

September 1, 2011

Mr. Charlie Jensen  
Encana Oil & Gas (USA) Inc.  
2717 County Rd. 215, Suite 100  
Parachute, CO 81635

**Re: West Divide Seep Area Second Quarter Monitoring Status Report for June 2011**

Dear Mr. Jensen:

Olsson Associates, Inc. (Olsson) has completed the second quarter of 2011 groundwater and surface-water monitoring for Encana Oil & Gas (USA) Inc. (Encana) at the West Divide Creek Gas Seep study area (**Figure 1**). This report summarizes the status of the remediation system and the analytical results of surface-water and groundwater monitoring that was conducted in June 2011 and data collected since 2004 to monitor the impacts of the dissolved phase hydrocarbons comprised primarily of methane and benzene in the study area.

***Groundwater and Surface-Water Monitoring***

Olsson collected groundwater samples from 22 out of the 24 monitoring wells and the Eicher domestic water well during the second quarter on June 20 and June 21, 2011 (**Figure 1**). Monitoring wells MW-19 and monitoring well MW-13 were previously plugged and abandoned. Three duplicate samples were also collected during this monitoring period. Prior to sample collection, static water levels were measured in the monitoring wells to within 0.01 feet (ft) from the top of the PVC casing using an electronic water level meter. The wells were purged of static water using dedicated disposable bailers. Field parameters were obtained at the completion of purging activities and included temperature, specific conductance, dissolved oxygen, pH, total dissolved solids and turbidity using a Quanta and YSI water quality meter (**Appendix A**). Groundwater samples were collected following field parameter measurements.

Olsson collected eight (8) surface-water samples (DCS-1 through DCS-8) on June 21, 2011 from West Divide Creek extending from the former seep area to the northern Langedger property line (**Figure 1**). Field parameters including temperature, specific conductance, dissolved oxygen, pH, total dissolved solids, and turbidity were measured for each sample using a Quanta and YSI water quality meters (**Appendix A**).

Water-quality samples collected during this period were analyzed by Accutest Labs (AL), Wheat Ridge, CO for the following analyses:

- BTEX using EPA method 8021B;
- Total dissolved methane using method RSK 175M;
- Chloride (Cl) using method 300E; and
- Sodium (Na) using method SW6020.

Isotopic methane was analyzed by Isotech Laboratories, Inc of Champaign, IL (Isotech). Stable isotopes of carbon and hydrogen in methane, stable isotopes of carbon in ethane and propane and the gas composition were determined for total dissolved methane gas concentrations at monitoring wells with a history of total dissolved methane greater than 1.0 mg/L (**Appendix B and Appendix C**).

Groundwater and surface-water samples were placed in the appropriate sample containers provided by AL and Isotech, labeled, stored on ice, and delivered under chain-of-custody procedures to AL.

### ***Site Hydrogeology and Hydrology***

For this monitoring period, groundwater was encountered from near surface (in the seep area) to 22.91 feet below ground surface (ft-bgs) in MW-21. The groundwater flow direction continues to be from the seep area towards the north, consistent with the flow direction of the creek (**Figure 2**). The groundwater gradient for this period of monitoring was 0.021 feet/foot (ft/ft) (March 2011 - .021 ft/ft). The flow in the creek was typical for this monitoring period and low compared to the spring flows.

### ***Groundwater Monitoring Results***

A summary of laboratory analytical groundwater results for benzene, toluene, ethylbenzene, total xylenes (BTEX), and total dissolved methane for the second quarter 2011 is presented in **Table 1**. The extent of benzene concentrations for this monitoring period is shown in **Figure 3**. The distribution of total dissolved methane concentrations are shown in **Figure 4**. The second quarter 2011 BTEX and total dissolved methane concentrations are shown in **Figure 5**. The groundwater field parameters are presented in **Appendix A**. A summary of historical hydrocarbon analyses results for groundwater data collected since 2004 are contained in **Appendix B** and historic surface water sample results are presented in **Appendix C**. The QA/QC data are contained in **Appendix D**. The thermogenic methane data for this monitoring period are summarized in **Appendix E**. Graphs of chemical concentrations for selected wells are in **Appendix F**. The laboratory reports for June 2011 are in **Appendix G**. This report including all of the laboratory reports is enclosed on a disk in the Adobe Acrobat format.

For this monitoring period confirmed laboratory results are summarized as follows:

- Benzene was detected above the state standard of 5.0 µg/L in samples collected from MW-2 (86.6 µg/L) and MW-4 (19.3 µg/L). Benzene was not detected above the state standard in any of the remaining monitoring wells;
- Toluene was not detected in any of the monitoring wells above the lower laboratory reporting limit of 2.0 µg/L. The state standard for toluene is 1,000 µg/L;
- Ethylbenzene was not detected in any of the monitoring wells above the lower laboratory reporting limit of 2.0 µg/L. The state standard for ethylbenzene is 680 µg/L; and
- Total xylenes were detected in MW-2 and MW-4 at concentrations of 30.2 µg/L and 8.5 µg/L, respectively. Both of these concentrations are well below the state standard of 10,000 µg/L for total xylenes.

### ***Surface-Water Monitoring Results***

The surface-water field parameters were measured using a Hach Quanta meter. The readings generally appeared consistent with previous quarterly data. Groundwater pH readings,

measured with a downhole YSI meter, ranged from 7.44 to 8.64 standard pH units, which are consistent with the historic data for both surface and groundwater.

**Table 2** contains the surface-water hydrocarbon results for June 2011. Laboratory results for this monitoring period indicate that BTEX compounds were not detected above the lower laboratory reporting limit in any of the Divide Creek surface-water samples (**Table 2**). The results to date continue to show that BTEX concentrations have not been detected in the creek since April of 2005 (**Appendix C**).

### ***Methane Results for Groundwater and Surface Water***

The AL laboratory results for methane are reported as total dissolved methane. There is no state standard for total dissolved methane in groundwater or surface water. The AL laboratory results report total dissolved methane which includes both biogenic (methane gas generated by biogenic reduction of organic matter) and thermogenic methane (methane gas generated by thermal reduction of deeply buried organic matter). Total dissolved methane above the laboratory reporting limit or the lower method detection level of 0.0008 mg/L was detected in groundwater samples collected from 13 monitoring wells in the study area. Total dissolved methane above a concentration of 1.0 mg/L continues to be found in monitoring wells MW-2, MW-4, MW-9, and MW-14. The laboratory reported a dissolved methane concentration of 0.924 mg/l in the MW-17 groundwater sample (**Table 1 and Figure 4**). Total dissolved methane concentrations were detected above the lower laboratory reporting limit of 0.0008 mg/L, but at concentrations that were well below 1.0 mg/L in all of the Divide Creek sample locations (**Table 2**).

Isotopic samples were collected and analyzed from monitoring wells MW-2, MW-4, MW-9, MW-14 and MW-17 during this monitoring period. The results for these locations are contained in **Appendix E**. All of these estimated thermogenic concentrations are less than the initial concentrations, but have remained stable at these estimated concentrations since 2007 (**Appendix E**).

### ***Divide Creek Seep Remediation Status***

The air sparge remediation system was operated during this quarter with minimum downtime. Monitoring has continuously shown that the air sparge remediation system has successfully contained migration of the hydrocarbon plume with the treatment time of 8 hr/day. The treatment time was reduced to 8 hr/day in April 2010 and the data continues to indicate the hydrocarbon concentrations are below the lower laboratory reporting limits within and downgradient of the area of the treatment wells.

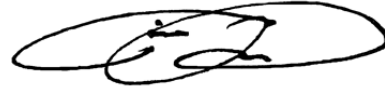
Benzene concentrations greater than the state standard and total dissolved methane concentrations greater than 1.0 mg/L in groundwater are primarily located within 250 feet of the seep and upgradient of the treatment system. Total dissolved methane concentrations have been significantly reduced from the initial concentrations downgradient of the remediation system (**Appendix B**). Concentrations of benzene in the area of treatment influence continue to show reduced concentrations to below the lower laboratory reporting limit at MW-1 (slightly upgradient of the treatment wells) and at MW-8 (downgradient of the treatment wells).

Olsson appreciates the opportunity to provide services to Encana Oil & Gas (USA) Inc. If you have any questions or concerns regarding this information, please contact me at (303) 237-2072, or Tim at (970) 263-7800.

Sincerely,



James W. Hix, P.G.  
Senior Geologist



Timothy Dobransky  
Project Scientist

cc: Linda Spry-O'Rourke  
Lisa Bracken  
Steve Thompson  
Pepi Langegger  
Kathy Friesen

Attachments

# **TABLES**

**Table 1**

Summary of June 2011 Groundwater Analytical Results and Groundwater Elevations  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	Groundwater Elevation (ft-msl)
Colorado GWQSs (ug/L)		5	1000	680	10000	None	None	
MW-01	20-Jun-11	<0.2	<1	<1	<2	<0.0008		5953.57
MW-02	20-Jun-11	<b>86.6</b>	<1	<1	30.2	8.13	6.0	5954.83
MW-04	20-Jun-11	<b>19.3</b>	<1	<1	8.5	7.55	5.1	5956.46
MW-06	20-Jun-11	<0.2	<1	<1	<2	0.0063		5953.30
MW-07	20-Jun-11	<0.2	<1	<1	<2	<0.0008		5952.62
MW-08	20-Jun-11	<0.2	<1	<1	<2	0.0031		5950.91
MW-09	21-Jun-11	1.3	<1	<1	<2	8.53	5.4	5960.82
MW-11	21-Jun-11	<0.2	<1	<1	<2	0.265		5965.48
MW-12	21-Jun-11	<0.2	<1	<1	<2	0.0637		5962.39
MW-12X	21-Jun-11	<0.2	<1	<1	<2	0.0773		5962.39
MW-13	20-Jun-11							ABANDONED
MW-14	21-Jun-11	<0.2	<1	<1	<2	3.09	1.3	5960.32
MW-15	21-Jun-11	<0.2	<1	<1	<2	<0.066		OVERFILLED
MW-16	20-Jun-11	<0.2	<1	<1	<2	<0.066		5955.33
MW-17	20-Jun-11	<0.2	<1	<1	<2	<0.0008	0.0	5952.67
MW-18	20-Jun-11	0.22 J	<1	<1	<2	0.395		5949.21
MW-19	20-Jun-11							ABANDONED
MW-20	20-Jun-11	<0.2	<1	<1	<2	<0.0008		5946.29
MW-21	20-Jun-11	<0.2	<1	<1	<2	<0.0008		5946.54
MW-22	20-Jun-11	<0.2	<1	<1	<2	<0.0008		5947.79
MW-23	20-Jun-11	<0.2	<1	<1	<2	<0.066		5950.38
MW-24	21-Jun-11	<0.2	<1	<1	<2	<0.066		5949.65
MW-25	20-Jun-11	<0.2	<1	<1	<2	<0.066		5969.12
MW-26	20-Jun-11	<0.2	<1	<1	<2	0.318		5953.95
MW-26X	20-Jun-11	<0.2	<1	<1	<2	0.318		5953.95
MW-27	20-Jun-11	<0.2	<1	<1	<2	<0.0008		5950.38
EICH2	20-Jun-11	<0.2	<1	<1	<2	<0.0008		NM

**Bold** - exceeds Colorado Groundwater Quality Standards (GWQS)

D - Duplicate sample

ft-msl - feet above mean sea level

mg/L - milligrams/Liter

ug/L - micrograms/Liter

NM - Not measured

< - Not detected above indicated reporting level

Blank cell - not analyzed/not collected

BTEX analyzed by EPA Method 8021

Total Dissolved Methane analyzed by EPA Method RSK175MOD

**Table 2**

Summary of Surface-Water Analytical Results for June 2011  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado GWQSS (ug/L)		5	1000	680	10,000	None	None
DCS-1	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-2	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-3	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-4	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-5	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-6	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-7	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA
DCS-8	21-Jun-11	<0.2	<1	<1	<2	<0.066	NA

**200 - Bold** exceeds Colorado Groundwater Quality Standards (GWQS)

NA - Not Analyzed

D - Duplicate Sample

mg/L - milligrams/Liter

ug/L - micrograms/liter

< - Not detected above indicated reporting level

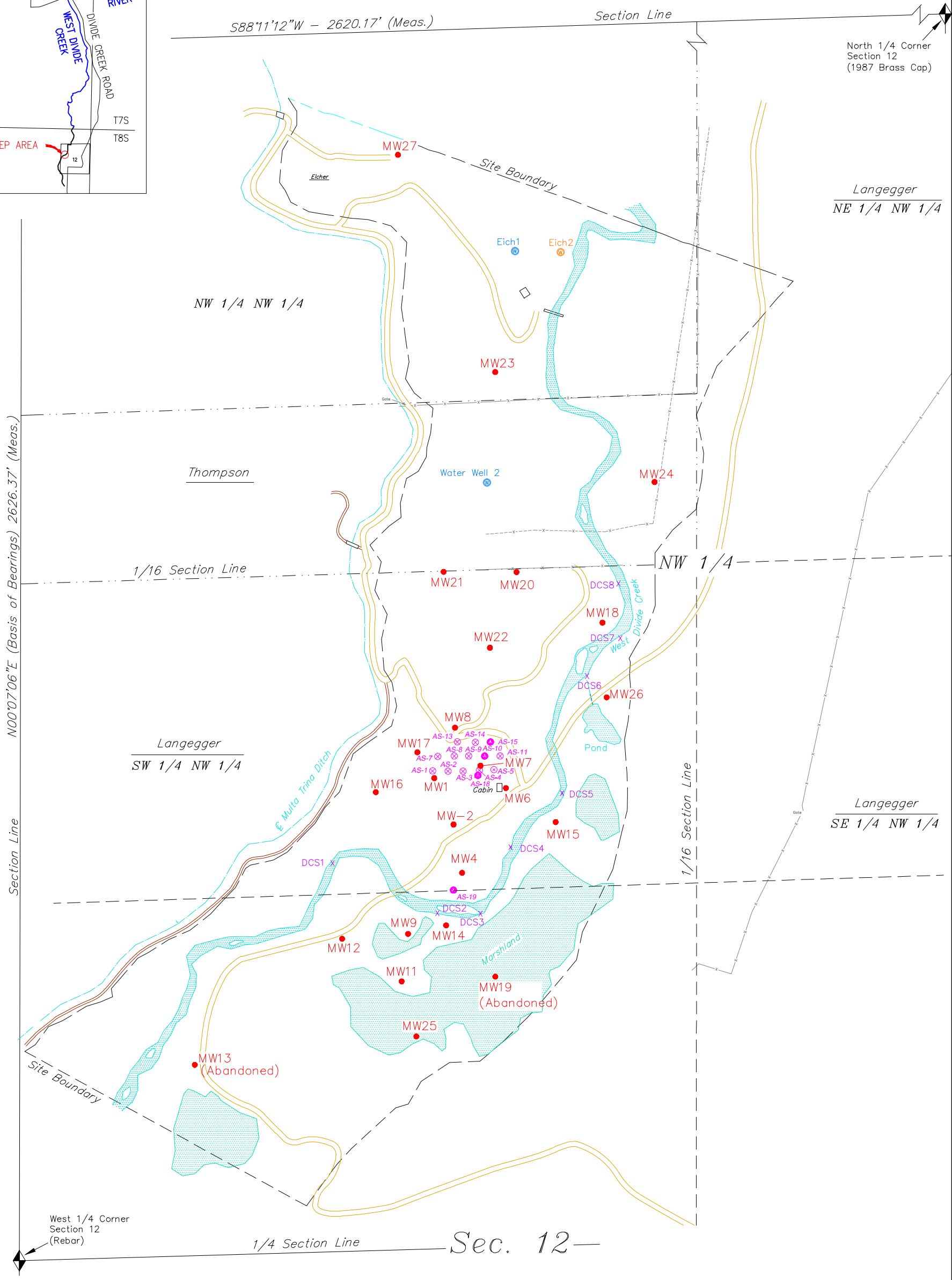
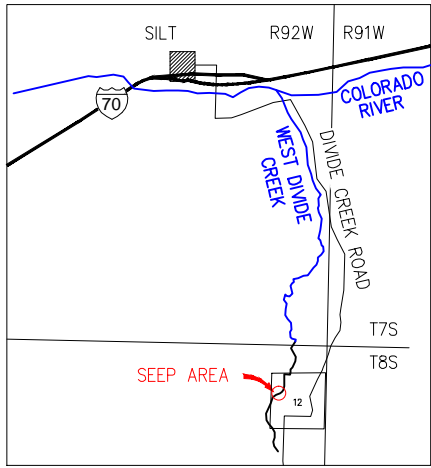
Blank cell - not analyzed/not collected

BTEX analyzed by EPA Method 8021

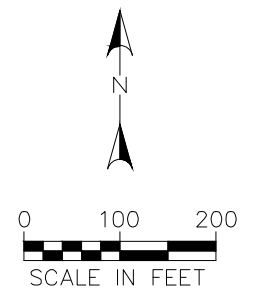
Total Dissolved Methane analyzed by EPA Method RSK175M

# FIGURES



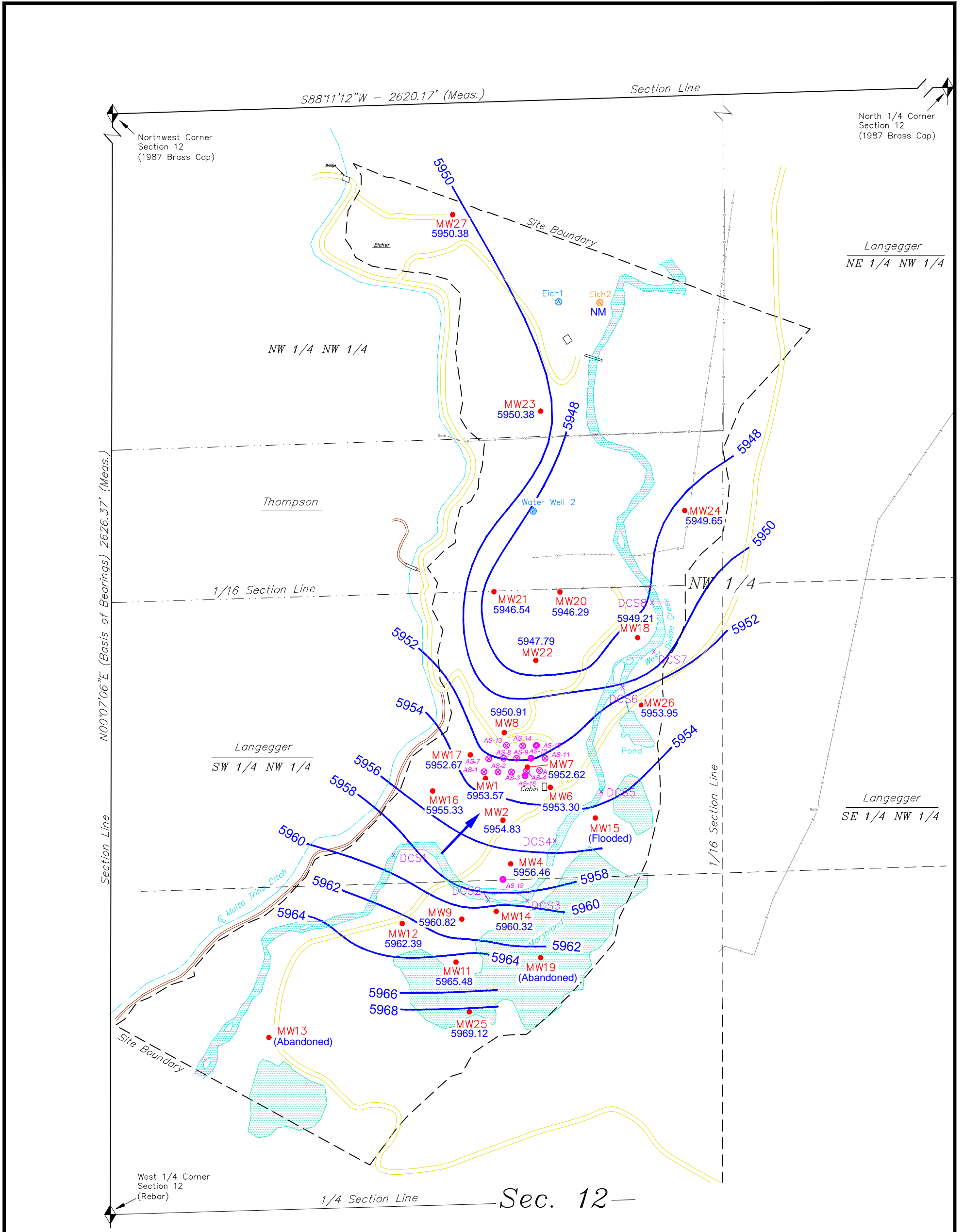


- LEGEND**
- = SECTION CORNERS FOUND
  - = TRAIL
  - = ROAD
  - = FENCE
  - = OLD FENCE
  - = PROPERTY LINE
  - = DRAINAGE
  - = MONITORING WELL LOCATION
  - = AIR SPARGE WELL LOCATION
  - = NESTED AIR SPARGE WELL LOCATION
  - = DIVIDE CREEK SAMPLE LOCATION



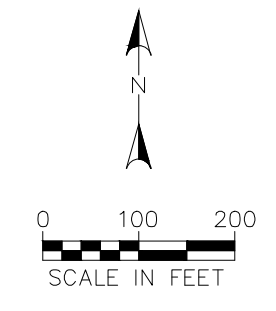
PROJECT NO: 008-2067	<b>SITE LOCATION MAP</b> <b>WEST DIVIDE CREEK SEEP AREA</b> <b>GARFIELD COUNTY, COLORADO</b>		4690 Table Mountain Drive Suite 200 Golden, CO 80403 TEL 303.237.2072 FAX 303.237.2659	FIGURE
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DATE: 08.29.11				

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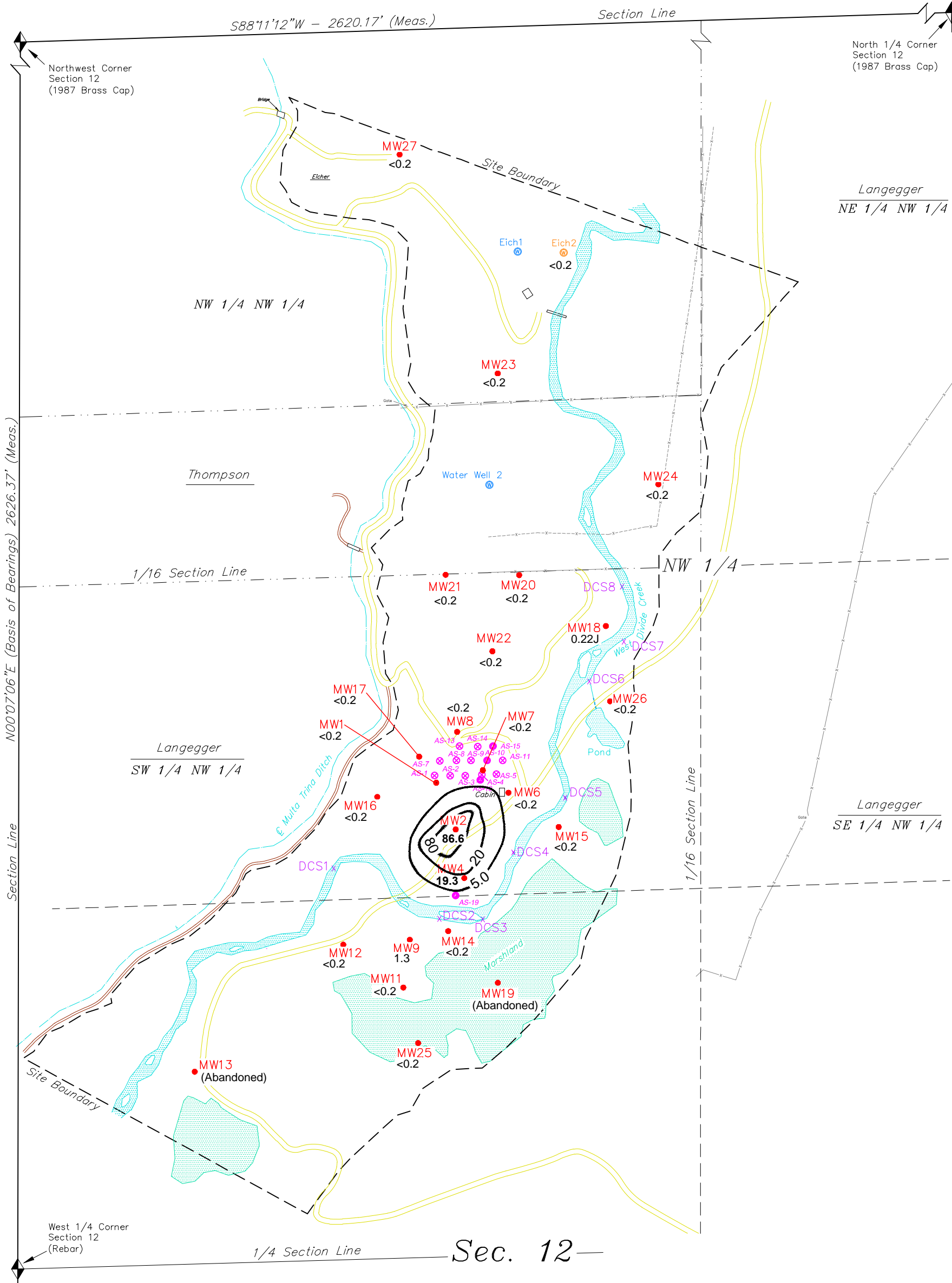
- LEGEND**
- = SECTION CORNERS FOUND
  - = TRAIL
  - = ROAD
  - = FENCE
  - = OLD FENCE
  - = DRAINAGE

- = DIVIDE CREEK SAMPLE
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION
- = GROUNDWATER ELEVATION CONTOUR (FEET)
- = GROUNDWATER ELEVATION (FEET)
- = APPROXIMATE GROUNDWATER FLOW DIRECTION
- = NOT MEASURED



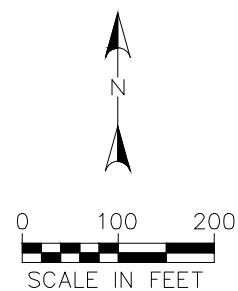
PROJECT NO: 008-2067	GROUNDWATER ELEVATION MAP - JUNE 2011 WEST DIVIDE CREEK SEEP AREA GARFIELD COUNTY, COLORADO		4690 Table Mountain Drive Suite 200 Golden, CO 80403 TEL 303.237.2072 FAX 303.237.2659	FIGURE 2
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**LEGEND**

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = DRAINAGE
- = 1.0 = BENZENE CONCENTRATION CONTOUR IN µg/L
- = 6.3 = BENZENE CONCENTRATION IN µg/L
- = >5 µg = EXCEEDS COLORADO GROUNDWATER QUALITY STANDARDS (GWQS)
- = DIVIDE CREEK SAMPLE LOCATION
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION



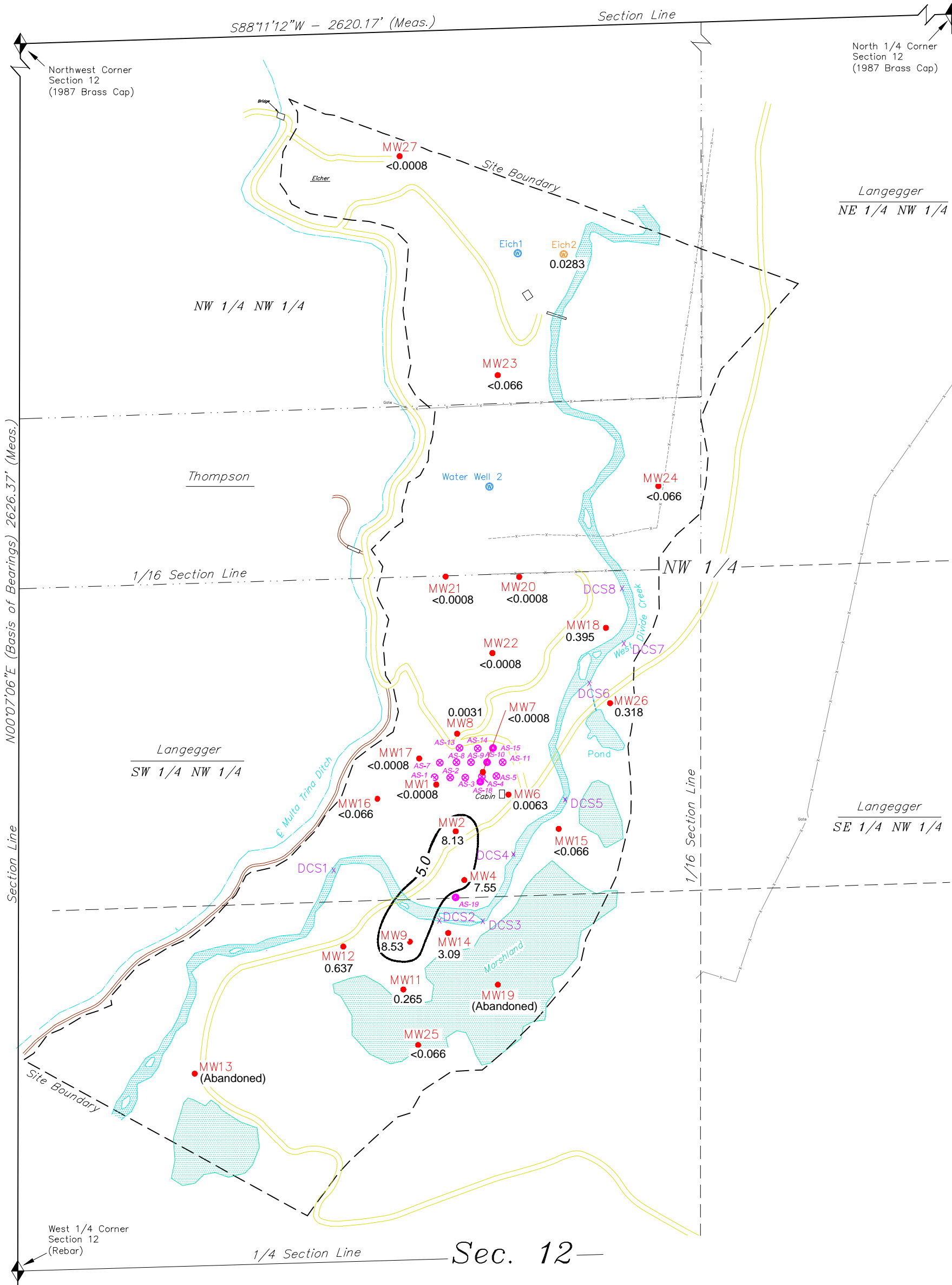
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 DATE: 08.29.11

**BENZENE CONCENTRATIONS - JUNE 2011  
 WEST DIVIDE CREEK SEEP AREA  
 GARFIELD COUNTY, COLORADO**



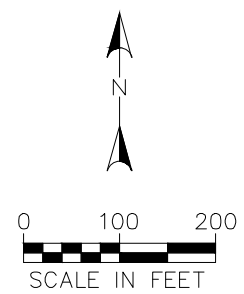
4690 Table Mountain Drive  
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 Golden, CO 80403  
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 FAX 303.237.2659

**FIGURE**  
 3



**LEGEND**

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = DRAINAGE
- = THERMOGENIC & BIOGENIC METHANE CONCENTRATION CONTOUR IN MILLIGRAMS PER LITER (mg/L)
- = THERMOGENIC & BIOGENIC METHANE CONCENTRATION IN mg/L
- = DIVIDE CREEK SAMPLE
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION



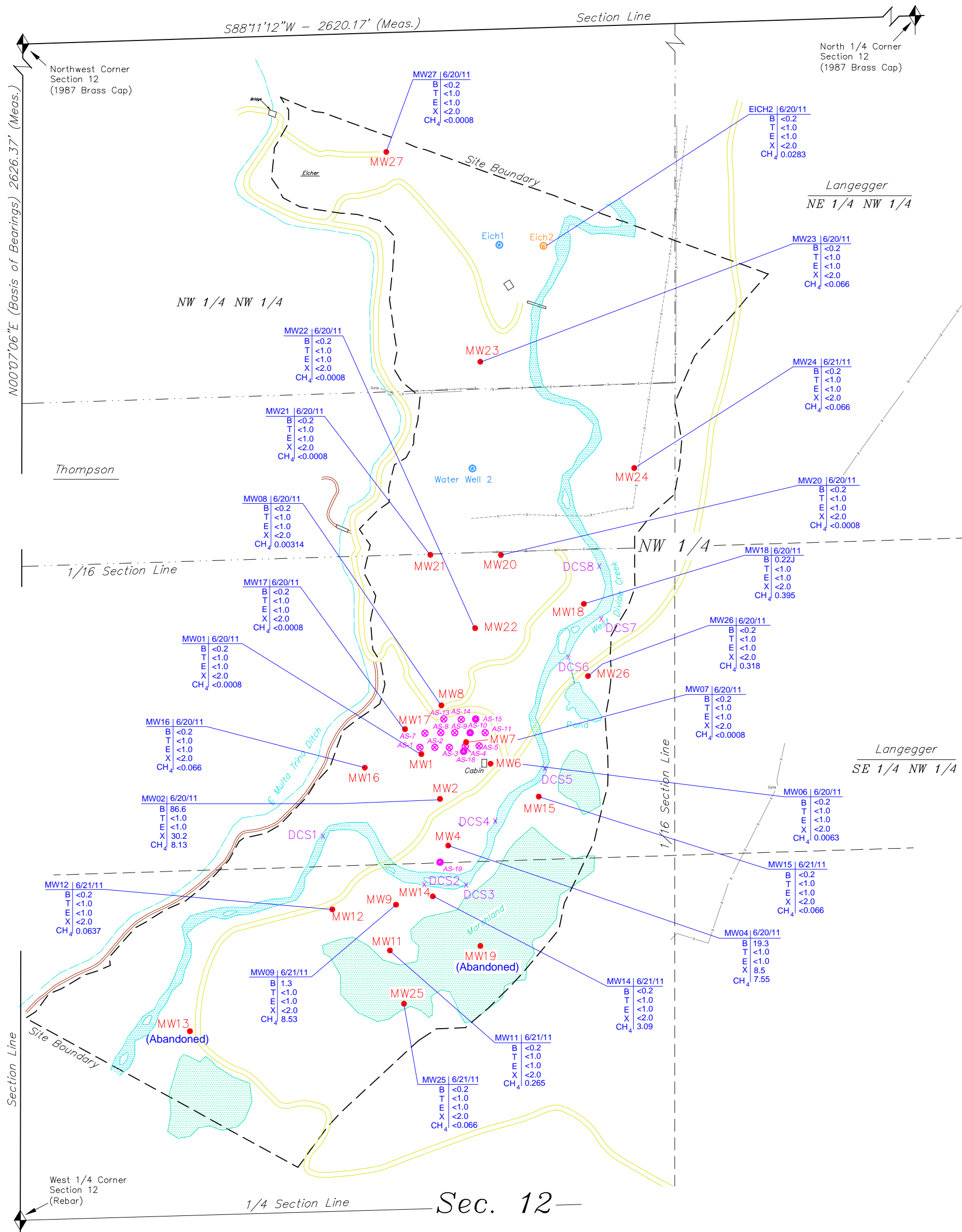
PROJECT NO:	008-2067
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DATE:	08.29.11

**DISSOLVED METHANE CONCENTRATIONS - JUNE 2011  
WEST DIVIDE CREEK SEEP AREA  
GARFIELD COUNTY, COLORADO**



4690 Table Mountain Drive  
Suite 200  
Golden, CO 80403  
TEL 303.237.2072  
FAX 303.237.2659

<b>FIGURE</b>
4



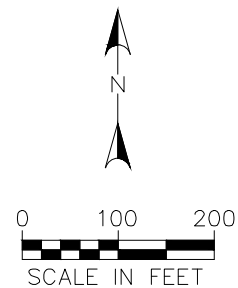
**LEGEND**

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = DRAINAGE

- = DIVIDE CREEK SAMPLE LOCATION
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION

**CHEMICAL DATA**

- B** = BENZENE (µg/l)
  - T** = TOLUENE (µg/l)
  - E** = ETHYLBENZENE (µg/l)
  - X** = XYLENES (µg/l)
  - CH<sub>4</sub>** = TOTAL METHANE (mg/L)
- (mg/L) = milligrams per liter  
 (µg/l) = micrograms per liter



PROJECT NO:	008-2067
DRAWN BY:	SDS
DATE:	08.29.11

**BENZENE AND METHANE CONCENTRATIONS - JUNE 2011**  
**WEST DIVIDE CREEK SEEP AREA**  
**GARFIELD COUNTY, COLORADO**



4690 Table Mountain Drive  
 Suite 200  
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<b>FIGURE</b>
5

# **APPENDIX A**

**Field Data  
included as .pdf file on CD in back**

**Appendix A**  
 Field Data for June 2011  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Date	SampleName	Temp_Field	SpCond_Field	DO_Field	pH_Field	TDS_Field	DO_Percent	Turbidity_Field	DTW	Sample Description	Sampler	SampleSource
20-Jun-11	EICH2	11.77	1.437	2.58	7.63	0.9	29.1	90.2	-88.8	Domestic well; WQ: clear, no odor, no eff., no sed.	JS	Well
20-Jun-11	MW23	12.51	1.52	1.83	7.90	1.0	41.0	128	11.08	Divide Creek monitoring well #23; WQ: clear water, slight sulfur odor	DS	Well
20-Jun-11	MW27	10.85	0.936	2.18	7.93	0.6	25.8	35.3	3.68	Divide Creek monitoring well #27; WQ: clear, no odor, no eff., no sed.	JS	Well
21-Jun-11	DCS1	13.7	0.432	7.01	8.59	0.3	80.2	173	-88.8	Divide Creek monitoring station 1; WQ: clear, no odor, no eff., no sed.	DS	Stream
21-Jun-11	DCS2	13.30	0.427	8.40	8.64	0.3	95.9	89.4	-88.8	Divide Creek monitoring station 2; WQ: no diverse observations	SH	Stream
21-Jun-11	DCS3	13.24	0.430	7.99	8.56	0.3	91.4	85	-88.8	Divide Creek monitoring station 3; WQ: clear water, no odor	DS	Stream
21-Jun-11	DCS4	12.97	0.434	8.12	8.57	0.3	92.1	80.6	-88.8	Divide Creek monitoring station 4; WQ: clear water, no odor	DS	Stream
21-Jun-11	DCS5	12.30	0.440	8.34	8.53	0.3	93.1	75.2	-88.8	Divide Creek monitoring station 5; WQ: clear water, no odor	DS	Stream
21-Jun-11	DCS6	11.90	0.439	8.23	8.52	0.3	65.2	78.1	-88.8	Divide Creek monitoring station 6; WQ: clear water, no odor	DS	Stream
21-Jun-11	DCS7	11.85	0.423	6.21	8.56	0.3	68.4	74.3	-88.8	Divide Creek monitoring station 7; WQ: clear water, no odor	DS	Stream
21-Jun-11	DCS8	11.41	0.438	8.46	8.50	0.3	92.8	96.2	-88.8	Divide Creek monitoring station 8; WQ: clear water, no odor	DS	Stream
20-Jun-11	MW1	11.00	2.690	0.39	7.52	1.7	16.4	1579.0	3.01	Divide Creek monitoring well #1: clear, no odor, no eff., no sed.	JS	Well
21-Jun-11	MW11	7.38	0.644	1.60	7.72	0.4	28.2	124	3.97	Divide Creek monitoring well #11: clear, no odor, no eff., no sed.	SH	Well
21-Jun-11	MW12	9.84	1.000	0.43	7.45	0.6	21.9	60.3	1.57	Divide Creek monitoring well #12: clear, no odor, no eff., no sed.	SH	Well
21-Jun-11	MW12X	9.84	1.000	0.43	7.45	0.6	21.9	60.3	1.57	Duplicate	SH	Well
21-Jun-11	MW14	8.26	0.787	0.57	7.45	0.5	26.7	87.4	4.54	Divide Creek monitoring well #14: dark black, no odor, no sheen, no eff.	SH	Well
20-Jun-11	MW17	12.01	1.840	0.38	8.06	1.2	28.1	2000.0	2.18	Divide Creek monitoring well #17: clear water, no odor	DS	Well
20-Jun-11	MW18	9.01	0.757	1.47	7.54	0.5	15.4	25	3.30	Divide Creek monitoring well #18; WQ: clear, no odor, no eff., no sed.	JS	Well
20-Jun-11	MW2	10.9	0.862	0.41	7.81	0.6	15.2	93.0	3.43	Divide Creek monitoring well #2: clear, some sed., no eff., no odor	JS	Well
20-Jun-11	MW20	9.88	1.038	1.59	7.42	0.7	16.5	264	5.67	Divide Creek monitoring well #20; WQ: clear, no odor, no eff., no sed.	JS	Well
20-Jun-11	MW21	11.14	1.420	0.48	7.69	0.9	27.3	190	20.73	Divide Creek monitoring well #21: clear, no odor, no eff., no sed.	SH	Well
20-Jun-11	MW22	9.10	1.277	2.45	7.44	0.8	25.6	257	7.24	Divide Creek monitoring well #22; WQ: brown, no odor	JS	Well
21-Jun-11	MW24	11.69	0.721	2.02	7.69	0.5	37.4	9.7	5.30	Divide Creek monitoring well #24; WQ: clear, no odor, no sheen, no effervescence.	DS	Well
20-Jun-11	MW26	12.51	0.716	0.61	7.64	0.5	23.6	762	0.00	Divide Creek monitoring well #26;	JS	Well
20-Jun-11	MW26X	12.51	0.716	0.61	7.64	0.5	23.6	762	0.00	Duplicate	JS	Well
20-Jun-11	MW4	13.1	1.1	0.25	7.7	0.7	20.4	316.0	7.27	Divide Creek monitoring well #4; clear water, slight sulfuric odor	DS	Well
20-Jun-11	MW6	10.42	1.269	0.38	7.33	0.8	15.2	228.0	5.90	Divide Creek monitoring well #6; WQ: no odor, some sed., turbid, no eff.	JS	Well
20-Jun-11	MW7	10.42	1.570	1.95	7.54	1.0	24.7	5999.0	4.30	Divide Creek monitoring well #7; WQ: brown, heavy sediment, no odor, no eff.	JS	Well
20-Jun-11	MW8	13.55	1.321	0.51	7.69	0.9	18.7	323.0	5.55	Divide Creek monitoring well #8; WQ: clear, no odor	DS	Well
21-Jun-11	MW25	7.49	0.647	0.47	7.89	0.4	25.0	264.0	2.67	Divide Creek monitoring well #25; WQ: clear, slight odor		
21-Jun-11	MW9	10.61	0.813	0.40	7.63	0.5	26.7	87.4	4.20	Divide Creek monitoring well #9; WQ: lt. gray, small black flakes, sulfur odor	SH	Well

## **APPENDIX B**

**Historical Groundwater Results  
included as .pdf file on CD in back**



## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-01	09-Jul-04	220	NA	NA	NA	11			
MW-01	22-Jul-04	470	NA	NA	NA	9.9		4.09	5954.70
MW-01	03-Aug-04	460	310	10	96	6		9.54	5949.25
MW-01	19-Aug-04	NS	NS	NS	NS	NS		9.96	5948.83
MW-01	15-Sep-04	330	130	8.1	53	8.6	6.9	10.32	5948.47
MW-01	13-Oct-04	190	31	5.3	18.3	7.4		9.87	5948.92
MW-01	09-Nov-04	88	<2	3.1	<2	5.3		9.70	5949.09
MW-01	14-Dec-04	35	<2	<2	<2	5.9		9.23	5949.56
MW-01	12-Jan-05	10	<2	<2	<2	4.7	3.5	8.63	5950.16
MW-01	09-Feb-05	14	<2	<2	<2	2.9	2.3	8.81	5949.98
MW-01	08-Mar-05	4.8	<2	<2	<2	2.6		8.96	5949.83
MW-01	12-Apr-05	<1	<2	<2	<2	0.38		5.73	5953.06
MW-01	10-May-05	<1	<2	<2	<2	0.38	0.3	5.19	5953.60
MW-01	08-Jun-05	<1	<2	<2	<2	<0.0008		3.03	5955.76
MW-01	12-Jul-05	<1	<2	<2	<2	<0.0008		4.13	5954.66
MW-01	09-Aug-05	<1	<2	<2	<2	0.11		5.36	5953.43
MW-01	12-Sep-05	<1	<2	<2	<2	0.068	0.0	6.18	5952.61
MW-01	11-Oct-05	<1	<2	<2	<2	0.17			
MW-01	08-Nov-05	<1	<2	<2	<2	0.12		6.47	5952.32
MW-01	08-Dec-05	<1	<2	<2	<2	0.086		6.72	5952.07
MW-01	11-Jan-06	<1	<2	<2	<2	0.055	0.0	6.31	5952.48
MW-01	15-Mar-06	<1	<2	<2	<2	0.0086		6.01	5952.78
MW-01	12-Apr-06	<1	<2	<2	<2	<0.0008		5.42	5953.37
MW-01	09-May-06	<1	<2	<2	<2	<0.0008		4.45	5954.34
MW-01	12-Jun-06	<1	<2	<2	<2	0.011			
MW-01	07-Sep-06	<1	<5	<2	<2	0.15		7.60	5951.19
MW-01	05-Dec-06	<1	<2	<2	<2	0.00085		6.68	5952.11
MW-01	13-Mar-07	<1	<2	<2	<2	0.0023		6.10	5952.69
MW-01	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-01	11-Sep-07	<0.5	<0.5	<0.5	<0.5	0.000144		7.95	5950.84
MW-01	11-Sep-07	<1	<2	<2	<2	0.001		7.95	5950.84
MW-01	18-Dec-07	<1	<2	<2	<2	0.0022		6.83	5951.96
MW-01	04-Mar-08	<1	<2	<2	<2	<0.0008		5.85	5952.94
MW-01	17-Jun-08	<1	<2	<2	<2	<0.0008		3.33	5955.46
MW-01	30-Sep-08	<1	4.1	<2	<2	<0.0008		7.50	5951.29
MW-01	09-Dec-08	<1	<2	<2	<2	0.18		6.65	5952.14
MW-01	17-Mar-09	<1	<2	<2	<2	0.0065		6.32	5952.47
MW-01	15-Jun-09	<1	<2	<2	<2	<0.0008		4.10	5954.69
MW-01	16-Sep-09	<1	<2	<2	<2	0.0022		7.24	5951.55
MW-01	15-Dec-09	<1	<2	<2	<2	0.019		6.60	5952.19
MW-01	29-Mar-10	<1	<2	<2	<2	<0.0008		5.66	5953.13
MW-01	28-Jun-10	<1	2.5	<2	<2	<0.0008		4.73	5954.06
MW-01 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-01	27-Sep-10	<1	<2	<2	<2	0.0200		6.59	5952.20
MW-01	14-Dec-10	<1	<2	<2	<2	0.00276		5.17	5953.62
MW-01	29-Mar-11	<1	<2	<2	<2	<0.0008		5.22	5953.57
MW-01	21-Jun-11	<1	<2	<2	<2	<0.0008		3.01	5955.78
MW-02	09-Jul-04	240	NA	NA	NA	12			
MW-02	22-Jul-04	240	NA	NA	NA	12		5.60	5953.68
MW-02	03-Aug-04	420	400	<2	96	4.4		9.10	5950.18
MW-02	19-Aug-04	NS	NS	NS	NS	NS		9.00	5950.28
MW-02	15-Sep-04	340	240	10	95	11	9.5	9.02	5950.26
MW-02	13-Oct-04	370	110	9	78	5.8		8.70	5950.58
MW-02	09-Nov-04	390	<2	<2	<2	3.3		8.70	5950.58
MW-02	13-Dec-04	270	46	8.2	56.4	3.8		8.54	5950.74
MW-02	12-Jan-05	370	4.5	6.5	27.1	6.9	6.5	8.47	5950.81

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-02	09-Feb-05	420	<10	<10	<10	3	2.6	4.09	5955.19
MW-02	09-Feb-05	420	2.4	8.6	43.5	2.6	3.0	11.95	5947.33
MW-02	09-Feb-05	340	<5	6.7	33	0.65		4.09	5955.19
MW-02	08-Mar-05	280	<10	<10	<10	4.4		8.82	5950.46
MW-02	12-Apr-05	360	<2	<2	<2	6.8		5.01	5954.27
MW-02	09-May-05	330	<10	<10	<10	5.9	5.4	4.49	5954.79
MW-02	08-Jun-05	98	<2	3.4	23.6	6.4		3.22	5956.06
MW-02	12-Jul-05	180	2.8	4.5	30.4	3.8		7.67	5951.61
MW-02	09-Aug-05	430	33	13	113	7.3		5.01	5954.27
MW-02	12-Sep-05	270	<10	<10	<10	4.9	4.3	5.31	5953.97
MW-02	11-Oct-05	350	<10	<10	<10	5.9			
MW-02	07-Nov-05	290	32	<10	<10	3.5			
MW-02	07-Dec-05	270	<10	<10	<10	5.1		5.12	5954.16
MW-02	07-Dec-05	290	35	8.1	49	8.4		5.12	5954.16
MW-02	07-Dec-05	290	<10	<10	<10	6.5		5.12	5954.16
MW-02	11-Jan-06	340	<2	8.8	62.5	9		5.13	5954.15
MW-02	11-Jan-06	174	<2	4.9	36.9	3.1		5.13	5954.15
MW-02	11-Jan-06	310	<2	8.5	63.9	8	6.8	5.13	5954.15
MW-02	14-Feb-06	219	<2	5.8	37.3	9.3		5.19	5954.09
MW-02	15-Mar-06	200	<2	4.8	26.8	0.013		4.98	5954.30
MW-02	12-Apr-06	210	<2	6.6	45.7	7.3		4.51	5954.77
MW-02	09-May-06	240	<2	7.2	53.6	4.1		4.05	5955.23
MW-02	12-Jun-06	280	<2	11	93	12			
MW-02	07-Sep-06	240	<25	<10	<10	7.1	5.7	9.05	5950.23
MW-02	05-Dec-06	260	<2	5.3	22.6	6.7	4.3	5.42	5953.86
MW-02	12-Mar-07	230	<2	5.8	37.8	7.8	6.1	5.20	5954.08
MW-02	12-Mar-07	250	<2	6.5	43.4	9.4		5.20	5954.08
MW-02	12-Mar-07	212	<2	8.05	51.43	0.0691		5.20	5954.08
MW-02	20-Jun-07	220	<2	5.3	36.1	6.1			
MW-02	20-Jun-07	190	NA	4.6	31.6	4.5			
MW-02	20-Jun-07	94	<0.25	5.5	43.49	0.979			
MW-02	12-Sep-07	260	<2	8.1	51.2	3.5	2.7	6.13	5953.15
MW-02	18-Dec-07	180	<2	4.3	29.8	7.4		5.42	5953.86
MW-02	03-Mar-08	120	<2	2.6	<2	5.8	3.6	4.91	5954.37
MW-02	03-Mar-08	186	<0.5	5.1	<0.5	1.86		4.91	5954.37
MW-02	17-Jun-08	230	<2	10	98	6.6	4.9	4.02	5955.26
MW-02	01-Oct-08	160	<2	4.6	27.8	4.7	3.5	6.40	5952.88
MW-02	10-Dec-08	140	<2	4	32	7.3	5.4	6.00	5953.28
MW-02	17-Mar-09	93	<2	<2	13	6.1	3.4	5.50	5953.78
MW-02	15-Jun-09	110	<2	<2	28.8	8.3	6.6	4.45	5954.83
MW-02	15-Jun-09	94	<2	<2	24.1	9.2	7.3	4.45	5954.83
MW-02	16-Sep-09	160	<2	2.5	20.1	7.5	5.7	9.00	5950.28
MW-02	15-Dec-09	110	<2	2.0	30.4	9.1	7.1	5.80	5953.48
MW-02	30-Mar-10	87.7	<2	<2	24.0	7.49	5.2	4.83	5954.45
MW-02	28-Jun-10	72	3.0	<2	24.9	8.71	6.4	5.09	5954.19
MW-02 <sup>a</sup>	21-Jul-10	144	2.2	<2	33.3				
MW-02	27-Sep-10	67.7	<2	<2	16.1	5.77	4.2	5.84	5953.44
MW-02	14-Dec-10	76.9	<2	<2	15.6	7.04	4.2	4.84	5954.44
MW-02	29-Mar-11	57.5	<2	<2	14.5	8.2		4.45	5954.83
MW-02	20-Jun-11	86.6	<2	<2	30.2			3.43	5955.85

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Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-04	12-Jan-04	320	35	8.1	49	6.1			5963.41
MW-04	09-Jul-04	230	NA	NA	NA	11			
MW-04	22-Jul-04	440	NA	NA	NA	11		8.46	5954.95
MW-04	03-Aug-04	400	160	<2	87	6.7		8.60	5954.81
MW-04	15-Sep-04	240	59	6.7	60	27		8.41	5955.00
MW-04	15-Sep-04	320	76	9.5	80.5	9.2	7.4	8.41	5955.00
MW-04	15-Sep-04	330	76	9.1	77.1	8.6		8.41	5955.00
MW-04	14-Oct-04	210	<50	6.1	37	4.4		8.38	5955.03
MW-04	14-Oct-04	300	51	9	59	9.3		8.38	5955.03
MW-04	14-Oct-04	300	37	9	55.2	5.6		8.38	5955.03
MW-04	09-Nov-04	290	41	<2	<2	9.1		4.90	5958.51
MW-04	02-Dec-04	280	19	<10	<10	14			
MW-04	08-Dec-04	280	110	7.8	72	17			
MW-04	13-Dec-04	240	33	12	97	7.8		7.93	5955.48
MW-04	13-Dec-04	270	36	8.1	64.9	14		7.93	5955.48
MW-04	13-Dec-04	270	37	7.7	62.6	12		7.93	5955.48
MW-04	12-Jan-05	350	68	11	71.9	14	11.9	7.40	5956.01
MW-04	12-Jan-05	360	40	11	62.3	14		7.40	5956.01
MW-04	09-Feb-05	280	57	8.5	52.7	10	8.5	8.02	5955.39
MW-04	08-Mar-05	350	160	<10	79	9.8		8.02	5955.39
MW-04	12-Apr-05	130	33	<2	<2	8.9		8.39	5955.02
MW-04	12-Apr-05	130	52	<2	<2	10		8.39	5955.02
MW-04	12-Apr-05	280	<1200	<120	NA	8.7		8.39	5955.02
MW-04	09-May-05	310	66	11	16	10	8.6	7.23	5956.18
MW-04	09-May-05	320	77	11	16	11		7.23	5956.18
MW-04	08-Jun-05	180	17	4.7	4.3	12		7.25	5956.16
MW-04	11-Jul-05	0.69	<1200	<120	NA	<1		7.83	5955.58
MW-04	11-Jul-05	170	40	3.3	38.7	7.8	6.4	7.83	5955.58
MW-04	11-Jul-05	180	32	3.8	34.9	6.1		7.83	5955.58
MW-04	09-Aug-05	270	41	<10	69	8.3		8.15	5955.26
MW-04	09-Aug-05	240	46	<10	65	8.5		8.15	5955.26
MW-04	09-Aug-05	170	29	2.2	62	2.7		8.15	5955.26
MW-04	12-Sep-05	260	7.6	8	74	8.8	7.1	8.22	5955.19
MW-04	11-Oct-05	220	5.1	6.8	66.4	7.3			
MW-04	08-Nov-05	300	<10	<10	96	8.2		8.03	5955.38
MW-04	07-Dec-05	230	<10	<10	<10	8.6		7.93	5955.48
MW-04	10-Jan-06	270	<2	8	73	8.5		7.98	5955.43
MW-04	10-Jan-06	97	<2	<2	37	8.3		7.98	5955.43
MW-04	10-Jan-06	270	<2	6.5	71	8.8	7.1	7.98	5955.43
MW-04	14-Feb-06	249	<2	9	73.6	8.8		7.98	5955.43
MW-04	15-Mar-06	260	<2	8.6	66.6	14		8.04	5955.37
MW-04	12-Apr-06	220	<2	8.6	49.9	9.3		7.10	5956.31
MW-04	09-May-06	150	2.5	6.3	40	3.7		6.98	5956.43
MW-04	12-Jun-06	220	<2	8.3	74	9.2			
MW-04	06-Sep-06	200	<2	7.3	68	10	8.2	8.41	5955.00
MW-04	05-Dec-06	200	<2	7	70.9	10	7.8	7.99	5955.42
MW-04	12-Mar-07	220	<2	7	67.2	9.8		7.85	5955.56
MW-04	12-Mar-07	200	NA	6	55.9	7.6		7.85	5955.56
MW-04	12-Mar-07	172	<0.25	6.73	69.28	0.0592		7.85	5955.56
MW-04	22-Jun-07	110	<2	<2	39.2	6.4			
MW-04	13-Sep-07	170	<2	4.8	57.9	5.6		8.52	5954.89
MW-04	18-Dec-07	170	<2	3.7	53.4	8.4		8.07	5955.34
MW-04	04-Mar-08	130	<2	3.3	31.6	8.5	6.4	7.70	5955.71
MW-04	17-Jun-08	85	2.3	<2	23	3.7	2.6	7.65	5955.76
MW-04	01-Oct-08	110	<2	<2	33.7	6.2	4.8	8.60	5954.81
MW-04	01-Oct-08	120	<2	<2	34.9	5		8.60	5954.81
MW-04	09-Dec-08	100	<2	<2	28.4	8.6	6.5	8.35	5955.06

## Appendix B

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Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-04	16-Mar-09	81	<2	<2	17.3	9.2	6.6	8.05	5955.36
MW-04	16-Mar-09	83	<2	<2	18.5	9.1	6.5	8.05	5955.36
MW-04	16-Mar-09	73	<1	<1	15.7	5.99		8.05	5955.36
MW-04	16-Jun-09	5.4	<2	<2	7.0	6.8	5.0	8.00	5955.41
MW-04	14-Jul-09	27	<2	2.2	21.6	10		8.09	5955.32
MW-04	16-Sep-09	100	<2	3.7	32.9	8.1	6.1	8.58	5954.83
MW-04	15-Dec-09	35	<2	<2	21.4	8.8		8.40	5955.01
MW-04	30-Mar-10	21.6	<2	<2	8.0	6.28	3.8	7.78	5955.63
MW-04	28-Jun-10	59.4	3	2.2	21.7	8.35	6.3	8.10	5955.31
MW-04 <sup>a</sup>	21-Jul-20	41.2	<2	<2	15.8				
MW-04	27-Sep-10	13.7	<2	<2	7.0	5.07	3.2	7.76	5955.65
MW-04	14-Dec-10	21.8	<2	<2	6.3	3.2	2.1	7.36	5956.05
MW-04	29-Mar-11	26.1	<2	<2	5.3	5.37		6.95	5956.46
MW-04	20-Jun-11	19.3	<2	<2	8.5			7.27	5956.14
MW-06	09-Jul-04	1.1	NA	NA	NA	0.011			
MW-06	22-Jul-04	0.023	NA	NA	NA	0.023		9.74	5950.20
MW-06	03-Aug-04	1.5	<2	<2	<2	0.083		9.89	5950.05
MW-06	15-Sep-04	<1	<2	<2	<2	0.38	0.4	9.67	5950.27
MW-06	14-Oct-04	<1	<2	<2	<2	0.14		9.48	5950.46
MW-06	10-Nov-04	<1	<2	<2	<2	0.057		9.60	5950.34
MW-06	14-Dec-04	<1	<2	<2	<2	0.054		9.24	5950.70
MW-06	14-Dec-04	<1	<2	<2	<2	0.4		9.24	5950.70
MW-06	14-Dec-04	<0.5	<5	<0.5	NA	0.071		9.24	5950.70
MW-06	13-Jan-05	<1	<2	<2	<2	0.056	0.0	8.87	5951.07
MW-06	09-Feb-05	<1	<2	<2	<2	0.023	0.0	9.06	5950.88
MW-06	08-Mar-05	3.1	<2	<2	<2	0.051		9.15	5950.79
MW-06	12-Apr-05	6.5	<2	<2	<2	0.092		6.59	5953.35
MW-06	10-May-05	<1	<2	<2	<2	0.18	0.2	5.82	5954.12
MW-06	08-Jun-05	1.3	<2	<2	<2	0.18		5.55	5954.39
MW-06	08-Jun-05	2.5	<2	<2	<2	0.22		5.55	5954.39
MW-06	08-Jun-05	2.2	<5	<0.5	NA	0.024		5.55	5954.39
MW-06	12-Jul-05	<1	<2	<2	<2	0.15			
MW-06	09-Aug-05	<1	<2	<2	<2	0.24		7.72	5952.22
MW-06	12-Sep-05	1.9	<5	<0.5	NA	<0.01		6.81	5953.13
MW-06	12-Sep-05	2	<2	<2	<2	0.12	0.0	6.81	5953.13
MW-06	12-Sep-05	1.9	<2	<2	<2	0.16		6.81	5953.13
MW-06	11-Oct-05	4.3	<2	<2	<2	4			
MW-06	08-Nov-05	3.7	<2	<2	<2	0.17			
MW-06	08-Nov-05	3.6	<2	<2	<2	0.17			
MW-06	08-Nov-05	2.1	<5	<0.5	NA	0.41			
MW-06	07-Dec-05	1.6	<2	<2	<2	0.13		6.88	5953.06
MW-06	11-Jan-06	<1	<2	<2	<2	0.14	0.1	6.94	5953.00
MW-06	14-Feb-06	0.6	<0.5	<0.5	<0.5	0.128		6.91	5953.03
MW-06	14-Feb-06	<0.5	<1	<1	<1	0.077		6.91	5953.03
MW-06	14-Feb-06	<0.5	<1	<1	<1	0.15		6.91	5953.03
MW-06	15-Mar-06	<1	<2	<2	<2	0.092		6.89	5953.05
MW-06	12-Apr-06	1.1	<2	<2	<2	0.046		6.15	5953.79
MW-06	12-Apr-06	1	NA	NA	NA	0.034		6.15	5953.79
MW-06	12-Apr-06	1.12	<0.25	<0.25	<0.25	0.125		6.15	5953.79
MW-06	09-May-06	<1	<2	<2	<2	0.029		5.89	5954.05
MW-06	12-Jun-06	<1	<2	<2	<2	0.0026			
MW-06	07-Sep-06	<0.25	<0.25	<0.25	<0.25	0.00523		7.53	5952.41
MW-06	07-Sep-06	<1	<5	<2	<2	0.038		7.53	5952.41
MW-06	07-Sep-06	<1	NA	<2	<2	0.031		7.53	5952.41
MW-06	05-Dec-06	<1	<2	<2	<2	<0.0008		7.04	5952.90
MW-06	13-Mar-07	<1	<2	<2	<2	0.0021		6.85	5953.09

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-06	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-06	12-Sep-07	<1	<2	<2	<2	<0.0008		7.95	5951.99
MW-06	17-Dec-07	<0.5	<5	<0.5	<2	0.00846		7.15	5952.79
MW-06	17-Dec-07	<1	<2	<2	<2	0.0081		7.15	5952.79
MW-06	17-Dec-07	<1	<2	<2	<2	0.008		7.15	5952.79
MW-06	03-Mar-08	<1	<2	<2	<2	0.0015		6.75	5953.19
MW-06	17-Jun-08	<1	<2	<2	<2	0.0031		6.20	5953.74
MW-06	30-Sep-08	<1	<2	<2	<2	<0.008		7.60	5952.34
MW-06	30-Sep-08	<1	<2	<2	<2	<0.008		7.60	5952.34
MW-06	09-Dec-08	<1	<2	<2	<2	0.0092	<0.0008	7.25	5952.69
MW-06	16-Mar-09	<1	<2	<2	<2	<0.0008		7.00	5952.94
MW-06	15-Jun-09	<1	<2	<2	<2	0.0071		6.60	5953.34
MW-06	16-Sep-09	<1	<2	<2	<2	0.0014		7.45	5952.49
MW-06	15-Dec-09	<1	<2	<2	<2	0.0051		12.00	5947.94
MW-06	29-Mar-10	<1	<2	<2	<2	0.00197		6.91	5953.03
MW-06	28-Jun-10	<1	<2	<2	<2	0.00989		6.80	5953.14
MW-06	27-Sep-10	<1	<2	<2	<2	0.00434		7.53	5952.41
MW-06	14-Dec-10	<1	<2	<2	<2	<0.0008		7.08	5952.86
MW-06	29-Mar-11	<1	<2	<2	<2	0.0008		6.64	5953.30
MW-06	20-Jun-11	<1	<2	<2	<2	0.0008		5.90	5954.04
MW-07	09-Jul-04	<b>200</b>	NA	NA	NA	0.67			5958.97
MW-07	22-Jul-04	<b>110</b>	NA	NA	NA	0.53		10.34	5948.63
MW-07	03-Aug-04	<b>32</b>	<2	<2	<2	0.73		10.46	5948.51
MW-07	15-Sep-04	<b>56</b>	<2	<2	<2	6		11.11	5947.86
MW-07	14-Oct-04	<b>32</b>	<2	<2	<2	0.78		10.70	5948.27
MW-07	10-Nov-04	<b>16</b>	<2	<2	<2	0.65		10.70	5948.27
MW-07	19-Nov-04	<b>19</b>	<2	<2	<2	0.49			
MW-07	23-Nov-04	<b>17</b>	<2	<2	<2	0.67			
MW-07	07-Dec-04	<1	<2	<2	<2	0.04			
MW-07	14-Dec-04	<b>20</b>	<2	<2	<2	0.55		10.24	5948.73
MW-07	13-Jan-05	<b>16</b>	<2	<2	<2	0.53		9.89	5949.08
MW-07	09-Feb-05	<b>5.7</b>	<2	<2	<2	0.47		9.91	5949.06
MW-07	08-Mar-05	4.5	<2	<2	<2	0.58		10.06	5948.91
MW-07	20-Apr-05	<1	<2	<2	<2	<0.0008			
MW-07	10-May-05	<1	<2	<2	<2	<0.0008		6.22	5952.75
MW-07	10-May-05	<1	<2	<2	<2	<0.0008		6.22	5952.75
MW-07	10-May-05	<0.5	<5	<0.5	NA	0.031		6.22	5952.75
MW-07	08-Jun-05	<1	<2	<2	<2	<0.0008		4.47	5954.50
MW-07	12-Jul-05	<1	<2	<2	<2	<0.0008			
MW-07	09-Aug-05	<1	<2	<2	<2	<0.0008		6.13	5952.84
MW-07	12-Sep-05	<1	<2	<2	<2	0.0015		6.62	5952.35
MW-07	11-Oct-05	<1	<2	<2	<2	0.0075			
MW-07	11-Oct-05	<1	<2	<2	<2	0.026			
MW-07	11-Oct-05	<0.5	<5	<0.5	NA	<0.01			
MW-07	08-Nov-05	<1	<2	<2	<2	0.0059			
MW-07	08-Dec-05	<1	<2	<2	<2	0.017		6.92	5952.05
MW-07	11-Jan-06	<1	<2	<2	<2	0.014		6.95	5952.02
MW-07	14-Feb-06	<0.5	<1	<0.5	<1	<0.002		9.08	5949.89
MW-07	15-Mar-06	<1	<2	<2	<2	10		6.83	5952.14
MW-07	12-Apr-06	<1	<2	<2	<2	0.00092		6.23	5952.74
MW-07	09-May-06	<1	<2	<2	<2	0.036		5.67	5953.30
MW-07	12-Jun-06	<1	<2	<2	<2	0.0037			
MW-07	21-Jul-06	<1	<2	<2	<2	<0.0008			
MW-07	28-Jul-06	<1	<2	<2	<2	0.0012			
MW-07	04-Aug-06	<1	<2	<2	<2	<0.0008			
MW-07	11-Aug-06	<1	<2	<2	<2	<0.0008			

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-07	16-Aug-06	<1	<2	<2	<2	0.0041		17.45	5941.52
MW-07	24-Aug-06	<1	<2	<2	<2	0.00092		7.72	5951.25
MW-07	31-Aug-06	<1	<2	<2	<2	0.0014		7.84	5951.13
MW-07	07-Sep-06	<1	<2	<2	<2	0.047		8.22	5950.75
MW-07	07-Sep-06	<0.25	<0.25	<0.25	<0.25	0.00163		8.22	5950.75
MW-07	13-Sep-06	<1	<2	<2	<2	0.0024		7.98	5950.99
MW-07	21-Sep-06	<0.25	<0.25	<0.25	<0.25	0.000762		7.93	5951.04
MW-07	21-Sep-06	<1	<2	<2	<2	0.002		7.93	5951.04
MW-07	27-Sep-06	<1	<2	<2	<2	0.004		7.82	5951.15
MW-07	06-Oct-06	<1	<2	<2	<2	<0.0008		7.88	5951.09
MW-07	12-Oct-06	<1	<2	<2	<2	0.0025		7.71	5951.26
MW-07	19-Oct-06	<1	<2	<2	<2	<0.0008		7.73	5951.24
MW-07	25-Oct-06	<1	<2	<2	<2	0.00082		7.62	5951.35
MW-07	01-Nov-06	<1	<2	<2	<2	0.0011		7.63	5951.34
MW-07	17-Nov-06	<1	<2	<2	<2	<0.0008		7.42	5951.55
MW-07	05-Dec-06	<1	<2	<2	<2	0.0011		7.37	5951.60
MW-07	03-Jan-07	<1	<2	<2	<2	<0.0008			
MW-07	17-Jan-07	<1	<2	<2	<2	<0.0008			
MW-07	05-Feb-07	<1	<2	<2	<2	<0.0008			
MW-07	22-Feb-07	<1	<2	<2	<2	0.0016		6.92	5952.05
MW-07	07-Mar-07	<1	<2	<2	<2	0.00094		6.75	5952.22
MW-07	13-Mar-07	<1	<2	<2	<2	0.0079		6.80	5952.17
MW-07	26-Mar-07	<1	<2	<2	<2	<0.0008			
MW-07	11-Apr-07	<1	<2	<2	<2	0.001			
MW-07	25-Apr-07	<0.5	<5	<0.5	<2	0.0016			
MW-07	08-May-07	<0.5	<5	<0.5	<2	<0.01			
MW-07	20-Jun-07	<0.25	<0.25	<0.25	<0.25	-88.8			
MW-07	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-07	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-07	12-Sep-07	<1	<2	<2	<2	<0.0008		8.21	5950.76
MW-07	17-Dec-07	<1	<2	<2	<2	<0.0008		5.72	5953.25
MW-07	03-Mar-08	<1	<2	<2	<2	<0.0008		6.84	5952.13
MW-07	17-Jun-08	<1	<2	<2	<2	<0.0008		4.53	5954.44
MW-07	09-Dec-08	<1	<2	<2	<2	0.0032		7.60	5951.37
MW-07	16-Mar-09	<1	<2	<2	<2	<0.0008		6.95	5952.02
MW-07	15-Jun-09	<1	<2	<2	<2	<0.0008		5.72	5953.25
MW-07	16-Sep-09	<1	<2	<2	<2	0.0028		7.92	5951.05
MW-07	15-Dec-09	<1	<2	<2	<2	<0.0008		7.60	5951.37
MW-07	29-Mar-10	<1	<2	<2	<2	<0.0008		7.50	5951.47
MW-07	28-Jun-10	<1	2.7	<2	<2	<0.0008		6.09	5952.88
MW-07 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-07	27-Sep-10	<1	<2	<2	<2	0.0014		8.24	5950.73
MW-07	14-Dec-10	<1	<2	<2	<2	<0.0008		7.00	5951.97
MW-07	29-Mar-11	<1	<2	<2	<2	<0.0008		6.35	5952.62
MW-07	20-Jun-11	<1	<2	<2	<2	<0.0008		4.30	5954.67
MW-08	09-Jul-04	<b>65</b>	NA	NA	NA	3.4			
MW-08	22-Jul-04	<b>210</b>	NA	NA	NA	2.9		12.45	5946.84
MW-08	03-Aug-04	<b>250</b>	<2	<2	<2	2.8		11.98	5947.31
MW-08	15-Sep-04	<b>200</b>	<2	<2	<2	4.1		13.54	5945.75
MW-08	14-Oct-04	<b>140</b>	<2	<2	<3	3.1		13.18	5946.11
MW-08	10-Nov-04	<b>120</b>	<5	<0.5	NA	3.1		12.80	5946.49
MW-08	10-Nov-04	<b>150</b>	<2	<2	<2	6.5		12.80	5946.49
MW-08	10-Nov-04	<b>140</b>	<2	<2	<2	7.2		12.80	5946.49
MW-08	14-Dec-04	<b>140</b>	<2	<2	<2	7.4		12.00	5947.29
MW-08	13-Jan-05	<b>100</b>	<2	<2	<2	5.7		12.12	5947.17
MW-08	09-Feb-05	<b>58</b>	<2	<2	<2	3.5		11.79	5947.50

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-08	08-Mar-05	42	<2	<2	<2	3.3		11.86	5947.43
MW-08	12-Apr-05	30	<2	<2	<2	3.2		8.64	5950.65
MW-08	10-May-05	4.8	<2	<2	<2	0.82		7.99	5951.30
MW-08	09-Jun-05	1.8	<2	<2	<2	0.23		6.18	5953.11
MW-08	12-Jul-05	<1	<2	<2	<2	0.12		7.92	5951.37
MW-08	12-Jul-05	120	<5	<0.5	NA	3.1		7.92	5951.37
MW-08	12-Jul-05	<1	<2	<2	<2	0.043		7.92	5951.37
MW-08	09-Aug-05	<1	<2	<2	<2	0.045		8.15	5951.14
MW-08	12-Sep-05	<1	<2	<2	<2	0.22		9.07	5950.22
MW-08	12-Oct-05	<0.5	<5	<0.5	NA	<0.01			
MW-08	12-Oct-05	<1	<2	<2	<2	0.25			
MW-08	12-Oct-05	<1	<2	<2	<3	0.19			
MW-08	08-Nov-05	<1	<2	<2	<4	0.11			
MW-08	08-Dec-05	<1	<2	<2	<5	0.08		8.86	5950.43
MW-08	11-Jan-06	<1	<2	<2	<6	0.13		8.99	5950.30
MW-08	14-Feb-06	<0.5	<1	<1	<1	0.206		9.02	5950.27
MW-08	15-Mar-06	<1	<2	<2	<2	0.23		8.89	5950.40
MW-08	12-Apr-06	<1	<2	<2	<2	0.11		8.34	5950.95
MW-08	11-May-06	<0.5	<0.5	<0.5	<0.5	0.0649		7.50	5951.79
MW-08	11-May-06	<1	<2	<2	<2	0.032		7.50	5951.79
MW-08	11-May-06	<1	<2	<2	<2	0.017		7.50	5951.79
MW-08	12-Jun-06	<1	<2	<2	<2	0.13			
MW-08	21-Jul-06	<1	<2	<2	<2	0.0024			
MW-08	28-Jul-06	<1	<2	<2	<2	0.14			
MW-08	04-Aug-06	<1	<2	<2	<2	0.18			
MW-08	11-Aug-06	<1	<2	<2	<2	0.1			
MW-08	16-Aug-06	<1	<2	<2	<2	0.2		25.03	5934.26
MW-08	24-Aug-06	<1	<2	<2	<2	0.34		9.89	5949.40
MW-08	31-Aug-06	<1	<2	<2	<2	0.7		10.01	5949.28
MW-08	07-Sep-06	<1	<2	<2	<2	0.47		10.11	5949.18
MW-08	13-Sep-06	<1	<2	<2	<2	0.74		10.16	5949.13
MW-08	21-Sep-06	<1	<2	<2	<2	1.1		10.11	5949.18
MW-08	27-Sep-06	<1	<2	<2	<2	0.58		10.04	5949.25
MW-08	06-Oct-06	<1	<2	<2	<2	0.45		10.25	5949.04
MW-08	12-Oct-06	<1	<2	<2	<2	0.39		9.84	5949.45
MW-08	19-Oct-06	<1	<2	<2	<2	0.42		9.75	5949.54
MW-08	25-Oct-06	<1	<2	<2	<2	0.34		10.00	5949.29
MW-08	01-Nov-06	<1	<2	<2	<2	0.28		9.49	5949.80
MW-08	17-Nov-06	<1	<2	<2	<2	0.0043		9.32	5949.97
MW-08	05-Dec-06	<1	<2	<2	<2	0.045		9.42	5949.87
MW-08	03-Jan-07	<1	<2	<2	<2	0.00092			
MW-08	17-Jan-07	<1	<2	<2	<2	0.0034			
MW-08	05-Feb-07	<1	<2	<2	<2	0.12			
MW-08	22-Feb-07	<1	<2	<2	<2	0.22		9.12	5950.17
MW-08	07-Mar-07	<1	<2	<2	<2	0.48		9.06	5950.23
MW-08	13-Mar-07	<1	<2	<2	<2	0.18		9.11	5950.18
MW-08	26-Mar-07	<1	<2	<2	<2	<0.0008			
MW-08	11-Apr-07	<1	<2	<2	<2	0.085			
MW-08	25-Apr-07	<0.5	<5	<0.5	<2	0.0019			
MW-08	08-May-07	<0.5	<5	<0.5	<2	0.06			
MW-08	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-08	12-Sep-07	<1	<2	<2	<2	<0.0008		10.53	5948.76
MW-08	17-Dec-07	<1	<2	<2	<2	0.13		9.62	5949.67
MW-08	03-Mar-08	<1	<2	<2	<2	0.14		8.92	5950.37
MW-08	17-Jun-08	<1	<2	<2	<2	0.001		5.70	5953.59
MW-08	30-Sep-08	<1	<2	<2	<2	<0.008		10.10	5949.19
MW-08	09-Dec-08	<1	<2	<2	<2	0.11		9.00	5950.29

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-08	16-Mar-09	<1	<2	<2	<2	0.22		9.00	5950.29
MW-08	15-Jun-09	<1	<2	<2	<2	0.015		6.99	5952.30
MW-08	16-Sep-09	<1	<2	<2	<2	<0.0008		10.05	5949.24
MW-08	15-Dec-09	<1	<2	<2	<2	0.083		9.40	5949.89
MW-08	29-Mar-10	<1	<2	<2	<2	0.0752		8.96	5950.33
MW-08	28-Jun-10	<1	<2	<2	<2	0.0192		7.62	5951.67
MW-08	27-Sep-10	<1	<2	<2	<2	0.0531		10.25	5949.04
MW-08	14-Dec-10	<1	<2	<2	<2	0.00438		9.02	5950.27
MW-08	29-Mar-11	<1	<2	<2	<2	0.0424		8.38	5950.91
MW-08	20-Jun-11	<1	<2	<2	<2	0.0424		5.55	5953.74
MW-09	09-Jul-04	120	NA	NA	NA	11			
MW-09	22-Jul-04	130	NA	NA	NA	10		4.88	5960.25
MW-09	03-Aug-04	150	50	2.8	21.3	9.5		4.85	5960.28
MW-09	15-Sep-04	210	140	6.2	59	11	9.0	4.61	5960.52
MW-09	13-Oct-04	280	230	9.8	96	9.9		4.15	5960.98
MW-09	09-Nov-04	320	170	11	104	9		4.05	5961.08
MW-09	09-Nov-04	280	160	9.8	100	14		4.05	5961.08
MW-09	09-Nov-04	310	160	10	98	10		4.05	5961.08
MW-09	13-Dec-04	350	130	13	127	14		4.06	5961.07
MW-09	12-Jan-05	290	110	12	113	16	13.3	4.18	5960.95
MW-09	09-Feb-05	260	48	<10	86	9.4	8.5	4.53	5960.60
MW-09	08-Mar-05	210	22	<10	<10	11		4.65	5960.48
MW-09	12-Apr-05	210	23	<2	<2	11		4.63	5960.50
MW-09	09-May-05	210	32	9.4	81	12	10.3	4.25	5960.88
MW-09	08-Jun-05	210	39	<2	<2	12		4.25	5960.88
MW-09	11-Jul-05	160	18	5.1	50.5	9.3	7.8	4.58	5960.55
MW-09	08-Aug-05	120	12	<10	<10	7.8		4.52	5960.61
MW-09	12-Sep-05	78	3.6	3	31.4	9.7	7.6	4.49	5960.64
MW-09	11-Oct-05	55	5.5	2.4	24.8	8.7		4.32	5960.81
MW-09	07-Nov-05	35	<2	<2	<2	7.6			
MW-09	08-Dec-05	38	<2	<2	<2	7.7		4.51	5960.62
MW-09	10-Jan-06	40	<2	<2	<2	12	9.9	4.61	5960.52
MW-09	14-Feb-06	34.4	<1	1.2	12.4	6.3		4.63	5960.50
MW-09	15-Mar-06	30	<2	<2	<2	14		5.02	5960.11
MW-09	11-Apr-06	21	<2	<2	<2	9		4.39	5960.74
MW-09	10-May-06	16	<2	<2	<2	9.8	7.8	4.28	5960.85
MW-09	12-Jun-06	8.6	<2	<2	<2	10			
MW-09	06-Sep-06	8.9	<2	<2	<2	9.3	7.1	4.41	5960.72
MW-09	06-Dec-06	7.2	<2	<2	<2	10	7.6	4.08	5961.05
MW-09	13-Mar-07	7.5	<2	<2	<2	8.3	6.5	4.45	5960.68
MW-09	30-Apr-07	4.8	<5	<0.5	<2	-88.8			
MW-09	21-Jun-07	<1	<2	<2	<2	5.1			
MW-09	13-Sep-07	4.2	<2	<2	<2	5.4		4.49	5960.64
MW-09	18-Dec-07	2.7	<2	<2	<2	7.1		3.82	5961.31
MW-09	05-Mar-08	1	<2	<2	<2	7.2	5.0	4.05	5961.08
MW-09	17-Jun-08	2.2	<2	<2	<2	6.2	4.2	4.39	5960.74
MW-09	30-Sep-08	<1	<2	<2	<2	5.0	3.5	4.20	5960.93
MW-09	09-Dec-08	1.1	<2	<2	<2	8.6		4.46	5960.67
MW-09	17-Mar-09	2.3	<2	<2	<2	8.1	5.5	4.52	5960.61
MW-09	16-Jun-09	1.6	<2	<2	<2	7.2	5.0	4.35	5960.78
MW-09	14-Jul-09	2.5	<2	<2	<2	8.2		4.31	5960.82
MW-09	16-Sep-09	1.3	<2	<2	<2	6.6	4.4	4.38	5960.75
MW-09	15-Dec-09	2	<2	<2	<2	9.2	6.4	4.37	5960.76
MW-09	29-Mar-10	<1	<2	<2	<2	9.24	6.4	4.53	5960.60
MW-09	28-Jun-10	1.8	<2	<2	<2	6.8	4.3	4.44	5960.69
MW-09	27-Sep-10	<1	<2	<2	<2	3.65	1.7	4.34	5960.79



## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-09	14-Dec-10	<1	<2	<2	<2	3.39	1.5	4.35	5960.78
MW-09	29-Mar-11	1.0	<2	<2	<2	4.71		4.31	5960.82
MW-09	21-Jun-11	1.3	<2	<2	<2	<2		4.20	5960.93
MW-11	09-Jul-04	2	NA	NA	NA	0.16			
MW-11	22-Jul-04	<1	NA	NA	NA	0.25		4.50	5965.16
MW-11	03-Aug-04	<1	<2	<2	<2	0.23		4.49	5965.17
MW-11	15-Sep-04	<1	<2	<2	<2	0.12		4.29	5965.37
MW-11	13-Oct-04	<1	<2	<2	<2	0.017		4.10	5965.56
MW-11	09-Nov-04	<1	<2	<2	<2	0.14		4.10	5965.56
MW-11	12-Jan-05	<1	<2	<2	<2	0.18		3.98	5965.68
MW-11	09-Feb-05	<1	<2	<2	<2	0.12		4.13	5965.53
MW-11	08-Mar-05	<1	<2	<2	<2	0.11		4.45	5965.21
MW-11	12-Apr-05	<1	<2	<2	<2	0.14		4.21	5965.45
MW-11	09-May-05	<1	<2	<2	<2	0.13		3.94	5965.72
MW-11	08-Jun-05	<1	<2	<2	<2	0.13		3.85	5965.81
MW-11	11-Jul-05	<1	<2	<2	<2	0.1		5.25	5964.41
MW-11	08-Aug-05	<1	<2	<2	<2	0.079		4.11	5965.55
MW-11	12-Sep-05	<1	<2	<2	<2	0.13		4.22	5965.44
MW-11	11-Oct-05	<1	<2	<2	<2	0.1		3.98	5965.68
MW-11	07-Nov-05	<1	<2	<2	<2	0.061			
MW-11	08-Dec-05	<1	<2	<2	<2	0.046		4.07	5965.59
MW-11	10-Jan-06	<1	<2	<2	<2	0.037		4.02	5965.64
MW-11	14-Feb-06	<0.5	<1	<1	<1	0.017		4.02	5965.64
MW-11	15-Mar-06	<1	<2	<2	<2	0.06		4.50	5965.16
MW-11	11-Apr-06	<1	<2	<2	<2	0.041		4.05	5965.61
MW-11	10-May-06	<1	<2	<2	<2	0.035		4.08	5965.58
MW-11	12-Jun-06	<1	<2	<2	<2	0.043			
MW-11	06-Sep-06	<1	<2	<2	<2	0.081		4.15	5965.51
MW-11	06-Dec-06	<1	<2	<2	<2	0.0039		3.98	5965.68
MW-11	13-Mar-07	<1	<2	<2	<2	0.02		3.89	5965.77
MW-11	21-Jun-07	<1	<2	<2	<2	0.018			
MW-11	12-Sep-07	<1	<2	<2	<2	0.028		4.30	5965.36
MW-11	05-Mar-08	<1	<2	<2	<2	0.027		4.09	5965.57
MW-11	17-Jun-08	<1	<2	<2	<2	0.012		4.03	5965.63
MW-11	30-Sep-08	<1	<2	<2	<2	0.0017		4.10	5965.56
MW-11	09-Dec-08	<1	<2	<2	<2	0.016		4.20	5965.46
MW-11	17-Mar-09	<1	<2	<2	<2	0.0073		4.65	5965.01
MW-11	15-Jun-09	<1	<2	<2	<2	0.037		4.51	5965.15
MW-11	17-Sep-09	<1	<2	<2	<2	0.16		4.48	5965.18
MW-11	15-Dec-09	<1	<2	<2	<2	0.019		4.23	5965.43
MW-11	29-Mar-10	<1	<2	<2	<2	0.0698		4.25	5965.41
MW-11	28-Jun-10	<1	2.3	<2	2.7	0.0615		4.80	5964.86
MW-11 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-11	27-Sep-10	<1	<2	<2	<2	0.0646		4.52	5965.14
MW-11	13-Dec-10	<1	<2	<2	<2	0.0187		4.51	5965.15
MW-11	29-Mar-11	<1	<2	<2	<2	0.001		4.18	5965.48
MW-11	21-Jun-11	<1	<2	<2	<2	0.001		3.97	5965.69
MW-12	09-Jul-04	0.86	NA	NA	NA	2.5			5963.60
MW-12	22-Jul-04	2	NA	NA	NA	3.6		6.02	5957.58
MW-12	03-Aug-04	4.6	<2	<2	<2	3.8			
MW-12	15-Sep-04	2.7	<2	<2	<2	4.9	4.1	5.81	5957.79
MW-12	13-Oct-04	<1	<2	<2	<2	0.17		5.13	5958.47
MW-12	13-Oct-04	<1	<2	<2	NA	0.12		5.13	5958.47
MW-12	13-Oct-04	<1	<2	<2	<2	<0.0008		5.13	5958.47
MW-12	09-Nov-04	<1	<2	<2	<2	0.069		4.90	5958.70

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-12	13-Dec-04	<1	<2	<2	<2	0.046		3.85	5959.75
MW-12	12-Jan-05	<1	<2	<2	<2	1.3	0.8	4.10	5959.50
MW-12	09-Feb-05	<1	<2	<2	<2	2	1.2	4.78	5958.82
MW-12	08-Mar-05	<1	<2	<2	<2	2.6		4.53	5959.07
MW-12	12-Apr-05	<1	<2	<2	<2	0.94		4.63	5958.97
MW-12	09-May-05	<1	<2	<2	<2	0.43	0.4	4.03	5959.57
MW-12	08-Jun-05	<1	<2	<2	<2	0.65		4.39	5959.21
MW-12	11-Jul-05	3.8	<2	<2	<2	3	2.7	2.86	5960.74
MW-12	08-Aug-05	<b>7.1</b>	<2	<2	<2	4.3		3.02	5960.58
MW-12	12-Sep-05	<b>8.4</b>	<2	<2	<2	6.4	5.1	2.82	5960.78
MW-12	11-Oct-05	<1	<2	<2	<2	0.26		1.94	5961.66
MW-12	07-Nov-05	<1	<2	<2	<2	0.11			
MW-12	08-Dec-05	<1	<2	<2	<2	0.25		1.81	5961.79
MW-12	10-Jan-06	<1	<2	<2	<2	0.24	0.2	1.89	5961.71
MW-12	14-Feb-06	0.6	<1	<1	<1	0.53		2.03	5961.57
MW-12	15-Mar-06	<1	<2	<2	<2	1.6		1.85	5961.75
MW-12	15-Mar-06	<0.5	<0.5	<0.5	<0.5	1.51		1.85	5961.75
MW-12	11-Apr-06	<1	<2	<2	<2	1.2		4.10	5959.50
MW-12	10-May-06	<1	<2	<2	<2	0.95	0.5	1.25	5962.35
MW-12	12-Jun-06	1.2	<2	<2	<2	2.1			
MW-12	06-Sep-06	<b>5.3</b>	<2	<2	<2	7.1	4.1	3.31	5960.29
MW-12	06-Dec-06	<1	<2	<2	<2	0.21	0.2	1.52	5962.08
MW-12	13-Mar-07	<1	<2	<2	<2	0.046	0.0	0.00	5963.60
MW-12	21-Jun-07	<1	<2	<2	<2	0.016			
MW-12	12-Sep-07	<b>5.4</b>	<2	<2	<2	3.7	2.8	3.08	5960.52
MW-12	18-Dec-07	<1	<2	<2	<2	0.18		1.92	5961.68
MW-12	05-Mar-08	<1	<2	<2	<2	<0.0008		0.00	5963.60
MW-12	17-Jun-08	<1	<2	<2	<2	0.0011	<0.0011	2.36	5961.24
MW-12	30-Sep-08	2.4	<2	<2	<2	2.8	1.5	3.30	5960.30
MW-12	09-Dec-08	<1	<2	<2	<2	0.13	<0.0008	2.10	5961.50
MW-12	17-Mar-09	<1	<2	<2	<2	0.13	0.04	1.95	5961.65
MW-12	15-Jun-09	<1	<2	<2	<2	0.25	0.02	2.21	5961.39
MW-12	16-Sep-09	1	<2	<2	<2	3.7		2.67	5960.93
MW-12	15-Dec-09	<1	<2	<2	<2	0.07		1.76	5961.84
MW-12	29-Mar-10	<1	<2	<2	<2	0.176		1.94	5961.66
MW-12	28-Jun-10	<1	<2	<2	<2	0.672		2.97	5960.63
MW-12	27-Sep-10	<1	<2	<2	<2	0.288		2.31	5961.29
MW-12	13-Dec-10								
MW-12	29-Mar-11	<1	<2	<2	<2	<0.00080		1.21	5962.39
MW-12	21-Jun-11	<1	<2	<2	<2	<0.00080		1.57	5962.03
MW-13	13-Dec-04	<1	<2	<2	<2	0.15		2.49	5961.11
MW-13	21-Sep-04	<1	<2	<2	<2	0.061			
MW-13	13-Oct-04	<1	<2	<2	<2	0.011		2.89	5969.11
MW-13	09-Nov-04	<1	<2	<2	<2	0.015		2.80	5969.20
MW-13	13-Dec-04	<1	<2	<2	<2	0.029		2.49	5969.51
MW-13	12-Jan-05	<1	<2	<2	<2	0.069		2.24	5969.76
MW-13	09-Feb-05	<1	<2	<2	<2	0.029		2.79	5969.21
MW-13	08-Mar-05	<1	<2	<2	<2	0.037		2.81	5969.19
MW-13	12-Apr-05	<1	<2	<2	<2	0.039		3.12	5968.88
MW-13	09-May-05	<1	<2	<2	<2	0.04		2.42	5969.58
MW-13	08-Jun-05	<1	<2	<2	<2	0.071		2.41	5969.59
MW-13	12-Jun-06	<1	<2	<2	<2	2.8			
MW-13	07-Sep-06	<1	<5	<2	<2	1.4		1.40	5970.60
MW-13	06-Dec-06	<1	<2	<2	<2	0.32		0.58	5971.42
MW-13	13-Mar-07	<1	<2	<2	<2	0.014		0.00	
MW-13	21-Jun-07	<1	<2	<2	<2	0.33			

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-13	12-Sep-07	<1	<2	<2	<2	0.43		1.05	5970.95
MW-13	17-Jun-08								flooded
MW-13	29-Sep-08							2.65	
MW-13	08-Dec-08								frozen
MW-13	16-Mar-09								flooded
MW-13	15-Jun-09								plugged
MW-13	16-Sep-09								plugged
MW-13	15-Dec-09								plugged
MW-13									plugged
MW-14	21-Sep-04	150	9.6	2.9	19.8	1.4			
MW-14	13-Oct-04	140	12	3.6	27.3	4.8	4.3	6.57	5958.49
MW-14	09-Nov-04	150	8.8	4.7	32.4	6.7		7.02	5958.04
MW-14	13-Dec-04	300	12	7.5	44.2	13		7.01	5958.05
MW-14	12-Jan-05	230	9.7	4.6	30.7	9.4	8.0	6.98	5958.08
MW-14	09-Feb-05	270	13	<10	<10	9.6	8.0	7.24	5957.82
MW-14	08-Mar-05	180	12	3.1	21.5	12		8.05	5957.01
MW-14	12-Apr-05	74	5.2	<2	<2	11		6.97	5958.09
MW-14	09-May-05	8	<2	<2	<2	8.2	6.6	6.19	5958.87
MW-14	08-Jun-05	6	<2	<2	<2	10		6.38	5958.68
MW-14	11-Jul-05	16	<2	<2	<2	4.8	3.8	4.15	5960.91
MW-14	08-Aug-05	<1	<2	<2	<2	3.6		4.25	5960.81
MW-14	12-Sep-05	<1	<2	<2	<2	3.6	2.3	4.25	5960.81
MW-14	11-Oct-05	<1	<2	<2	<2	4.2		4.17	5960.89
MW-14	07-Nov-05	<1	<2	<2	<2	3.9			
MW-14	08-Dec-05	1.6	<2	<2	<2	3.9		4.59	5960.47
MW-14	10-Jan-06	<1	<2	<2	<2	7.4	5.6	4.71	5960.35
MW-14	14-Feb-06	1.9	<1	<1	<1	8.3		4.71	5960.35
MW-14	15-Mar-06	<1	<2	<2	<2	5.8		4.71	5960.35
MW-14	11-Apr-06	<1	<2	<2	<2	1.2		4.55	5960.51
MW-14	10-May-06	<1	<2	<2	<2	2.9	1.9	4.28	5960.78
MW-14	12-Jun-06	<1	<2	<2	<2	7			
MW-14	06-Sep-06	<1	<2	<2	<2	9	6.0	4.22	5960.84
MW-14	06-Dec-06	12	<2	<2	<2	9.1	6.4	4.18	5960.88
MW-14	13-Mar-07	<1	<2	<2	<2	7.6	5.3	4.45	5960.61
MW-14	30-Apr-07	<1	<5	<0.5	<2	-88.8			
MW-14	21-Jun-07	<1	<2	<2	<2	3.4			
MW-14	13-Sep-07	<1	<2	<2	<2	2.8		5.04	5960.02
MW-14	18-Dec-07	1.2	<2	<2	<2	3.2		4.75	5960.31
MW-14	05-Mar-08	<1	<2	<2	<2	5.1	3.1	4.98	5960.08
MW-14	17-Jun-08	<1	<2	<2	<2	3.7	2.1	4.95	5960.11
MW-14	30-Sep-08	<1	<2	<2	<2	2.9	2.0	5.51	5959.55
MW-14	09-Dec-08	<1	<2	<2	<2	4.7	2.9	5.20	5959.86
MW-14	17-Mar-09	1.0	<2	<2	<2	7.0	4.6	5.29	5959.77
MW-14	16-Jun-09	<1	<2	<2	<2	5.6	3.9	5.05	5960.01
MW-14	16-Sep-09	1.9	<2	<2	<2	5.7	3.7	5.10	5959.96
MW-14	15-Dec-09	1.9	<2	<2	<2	5.7	3.4	5.03	5960.03
MW-14	29-Mar-10	<1	<2	<2	<2	6.74	4.4	6.25	5958.81
MW-14	28-Jun-10	<1	<2	<2	<2	4.79	3.1	5.44	5959.62
MW-14	27-Sep-10	<1	<2	<2	<2	3.41	1.6	5.42	5959.64
MW-14	14-Dec-10	<1	<2	<2	<2	3.85	2.1	4.61	5960.45
MW-14	29-Mar-11	<1	<2	<2	<2	3.90		4.74	5960.32
MW-14	21-Jun-11	<1	<2	<2	<2	3.90		4.54	5960.52
MW-15	21-Sep-04	<1	<2	<2	<2	0.37			
MW-15	14-Oct-04	<1	<2	<2	<2	0.047		2.80	5954.99
MW-15	10-Nov-04	<1	<2	<2	<2	0.034		2.85	5954.94

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-15	14-Dec-04	<1	<2	<2	<2	0.017		2.54	5955.25
MW-15	12-Jan-05	<1	<2	<2	<2	0.012		2.50	5955.29
MW-15	08-Mar-05	<1	<2	<2	<2	0.0071		3.62	5954.17
MW-15	12-Apr-05	<1	<2	<2	<2	0.021		2.82	5954.97
MW-15	11-May-05	<1	<2	<2	<2	0.031		2.47	5955.32
MW-15	08-Jun-05	<1	<2	<2	<2	0.059		2.36	5955.43
MW-15	12-Jul-05	<1	<2	<2	<2	0.0055		0.17	5957.62
MW-15	09-Aug-05	<1	<2	<2	<2	0.0069		0.42	5957.37
MW-15	12-Sep-05	<1	<2	<2	<2	0.007		0.36	5957.43
MW-15	11-Oct-05	<1	<2	<2	<2	0.058		0.42	5957.37
MW-15	08-Nov-05	<1	<2	<2	<2	0.025		0.44	5957.35
MW-15	08-Dec-05	<1	<2	<2	<2	0.038		0.56	5957.23
MW-15	11-Jan-06	<1	<2	<2	<2	0.044		0.68	5957.11
MW-15	15-Feb-06	<1	<2	<2	<2	0.026		0.58	5957.21
MW-15	15-Mar-06	<1	<2	<2	<2	0.027		0.40	5957.39
MW-15	11-Apr-06	<1	<2	<2	<2	0.012		0.50	5957.29
MW-15	10-May-06	<1	<2	<2	<2	0.01		0.51	5957.28
MW-15	12-Jun-06	<1	<2	<2	<2	0.01			
MW-15	06-Sep-06	<1	<2	<2	<2	0.036		0.00	5957.79
MW-15	06-Dec-06	<1	<2	<2	<2	0.015		0.00	5957.79
MW-15	13-Mar-07	<1	<2	<2	<2	0.012		0.10	5957.69
MW-15	21-Jun-07	<1	<2	<2	<2	0.015			
MW-15	11-Sep-07	<1	<2	<2	<2	<0.0008		0.00	5957.79
MW-15	18-Dec-07	<1	<2	<2	<2	0.0018		0.05	5957.74
MW-15	17-Jun-08	<1	<2	<2	<2	0.0072		2.12	5955.67
MW-15	29-Sep-08								Flooded
MW-15	08-Dec-08								Frozen
MW-15	16-Mar-09								Frozen
MW-15	15-Jun-09								Flooded
MW-15	16-Sep-09								Flooded
MW-15	15-Dec-09								Flooded
MW-15	30-Mar-10	<1	<2	<2	<2	<0.0008		0.60	5957.19
MW-15	29-Jun-10	<1	<2	<2	<2	<0.0008		0.01	5957.78
MW-15	28-Sep-10	<1	<2	<2	<2	0.0035		0.30	5957.49
MW-15	13-Dec-10								
MW-15	29-Mar-11								
MW-15	20-Jun-11							0.00	5957.79
MW-16	21-Sep-04	<b>9.5</b>	<2	<2	<2	1.1			
MW-16	13-Oct-04	4.7	<2	<2	<2	0.85		7.79	5952.66
MW-16	09-Nov-04	2.7	<2	<2	<2	0.34		7.29	5953.16
MW-16	14-Dec-04	4.9	<2	<2	<2	0.8		6.92	5953.53
MW-16	12-Jan-05	<b>7.6</b>	<2	<2	<2	1.1		7.20	5953.25
MW-16	09-Feb-05	<b>6.2</b>	<2	<2	<2	0.72	0.5	6.96	5953.49
MW-16	08-Mar-05	<b>6.1</b>	<2	<2	<2	0.83		7.27	5953.18
MW-16	08-Mar-05	<b>6.3</b>	<2	<2	<2	0.66		7.27	5953.18
MW-16	08-Mar-05	<b>6.2</b>	<5	<0.5	NA	1.7		7.27	5953.18
MW-16	12-Apr-05	1.4	<2	<2	<2	0.57		7.39	5953.06
MW-16	09-May-05	1.9	<2	<2	<2	0.35		5.81	5954.64
MW-16	08-Jun-05	1.7	<2	<2	<2	0.37		4.20	5956.25
MW-16	12-Jul-05	4	<2	<2	<2	0.62		2.65	5957.80
MW-16	09-Aug-05	<b>12</b>	<2	<2	<2	1.1		4.83	5955.62
MW-16	12-Sep-05	<b>6.4</b>	<2	<2	<2	1.3		5.45	5955.00
MW-16	11-Oct-05	2.8	<2	<2	<2	0.91			
MW-16	08-Nov-05	4.1	<2	<2	<2	0.62			
MW-16	07-Dec-05	3.4	<2	<2	<2	0.67		4.73	5955.72
MW-16	11-Jan-06	2.1	<2	<2	<2	1.1		5.21	5955.24

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-16	14-Feb-06	<0.5	<1	<1	<1	0.58		5.25	5955.20
MW-16	15-Mar-06	<1	<2	<2	<2	0.78		5.38	5955.07
MW-16	12-Apr-06	<1	<2	<2	<2	0.59		4.77	5955.68
MW-16	09-May-06	<1	<2	<2	<2	0.2		3.43	5957.02
MW-16	12-Jun-06	<1	<2	<2	<2	0.042			
MW-16	07-Sep-06	3.7	<5	<2	<2	1.7		6.41	5954.04
MW-16	05-Dec-06	<1	<2	<2	<2	1.1		5.21	5955.24
MW-16	13-Mar-07	<1	<2	<2	<2	0.54	0.1	5.50	5954.95
MW-16	20-Jun-07	<1	<2	<2	<2	0.17			
MW-16	12-Sep-07	<1	<2	<2	<2	0.8	0.3	6.45	5954.00
MW-16	18-Dec-07	<1	<2	<2	<2	1.2		8.50	5951.95
MW-16	04-Mar-08	<1	<2	<2	<2	1.2		5.60	5954.85
MW-16	17-Jun-08	<1	<2	<2	<2	0.021	<0.021	2.69	5957.76
MW-16	30-Sep-08	<1	<2	<2	<2	1.3	0.4	6.70	5953.75
MW-16	09-Dec-08	<1	<2	<2	<2	1.2	0.1	5.20	5955.25
MW-16	16-Mar-09	<1	<2	<2	<2	1.4	0.03	5.86	5954.59
MW-16	15-Jun-09	<1	<2	<2	<2	0.076	0.001	2.58	5957.87
MW-16	16-Sep-09	<1	<2	<2	<2	1.8		6.39	5954.06
MW-16	16-Sep-09	<1	<2	<2	<2	1.5		6.39	5954.06
MW-16	15-Dec-09	<1	<2	<2	<2	0.76		5.90	5954.55
MW-16	15-Dec-09	<1	<2	<2	<2	0.75		5.90	5954.55
MW-16	30-Mar-10	<1	<2	<2	<2	0.636		5.05	5955.40
MW-16	30-Mar-10	<1	<2	<2	<2	0.527		5.05	5955.40
MW-16	28-Jun-10	<1	<2	<2	<2	0.0889		3.03	5957.42
MW-16 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-16	28-Jun-10	<1	2.4	<2	<2	0.0135		3.03	5957.42
MW-16 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-16	27-Sep-10	<1	<2	<2	<2	0.413		6.74	5953.71
MW-16	14-Dec-10	<1	<2	<2	<2	0.166		5.29	5955.16
MW-16	14-Dec-10	<1	<2	<2	<2	0.111		5.29	5955.16
MW-16	29-Mar-11	<1	<2	<2	<2	0.021		5.12	5955.33
MW-16	20-Jun-11	<1	<2	<2	<2	0.021		1.96	5958.49
MW-17	21-Sep-04	<1	<2	<2	46.6	8.3			
MW-17	13-Oct-04	<b>230</b>	110	4.1	39.8	7.5	6.2	10.48	5948.01
MW-17	09-Nov-04	<b>140</b>	7.2	3	20.7	7.6		9.60	5948.89
MW-17	14-Dec-04	<b>110</b>	<2	2.1	16.1	9.4		8.76	5949.73
MW-17	12-Jan-05	<b>56</b>	<2	<2	<2	7.1	5.1	8.84	5949.65
MW-17	09-Feb-05	<b>76</b>	<2	<2	<2	6.6	4.9	8.69	5949.80
MW-17	08-Mar-05	<b>63</b>	<2	<2	<2	6.8		8.84	5949.65
MW-17	12-Apr-05	<b>44</b>	<2	<2	<2	6.6		6.19	5952.30
MW-17	10-May-05	<b>16</b>	<2	<2	<2	1.9	1.0	4.90	5953.59
MW-17	08-Jun-05	1.4	<2	<2	<2	1.6		2.43	5956.06
MW-17	12-Jul-05	<1	<2	<2	<2	0.64		3.28	5955.21
MW-17	09-Aug-05	<b>19</b>	<2	<2	<2	2.7		5.53	5952.96
MW-17	12-Sep-05	<b>110</b>	3.6	<2	<2	5.3	3.3	7.02	5951.47
MW-17	11-Oct-05	<b>72</b>	<2	<2	<2	4.7			
MW-17	08-Nov-05	<b>31</b>	<2	<2	<2	3.2			
MW-17	07-Dec-05	<b>31</b>	<2	<2	<2	3.1		6.58	5951.91
MW-17	11-Jan-06	<b>30</b>	<2	<2	<2	3.2	1.8	6.88	5951.61
MW-17	14-Feb-06	<b>26</b>	<1	<1	<1	2.5		6.88	5951.61
MW-17	15-Mar-06	<b>19</b>	<2	<2	<2	3.5		6.55	5951.94
MW-17	12-Apr-06	<b>12</b>	<2	<2	<2	3		5.85	5952.64
MW-17	09-May-06	2.8	<2	<2	<2	1.4		4.20	5954.29
MW-17	12-Jun-06	<1	<2	<2	<2	2.6			
MW-17	07-Sep-06	<b>24</b>	<5	<2	<2	3.5	2.2	8.27	5950.22
MW-17	05-Dec-06	<b>23</b>	<2	<2	<2	2.2	1.2	7.31	5951.18

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-17	13-Mar-07	66	<2	<2	<2	5.6	0.6	6.65	5951.84
MW-17	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-17	12-Sep-07	30	<2	<2	<2	2	1.2	9.68	5948.81
MW-17	18-Dec-07	16	<2	<2	<2	2		7.59	5950.90
MW-17	03-Mar-08	6.7	<2	<2	<2	1	0.5	6.90	5951.59
MW-17	17-Jun-08	<1	<2	<2	<2	<0.0008	<0.0008	2.66	5955.83
MW-17	30-Sep-08	31	<2	<2	<2	1.9	1.1	8.20	5950.29
MW-17	09-Dec-08	21	<2	<2	<2	1.9	1.0	6.75	5951.74
MW-17	16-Mar-09	13	<2	<2	<2	2.2	1.0	6.71	5951.78
MW-17	15-Jun-09	<1	<2	<2	<2	0.0027	<0.0008	3.25	5955.24
MW-17	16-Sep-09	41	<2	<2	<2	4.2	2.3	8.10	5950.39
MW-17	15-Dec-09	25	<2	<2	<2	3.2	1.5	8.40	5950.09
MW-17	29-Mar-10	24.6	<2	<2	<2	3.25	1.6	6.52	5951.97
MW-17	28-Jun-10	<1	<2	<2	<2	0.0107	0.0008	4.05	5954.44
MW-17 <sup>a</sup>	21-Jul-10	13.0	<2	<2	<2				
MW-17	27-Sep-10	27.4	<2	<2	<2	2.74	1.5	8.46	5950.03
MW-17	14-Dec-10	21.5	<2	<2	<2	2.06	0.9	6.84	5951.65
MW-17	29-Mar-11	6.3	<2	<2	<2	0.924		5.82	5952.67
MW-17	20-Jun-11	<1	<2	<2	<2	0.924		2.18	5956.31
MW-18	21-Sep-04	<1	<2	<2	<2	0.74			
MW-18	14-Oct-04	<1	<2	<2	<2	0.89	0.3	6.75	5945.68
MW-18	10-Nov-04	<1	<2	<2	<2	1.6		6.80	5945.63
MW-18	14-Dec-04	<1	<2	<2	<2	1.1		6.63	5945.80
MW-18	13-Jan-05	<1	<2	<2	<2	1.1	0.4		
MW-18	09-Feb-05	<1	<2	<2	<2	0.71	0.2	6.77	5945.66
MW-18	09-Mar-05	<1	<2	<2	<2	0.69		6.81	5945.62
MW-18	13-Apr-05	<1	<2	<2	<2	0.71		6.98	5945.45
MW-18	10-May-05	<1	<2	<2	<2	0.19	0.1	6.11	5946.32
MW-18	09-Jun-05	<1	<2	<2	<2	0.058		3.55	5948.88
MW-18	12-Jul-05	<1	<2	<2	<2	0.02			
MW-18	09-Aug-05	<1	<2	<2	<2	0.66		4.26	5948.17
MW-18	13-Sep-05	<1	<2	<2	<2	0.3	0.1	4.35	5948.08
MW-18	12-Oct-05	<1	<2	<2	<2	1.1			
MW-18	09-Nov-05	<1	<2	<2	<2	1.1		4.06	5948.37
MW-18	08-Dec-05	<1	<2	<2	<2	0.76		3.93	5948.50
MW-18	08-Dec-05	<1	<2	<2	<2	0.68		3.93	5948.50
MW-18	08-Dec-05	<0.5	<5	<0.5	NA	0.8		3.93	5948.50
MW-18	11-Jan-06	<1	<2	<2	<2	0.6	0.2	3.72	5948.71
MW-18	15-Feb-06	<1	<2	<2	<2	1.2		4.12	5948.31
MW-18	15-Mar-06	<1	<2	<2	<2	1.5		3.94	5948.49
MW-18	12-Apr-06	<1	<2	<2	<2	0.46		3.30	5949.13
MW-18	11-May-06	<1	<2	<2	<2	0.25	0.1	3.33	5949.10
MW-18	13-Jun-06	<0.5	<0.5	<0.5	<0.5	1.46			
MW-18	13-Jun-06	<1	<2	<2	<2	1.4			
MW-18	06-Sep-06	<1	<2	<2	<2	0.99	0.4	4.58	5947.85
MW-18	05-Dec-06	<1	<2	<2	<2	0.0057	0.0	4.02	5948.41
MW-18	13-Mar-07	<1	<2	<2	<2	0.0034	0.0	3.10	5949.33
MW-18	22-Jun-07	<1	<2	<2	<2	0.026			
MW-18	11-Sep-07	<1	<2	<2	<2	<0.0008		3.85	5948.58
MW-18	18-Dec-07	<1	<2	<2	<2	<0.0008		3.35	5949.08
MW-18	04-Mar-08	<1	<2	<2	<2	<0.0008		3.15	5949.28
MW-18	17-Jun-08	<1	<2	<2	<2	0.15		3.78	5948.65
MW-18	30-Sep-08	<1	<2	<2	<2	<0.0008		4.50	5947.93
MW-18	08-Dec-08	<1	<2	<2	<2	0.034		3.40	5949.03
MW-18	16-Mar-09	<1	<2	<2	<2	<0.0008		3.75	5948.68
MW-18	15-Jun-09	<1	<2	<2	<2	0.81		3.91	5948.52

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-18	16-Sep-09	<1	<2	<2	<2	<0.0008		4.50	5947.93
MW-18	15-Dec-09	<1	<2	<2	<2	0.042		4.10	5948.33
MW-18	29-Mar-10	<1	<2	<2	<2	0.0444		3.90	5948.53
MW-18	29-Jun-10	<1	<2	<2	<2	0.264		4.01	5948.42
MW-18	27-Sep-10	<1	<2	<2	<2	0.00498		4.09	5948.34
MW-18	13-Dec-10	<1	<2	<2	<2	<0.0008		3.50	5948.93
MW-18	28-Mar-11	<1	<2	<2	<2	0.0482		3.22	5949.21
MW-18	20-Jun-11	0.22	<2	<2	<2	0.0482		3.30	5949.13
MW-19	21-Sep-04	<1	2.4	<2	<2	1.6			
MW-19	13-Oct-04	<1	7.8	<2	<2	0.34		2.94	5966.50
MW-19	09-Nov-04	<1	10	<2	<2	4		4.20	5965.24
MW-19	13-Dec-04	<1	14	<2	<2	3.9		3.42	5966.02
MW-19	12-Jan-05	<1	9	<2	<2	2.6		3.32	5966.12
MW-19	08-Mar-05	<1	13	<2	<2	3.7		4.77	5964.67
MW-19	12-Apr-05	<1	<2	<2	<2	2.2		3.67	5965.77
MW-19	09-May-05	<1	9	<2	<2	1		3.37	5966.07
MW-19	08-Jun-05	<1	<2	<2	<2	2		2.71	5966.73
MW-19	11-Jul-05	<1	2.7	<2	<2	1.2		4.51	5964.93
MW-19	08-Aug-05	<1	5.7	<2	<2	1.7		2.83	5966.61
MW-19	12-Sep-05	<1	2.7	<2	<2	2.1		2.78	5966.66
MW-19	11-Oct-05	<1	3.1	<2	<2	2.2		2.63	5966.81
MW-19	07-Nov-05	<1	<2	<2	<2	2			
MW-19	11-Apr-06	<1	<2	<2	<2	0.95		4.05	5965.39
MW-19	10-May-06	<1	4.5	<2	<2	1.1		3.18	5966.26
MW-19	12-Jun-06	<1	<2	<2	<2	1.3			5969.44
MW-19	17-Jun-08								Flooded
MW-19	29-Sep-08								Lost
MW-19	08-Dec-08								Frozen
MW-19	16-Mar-09								Lost
MW-19	15-Jun-09								Flooded
MW-19	16-Sep-09								Flooded
MW-19	15-Dec-09								Flooded
MW-19									PLUGGED
MW-20	02-Sep-04	<1	<2	<2	<2	0.89			
MW-20	14-Oct-04	<1	<2	<2	<2	0.36		11.90	5941.98
MW-20	10-Nov-04	<1	<2	<2	<2	0.048		11.75	5942.13
MW-20	14-Dec-04	<1	<2	<2	<2	0.0078		11.12	5942.76
MW-20	13-Jan-05	<1	<2	<2	<2	0.0039			
MW-20	09-Feb-05	<1	<2	<2	<2	0.00092		10.54	5943.34
MW-20	09-Mar-05	<1	<2	<2	<2	0.0008		10.33	5943.55
MW-20	13-Apr-05	<1	<2	<2	<2	0.0011		10.23	5943.65
MW-20	10-May-05	<1	<2	<2	<2	0.002		9.83	5944.05
MW-20	09-Jun-05	<1	<2	<2	<2	0.0092		7.12	5946.76
MW-20	12-Jul-05	<1	<2	<2	<2	0.053			
MW-20	09-Aug-05	<1	<2	<2	<2	0.017		1.48	5952.40
MW-20	13-Sep-05	<1	<2	<2	<2	0.002		9.28	5944.60
MW-20	12-Oct-05	<1	<2	<2	<2	<0.0008		9.11	5944.77
MW-20	08-Nov-05	<1	<2	<2	<2	0.00084			
MW-20	08-Dec-05	<1	<2	<2	<2	<0.0008		8.27	5945.61
MW-20	11-Jan-06	<1	<2	<2	<2	<0.0008		8.06	5945.82
MW-20	15-Feb-06	<1	<2	<2	<2	<0.0008		7.96	5945.92
MW-20	15-Mar-06	<1	<2	<2	<2	<0.0008		7.73	5946.15
MW-20	11-Apr-06	<1	<2	<2	<2	<0.0008		7.35	5946.53
MW-20	11-May-06	<1	<2	<2	<2	0.00086		7.01	5946.87
MW-20	13-Jun-06	<1	<2	<2	<2	0.00855			

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-20	21-Jul-06	<1	<2	<2	<2	<0.0008			
MW-20	28-Jul-06	<1	<2	<2	<2	0.0011			
MW-20	04-Aug-06	<1	<2	<2	<2	<0.0008			
MW-20	11-Aug-06	<1	<2	<2	<2	<0.0008			
MW-20	16-Aug-06	<1	<2	<2	<2	0.0033			
MW-20	24-Aug-06	<1	<2	<2	<2	0.0022		9.71	5944.17
MW-20	31-Aug-06	<1	<2	<2	<2	0.0011		9.85	5944.03
MW-20	06-Sep-06	<1	<2	<2	<2	0.011		10.00	5943.88
MW-20	13-Sep-06	<1	<2	<2	<2	<0.0008		10.04	5943.84
MW-20	21-Sep-06	<1	<2	<2	<2	0.0015		9.96	5943.92
MW-20	27-Sep-06	<1	<2	<2	<2	0.00096		9.82	5944.06
MW-20	06-Oct-06	<1	<2	<2	<2	<0.0008		9.88	5944.00
MW-20	12-Oct-06	<1	<2	<2	<2	<0.0008		9.54	5944.34
MW-20	19-Oct-06	<1	<2	<2	<2	<0.0008		9.43	5944.45
MW-20	25-Oct-06	<1	<2	<2	<2	<0.0008		9.64	5944.24
MW-20	01-Nov-06	<1	<2	<2	<2	<0.0008		9.25	5944.63
MW-20	17-Nov-06	<1	<2	<2	<2	<0.0008		9.03	5944.85
MW-20	06-Dec-06	<1	<2	<2	<2	<0.0008		7.92	5945.96
MW-20	03-Jan-07	<1	<2	<2	<2	<0.0008			
MW-20	17-Jan-07	<1	<2	<2	<2	<0.0008			
MW-20	05-Feb-07	<1	<2	<2	<2	<0.0008			
MW-20	22-Feb-07	<1	<2	<2	<2	<0.0008		8.32	5945.56
MW-20	07-Mar-07	<1	<2	<2	<2	<0.0008		8.19	5945.69
MW-20	13-Mar-07	<1	<2	<2	<2	<0.0008		8.20	5945.68
MW-20	26-Mar-07	<1	<2	<2	<2	0.0012			
MW-20	11-Apr-07	<1	<2	<2	<2	<0.0008			
MW-20	25-Apr-07	<0.5	<5	<0.5	<2	<0.01			
MW-20	08-May-07	<0.5	<5	<0.5	<2	<0.01			
MW-20	22-Jun-07	<1	<2	<2	<2	0.0012			
MW-20	11-Sep-07	<1	<2	<2	<2	<0.0008		10.15	5943.73
MW-20	18-Dec-07	<1	<2	<2	<2	<0.0008		8.25	5945.63
MW-20	04-Mar-08	<1	<2	<2	<2	<0.0008		7.69	5946.19
MW-20	17-Jun-08	<1	<2	<2	<2	<0.0008		6.23	5947.65
MW-20	30-Sep-08	<1	<2	<2	<2	0.0035		9.75	5944.13
MW-20	08-Dec-08	<1	<2	<2	<2	0.0011		8.61	5945.27
MW-20	16-Mar-09	<1	<2	<2	<2	<0.0008		7.85	5946.03
MW-20	15-Jun-09	<1	<2	<2	<2	0.00089		6.98	5946.90
MW-20	16-Sep-09	<1	<2	<2	<2	<0.0008		9.96	5943.92
MW-20	15-Dec-09	<1	<2	<2	<2	<0.0008		9.00	5944.88
MW-20	29-Mar-10	<1	<2	<2	<2	<0.0008		8.31	5945.57
MW-20	29-Jun-10	<1	<2	<2	<2	0.00369		8.64	5945.24
MW-20	27-Sep-10	<1	<2	<2	<2	0.00466		10.10	5943.78
MW-20	13-Dec-10	<1	<2	<2	<2	0.00251		8.71	5945.17
MW-20	28-Mar-11	<1	<2	<2	<2	<0.0008		7.59	5946.29
MW-20	20-Jun-01	<1	<2	<2	<2	<0.0008		5.17	5948.71
MW-21	02-Sep-04	<1	<2	<2	<2	0.0087			
MW-21	14-Oct-04	<1	<2	<2	<2	0.0049		25.20	5944.25
MW-21	10-Nov-04	<1	<2	<2	<2	0.0011		24.80	5944.65
MW-21	14-Dec-04	<1	<2	<2	<2	0.0016		23.54	5945.91
MW-21	13-Jan-05	<1	<2	<2	<2	<0.0009			
MW-21	09-Feb-05	<1	<2	<2	<2	0.00086		23.68	5945.77
MW-21	09-Mar-05	<1	<2	<2	<2	<0.0008		23.56	5945.89
MW-21	13-Apr-05	<1	<2	<2	<2	<0.0008		23.33	5946.12
MW-21	10-May-05	<1	<2	<2	<2	<0.0008		22.79	5946.66
MW-21	09-Jun-05	<1	<2	<2	<2	0.0019		21.93	5947.52
MW-21	13-Jul-05	<1	<2	<2	<2	0.0028		22.24	5947.21



## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-21	09-Aug-05	<1	<2	<2	<2	0.0011		23.42	5946.03
MW-21	13-Sep-05	<1	<2	<2	<2	0.0011		24.43	5945.02
MW-21	12-Oct-05	<1	<2	<2	<2	0.0015		24.34	5945.11
MW-21	08-Nov-05	<1	<2	<2	<2	0.0013		23.89	5945.56
MW-21	08-Dec-05	<1	<2	<2	<2	0.00092		23.52	5945.93
MW-21	12-Jan-06	<1	<2	<2	<2	0.0013		23.37	5946.08
MW-21	15-Feb-06	<1	<2	<2	<2	0.0013		23.22	5946.23
MW-21	15-Mar-06	<1	<2	<2	<2	0.01		20.33	5949.12
MW-21	11-Apr-06	<1	<2	<2	<2	0.0022		22.48	5946.97
MW-21	11-May-06	<1	<2	<2	<2	0.0017		22.00	5947.45
MW-21	13-Jun-06	<1	<2	<2	<2	0.0032			
MW-21	21-Jul-06	<1	<2	<2	<2	0.0016			
MW-21	28-Jul-06	<1	<2	<2	<2	0.0019			
MW-21	04-Aug-06	<1	<2	<2	<2	0.001			
MW-21	11-Aug-06	<1	<2	<2	<2	0.0011			
MW-21	16-Aug-06	<1	<2	<2	<2	0.0023			
MW-21	24-Aug-06	<1	<2	<2	<2	0.0026		24.79	5944.66
MW-21	31-Aug-06	<1	<2	<2	<2	0.0036		24.87	5944.58
MW-21	06-Sep-06	<1	<2	<2	<2	0.0057		24.95	5944.50
MW-21	13-Sep-06	<1	<2	<2	<2	0.0031		25.31	5944.14
MW-21	21-Sep-06	<1	<2	<2	<2	0.0036		25.31	5944.14
MW-21	27-Sep-06	<1	<2	<2	<2	0.0039		25.08	5944.37
MW-21	06-Oct-06	<1	<2	<2	<2	0.0019		25.21	5944.24
MW-21	12-Oct-06	<1	<2	<2	<2	<0.0008		24.85	5944.60
MW-21	19-Oct-06	<1	<2	<2	<2	<0.0008		24.75	5944.70
MW-21	25-Oct-06	<1	<2	<2	<2	<0.0008		24.68	5944.77
MW-21	01-Nov-06	<1	<2	<2	<2	<0.0008		24.53	5944.92
MW-21	17-Nov-06	<1	<2	<2	<2	<0.0008		24.61	5944.84
MW-21	06-Dec-06	<1	<2	<2	<2	0.0019		24.26	5945.19
MW-21	03-Jan-07	<1	<2	<2	<2	<0.0008			
MW-21	17-Jan-07	<1	<2	<2	<2	<0.0008			
MW-21	05-Feb-07	<1	<2	<2	<2	<0.0008			
MW-21	22-Feb-07	<1	<2	<2	<2	<0.0008		23.68	5945.77
MW-21	07-Mar-07	<1	<2	<2	<2	0.00086		23.82	5945.63
MW-21	13-Mar-07	<1	<2	<2	<2	<0.0008		23.60	5945.85
MW-21	26-Mar-07	<1	<2	<2	<2	<0.0008			
MW-21	11-Apr-07	<1	<2	<2	<2	<0.0008			
MW-21	25-Apr-07	<0.5	<5	<0.5	<2	<0.0008			
MW-21	08-May-07	<0.5	<5	<0.5	<2	<0.0008			
MW-21	22-Jun-07	<1	<2	<2	<2	0.00095			
MW-21	11-Sep-07	<1	<2	<2	<2	0.0012		24.95	5944.50
MW-21	18-Dec-07	<1	<2	<2	<2	0.0038		23.81	5945.64
MW-21	04-Mar-08	<1	<2	<2	<2	<0.0008		23.12	5946.33
MW-21	17-Jun-08	<1	<2	<2	<2	<0.0008		20.80	5948.65
MW-21	30-Sep-08	<1	<2	<2	<2	0.0015		25.00	5944.45
MW-21	08-Dec-08	<1	<2	<2	<2	<0.0008		23.90	5945.55
MW-21	16-Mar-09	<1	<2	<2	<2	<0.0008		23.27	5946.18
MW-21	15-Jun-09	<1	<2	<2	<2	0.0011		21.55	5947.90
MW-21	16-Sep-09	<1	<2	<2	<2	0.002		25.12	5944.33
MW-21	15-Dec-09	<1	<2	<2	<2	<0.0008		24.24	5945.21
MW-21	29-Mar-10	<1	<2	<2	<2	<0.0008		23.76	5945.69
MW-21	29-Jun-10	<1	<2	<2	<2	0.00156		22.65	5946.80
MW-21	27-Sep-10	<1	<2	<2	<2	<0.0008		25.44	5944.01
MW-21	13-Dec-10	<1	<2	<2	<2	<0.0008		24.20	5945.25
MW-21	28-Mar-11	<1	<2	<2	<2	<0.0008		22.91	5946.54
MW-21	20-Jun-11	<1	<2	<2	<2	<0.0008		20.73	5948.72

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-22	21-Sep-04	<1	<2	<2	<2	0.025			
MW-22	14-Oct-04	<1	<2	<2	<2	0.061		13.50	5943.58
MW-22	10-Nov-04	<1	<2	<2	<2	0.023		13.20	5943.88
MW-22	14-Dec-04	<1	<2	<2	<2	0.069		12.42	5944.66
MW-22	13-Jan-05	<1	<2	<2	<2	0.03			
MW-22	09-Feb-05	<1	<2	<2	<2	0.0087		11.95	5945.13
MW-22	09-Mar-05	<1	<2	<2	<2	0.0043		11.89	5945.19
MW-22	09-Mar-05	<1	<2	<2	<2	0.0034		11.89	5945.19
MW-22	09-Mar-05	<0.5	<5	<0.5	<2	<0.01		11.89	5945.19
MW-22	13-Apr-05	<1	<2	<2	<2	0.0013		11.78	5945.30
MW-22	10-May-05	<1	<2	<2	<2	<0.0008		11.14	5945.94
MW-22	09-Jun-05	<1	<2	<2	<2	0.0066		8.11	5948.97
MW-22	12-Jul-05	<1	<2	<2	<2	0.021		8.64	5948.44
MW-22	09-Aug-05	<1	<2	<2	<2	0.0084		9.65	5947.43
MW-22	13-Sep-05	<1	<2	<2	<2	0.0025		10.56	5946.52
MW-22	12-Oct-05	<1	<2	<2	<2	0.004		10.56	5946.52
MW-22	08-Nov-05	<1	<2	<2	<2	0.0042		10.16	5946.92
MW-22	08-Dec-05	<1	<2	<2	<2	<0.0008		9.82	5947.26
MW-22	11-Jan-06	<1	<2	<2	<2	0.007		9.06	5948.02
MW-22	15-Feb-06	<1	<2	<2	<2	0.0015		9.79	5947.29
MW-22	15-Mar-06	<1	<2	<2	<2	0.009		9.51	5947.57
MW-22	11-Apr-06	<1	<2	<2	<2	0.0052		9.05	5948.03
MW-22	11-May-06	<1	<2	<2	<2	<0.0008		9.43	5947.65
MW-22	13-Jun-06	<1	<2	<2	<2	0.0014			
MW-22	06-Sep-06	<1	<2	<2	<2	0.049		10.00	5947.08
MW-22	05-Dec-06	<1	<2	<2	<2	0.00085		10.56	5946.52
MW-22	13-Mar-07	<1	<2	<2	<2	<0.0008		9.95	5947.13
MW-22	22-Jun-07	<1	<2	<2	<2	<0.0008			
MW-22	11-Sep-07	<1	<2	<2	<2	<0.0008		11.45	5945.63
MW-22	18-Dec-07	<1	<2	<2	<2	<0.0008		9.92	5947.16
MW-22	04-Mar-08	<1	<2	<2	<2	<0.0008		9.43	5947.65
MW-22	17-Jun-08	<1	<2	<2	<2	<0.0008		7.21	5949.87
MW-22	30-Sep-08	<1	<2	<2	<2	<0.0008		11.55	5945.53
MW-22	08-Dec-08	<1	<2	<2	<2	<0.0008		10.25	5946.83
MW-22	16-Mar-09	<1	<2	<2	<2	<0.0008		9.67	5947.41
MW-22	15-Jun-09	<1	<2	<2	<2	<0.0008		8.35	5948.73
MW-22	16-Sep-09	<1	<2	<2	<2	<0.0008		11.74	5945.34
MW-22	15-Dec-09	<1	<2	<2	<2	<0.0008		10.60	5946.48
MW-22	29-Mar-10	<1	<2	<2	<2	<0.0008		10.21	5946.87
MW-22	29-Jun-10	<1	<2	<2	<2	<0.0008		9.36	5947.72
MW-22	27-Sep-10	<1	<2	<2	<2	<0.0008		11.75	5945.33
MW-22	13-Dec-10	<1	<2	<2	<2	0.00085		10.11	5946.97
MW-22	28-Mar-11	<1	<2	<2	<2	<0.0008		9.29	5947.79
MW-22	20-Jun-11	<1	<2	<2	<2	<0.0008		7.24	5949.84
MW-23	23-Sep-04	<1	<2	<2	<2	3.7			
MW-23	14-Oct-04	<1	<2	<2	<2	5.5		17.05	5935.64
MW-23	10-Nov-04	<1	<2	<2	<2	6.1		17.20	5935.49
MW-23	14-Dec-04	<1	<2	<2	<2	6.6		15.71	5936.98
MW-23	13-Jan-05	<1	<2	<2	<2	7.2		16.02	5936.67
MW-23	10-Feb-05	<1	<2	<2	<2	4.3	0.0		
MW-23	09-Mar-05	<1	<2	<2	<2	4.1		16.58	5936.11
MW-23	13-Apr-05	<1	<2	<2	<2	7.5		16.08	5936.61
MW-23	11-May-05	<1	<2	<2	<2	4		14.51	5938.18
MW-23	09-Jun-05	<1	<2	<2	<2	4.9		13.15	5939.54
MW-23	13-Jul-05	<1	<2	<2	<2	3.4		13.33	5939.36
MW-23	10-Aug-05	<1	<2	<2	<2	3.6		15.14	5937.55

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-23	12-Sep-05	<1	<2	<2	<2	4.4		16.93	5935.76
MW-23	11-Oct-05	<1	<2	<2	<2	3.3			
MW-23	09-Nov-05	<1	<2	<2	<2	3.5			
MW-23	08-Dec-05	<1	<2	<2	<2	3.2		16.08	5936.61
MW-23	12-Jan-06	<1	<2	<2	<2	3		16.16	5936.53
MW-23	15-Feb-06	<1	<2	<2	<2	5.5		16.03	5936.66
MW-23	16-Mar-06	<1	<2	<2	<2	7.3		16.15	5936.54
MW-23	11-Apr-06	<1	<2	<2	<2	5.3		14.80	5937.89
MW-23	11-May-06	<1	<2	<2	<2	4.6		13.15	5939.54
MW-23	13-Jun-06	<1	<2	<2	<2	0.92			
MW-23	21-Jul-06	<1	<2	<2	<2	2.4			
MW-23	28-Jul-06	<1	<2	<2	<2	3.6			
MW-23	04-Aug-06	<1	<2	<2	<2	4.2			
MW-23	11-Aug-06	<1	<2	<2	<2	4			
MW-23	16-Aug-06	<1	<2	<2	<2	3.3			
MW-23	24-Aug-06	<1	<2	<2	<2	5.4			
MW-23	31-Aug-06	<1	<2	<2	<2	5		17.39	5935.30
MW-23	06-Sep-06	<1	<2	<2	<2	2.9		17.29	5935.40
MW-23	13-Sep-06	<1	<2	<2	<2	5.5		17.36	5935.33
MW-23	21-Sep-06	<1	<2	<2	<2	4.8		17.45	5935.24
MW-23	27-Sep-06	<1	<2	<2	<2	4		17.22	5935.47
MW-23	06-Oct-06	<1	<2	<2	<2	4.6		17.18	5935.51
MW-23	12-Oct-06	<1	<2	<2	<2	5.7		17.21	5935.48
MW-23	19-Oct-06	<1	<2	<2	<2	4.2		16.64	5936.05
MW-23	25-Oct-06	<1	<2	<2	<2	3.9		16.89	5935.80
MW-23	01-Nov-06	<1	<2	<2	<2	3.1		16.31	5936.38
MW-23	17-Nov-06	<1	<2	<2	<2	1.6		16.25	5936.44
MW-23	06-Dec-06	<1	<2	<2	<2	1.2		16.32	5936.37
MW-23	03-Jan-07	<1	<2	<2	<2	2.3			
MW-23	17-Jan-07	<1	<2	<2	<2	1.7			
MW-23	05-Feb-07	<1	<2	<2	<2	2.2			
MW-23	22-Feb-07	<1	<2	<2	<2	4		15.68	5937.01
MW-23	07-Mar-07	<1	<2	<2	<2	3.4		15.34	5937.35
MW-23	13-Mar-07	<1	<2	<2	<2	3.4	0.2	15.30	5937.39
MW-23	26-Mar-07	<1	<2	<2	<2	3.6			
MW-23	11-Apr-07	<1	<2	<2	<2	2.2			
MW-23	25-Apr-07	<0.5	<5	<2	<2	3.2			
MW-23	08-May-07	<0.5	<5	<2	<2	2.1			
MW-23	22-Jun-07	<1	<2	<2	<2	2.3			
MW-23	10-Sep-07	<1	<2	<2	<2	3.6		17.29	5935.40
MW-23	18-Dec-07	<1	<2	<2	<2	4.5		16.65	5936.04
MW-23	04-Mar-08	<1	<2	<2	<2	1.3		16.17	5936.52
MW-23	17-Jun-08	<1	<2	<2	<2	0.0012		12.16	5940.53
MW-23	29-Sep-08	<1	<2	<2	<2	0.72		17.10	5935.59
MW-23	08-Dec-08	<1	<2	<2	<2	0.45		14.77	5937.92
MW-23	16-Mar-09	<1	<2	<2	<2	0.37		15.52	5937.17
MW-23	15-Jun-09	<1	<2	<2	<2	<0.0008	<0.0008	11.62	5941.07
MW-23	16-Sep-09	<1	<2	<2	<2	<0.0008	<0.0008	17.00	5935.69
MW-23	16-Sep-09	<1	<2	<2	<2	0.0011		17.00	5935.69
MW-23	16-Dec-09	<1	<2	<2	<2	0.37		16.12	5936.57
MW-23	30-Mar-10	<1	<2	<2	<2	0.0724		15.69	5937.00
MW-23	30-Mar-10	<1	<2	<2	<2	0.0964		15.69	5937.00
MW-23	28-Jun-10	<1	<2	<2	<2	<0.0008		11.46	5941.23
MW-23	28-Jun-10	<1	<2	<2	<2	<0.0008		11.86	5940.83
MW-23	27-Sep-10								
MW-23	16-Dec-10	<1	<2	<2	<2	<0.0008		16.37	5936.32
MW-23	16-Dec-10	<1	<2	<2	<2	<0.0008		16.37	5936.32

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-23	28-Mar-11	<1	<2	<2	<2	0.012		15.30	5937.39
MW-23	20-Jun-11	<1	<2	<2	<2	0.012		11.08	5941.61
MW-24	21-Sep-04	<1	<2	<2	<2	<0.0008			
MW-24	14-Oct-04	<1	<2	<2	<2	0.00082		5.25	5949.66
MW-24	10-Nov-04	<1	<2	<2	<2	<0.0008		6.00	5948.91
MW-24	14-Dec-04	<1	<2	<2	<2	<0.0008		6.54	5948.37
MW-24	13-Jan-05	<1	<2	<2	<2	<0.0008			
MW-24	10-Feb-05	<1	<2	<2	<2	<0.0008			
MW-24	09-Mar-05	<1	<2	<2	<2	<0.0008		6.95	5947.96
MW-24	13-Apr-05	<1	<2	<2	<2	<0.0008		7.28	5947.63
MW-24	11-May-05	<1	<2	<2	<2	<0.0008		2.64	5952.27
MW-24	09-Jun-05	<1	<2	<2	<2	<0.0008		7.08	5947.83
MW-24	13-Jul-05	<1	<2	<2	<2	<0.0008			
MW-24	10-Aug-05	<1	<2	<2	<2	<0.0008		5.02	5949.89
MW-24	10-Aug-05	<1	<2	<2	<2	<0.0008		5.02	5949.89
MW-24	10-Aug-05	<0.5	<5	<0.5	1.9	<0.01		5.02	5949.89
MW-24	12-Sep-05	<1	<2	<2	<2	<0.0008		5.35	5949.56
MW-24	12-Oct-05	<1	<2	<2	<2	<0.0008		5.83	5949.08
MW-24	09-Nov-05	<1	<2	<2	<2	<0.0008			
MW-24	09-Nov-05	<0.5	<5	<0.5	NA	<0.01			
MW-24	09-Nov-05	<1	<2	<2	<2	<0.0008			
MW-24	08-Dec-05	<1	<2	<2	<2	<0.0008		5.82	5949.09
MW-24	10-Jan-06	<1	<2	<2	<2	<0.0008		5.88	5949.03
MW-24	15-Feb-06	<1	<2	<2	<2	<0.0008		6.18	5948.73
MW-24	15-Feb-06	<1	<2	<2	<2	<0.0008		6.18	5948.73
MW-24	15-Feb-06	<0.5	<0.5	<0.5	<0.5	<0.0034		6.18	5948.73
MW-24	16-Mar-06	<1	<2	<2	<2	0.002		6.45	5948.46
MW-24	13-Apr-06	<1	<2	<2	<2	<0.0008		6.13	5948.78
MW-24	11-May-06	<1	<2	<2	<2	<0.0008		6.78	5948.13
MW-24	13-Jun-06	<1	<2	<2	<2	<0.0008			
MW-24	06-Sep-06	<1	<2	<2	<2	<0.0008		5.23	5949.68
MW-24	06-Dec-06	<1	<2	<2	<2	<0.0008		5.36	5949.55
MW-24	06-Dec-06	<0.25	<0.25	<0.25	<0.25	0.00028		5.36	5949.55
MW-24	12-Mar-07	<1	<2	<2	<2	<0.0008		5.80	5949.11
MW-24	22-Jun-07	<1	<2	<2	<2	<0.0008			
MW-24	10-Sep-07	<1	<2	<2	<2	0.021		5.15	5949.76
MW-24	18-Dec-07	<1	<2	<2	<2	<0.0008		5.41	5949.50
MW-24	05-Mar-08	<1	<2	<2	<2	<0.0008		5.01	5949.90
MW-24	17-Jun-08	<1	<2	<2	<2	<0.0008		6.15	5948.76
MW-24	01-Oct-08	<1	<2	<2	<2	0.004		4.85	5950.06
MW-24	10-Dec-08	<1	<2	<2	<2	<0.0008		4.58	5950.33
MW-24	10-Dec-08	<1	<2	<2	<2	<0.0008		4.58	5950.33
MW-24	10-Dec-08	<1	<1	<1	<1	<0.001		4.58	5950.33
MW-24	17-Mar-09	<1	<2	<2	<2	<0.0008		5.45	5949.46
MW-24	16-Jun-09	<1	<2	<2	<2	0.014		3.89	5951.02
MW-24	17-Sep-09	<1	<2	<2	<2	0.6		4.38	5950.53
MW-24	16-Dec-09	<1	<2	<2	<2	<0.0008		5.52	5949.39
MW-24	31-Mar-10	<1	<2	<2	<2	<0.0008		5.41	5949.50
MW-24	29-Jun-10	<1	<2	<2	<2	0.00178		4.85	5950.06
MW-24	27-Sep-10	<1	<2	<2	<2	0.00418		4.68	5950.23
MW-24	16-Dec-10	<1	<2	<2	<2	<0.0008		4.92	5949.99
MW-24	29-Mar-11	<1	<2	<2	<2	<0.0008		5.26	5949.65
MW-24	21-Jun-11	<1	<2	<2	<2	<0.0008		5.30	5949.61
MW-25	21-Sep-04	<1	<2	<2	<2	0.093			
MW-25	13-Oct-04	<1	<2	<2	<2	0.029		2.57	5969.22

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-25	09-Nov-04	<1	<2	<2	<2	0.06		3.30	5968.49
MW-25	13-Dec-04	<1	<2	<2	<2	0.087		2.54	5969.25
MW-25	08-Mar-05	<1	<2	<2	<2	0.17		4.02	5967.77
MW-25	12-Apr-05	<1	<2	<2	<2	0.065		4.74	5967.05
MW-25	09-May-05	<1	<2	<2	<2	0.08		2.89	5968.90
MW-25	08-Jun-05	<1	<2	<2	<2	0.067		2.08	5969.71
MW-25	11-Jul-05	<1	<2	<2	<2	0.041			
MW-25	08-Aug-05	<1	<2	<2	<2	0.06		2.51	5969.28
MW-25	12-Sep-05	<1	<2	<2	<2	0.4		2.68	5969.11
MW-25	11-Oct-05	<1	<2	<2	<2	0.0079		2.51	5969.28
MW-25	07-Nov-05	<1	<2	<2	<2	0.034			
MW-25	11-Apr-06	<1	<2	<2	<2	0.13		2.75	5969.04
MW-25	10-May-06	<1	<2	<2	<2	0.14		2.65	5969.14
MW-25	12-Jun-06	<1	<2	<2	<2	0.06			
MW-25	06-Sep-06	<1	<2	<2	<2	0.068		2.42	5969.37
MW-25	13-Mar-07	<1	<2	<2	<2	0.076			
MW-25	21-Jun-07	<1	<2	<2	<2	0.2			
MW-25	12-Sep-07	<1	<2	<2	<2	0.0023		2.71	5969.08
MW-25	17-Jun-08	<1	<2	<2	<2	0.0025		2.51	5969.28
MW-25	29-Sep-08								Lost
MW-25	08-Dec-08								Frozen
MW-25	17-Mar-09	<1	<2	<2	<2	<0.0008		3.30	5968.49
MW-25	15-Jun-09	<1	<2	<2	<2	0.011		4.03	5967.76
MW-25	17-Sep-09	<1	<2	<2	<2	0.11		3.73	5968.06
MW-25	15-Dec-09								Frozen
MW-25	29-Mar-10	<1	<2	<2	<2	0.004		4.04	5967.75
MW-25	28-Jun-10	<1	2	<2	<2	0.0103		3.40	5968.39
MW-25 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-25	27-Sep-10	<1	<2	<2	<2	0.0519		3.74	5968.05
MW-25	13-Dec-10								
MW-25	29-Mar-11								
MW-25	20-Jun-11	<1	<2	<2	<2			2.67	5969.12
MW-26	21-Sep-04	<1	<2	<2	<2	0.82			
MW-26	14-Oct-04	<1	<2	<2	<2	1.4		4.15	5950.50
MW-26	10-Nov-04	<1	<2	<2	<2	4		4.90	5949.75
MW-26	14-Dec-04	<1	<2	<2	<2	2.4		4.81	5949.84
MW-26	13-Jan-05	<0.5	<5	<0.5	NA	0.5		5.79	5948.86
MW-26	13-Jan-05	<1	<2	<2	<2	2.4		5.79	5948.86
MW-26	13-Jan-05	<1	<2	<2	<2	2.1		5.79	5948.86
MW-26	10-Feb-05	<0.5	<5	<0.5	NA	2.9			
MW-26	10-Feb-05	<1	<2	<2	<2	3.2			
MW-26	10-Feb-05	<1	<2	<2	<2	2.9			
MW-26	09-Mar-05	<1	<2	<2	<2	3.4		4.25	5950.40
MW-26	13-Apr-05	<1	<2	<2	<2	3.3		4.15	5950.50
MW-26	13-Apr-05	<1	<2	<2	<2	3.3		4.15	5950.50
MW-26	13-Apr-05	<0.5	<2	<0.5	NA	3.7		4.15	5950.50
MW-26	11-May-05	<1	<2	<2	<2	2.1		1.77	5952.88
MW-26	11-May-05	<0.5	<5	<0.5	NA	0.38		1.77	5952.88
MW-26	11-May-05	<1	<2	<2	<2	2.3		1.77	5952.88
MW-26	08-Jun-05	<1	<2	<2	<2	2.8		1.79	5952.86
MW-26	12-Jul-05	<1	<2	<2	<2	1.5		1.79	5952.86
MW-26	09-Aug-05	<1	<2	<2	<2	1		1.48	5953.17
MW-26	13-Sep-05	<1	<2	<2	<2	0.97		1.32	5953.33
MW-26	13-Sep-05	<1	<2	<2	<2	0.99		1.32	5953.33
MW-26	13-Sep-05	<0.5	<5	<0.5	NA	1.5		1.32	5953.33
MW-26	11-Oct-05	<1	<2	<2	<2	0.48		1.45	5953.20

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-26	09-Nov-05	<1	<2	<2	<2	1.4		1.79	5952.86
MW-26	08-Dec-05	<1	<2	<2	<2	0.86		1.75	5952.90
MW-26	12-Jan-06	<1	<2	<2	<2	1.2		1.65	5953.00
MW-26	15-Feb-06	<1	<2	<2	<2	1		1.64	5953.01
MW-26	16-Mar-06	<1	<2	<2	<2	0.83		1.48	5953.17
MW-26	16-Mar-06	<0.25	<0.25	<0.25	<0.25	0.000377		1.48	5953.17
MW-26	12-Apr-06	<1	<2	<2	<2	0.45		1.13	5953.52
MW-26	12-Apr-06	<0.25	<0.25	<0.25	<0.25	0.858		1.13	5953.52
MW-26	11-May-06	<1	<2	<2	<2	0.75		1.55	5953.10
MW-26	11-May-06	<0.5	<0.5	<0.5	<0.5	0.877		1.55	5953.10
MW-26	13-Jun-06	<1	<2	<2	<2	0.63			
MW-26	13-Jun-06	<0.5	<0.5	<0.5	<0.5	0.767			
MW-26	07-Sep-06	<1	<5	<2	<2	1.5		1.20	5953.45
MW-26	06-Dec-06	<0.25	<0.25	<0.25	<0.25	0.355		0.98	5953.67
MW-26	06-Dec-06	<1	<2	<2	<2	1.1		0.98	5953.67
MW-26	06-Dec-06	<1	<2	<2	<2	0.76		0.98	5953.67
MW-26	12-Mar-07	<1	<2	<2	<2	0.56		0.70	5953.95
MW-26	21-Jun-07	<1	<2	<2	<2	0.62			
MW-26	11-Sep-07	<1	<2	<2	<2	1.4		1.00	5953.65
MW-26	18-Dec-07	<1	<2	<2	<2	0.036		1.73	5952.92
MW-26	04-Mar-08	<1	<2	<2	<2	0.35		0.60	5954.05
MW-26	17-Jun-08	<1	<2	<2	<2	0.55		1.30	5953.35
MW-26	17-Jun-08	<1	<1	<1	<2			1.30	5953.35
MW-26	01-Oct-08	<1	<2	<2	<2	1		1.60	5953.05
MW-26	09-Dec-08	<1	<2	<2	<2	0.73		1.25	5953.40
MW-26	09-Dec-08	<1	<2	<2	<2	0.79		1.25	5953.40
MW-26	09-Dec-08	<1	<1	<1	<1	0.145		1.25	5953.40
MW-26	17-Mar-09	<1	<2	<2	<2	0.14		1.59	5953.06
MW-26	16-Jun-09	<1	<2	<2	<2	0.33		1.00	5953.65
MW-26	17-Sep-09	<1	<2	<2	<2	0.049		1.60	5953.05
MW-26	16-Dec-09	<1	<2	<2	<2	0.27		1.60	5953.05
MW-26	16-Dec-09	<1	<2	<2	<2	0.33		1.60	5953.05
MW-26	31-Mar-10	<1	<2	<2	<2	1.25		1.24	5953.41
MW-26	28-Jun-10	<1	<2	<2	<2	0.778		1.09	5953.56
MW-26	27-Sep-10	<1	<2	<2	<2	0.512		1.18	5953.47
MW-26	27-Sep-10	<1	<2	<2	<2	0.569		1.18	5953.47
MW-26	13-Dec-10	<1	<2	<2	<2	0.473		1.04	5953.61
MW-26	13-Dec-10	<1	<2	<2	<2	0.454		1.04	5953.61
MW-26	29-Mar-11	<1	<2	<2	<2	0.722		0.70	5953.95
MW-26	20-Jun-11	<1	<2	<2	<2	0.722		0.00	5954.65
MW-27	23-Sep-04	<1	<2	<2	<2	0.00095			
MW-27	14-Oct-04	<1	<2	<2	<2	<0.0008		9.72	5946.50
MW-27	10-Nov-04	<1	<2	<2	<2	0.0011		7.30	5948.92
MW-27	14-Dec-04	<1	<2	<2	<2	0.00091		6.74	5949.48
MW-27	13-Jan-05	<1	<2	<2	<2	<0.0009		7.39	5948.83
MW-27	10-Feb-05	<1	<2	<2	<2	<0.0008			
MW-27	09-Mar-05	<1	<2	<2	<2	<0.0008		9.29	5946.93
MW-27	13-Apr-05	<1	<2	<2	<2	<0.0008		8.02	5948.20
MW-27	11-May-05	<1	<2	<2	<2	<0.0008		5.56	5950.66
MW-27	09-Jun-05	<1	<2	<2	<2	<0.0008		4.67	5951.55
MW-27	13-Jul-05	<1	<2	<2	<2	<0.0008		13.33	5942.89
MW-27	10-Aug-05	<1	<2	<2	<2	<0.0008		8.39	5947.83
MW-27	12-Sep-05	<1	<2	<2	<2	<0.0008		9.87	5946.35
MW-27	11-Oct-05	<1	<2	<2	<2	<0.0008			
MW-27	09-Nov-05	<1	<2	<2	<2	0.00086			
MW-27	08-Dec-05	<1	<2	<2	<2	<0.0008		8.23	5947.99

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
MW-27	12-Jan-06	<1	<2	<2	<2	<0.0008		9.06	5947.16
MW-27	15-Feb-06	<1	<2	<2	<2	<0.0008		9.57	5946.65
MW-27	16-Mar-06	<1	<2	<2	<2	<0.0008		7.91	5948.31
MW-27	11-Apr-06	<1	<2	<2	<2	0.00083		6.45	5949.77
MW-27	11-May-06	<1	<2	<2	<2	<0.0008		4.15	5952.07
MW-27	13-Jun-06	<1	<2	<2	<2	<0.0008			
MW-27	06-Sep-06	<1	<2	<2	<2	<0.0008		11.04	5945.18
MW-27	06-Dec-06	<1	<2	<2	<2	<0.0008		8.82	5947.40
MW-27	13-Mar-07	<1	<2	<2	<2	<0.0008		5.90	5950.32
MW-27	22-Jun-07	<1	<2	<2	<2	<0.0008			
MW-27	10-Sep-07	<1	<2	<2	<2	<0.0008		11.21	5945.01
MW-27	18-Dec-07	<1	<2	<2	<2	<0.0008		10.95	5945.27
MW-27	04-Mar-08	<1	<2	<2	<2	<0.0008		9.75	5946.47
MW-27	17-Jun-08	<1	<2	<2	<2	<0.0008		5.47	5950.75
MW-27	29-Sep-08	<1	<2	<2	<2	<0.0008	<0.0008	11.35	5944.87
MW-27	09-Dec-08	<1	<2	<2	<2	<0.0008	<0.0008	5.75	5950.47
MW-27	16-Mar-09	<1	<2	<2	<2	<0.0008		8.21	5948.01
MW-27	15-Jun-09	<1	<2	<2	<2	<0.0008		3.85	5952.37
MW-27	16-Sep-09	<1	<2	<2	<2	0.0015		11.42	5944.80
MW-27	16-Dec-09	<1	<2	<2	<2	<0.0008		8.90	5947.32
MW-27	30-Mar-10	<1	<2	<2	<2	<0.0008		6.78	5949.44
MW-27	28-Jun-10	<1	2.1	<2	<2	<0.0008		6.31	5949.91
MW-27 <sup>a</sup>	21-Jul-20	<1	<2	<2	<2				
MW-27	27-Sep-10								
MW-27	16-Dec-10	<1	<2	<2	<2	<0.0008		9.58	5946.64
MW-27	28-Mar-11	<1	<2	<2	<2	<0.0008		5.84	5950.38
MW-27	20-Jun-11	<1	<2	<2	<2	<0.0008		3.68	5952.54
EP-01	08-Apr-04	<1	<2	<2	<2	0.015			
E2	16-Sep-04	<1	<2	<2	<2	0.16			
E2	20-Apr-05	<1	<2	<2	<2	0.0015			
E2	18-May-05	<1	<2	<2	<2	0.0035			
E2	09-Jun-05	<1	<2	<2	<2	0.43			
E2-D	09-Jun-05	<1	<2	<2	<2	0.51			
E2-S	09-Jun-05	<0.5	<5	<0.5	<1.5	0.13			
E2	13-Jul-05	<1	<2	<2	<2	0.41			
E2	10-Aug-05	<1	<2	<2	<2	0.23			
E2	08-Sep-05	<1	<2	<2	<2	0.11			
E2	06-Oct-05	<1	<2	<2	<2	0.12			
E2	03-Nov-05	<1	<2	<2	<2	0.095			
E2	12-Dec-05	<1	<2	<2	<2	0.0012			
E2	10-Jan-06	<1	<2	<2	<2	0.037			
E2	15-Feb-06	<1	<2	<2	<2	0.027			
E2	16-Mar-06	<1	<2	<2	<2	0.13			
E2	11-Apr-06	<1	<2	<2	<2	0.16			
E2	03-May-06	<1	<2	<2	<2	0.14			
E2	06-Jun-06	<1	<2	<2	<2	0.059			
E2	21-Jul-06	<1	<2	<2	<2	0.16			
E2	28-Jul-06	<1	<2	<2	<2	0.068			
E2	04-Aug-06	<1	<2	<2	<2	0.085			
E2	11-Aug-06	<1	<2	<2	<2	0.051			
E2	16-Aug-06	<1	<2	<2	<2	0.064			
E2	24-Aug-06	<1	<2	<2	<2	0.05			
E2	31-Aug-06	<1	<2	<2	<2	0.041			
E2	06-Sep-06	<1	<2	<2	<2	0.038			
E2	13-Sep-06	<1	<2	<2	<2	0.03			
E2	21-Sep-06	<1	<2	<2	<2	0.052			

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
E2	27-Sep-06	<1	<2	<2	<2	0.018			
E2	06-Oct-06	<1	<2	<2	<2	0.013			
E2	12-Oct-06	<1	<2	<2	<2	0.028			
E2	19-Oct-06	<1	<2	<2	<2	0.016			
E2	25-Oct-06	<1	<2	<2	<2	0.0061			
E2-D	25-Oct-06	<1	<2	<2	<2	0.0098			
E2-S	25-Oct-06	<0.25	<0.25	<0.25	<0.5	0.00274			
E2	01-Nov-06	<1	<2	<2	<2	0.0076			
E2	17-Nov-06	<1	<2	<2	<2	0.0025			
E2	06-Dec-06	<1	<2	<2	<2	0.0067			
E2	03-Jan-07	<1	<2	<2	<2	0.0075			
E2	17-Jan-07	<1	<2	<2	<2	0.0095			
E2	05-Feb-07	<1	<2	<2	<2	0.011			
E2	22-Feb-07	<1	<2	<2	<2	0.024			
E2	07-Mar-07	<1	<2	<2	<2	0.02			
E2	13-Mar-07	<1	<2	<2	<2	0.018			
E2	26-Mar-07	<1	<2	<2	<2	0.032			
E2	11-Apr-07	<1	<2	<2	<2	0.049			
E2	25-Apr-07	<0.5	<5	<0.5	NS	0.055			
E2	08-May-07	<0.5	<5	<0.5	NS	0.054			
E2	30-May-07	<1	<2	<2	<2	0.012			
E2	13-Jun-07	<1	<2	<2	<2	0.0095			
E2	22-Jun-07	<1	<2	<2	<2	0.0096			
E2	05-Jul-07	<1	<2	<2	<2	0.017			
E2	20-Jul-07	<1	<2	<2	<2	0.047			
E2	02-Aug-07	<1	<2	<2	<2	0.082			
E2	15-Aug-07	<1	<2	<2	<2	0.1			
E2	10-Sep-07	<1	<2	<2	<2	0.043			
E2	24-Sep-07	<1	<2	<2	<2	0.11			
E2	09-Oct-07	<1	<2	<2	<2	<0.0008			
E2	24-Oct-07	<0.5	<5	<0.5	<2	<0.0008			
EDC-1	02-Nov-07	<1	<2	<2	<2	0.0041			
EDC-2	02-Nov-07	<0.5	<5	<0.5	NS	0.0089			
E2	07-Nov-07	<0.5	<5	<0.5	<2	<0.0008			
E2	20-Nov-07	<1	<2	<2	<2	<0.0008			
E2	04-Dec-07	<1	<2	<2	<2	<0.0008			
E2	18-Dec-07	<1	<2	<2	<2	<0.0008			
E2	03-Jan-08	<1	<2	<2	<2	0.012			
E2	04-Mar-08	<1	<2	<2	<2	0.0095			



## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft-bmp)	Groundwater Elevation (ft-msl)
EICH1	21-May-08	<0.5	<5	<0.5	<1.5	< 0.01			
ECH2WW	29-Sep-08	<1	<2	<2	<2	<0.0008			
EICH1	01-Dec-08	<0.5	<5	<0.5	<1.5	< 0.010			
EICH2	16-Mar-09	<1	<2	<2	<2	<0.0008			
EICH2	15-Jun-09	<1	<2	<2	<2	0.087			
EICH2WW	16-Sep-09	<1	<2	<2	<2	0.1			
EICH2	16-Dec-09	<1	<2	<2	<2	<0.0008			
EICH2	30-Mar-10	<1	<2	<2	<2	0.0254			
EICH2	29-Jun-10	<1	<2	<2	<2	0.014			
EICH2	27-Sep-10								
EICH2	16-Dec-10	<1	<2	<2	<2	<0.0008			
EICH2	29-Mar-11	<1	<2	<2	<2	0.0283			
EICH2	20-Jun-11	<1	<2	<2	<2	0.0283			
LANGWW	17-Sep-09	<1	<2	<2	<2	< 0.0008			
<b>Bold - indicates value exceeds state standard</b>		<sup>a</sup> - Resampled due to suspected laboratory error							
mg/l - milligrams/liter		DTW - depth to water below measuring point				ft-msl - feet above mean sea level			
ug/l - micrograms/liter		<b>ft - feet</b>							
Total number of all groundwater samples over all dates = 1252						Blank cell - indicates not analyzed or not obtained			

## **APPENDIX C**

**Historical Surface-Water Results  
included as .pdf file on CD in back**

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-1	13-Apr-04	<1	<2	<2	<2	0.0055	
DCS-1	14-Apr-04	<1	<2	<2	<2	0.0039	
DCS-1	15-Apr-04	<1	<2	<2	<2	0.0077	
DCS-1	16-Apr-04	<1	<2	<2	<2	0.011	
DCS-1	17-Apr-04	<1	<2	<2	<2	0.015	
DCS-1	18-Apr-04	<1	<2	<2	<2	0.018	
DCS-1	19-Apr-04	<1	<2	<2	<2	0.0031	
DCS-1	26-Apr-04	<1	<2	<2	<2	0.003	
DCS-1	29-Apr-04	<1	<2	<2	<2	0.0015	
DCS-1	03-May-04	<1	<2	<2	<2	0.0011	
DCS-1	02-Jun-04	<1	<2	<2	<2	0.0013	
DCS-1	08-Jul-04	<1	<2	<2	<2	0.0016	
DCS-1	03-Aug-04	<1	<2	<2	<2	0.0025	
DCS-1	14-Sep-04	<1	<2	<2	<2	0.0014	
DCS-1	12-Oct-04	<1	<2	<2	<2	0.02	
DCS-1	26-Oct-04	<1	<2	<2	<2	0.026	
DCS-1	27-Oct-04	<1	<2	<2	<2	0.021	
DCS-1	28-Oct-04	<1	<2	<2	<2	0.023	
DCS-1	29-Oct-04	<1	<2	<2	<2	0.027	
DCS-1	30-Oct-04	<1	<2	<2	<2	0.026	
DCS-1	31-Oct-04	<1	<2	<2	<2	0.028	
DCS-1	01-Nov-04	<1	<2	<2	<2	0.027	
DCS-1	02-Nov-04	<1	<2	<2	<2	0.05	
DCS-1	03-Nov-04	<1	<2	<2	<2	0.029	
DCS-1	04-Nov-04	<1	<2	<2	<2	0.042	
DCS-1	05-Nov-04	<1	<2	<2	<2	0.035	
DCS-1	06-Nov-04	<1	<2	<2	<2	0.037	
DCS-1	07-Nov-04	<1	<2	<2	<2	0.032	
DCS-1	08-Nov-04	<1	<2	<2	<2	0.018	
DCS-1	09-Nov-04	<1	<2	<2	<2	0.022	
DCS-1	10-Nov-04	<1	<2	<2	<2	0.024	
DCS-1	11-Nov-04	<1	<2	<2	<2	0.026	
DCS-1	12-Nov-04	<1	<2	<2	<2	0.028	
DCS-1	19-Nov-04	<1	<2	<2	<2	0.033	
DCS-1	23-Nov-04	<1	<2	<2	<2	0.057	
DCS-1	02-Dec-04	<1	<2	<2	<2	0.086	
DCS-1	09-Dec-04	<1	<2	<2	<2	0.002	
DCS-1	15-Dec-04	<1	<2	<2	<2	0.0019	
DCS-1	20-Dec-04	<1	<2	<2	<2	0.002	
DCS-1	23-Dec-04	<1	<2	<2	<2	0.0013	
DCS-1	06-Jan-05	<1	<2	<2	<2	0.0015	
DCS-1	10-Jan-05	<1	<2	<2	<2	0.0022	
DCS-1	10-Jan-05	<1	<2	<2	<2	0.0023	
DCS-1	10-Jan-05	<0.5	<5	<0.5	NA	<0.01	
DCS-1	20-Jan-05	<1	<2	<2	<2	0.0013	
DCS-1	26-Jan-05	<1	<2	<2	<2	0.00095	
DCS-1	04-Feb-05	<1	<2	<2	<2	0.0013	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-1	07-Feb-05	<1	<2	<2	<2	0.0013	
DCS-1	16-Feb-05	<1	<2	<2	<2	0.0013	
DCS-1	24-Feb-05	<1	<2	<2	<2	0.0011	
DCS-1	03-Mar-05	<1	<2	<2	<2	0.0013	
DCS-1	07-Mar-05	<1	<2	<2	<2	0.0014	
DCS-1	07-Mar-05	<1	<2	<2	<2	0.0014	
DCS-1	07-Mar-05	<0.5	<5	<0.5	NA	<0.01	
DCS-1	18-Mar-05	<1	<2	<2	<2	0.0011	
DCS-1	23-Mar-05	<1	<2	<2	<2	0.0063	
DCS-1	29-Mar-05	<1	<2	<2	<2	<0.0008	
DCS-1	07-Apr-05	<1	<2	<2	<2	0.0062	
DCS-1	11-Apr-05	<1	<2	<2	<2	0.01	
DCS-1	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-1	27-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-1	05-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	09-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	18-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	25-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	02-Jun-05	<1	<2	<2	<2	0.0018	
DCS-1	08-Jun-05	<1	<2	<2	<2	0.0019	
DCS-1	15-Jun-05	<1	<2	<2	<2	0.0026	
DCS-1	21-Jun-05	<1	<2	<2	<2	0.0011	
DCS-1	30-Jun-05	<1	<2	<2	<2	0.0012	
DCS-1	07-Jul-05	<1	<2	<2	<2	0.0013	
DCS-1	11-Jul-05	<1	<2	<2	<2	0.0013	
DCS-1	21-Jul-05	<1	<2	<2	<2	0.0018	
DCS-1	27-Jul-05	<1	<2	<2	<2	0.0011	
DCS-1	03-Aug-05	<1	<2	<2	<2	0.0014	
DCS-1	08-Aug-05	<1	<2	<2	<2	0.0014	
DCS-1	16-Aug-05	<1	<2	<2	<2	0.0022	
DCS-1	24-Aug-05	<1	<2	<2	<2	0.0015	
DCS-1	02-Sep-05	<1	<2	<2	<2	0.0017	
DCS-1	09-Sep-05	<1	<2	<2	<2	0.0021	
DCS-1	13-Sep-05	<1	<2	<2	<2	0.0014	
DCS-1	22-Sep-05	<1	<2	<2	<2	<0.0008	
DCS-1	29-Sep-05	<1	<2	<2	<2	<0.0008	
DCS-1	06-Oct-05	<1	<2	<2	<2	0.006	
DCS-1	10-Oct-05	<1	<2	<2	<2	0.0015	
DCS-1	20-Oct-05	<1	<2	<2	<2	0.0063	
DCS-1	27-Oct-05	<1	<2	<2	<2	0.0061	
DCS-1	03-Nov-05	<1	<2	<2	<2	0.0012	
DCS-1	07-Nov-05	<1	<2	<2	<2	0.0012	
DCS-1	17-Nov-05	<1	<2	<2	<2	0.0011	
DCS-1	22-Nov-05	<1	<2	<2	<2	0.0017	
DCS-1	29-Nov-05	<1	<2	<2	<2	0.0016	
DCS-1	06-Dec-05	<1	<2	<2	<2	0.0013	
DCS-1	14-Dec-05	<1	<2	<2	<2	0.0014	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-1	21-Dec-05	<1	<2	<2	<2	<0.0008	
DCS-1	29-Dec-05	<1	<2	<2	<2	<0.0008	
DCS-1	05-Jan-06	<1	<2	<2	<2	<0.0008	
DCS-1	09-Jan-06	<1	<2	<2	<2	<0.0008	
DCS-1	18-Jan-06	<1	<2	<2	<2	<0.0008	
DCS-1	24-Jan-06	<1	<2	<2	<2	0.0011	
DCS-1	01-Feb-06	<1	<2	<2	<2	0.00089	
DCS-1	09-Feb-06	<0.5	<1	<1	NA	0.003	
DCS-1	13-Feb-06	<0.5	<1	<1	NA	<0.0008	
DCS-1	22-Feb-06	<1	<2	<2	<2	0.00081	
DCS-1	01-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-1	09-Mar-06	<1	<2	<2	<2	0.00084	
DCS-1	14-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-1	22-Mar-06	<1	<2	<2	<2	0.0017	
DCS-1	30-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-1	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	20-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-1	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-1	13-Jun-06	<1	<2	<2	<2	0.0016	
DCS-1	05-Sep-06	<1	<5	<2	<2	0.0019	
DCS-1	04-Dec-06	<1	<5	<2	<2	0.0015	
DCS-1	04-Dec-06	<0.25	<0.25	<0.25	NA	0.0005	
DCS-1	12-Mar-07	<1	<5	<2	<2	<0.0008	
DCS-1	21-Jun-07	<1	<2	<2	<2	<0.0008	
DCS-1	13-Sep-07	<1	<2	<2	<2	0.0018	
DCS-1	17-Dec-07	<1	<2	<2	<2	0.0015	
DCS-1	03-Mar-08	<1	<2	<2	<2	<0.0008	
DCS-1	18-Jun-08	<1	<2	<2	<2	0.0012	
DCS-1	29-Sep-08	<1	<2	<2	<2	0.0019	
DCS-1	10-Dec-08	<1	<2	<2	<2	<0.0008	
DCS-1	17-Mar-09	<1	<2	<2	<2	<0.0008	
DCS-1	17-Mar-09	<1	<2	<2	<2	<0.0008	
DCS-1	17-Mar-09	<1	<1	<1	<1	<0.001	
DCS-1	16-Jun-09	<1	<2	<2	<2	0.0015	
DCS-1	17-Sep-09	<1	<2	<2	<2	0.0015	
DCS-1	16-Dec-09	<1	<2	<2	<2	0.0013	
DCS-1	30-Mar-10	<1	<2	<2	<2	0.00094	
DCS-1	29-Jun-10	<1	2.6	<2	<2	0.00186	
DCS-1	28-Sep-10	<1	<2	<2	<2	0.00247	
DCS-1	16-Dec-10	<1	<2	<2	<2	0.00095	
DCS-1	29-Mar-11	<1	<2	<2	<2	0.0012	
DCS-1	21-Jun-11	<0.2	<1	<1	<2	<0.066	
DCS-2	13-Apr-04	1.4	<2	<2	<2	0.1	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-2	14-Apr-04	1.1	<2	<2	<2	0.11	
DCS-2	15-Apr-04	1.6	<2	<2	<2	0.12	
DCS-2	16-Apr-04	3.5	2.6	<2	<2	0.24	
DCS-2	17-Apr-04	3.5	2.6	<2	<2	0.28	
DCS-2	18-Apr-04	2.9	2.1	<2	<2	0.19	
DCS-2	19-Apr-04	<1	<2	<2	<2	0.034	
DCS-2	26-Apr-04	<1	<2	<2	<2	0.027	
DCS-2	29-Apr-04	<1	<2	<2	<2	0.0025	
DCS-2	03-May-04	<1	<2	<2	<2	0.007	
DCS-2	02-Jun-04	<1	<2	<2	<2	0.0027	
DCS-2	09-Jun-04	<1	<2	<2	<2	0.0028	
DCS-2	17-Jun-04	<1	<2	<2	<2	0.0023	
DCS-2	24-Jun-04	<1	<2	<2	<2	0.015	
DCS-2	30-Jun-04	<1	<2	<2	<2	0.0052	
DCS-2	08-Jul-04	<1	<2	<2	<2	0.0064	
DCS-2	15-Jul-04	<1	<2	<2	<2	0.0065	
DCS-2	22-Jul-04	<1	<2	<2	<2	0.0077	
DCS-2	29-Jul-04	<1	<2	<2	<2	0.0074	
DCS-2	03-Aug-04	<1	<2	<2	<2	0.011	
DCS-2	11-Aug-04	<1	<2	<2	<2	0.014	
DCS-2	17-Aug-04	1.9	<2	<2	<2	0.012	
DCS-2	14-Sep-04	<1	<2	<2	<2	0.013	
DCS-2	12-Oct-04	4.3	<2	<2	<2	0.36	
DCS-2	12-Oct-04	4.1	<2	<2	<2	0.36	
DCS-2	12-Oct-04	3.6	<2	<2	NA	0.18	
DCS-2	26-Oct-04	2.9	<2	<2	<2	0.29	
DCS-2	27-Oct-04	2.2	<2	<2	<2	0.18	
DCS-2	28-Oct-04	2.5	<2	<2	<2	0.28	
DCS-2	29-Oct-04	2.4	<2	<2	<2	0.25	
DCS-2	30-Oct-04	3.2	<2	<2	<2	0.28	
DCS-2	31-Oct-04	1.3	<2	<2	<2	0.18	
DCS-2	01-Nov-04	3.5	<2	<2	<2	0.33	
DCS-2	02-Nov-04	4.1	<2	<2	<2	0.59	
DCS-2	03-Nov-04	3.3	<2	<2	<2	0.32	
DCS-2	04-Nov-04	4.4	<2	<2	<2	0.61	
DCS-2	05-Nov-04	<b>5.9</b>	<2	<2	<2	0.56	
DCS-2	06-Nov-04	4.4	<2	<2	<2	0.46	
DCS-2	07-Nov-04	4.2	<2	<2	<2	0.44	
DCS-2	08-Nov-04	3	<2	<2	<2	0.18	
DCS-2	09-Nov-04	3.7	<2	<2	<2	0.29	
DCS-2	10-Nov-04	4.5	<2	<2	<2	0.37	
DCS-2	11-Nov-04	3.3	<2	<2	<2	0.28	
DCS-2	12-Nov-04	<1	<2	<2	<2	0.3	
DCS-2	19-Nov-04	2.8	<2	<2	<2	0.3	
DCS-2	23-Nov-04	<b>5.1</b>	<2	<2	<2	0.57	
DCS-2	02-Dec-04	2.4	<2	<2	<2	0.42	
DCS-2	09-Dec-04	<1	<2	<2	<2	0.059	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-2	15-Dec-04	<1	<2	<2	<2	0.035	
DCS-2	20-Dec-04	<b>360</b>	130	16	NA	12	
DCS-2	23-Dec-04	<1	<2	<2	<2	0.018	
DCS-2	06-Jan-05	<1	<2	<2	<2	0.0055	
DCS-2	10-Jan-05	<1	<2	<2	<2	0.041	
DCS-2	20-Jan-05	<1	<2	<2	<2	0.0031	
DCS-2	26-Jan-05	<1	<2	<2	<2	0.0035	
DCS-2	04-Feb-05	<1	<2	<2	<2	0.0038	
DCS-2	07-Feb-05	<1	<2	<2	<2	0.0035	
DCS-2	16-Feb-05	<1	<2	<2	<2	0.0045	0.003
DCS-2	24-Feb-05	<1	<2	<2	<2	0.0038	
DCS-2	03-Mar-05	<1	<2	<2	<2	0.003	
DCS-2	07-Mar-05	<1	<2	<2	<2	0.0048	
DCS-2	18-Mar-05	<1	<2	<2	<2	0.0035	
DCS-2	23-Mar-05	<1	<2	<2	<2	0.056	
DCS-2	29-Mar-05	<1	<2	<2	<2	0.0019	
DCS-2	07-Apr-05	1	<2	<2	<2	0.064	
DCS-2	11-Apr-05	2	<2	<2	<2	0.11	
DCS-2	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-2	27-Apr-05	<1	<2	<2	<2	0.00088	
DCS-2	05-May-05	<1	<2	<2	<2	<0.0008	
DCS-2	09-May-05	<1	<2	<2	<2	0.0084	
DCS-2	09-May-05	<1	<2	<2	<2	0.0098	
DCS-2	18-May-05	<1	<2	<2	<2	0.001	
DCS-2	25-May-05	<1	<2	<2	<2	0.0018	
DCS-2	02-Jun-05	<1	<2	<2	<2	0.0023	
DCS-2	08-Jun-05	<1	<2	<2	<2	0.003	
DCS-2	15-Jun-05	<1	<2	<2	<2	0.0027	
DCS-2	21-Jun-05	<1	<2	<2	<2	0.0013	
DCS-2	30-Jun-05	<1	<2	<2	<2	0.0015	
DCS-2	07-Jul-05	<1	<2	<2	<2	0.0023	
DCS-2	11-Jul-05	<1	<2	<2	<2	0.0021	
DCS-2	21-Jul-05	<1	<2	<2	<2	0.0036	
DCS-2	27-Jul-05	<1	<2	<2	<2	0.0023	
DCS-2	08-Aug-05	<1	<2	<2	<2	0.0052	
DCS-2	16-Aug-05	<1	<2	<2	<2	0.006	
DCS-2	24-Aug-05	<1	<2	<2	<2	0.0044	
DCS-2	02-Sep-05	<1	<2	<2	<2	0.01	
DCS-2	09-Sep-05	<1	<2	<2	<2	0.014	
DCS-2	13-Sep-05	<1	<2	<2	<2	0.0063	
DCS-2	22-Sep-05	<1	<2	<2	<2	0.0012	
DCS-2	29-Sep-05	<1	<2	<2	<2	0.0014	
DCS-2	06-Oct-05	<1	<2	<2	<2	0.048	
DCS-2	10-Oct-05	<1	<2	<2	<2	0.012	
DCS-2	20-Oct-05	<1	<2	<2	<2	0.043	
DCS-2	27-Oct-05	<1	<2	<2	<2	0.051	
DCS-2	07-Nov-05	<1	<2	<2	<2	0.0022	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-2	17-Nov-05	<1	<2	<2	<2	0.0038	
DCS-2	22-Nov-05	<1	<2	<2	<2	0.0096	
DCS-2	29-Nov-05	<1	<2	<2	<2	0.015	
DCS-2	06-Dec-05	<1	<2	<2	<2	0.005	
DCS-2	14-Dec-05	<1	<2	<2	<2	0.065	
DCS-2	21-Dec-05	<1	<2	<2	<2	0.0062	
DCS-2	29-Dec-05	<1	<2	<2	<2	0.0052	
DCS-2	05-Jan-06	<1	<2	<2	<2	0.0046	
DCS-2	09-Jan-06	<1	<2	<2	<2	0.0035	
DCS-2	18-Jan-06	<1	<2	<2	<2	0.01	
DCS-2	24-Jan-06	<1	<2	<2	<2	0.0098	
DCS-2	01-Feb-06	<1	<2	<2	<2	0.0049	
DCS-2	09-Feb-06	<0.5	<1	<1	<1	0.028	
DCS-2	13-Feb-06	<0.5	<1	<1	<1	-999.9	
DCS-2	22-Feb-06	<1	<2	<2	<2	0.0039	
DCS-2	01-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-2	09-Mar-06	<1	<2	<2	<2	0.0021	
DCS-2	14-Mar-06	<1	<2	<2	<2	0.0014	
DCS-2	22-Mar-06	<1	<2	<2	<2	0.0052	
DCS-2	30-Mar-06	<1	<2	<2	<2	0.0012	
DCS-2	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	10-Apr-06	<0.25	<0.25	<0.25	<0.25	0.00061	
DCS-2	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	20-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-2	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-2	13-Jun-06	<1	<2	<2	<2	0.019	
DCS-2	05-Sep-06	<1	<5	<2	<2	0.0054	0.000
DCS-2	05-Sep-06	<0.25	<0.25	<0.25	<0.25	0.00269	
DCS-2	04-Dec-06	<1	<5	<2	<2	0.014	0.007
DCS-2	12-Mar-07	<1	<5	<2	<2	0.0735	
DCS-2	12-Mar-07	<1	<5	<2	<2	0.072	0.042
DCS-2	12-Mar-07	<1	<5	<2	<2	0.11	
DCS-2	21-Jun-07	<1	<2	<2	<2	0.0019	
DCS-2	21-Jun-07	<0.25	<0.25	<0.25	<0.25	0.991	
DCS-2	13-Sep-07	<1	<2	<2	<2	0.02	
DCS-2	17-Dec-07	<1	<2	<2	<2	0.0018	
DCS-2	03-Mar-08	<1	<2	<2	<2	0.00096	
DCS-2	03-Mar-08	<1	<2	<2	<2	0.0011	0.000
DCS-2	03-Mar-08	<0.5	<0.5	<0.5	<0.5	0.000488	
DCS-2	18-Jun-08	<1	<2	<2	<2	0.0013	<0.0013
DCS-2	29-Sep-08	<1	<2	<2	<2	0.0059	<0.0059
DCS-2	10-Dec-08	<1	<2	<2	<2	0.0022	<0.0008
DCS-2	17-Mar-09	<1	<2	<2	<2	<0.0008	<0.0008
DCS-2	16-Jun-09	<1	<2	<2	<2	0.0017	<0.0008
DCS-2	17-Sep-09	<1	<2	<2	<2	0.0029	<0.0008



### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-2	16-Dec-09	<1	<2	<2	<2	0.0032	0.002
DCS-2	30-Mar-10	<1	<2	<2	<2	0.0013	<0.0008
DCS-2	29-Jun-10	<1	<2	<2	<2	0.0013	
DCS-2	28-Sep-10	<1	<2	<2	<2	0.00579	
DCS-2	16-Dec-10	<1	<2	<2	<2	0.00211	
DCS-2	29-Mar-11	<1	<2	<2	<2	0.00086	
DCS-2	21-Jun-11	<0.2	<1	<1	<2	<0.066	
DCS-3	03-Nov-05	<1	<2	<2	<2	0.0035	
DCS-3	13-Apr-04	3.1	2.6	<2	<2	0.22	
DCS-3	14-Apr-04	2.3	<2	<2	<2	0.15	
DCS-3	15-Apr-04	<b>6.6</b>	5.2	<2	<2	0.35	
DCS-3	16-Apr-04	<b>5.7</b>	4.2	<2	<2	0.38	
DCS-3	16-Apr-04	<b>5.8</b>	4.2	<2	<2	0.33	
DCS-3	17-Apr-04	<b>9.1</b>	7	<2	<2	0.46	
DCS-3	18-Apr-04	<b>6.4</b>	4.7	<2	<2	0.4	
DCS-3	19-Apr-04	1.4	<2	<2	<2	0.098	
DCS-3	26-Apr-04	<1	<2	<2	<2	0.081	
DCS-3	29-Apr-04	<1	<2	<2	<2	0.018	
DCS-3	03-May-04	<1	<2	<2	<2	0.027	
DCS-3	26-May-04	<1	<2	<2	<2	0.023	
DCS-3	02-Jun-04	<1	<2	<2	<2	0.014	
DCS-3	09-Jun-04	<1	<2	<2	<2	0.019	
DCS-3	17-Jun-04	<1	<2	<2	<2	0.013	
DCS-3	24-Jun-04	<1	<2	<2	<2	0.0029	
DCS-3	30-Jun-04	<1	<2	<2	<2	0.02	
DCS-3	08-Jul-04	<1	<2	<2	<2	0.033	
DCS-3	15-Jul-04	<1	<2	<2	<2	0.041	
DCS-3	22-Jul-04	<1	<2	<2	<2	0.048	
DCS-3	29-Jul-04	<1	<2	<2	<2	0.046	
DCS-3	03-Aug-04	<1	<2	<2	<2	0.066	
DCS-3	11-Aug-04	<1	<2	<2	<2	0.072	
DCS-3	17-Aug-04	<1	<2	<2	<2	0.083	
DCS-3	14-Sep-04	<1	<2	<2	<2	0.084	0.049
DCS-3	12-Oct-04	<b>6.2</b>	<2	<2	<2	0.67	
DCS-3	26-Oct-04	<b>5.8</b>	<2	<2	<2	0.64	
DCS-3	27-Oct-04	<b>5.3</b>	<2	<2	<2	0.56	
DCS-3	28-Oct-04	4.4	<2	<2	<2	0.48	
DCS-3	29-Oct-04	4.3	<2	<2	<2	0.43	
DCS-3	30-Oct-04	<1	<2	<2	<2	0.59	
DCS-3	31-Oct-04	<b>6.3</b>	<2	<2	<2	0.58	
DCS-3	01-Nov-04	<b>5.5</b>	<2	<2	<2	0.62	
DCS-3	02-Nov-04	<b>6.5</b>	<2	<2	<2	1.2	
DCS-3	03-Nov-04	<b>5.7</b>	<2	<2	<2	0.53	
DCS-3	04-Nov-04	<b>5.4</b>	<2	<2	<2	0.74	
DCS-3	05-Nov-04	<b>9.7</b>	<2	<2	<2	0.86	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-3	06-Nov-04	4.9	<2	<2	<2	0.71	
DCS-3	07-Nov-04	3.9	<2	<2	<2	0.6	
DCS-3	08-Nov-04	<b>5.1</b>	<2	<2	<2	0.39	
DCS-3	09-Nov-04	<b>5.7</b>	<2	<2	<2	0.58	
DCS-3	10-Nov-04	<b>5.4</b>	<2	<2	<2	0.57	
DCS-3	11-Nov-04	<b>7.1</b>	<2	<2	<2	0.63	
DCS-3	12-Nov-04	1.2	<2	<2	<2	0.77	
DCS-3	19-Nov-04	5.9	<2	<2	<2	0.74	
DCS-3	23-Nov-04	<b>9.2</b>	<2	<2	<2	0.98	
DCS-3	02-Dec-04	<b>12</b>	<2	<2	<2	1.5	
DCS-3	09-Dec-04	<0.5	<5	<0.5	NA	0.058	
DCS-3	09-Dec-04	<1	<2	<2	<2	0.079	
DCS-3	09-Dec-04	<1	<2	<2	<2	0.077	
DCS-3	15-Dec-04	<1	<2	<2	<2	0.006	
DCS-3	20-Dec-04	<1	<2	<2	<2	0.0052	
DCS-3	23-Dec-04	<1	<2	<2	<2	0.03	
DCS-3	06-Jan-05	<1	<2	<2	<2	0.039	
DCS-3	10-Jan-05	<1	<2	<2	<2	0.088	0.045
DCS-3	20-Jan-05	<1	<2	<2	<2	0.022	
DCS-3	26-Jan-05	<1	<2	<2	<2	0.018	
DCS-3	04-Feb-05	<1	<2	<2	<2	0.025	
DCS-3	07-Feb-05	<1	<2	<2	<2	0.02	
DCS-3	16-Feb-05	<1	<2	<2	<2	0.025	0.020
DCS-3	24-Feb-05	<1	<2	<2	<2	0.016	
DCS-3	03-Mar-05	<1	<2	<2	<2	0.014	
DCS-3	07-Mar-05	<1	<2	<2	<2	0.025	
DCS-3	18-Mar-05	<1	<2	<2	<2	0.023	
DCS-3	23-Mar-05	2.1	<2	<2	<2	0.13	
DCS-3	29-Mar-05	<1	<2	<2	<2	0.0089	
DCS-3	07-Apr-05	1.9	<2	<2	<2	0.17	
DCS-3	11-Apr-05	3.5	<2	<2	<2	0.29	
DCS-3	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-3	27-Apr-05	<1	<2	<2	<2	0.0026	
DCS-3	05-May-05	<1	<2	<2	<2	0.0028	
DCS-3	09-May-05	<1	<2	<2	<2	0.015	0.002
DCS-3	18-May-05	<1	<2	<2	<2	0.00083	
DCS-3	25-May-05	<1	<2	<2	<2	0.00082	
DCS-3	02-Jun-05	<1	<2	<2	<2	0.0019	
DCS-3	08-Jun-05	<1	<2	<2	<2	0.0037	
DCS-3	08-Jun-05	<0.5	<5	<0.5	NA	<0.01	
DCS-3	08-Jun-05	<1	<2	<2	<2	0.0035	
DCS-3	15-Jun-05	<1	<2	<2	<2	0.0026	
DCS-3	21-Jun-05	<1	<2	<2	<2	0.0013	
DCS-3	30-Jun-05	<1	<2	<2	<2	0.0014	
DCS-3	07-Jul-05	<1	<2	<2	<2	0.0091	
DCS-3	11-Jul-05	<1	<2	<2	<2	0.0069	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-3	11-Jul-05	<0.5	<5	0.53	NA	0.017	
DCS-3	11-Jul-05	<1	<2	<2	<2	0.006	
DCS-3	21-Jul-05	<1	<2	<2	<2	0.017	
DCS-3	27-Jul-05	<1	<2	<2	<2	0.0087	
DCS-3	03-Aug-05	<1	<2	<2	<2	0.016	
DCS-3	08-Aug-05	<1	<2	<2	<2	0.017	
DCS-3	16-Aug-05	<1	<2	<2	<2	0.017	
DCS-3	24-Aug-05	<1	<2	<2	<2	0.014	
DCS-3	02-Sep-05	<1	<2	<2	<2	0.026	
DCS-3	09-Sep-05	<1	<2	<2	<2	0.015	
DCS-3	13-Sep-05	<1	<2	<2	<2	0.017	0.012
DCS-3	22-Sep-05	<1	<2	<2	<2	0.0035	
DCS-3	29-Sep-05	<1	<2	<2	<2	0.003	
DCS-3	06-Oct-05	<1	<2	<2	<2	0.093	
DCS-3	10-Oct-05	<1	<2	<2	<2	0.015	
DCS-3	20-Oct-05	<1	<2	<2	<2	0.048	
DCS-3	27-Oct-05	<1	<2	<2	<2	0.068	
DCS-3	03-Nov-05	<1	<2	<2	<2	0.011	
DCS-3	07-Nov-05	<1	<2	<2	<2	0.0069	
DCS-3	17-Nov-05	<1	<2	<2	<2	0.0084	
DCS-3	22-Nov-05	<1	<2	<2	<2	0.035	
DCS-3	29-Nov-05	<1	<2	<2	<2	0.048	
DCS-3	06-Dec-05	<1	<2	<2	<2	0.0024	
DCS-3	14-Dec-05	<1	<2	<2	<2	0.061	
DCS-3	21-Dec-05	<1	<2	<2	<2	0.014	
DCS-3	29-Dec-05	<1	<2	<2	<2	0.014	
DCS-3	05-Jan-06	<1	<2	<2	<2	0.011	
DCS-3	09-Jan-06	<1	<2	<2	<2	0.019	0.019
DCS-3	18-Jan-06	<1	<2	<2	<2	0.02	
DCS-3	24-Jan-06	<1	<2	<2	<2	0.04	
DCS-3	01-Feb-06	<1	<2	<2	<2	0.023	
DCS-3	09-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-3	13-Feb-06	<0.5	<1	<1	<1	0.028	
DCS-3	22-Feb-06	<1	<2	<2	<2	0.015	
DCS-3	01-Mar-06	<1	<2	<2	<2	0.0011	
DCS-3	09-Mar-06	<1	<2	<2	<2	0.0055	
DCS-3	14-Mar-06	<1	<2	<2	<2	0.0028	
DCS-3	22-Mar-06	<1	<2	<2	<2	0.01	
DCS-3	30-Mar-06	<1	<2	<2	<2	0.0011	
DCS-3	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-3	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-3	20-Apr-06	<1	<2	<2	<2	0.0005	
DCS-3	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-3	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-3	09-May-06	<1	<2	<2	<2	<0.0008	0.000
DCS-3	09-May-06	<0.5	<0.5	<0.5	<0.5	0.000849	
DCS-3	09-May-06	<1	<2	<2	<2	<0.0008	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-3	13-Jun-06	<1	<2	<2	<2	0.005	
DCS-3	05-Sep-06	<1	<5	<2	<2	0.015	0.009
DCS-3	04-Dec-06	<1	<5	<2	<2	0.0061	0.000
DCS-3	12-Mar-07	<1	<5	<2	<2	0.0081	0.000
DCS-3	21-Jun-07	<1	<2	<2	<2	0.00082	
DCS-3	13-Sep-07	<1	<2	<2	<2	0.0025	
DCS-3	17-Dec-07	<0.5	<5	<0.5	<2	0.00371	
DCS-3	17-Dec-07	<1	<2	<2	<2	0.0032	
DCS-3	03-Mar-08	<1	<2	<2	<2	0.0021	0.000
DCS-3	18-Jun-08	<1	<2	<2	<2	0.001	<0.001
DCS-3	29-Sep-08	<1	<2	<2	<2	0.015	0.008
DCS-3	10-Dec-08	<1	<2	<2	<2	0.067	<0.0008
DCS-3	17-Mar-09	<1	<2	<2	<2	<0.0008	<0.0008
DCS-3	16-Jun-09	<1	<2	<2	<2	0.0014	
DCS-3	16-Jun-09	<1	<2	<2	<2	0.0014	
DCS-3	17-Sep-09	<1	<2	<2	<2	0.0017	
DCS-3	16-Dec-09	<1	<2	<2	<2	0.0016	0.001
DCS-3	30-Mar-10	<1	<2	<2	<2	0.001	
DCS-3	29-Jun-10	<1	<2	<2	<2	0.001	
DCS-3	28-Sep-10	<1	<2	<2	<2	0.0176	
DCS-3	28-Sep-10	<1	<2	<2	<2	0.0153	
DCS-3	16-Dec-10	<1	<2	<2	<2	0.0013	
DCS-3	29-Mar-11	<1	<2	<2	<2	0.0008	
DCS-3	21-Jun-11	<0.2	<1	<1	<2	<0.066	
DCS-4	13-Apr-04	<1	<2	<2	<2	0.11	
DCS-4	14-Apr-04	<1	<2	<2	<2	0.09	
DCS-4	15-Apr-04	1.7	<2	<2	<2	0.15	
DCS-4	16-Apr-04	1.4	<2	<2	<2	0.14	
DCS-4	17-Apr-04	2	<2	<2	<2	0.18	
DCS-4	18-Apr-04	1.7	<2	<2	<2	0.17	
DCS-4	19-Apr-04	<1	<2	<2	<2	0.058	
DCS-4	26-Apr-04	<1	<2	<2	<2	0.043	
DCS-4	29-Apr-04	<1	<2	<2	<2	0.012	
DCS-4	03-May-04	<1	<2	<2	<2	0.013	
DCS-4	02-Jun-04	<1	<2	<2	<2	0.006	
DCS-4	08-Jul-04	<1	<2	<2	<2	0.014	
DCS-4	03-Aug-04	<1	<2	<2	<2	0.022	
DCS-4	14-Sep-04	<1	<2	<2	<2	0.027	
DCS-4	12-Oct-04	1	<2	<2	<2	0.13	
DCS-4	26-Oct-04	1.1	<2	<2	<2	0.15	
DCS-4	27-Oct-04	<1	<2	<2	<2	0.11	
DCS-4	28-Oct-04	<1	<2	<2	<2	0.13	
DCS-4	29-Oct-04	1.1	<2	<2	<2	0.13	
DCS-4	30-Oct-04	1.3	<2	<2	<2	0.15	
DCS-4	31-Oct-04	1.2	<2	<2	<2	0.12	
DCS-4	01-Nov-04	1.2	<2	<2	<2	0.13	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-4	02-Nov-04	1.9	<2	<2	<2	0.3	
DCS-4	03-Nov-04	1.3	<2	<2	<2	0.16	
DCS-4	04-Nov-04	1.7	<2	<2	<2	0.21	
DCS-4	05-Nov-04	1.5	<2	<2	<2	0.15	
DCS-4	06-Nov-04	1.3	<2	<2	<2	0.17	
DCS-4	07-Nov-04	1.3	<2	<2	<2	0.16	
DCS-4	08-Nov-04	1	<2	<2	<2	0.077	
DCS-4	09-Nov-04	1	<2	<2	<2	0.11	
DCS-4	10-Nov-04	<1	<2	<2	<2	0.1	
DCS-4	11-Nov-04	1	<2	<2	<2	0.1	
DCS-4	12-Nov-04	<b>9.8</b>	<2	<2	<2	0.12	
DCS-4	19-Nov-04	1.1	<2	<2	<2	0.14	
DCS-4	23-Nov-04	1.8	<2	<2	<2	0.26	
DCS-4	02-Dec-04	3	<2	<2	<2	0.5	
DCS-4	09-Dec-04	<1	<2	<2	<2	0.029	
DCS-4	15-Dec-04	<1	<2	<2	<2	0.016	
DCS-4	20-Dec-04	<1	<2	<2	<2	0.0023	
DCS-4	23-Dec-04	<1	<2	<2	<2	0.0097	
DCS-4	06-Jan-05	<1	<2	<2	<2	0.019	
DCS-4	10-Jan-05	<1	<2	<2	<2	0.0046	
DCS-4	20-Jan-05	<1	<2	<2	<2	0.0091	
DCS-4	26-Jan-05	<1	<2	<2	<2	0.01	
DCS-4	04-Feb-05	<1	<2	<2	<2	0.0087	
DCS-4	07-Feb-05	<0.5	<5	<0.5	NA	<0.01	
DCS-4	07-Feb-05	<1	<2	<2	<2	0.0096	
DCS-4	07-Feb-05	<1	<2	<2	<2	0.0096	
DCS-4	16-Feb-05	<1	<2	<2	<2	0.01	
DCS-4	24-Feb-05	<1	<2	<2	<2	0.016	
DCS-4	03-Mar-05	<1	<2	<2	<2	0.0069	
DCS-4	07-Mar-05	<1	<2	<2	<2	0.011	
DCS-4	18-Mar-05	<1	<2	<2	<2	0.0075	
DCS-4	23-Mar-05	<1	<2	<2	<2	0.033	
DCS-4	29-Mar-05	<1	<2	<2	<2	0.0042	
DCS-4	07-Apr-05	<1	<2	<2	<2	0.027	
DCS-4	11-Apr-05	<1	<2	<2	<2	0.057	
DCS-4	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-4	27-Apr-05	<1	<2	<2	<2	0.0014	
DCS-4	05-May-05	<1	<2	<2	<2	0.0016	
DCS-4	09-May-05	<1	<2	<2	<2	0.00096	
DCS-4	18-May-05	<1	<2	<2	<2	0.0012	
DCS-4	25-May-05	<1	<2	<2	<2	0.0012	
DCS-4	02-Jun-05	<1	<2	<2	<2	0.003	
DCS-4	08-Jun-05	<1	<2	<2	<2	0.0054	
DCS-4	15-Jun-05	<1	<2	<2	<2	0.0033	
DCS-4	21-Jun-05	<1	<2	<2	<2	0.0022	
DCS-4	30-Jun-05	<1	<2	<2	<2	0.0027	
DCS-4	07-Jul-05	<1	<2	<2	<2	0.0042	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-4	11-Jul-05	<1	<2	<2	<2	0.0041	
DCS-4	21-Jul-05	<1	<2	<2	<2	0.0075	
DCS-4	27-Jul-05	<1	<2	<2	<2	0.0035	
DCS-4	03-Aug-05	<1	<2	<2	<2	0.0077	
DCS-4	08-Aug-05	<1	<2	<2	<2	0.0077	
DCS-4	16-Aug-05	<1	<2	<2	<2	0.0089	
DCS-4	24-Aug-05	<1	<2	<2	<2	0.0068	
DCS-4	02-Sep-05	<1	<2	<2	<2	0.0089	
DCS-4	09-Sep-05	<1	<2	<2	<2	0.0072	
DCS-4	13-Sep-05	<1	<2	<2	<2	0.0084	
DCS-4	22-Sep-05	<1	<2	<2	<2	0.0013	
DCS-4	29-Sep-05	<1	<2	<2	<2	0.0019	
DCS-4	06-Oct-05	<1	<2	<2	<2	0.035	
DCS-4	10-Oct-05	<1	<2	<2	<2	0.0085	
DCS-4	20-Oct-05	<1	<2	<2	<2	0.022	
DCS-4	27-Oct-05	<1	<2	<2	<2	0.025	
DCS-4	03-Nov-05	<1	<2	<2	<2	0.0063	
DCS-4	07-Nov-05	<1	<2	<2	<2	0.0044	
DCS-4	07-Nov-05	<1	<2	<2	<2	0.0034	
DCS-4	07-Nov-05	<0.5	<5	<0.5	NA	<0.01	
DCS-4	17-Nov-05	<1	<2	<2	<2	0.0049	
DCS-4	22-Nov-05	<1	<2	<2	<2	0.014	
DCS-4	29-Nov-05	<1	<2	<2	<2	0.024	
DCS-4	06-Dec-05	<1	<2	<2	<2	0.012	
DCS-4	14-Dec-05	<1	<2	<2	<2	0.011	
DCS-4	21-Dec-05	<1	<2	<2	<2	0.0038	
DCS-4	29-Dec-05	<1	<2	<2	<2	0.0038	
DCS-4	05-Jan-06	<1	<2	<2	<2	0.0042	
DCS-4	09-Jan-06	<0.5	<1	<2	<1	0.005	
DCS-4	09-Jan-06	<1	<2	<2	<2	0.0064	
DCS-4	09-Jan-06	<1	<2	<2	<2	0.0064	
DCS-4	18-Jan-06	<1	<2	<2	<2	0.0057	
DCS-4	24-Jan-06	<1	<2	<2	<2	0.019	
DCS-4	01-Feb-06	<1	<2	<2	<2	0.0059	
DCS-4	09-Feb-06	<0.5	<1	<1	<1	0.015	
DCS-4	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-4	22-Feb-06	<1	<2	<2	<2	0.0054	
DCS-4	01-Mar-06	<1	<2	<2	<2	0.0013	
DCS-4	09-Mar-06	<1	<2	<2	<2	0.0032	
DCS-4	14-Mar-06	<1	<2	<2	<2	0.004	
DCS-4	22-Mar-06	<1	<2	<2	<2	0.008	
DCS-4	30-Mar-06	<1	<2	<2	<2	0.0018	
DCS-4	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-4	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-4	20-Apr-06	<1	<2	<2	<2	0.00078	
DCS-4	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-4	04-May-06	<1	<2	<2	<2	<0.0008	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-4	09-May-06	<1	<2	<2	<2	0.00081	
DCS-4	13-Jun-06	<1	<2	<2	<2	0.0038	
DCS-4	05-Sep-06	<1	<5	<2	<2	0.0096	
DCS-4	04-Dec-06	<1	<5	<2	<2	0.014	
DCS-4	12-Mar-07	<1	<5	<2	<2	0.0014	
DCS-4	21-Jun-07	<1	<2	<2	<2	0.0014	
DCS-4	13-Sep-07	<1	<2	<2	<2	0.0058	
DCS-4	17-Dec-07	<1	<2	<2	<2	0.0078	
DCS-4	03-Mar-08	<1	<2	<2	<2	0.0022	
DCS-4	18-Jun-08	<1	<2	<2	<2	0.0028	
DCS-4	29-Sep-08	<1	<2	<2	<2	0.0098	
DCS-4	29-Sep-08	<1	<2	<2	<2	0.0098	
DCS-4	10-Dec-08	<1	<2	<2	<2	0.006	
DCS-4	17-Mar-09	<1	<2	<2	<2	0.00096	
DCS-4	16-Jun-09	<1	<2	<2	<2	0.0029	
DCS-4	17-Sep-09	<1	<2	<2	<2	0.0042	
DCS-4	16-Dec-09	<1	<2	<2	<2	0.0063	
DCS-4	30-Mar-10	<1	<2	<2	<2	0.00263	
DCS-4	29-Jun-10	<1	<2	<2	<2	0.00165	
DCS-4	28-Sep-10	<1	<2	<2	<2	0.0101	
DCS-4	16-Dec-10	<1	<2	<2	<2	0.002	
DCS-4	29-Mar-11	<1	<2	<2	<2	0.00149	
DCS-4	21-Jun-11	<0.2	<1	<1	<2	<0.066	
DCS-5	13-Apr-04	<1	<2	<2	<2	0.11	
DCS-5	14-Apr-04	<1	<2	<2	<2	0.086	
DCS-5	15-Apr-04	1.3	<2	<2	<2	0.13	
DCS-5	16-Apr-04	<1	<2	<2	<2	0.13	
DCS-5	17-Apr-04	1.3	<2	<2	<2	0.15	
DCS-5	18-Apr-04	1.2	<2	<2	<2	0.15	
DCS-5	19-Apr-04	<1	<2	<2	<2	0.057	
DCS-5	26-Apr-04	<1	<2	<2	<2	0.046	
DCS-5	29-Apr-04	<1	<2	<2	<2	0.014	
DCS-5	03-May-04	<1	<2	<2	<2	0.018	
DCS-5	26-May-04	<1	<2	<2	<2	0.015	
DCS-5	02-Jun-04	<1	<2	<2	<2	0.012	
DCS-5	08-Jul-04	<1	<2	<2	<2	0.016	
DCS-5	03-Aug-04	<1	<2	<2	<2	0.014	
DCS-5	14-Sep-04	<1	<2	<2	<2	0.017	
DCS-5	12-Oct-04	<1	<2	<2	<2	0.044	
DCS-5	26-Oct-04	<1	<2	<2	<2	0.055	
DCS-5	27-Oct-04	<1	<2	<2	<2	0.035	
DCS-5	28-Oct-04	<1	<2	<2	<2	0.028	
DCS-5	29-Oct-04	<1	<2	<2	<2	0.053	
DCS-5	30-Oct-04	<1	<2	<2	<2	0.047	
DCS-5	31-Oct-04	<1	<2	<2	<2	0.052	
DCS-5	01-Nov-04	<1	<2	<2	<2	0.049	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-5	02-Nov-04	<1	<2	<2	<2	0.12	
DCS-5	03-Nov-04	<1	<2	<2	<2	0.072	
DCS-5	04-Nov-04	<1	<2	<2	<2	0.088	
DCS-5	05-Nov-04	<1	<2	<2	<2	0.064	
DCS-5	06-Nov-04	<1	<2	<2	<2	0.06	
DCS-5	07-Nov-04	<1	<2	<2	<2	0.054	
DCS-5	08-Nov-04	<1	<2	<2	<2	0.026	
DCS-5	09-Nov-04	<1	<2	<2	<2	0.35	
DCS-5	10-Nov-04	<1	<2	<2	<2	0.035	
DCS-5	11-Nov-04	<1	<2	<2	<2	0.039	
DCS-5	12-Nov-04	3.6	<2	<2	<2	0.048	
DCS-5	19-Nov-04	<1	<2	<2	<2	0.056	
DCS-5	23-Nov-04	<1	<2	<2	<2	0.11	
DCS-5	02-Dec-04	1.1	<2	<2	<2	0.18	
DCS-5	09-Dec-04	<1	<2	<2	<2	0.029	
DCS-5	15-Dec-04	<1	<2	<2	<2	0.017	
DCS-5	20-Dec-04	<1	<2	<2	<2	0.0034	
DCS-5	23-Dec-04	<1	<2	<2	<2	0.026	
DCS-5	06-Jan-05	<1	<2	<2	<2	0.02	
DCS-5	10-Jan-05	<1	<2	<2	<2	0.012	
DCS-5	20-Jan-05	<1	<2	<2	<2	0.0098	
DCS-5	26-Jan-05	<1	<2	<2	<2	0.013	
DCS-5	04-Feb-05	<1	<2	<2	<2	0.011	
DCS-5	07-Feb-05	<1	<2	<2	<2	0.012	
DCS-5	16-Feb-05	<1	<2	<2	<2	0.011	
DCS-5	24-Feb-05	<1	<2	<2	<2	0.014	
DCS-5	03-Mar-05	<1	<2	<2	<2	0.0086	
DCS-5	07-Mar-05	<1	<2	<2	<2	0.012	
DCS-5	18-Mar-05	<1	<2	<2	<2	0.0099	
DCS-5	23-Mar-05	<1	<2	<2	<2	0.021	
DCS-5	29-Mar-05	<1	<2	<2	<2	0.006	
DCS-5	07-Apr-05	<1	<2	<2	<2	0.014	
DCS-5	11-Apr-05	<1	<2	<2	<2	0.044	
DCS-5	20-Apr-05	<1	<2	<2	<2	0.00091	
DCS-5	27-Apr-05	<1	<2	<2	<2	0.0037	
DCS-5	05-May-05	<1	<2	<2	<2	0.0046	
DCS-5	09-May-05	<1	<2	<2	<2	0.0016	
DCS-5	18-May-05	<1	<2	<2	<2	0.0013	
DCS-5	25-May-05	<1	<2	<2	<2	0.0018	
DCS-5	02-Jun-05	<1	<2	<2	<2	0.0035	
DCS-5	08-Jun-05	<1	<2	<2	<2	0.0049	
DCS-5	15-Jun-05	<1	<2	<2	<2	0.0027	
DCS-5	21-Jun-05	<1	<2	<2	<2	0.0025	
DCS-5	30-Jun-05	<1	<2	<2	<2	0.0052	
DCS-5	07-Jul-05	<1	<2	<2	<2	0.0053	
DCS-5	11-Jul-05	<1	<2	<2	<2	0.0053	
DCS-5	21-Jul-05	<1	<2	<2	<2	0.0079	



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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-5	27-Jul-05	<1	<2	<2	<2	0.0058	
DCS-5	03-Aug-05	<1	<2	<2	<2	0.0091	
DCS-5	08-Aug-05	<1	<2	<2	<2	0.011	
DCS-5	16-Aug-05	<1	<2	<2	<2	0.0098	
DCS-5	24-Aug-05	<1	<2	<2	<2	0.0074	
DCS-5	02-Sep-05	<1	<2	<2	<2	0.01	
DCS-5	09-Sep-05	<1	<2	<2	<2	0.009	
DCS-5	13-Sep-05	<1	<2	<2	<2	0.0076	
DCS-5	13-Sep-05	<0.5	<5	<0.5	NA	0.012	
DCS-5	13-Sep-05	<1	<2	<2	<2	0.0075	
DCS-5	22-Sep-05	<1	<2	<2	<2	0.002	
DCS-5	29-Sep-05	<1	<2	<2	<2	0.0035	
DCS-5	06-Oct-05	<1	<2	<2	<2	0.028	
DCS-5	10-Oct-05	<1	<2	<2	<2	0.015	
DCS-5	20-Oct-05	<1	<2	<2	<2	0.016	
DCS-5	27-Oct-05	<1	<2	<2	<2	0.018	
DCS-5	03-Nov-05	<1	<2	<2	<2	0.007	
DCS-5	07-Nov-05	<1	<2	<2	<2	0.005	
DCS-5	17-Nov-05	<1	<2	<2	<2	0.0068	
DCS-5	22-Nov-05	<1	<2	<2	<2	0.013	
DCS-5	29-Nov-05	<1	<2	<2	<2	0.023	
DCS-5	06-Dec-05	<1	<2	<2	<2	0.015	
DCS-5	14-Dec-05	<1	<2	<2	<2	0.012	
DCS-5	21-Dec-05	<1	<2	<2	<2	0.0055	
DCS-5	29-Dec-05	<1	<2	<2	<2	0.0048	
DCS-5	05-Jan-06	<1	<2	<2	<2	0.0068	
DCS-5	09-Jan-06	<1	<2	<2	<2	0.0072	
DCS-5	18-Jan-06	<1	<2	<2	<2	0.0074	
DCS-5	24-Jan-06	<1	<2	<2	<2	0.021	
DCS-5	01-Feb-06	<1	<2	<2	<2	0.007	
DCS-5	09-Feb-06	<0.5	<1	<1	<1	0.015	
DCS-5	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-5	13-Feb-06	<0.5	<1	<1	<1	0.009	
DCS-5	13-Feb-06	<0.5	<0.5	<0.5	<0.5	0.013	
DCS-5	22-Feb-06	<1	<2	<2	<2	0.0073	
DCS-5	01-Mar-06	<1	<2	<2	<2	0.0019	
DCS-5	09-Mar-06	<1	<2	<2	<2	0.0041	
DCS-5	14-Mar-06	<1	<2	<2	<2	0.0052	
DCS-5	22-Mar-06	<1	<2	<2	<2	0.0085	
DCS-5	30-Mar-06	<1	<2	<2	<2	0.0025	
DCS-5	05-Apr-06	<1	<2	<2	<2	0.00089	
DCS-5	10-Apr-06	<1	<2	<2	<2	0.0009	
DCS-5	20-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-5	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-5	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-5	09-May-06	<1	<2	<2	<2	0.00097	
DCS-5	13-Jun-06	<1	<2	<2	<2	0.0045	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-5	13-Jun-06	<0.5	<0.5	<0.5	<0.5	0.00445	
DCS-5	05-Sep-06	<1	<5	<2	<2	0.01	
DCS-5	04-Dec-06	<1	<5	<2	<2	0.012	
DCS-5	12-Mar-07	<1	<5	<2	<2	0.0026	
DCS-5	21-Jun-07	<1	<2	<2	<2	0.0018	
DCS-5	13-Sep-07	<1	<2	<2	<2	0.0055	
DCS-5	17-Dec-07	<1	<2	<2	<2	0.0077	
DCS-5	04-Mar-08	<1	<2	<2	<2	0.0038	
DCS-5	18-Jun-08	<1	<2	<2	<2	0.0019	
DCS-5	29-Sep-08	<1	<2	<2	<2	0.008	
DCS-5	10-Dec-08	<1	<2	<2	<2	0.0066	
DCS-5	10-Dec-08	<1	<2	<2	<2	0.0062	
DCS-5	10-Dec-08	<1	<1	<1	<1	0.003	
DCS-5	17-Mar-09	<1	<2	<2	<2	0.0012	
DCS-5	16-Jun-09	<1	<2	<2	<2	0.0028	
DCS-5	17-Sep-09	<1	<2	<2	<2	0.0042	
DCS-5	16-Dec-09	<1	<2	<2	<2	0.006	
DCS-5	31-Mar-10	<1	<2	<2	<2	0.0013	
DCS-5	29-Jun-10	<1	<2	<2	<2	0.00176	
DCS-5	28-Sep-10	<1	<2	<2	<2	0.00626	
DCS-5	16-Dec-10	<1	<2	<2	<2	0.00217	
DCS-5	29-Mar-11	<1	<2	<2	<2	0.0018	
DCS-5	21-Jun-11	<0.2	<1	<1	<2	<0.066	
DCS-6	13-Apr-04	<1	<2	<2	<2	0.087	
DCS-6	14-Apr-04	<1	<2	<2	<2	0.063	
DCS-6	15-Apr-04	<1	<2	<2	<2	0.11	
DCS-6	16-Apr-04	<1	<2	<2	<2	0.083	
DCS-6	17-Apr-04	<1	<2	<2	<2	0.11	
DCS-6	18-Apr-04	<1	<2	<2	<2	0.093	
DCS-6	19-Apr-04	<1	<2	<2	<2	0.048	
DCS-6	26-Apr-04	<1	<2	<2	<2	0.035	
DCS-6	29-Apr-04	<1	<2	<2	<2	0.011	
DCS-6	29-Apr-04	<1	<2	<2	<2	0.015	
DCS-6	03-May-04	<1	<2	<2	<2	0.014	
DCS-6	02-Jun-04	<1	<2	<2	<2	0.0091	
DCS-6	08-Jul-04	<1	<2	<2	<2	0.014	
DCS-6	03-Aug-04	<1	<2	<2	<2	0.014	
DCS-6	14-Sep-04	<1	<2	<2	<2	0.031	
DCS-6	12-Oct-04	<1	<2	<2	<2	0.032	
DCS-6	26-Oct-04	<1	<2	<2	<2	0.049	
DCS-6	27-Oct-04	<1	<2	<2	<2	0.023	
DCS-6	28-Oct-04	<1	<2	<2	<2	0.06	
DCS-6	29-Oct-04	<1	<2	<2	<2	0.086	
DCS-6	30-Oct-04	<1	<2	<2	<2	0.034	
DCS-6	31-Oct-04	<1	<2	<2	<2	0.045	
DCS-6	01-Nov-04	<1	<2	<2	<2	0.24	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-6	02-Nov-04	<1	<2	<2	<2	0.093	
DCS-6	03-Nov-04	<1	<2	<2	<2	0.16	
DCS-6	04-Nov-04	<1	<2	<2	<2	0.061	
DCS-6	05-Nov-04	<1	<2	<2	<2	0.039	
DCS-6	06-Nov-04	<1	<2	<2	<2	0.043	
DCS-6	07-Nov-04	<1	<2	<2	<2	0.039	
DCS-6	08-Nov-04	<1	<2	<2	<2	0.017	
DCS-6	09-Nov-04	<1	<2	<2	<2	0.034	
DCS-6	10-Nov-04	<1	<2	<2	<2	0.024	
DCS-6	11-Nov-04	<1	<2	<2	<2	0.026	
DCS-6	12-Nov-04	<1	<2	<2	<2	0.022	
DCS-6	19-Nov-04	<1	<2	<2	<2	0.035	
DCS-6	23-Nov-04	<1	<2	<2	<2	0.069	
DCS-6	02-Dec-04	1.5	<2	<2	<2	-88.8	
DCS-6	09-Dec-04	<1	<2	<2	<2	0.028	
DCS-6	15-Dec-04	<1	<2	<2	<2	0.018	
DCS-6	20-Dec-04	<1	<2	<2	<2	0.036	
DCS-6	23-Dec-04	<1	<2	<2	<2	0.021	
DCS-6	06-Jan-05	<1	<2	<2	<2	0.019	
DCS-6	10-Jan-05	<1	<2	<2	<2	0.011	
DCS-6	20-Jan-05	<1	<2	<2	<2	0.0086	
DCS-6	26-Jan-05	<1	<2	<2	<2	0.013	
DCS-6	04-Feb-05	<1	<2	<2	<2	0.0088	
DCS-6	07-Feb-05	<1	<2	<2	<2	0.0091	
DCS-6	16-Feb-05	<1	<2	<2	<2	0.011	
DCS-6	24-Feb-05	<1	<2	<2	<2	0.014	
DCS-6	03-Mar-05	<1	<2	<2	<2	0.0086	
DCS-6	07-Mar-05	<1	<2	<2	<2	0.013	
DCS-6	18-Mar-05	<1	<2	<2	<2	0.01	
DCS-6	23-Mar-05	<1	<2	<2	<2	0.023	
DCS-6	29-Mar-05	<1	<2	<2	<2	0.0052	
DCS-6	07-Apr-05	<1	<2	<2	<2	0.015	
DCS-6	11-Apr-05	<1	<2	<2	<2	0.034	
DCS-6	27-Apr-05	<1	<2	<2	<2	0.003	
DCS-6	05-May-05	<1	<2	<2	<2	0.0045	
DCS-6	09-May-05	<1	<2	<2	<2	0.0022	
DCS-6	18-May-05	<1	<2	<2	<2	0.0019	
DCS-6	25-May-05	<1	<2	<2	<2	0.0025	
DCS-6	02-Jun-05	<1	<2	<2	<2	0.0031	
DCS-6	08-Jun-05	<1	<2	<2	<2	0.0049	
DCS-6	15-Jun-05	<1	<2	<2	<2	0.0044	
DCS-6	21-Jun-05	<1	<2	<2	<2	0.0027	
DCS-6	30-Jun-05	<1	<2	<2	<2	0.0036	
DCS-6	07-Jul-05	<1	<2	<2	<2	0.0068	
DCS-6	11-Jul-05	<1	<2	<2	<2	0.0064	
DCS-6	21-Jul-05	<1	<2	<2	<2	0.012	
DCS-6	27-Jul-05	<1	<2	<2	<2	0.0066	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-6	03-Aug-05	<1	<2	<2	<2	0.0081	
DCS-6	08-Aug-05	<1	<2	<2	<2	0.018	
DCS-6	16-Aug-05	<1	<2	<2	<2	0.016	
DCS-6	24-Aug-05	<1	<2	<2	<2	0.013	
DCS-6	02-Sep-05	<1	<2	<2	<2	0.013	
DCS-6	09-Sep-05	<1	<2	<2	<2	0.0086	
DCS-6	13-Sep-05	<1	<2	<2	<2	0.011	
DCS-6	22-Sep-05	<1	<2	<2	<2	0.0021	
DCS-6	29-Sep-05	<1	<2	<2	<2	0.0033	
DCS-6	06-Oct-05	<1	<2	<2	<2	0.027	
DCS-6	10-Oct-05	<1	<2	<2	<2	0.014	
DCS-6	10-Oct-05	<1	<2	<2	<2	0.015	
DCS-6	10-Oct-05	<0.5	<5	<0.5	<0.5	0.019	
DCS-6	20-Oct-05	<1	<2	<2	<2	0.014	
DCS-6	27-Oct-05	<1	<2	<2	<2	0.012	
DCS-6	03-Nov-05	<1	<2	<2	<2	0.0066	
DCS-6	07-Nov-05	<1	<2	<2	<2	0.0059	
DCS-6	17-Nov-05	<1	<2	<2	<2	0.007	
DCS-6	22-Nov-05	<1	<2	<2	<2	0.013	
DCS-6	29-Nov-05	<1	<2	<2	<2	0.021	
DCS-6	06-Dec-05	<1	<2	<2	<2	0.015	
DCS-6	06-Dec-05	<1	<2	<2	<2	0.014	
DCS-6	06-Dec-05	<0.5	<5	<0.5	NA	0.014	
DCS-6	14-Dec-05	<1	<2	<2	<2	0.011	
DCS-6	21-Dec-05	<1	<2	<2	<2	0.0064	
DCS-6	29-Dec-05	<1	<2	<2	<2	0.0026	
DCS-6	05-Jan-06	<1	<2	<2	<2	0.0056	
DCS-6	09-Jan-06	<1	<2	<2	<2	0.0078	
DCS-6	18-Jan-06	<1	<2	<2	<2	0.0066	
DCS-6	24-Jan-06	<1	<2	<2	<2	0.036	
DCS-6	01-Feb-06	<1	<2	<2	<2	0.0056	
DCS-6	09-Feb-06	<0.5	<1	<1	<1	0.016	
DCS-6	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-6	22-Feb-06	<1	<2	<2	<2	0.0066	
DCS-6	01-Mar-06	<1	<2	<2	<2	0.0019	
DCS-6	09-Mar-06	<1	<2	<2	<2	0.0056	
DCS-6	14-Mar-06	<0.25	<0.25	<0.25	<0.25	0.0143	
DCS-6	14-Mar-06	<1	<2	<2	<2	0.012	
DCS-6	14-Mar-06	<1	<2	<2	<2	0.012	
DCS-6	22-Mar-06	<1	<2	<2	<2	0.0096	
DCS-6	30-Mar-06	<1	<2	<2	<2	0.0058	
DCS-6	05-Apr-06	<1	<2	<2	<2	0.00089	
DCS-6	10-Apr-06	<1	<2	<2	<2	0.00089	
DCS-6	20-Apr-06	<1	<2	<2	<2	0.00098	
DCS-6	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-6	04-May-06	<1	<2	<2	<2	0.00084	
DCS-6	09-May-06	<1	<2	<2	<2	0.00083	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-6	13-Jun-06	<1	<2	<2	<2	0.0054	
DCS-6	05-Sep-06	<1	<5	<2	<2	0.013	
DCS-6	04-Dec-06	<1	<5	<2	<2	0.013	
DCS-6	12-Mar-07	<1	<5	<2	<2	0.0035	
DCS-6	21-Jun-07	<1	<2	<2	<2	0.0025	
DCS-6	13-Sep-07	<1	<2	<2	<2	NA	
DCS-6	17-Dec-07	<1	<2	<2	<2	0.0078	
DCS-6	04-Mar-08	<1	<2	<2	<2	0.0047	
DCS-6	18-Jun-08	<1	<2	<2	<2	0.0029	
DCS-6	29-Sep-08	<1	<2	<2	<2	0.011	
DCS-6	10-Dec-08	<1	<2	<2	<2	0.085	
DCS-6	17-Mar-09	<1	<2	<2	<2	0.0011	
DCS-6	16-Jun-09	<1	<2	<2	<2	0.0056	
DCS-6	17-Sep-09	<1	<2	<2	<2	0.0051	
DCS-6	16-Dec-09	<1	<2	<2	<2	0.0077	
DCS-6	31-Mar-10	<1	<2	<2	<2	0.00153	
DCS-6	29-Jun-10	<1	<2	<2	<2	0.00174	
DCS-6	28-Sep-10	<1	<2	<2	<2	0.0227	
DCS-6	13-Dec-10	<1	<2	<2	<2	0.00767	
DCS-6	29-Mar-11	<1	<2	<2	<2	0.00442	
DCS-6	21-Jun-11	<0.20	<1	<1	<2	<0.066	
DCS-7	09-Dec-04	<1	<2	<2	<2	0.026	
DCS-7	15-Dec-04	<1	<2	<2	<2	0.016	
DCS-7	20-Dec-04	<1	<2	<2	<2	0.031	
DCS-7	23-Dec-04	<1	<2	<2	<2	0.019	
DCS-7	06-Jan-05	<1	<2	<2	<2	0.018	
DCS-7	10-Jan-05	<1	<2	<2	<2	0.01	
DCS-7	20-Jan-05	<1	<2	<2	<2	0.0082	
DCS-7	26-Jan-05	<1	<2	<2	<2	0.012	
DCS-7	04-Feb-05	<1	<2	<2	<2	0.0087	
DCS-7	07-Feb-05	<1	<2	<2	<2	0.0092	
DCS-7	16-Feb-05	<1	<2	<2	<2	0.0094	
DCS-7	24-Feb-05	<1	<2	<2	<2	0.012	
DCS-7	03-Mar-05	<1	<2	<2	<2	0.0081	
DCS-7	07-Mar-05	<1	<2	<2	<2	0.01	
DCS-7	18-Mar-05	<1	<2	<2	<2	0.0087	
DCS-7	23-Mar-05	<1	<2	<2	<2	0.017	
DCS-7	29-Mar-05	<1	<2	<2	<2	0.0049	
DCS-7	07-Apr-05	<1	<2	<2	<2	0.0097	
DCS-7	11-Apr-05	<1	<2	<2	<2	0.033	
DCS-7	27-Apr-05	<1	<2	<2	<2	0.0027	
DCS-7	05-May-05	<1	<2	<2	<2	0.0038	
DCS-7	09-May-05	<1	<2	<2	<2	0.0021	
DCS-7	18-May-05	<1	<2	<2	<2	0.0016	
DCS-7	25-May-05	<1	<2	<2	<2	0.0018	
DCS-7	02-Jun-05	<1	<2	<2	<2	0.0031	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-7	08-Jun-05	<1	<2	<2	<2	0.0041	
DCS-7	15-Jun-05	<1	<2	<2	<2	0.0027	
DCS-7	21-Jun-05	<1	<2	<2	<2	0.0027	
DCS-7	30-Jun-05	<1	<2	<2	<2	0.0036	
DCS-7	07-Jul-05	<1	<2	<2	<2	0.0054	
DCS-7	11-Jul-05	<1	<2	<2	<2	0.0051	
DCS-7	21-Jul-05	<1	<2	<2	<2	0.0082	
DCS-7	27-Jul-05	<1	<2	<2	<2	0.0053	
DCS-7	03-Aug-05	<1	<2	<2	<2	0.0074	
DCS-7	08-Aug-05	<1	<2	<2	<2	0.0099	
DCS-7	16-Aug-05	<1	<2	<2	<2	0.0098	
DCS-7	24-Aug-05	<1	<2	<2	<2	0.0085	
DCS-7	02-Sep-05	<1	<2	<2	<2	0.0085	
DCS-7	09-Sep-05	<1	<2	<2	<2	0.0074	
DCS-7	13-Sep-05	<1	<2	<2	<2	0.0079	
DCS-7	22-Sep-05	<1	<2	<2	<2	0.0021	
DCS-7	29-Sep-05	<1	<2	<2	<2	0.0034	
DCS-7	06-Oct-05	<1	<2	<2	<2	0.025	
DCS-7	10-Oct-05	<1	<2	<2	<2	0.013	
DCS-7	20-Oct-05	<1	<2	<2	<2	0.0096	
DCS-7	27-Oct-05	<1	<2	<2	<2	0.01	
DCS-7	03-Nov-05	<1	<2	<2	<2	0.0064	
DCS-7	07-Nov-05	<1	<2	<2	<2	0.0052	
DCS-7	17-Nov-05	<1	<2	<2	<2	0.0066	
DCS-7	22-Nov-05	<1	<2	<2	<2	0.012	
DCS-7	29-Nov-05	<1	<2	<2	<2	0.022	
DCS-7	06-Dec-05	<1	<2	<2	<2	0.015	
DCS-7	14-Dec-05	<1	<2	<2	<2	0.013	
DCS-7	21-Dec-05	<1	<2	<2	<2	0.0067	
DCS-7	29-Dec-05	<1	<2	<2	<2	0.0044	
DCS-7	05-Jan-06	<1	<2	<2	<2	0.0058	
DCS-7	09-Jan-06	<1	<2	<2	<2	0.008	
DCS-7	18-Jan-06	<1	<2	<2	<2	0.0055	
DCS-7	24-Jan-06	<1	<2	<2	<2	0.02	
DCS-7	01-Feb-06	<1	<2	<2	<2	0.0053	
DCS-7	09-Feb-06	<0.5	<1	<1	<1	0.017	
DCS-7	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-7	22-Feb-06	<1	<2	<2	<2	0.004	
DCS-7	01-Mar-06	<1	<2	<2	<2	0.002	
DCS-7	09-Mar-06	<1	<2	<2	<2	0.0039	
DCS-7	14-Mar-06	<1	<2	<2	<2	0.01	
DCS-7	22-Mar-06	<1	<2	<2	<2	0.0084	
DCS-7	30-Mar-06	<1	<2	<2	<2	0.0025	
DCS-7	05-Apr-06	<1	<2	<2	<2	0.00079	
DCS-7	10-Apr-06	<1	<2	<2	<2	0.00077	
DCS-7	20-Apr-06	<1	<2	<2	<2	0.00089	
DCS-7	27-Apr-06	<1	<2	<2	<2	<0.0008	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-7	04-May-06	<1	<2	<2	<2	0.0014	
DCS-7	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-7	13-Jun-06	<1	<2	<2	<2	0.0053	
DCS-7	05-Sep-06	<1	<5	<2	<2	0.01	
DCS-7	04-Dec-06	<1	<5	<2	<2	0.011	
DCS-7	12-Mar-07	<1	<5	<2	<2	0.0027	
DCS-7	21-Jun-07	<1	<2	<2	<2	0.002	
DCS-7	13-Sep-07	<1	<2	<2	<2	-88.8	
DCS-7	17-Dec-07	<1	<2	<2	<2	0.0078	
DCS-7	04-Mar-08	<1	<2	<2	<2	0.004	
DCS-7	18-Jun-08	<1	<2	<2	<2	0.0022	
DCS-7	29-Sep-08	<1	<2	<2	<2	0.0084	
DCS-7	10-Dec-08	<1	<2	<2	<2	0.0083	
DCS-7	17-Mar-09	<1	<2	<2	<2	0.0012	
DCS-7	16-Jun-09	<1	<2	<2	<2	0.0037	
DCS-7	17-Sep-09	<1	<2	<2	<2	0.0054	
DCS-7	16-Dec-09	<1	<2	<2	<2	0.0069	
DCS-7	31-Mar-10	<1	<2	<2	<2	0.00156	
DCS-7	29-Jun-10	<1	<2	<2	<2	0.00186	
DCS-7	28-Sep-10	<1	<2	<2	<2	0.00561	
DCS-7	13-Dec-10	<1	<2	<2	<2	0.00277	
DCS-7	29-Mar-11	<1	<2	<2	<2	0.00219	
DCS-7	21-Jun-11	<0.2	<1	<1	<2	<0.066	
DCS-8	09-Dec-04	<1	<2	<2	<2	0.021	
DCS-8	15-Dec-04	<1	<2	<2	<2	0.013	
DCS-8	20-Dec-04	<1	<2	<2	<2	0.026	
DCS-8	23-Dec-04	<1	<2	<2	<2	0.016	
DCS-8	06-Jan-05	<1	<2	<2	<2	0.016	
DCS-8	10-Jan-05	<1	<2	<2	<2	0.0098	
DCS-8	20-Jan-05	<1	<2	<2	<2	0.0075	
DCS-8	26-Jan-05	<1	<2	<2	<2	0.013	
DCS-8	04-Feb-05	<1	<2	<2	<2	0.0075	
DCS-8	07-Feb-05	<1	<2	<2	<2	0.0076	
DCS-8	16-Feb-05	<1	<2	<2	<2	0.0074	
DCS-8	24-Feb-05	<1	<2	<2	<2	0.0099	
DCS-8	03-Mar-05	<1	<2	<2	<2	0.0058	
DCS-8	07-Mar-05	<1	<2	<2	<2	0.0086	
DCS-8	18-Mar-05	<1	<2	<2	<2	0.0075	
DCS-8	23-Mar-05	<1	<2	<2	<2	0.013	
DCS-8	29-Mar-05	<1	<2	<2	<2	0.0041	
DCS-8	07-Apr-05	<1	<2	<2	<2	0.0083	
DCS-8	11-Apr-05	<1	<2	<2	<2	0.025	
DCS-8	27-Apr-05	<1	<2	<2	<2	0.0027	
DCS-8	05-May-05	<1	<2	<2	<2	0.0032	
DCS-8	09-May-05	<1	<2	<2	<2	0.0019	
DCS-8	18-May-05	<1	<2	<2	<2	0.002	

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-8	25-May-05	<1	<2	<2	<2	0.0017	
DCS-8	02-Jun-05	<1	<2	<2	<2	0.0032	
DCS-8	08-Jun-05	<1	<2	<2	<2	0.0045	
DCS-8	15-Jun-05	<1	<2	<2	<2	0.0025	
DCS-8	21-Jun-05	<1	<2	<2	<2	0.0024	
DCS-8	30-Jun-05	<1	<2	<2	<2	0.0034	
DCS-8	07-Jul-05	<1	<2	<2	<2	0.0047	
DCS-8	11-Jul-05	<1	<2	<2	<2	0.0044	
DCS-8	21-Jul-05	<1	<2	<2	<2	0.0072	
DCS-8	27-Jul-05	<1	<2	<2	<2	0.0038	
DCS-8	03-Aug-05	<1	<2	<2	<2	0.0099	
DCS-8	08-Aug-05	<0.5	<5	<2	NA	<0.01	
DCS-8	08-Aug-05	<1	<2	<2	<2	0.0075	
DCS-8	08-Aug-05	<1	<2	<2	<2	0.0072	
DCS-8	16-Aug-05	<1	<2	<2	<2	0.0083	
DCS-8	24-Aug-05	<1	<2	<2	<2	0.0065	
DCS-8	02-Sep-05	<1	<2	<2	<2	0.0066	
DCS-8	09-Sep-05	<1	<2	<2	<2	0.0068	
DCS-8	13-Sep-05	<1	<2	<2	<2	0.0064	
DCS-8	22-Sep-05	<1	<2	<2	<2	0.0018	
DCS-8	29-Sep-05	<1	<2	<2	<2	0.0032	
DCS-8	06-Oct-05	<1	<2	<2	<2	0.026	
DCS-8	10-Oct-05	<1	<2	<2	<2	0.0097	
DCS-8	20-Oct-05	<1	<2	<2	<2	0.011	
DCS-8	27-Oct-05	<1	<2	<2	<2	0.0091	
DCS-8	03-Nov-05	<1	<2	<2	<2	0.0065	
DCS-8	07-Nov-05	<1	<2	<2	<2	0.0043	
DCS-8	17-Nov-05	<1	<2	<2	<2	0.0066	
DCS-8	22-Nov-05	<1	<2	<2	<2	0.012	
DCS-8	29-Nov-05	<1	<2	<2	<2	0.021	
DCS-8	06-Dec-05	<1	<2	<2	<2	0.013	



### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None
DCS-8	14-Dec-05	<1	<2	<2	<2	0.073	
DCS-8	21-Dec-05	<1	<2	<2	<2	0.0073	
DCS-8	29-Dec-05	<1	<2	<2	<2	-88.8	
DCS-8	05-Jan-06	<1	<2	<2	<2	0.006	
DCS-8	09-Jan-06	<1	<2	<2	<2	0.0081	
DCS-8	18-Jan-06	<1	<2	<2	<2	0.005	
DCS-8	24-Jan-06	<1	<2	<2	<2	0.018	
DCS-8	01-Feb-06	<1	<2	<2	<2	0.0056	
DCS-8	09-Feb-06	<0.5	<1	<2	<1	0.015	
DCS-8	13-Feb-06	<0.5	<1	<2	<1	<0.002	
DCS-8	22-Feb-06	<1	<2	<2	<2	0.0052	
DCS-8	01-Mar-06	<1	<2	<2	<2	0.0018	
DCS-8	09-Mar-06	<1	<2	<2	<2	0.0038	
DCS-8	14-Mar-06	<1	<2	<2	<2	0.0088	
DCS-8	22-Mar-06	<1	<2	<2	<2	0.008	
DCS-8	30-Mar-06	<1	<2	<2	<2	0.0024	
DCS-8	05-Apr-06	<1	<2	<2	<2	0.00083	
DCS-8	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-8	20-Apr-06	<1	<2	<2	<2	0.0008	
DCS-8	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-8	04-May-06	<1	<2	<2	<2	0.0013	
DCS-8	09-May-06	<1	<2	<2	<2	0.0011	
DCS-8	13-Jun-06	<1	<2	<2	<2	0.0043	
DCS-8	05-Sep-06	<1	<5	<2	<2	0.0084	
DCS-8	04-Dec-06	<1	<5	<2	<2	0.011	
DCS-8	12-Mar-07	<1	<5	<2	<2	0.0022	
DCS-8	21-Jun-07	<1	<2	<2	<2	0.0017	
DCS-8	13-Sep-07	<1	<2	<2	<2	0.0064	
DCS-8	13-Sep-07	<1	<2	<2	<2	0.005	
DCS-8	17-Dec-07	<1	<2	<2	<2	0.0058	
DCS-8	04-Mar-08	<1	<2	<2	<2	0.0034	
DCS-8	18-Jun-08	<1	<2	<2	<2	0.0023	
DCS-8	29-Sep-08	<1	<2	<2	<2	0.0065	
DCS-8	10-Dec-08	<1	<2	<2	<2	0.006	
DCS-8	17-Mar-09	<1	<2	<2	<2	0.0011	
DCS-8	16-Jun-09	<1	<2	<2	<2	0.0032	
DCS-8	17-Sep-09	<1	<2	<2	<2	0.0038	
DCS-8	16-Dec-09	<1	<2	<2	<2	0.0058	
DCS-8	31-Mar-10	<1	<2	<2	<2	0.0013	
DCS-8	29-Jun-10	<1	<2	<2	<2	0.0015	
DCS-8	28-Sep-10	<1	<2	<2	<2	0.00381	
DCS-8	13-Dec-10	<1	<2	<2	<2	0.00255	
DCS-8	29-Mar-11	<1	<2	<2	<2	0.00157	
DCS-8	21-Jun-11	<0.20	<1	<1	<2	<0.066	

**Bold - indicates value exceeds state standard**

mg/l - milligrams/liter

ug/l - micrograms/liter

### Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000	None	None

Total number of observations for all points over all dates = 1052

## **APPENDIX D**

**Historical QA/QC Results for  
Surface and Ground Water Samples  
included as .pdf file on CD in back**

**Appendix D**  
Summary of Historical QA/QC Samples  
Encana, West Divide Seep  
Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
DCS-1		1/10/05	< 1	< 2	< 2	< 2	0.0022
DCS-1	Dup	1/10/05	< 1	< 2	< 2	< 2	0.0023
DCS-1	Split	1/10/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-1		3/7/05	< 1	< 2	< 2	< 2	0.0014
DCS-1	Dup	3/7/05	< 1	< 2	< 2	< 2	0.0014
DCS-1	Split	3/7/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-1		12/4/06	< 1	< 5	< 2	< 2	0.0015
DCS-1	Dup	12/4/06	< 1	< 5	< 2	< 2	0.0015
DCS-1	Split	12/4/06	< 0.25	< 0.25	< 0.25	< 0.5	0.0005
DCS-1		3/17/09	< 1	< 2	< 2	< 2	< 0.0008
DCS-1	Dup	3/17/09	< 1	< 2	< 2	< 2	0.0062
DCS-1	Split	3/17/09	< 1	< 1	< 1	< 1	< 0.001
DCS-2		10/12/04	4.3	< 2	< 2	< 2	0.36
DCS-2	Dup	10/12/04	4.1	< 2	< 2	< 2	0.36
DCS-2	Split	10/12/04	3.6	< 2	< 2	< 1.5	0.18
DCS-2		5/9/05	< 1	< 2	< 2	< 2	0.0084
DCS-2	Dup	5/9/05	< 1	< 2	< 2	< 2	0.0098
DCS-2	Split	5/9/05	< 0.5	< 5	< 0.5	< 1.5	0.012
DCS-2		4/10/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-2	Dup	4/10/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-2	Split	4/10/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00061
DCS-2		9/5/06	< 1	< 5	< 2	< 2	0.0054
DCS-2	Dup	9/5/06	< 1	< 5	< 2	< 2	0.0057
DCS-2	Split	9/5/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00269
DCS-2		3/12/07	< 1	< 5	< 2	< 2	0.072
DCS-2	Dup.	3/12/07	< 1	< 5	< 2	< 2	0.11
DCS-2	Split	3/12/07	< 1	< 5	< 2	< 2	0.0735
DCS-2		6/21/07	< 1	< 2	< 2	< 2	0.0019
DCS-2	Dup	6/21/07	< 1	< 2	< 2	< 2	0.002
DCS-2	Split	6/21/07	< 0.25	< 0.25	< 0.25	< 0.5	0.991
DCS-2		3/3/08	< 1	< 2	< 2	< 2	0.00096
DCS-2	Dup	3/3/08	< 1	< 2	< 2	< 2	0.0011
DCS-2	Split	3/3/08	< 0.5	< 0.5	< 0.5	< 1	0.000488
DCS-2		3/29/11	< 1	< 2	< 2	< 2	0.00086
DCS-2	Dup	3/29/11	< 1	< 2	< 2	< 2	0.00089
DCS-3		4/16/04	<b>5.7</b>	4.2	< 2	< 2	0.38
DCS-3	Dup	4/16/04	<b>5.8</b>	4.2	< 2	2.3	0.33
DCS-3		12/9/04	< 1	< 2	< 2	< 2	0.077
DCS-3	Dup	12/9/04	< 1	< 2	< 2	< 2	0.079
DCS-3	Split	12/9/04	< 0.5	< 5	< 0.5	< 1.5	0.058
DCS-3		6/8/05	< 1	< 2	< 2	< 2	0.0035
DCS-3	Dup	6/8/05	< 1	< 2	< 2	< 2	0.0037
DCS-3	Split	6/8/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-3		7/11/05	< 1	< 2	< 2	< 2	0.0069
DCS-3	Dup	7/11/05	< 1	< 2	< 2	< 2	0.006
DCS-3	Split	7/11/05	< 0.5	< 5	0.53	2.6	0.017
DCS-3		5/9/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-3	Dup	5/9/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-3	Split	5/9/06	< 0.5	< 0.5	< 0.5	< 1	0.000849
DCS-3		12/17/07	< 1	< 2	< 2	< 2	0.0032
DCS-3	Dup	12/17/07	< 1	< 2	< 2	< 2	0.0034
DCS-3	Rep	12/17/07	< 0.5	< 5	< 0.5	< 0	0.00371
DCS-3		6/16/09	< 1	< 2	< 2	< 2	0.0014
DCS-3	Dup	6/16/09	< 1	< 2	< 2	< 2	0.0014
DCS-3		9/28/10	< 1	< 2	< 2	< 2	0.0176
DCS-3	Dup	9/28/10	< 1	< 2	< 2	< 2	0.0153

**Appendix D**  
Summary of Historical QA/QC Samples  
Encana, West Divide Seep  
Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
DCS-4		2/7/05	< 1	< 2	< 2	< 2	0.0096
DCS-4	Dup	2/7/05	< 1	< 2	< 2	< 2	0.0096
DCS-4	Split	2/7/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-4		11/7/05	< 1	< 2	< 2	< 2	0.0044
DCS-4	Dup	11/7/05	< 1	< 2	< 2	< 2	0.0034
DCS-4	Split	11/7/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-4		1/9/06	< 1	< 2	< 2	< 2	0.0064
DCS-4	Dup	1/9/06	< 1	< 2	< 2	< 2	0.0064
DCS-4	Split	1/9/06	< 0.5	< 1	< 1	< 2	0.005
DCS-4		9/29/08	< 1	< 2	< 2	< 2	0.0098
DCS-4	Dup	9/29/08	< 1	< 2	< 2	< 2	0.0098
DCS-4	Split	9/29/08	< 0.5	< 0.5	< 0.5	< 0.5	0.012
DCS-5		9/13/05	< 1	< 2	< 2	< 2	0.0076
DCS-5	Dup	9/13/05	< 1	< 2	< 2	< 2	0.0075
DCS-5	Split	9/13/05	0.99	< 5	< 0.5	1.9	0.012
DCS-5		2/13/06	< 0.5	< 1	< 1	< 2	< 0.002
DCS-5	Dup	2/13/06	< 0.5	< 1	< 1	< 2	0.009
DCS-5	Split	2/13/06	< 0.5	< 0.5	< 0.5	< 1	0.013
DCS-5		6/13/06	< 1	< 2	< 2	< 2	0.0045
DCS-5	Split	6/13/06	< 0.5	< 0.5	< 0.5	< 1	0.00445
DCS-5		12/10/08	<1	<2	<2	<2	0.0066
DCS-5	Dup	12/10/08	<1	<2	<2	<2	0.0062
DCS-5	Split	12/10/08	<1	<1	<1	<1	0.003
DCS-6		4/29/04	< 1	< 2	< 2	< 2	0.011
DCS-6	Dup	4/29/04	< 1	< 2	< 2	< 2	0.015
DCS-6		10/10/05	< 1	< 2	< 2	< 2	0.014
DCS-6	Dup	10/10/05	< 1	< 2	< 2	< 2	0.015
DCS-6	Split	10/10/05	< 0.5	< 5	< 0.5	< 1.5	0.019
DCS-6		12/6/05	< 1	< 2	< 2	< 2	0.015
DCS-6	Dup	12/6/05	< 1	< 2	< 2	< 2	0.014
DCS-6	Split	12/6/05	< 0.5	< 5	< 0.5	< 1.5	0.014
DCS-6		3/14/06	< 1	< 2	< 2	< 2	0.012
DCS-6	Dup	3/14/06	< 1	< 2	< 2	< 2	0.012
DCS-6	Split	3/14/06	< 0.25	< 0.25	< 0.25	< 0.5	0.0143
DCS-6		6/18/08	< 1	< 2	< 2	< 2	0.0029
DCS-6	Dup	6/18/08	< 1	< 2	< 2	< 2	0.0027
DCS-6	Split	6/18/08	< 1	< 1	< 1	< 3	NS
DCS-8		8/8/05	< 1	< 2	< 2	< 2	0.0075
DCS-8	Dup	8/8/05	< 1	< 2	< 2	< 2	0.0072
DCS-8	Split	8/8/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-8		6/13/06	< 1	< 2	< 2	< 2	0.0043
DCS-8	Dup	6/13/06	< 1	< 2	< 2	< 2	0.0048
DCS-8		9/13/07	< 1	< 2	< 2	< 2	0.0064
DCS-8	Dup	9/13/07	< 1	< 2	< 2	< 2	0.005
MW-1		9/11/07	< 1	< 2	< 2	< 2	0.001
MW-1	Dup	9/11/07	< 1	< 2	< 2	< 2	< 0.0008
MW-1	Split	9/11/07	< 0.5	< 0.5	< 0.5	< 1	0.000144
MW-2		2/9/05	<b>420</b>	< 10	< 10	30	3
MW-2	Dup	2/9/05	<b>420</b>	2.4	8.6	43.5	2.6
MW-2	Split	2/9/05	<b>340</b>	< 5	6.7	33	0.65
MW-2		12/7/05	<b>290</b>	< 10	< 10	46	6.5
MW-2	Dup	12/7/05	<b>270</b>	< 10	< 10	42	5.1

**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-2	Split	12/7/05	290	35	8.1	49	8.4
MW-2		1/11/06	310	< 2	8.5	63.9	8
MW-2	Dup	1/11/06	340	< 2	8.8	62.5	9
MW-2	Split	1/11/06	174	< 2	4.9	36.9	3.1
MW-2		3/12/07	230	< 2	5.8	37.8	7.8
MW-2	Dup.	3/12/07	250	< 2	6.5	43.4	9.4
MW-2	Split	3/12/07	212	< 2	8.05	51.43	0.0691
MW-2		6/20/07	220	< 2	5.3	36.1	6.1
MW-2	Dup	6/20/07	190	< 2	4.6	31.6	4.5
MW-2	Split	6/20/07	94	< 0.25	5.5	43.49	0.979
MW-2		3/3/08	120	< 2	2.6	11	5.8
MW-2	Dup	3/3/08	130	< 2	2.7	12	5.9
MW-2	Split	3/3/08	186	< 0.5	5.1	31.2	1.86
MW-2		6/15/09	110	< 2	< 2	28.8	8.3
MW-2	Dup	6/15/09	94	< 2	< 2	24.1	9.2
MW-4		9/15/04	320	76	9.5	80.5	9.2
MW-4	Dup	9/15/04	330	76	9.1	77.1	8.6
MW-4	Split	9/15/04	240	59	6.7	60	27
MW-4		10/14/04	300	37	9	55.2	5.6
MW-4	Dup	10/14/04	300	51	9	59	9.3
MW-4	Split	10/14/04	210	< 50	6.1	37	4.4
MW-4		12/13/04	270	36	8.1	64.9	14
MW-4	Dup	12/13/04	270	37	7.7	62.6	12
MW-4	Split	12/13/04	240	33	12	97	7.8
MW-4		1/12/05	350	68	11	71.9	14
MW-4	Dup	1/12/05	360	40	11	62.3	14
MW-4	Split	1/12/05	320	35	8.1	49	6.1
MW-4		4/12/05	130	33	< 2	20	8.9
MW-4	Dup	4/12/05	130	52	< 2	24	10
MW-4	Split	4/12/05	280	< 1200	< 120	< 380	8.7
MW-4		5/9/05	310	66	11	88	10
MW-4	Dup	5/9/05	320	77	11	90	11
MW-4		7/11/05	180	32	3.8	34.9	6.1
MW-4	Dup	7/11/05	170	40	3.3	38.7	7.8
MW-4	Split	7/11/05	0.69	< 1200	< 120	< 380	< 1
MW-4		8/9/05	270	41	< 10	69	8.3
MW-4	Dup	8/9/05	240	46	< 10	65	8.5
MW-4	Split	8/9/05	170	29	2.2	62	2.7
MW-4		1/10/06	270	< 2	6.5	71	8.8
MW-4	Dup	1/10/06	270	< 2	8	73	8.5
MW-4	Split	1/10/06	97	< 2	< 2	37	8.3
MW-4		3/12/07	220	< 2	7	67.2	9.8
MW-4	Dup.	3/12/07	200	< 2	6	55.9	7.6
MW-4	Split	3/12/07	172	< 0.25	6.73	69.28	0.0592
MW-4		10/1/08	110	< 2	< 2	33.7	6.2
MW-4	Dup	10/1/08	120	< 2	< 2	34.9	5
MW-4	Split	10/1/08	100	< 0.5	0.69	23.7	4.48
MW-4		3/16/09	81	< 2	< 2	17.3	9.2
MW-4	Dup	3/16/09	83	< 2	< 2	18.5	9.1
MW-4	Split	3/16/09	73	< 1	< 1	15.7	5.99
MW-6		12/14/04	< 1	< 2	< 2	< 2	0.054
MW-6	Dup	12/14/04	< 1	< 2	< 2	< 2	0.4
MW-6	Split	12/14/04	< 0.5	< 5	< 0.5	< 1.5	0.071
MW-6		6/8/05	1.3	< 2	< 2	< 2	0.18
MW-6	Dup	6/8/05	2.5	< 2	< 2	< 2	0.22
MW-6	Split	6/8/05	2.2	< 5	< 0.5	< 1.5	0.024

**Appendix D**  
Summary of Historical QA/QC Samples  
Encana, West Divide Seep  
Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-6		9/12/05	2	< 2	< 2	< 2	0.12
MW-6	Dup	9/12/05	1.9	< 2	< 2	< 2	0.16
MW-6	Split	9/12/05	1.9	< 5	< 0.5	< 1.5	< 0.01
MW-6		11/8/05	3.7	< 2	< 2	< 2	0.17
MW-6	Dup	11/8/05	3.6	< 2	< 2	< 2	0.17
MW-6	Split	11/8/05	2.1	< 5	< 0.5	< 1.5	0.41
MW-6		2/14/06	< 0.5	< 1	< 1	< 2	0.15
MW-6	Dup	2/14/06	< 0.5	< 1	< 1	< 2	0.077
MW-6	Split	2/14/06	0.6	< 0.5	< 0.5	< 1	0.128
MW-6		4/12/06	1.1	< 2	< 2	< 2	0.046
MW-6	Dup	4/12/06	1	< 2	< 2	< 2	0.034
MW-6	Split	4/12/06	1.12	< 0.25	< 0.25	< 0.5	0.125
MW-6		9/7/06	< 1	< 5	< 2	< 2	0.038
MW-6	DUP	9/7/06	< 1	< 5	< 2	< 2	0.031
MW-6	Split	9/7/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00523
MW-6		12/17/07	< 1	< 2	< 2	< 2	0.0081
MW-6	Dup	12/17/07	< 1	< 2	< 2	< 2	0.008
MW-6	Split	12/17/07	< 0.5	< 5	< 0.5	< 0	0.00846
MW-6		9/30/08	< 1	< 2	< 2	< 2	< 0.008
MW-6	Dup	9/30/08	< 1	< 2	< 2	< 2	< 0.008
MW-6	Split	9/30/08	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001
MW-7		5/10/05	< 1	< 2	< 2	< 2	< 0.0008
MW-7	Dup	5/10/05	< 1	< 2	< 2	< 2	< 0.0008
MW-7	Split2	5/10/05	< 0.5	< 5	< 0.5	< 1.5	0.031
MW-7		10/11/05	< 1	< 2	< 2	< 2	0.0075
MW-7	Dup	10/11/05	< 1	< 2	< 2	< 2	0.026
MW-7	Split2	10/11/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
MW-7		9/7/06	< 1	< 2	< 2	< 2	0.047
MW-7	Dup	9/7/06	< 1	< 2	< 2	< 2	0.039
MW-7	Split	9/7/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00163
MW-7		9/21/06	< 1	< 2	< 2	< 2	0.002
MW-7	DUP	9/21/06	< 1	< 2	< 2	< 2	0.0013
MW-7	Split	9/21/06	< 0.25	< 0.25	< 0.25	< 0.5	0.000762
MW-7		6/20/07	< 1	< 2	< 2	< 2	< 0.0008
MW-7	Dup	6/20/07	< 1	< 2	< 2	< 2	0.0013
MW-7	Split	6/20/07	< 0.25	< 0.25	< 0.25	< 0.5	NS
MW-8		11/10/04	<b>140</b>	< 2	< 2	< 2	7.2
MW-8	Dup	11/10/04	<b>150</b>	< 2	< 2	< 2	6.5
MW-8	Split	11/10/04	<b>120</b>	< 5	< 0.5	< 1.5	3.1
MW-8		7/12/05	< 1	< 2	< 2	< 2	0.043
MW-8	Dup	7/12/05	< 1	< 2	< 2	< 2	0.12
MW-8	Split	7/12/05	<b>120</b>	< 5	< 0.5	< 1.5	3.1
MW-8		10/12/05	< 1	< 2	< 2	< 2	0.25
MW-8	Dup	10/12/05	< 1	< 2	< 2	< 2	0.19
MW-8	Split	10/12/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
MW-8		5/11/06	< 1	< 2	< 2	< 2	0.032
MW-8	Dup	5/11/06	< 1	< 2	< 2	< 2	0.017
MW-8	Split	5/11/06	< 0.5	< 0.5	< 0.5	< 1	0.0649
MW-9		11/9/04	<b>310</b>	160	10	98	10
MW-9	Dup	11/9/04	<b>320</b>	170	11	104	9
MW-9	Split	11/9/04	<b>280</b>	160	9.8	100	14
MW-12		10/13/04	< 1	< 2	< 2	< 2	< 0.0008
MW-12	Dup	10/13/04	< 1	< 2	< 2	< 2	0.17
MW-12	Split	10/13/04	< 1	< 2	< 2	< 1.5	0.12

**Appendix D**  
Summary of Historical QA/QC Samples  
Encana, West Divide Seep  
Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-12		3/15/06	< 1	< 2	< 2	< 2	1.6
MW-12	Dup	3/15/06	< 1	< 2	< 2	< 2	1.4
MW-12	Split	3/15/06	< 0.5	< 0.5	< 0.5	< 1	1.51
MW-16		3/8/05	<b>6.1</b>	< 2	< 2	< 2	0.83
MW-16	Dup	3/8/05	<b>6.3</b>	< 2	< 2	< 2	0.66
MW-16	Split	3/8/05	<b>6.2</b>	< 5	< 0.5	< 1.5	1.7
MW-16		9/16/09	<1	<2	<2	<2	1.8
MW-16	Dup	9/16/09	<1	<2	<2	<2	1.5
MW-16		12/15/09	< 1	< 2	< 2	< 2	0.76
MW-16	Dup	12/15/09	< 1	< 2	< 2	< 2	0.75
MW-16		3/30/10	< 1	< 2	< 2	< 2	0.636
MW-16	Dup	3/30/10	< 1	< 2	< 2	< 2	0.527
MW-16		6/28/10	< 1	< 2	< 2	< 2	0.0889
MW-16	Dup	6/28/10	< 1	2.4	< 2	< 2	0.0135
MW-16 <sup>a</sup>		7/21/10	< 1	< 2	< 2	< 2	
MW-16 <sup>a</sup>	Dup	7/21/10	< 1	< 2	< 2	< 2	
MW-16		12/14/10	<1	<2	<2	<2	0.166
MW-16	Dup	12/14/10	<1	<2	<2	<2	0.111
MW-16		3/29/11	<1	<2	<2	<2	0.021
MW-16 <sup>a</sup>	Dup	3/29/11	<1	<2	<2	<2	0.0483
MW-18		12/8/05	< 1	< 2	< 2	< 2	0.76
MW-18	Dup	12/8/05	< 1	< 2	< 2	< 2	0.68
MW-18	Split2	12/8/05	< 0.5	< 5	< 0.5	< 1.5	0.8
MW-18		6/13/06	< 1	< 2	< 2	< 2	1.4
MW-18	Dup	6/13/06	< 1	< 2	< 2	< 2	1.2
MW-18	Split	6/13/06	< 0.5	< 0.5	< 0.5	< 1	1.46
MW-18		6/19/08	< 1	< 2	< 2	< 2	0.15
MW-18	Dup	6/19/08	< 1	< 2	< 2	< 2	0.013
MW-18	Split	6/19/08	< 1	< 1	< 1	< 3	NS
MW-22		3/9/05	< 1	< 2	< 2	< 2	0.0043
MW-22	Dup	3/9/05	< 1	< 2	< 2	< 2	0.0034
MW-22	Split2	3/9/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
MW-23		9/16/09	< 1	< 2	< 2	< 2	<0.0008
MW-23	Dup	9/16/09	< 1	< 2	< 2	< 2	0.0011
MW-23		3/30/10	< 1	< 2	< 2	< 2	0.0724
MW-23	Dup	3/30/10	< 1	< 2	< 2	< 2	0.0964
MW-23		6/28/10	< 1	< 2	< 2	< 2	<0.0008
MW-23	Dup	6/28/10	< 1	< 2	< 2	< 2	<0.0008
MW-23		12/16/10	<1	<2	<2	<2	<0.0008
MW-23	Dup	12/16/10	<1	<2	<2	<2	<0.0008
MW-23		3/28/11	<1	<2	<2	<2	0.012
MW-23	Dup	3/28/11	<1	<2	<2	<2	0.00938
MW-24		8/10/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Dup	8/10/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split2	8/10/05	< 0.5	< 5	< 0.5	1.9	< 0.01
MW-24		11/9/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Dup	11/9/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split2	11/9/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
MW-24		2/15/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Dup	2/15/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split	2/15/06	< 0.5	< 0.5	< 0.5	< 1	< 0.0034
MW-24		12/6/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	DUP	12/6/06	< 1	< 2	< 2	< 2	< 0.0008



**Appendix D**  
Summary of Historical QA/QC Samples  
Encana, West Divide Seep  
Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-24	Split	12/6/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00028
MW-24		12/10/08	<1	<2	<2	<2	<0.0008
MW-24	Dup	12/10/08	<1	<2	<2	<2	<0.0008
MW-24	Split	12/10/08	<1	<1	<1	<1	<0.001
MW-26		1/13/05	< 1	< 2	< 2	< 2	2.4
MW-26	Dup	1/13/05	< 1	< 2	< 2	< 2	2.1
MW-26	Split	1/13/05	< 0.5	< 5	< 0.5	< 1.5	0.5
MW-26		2/10/05	< 1	< 2	< 2	< 2	2.9
MW-26	Dup	2/10/05	< 1	< 2	< 2	< 2	3.2
MW-26	Split2	2/10/05	< 0.5	< 5	< 0.5	< 1.5	2.9
MW-26		4/13/05	< 1	< 2	< 2	< 2	3.3
MW-26	Dup	4/13/05	< 1	< 2	< 2	< 2	3.3
MW-26	Split2	4/13/05	< 0.5	< 5	< 0.5	< 1.5	3.7
MW-26		5/11/05	< 1	< 2	< 2	< 2	2.3
MW-26	Dup	5/11/05	< 1	< 2	< 2	< 2	2.1
MW-26	Split2	5/11/05	< 0.5	< 5	< 0.5	< 1.5	0.38
MW-26		9/13/05	< 1	< 2	< 2	< 2	0.97
MW-26	Dup	9/13/05	< 1	< 2	< 2	< 2	0.99
MW-26	Split2	9/13/05	< 0.5	< 5	< 0.5	< 1.5	1.5
MW-26		3/16/06	< 1	< 2	< 2	< 2	0.83
MW-26	Dup	3/16/06	< 1	< 2	< 2	< 2	0.79
MW-26	Split	3/16/06	< 0.25	< 0.25	< 0.25	< 0.5	0.000377
MW-26		4/12/06	< 1	< 2	< 2	< 2	0.45
MW-26	Dup	4/12/06	< 1	< 2	< 2	< 2	0.6
MW-26	Split	4/12/06	< 0.25	< 0.25	< 0.25	< 0.5	0.858
MW-26		5/11/06	< 1	< 2	< 2	< 2	0.75
MW-26	Dup	5/11/06	< 1	< 2	< 2	< 2	0.74
MW-26	Split	5/11/06	< 0.5	< 0.5	< 0.5	< 1	0.877
MW-26		6/13/06	< 1	< 2	< 2	< 2	0.63
MW-26	Dup	6/13/06	< 1	< 2	< 2	< 2	0.74
MW-26	Split	6/13/06	< 0.5	< 0.5	< 0.5	< 1	0.767
MW-26		12/6/06	< 1	< 2	< 2	< 2	1.1
MW-26	DUP	12/6/06	< 1	< 2	< 2	< 2	0.76
MW-26	Split	12/6/06	< 0.25	< 0.25	< 0.25	< 0.5	0.355
MW-26		6/17/08	< 1	< 2	< 2	< 2	0.55
MW-26	Dup	6/17/08	< 1	< 2	< 2	< 2	0.51
MW-26	Split	6/17/08	< 1	< 1	< 1	< 3	NS
MW-26		12/9/08	<1	<2	<2	<2	0.73
MW-26	Dup	12/9/08	<1	<2	<2	<2	0.79
MW-26	Split	12/9/08	<1	<1	<1	<1	0.145
MW-26		12/16/09	< 1	< 2	< 2	< 2	0.27
MW-26	Dup	12/16/09	< 1	< 2	< 2	< 2	0.33
MW-26		9/27/10	< 1	< 2	< 2	< 2	0.512
MW-26	Dup	9/27/10	< 1	< 2	< 2	< 2	0.569
MW-26		12/13/10	<1	<2	<2	<2	0.473
MW-26	Dup	12/13/10	<1	<2	<2	<2	0.454

### Appendix D

Summary of Historical QA/QC Samples  
Encana, West Divide Seep  
Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
E2		6/9/05	< 1	< 2	< 2	< 2	0.43
E2	Dup	6/9/05	< 1	< 2	< 2	< 2	0.51
E2	Split	6/9/05	< 0.5	< 5	< 0.5	< 1.5	0.13
E2		10/25/06	< 1	< 2	< 2	< 2	0.0061
E2	Dup	10/25/06	< 1	< 2	< 2	< 2	0.0098
E2	Split	10/25/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00274
FB	Field Blank	7/21/10	< 1	< 2	< 2	< 2	

Bold - Indicates Value exceeds state standard

<sup>a</sup> - Resampled due to suspected laboratory error

ug/L = micrograms per liter

mg/L = milligrams per liter

< - below laborator reporting limit

NS - Not sampled

Dup - Duplicate sample

Split - Split sample

Split2 - Split sample

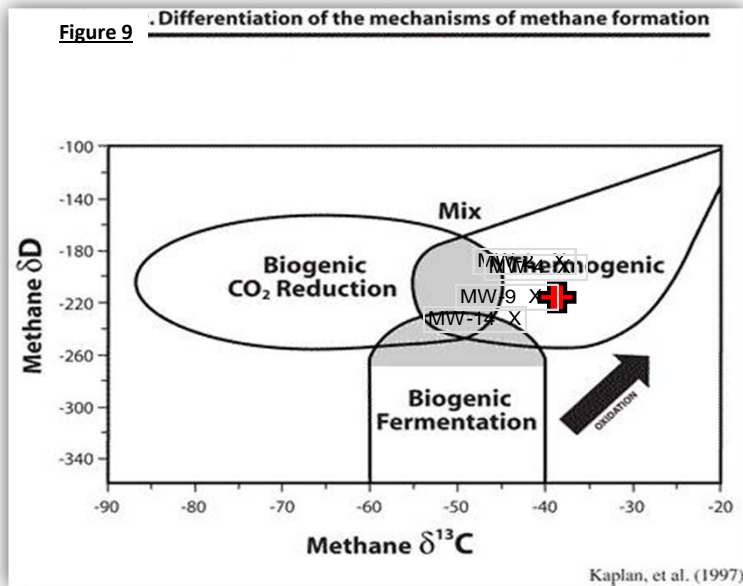
# **APPENDIX E**

**Thermogenic Methane Data  
included as .pdf file on CD in back**

Appendix E - An Estimation of Thermogenic Methane Data for West Divide Creek Seep Study Area

Date	Site ID	Total Methane mg/L	Thermogenic Methane mg/L	$\delta^{13}\text{C}_1$	$\delta\text{DC}_1$	Comment
				per mil	per mil	
20-Jun-11	MW-2	8.13	6.0	-39.98	-185.3	Consistent with thermogenic (or mostly thermogenic) formation
20-Jun-11	MW-17	0.0008	0.0			Methane was not detected above the laboratory reporting limit
20-Jun-11	MW-4	7.55	5.1	-39.80	-181.2	Consistent with thermogenic (or mostly thermogenic) formation
21-Jun-11	MW-14	3.09	1.3	-44.20	-226.5	Consistent with thermogenic (or mostly thermogenic) formation
21-Jun-11	MW-9	8.53	5.4	-41.21	-190.3	Consistent with thermogenic (or mostly thermogenic) formation

Ratiod data and Raw data show more information regarding results



Lab #: 214173 Job #: 15598  
 Sample Name/Number: MW2  
 Company: Olsson Associates  
 Date Sampled: 6/20/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.098			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	0.383			
Oxygen -----	5.34			
Nitrogen -----	20.47			
Carbon Dioxide -----	1.74			
Methane -----	60.77	-39.98	-185.3	
Ethane -----	7.67	-28.08		
Ethylene -----	nd			
Propane -----	2.54	-25.92		
Iso-butane -----	0.356			
N-butane -----	0.400			
Iso-pentane -----	0.0976			
N-pentane -----	0.0603			
Hexanes + -----	0.0773			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 852

Specific gravity, calculated: 0.766

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.60

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 214174 Job #: 15598  
 Sample Name/Number: MW17  
 Company: Olsson Associates  
 Date Sampled: 6/20/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.092			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	1.70			
Oxygen -----	0.97			
Nitrogen -----	91.25			
Carbon Dioxide -----	5.95			
Methane -----	0.0263			
Ethane -----	0.0047			
Ethylene -----	nd			
Propane -----	0.0032			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 1 Specific gravity, calculated: 1.008

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.72

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 214175 Job #: 15598  
 Sample Name/Number: MW4  
 Company: Olsson Associates  
 Date Sampled: 6/20/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.044			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	0.683			
Oxygen -----	0.14			
Nitrogen -----	36.36			
Carbon Dioxide -----	5.15			
Methane -----	49.41	-39.80	-181.2	
Ethane -----	5.70	-27.89		
Ethylene -----	nd			
Propane -----	1.78	-26.07		
Iso-butane -----	0.271			
N-butane -----	0.288			
Iso-pentane -----	0.0745			
N-pentane -----	0.0438			
Hexanes + -----	0.0551			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 673

Specific gravity, calculated: 0.817

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.65

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 214176 Job #: 15598  
 Sample Name/Number: MW14  
 Company: Olsson Associates  
 Date Sampled: 6/21/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.022			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	1.14			
Oxygen -----	1.96			
Nitrogen -----	55.05			
Carbon Dioxide -----	9.32			
Methane -----	29.59	-44.20	-226.5	
Ethane -----	1.95	-28.50		
Ethylene -----	nd			
Propane -----	0.678	-25.32		
Iso-butane -----	0.111			
N-butane -----	0.114			
Iso-pentane -----	0.0305			
N-pentane -----	0.0191			
Hexanes + -----	0.0178			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 362

Specific gravity, calculated: 0.912

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.68

\*Addition of helium negates the ability to detect native helium or hydrogen.

\*\* Propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.



Lab #: 214177 Job #: 15598  
 Sample Name/Number: MW9  
 Company: Olsson Associates  
 Date Sampled: 6/21/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.035			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	0.682			
Oxygen -----	5.63			
Nitrogen -----	33.57			
Carbon Dioxide -----	5.09			
Methane -----	47.72	-41.21	-190.3	
Ethane -----	4.76	-28.53		
Ethylene -----	nd			
Propane -----	1.74	-26.16		
Iso-butane -----	0.288			
N-butane -----	0.302			
Iso-pentane -----	0.0824			
N-pentane -----	0.0442			
Hexanes + -----	0.0526			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 639

Specific gravity, calculated: 0.831

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.64

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

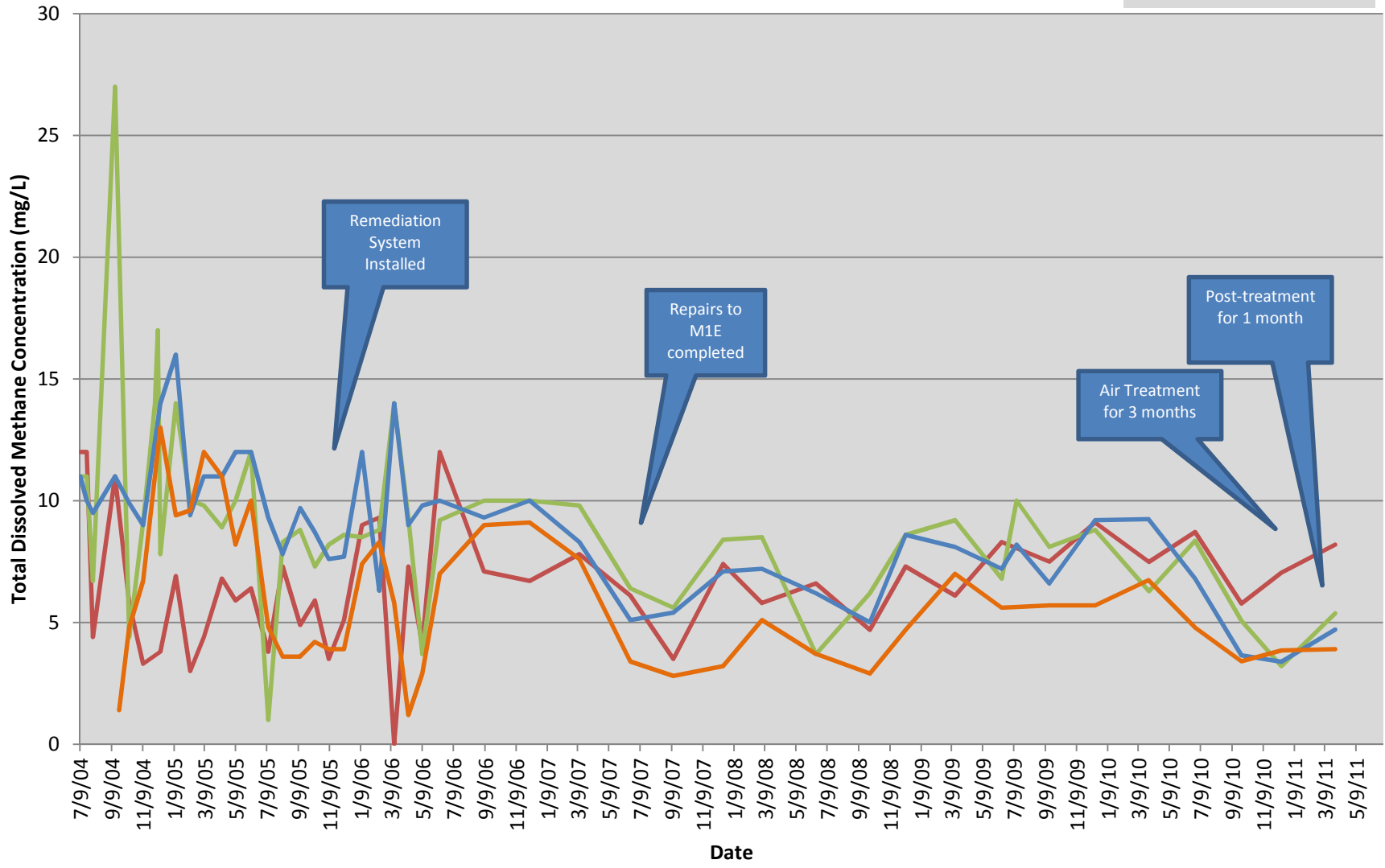
# **APPENDIX F**

**Graphs  
included as .pdf file on CD in back**

# West Divide Creek

## Total Dissolved Methane Concentrations MW2, MW4, MW9, and MW14

- Methane - MW2
- Methane - MW4
- Methane - MW9
- Methane - MW14

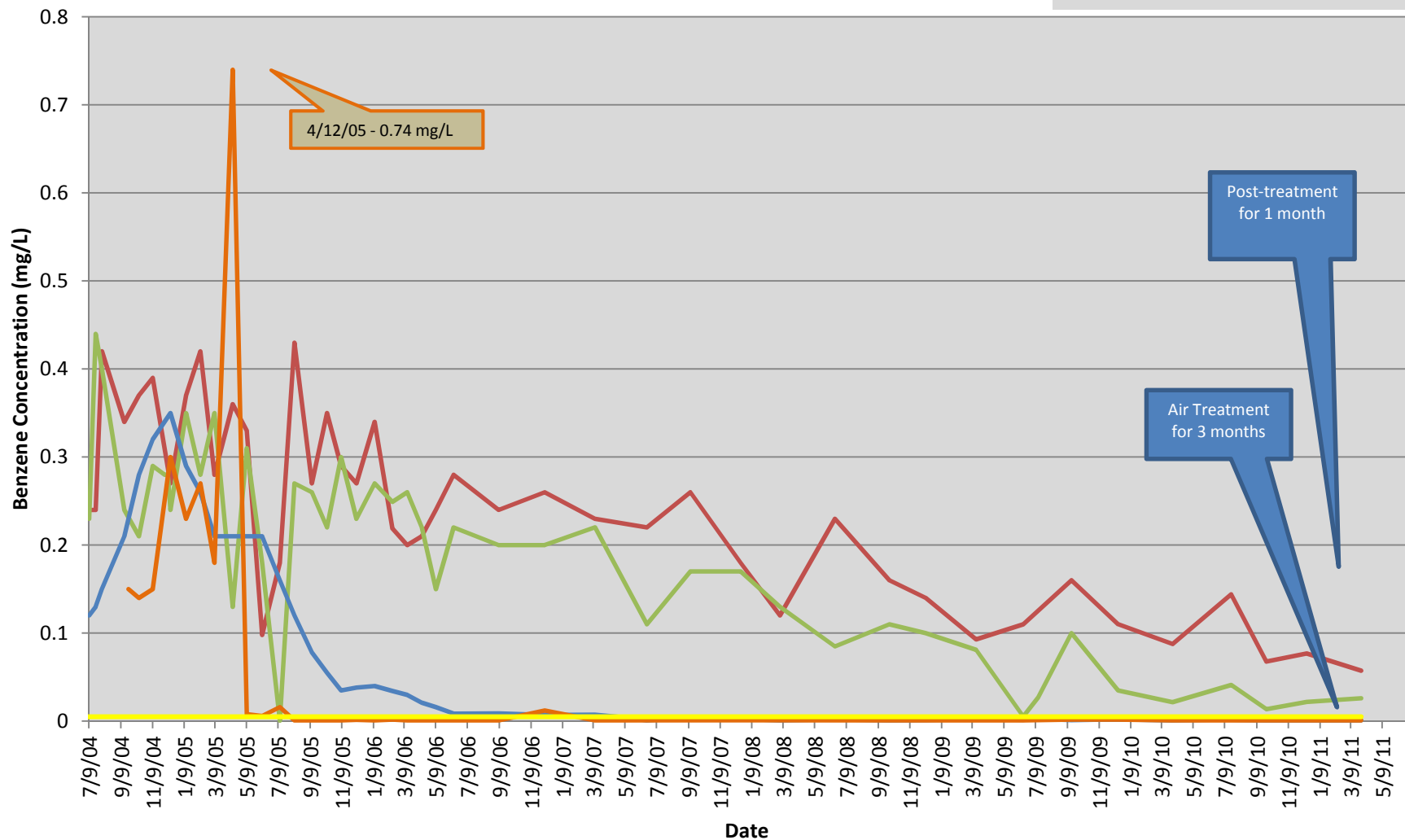


# West Divide Creek

## Benzene Concentrations

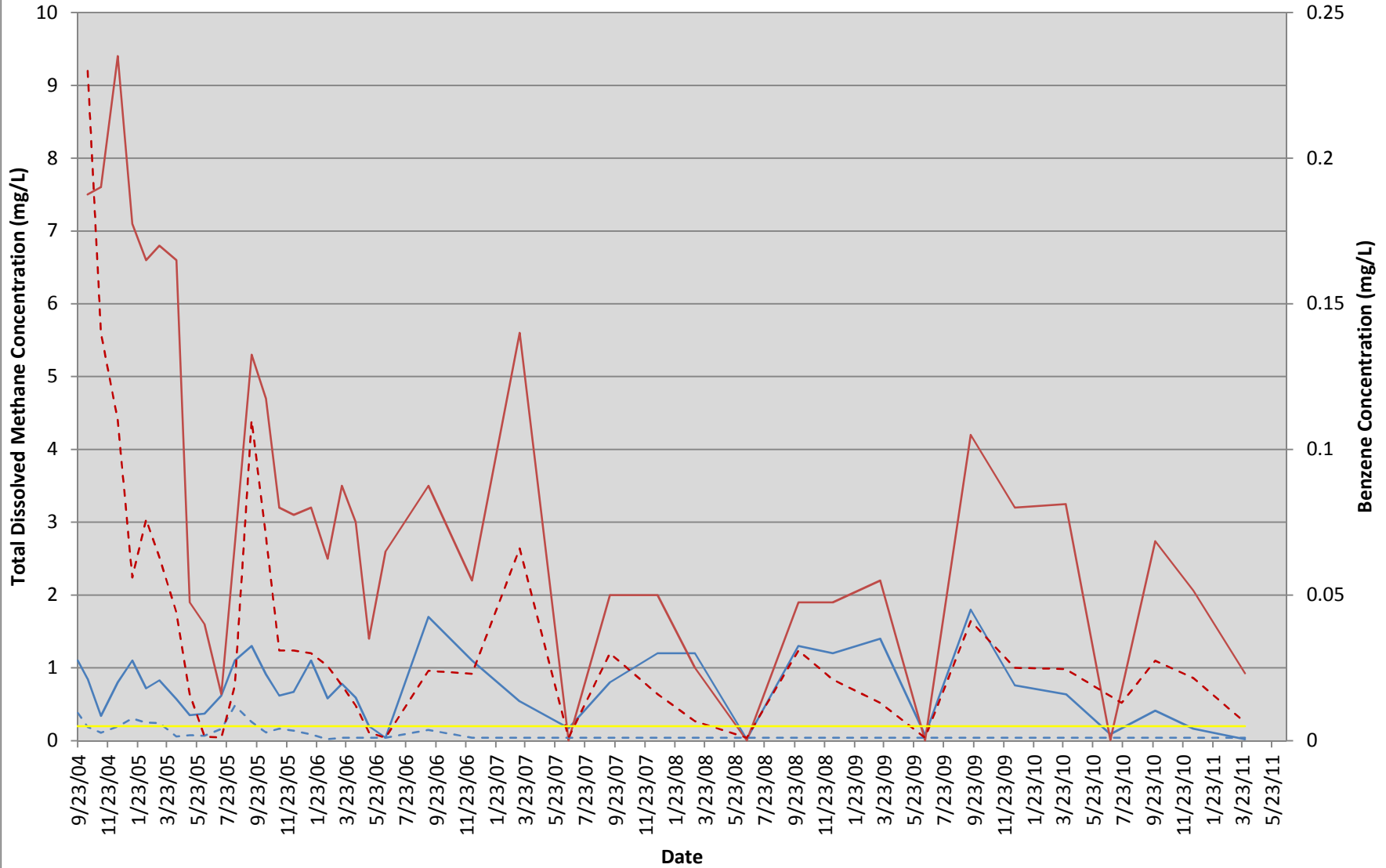
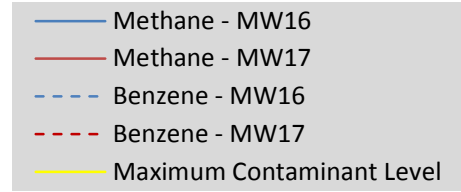
MW2, MW4, MW9, and MW14

- Benzene - MW2
- Benzene - MW4
- Benzene - MW9
- Benzene - MW14
- Maximum Contaminant Level



# West Divide Creek

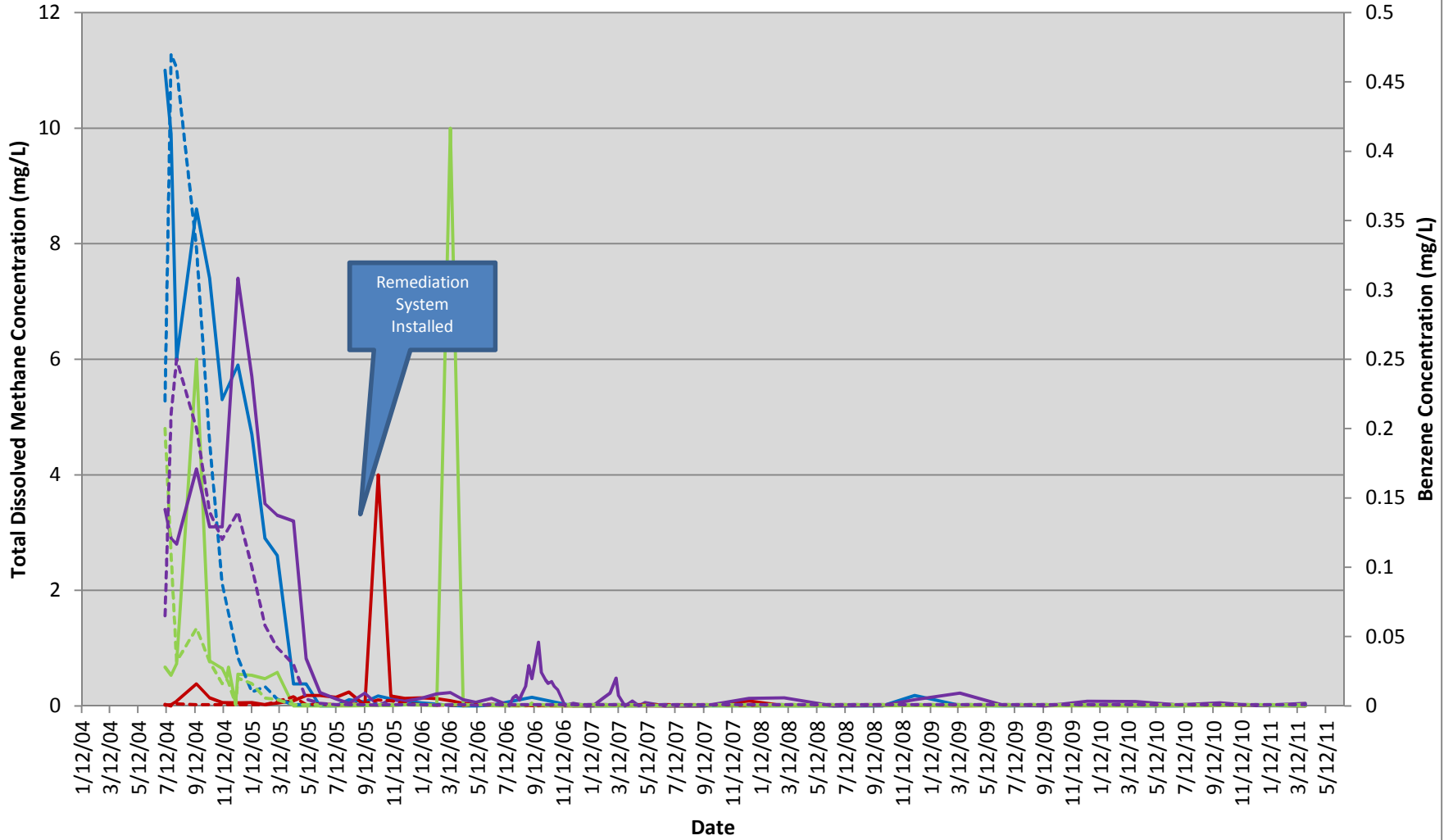
## Total Dissolved Methane Concentrations and Benzene Concentrations MW16 and MW17



# West Divide Creek

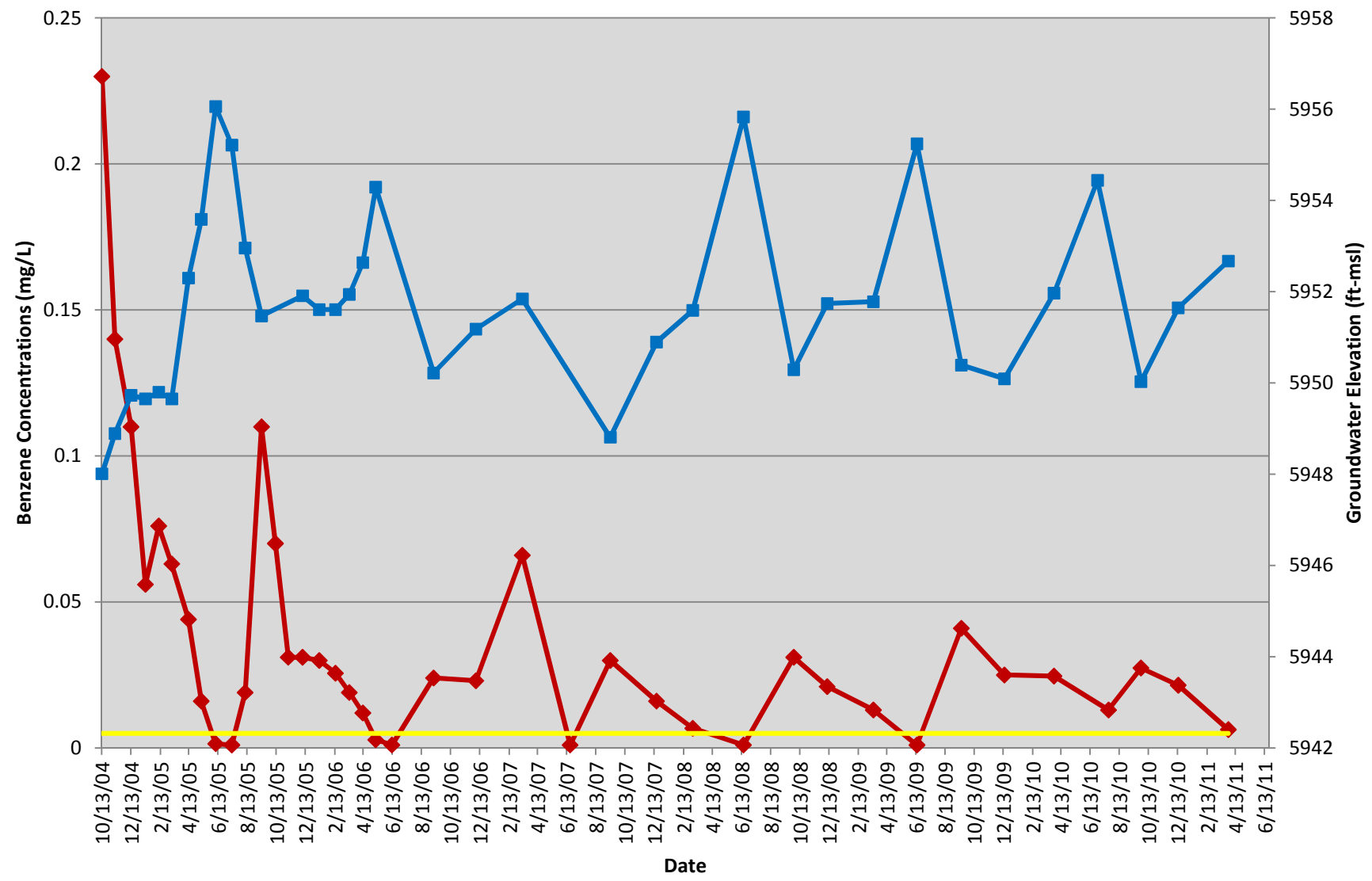
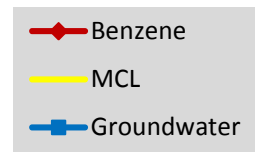
## Total Dissolved Methane Concentrations MW1, MW6, MW7 and MW8

- Methane - MW1
- Methane - MW6
- Methane - MW7
- Methane - MW8
- Benzene - MW1
- Benzene - MW6
- Benzene - MW7
- Benzene - MW8



# West Divide Creek

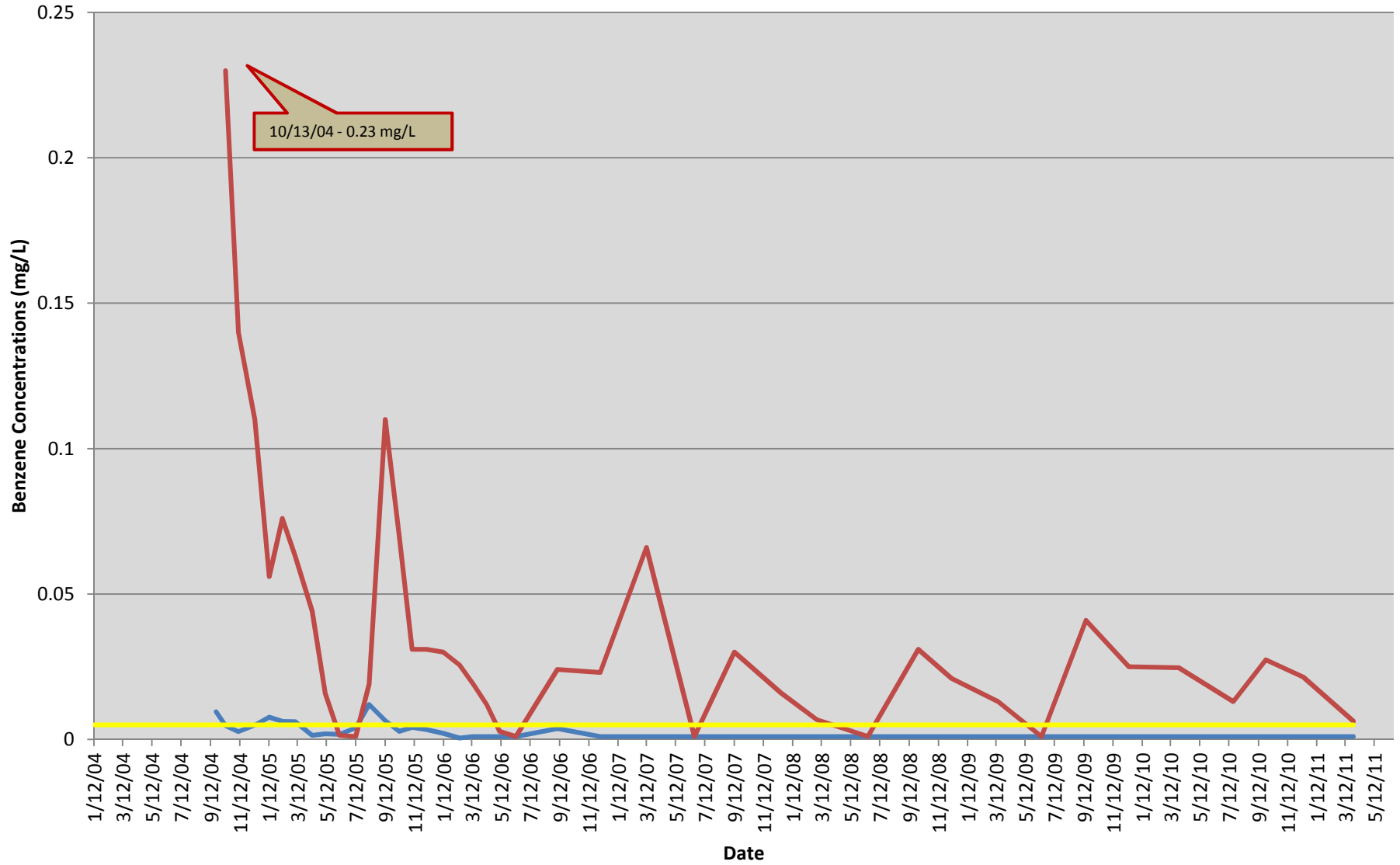
## Benzene Concentration vs. Groundwater Elevation MW17



# West Divide Creek

Benzene concentrations  
MW16 and MW17

- Benzene - MW16
- Benzene - MW17
- Maximum Contaminant Level

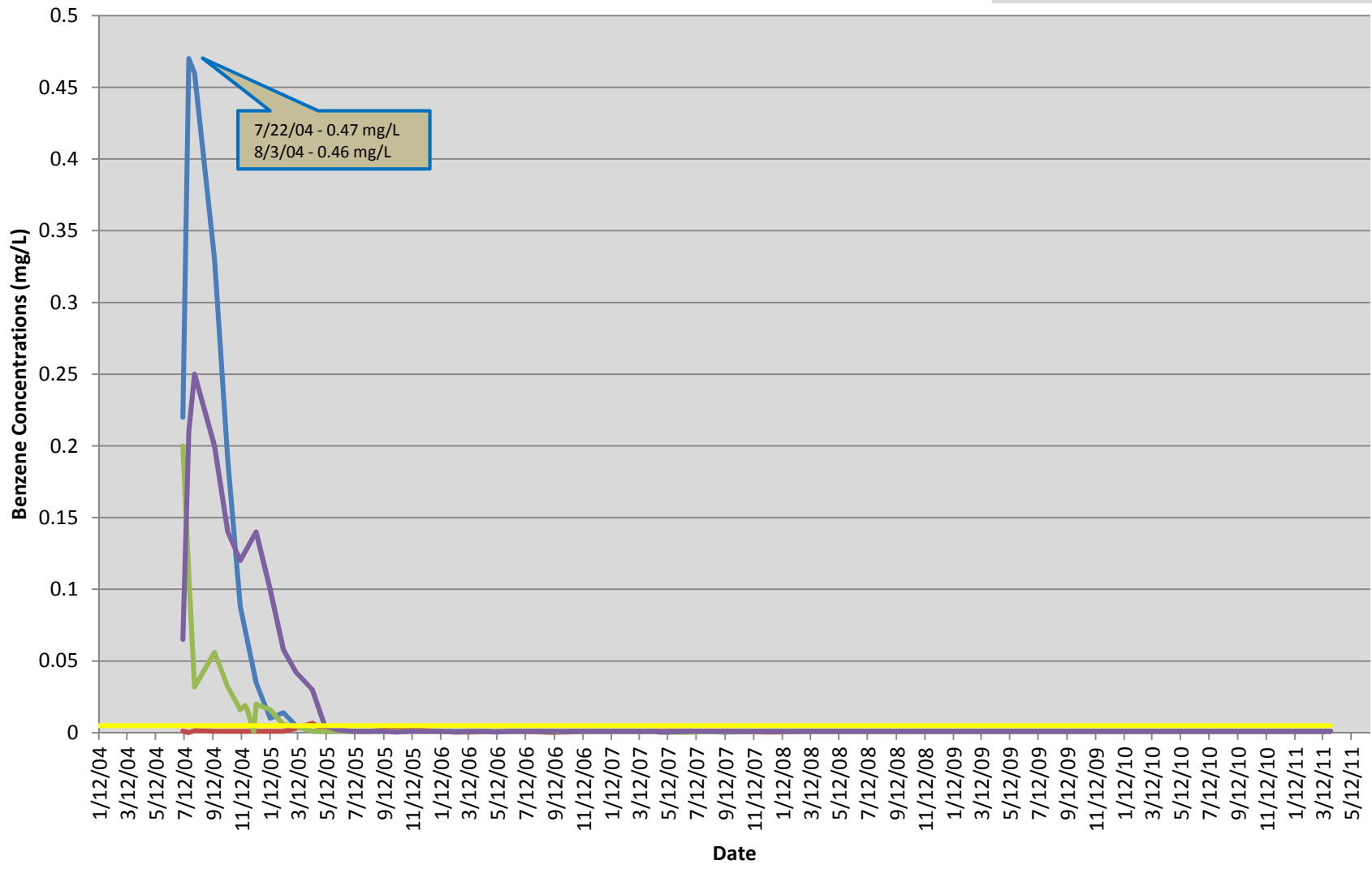




# West Divide Creek

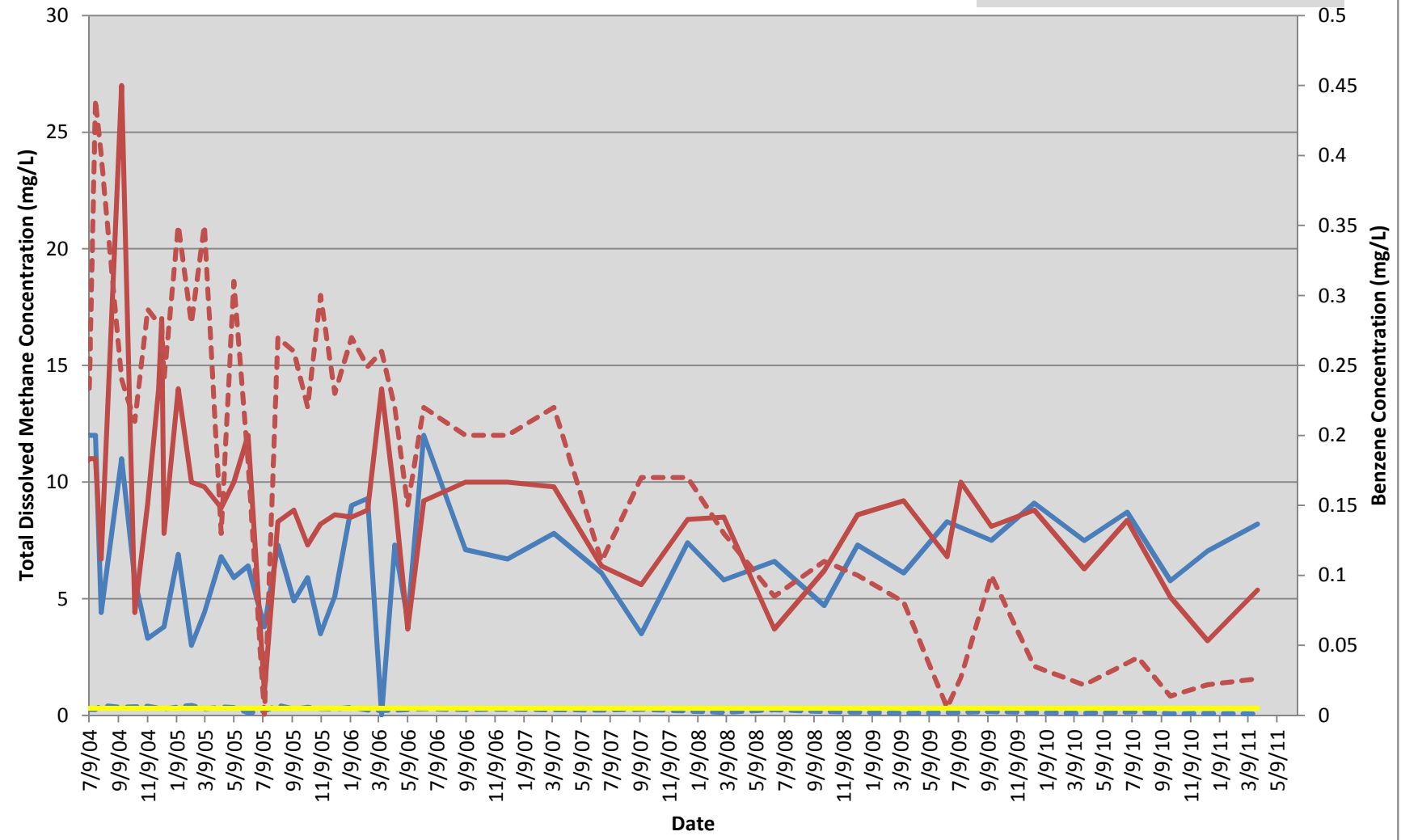
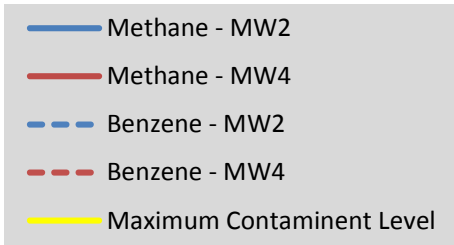
## Benzene concentrations MW1, MW6, MW7 and MW8

- Benzene - MW1
- Benzene - MW6
- Benzene - MW7
- Benzene - MW8
- Maximum Contaminant Level



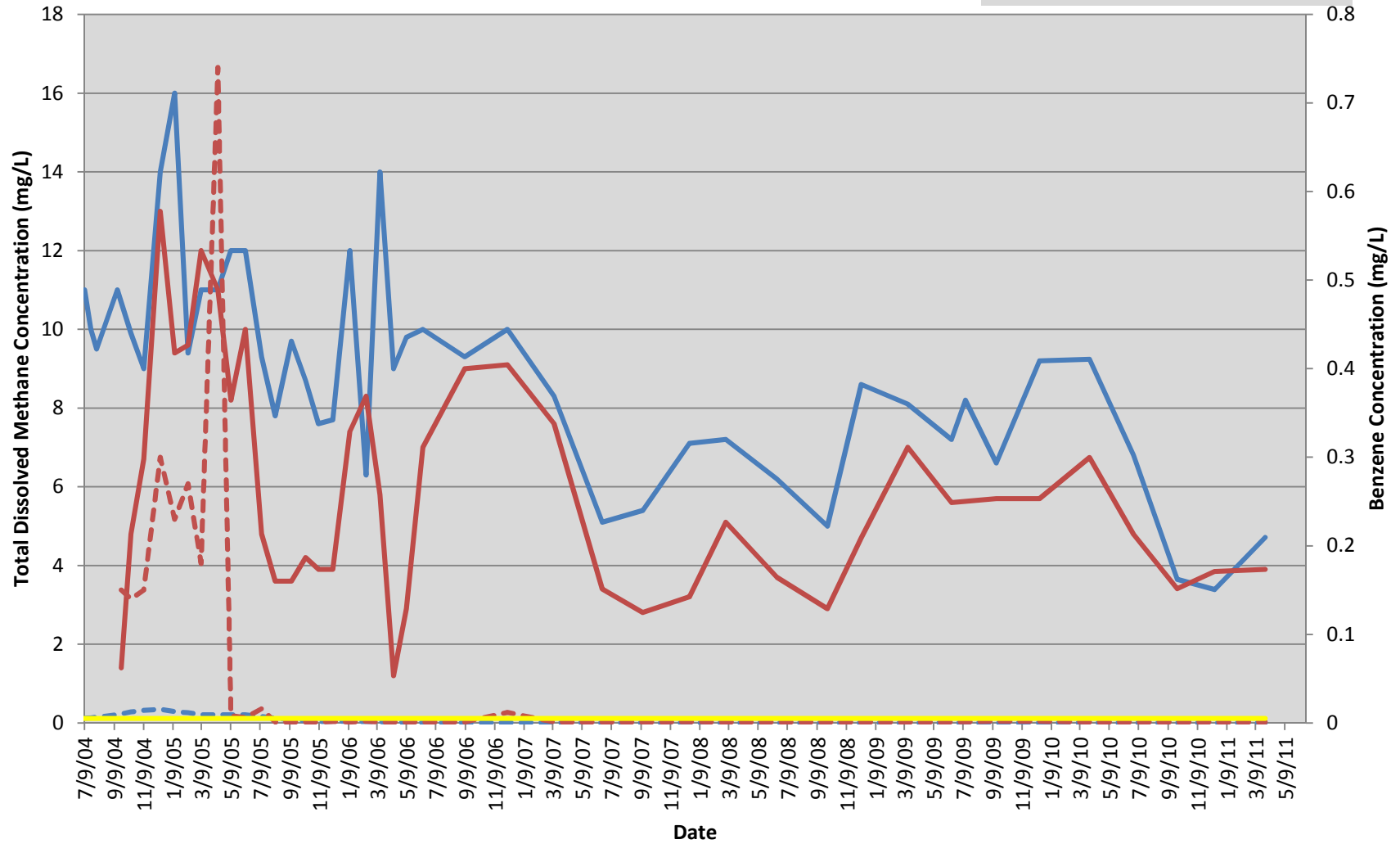
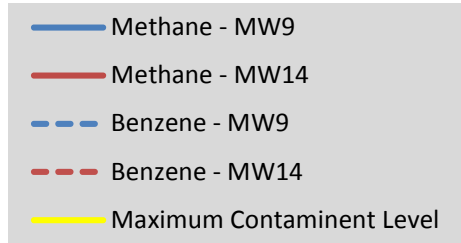
# West Divide Creek

## Total Dissolved Methane Concentrations and Benzene Concentrations MW2 and MW4



# West Divide Creek

## Total Dissolved Methane Concentrations and Benzene Concentrations MW9 and MW14



# **APPENDIX G**

## **Lab Reports**

**Accutest Labs: report included as .pdf file on CD in back**

**Isotech Labs: report included as .pdf file on CD in back**



07/06/11

**Technical Report for**

**Olsson Associates**

**Divide Creek Quarterly**

**008-2067**

**Accutest Job Number: D24649**

**Sampling Date: 06/20/11**

**Report to:**

**Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505  
kkreie@oaconsulting.com; shall@oaconsulting.com  
ATTN: Ken Kreie**

**Total number of pages in report: 112**



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.

**John Hamilton  
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

Olsson Associates

**Job No:** D24649

Divide Creek Quarterly  
Project No: 008-2067

Sample Number	Collected		Matrix Code	Received	Type	Client Sample ID
	Date	Time By				
D24649-1	06/20/11	10:05	JSDS	06/21/11	AQ Ground Water	MW21
D24649-1F	06/20/11	10:05	JSDS	06/21/11	AQ Groundwater Filtered	MW21
D24649-2	06/20/11	10:15	JSDS	06/21/11	AQ Ground Water	MW20
D24649-2F	06/20/11	10:15	JSDS	06/21/11	AQ Groundwater Filtered	MW20
D24649-3	06/20/11	10:25	JSDS	06/21/11	AQ Ground Water	MW22
D24649-3F	06/20/11	10:25	JSDS	06/21/11	AQ Groundwater Filtered	MW22
D24649-4	06/20/11	10:35	JSDS	06/21/11	AQ Ground Water	MW18
D24649-4F	06/20/11	10:35	JSDS	06/21/11	AQ Groundwater Filtered	MW18
D24649-5	06/20/11	10:45	JSDS	06/21/11	AQ Ground Water	MW7
D24649-5F	06/20/11	10:45	JSDS	06/21/11	AQ Groundwater Filtered	MW7
D24649-6	06/20/11	11:05	JSDS	06/21/11	AQ Ground Water	MW1
D24649-6F	06/20/11	11:05	JSDS	06/21/11	AQ Groundwater Filtered	MW1
D24649-7	06/20/11	11:15	JSDS	06/21/11	AQ Ground Water	MW2





## Sample Summary

(continued)

Olsson Associates

**Job No:** D24649

Divide Creek Quarterly  
Project No: 008-2067

Sample Number	Collected		Matrix Received	Code	Type	Client Sample ID
	Date	Time By				
D24649-7F	06/20/11	11:15	JSDS	06/21/11	AQ Groundwater Filtered	MW2
D24649-8	06/20/11	11:25	JSDS	06/21/11	AQ Ground Water	MW6
D24649-8F	06/20/11	11:25	JSDS	06/21/11	AQ Groundwater Filtered	MW6
D24649-9	06/20/11	12:15	JSDS	06/21/11	AQ Ground Water	MW26
D24649-9F	06/20/11	12:15	JSDS	06/21/11	AQ Groundwater Filtered	MW26
D24649-10	06/20/11	13:10	JSDS	06/21/11	AQ Ground Water	EICH2
D24649-10F	06/20/11	13:10	JSDS	06/21/11	AQ Groundwater Filtered	EICH2
D24649-11	06/20/11	13:20	JSDS	06/21/11	AQ Ground Water	MW27
D24649-11F	06/20/11	13:20	JSDS	06/21/11	AQ Groundwater Filtered	MW27
D24649-12	06/20/11	12:15	JSDS	06/21/11	AQ Ground Water	MW26X
D24649-12F	06/20/11	12:15	JSDS	06/21/11	AQ Groundwater Filtered	MW26X
D24649-13	06/20/11	10:55	JSDS	06/21/11	AQ Ground Water	MW8
D24649-13F	06/20/11	10:55	JSDS	06/21/11	AQ Groundwater Filtered	MW8



## Sample Summary

(continued)

Olsson Associates

**Job No:** D24649

Divide Creek Quarterly  
Project No: 008-2067

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D24649-14	06/20/11	11:15 JSDS	06/21/11	AQ	Ground Water	MW17
D24649-14F	06/20/11	11:15 JSDS	06/21/11	AQ	Groundwater Filtered	MW17
D24649-15	06/20/11	11:35 JSDS	06/21/11	AQ	Ground Water	MW16
D24649-15F	06/20/11	11:35 JSDS	06/21/11	AQ	Groundwater Filtered	MW16
D24649-16	06/20/11	12:00 JSDS	06/21/11	AQ	Ground Water	MW4
D24649-16F	06/20/11	12:00 JSDS	06/21/11	AQ	Groundwater Filtered	MW4
D24649-17	06/20/11	13:30 JSDS	06/21/11	AQ	Ground Water	MW23
D24649-17F	06/20/11	13:30 JSDS	06/21/11	AQ	Groundwater Filtered	MW23

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Olsson Associates

**Job No** D24649

**Site:** Divide Creek Quarterly

**Report Date** 7/6/2011 9:09:36 AM

On 06/21/2011, 17 sample(s), 1 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D24649 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

### Volatiles by GC By Method RSK175 MOD

<b>Matrix</b> AQ	<b>Batch ID:</b> GFB121
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24607-1MS, D24607-1MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8021B

<b>Matrix</b> AQ	<b>Batch ID:</b> GTA675
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24655-1MS, D24655-1MSD were used as the QC samples indicated.

<b>Matrix</b> AQ	<b>Batch ID:</b> GTB651
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24667-1MS, D24667-1MSD were used as the QC samples indicated.

### Volatiles by GC By Method VRSK 175

<b>Matrix</b> AQ	<b>Batch ID:</b> M:GBA941
------------------	---------------------------

- The data for VRSK 175 meets quality control requirements.
- D24649-15, D24649-16, and D24649-17: The pH of the sample aliquot for VOA analysis was >2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

### Metals By Method SW846 6010B

<b>Matrix</b> AQ	<b>Batch ID:</b> MP5019
------------------	-------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24649-3FMS, D24649-3FMSD were used as the QC samples for the metals analysis.

## Wet Chemistry By Method EPA 300/SW846 9056

**Matrix** AQ

**Batch ID:** GP4739

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24649-4MS, D24649-4MSD were used as the QC samples for the Chloride 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 DELIVERY GROUP CASE NARRATIVE

**Client:** Accutest Mountain States

**Job No** D24649

**Site:** CORCCOGJ: Divide Creek Quarterly

**Report Date** 6/30/2011 11:12:51 AM

3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 06/20/2011 and were received at Accutest on 06/21/2011 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of D24649. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GC By Method VRSK 175

**Matrix** AQ

**Batch ID:** GBA941

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24559-1MS, D24559-1MSD were used as the QC samples indicated.
- D24649-15, -16, -17: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(D24649).

Sample Results

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Report of Analysis

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## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> MW21		
<b>Lab Sample ID:</b> D24649-1		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04054.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

3.1  
3

<b>Client Sample ID:</b> MW21	
<b>Lab Sample ID:</b> D24649-1	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11337.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	79%		60-140%

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

<b>Client Sample ID:</b> MW21	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-1	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	27.1	0.50	mg/l	1	06/23/11 09:31	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW21	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-1F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	302000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW20		
<b>Lab Sample ID:</b> D24649-2		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04055.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

<b>Client Sample ID:</b> MW20	
<b>Lab Sample ID:</b> D24649-2	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11338.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	81%		60-140%

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

<b>Client Sample ID:</b> MW20	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-2	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	20.5	0.50	mg/l	1	06/23/11 09:42	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW20	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-2F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	102000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

3.5  
3

<b>Client Sample ID:</b> MW22	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-3	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04056.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

<b>Client Sample ID:</b> MW22	
<b>Lab Sample ID:</b> D24649-3	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11339.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	76%		60-140%

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

<b>Client Sample ID:</b> MW22	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-3	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	25.5	0.50	mg/l	1	06/23/11 09:54	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW22	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-3F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	130000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW18		
<b>Lab Sample ID:</b> D24649-4		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04057.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.395	0.00080	0.00080	mg/l	

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

<b>Client Sample ID:</b> MW18	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-4	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11340.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.22	1.0	0.20	ug/l	J
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	85%		60-140%

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

<b>Client Sample ID:</b> MW18	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-4	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	7.4	0.50	mg/l	1	06/23/11 10:05	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW18	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-4F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	57100	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW7		
<b>Lab Sample ID:</b> D24649-5		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04059.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

3.9  
3

<b>Client Sample ID:</b> MW7	
<b>Lab Sample ID:</b> D24649-5	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11341.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	74%		60-140%

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

<b>Client Sample ID:</b> MW7	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-5	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	57.7	2.5	mg/l	5	06/23/11 14:00	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW7	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-5F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	169000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW1		
<b>Lab Sample ID:</b> D24649-6		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04060.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

<b>Client Sample ID:</b> MW1	
<b>Lab Sample ID:</b> D24649-6	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11342.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	75%		60-140%

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

<b>Client Sample ID:</b> MW1		<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-6		<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	96.4	2.5	mg/l	5	06/23/11 14:11	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW1	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-6F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	507000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW2	
<b>Lab Sample ID:</b> D24649-7	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04072.D	20	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	8.13	0.016	0.00080	mg/l	

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

<b>Client Sample ID:</b> MW2		
<b>Lab Sample ID:</b> D24649-7		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11343.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	86.6	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	30.2	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	84%		60-140%

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

<b>Client Sample ID:</b> MW2	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-7	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	48.2	1.0	mg/l	2	06/23/11 10:39	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW2	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-7F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	128000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW6	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-8	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04062.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00636	0.00080	0.00080	mg/l	

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

<b>Client Sample ID:</b> MW6	
<b>Lab Sample ID:</b> D24649-8	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11344.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	76%		60-140%

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

<b>Client Sample ID:</b> MW6	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-8	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	14.6	0.50	mg/l	1	06/23/11 10:50	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW6	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-8F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	146000	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW26		<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-9		<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04063.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.318	0.00080	0.00080	mg/l	

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

<b>Client Sample ID:</b> MW26		<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-9		<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11346.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	72%		60-140%

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

<b>Client Sample ID:</b> MW26	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-9	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.3	0.50	mg/l	1	06/23/11 11:01	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW26	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-9F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	70800	400	ug/l	1	06/22/11	06/23/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1622

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> EICH2	
<b>Lab Sample ID:</b> D24649-10	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04064.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0283	0.00080	0.00080	mg/l	

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

<b>Client Sample ID:</b> EICH2	
<b>Lab Sample ID:</b> D24649-10	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11347.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	75%		60-140%

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

<b>Client Sample ID:</b> EICH2	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-10	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	37.3	1.0	mg/l	2	06/23/11 11:34	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> EICH2	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-10F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	200000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW27		
<b>Lab Sample ID:</b> D24649-11		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04065.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

<b>Client Sample ID:</b> MW27	
<b>Lab Sample ID:</b> D24649-11	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11348.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	74%		60-140%

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

<b>Client Sample ID:</b> MW27	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-11	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	17.2	0.50	mg/l	1	06/23/11 11:46	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW27	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-11F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	124000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW26X	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-12	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04066.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.378	0.00080	0.00080	mg/l	

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

<b>Client Sample ID:</b> MW26X		
<b>Lab Sample ID:</b> D24649-12		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12487.D	1	06/25/11	BR	n/a	n/a	GTA675
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%

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

<b>Client Sample ID:</b> MW26X	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-12	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.3	0.50	mg/l	1	06/23/11 11:57	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW26X	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-12F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	73600	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW8		<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-13		<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04067.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00314	0.00080	0.00080	mg/l	

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

<b>Client Sample ID:</b> MW8	
<b>Lab Sample ID:</b> D24649-13	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11350.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	77%		60-140%

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

<b>Client Sample ID:</b> MW8	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-13	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	40.9	1.0	mg/l	2	06/23/11 12:08	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW8	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-13F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	175000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW17		
<b>Lab Sample ID:</b> D24649-14		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB04068.D	1	06/22/11	EH	n/a	n/a	GFB121
Run #2							

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

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

<b>Client Sample ID:</b> MW17	
<b>Lab Sample ID:</b> D24649-14	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11351.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	76%		60-140%

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

<b>Client Sample ID:</b> MW17	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-14	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	37.9	1.0	mg/l	2	06/23/11 12:19	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW17	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-14F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	374000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW16	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-15	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> VRSK 175	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15085.D	1	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW16	
<b>Lab Sample ID:</b> D24649-15	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11352.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	82%		60-140%

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

<b>Client Sample ID:</b> MW16	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-15	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	18.0	1.0	mg/l	2	06/23/11 12:31	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW16	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-15F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	191000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW4	
<b>Lab Sample ID:</b> D24649-16	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/21/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15088.D	10	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	7550	100	0.66	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW4		
<b>Lab Sample ID:</b> D24649-16		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11353.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	19.3	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	8.5	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	77%		60-140%

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

<b>Client Sample ID:</b> MW4	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-16	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	37.2	1.0	mg/l	2	06/23/11 12:42	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW4		
<b>Lab Sample ID:</b> D24649-16F		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Groundwater Filtered		<b>Date Received:</b> 06/21/11
		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	120000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW23		
<b>Lab Sample ID:</b> D24649-17		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> VRSK 175		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15089.D	1	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW23		
<b>Lab Sample ID:</b> D24649-17		<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/21/11
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB11354.D	1	06/23/11	SK	n/a	n/a	GTB651
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	78%		60-140%

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

<b>Client Sample ID:</b> MW23	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-17	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	37.3	1.0	mg/l	2	06/23/11 12:53	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW23	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> D24649-17F	<b>Date Received:</b> 06/21/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	333000	400	ug/l	1	06/22/11	06/24/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1625

(2) Prep QC Batch: MP5019

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RL = Reporting Limit

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



Accutest Laboratories Mountain States  
4036 Youngfield Street Wheat Ridge, Co 80033  
TEL. 303-425-6021 877-737-4521  
FAX 303-425-6021

FED-EX Tracking #	Boiler Order Control #
Accutest Quote #	Accutest Job # <b>D24649</b>
Requested Analysis (see TEST CODE sheet)	
Matrix Codes	
DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank	
LAB USE ONLY	

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes			
Company Name <b>Ogden Associates</b>		Project Name <b>Divide Creek Quarterly</b>		STEX Dissolved metals Dissolved Nitrate chloride										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank			
Street Address <b>326 21<sup>st</sup> Road</b>		Street															
City State Zip <b>Grand Junction, CO 81505</b>		Billing Information (If different from Report to)															
Project Contact <b>Stor &amp; Hull shull@accutest.com</b>		Company Name															
Phone # Fax # <b>970-263-7800</b>		Street Address															
Sampler(s) Name(s) <b>Jessica Sutrina / Ryan Smith</b>		Project Manager		Number of preserved Bottles										LAB USE ONLY			
Field ID / Point of Collection		MECH/IDL Viol #	Collection		Matrix										LAB USE ONLY		
			Date	Time	Sampled by	Matrix	# of bottles	HCl	NiOOH	HNO3	H2SO4	NONE	DI Water	MCHH	EMCORS	Biosaline	
MW 8			6/20/14	1055	DS/GW	8											13
MW 17				1115	DS												14
MW 16				1135	DS												15
MW 4				1200	DS												16
MW 23				1330	DS												17
																	18 TB

Turnaround Time (Business Days)		Approved By (Accutest PM): / Date:		Data Deliverable Information										Comments / Special Instructions
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day P/SH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> State Forms <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "B" - Narrative <input type="checkbox"/> PDF <input type="checkbox"/> FULLT1 (Level 3+4)										Please Lab Filter
Emergency & Rush T/A data available VIA Lablink				Commercial "A" = Results Only Commercial "B" = Results + QC Summary										

Sample Custody must be documented below each time samples change possession, including courier delivery.							
Relinquished by Sampler:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:		
1 <i>Winston Smith</i>	6/20/14 1530	1 <i>LS</i>	2 <i>LS</i>		3 <i>Winston Smith</i>		
Relinquished by Sampler:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:		
3		3	4		4		
Relinquished by:	Date/Time:	Received By:	Custody Seal #	<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not intact	Preserved where applicable <input checked="" type="checkbox"/>	On Ice <input checked="" type="checkbox"/>	Cooler Temp. <b>34°</b>
5		5	<i>HD/LS</i>				

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**D24649: Chain of Custody**

Page 2 of 3



# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D24649

Client: OLSSON ASS.

Immediate Client Services Action Required: No

Date / Time Received: 6/21/2011 3:15:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: DIVIDE CREEK QTR

Airbill #'s: HD/CO

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

Empty box for comments.

Accutest Laboratories  
V:(303) 425-6021

4036 Youngfield Street  
F: (303) 425-6854

Wheat Ridge, CO  
www.accutest.com

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## GC Volatiles

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## QC Data Summaries

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Includes the following where applicable:

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

## Method Blank Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB121-MB	FB04045.D	1	06/22/11	EH	n/a	n/a	GFB121

The QC reported here applies to the following samples:

Method: RSK175 MOD

D24649-1, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9, D24649-10, D24649-11, D24649-12, D24649-13, D24649-14

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



## Method Blank Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB651-MB	TB11330.D	1	06/23/11	SK	n/a	n/a	GTB651

The QC reported here applies to the following samples:

Method: SW846 8021B

D24649-1, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9, D24649-10, D24649-11, D24649-13, D24649-14, D24649-15, D24649-16, D24649-17

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	83% 60-140%

## Method Blank Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA675-MB	TA12475.D	1	06/25/11	BR	n/a	n/a	GTA675

The QC reported here applies to the following samples:

Method: SW846 8021B

D24649-12

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	106% 60-140%

# Blank Spike Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB121-BS	FB04046.D	10	06/22/11	EH	n/a	n/a	GFB121

The QC reported here applies to the following samples:

Method: RSK175 MOD

D24649-1, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9, D24649-10, D24649-11, D24649-12, D24649-13, D24649-14

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
74-82-8	Methane	0.5094	0.635	125	70-130

# Blank Spike Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB651-BS	TB11331.D	1	06/23/11	SK	n/a	n/a	GTB651

The QC reported here applies to the following samples:

Method: SW846 8021B

D24649-1, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9, D24649-10, D24649-11, D24649-13, D24649-14, D24649-15, D24649-16, D24649-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	27.9	103	70-130
100-41-4	Ethylbenzene	45.6	42.8	94	70-130
108-88-3	Toluene	212	192	91	70-130
1330-20-7	Xylenes (total)	216	204	94	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	78%	60-140%

# Blank Spike Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA675-BS	TA12476.D	1	06/25/11	BR	n/a	n/a	GTA675

The QC reported here applies to the following samples:

Method: SW846 8021B

D24649-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	28.4	104	70-130
100-41-4	Ethylbenzene	45.6	44.6	98	70-130
108-88-3	Toluene	212	206	97	70-130
1330-20-7	Xylenes (total)	216	222	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	109%	60-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24607-1MS	FB04070.D	10	06/22/11	EH	n/a	n/a	GFB121
D24607-1MSD	FB04071.D	10	06/22/11	EH	n/a	n/a	GFB121
D24607-1	FB04050.D	1	06/22/11	EH	n/a	n/a	GFB121

The QC reported here applies to the following samples:

Method: RSK175 MOD

D24649-1, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9, D24649-10, D24649-11, D24649-12, D24649-13, D24649-14

CAS No.	Compound	D24607-1 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	ND	0.5094	0.513	101	0.552	108	7	70-130/30

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24667-1MS	TB11334.D	1	06/23/11	SK	n/a	n/a	GTB651
D24667-1MSD	TB11335.D	1	06/23/11	SK	n/a	n/a	GTB651
D24667-1	TB11332.D	1	06/23/11	SK	n/a	n/a	GTB651

The QC reported here applies to the following samples:

Method: SW846 8021B

D24649-1, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9, D24649-10, D24649-11, D24649-13, D24649-14, D24649-15, D24649-16, D24649-17

CAS No.	Compound	D24667-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	5.2	27.2	32.3	100	31.7	97	2	70-130/30
100-41-4	Ethylbenzene	3.6	45.6	49.7	101	50.4	103	1	62-130/30
108-88-3	Toluene	11.5	212	193	86	193	86	0	70-130/30
1330-20-7	Xylenes (total)	14.4	216	213	92	214	92	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D24667-1	Limits
120-82-1	1,2,4-Trichlorobenzene	73%	71%	76%	60-140%

5.3.2  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24649  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24655-1MS	TA12481.D	5	06/25/11	BR	n/a	n/a	GTA675
D24655-1MSD	TA12482.D	5	06/25/11	BR	n/a	n/a	GTA675
D24655-1	TA12480.D	1	06/25/11	BR	n/a	n/a	GTA675

The QC reported here applies to the following samples:

Method: SW846 8021B

D24649-12

CAS No.	Compound	D24655-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.1	136	140	102	140	102	0	70-130/30
100-41-4	Ethylbenzene	ND	228	219	96	218	96	0	62-130/30
108-88-3	Toluene	ND	1060	998	94	995	94	0	70-130/30
1330-20-7	Xylenes (total)	4.8	1080	1090	101	1080	100	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D24655-1	Limits
120-82-1	1,2,4-Trichlorobenzene	112%	112%	105%	60-140%

5.3.3  
5



## Metals Analysis

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## 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: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5019  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 06/22/11

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		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15		
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10		
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55		
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	-35	<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 MP5019: D24649-1F, D24649-2F, D24649-3F, D24649-4F, D24649-5F, D24649-6F, D24649-7F, D24649-8F, D24649-9F, D24649-10F, D24649-11F, D24649-12F, D24649-13F, D24649-14F, D24649-15F, D24649-16F, D24649-17F

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5019  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

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

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24649  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP5019  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/22/11

Metal	D24649-3F Original MS	SpikeLot MPICPALL % Rec		QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	anr			
Selenium	anr			
Silicon				
Silver	anr			
Sodium	130000	155000	25000	100.0 75-125
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP5019: D24649-1F, D24649-2F, D24649-3F, D24649-4F, D24649-5F, D24649-6F, D24649-7F, D24649-8F, D24649-9F, D24649-10F, D24649-11F, D24649-12F, D24649-13F, D24649-14F, D24649-15F, D24649-16F, D24649-17F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5019  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24649  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP5019  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/22/11

Metal	D24649-3F Original MSD	SpikeLot MPICPALL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	anr			
Selenium	anr			
Silicon				
Silver	anr			
Sodium	130000 154000	25000 96.0	0.6	20
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP5019: D24649-1F, D24649-2F, D24649-3F, D24649-4F, D24649-5F, D24649-6F, D24649-7F, D24649-8F, D24649-9F, D24649-10F, D24649-11F, D24649-12F, D24649-13F, D24649-14F, D24649-15F, D24649-16F, D24649-17F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5019  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D24649  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP5019  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/22/11

Metal	BSP Result	SpikeLot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	anr			
Selenium	anr			
Silicon				
Silver	anr			
Sodium	26300	25000	105.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP5019: D24649-1F, D24649-2F, D24649-3F, D24649-4F, D24649-5F, D24649-6F, D24649-7F, D24649-8F, D24649-9F, D24649-10F, D24649-11F, D24649-12F, D24649-13F, D24649-14F, D24649-15F, D24649-16F, D24649-17F



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5019  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

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

6.1.3

6

## General Chemistry

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### QC Data Summaries

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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: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP4739/GN10195	0.50	0.0	mg/l	20	21.3	106.5	90-110%

Associated Samples:

Batch GP4739: D24649-1, D24649-10, D24649-11, D24649-12, D24649-13, D24649-14, D24649-15, D24649-16, D24649-17, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9

(\*) Outside of QC limits

7.1  
7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP4739/GN10195	D24649-4	mg/l	7.4	10	17.8	104.0	80-120%

Associated Samples:

Batch GP4739: D24649-1, D24649-10, D24649-11, D24649-12, D24649-13, D24649-14, D24649-15, D24649-16, D24649-17, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.2  
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D24649  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP4739/GN10195	D24649-4	mg/l	7.4	10	17.8	0.0	20%

Associated Samples:

Batch GP4739: D24649-1, D24649-10, D24649-11, D24649-12, D24649-13, D24649-14, D24649-15, D24649-16, D24649-17, D24649-2, D24649-3, D24649-4, D24649-5, D24649-6, D24649-7, D24649-8, D24649-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

Misc. Forms

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Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

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Includes the following where applicable:

- Chain of Custody





CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033  
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D24649
Accutest Quote #:	0
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information				
Name <b>Accutest Mountain States (AMS)</b>			Name Accutest - New England							VRSK175CH4	VGC+UNPR			
Address 4036 Youngfield St.			Address 495 Technology Center West, BLDG C											
City Wheat Ridge,	State CO	Zip 80033	City Marlborough	State MA	Zip 01752									
Send Report to: Tiffany Pham			Contact: Sample Management											
Any questions contact: Amanda Kissell			Phone: (508) 481-6200											
Phone/Fax #: (303) 425-6021; (303) 425-6854			Phone: (508) 481-6200											
Field ID / Point of Collection		Date	Time	Matrix	# of bottles	Preservation							Comments	
D24649 -15		6/20/11	12:00 AM	AQ						X	X			
-16				AQ						X	X			
-17				AQ						X	X			
Turnaround Information			Data Deliverable Information					Comments / Remarks						
<input checked="" type="checkbox"/> 6 - 9 Business Day Rush <input type="checkbox"/> Other _____ (Days)			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> PDF <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Electronic Delivery: <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> State Forms <input type="checkbox"/> Full Tier 1 <input type="checkbox"/> Other (Specify)					<b>Please use Colorado regulations and RLs.</b>  <div style="text-align: right; font-size: 2em;">284</div>						
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.														
Sample Custody must be documented below each time samples change possession, including courier delivery.							For Subcontract Laboratory Use Only							
Relinquished by:	Date & Time:	Received By:	Date & Time:	Seal #:	Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>									
1	<i>MA</i> 6/23/11	1 <i>FedEx</i>	1											
Relinquished by:	Date & Time:	Received By:	Date & Time:	Preserved where applicable:										
2	<i>FedEx</i> 6/24/11 10:00	2 <i>[Signature]</i>	2	<input type="checkbox"/>										
Relinquished by:	Date & Time:	Received By:	Date & Time:	Temperature °C	On Ice <input checked="" type="checkbox"/>									
3		3 <i>[Signature]</i>	3	2.1										

8.1  
8

**D24649: Chain of Custody**  
**Page 1 of 2**  
**Accutest Labs of New England, Inc.**

## Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D24649

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 6/24/2011

Delivery Method:

Client Service Action Required at Login: No

Project:

No. Coolers: 1

Airbill #'s:

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	<u>Y or N</u>	
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. SmpI Dates/Time OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

<u>Quality Control Preservatio</u>	<u>Y or N</u>		<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

<u>Sample Integrity - Documentation</u>	<u>Y or N</u>	
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"/>

<u>Sample Integrity - Condition</u>	<u>Y or N</u>	
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	

<u>Sample Integrity - Instructions</u>	<u>Y or N</u>		<u>N/A</u>
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 recvd 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 Volatiles

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### QC Data Summaries

(Accutest Labs of New England, Inc.)

---

Includes the following where applicable:

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

## Method Blank Summary

**Job Number:** D24649  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBA941-MB	GBA15072.D1		06/25/11	AF	n/a	n/a	GBA941

The QC reported here applies to the following samples:

Method: VRSK 175

D24649-15, D24649-16, D24649-17

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

9.1.1  
9

# Blank Spike Summary

**Job Number:** D24649  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBA941-BSP	GBA15073.D1		06/25/11	AF	n/a	n/a	GBA941

The QC reported here applies to the following samples:

Method: VRSK 175

D24649-15, D24649-16, D24649-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	88.7	79.8	90	50-150

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24649  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24559-1MS	GBA15075.D1		06/25/11	AF	n/a	n/a	GBA941
D24559-1MSD	GBA15076.D1		06/25/11	AF	n/a	n/a	GBA941
D24559-1	GBA15074.D1		06/25/11	AF	n/a	n/a	GBA941

The QC reported here applies to the following samples:

Method: VRSK 175

D24649-15, D24649-16, D24649-17

CAS No.	Compound	D24559-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.86	88.7	64.2	71	67.1	75	4	50-150/30

9.3.1  
9

Technical Report for

Olsson Associates

Divide Creek Quarterly

Accutest Job Number: D24715

Sampling Date: 06/21/11

Report to:

Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505  
kkreie@oaconsulting.com; shall@oaconsulting.com  
ATTN: Ken Kreie

Total number of pages in report: **106**



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.

John Hamilton  
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

Olsson Associates

**Job No:** D24715

Divide Creek Quarterly

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D24715-1	06/21/11	09:45 SH	06/22/11	AQ	Ground Water	MW14
D24715-1F	06/21/11	09:45 SH	06/22/11	AQ	Groundwater Filtered	MW14
D24715-2	06/21/11	10:05 SH	06/22/11	AQ	Ground Water	MW9
D24715-2F	06/21/11	10:05 SH	06/22/11	AQ	Groundwater Filtered	MW9
D24715-3	06/21/11	10:25 SH	06/22/11	AQ	Ground Water	MW25
D24715-3F	06/21/11	10:25 SH	06/22/11	AQ	Groundwater Filtered	MW25
D24715-4	06/21/11	10:40 SH	06/22/11	AQ	Ground Water	MW11
D24715-4F	06/21/11	10:40 SH	06/22/11	AQ	Groundwater Filtered	MW11
D24715-5	06/21/11	11:05 SH	06/22/11	AQ	Ground Water	MW12
D24715-5F	06/21/11	11:05 SH	06/22/11	AQ	Groundwater Filtered	MW12
D24715-6	06/21/11	11:05 SH	06/22/11	AQ	Ground Water	MW12X
D24715-6F	06/21/11	11:05 SH	06/22/11	AQ	Groundwater Filtered	MW12X
D24715-7	06/21/11	11:25 SH	06/22/11	AQ	Ground Water	DCS2





## Sample Summary

(continued)

Olsson Associates

**Job No:** D24715

Divide Creek Quarterly

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D24715-7F	06/21/11	11:25 SH	06/22/11	AQ	Groundwater Filtered	DCS2
D24715-8	06/21/11	09:15 DS	06/22/11	AQ	Ground Water	DCS8
D24715-8F	06/21/11	09:15 DS	06/22/11	AQ	Groundwater Filtered	DCS8
D24715-9	06/21/11	09:30 DS	06/22/11	AQ	Ground Water	DCS7
D24715-9F	06/21/11	09:30 DS	06/22/11	AQ	Groundwater Filtered	DCS7
D24715-10	06/21/11	09:45 DS	06/22/11	AQ	Ground Water	DCS6
D24715-10F	06/21/11	09:45 DS	06/22/11	AQ	Groundwater Filtered	DCS6
D24715-11	06/21/11	10:00 DS	06/22/11	AQ	Ground Water	DCS5
D24715-11F	06/21/11	10:00 DS	06/22/11	AQ	Groundwater Filtered	DCS5
D24715-12	06/21/11	10:15 DS	06/22/11	AQ	Ground Water	DCS4
D24715-12F	06/21/11	10:15 DS	06/22/11	AQ	Groundwater Filtered	DCS4
D24715-13	06/21/11	10:30 DS	06/22/11	AQ	Ground Water	DCS3
D24715-13F	06/21/11	10:30 DS	06/22/11	AQ	Groundwater Filtered	DCS3



### Sample Summary (continued)

Olsson Associates

Job No: D24715

Divide Creek Quarterly

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D24715-14	06/21/11	10:45 DS	06/22/11	AQ	Ground Water	DCS1
D24715-14F	06/21/11	10:45 DS	06/22/11	AQ	Groundwater Filtered	DCS1
D24715-15	06/21/11	12:30 DS	06/22/11	AQ	Ground Water	MW15
D24715-15F	06/21/11	12:30 DS	06/22/11	AQ	Groundwater Filtered	MW15
D24715-16	06/21/11	13:00 DS	06/22/11	AQ	Ground Water	MW24
D24715-16F	06/21/11	13:00 DS	06/22/11	AQ	Groundwater Filtered	MW24

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Olsson Associates

**Job No** D24715

**Site:** Divide Creek Quarterly

**Report Date** 7/6/2011 11:46:14 AM

On 06/22/2011, 16 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D24715 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

### Volatiles by GC By Method SW846 8021B

<b>Matrix</b> AQ	<b>Batch ID:</b> GTA674
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24654-1MS, D24654-1MSD were used as the QC samples indicated.

### Volatiles by GC By Method VRSK 175

<b>Matrix</b> AQ	<b>Batch ID:</b> M:GBA941
------------------	---------------------------

- The data for VRSK 175 meets quality control requirements.
- D24715-1, D24715-2, D24715-3, and D24715-4 : The pH of the sample aliquot for VOA analysis was >2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

<b>Matrix</b> AQ	<b>Batch ID:</b> M:GBA942
------------------	---------------------------

- The data for VRSK 175 meets quality control requirements.
- D24715-14, D24715-9, D24715-10, D24715-11, D24715-13, D24715-15, D24715-16 D24715-5, D24715-6, D24715-7, D24715-8, D24715-12 : Analysis performed at Accutest Laboratories, Marlborough, MA.

### Metals By Method SW846 6010B

<b>Matrix</b> AQ	<b>Batch ID:</b> MP5032
------------------	-------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24635-2FMS, D24635-2FMSD were used as the QC samples for the metals analysis.

### Wet Chemistry By Method EPA 300/SW846 9056

<b>Matrix</b> AQ	<b>Batch ID:</b> GP4761
------------------	-------------------------

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24715-1MS, D24715-1MSD were used as the QC samples for the Chloride analysis.

<b>Matrix</b> AQ	<b>Batch ID:</b> GP4773
------------------	-------------------------

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24715-13MS, D24715-13MSD were used as the QC samples for the Chloride 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 DELIVERY GROUP CASE NARRATIVE

**Client:** Accutest Mountain States

**Job No** D24715

**Site:** CORCCOGJ: Divide Creek Quarterly

**Report Date** 6/30/2011 11:41:37 AM

16 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 06/21/2011 and were received at Accutest on 06/22/2011 at 2.1 Deg. C and intact. These Samples received an Accutest job number of D24715. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GC By Method VRSK 175

<b>Matrix</b> AQ	<b>Batch ID:</b> GBA941
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24559-1MS, D24559-1MSD were used as the QC samples indicated.
- D24715-1, -2, -3, -4: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

<b>Matrix</b> AQ	<b>Batch ID:</b> GBA942
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D24715-5MS, D24715-5MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(D24715).



Sample Results

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Report of Analysis

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## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> MW14	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-1	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> VRSK 175	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15097.D	10	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	3090	100	0.66	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW14	
<b>Lab Sample ID:</b> D24715-1	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12457.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	101%		60-140%

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

<b>Client Sample ID:</b> MW14	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-1	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	7.6	0.50	mg/l	1	06/24/11 10:54	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW14	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-1F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	43800	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW9	
<b>Lab Sample ID:</b> D24715-2	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15100.D	20	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	8530	200	1.3	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-2	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12458.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.3	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

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

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-2	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	22.8	0.50	mg/l	1	06/24/11 11:09	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-2F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	63500	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW25	
<b>Lab Sample ID:</b> D24715-3	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15101.D	1	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW25	
<b>Lab Sample ID:</b> D24715-3	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12459.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%

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

<b>Client Sample ID:</b> MW25	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-3	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	14.6	0.50	mg/l	1	06/24/11 11:23	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW25	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-3F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	34200	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

---

RL = Reporting Limit

## Report of Analysis

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<b>Client Sample ID:</b> MW11	
<b>Lab Sample ID:</b> D24715-4	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15102.D	1	06/25/11	AMA	n/a	n/a	M:GBA941
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	26.5	10	0.066	ug/l	

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis. Analysis performed at Accutest Laboratories, Marlborough, MA.

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

# Report of Analysis

<b>Client Sample ID:</b> MW11		
<b>Lab Sample ID:</b> D24715-4		<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12460.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%

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

<b>Client Sample ID:</b> MW11	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-4	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	16.2	0.50	mg/l	1	06/24/11 11:37	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis



<b>Client Sample ID:</b> MW11	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-4F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	34300	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

3.9  
3

<b>Client Sample ID:</b> MW12	
<b>Lab Sample ID:</b> D24715-5	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15107.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	63.7	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW12	
<b>Lab Sample ID:</b> D24715-5	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12461.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	101%		60-140%

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

<b>Client Sample ID:</b> MW12	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-5	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	21.6	0.50	mg/l	1	06/24/11 11:52	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW12	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-5F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	79400	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW12X	
<b>Lab Sample ID:</b> D24715-6	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15111.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	77.3	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW12X	
<b>Lab Sample ID:</b> D24715-6	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12462.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%

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

<b>Client Sample ID:</b> MW12X	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-6	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	21.6	0.50	mg/l	1	06/24/11 13:18	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW12X	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-6F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	78500	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS2	
<b>Lab Sample ID:</b> D24715-7	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15112.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS2	
<b>Lab Sample ID:</b> D24715-7	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12464.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%

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

<b>Client Sample ID:</b> DCS2	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-7	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/24/11 14:02	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS2	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-7F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	32100	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS8	
<b>Lab Sample ID:</b> D24715-8	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15113.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS8	
<b>Lab Sample ID:</b> D24715-8	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12465.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

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

<b>Client Sample ID:</b> DCS8	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-8	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/24/11 14:16	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS8	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-8F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	31400	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS7	
<b>Lab Sample ID:</b> D24715-9	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15114.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS7	
<b>Lab Sample ID:</b> D24715-9	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12466.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

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

<b>Client Sample ID:</b> DCS7	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-9	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.8	0.50	mg/l	1	06/24/11 20:30	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS7	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-9F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	31100	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS6	
<b>Lab Sample ID:</b> D24715-10	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15115.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS6	
<b>Lab Sample ID:</b> D24715-10	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12467.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

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

<b>Client Sample ID:</b> DCS6	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-10	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/24/11 20:45	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS6	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-10F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	30900	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS5	
<b>Lab Sample ID:</b> D24715-11	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15116.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS5	
<b>Lab Sample ID:</b> D24715-11	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12468.D	1	06/24/11	BR	n/a	n/a	GTA674
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

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

<b>Client Sample ID:</b> DCS5	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-11	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/27/11 12:21	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS5	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-11F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	31600	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS4	
<b>Lab Sample ID:</b> D24715-12	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15117.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS4	
<b>Lab Sample ID:</b> D24715-12	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12469.D	1	06/25/11	BR	n/a	n/a	GTA674
Run #2							

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

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

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

<b>Client Sample ID:</b> DCS4	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-12	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/27/11 12:35	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS4	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-12F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	31900	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS3	
<b>Lab Sample ID:</b> D24715-13	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15118.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS3	
<b>Lab Sample ID:</b> D24715-13	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12470.D	1	06/25/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	106%		60-140%

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

<b>Client Sample ID:</b> DCS3	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-13	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/27/11 12:50	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS3	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-13F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	30400	400	ug/l	1	06/24/11	06/27/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS1	
<b>Lab Sample ID:</b> D24715-14	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15121.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> DCS1	
<b>Lab Sample ID:</b> D24715-14	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12471.D	1	06/25/11	BR	n/a	n/a	GTA674
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%

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

<b>Client Sample ID:</b> DCS1	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-14	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.9	0.50	mg/l	1	06/27/11 13:04	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS1	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-14F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	32400	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW15		
<b>Lab Sample ID:</b> D24715-15		<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15122.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW15	
<b>Lab Sample ID:</b> D24715-15	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12472.D	1	06/25/11	BR	n/a	n/a	GTA674
Run #2							

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

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

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

<b>Client Sample ID:</b> MW15	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-15	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	4.4	0.50	mg/l	1	06/27/11 13:19	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW15	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-15F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	46300	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW24	
<b>Lab Sample ID:</b> D24715-16	<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/22/11
<b>Method:</b> VRSK 175	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	GBA15123.D	1	06/26/11	AMA	n/a	n/a	M:GBA942
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

<b>Client Sample ID:</b> MW24		
<b>Lab Sample ID:</b> D24715-16		<b>Date Sampled:</b> 06/21/11
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/22/11
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA12473.D	1	06/25/11	BR	n/a	n/a	GTA674
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%

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

<b>Client Sample ID:</b> MW24	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-16	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.0	0.50	mg/l	1	06/27/11 13:33	JML	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW24	<b>Date Sampled:</b> 06/21/11
<b>Lab Sample ID:</b> D24715-16F	<b>Date Received:</b> 06/22/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	39000	400	ug/l	1	06/24/11	06/26/11 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA1627

(2) Prep QC Batch: MP5032

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RL = Reporting Limit

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Mountain States  
4036 Youngfield Street, Wheat Ridge, CO 80033  
TEL: 303-425-6021 877-737-4521  
FAX: 303-425-6021

FED-EX Tracking # \_\_\_\_\_ Bottle Order Control # \_\_\_\_\_  
Accutest Quote # \_\_\_\_\_ Accutest Job # **D24715**

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes								
Company Name <b>Oleson Associates</b>		Project Name <b>Divide Creek Quarterly</b>		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Dissolved Methane</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Dissolved Nitrate</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride</div> </div>										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 - Waste FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank								
Street Address <b>826 21<sup>1/2</sup> Rand G.J. Co 81505</b>		Street: <b>Divide Creek Quarterly</b>																				
City, State, Zip <b>6</b>		Billing Information (if different from Report to)																				
Project Contact <b>Stuart Hill shill@oleson.com</b>		Project #																				
Phone # <b>970-243-7860</b>		Client PO# <b>008-2067</b>																				
Sampler(s) Name(s) <b>Stuart Hill / Dylan Smith</b>		Project Manager																				
Accutest Sample #	Field ID / Point of Collection	MEQ(HD) Viol #	Date	Time	Sampled by	Matrix	# of bottles	TC	NO3	NO2	NO3+NO2	NO3+NO2+NO	NO3+NO2+NO+NH4	NO3+NO2+NO+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	NO3+NO2+NO+NH4+NH4+NH4	LAB USE ONLY
	MW 14		6/21/11	0945	SH	GW	8															O1
	MW 9			1005	SH																	O2
	MW 25			1025	SH																	O3
	MW 11			1040	SH																	O4
	MW 12			1105	SH																	O5
	MW 12X			1105	SH																	O6
	OCS2			1125	SH																	O7
PK																						

Turnaround Time (Business days)		Approved By (Accutest PM): / Date:		Data Deliverable Information				Comments / Special Instructions	
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day R/SH <input type="checkbox"/> 3 Day EMERGENC <input type="checkbox"/> 2 Day EMERGENC <input type="checkbox"/> 1 Day EMERGENC				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> State Forms <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "B" + Narrative <input type="checkbox"/> PDF <input type="checkbox"/> FULLT1 (Level 3+4)				Please lab filter	
Emergency & Rush: T/A data available VIA Lablink				Commercial "A" = Results Only Commercial "B" = Results + QC Summary					

Sample Custody must be documented below each time samples change possession, including courier delivery.							
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:
1 <i>[Signature]</i>	6/21/11 1430	1 <i>[Signature]</i>	2		2 Jacobs port w 1300	3	6/22/11
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:
3		3	4		4		
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp.
5		5	HAD/CO	Intact		A	4.0

D24715: Chain of Custody

Page 1 of 3





## Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D24715

Client:

Immediate Client Services Action Required: No

Date / Time Received: 6/22/2011

No. Coolers:

Client Service Action Required at Login: No

Project:

Airbill #'s:

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	
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"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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"/>

<u>Sample Integrity - Documentation</u>	<u>Y or N</u>	
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"/>

<u>Sample Integrity - Condition</u>	<u>Y or N</u>	
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	

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

4.1  
4

## GC Volatiles

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5

## QC Data Summaries

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Includes the following where applicable:

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

## Method Blank Summary

**Job Number:** D24715  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA674-MB	TA12449.D	1	06/24/11	BR	n/a	n/a	GTA674

The QC reported here applies to the following samples:

Method: SW846 8021B

D24715-1, D24715-2, D24715-3, D24715-4, D24715-5, D24715-6, D24715-7, D24715-8, D24715-9, D24715-10, D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	105% 60-140%

# Blank Spike Summary

**Job Number:** D24715  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA674-BS	TA12450.D	1	06/24/11	BR	n/a	n/a	GTA674

The QC reported here applies to the following samples:

Method: SW846 8021B

D24715-1, D24715-2, D24715-3, D24715-4, D24715-5, D24715-6, D24715-7, D24715-8, D24715-9, D24715-10, D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	27.8	102	70-130
100-41-4	Ethylbenzene	45.6	44.9	98	70-130
108-88-3	Toluene	212	206	97	70-130
1330-20-7	Xylenes (total)	216	222	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	111%	60-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24715  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24654-1MS	TA12453.D	5	06/24/11	BR	n/a	n/a	GTA674
D24654-1MSD	TA12454.D	5	06/24/11	BR	n/a	n/a	GTA674
D24654-1	TA12452.D	1	06/24/11	BR	n/a	n/a	GTA674

**The QC reported here applies to the following samples:** **Method:** SW846 8021B

D24715-1, D24715-2, D24715-3, D24715-4, D24715-5, D24715-6, D24715-7, D24715-8, D24715-9, D24715-10, D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

CAS No.	Compound	D24654-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	92.6	136	214	89	212	88	1	70-130/30
100-41-4	Ethylbenzene	98.9	228	302	89	301	89	0	62-130/30
108-88-3	Toluene	ND	1060	1020	96	1010	95	1	70-130/30
1330-20-7	Xylenes (total)	208	1080	1260	97	1250	97	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D24654-1	Limits
120-82-1	1,2,4-Trichlorobenzene	106%	106%	109%	60-140%

5.3.1  
5

## Metals Analysis

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## QC Data Summaries

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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: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5032  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 06/24/11

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		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15		
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10		
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55		
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	-22	<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 MP5032: D24715-1F, D24715-2F, D24715-3F, D24715-4F, D24715-5F, D24715-6F, D24715-7F, D24715-8F, D24715-9F, D24715-10F, D24715-11F, D24715-12F, D24715-13F, D24715-14F, D24715-15F, D24715-16F

Results < IDL are shown as zero for calculation purposes



BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5032  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24715  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP5032  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11

Metal	D24635-2F Original MS	SpikeLot MPICPAL % Rec		QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	anr			
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	anr			
Selenium				
Silicon				
Silver				
Sodium	3470000 3500000 25000	120.0	75-125	
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP5032: D24715-1F, D24715-2F, D24715-3F, D24715-4F, D24715-5F, D24715-6F, D24715-7F, D24715-8F, D24715-9F, D24715-10F, D24715-11F, D24715-12F, D24715-13F, D24715-14F, D24715-15F, D24715-16F

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5032  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

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

6.1.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24715  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP5032  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11

Metal	D24635-2F Original MSD	SpikeLot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	anr				
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	anr				
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium	anr				
Selenium					
Silicon					
Silver					
Sodium	3470000 3550000	25000	320.0(a)	1.4	20
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP5032: D24715-1F, D24715-2F, D24715-3F, D24715-4F, D24715-5F, D24715-6F, D24715-7F, D24715-8F, D24715-9F, D24715-10F, D24715-11F, D24715-12F, D24715-13F, D24715-14F, D24715-15F, D24715-16F

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5032  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

- (\*) 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.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D24715  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP5032  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	anr			
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	anr			
Selenium				
Silicon				
Silver				
Sodium	23900	25000	95.6	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP5032: D24715-1F, D24715-2F, D24715-3F, D24715-4F, D24715-5F, D24715-6F, D24715-7F, D24715-8F, D24715-9F, D24715-10F, D24715-11F, D24715-12F, D24715-13F, D24715-14F, D24715-15F, D24715-16F

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP5032  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits  
(anr) Analyte not requested

## General Chemistry

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### QC Data Summaries

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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: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP4761/GN10253	0.50	0.31	mg/l	20	21.1	105.5	90-110%
Chloride	GP4773/GN10264	0.50	0.31	mg/l	20	21.7	108.5	90-110%
Nitrogen, Nitrate	GP4761/GN10253	0.045	0.0	mg/l	4.52	4.41	97.6	90-110%
Nitrogen, Nitrite	GP4761/GN10253	0.061	0.0	mg/l	6.09	6.02	98.9	90-110%
Sulfate	GP4761/GN10253	0.50	0.0	mg/l	30	30.7	102.3	90-110%
Sulfate	GP4773/GN10264	0.50	0.0	mg/l	30	31.6	105.3	90-110%

Associated Samples:

Batch GP4761: D24715-1, D24715-10, D24715-2, D24715-3, D24715-4, D24715-5, D24715-6, D24715-7, D24715-8, D24715-9

Batch GP4773: D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

(\*) Outside of QC limits

7.1  
7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP4761/GN10253	D24715-1	mg/l	7.6	10	17.5	99.0	80-120%
Chloride	GP4773/GN10264	D24715-13	mg/l	5.9	10	15.8	99.0	80-120%
Nitrogen, Nitrate	GP4761/GN10253	D24715-1	mg/l	0.0	0.565	0.60	106.2	80-120%
Nitrogen, Nitrite	GP4761/GN10253	D24715-1	mg/l	0.0	0.305	0.30	98.4	80-120%
Sulfate	GP4761/GN10253	D24715-1	mg/l	1.8	10	11.8	100.0	80-120%
Sulfate	GP4773/GN10264	D24715-13	mg/l	20.3	10	29.8	95.0	80-120%

Associated Samples:

Batch GP4761: D24715-1, D24715-10, D24715-2, D24715-3, D24715-4, D24715-5, D24715-6, D24715-7, D24715-8, D24715-9

Batch GP4773: D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.2  
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D24715  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP4761/GN10253	D24715-1	mg/l	7.6	10	17.3	1.1	20%
Chloride	GP4773/GN10264	D24715-13	mg/l	5.9	10	15.8	0.0	20%
Nitrogen, Nitrate	GP4761/GN10253	D24715-1	mg/l	0.0	0.565	0.61	1.7	20%
Nitrogen, Nitrite	GP4761/GN10253	D24715-1	mg/l	0.0	0.305	0.29	3.4	20%
Sulfate	GP4761/GN10253	D24715-1	mg/l	1.8	10	11.6	1.7	20%
Sulfate	GP4773/GN10264	D24715-13	mg/l	20.3	10	29.7	0.3	20%

Associated Samples:

Batch GP4761: D24715-1, D24715-10, D24715-2, D24715-3, D24715-4, D24715-5, D24715-6, D24715-7, D24715-8, D24715-9

Batch GP4773: D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.3

7

Misc. Forms

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Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

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Includes the following where applicable:

- Chain of Custody







# CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033  
 303-425-6021 FAX: 303-425-6854

Accutest Job #:	D24715
Accutest Quote #:	0
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information					
Name <b>Accutest Mountain States (AMS)</b>			Name Accutest - New England							VRSK175CH4	VGC+UNPR				
Address 4036 Youngfield St.			Address 495 Technology Center West, BLDG C												
City Wheat Ridge,	State CO	Zip 80033	City Marlborough	State MA	Zip 01752										
Send Report to: Tiffany Pham			Contact: Sample Management												
Any questions contact: Amanda Kissell															
Phone/Fax #: (303) 425-6021; (303)425-6854			Phone: (508) 481-6200												
Field ID / Point of Collection		Collection		Matrix	# of bottles	Preservation					VRSK175CH4	VGC+UNPR			Comments
	Date	Time					HCL	NaOH	HNO3	H2SO4					
D24715 -11	6/21/11			AQ							X	X			
-12				AQ							X	X			
-13				AQ							X	X			
-14				AQ							X	X			
-15				AQ							X	X			
-16				AQ							X	X			
Turnaround Information			Data Deliverable Information							Comments / Remarks					
<input checked="" type="checkbox"/> 6 - 9 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By: _____			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Tier 1		<input type="checkbox"/> PDF <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Electronic Delivery: <input type="checkbox"/> State Forms <input type="checkbox"/> Other (Specify) _____			Please use Colorado regulations and RLs.				
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.															
Sample Custody must be documented below each time samples change possession, including courier delivery.										For Subcontract Laboratory Use Only					
Relinquished by: 1	Date & Time: 6/23/11	Received By: 1	Date & Time: 1	Seal #:	Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>										
Relinquished by: 2	Date & Time: 6/24/11 1000	Received By: 2	Date & Time: 2	Seal #:	Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>										
Relinquished by: 3	Date & Time:	Received By: 3	Date & Time: 3	Seal #:	Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Temperature °C 2.1 <input checked="" type="checkbox"/> On Ice									

8.1  
8

## Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D24715

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 6/24/2011

Delivery Method:

Client Service Action Required at Login: No

Project:

No. Coolers: 1

Airbill #'s:

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	<u>Y or N</u>	
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. SmpI Dates/Time OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

<u>Quality Control Preservatio</u>	<u>Y or N</u>		<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y or N</u>	
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"/>

<u>Sample Integrity - Condition</u>	<u>Y or N</u>	
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	

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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 recvd 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 Volatiles

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### QC Data Summaries

(Accutest Labs of New England, Inc.)

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Includes the following where applicable:

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



# Method Blank Summary

**Job Number:** D24715  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBA941-MB	GBA15072.D1		06/25/11	AF	n/a	n/a	GBA941

The QC reported here applies to the following samples:

Method: VRSK 175

D24715-1, D24715-2, D24715-3, D24715-4

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

9.1.1  
9

## Method Blank Summary

**Job Number:** D24715  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBA942-MB	GBA15105.D1		06/26/11	AF	n/a	n/a	GBA942

The QC reported here applies to the following samples:

Method: VRSK 175

D24715-5, D24715-6, D24715-7, D24715-8, D24715-9, D24715-10, D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	10	0.066	ug/l	

# Blank Spike Summary

**Job Number:** D24715  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBA941-BSP	GBA15073.D1		06/25/11	AF	n/a	n/a	GBA941

The QC reported here applies to the following samples:

Method: VRSK 175

D24715-1, D24715-2, D24715-3, D24715-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	88.7	79.8	90	50-150

# Blank Spike Summary

**Job Number:** D24715  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBA942-BSP	GBA15106.D1		06/26/11	AF	n/a	n/a	GBA942

The QC reported here applies to the following samples:

Method: VRSK 175

D24715-5, D24715-6, D24715-7, D24715-8, D24715-9, D24715-10, D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	88.7	94.4	106	50-150

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24715  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24559-1MS	GBA15075.D1		06/25/11	AF	n/a	n/a	GBA941
D24559-1MSD	GBA15076.D1		06/25/11	AF	n/a	n/a	GBA941
D24559-1	GBA15074.D1		06/25/11	AF	n/a	n/a	GBA941

The QC reported here applies to the following samples:

Method: VRSK 175

D24715-1, D24715-2, D24715-3, D24715-4

CAS No.	Compound	D24559-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.86	88.7	64.2	71	67.1	75	4	50-150/30

9.3.1  
9

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D24715  
**Account:** ALMS Accutest Mountain States  
**Project:** CORCCOGJ: Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D24715-5MS	GBA15108.D1		06/26/11	AF	n/a	n/a	GBA942
D24715-5MSD	GBA15110.D1		06/26/11	AF	n/a	n/a	GBA942
D24715-5	GBA15107.D1		06/26/11	AF	n/a	n/a	GBA942

The QC reported here applies to the following samples:

Method: VRSK 175

D24715-5, D24715-6, D24715-7, D24715-8, D24715-9, D24715-10, D24715-11, D24715-12, D24715-13, D24715-14, D24715-15, D24715-16

CAS No.	Compound	D24715-5 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	63.7	88.7	131	76	127	71	3	50-150/30

9.3.2  
9

Lab #: 214173 Job #: 15598  
 Sample Name/Number: MW2  
 Company: Olsson Associates  
 Date Sampled: 6/20/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.098			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	0.383			
Oxygen -----	5.34			
Nitrogen -----	20.47			
Carbon Dioxide -----	1.74			
Methane -----	60.77	-39.98	-185.3	
Ethane -----	7.67	-28.08		
Ethylene -----	nd			
Propane -----	2.54	-25.92		
Iso-butane -----	0.356			
N-butane -----	0.400			
Iso-pentane -----	0.0976			
N-pentane -----	0.0603			
Hexanes + -----	0.0773			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 852 Specific gravity, calculated: 0.766

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.60

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 214174 Job #: 15598  
 Sample Name/Number: MW17  
 Company: Olsson Associates  
 Date Sampled: 6/20/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.092			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	1.70			
Oxygen -----	0.97			
Nitrogen -----	91.25			
Carbon Dioxide -----	5.95			
Methane -----	0.0263			
Ethane -----	0.0047			
Ethylene -----	nd			
Propane -----	0.0032			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 1 Specific gravity, calculated: 1.008

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.72

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.



Lab #: 214175 Job #: 15598  
 Sample Name/Number: MW4  
 Company: Olsson Associates  
 Date Sampled: 6/20/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.044			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	0.683			
Oxygen -----	0.14			
Nitrogen -----	36.36			
Carbon Dioxide -----	5.15			
Methane -----	49.41	-39.80	-181.2	
Ethane -----	5.70	-27.89		
Ethylene -----	nd			
Propane -----	1.78	-26.07		
Iso-butane -----	0.271			
N-butane -----	0.288			
Iso-pentane -----	0.0745			
N-pentane -----	0.0438			
Hexanes + -----	0.0551			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 673

Specific gravity, calculated: 0.817

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.65

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 214176 Job #: 15598  
 Sample Name/Number: MW14  
 Company: Olsson Associates  
 Date Sampled: 6/21/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.022			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	1.14			
Oxygen -----	1.96			
Nitrogen -----	55.05			
Carbon Dioxide -----	9.32			
Methane -----	29.59	-44.20	-226.5	
Ethane -----	1.95	-28.50		
Ethylene -----	nd			
Propane -----	0.678	-25.32		
Iso-butane -----	0.111			
N-butane -----	0.114			
Iso-pentane -----	0.0305			
N-pentane -----	0.0191			
Hexanes + -----	0.0178			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 362

Specific gravity, calculated: 0.912

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.68

\*Addition of helium negates the ability to detect native helium or hydrogen.

\*\* Propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 214177 Job #: 15598  
 Sample Name/Number: MW9  
 Company: Olsson Associates  
 Date Sampled: 6/21/2011  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 6/23/2011 Date Reported: 8/01/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.035			
Hydrogen Sulfide -----	nd			
Helium -----	na			
Hydrogen -----	na			
Argon -----	0.682			
Oxygen -----	5.63			
Nitrogen -----	33.57			
Carbon Dioxide -----	5.09			
Methane -----	47.72	-41.21	-190.3	
Ethane -----	4.76	-28.53		
Ethylene -----	nd			
Propane -----	1.74	-26.16		
Iso-butane -----	0.288			
N-butane -----	0.302			
Iso-pentane -----	0.0824			
N-pentane -----	0.0442			
Hexanes + -----	0.0526			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 639

Specific gravity, calculated: 0.831

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.64

\*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.