-3	mg/l	0.33	12.5	12.5	0.0	20%
Chloride	GP5616/GN11866	D28049-3	mg/l	120	50	166	0.0	20%
Fluoride	GP5665/GN11954	D28265-4	mg/l	0.18	2.5	2.4	0.0	20%
Nitrogen, Ammonia	GP5628/GN11881	D28124-4	mg/l	0.080	10	11.4	0.8	
Nitrogen, Ammonia	GP5648/GN11907	D28134-1	mg/l	0.0	10	9.95	4.3	
Nitrogen, Nitrate	GP5616/GN11866	D28049-3	mg/l	1.3	2.83	4.0	2.5	20%
Nitrogen, Nitrite	GP5616/GN11866	D28049-3	mg/l	0.26	1.52	1.7	0.0	20%
Sulfate	GP5616/GN11866	D28049-3	mg/l	241	50	283	0.4	20%

Associated Samples:

Batch GN11926: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GP5616: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

Batch GP5628: D28124-1, D28124-2, D28124-3, D28124-4

Batch GP5648: D28124-5, D28124-6, D28124-7

Batch GP5665: D28124-1, D28124-2, D28124-3, D28124-4, D28124-5, D28124-6, D28124-7

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

8.4

8