



October 23, 2009

Mr. Brett Middleton  
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 2009

Dear Mr. Middleton:

Olsson Associates (OA), formerly Cordilleran Compliance Services, Inc. has completed the second quarter of 2009 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 2009 and data collected since 2004 to monitor the impacts of the dissolved phase hydrocarbons comprised primarily of methane and benzene at the seep site.

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

OA collected groundwater samples from 24 monitoring wells and the Eicher water well for the second quarter on June 15 and 16, 2009 (**Figure 1**). One duplicate sample was also collected from the monitoring wells. 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. 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 water quality meter. Groundwater samples were collected following field parameter measurements.

OA collected eight (8) surface-water samples (DCS-1-8) in West Divide Creek extending from the former seep area to the northern Langedger property line on June 15 and 16 (**Figure 1**). Field parameters (temperature, specific conductance, dissolved oxygen, pH, total dissolved solids, and turbidity) were also collected from the creek locations using the Quanta meter (**Figure 1**). One duplicate sample was acquired from one of the sampling points in the creek.

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

- BTEX/MTBE using EPA method 8021
- Total Dissolved methane using method RSK 175M
- Chloride (Cl) using method 300E
- Sodium (Na) using method SW6020

Isotopic methane was analyzed by Isotech Laboratories, Inc of Champaign, IL. 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 locations with a history of methane greater than 1.0 mg/L and on the Eicher property at MW-23 (**Appendix B, Appendix C**).

Groundwater and surface-water samples were placed in the appropriate sample containers provided by AL, 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 21.55 (MW-21) feet below ground surface (ft-bgs). The groundwater flow direction continues to be from the seep area towards the north, mimicking the creek flow direction (**Figure 2**). The groundwater gradient for this period of monitoring was 0.014 feet/foot (ft/ft), which is consistent with gradients measured during other spring periods.

The flow in the creek was typical for this monitoring period. During June, the southeast side of the study area was flooded near MW-15 and MW-19; therefore groundwater levels and groundwater samples were not acquired from these wells.

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

A summary of laboratory analytical groundwater results for benzene, toluene, ethylene, total xylenes (BTEX), and total dissolved methane for June 2009 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 June 2009 results are depicted in **Figure 5**. The June 2009 field parameters are contained in **Appendix A**. A summary of historical hydrocarbon analyses results for groundwater data collected since 2004 are contained in **Appendix B**. **Appendix C** contains a summary of historical hydrocarbon analyses results for surface-water data collected since 2004. The QA/QC data are contained in **Appendix D**. The thermogenic methane data are summarized in **Appendix E**. The laboratory reports for June 2009 are in **Appendix F**. Graphs of chemical concentrations for selected wells are in **Appendix G**. This report including all of the laboratory reports is enclosed on a disk in the Adobe Acrobat format.

For June 2009, detections of benzene were found in monitoring wells 2, 4, and 9 (**Table 1**). Benzene concentrations were detected above the state standard of 5 µg/L in monitoring wells MW-2 at 110 µg/L and MW-4 at 5.4 µg/L (**Table 1**). The reported benzene concentration at MW-9 was 1.6 µg/L. Toluene and ethylbenzene were not detected in any monitoring wells during this monitoring period (**Table 1, Appendix B**). Total xylenes were detected in MW-2 and MW-4, but were below the state standard (**Table 1**). The data continues to show decreasing concentrations of hydrocarbons at all locations (**Appendices B and H**).

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

A summary of historical surface-water results for hydrocarbons is contained in **Appendix C**. Laboratory results indicate that BTEX compounds were not detected in any of the Divide Creek surface-water samples in June (**Table 2**). Typical total dissolved methane concentrations of less than 0.006 mg/L were found in all of the Divide Creek sample locations (**Table 2**). The results

from June 2009 to date continue to indicate that hydrocarbon concentrations above the laboratory reporting limit have not been detected in the creek since April of 2005 (Appendix C).

### ***Methane Results***

The AL laboratory results for methane are reported as total dissolved methane. This includes both biogenic (methane gas generated by biologic reduction of organic matter) and thermogenic methane (methane gas generated by thermal reduction of deeply buried organic matter). Total dissolved methane above the lower method detection level is generally detected in all monitoring wells in the study area. As previously observed in the seep area, the highest concentrations of total dissolved methane in the groundwater are located in close proximity to the seep at wells MW-2 and MW-4 (**Table 1 and Figure 4**).

Isotopic samples were collected from monitoring wells 2, 4, 9, 12, 14, 16, 17 and 23 and creek locations DCS-2 and DCS-3 during this monitoring period. The results for these locations are shown in **Appendix F**. All of these estimated thermogenic concentrations are less than the initial concentrations, but have remained stable at these concentrations since 2007 (**Appendix B**).

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

The air sparge remediation system has been operated with minimum downtime throughout this quarter. Monitoring has continuously shown that the air sparge remediation system has successfully contained migration of the hydrocarbon plume with the treatment time of 12 hr/day. OA will continue to evaluate remedial options in the area upgradient of the present air sparge array. During this quarter air treatment was attempted in MW-4. An air sparging line was installed in MW-4 and was operated continuously for three months. The well was sampled after three months and the results indicate that benzene concentration was reduced from 73 ug/L (March 2009) to 5.4 ug/L (June 2009). The air sparge line was removed and the benzene concentration after one month rebounded to 27 ug/L in this well (**Appendix B**).

A summary of historical analytical results for groundwater and surface water for the West Divide Creek Seep study area are contained in Appendix A (Groundwater) and Appendix B (Surface water). The historical data for groundwater and surface water that has been collected since 2004 indicates the following:

- 12 wells (MW-11, 13, 15, 18, 19, 20, 21, 22, 23, 24, 26 and 27) have never had any detections of any BTEX compounds above the laboratory lower method detection level;
- Monitoring wells MW-1, 6, 7 and 8 located within the treatment area of the air sparge remediation system have not had any detections of benzene above the state standard since groundwater remediation was implemented in 2005;
- Monitoring wells MW-2, 4, 9, 12, 14, 16 and 17 located near the seep and upgradient of the remediation system have shown decreasing concentrations of benzene since the initial discovery of the seep in 2004 (**Appendix G**);
- Benzene concentrations greater than state standard and total dissolved methane concentrations greater than 1 mg/L in groundwater are primarily located within 250 feet of the seep;
- Thermogenic methane concentrations have fluctuated but essentially remained the same in monitoring wells located in the vicinity of the seep;
- Thermogenic methane concentrations have been reduced significantly downgradient of the remediation system; and

- BTEX compounds have not been detected above the laboratory lower method detection level in the creek since 2005.

***Planned Activities for the Next Quarter***

The following activities are planned for the next quarter:

- Obtain water levels from all monitoring wells;
- Sample all monitoring well locations and the Eicher and Langegger domestic wells for analyses of BTEX, total dissolved methane, chloride and sulfide.
- Sample Divide Creek locations DCS-1, 2 and 3.
- Obtain water quality samples for thermogenic methane analysis at monitoring locations MW-2,4,9,14,17 and 23 and DCS-2;
- Reinstall air treatment in MW-4;
- Perform anti-scaling maintenance on all air sparge wells;
- Perform maintenance on the air sparge system; and
- Reduce the air sparge treatment time from 12 hrs/day to 8 hrs/day.

OA 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.

Sincerely,



Brad Stephenson, P.G.  
Associate Hydrogeologist

cc: Margaret Ash  
Lisa Bracken  
Richard Thompson  
Pepi Langegger  
Kathy Friesen

Attachments

## **TABLES**

**Table 1**

Summary of June 2009 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 RBSLs (ug/L)		5	1000	680	10000			
MW-01	15-Jun-09	<1	<2	<2	<2	<0.0008		5954.69
MW-02	15-Jun-09	<b>110</b>	<2	<2	28.8	8.3	6.6	5954.83
MW-02D	15-Jun-09	<b>94</b>	<2	<2	24.1	9.2	7.3	5954.83
MW-04	16-Jun-09	<b>5.4</b>	<2	<2	7.0	6.8	5.0	5955.41
MW-04 <sup>a</sup>	14-Jul-09	<b>27</b>	<2	2.2	21.6	10.0		5955.32
MW-06	15-Jun-09	<1	<2	<2	<2	0.0071		5953.34
MW-07	15-Jun-09	<1	<2	<2	<2	<0.0008		5953.25
MW-08	15-Jun-09	<1	<2	<2	<2	0.015		5952.30
MW-09	16-Jun-09	1.6	<2	<2	<2	7.2	5.0	5960.78
MW-09 <sup>b</sup>	14-Jul-09	2.5	<2	<2	<2	8.2		5960.82
MW-11	15-Jun-09	<1	<2	<2	<2	0.037		5965.15
MW-12	15-Jun-09	<1	<2	<2	<2	0.25	0.02	5961.39
MW-13	15-Jun-09							PLUGGED
MW-14	16-Jun-09	<1	<2	<2	<2	5.6	3.9	5960.01
MW-15	15-Jun-09							FLOODED
MW-16	15-Jun-09	<1	<2	<2	<2	0.076	0.001	5957.87
MW-17	15-Jun-09	<1	<2	<2	<2	0.0027	<0.0008	5955.24
MW-18	16-Jun-09	<1	<2	<2	<2	0.81		5948.52
MW-19	15-Jun-09							FLOODED
MW-20	16-Jun-09	<1	<2	<2	<2	0.00089		5946.90
MW-21	16-Jun-09	<1	<2	<2	<2	0.0011		5947.90
MW-22	16-Jun-09	<1	<2	<2	<2	<0.0008		5948.73
MW-23	15-Jun-09	<1	<2	<2	<2	<0.0008	<0.0008	5941.07
MW-24	16-Jun-09	<1	<2	<2	<2	0.014		5951.02
MW-25	15-Jun-09	<1	<2	<2	<2	0.011		5967.76
MW-26	16-Jun-09	<1	<2	<2	<2	0.33		5953.65
MW-27	15-Jun-09	<1	<2	<2	<2	<0.0008		5952.37
EICH2	15-Jun-09	<1	<2	<2	<2	0.087		NOT ANALYZED

**200 - Bold** exceeds Colorado RBSLs

ug/L - micrograms/Liter

mg/L - milligrams/Liter

Blank cell - not analyzed/not collected

ft-msl - feet above mean sea level

D - Duplicate sample

S - Split to Energy Labs

< - Not detected above indicated reporting level

<sup>a</sup> Sparge for 3 months, sample taken 1 month after sparge

<sup>b</sup> Sample taken 1 month after sparge complete from well outside sparge area

BTEX analyzed by EPA Method 8021

Total Dissolved Methane analyzed by EPA Method RSK175M

**Table 2**

Summary of Surface-Water Analytical Results for June 2009  
 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		
DCS-1	16-Jun-09	<1	<2	<2	<2	0.0015	
DCS-2	16-Jun-09	<1	<2	<2	<2	0.0017	<0.0008
DCS-3	16-Jun-09	<1	<2	<2	<2	0.0014	<0.0008
DCS-3D	16-Jun-09	<1	<2	<2	<2	0.0014	
DCS-4	16-Jun-09	<1	<2	<2	<2	0.0029	
DCS-5	16-Jun-09	<1	<2	<2	<2	0.0028	
DCS-6	16-Jun-09	<1	<2	<2	<2	0.0056	
DCS-7	16-Jun-09	<1	<2	<2	<2	0.0037	
DCS-8	16-Jun-09	<1	<2	<2	<2	0.0032	

**200 - Bold** exceeds Colorado RBSLs

ug/L - micrograms/liter

mg/L - milligrams/Liter

Blank cell - not analyzed/not collected

D - Duplicate Sample

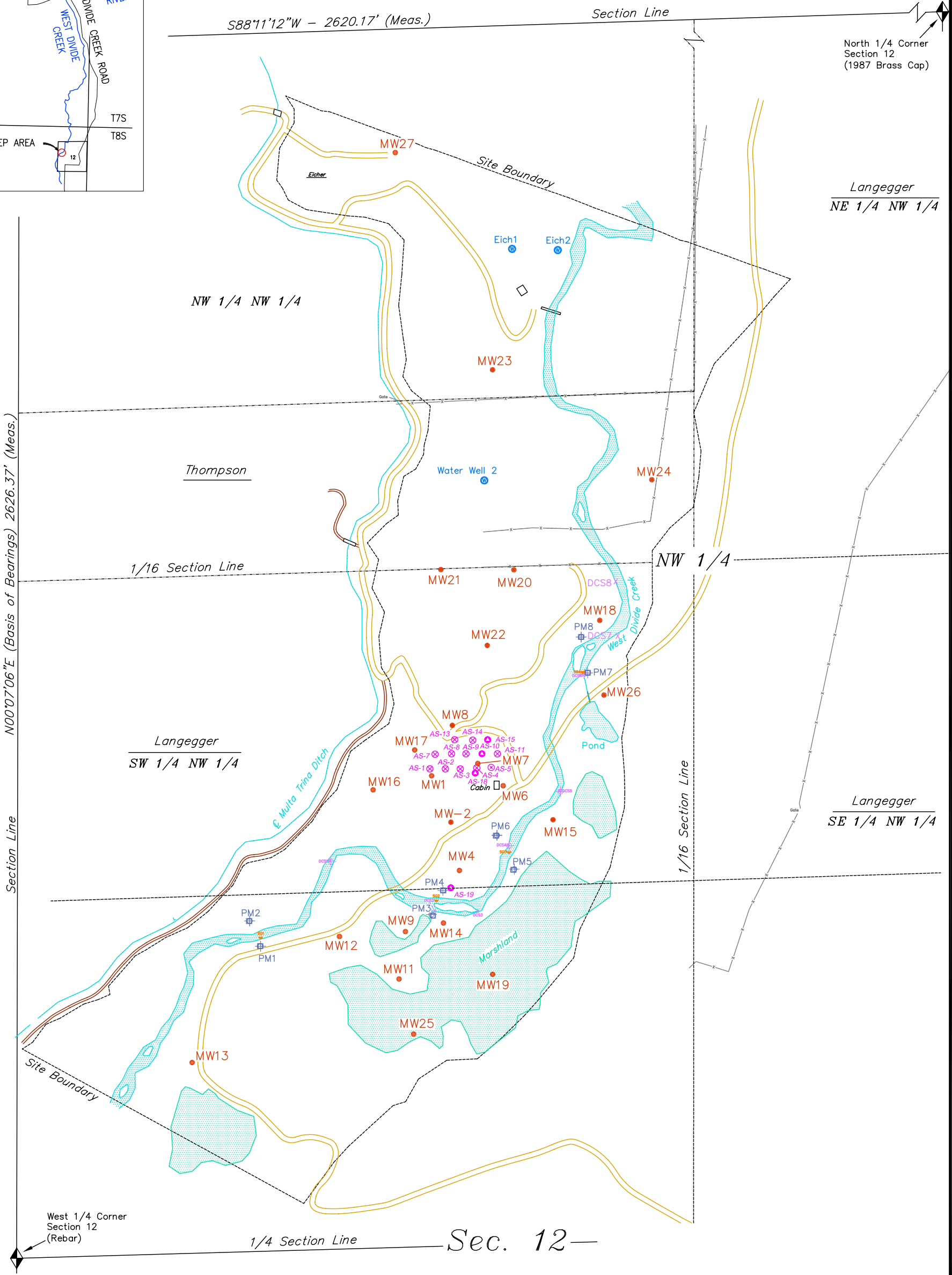
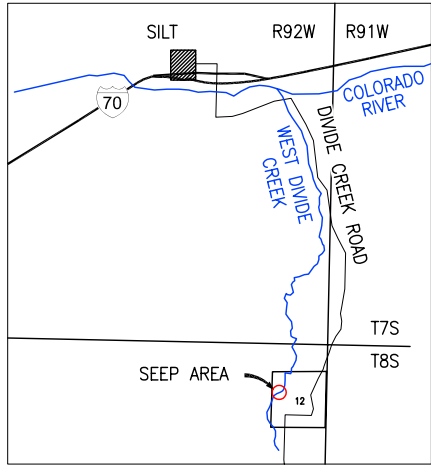
< - Not detected above indicated reporting level

BTEX analyzed by EPA Method 8021

Total Dissolved Methane analyzed by EPA Method RSK175M

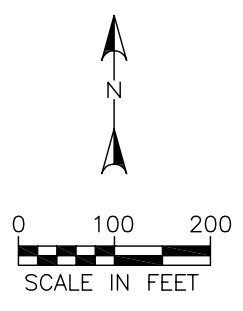
## **FIGURES**





**LEGEND**

- = SECTION CORNERS FOUND
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE
- = STREAM GAUGE
- = PIEZOMETER
- = DIVIDE CREEK SAMPLE
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION
- = MONITORING WELL



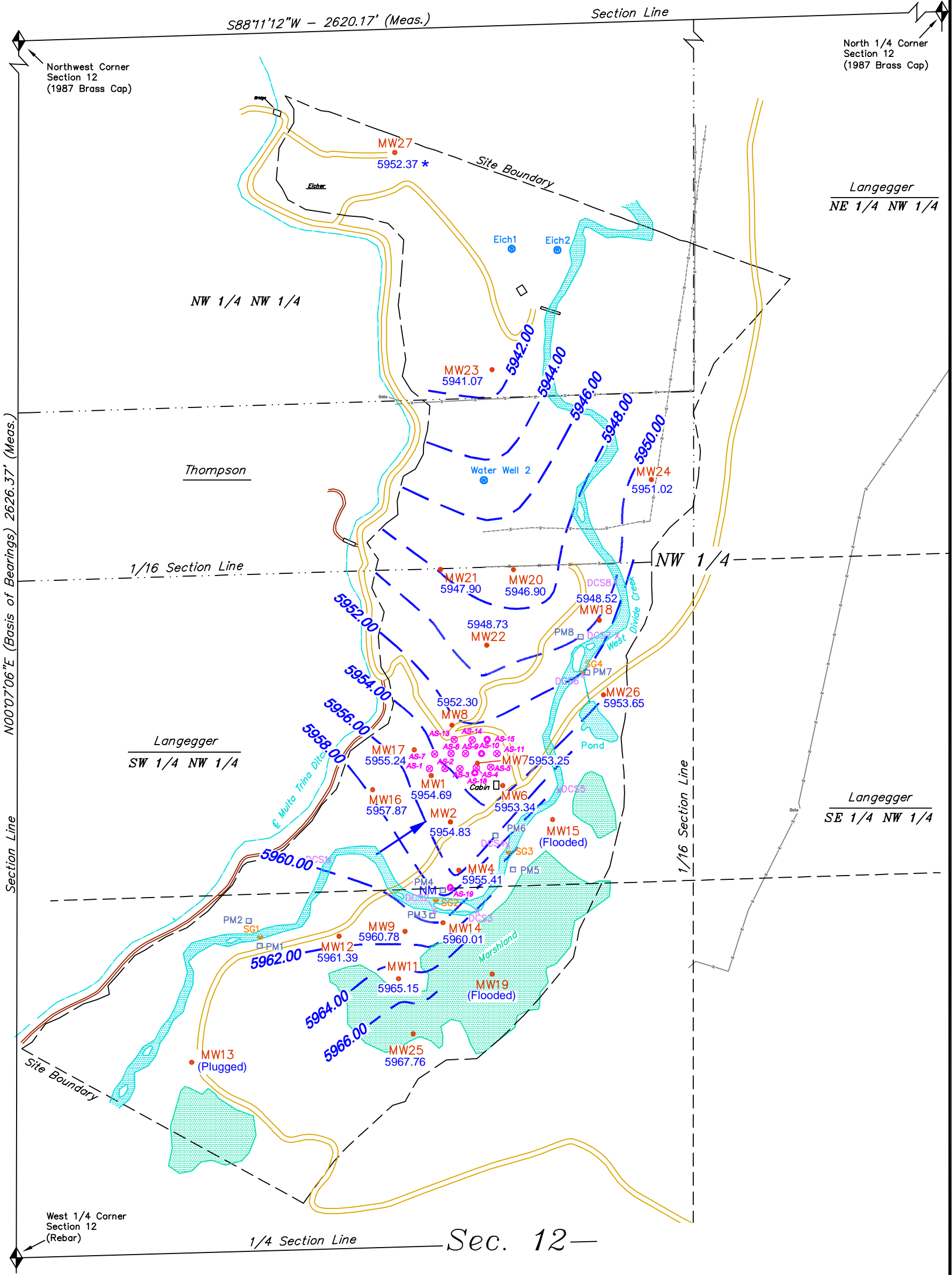
PROJECT NO: 008-2067  
 DRAWN BY: RJV  
 DATE: 5/14/09

**WEST DIVIDE CREEK SEEP AREA  
 SITE LOCATION MAP**



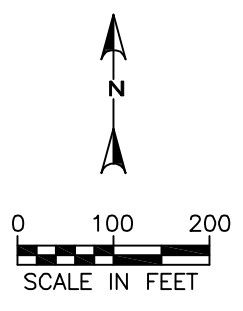
4690 Table Mountain Drive  
 Suite 200  
 Golden, CO 80403  
 TEL 303.237.2072  
 FAX 303.237.2659

**FIGURE**  
 1



**LEGEND**

- = SECTION CORNERS FOUND
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE
- = STREAM GAUGE
- = GROUNDWATER ELEVATION CONTOUR (FEET)
- = GROUNDWATER ELEVATION (FEET)
- = GROUNDWATER FLOW DIRECTION
- = DATA NOT USED IN CONTOURING
- = PIEZOMETER
- = DIVIDE CREEK SAMPLE
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION
- = MONITORING WELL

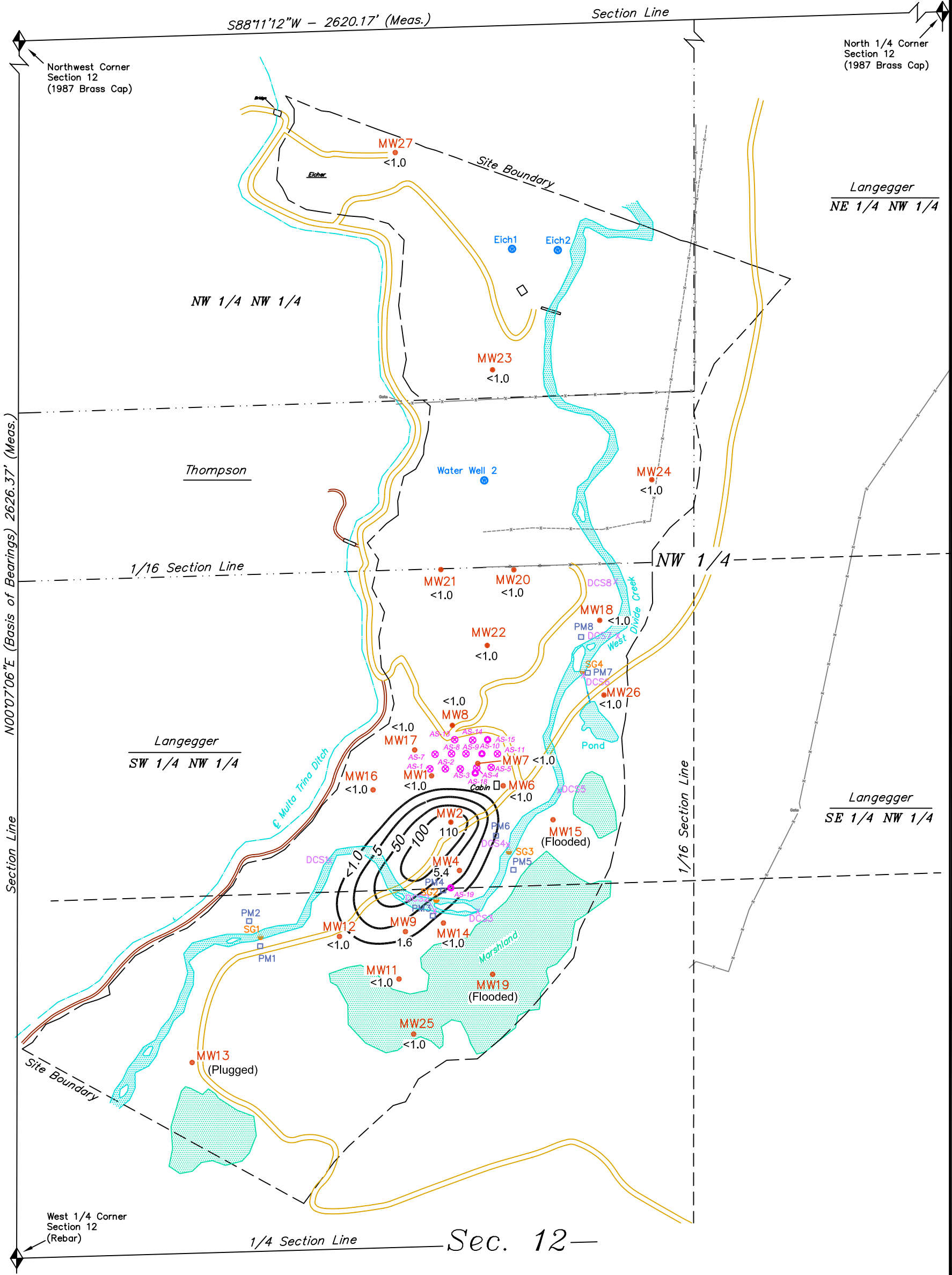


PROJECT NO: 008-2067  
 DRAWN BY: RJV  
 DATE: 7/7/09

**WEST DIVIDE CREEK SEEP AREA GROUNDWATER ELEVATION MAP**  
 JUNE 2009  
 GARFIELD COUNTY, COLORADO

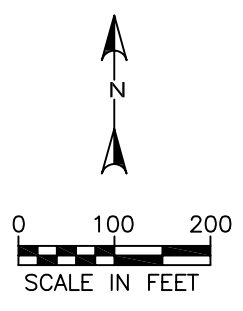
**OLSSON ASSOCIATES**  
 4690 Table Mountain Drive  
 Suite 200  
 Golden, CO 80403  
 TEL 303.237.2072  
 FAX 303.237.2659

FIGURE  
 2



**LEGEND**

- ◆ = SECTION CORNERS FOUND
- x— = FENCE
- - -x- - - = OLD FENCE
- · - · - = PROPERTY LINE
- (blue) — = DRAINAGE
- (orange) = STREAM GAUGE
- 100 — = BENZENE CONCENTRATION CONTOUR IN µg/L
- 110 = BENZENE CONCENTRATION IN µg/L
- NS = NOT SAMPLED
- = PIEZOMETER
- X = DIVIDE CREEK SAMPLE
- ⊗ = AIR SPARGE WELL LOCATION
- ⊙ = NESTED AIR SPARGE WELL LOCATION
- = MONITORING WELL



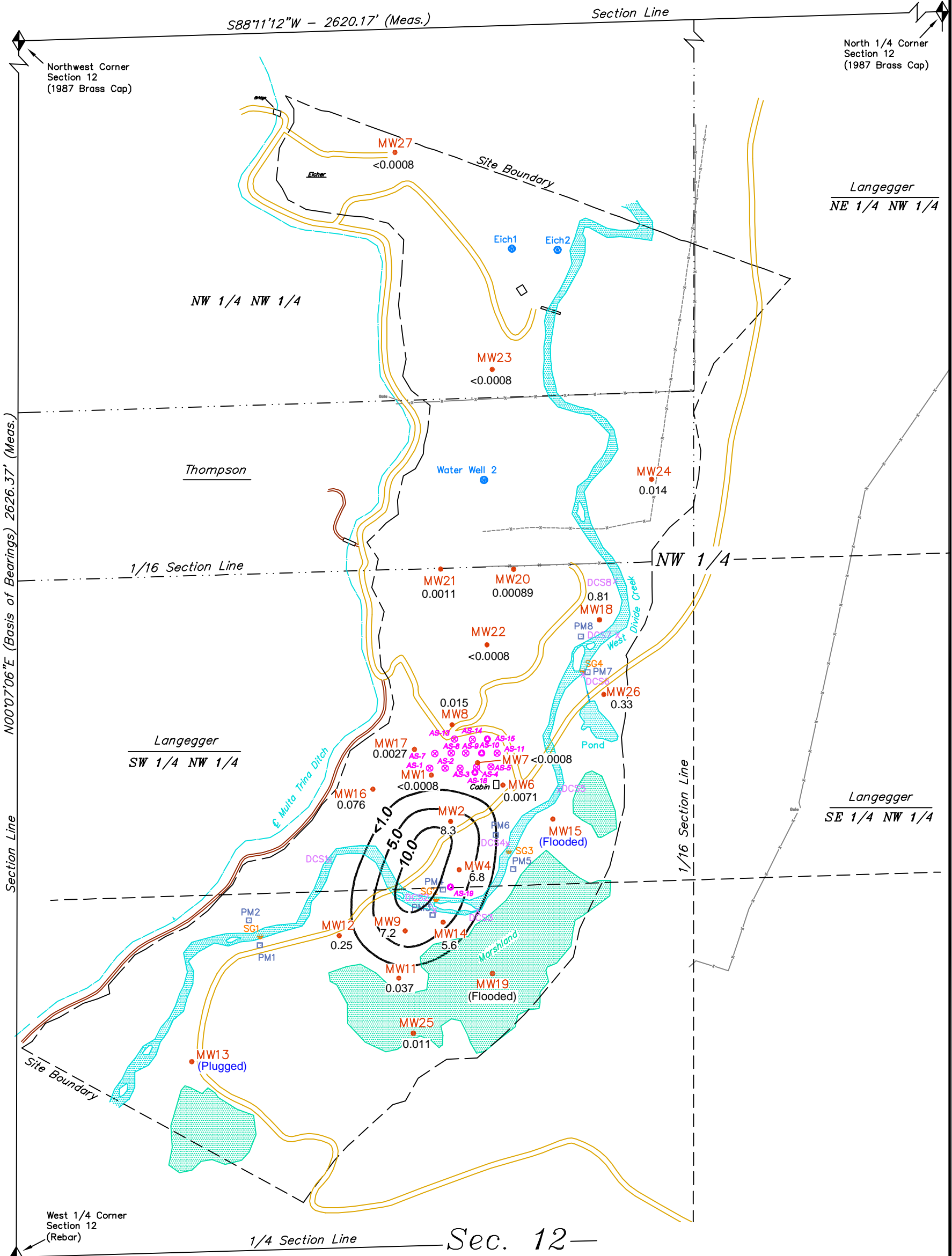
PROJECT NO: 008-2067  
 DRAWN BY: RJV  
 DATE: 7/2/09

**WEST DIVIDE CREEK SEEP AREA BENZENE CONCENTRATIONS**  
 JUNE 2009  
 GARFIELD COUNTY, COLORADO



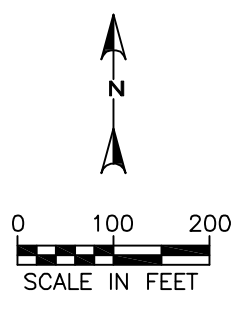
4690 Table Mountain Drive  
 Suite 200  
 Golden, CO 80403  
 TEL 303.237.2072  
 FAX 303.237.2659

FIGURE  
 3



**LEGEND**

- ◆ = SECTION CORNERS FOUND
- x— = FENCE
- - -x- - - = OLD FENCE
- · - · - = PROPERTY LINE
- · — · — = DRAINAGE
- = STREAM GAUGE
- 5.0— = THERMOGENIC & BIOGENIC METHANE CONCENTRATION CONTOUR IN mg/L
- 5.6 = THERMOGENIC & BIOGENIC METHANE CONCENTRATION IN mg/L
- NS = NOT SAMPLED
- \* = DATA NOT USED IN CONTOURING
- = PIEZOMETER
- X = DIVIDE CREEK SAMPLE
- ⊗ = AIR SPARGE WELL LOCATION
- ⊙ = NESTED AIR SPARGE WELL LOCATION
- = MONITORING WELL

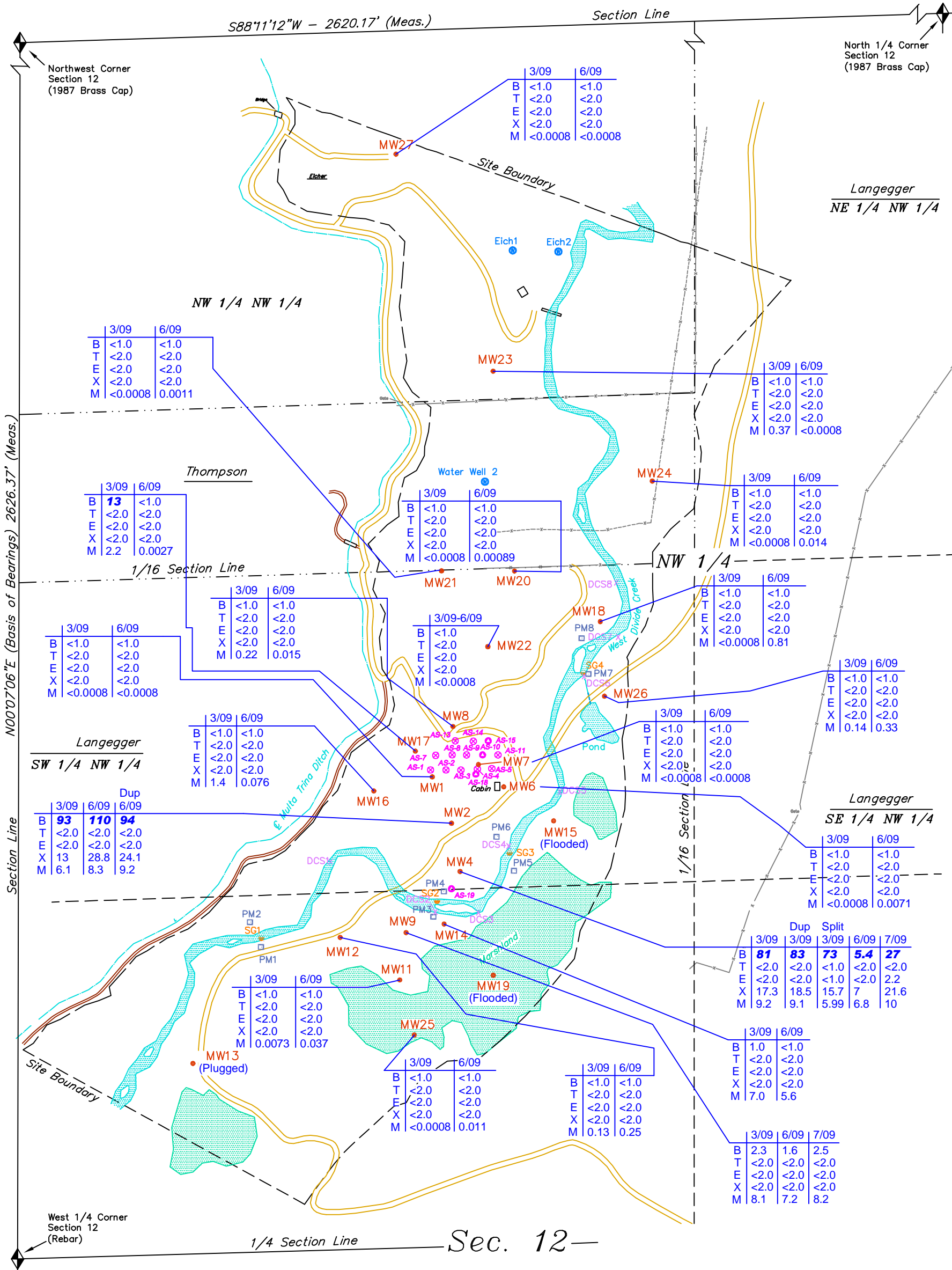


PROJECT NO: 008-2067  
 DRAWN BY: RJV  
 DATE: 7/7/09

**WEST DIVIDE CREEK SEEP AREA TOTAL DISSOLVED METHANE CONCENTRATIONS JUNE 2009 GARFIELD COUNTY, COLORADO**

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**FIGURE 4**

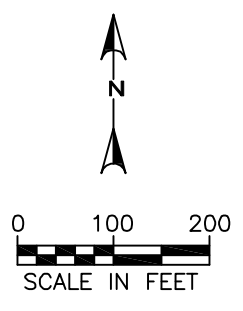


**LEGEND**

- = SECTION CORNERS FOUND
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE
- = STREAM GAUGE
- = PIEZOMETER
- = DIVIDE CREEK SAMPLE
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION
- = MONITORING WELL

**CHEMICAL DATA**  
(ALL VALUES ARE IN µg/l)

B = BENZENE  
T = TOLUENE  
E = ETHYLBENZENE  
X = XYLENES  
M = TOTAL METHANE



# **APPENDIX A**

**Field Data – 2nd Quarter**

**Appendix A**  
 Field Data for June 2009  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Date	SampleName	Cl-	Cl-_DL	Na	Na_DL	Temp_Field	SpCond_Field	DO_Field	pH_Field	TDS_Field	DO_Percent	Turbidity_Field	DTW
15-Jun-09	EICH2	22.8	0.5	137	0.4	15.66	1.160	1.69	8.16	0.7	19.9	112	-88.8
15-Jun-09	MW23	36.4	2.5	429	0.4	14.50	2.100	3.13	8.59	1.4	36.6	182	11.62
15-Jun-09	MW27	19.1	0.5	161	0.4	19.68	0.928	2.15	8.49	0.6	25.1	129	3.85
16-Jun-09	DCS1	8.6	0.5	52.1	0.4	13.31	0.583	9.28	9.51	0.4	107.1	280	-88.8
16-Jun-09	DCS2	8.5	0.5	50.6	0.4	14.11	0.576	9.60	9.51	0.4	112.8	31.6	-88.8
16-Jun-09	DCS3	8.4	0.5	52	0.4	14.42	0.574	9.76	9.51	0.4	115.6	26.5	-88.8
16-Jun-09	DCS3D	8.6	0.5	51	0.4	14.42	0.574	9.76	9.51	0.4	115.6	26.5	-88.8
16-Jun-09	DCS4	8.4	0.5	51.6	0.4	15.27	0.577	9.58	9.54	0.4	115.5	27.5	-88.8
16-Jun-09	DCS5	8.4	0.5	50.8	0.4	16.01	0.578	9.36	9.57	0.4	114.5	30.1	-88.8
16-Jun-09	DCS6	8.3	0.5	50.4	0.4	16.29	0.583	8.90	9.51	0.4	109.6	22.3	-88.8
16-Jun-09	DCS7	8.7	0.5	50.8	0.4	11.16	0.576	8.86	9.54	0.4	108.7	24.8	-88.8
16-Jun-09	DCS8	8.8	0.5	51.1	0.4	16.24	0.575	8.69	9.56	0.4	106.9	25.8	-88.8
15-Jun-09	MW1	35.4	0.5	351	0.4	13.50	1.580	1.90	7.06	1.0	-88.8	1331	4.10
15-Jun-09	MW11	31.5	0.5	38.8	0.4	10.51	0.594	1.38	8.17	0.4	14.7	306	4.51
15-Jun-09	MW12	17.8	0.5	91.8	0.4	10.94	0.904	1.95	8.04	0.6	21.5	148	2.21
16-Jun-09	MW14	19.5	0.5	46.8	0.4	10.67	0.745	3.26	8.31	0.5	34.4	2000	5.05
15-Jun-09	MW16	14.0	0.5	224	0.4	12.80	0.923	2.39	7.81	0.6	-88.8	104	2.58
15-Jun-09	MW17	44.2	0.5	502	0.4	12.80	2.210	0.84	7.46	1.4	-88.8	763	3.25
16-Jun-09	MW18	7.4	0.5	64.4	0.4	20.10	0.000	3.06	7.26	0.0	-88.8	215	3.91
15-Jun-09	MW2	47.3	0.5	129	0.4	14.50	0.845	0.52	7.23	0.5	-88.8	401	4.45
15-Jun-09	MW2D	47.5	0.5	130	0.4	14.50	0.845	0.52	7.23	0.5	-88.8	401	4.45
16-Jun-09	MW20	20.2	0.5	111	0.4	14.21	1.000	1.84	6.98	0.6	-88.8	315	6.98
16-Jun-09	MW21	25.1	0.5	249	0.4	10.80	1.240	3.22	7.34	0.8	-88.8	298	21.55
16-Jun-09	MW22	34.7	0.5	169	0.4	13.40	0.000	2.84	7.02	0.0	-88.8	496	8.35
16-Jun-09	MW24	3.6	0.5	46.7	0.4	12.90	0.692	3.33	7.30	0.4	-88.8	405	3.89
15-Jun-09	MW25	22.9	0.5	37.5	0.4	7.58	0.729	1.73	8.34	0.5	19.3	409	4.03
16-Jun-09	MW26	4.6	0.5	99.4	0.4	10.40	0.785	2.31	7.00	0.5	-88.8	2000	1.00
16-Jun-09	MW4	35.7	0.5	125	0.4	13.10	0.760	1.41	7.64	0.5	-88.8	190	8.00
15-Jun-09	MW6	25.3	0.5	150	0.4	11.50	1.140	3.17	6.63	0.7	-88.8	302	6.60
15-Jun-09	MW7	28.5	0.5	137	0.4	11.40	1.020	4.30	7.14	0.7	-88.8	2000	5.72
15-Jun-09	MW8	38.6	0.5	179	0.4	12.20	1.150	0.54	7.19	0.7	-88.8	36.5	6.99
16-Jun-09	MW9	24.5	0.5	60.9	0.4	12.54	0.855	1.89	8.23	0.5	20.8	12.4	4.35

**Appendix A**  
 Field Data for June 2009  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Date	SampleName	Sample Description	SampleComments	Sampler	SampleSource
15-Jun-09	EICH2	Domestic well	WQ: Slight sulfur smell, lt brown/clear, no sheen, no effervescence	SH	Well
15-Jun-09	MW23	Domestic well	WQ: Clean, slightly turbid, sulfur odor, no sheen, no effervescence	SH	Well
15-Jun-09	MW27	Divide Creek monitoring well #27	WQ: Clear/lt brown, slight sulfur odor, no sheen, no effervescence	SH	Well
16-Jun-09	DCS1	Divide Creek monitoring station 1	WQ: Brown/clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS2	Divide Creek monitoring station 2	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS3	Divide Creek monitoring station 3	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS3D	Divide Creek monitoring station 3	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS4	Divide Creek monitoring station 4	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS5	Divide Creek monitoring station 5	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS6	Divide Creek monitoring station 6	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS7	Divide Creek monitoring station 7	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
16-Jun-09	DCS8	Divide Creek monitoring station 8	WQ: Clear, no odor, no sheen, no effervescence.	SH	Stream
15-Jun-09	MW1	Divide Creek monitoring well #1	WQ:	BS	Well
15-Jun-09	MW11	Divide Creek monitoring well #11	WQ: Brown, no odor, sheen, or effervescence.	SH	Well
15-Jun-09	MW12	Divide Creek monitoring well #12	WQ : Gray/black, no odor, no sheen, no effervescence.	SH	Well
16-Jun-09	MW14	Divide Creek monitoring well #14	WQ: Black, slight sulfur smell, no sheen, no effervescence.	SH	Well
15-Jun-09	MW16	Divide Creek monitoring well #16	WQ:	BS	Well
15-Jun-09	MW17	Divide Creek monitoring well #17	WQ:	BS	Well
16-Jun-09	MW18	Divide Creek monitoring well #18	WQ: Light brown, neutral smell, no effervescence, some sediment	BS	Well
15-Jun-09	MW2	Divide Creek monitoring well #2	WQ:	BS	Well
15-Jun-09	MW2D	Divide Creek monitoring well #2	WQ:	BS	Well
16-Jun-09	MW20	Divide Creek monitoring well #20	WQ: Brown, turbid, neutral odor, no effervescence, some sediment	BS	Well
16-Jun-09	MW21	Divide Creek monitoring well #21	WQ: Brown, neutral smell, no effervescence, some sediment	BS	Well
16-Jun-09	MW22	Divide Creek monitoring well #22	WQ: Brown, neutral odor, no effervescence, some sediment	BS	Well
16-Jun-09	MW24	Divide Creek monitoring well #24	WQ:	BS	Well
15-Jun-09	MW25	Divide Creek monitoring well #25	WQ: Black/gray, slight sulfur smell, no sheen, no effervescence	SH	Well
16-Jun-09	MW26	Divide Creek monitoring well #26	WQ:	BS	Well
16-Jun-09	MW4	Divide Creek monitoring well #4	WQ:	BS	Well
15-Jun-09	MW6	Divide Creek monitoring well #6	WQ:	BS	Well
15-Jun-09	MW7	Divide Creek monitoring well #7	WQ:	BS	Well
15-Jun-09	MW8	Divide Creek monitoring well #8	WQ:	BS	Well
16-Jun-09	MW9	Divide Creek monitoring well #9	WQ: Black/gray, slight sulfur smell, no sheen, no effervescence	SH	Well



# **APPENDIX B**

## **Historical Groundwater Results**

## 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)	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-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
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

## 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)	Groundwater Elevation (ft-msl)
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-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

## 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)	Groundwater Elevation (ft-msl)
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
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-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

## 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)	Groundwater Elevation (ft-msl)
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
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-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			

## 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)	Groundwater Elevation (ft-msl)
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			
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-08	09-Jul-04	65	NA	NA	NA	3.4			
MW-08	22-Jul-04	210	NA	NA	NA	2.9		12.45	5946.84
MW-08	03-Aug-04	250	<2	<2	<2	2.8		11.98	5947.31
MW-08	15-Sep-04	200	<2	<2	<2	4.1		13.54	5945.75
MW-08	14-Oct-04	140	<2	<2	<3	3.1		13.18	5946.11
MW-08	10-Nov-04	120	<5	<0.5	NA	3.1		12.80	5946.49
MW-08	10-Nov-04	150	<2	<2	<2	6.5		12.80	5946.49
MW-08	10-Nov-04	140	<2	<2	<2	7.2		12.80	5946.49
MW-08	14-Dec-04	140	<2	<2	<2	7.4		12.00	5947.29

## 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)	Groundwater Elevation (ft-msl)
MW-08	13-Jan-05	100	<2	<2	<2	5.7		12.12	5947.17
MW-08	09-Feb-05	58	<2	<2	<2	3.5		11.79	5947.50
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

## 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)	Groundwater Elevation (ft-msl)
MW-08	09-Dec-08	<1	<2	<2	<2	0.11		9.00	5950.29
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-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-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



## 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)	Groundwater Elevation (ft-msl)
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-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
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	7.1	<2	<2	<2	4.3		3.02	5960.58
MW-12	12-Sep-05	8.4	<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	5.3	<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	5.4	<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

## 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)	Groundwater Elevation (ft-msl)
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-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			
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-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

## 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)	Groundwater Elevation (ft-msl)
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-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
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-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			

## 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)	Groundwater Elevation (ft-msl)
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
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-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
MW-17	13-Mar-07	<b>66</b>	<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	<b>30</b>	<2	<2	<2	2	1.2	9.68	5948.81
MW-17	18-Dec-07	<b>16</b>	<2	<2	<2	2		7.59	5950.90
MW-17	03-Mar-08	<b>6.7</b>	<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	<b>31</b>	<2	<2	<2	1.9	1.1	8.20	5950.29
MW-17	09-Dec-08	<b>21</b>	<2	<2	<2	1.9	1.0	6.75	5951.74
MW-17	16-Mar-09	<b>13</b>	<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-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



## 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)	Groundwater Elevation (ft-msl)
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			
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

## 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)	Groundwater Elevation (ft-msl)
MW-20	15-Jun-09	<1	<2	<2	<2	0.00089		6.98	5946.90
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
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

## 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)	Groundwater Elevation (ft-msl)
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-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-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
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



## 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)	Groundwater Elevation (ft-msl)
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-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

## 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)	Groundwater Elevation (ft-msl)
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-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
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-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

## 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)	Groundwater Elevation (ft-msl)
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
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-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

## 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)	Groundwater Elevation (ft-msl)
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
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
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			
E2	27-Sep-06	< 1	< 2	< 2	< 2	0.018			

### 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)	Groundwater Elevation (ft-msl)	
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				
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				
<b>Bold - indicates value exceeds state standard</b>				DTW - depth to water below measuring point						
mg/l - milligrams/liter				<b>ft - feet</b>				ft-msl - feet above mean sea level		
ug/l - micrograms/liter				Blank cell - indicates not analyzed or not obtained						
Total number of all groundwater samples over all dates = 1048										

# **APPENDIX C**

## **Historical Surface Water Results**

## 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		
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	

## 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		
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	
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	



## 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		
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	
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	

## 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		
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-2	13-Apr-04	1.4	<2	<2	<2	0.1	
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	

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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		
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	
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	

## 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		
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	
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	

## 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		
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-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	

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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		
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	
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	

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Summary of Historical Surface-Water Analytical Results  
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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		
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	
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	

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Summary of Historical Surface-Water Analytical Results  
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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		
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	
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	



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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		
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	
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	

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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		
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	
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	

## 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		
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	
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	

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Summary of Historical Surface-Water Analytical Results  
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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		
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-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	
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	

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Summary of Historical Surface-Water Analytical Results  
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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		
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	
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	

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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		
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	
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	

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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		
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-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	
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	

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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		
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	



## 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		
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	

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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		
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	
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-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	

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Summary of Historical Surface-Water Analytical Results  
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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		
DCS-7	25-May-05	<1	<2	<2	<2	0.0018	
DCS-7	02-Jun-05	<1	<2	<2	<2	0.0031	
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	

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Summary of Historical Surface-Water Analytical Results  
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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		
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	
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-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	

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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		
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	
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	
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	

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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		
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	

**Bold - indicates value exceeds state standard**

mg/l - milligrams/liter

ug/l - micrograms/liter

Total number of observations for all points over all dates = 988

# **APPENDIX D**

**Historical QA/QC Results  
Surface and Ground Water**

**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-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



**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-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-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

**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-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
MW-2	Split	12/7/05	<b>290</b>	35	8.1	49	8.4
MW-2		1/11/06	<b>310</b>	< 2	8.5	63.9	8
MW-2	Dup	1/11/06	<b>340</b>	< 2	8.8	62.5	9
MW-2	Split	1/11/06	<b>174</b>	< 2	4.9	36.9	3.1
MW-2		3/12/07	<b>230</b>	< 2	5.8	37.8	7.8
MW-2	Dup.	3/12/07	<b>250</b>	< 2	6.5	43.4	9.4
MW-2	Split	3/12/07	<b>212</b>	< 2	8.05	51.43	0.0691
MW-2		6/20/07	<b>220</b>	< 2	5.3	36.1	6.1
MW-2	Dup	6/20/07	<b>190</b>	< 2	4.6	31.6	4.5
MW-2	Split	6/20/07	<b>94</b>	< 0.25	5.5	43.49	0.979
MW-2		3/3/08	<b>120</b>	< 2	2.6	11	5.8
MW-2	Dup	3/3/08	<b>130</b>	< 2	2.7	12	5.9
MW-2	Split	3/3/08	<b>186</b>	< 0.5	5.1	31.2	1.86
MW-2		6/15/09	<b>110</b>	<2	<2	28.8	8.3
MW-2	Dup	6/15/09	<b>94</b>	<2	<2	24.1	9.2
MW-4		9/15/04	<b>320</b>	76	9.5	80.5	9.2
MW-4	Dup	9/15/04	<b>330</b>	76	9.1	77.1	8.6
MW-4	Split	9/15/04	<b>240</b>	59	6.7	60	27
MW-4		10/14/04	<b>300</b>	37	9	55.2	5.6
MW-4	Dup	10/14/04	<b>300</b>	51	9	59	9.3
MW-4	Split	10/14/04	<b>210</b>	< 50	6.1	37	4.4
MW-4		12/13/04	<b>270</b>	36	8.1	64.9	14

**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-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
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



**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		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
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-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-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
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

**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-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
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

Bold - Indicates Value exceeds state standard  
 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

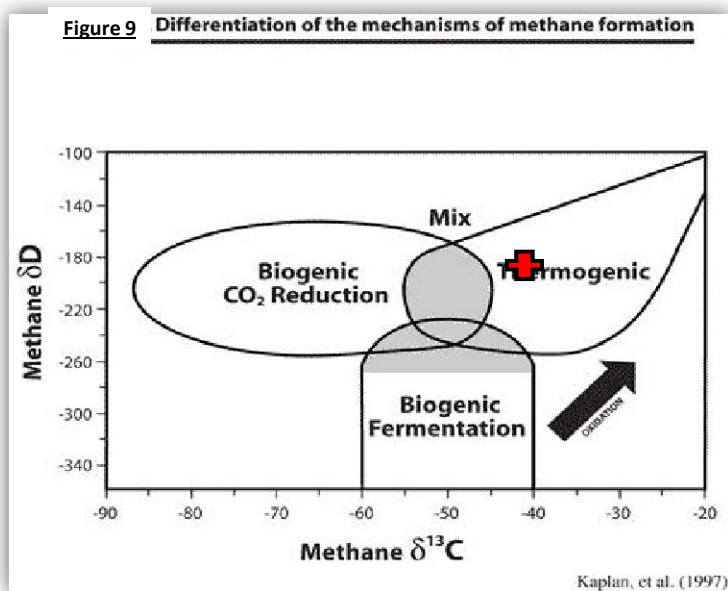
# Appendix E

## Thermogenic Methane Data

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	$\delta^{13}C_1$	$\delta DC_1$	Comment
				per mil	per mil	
16-Jun-09	DCS2	0.0017	<0.0008			Hydrocarbon levels (including methane) too low for accurate analysis
16-Jun-09	DCS3	0.0014	<0.0008			Hydrocarbon levels (including methane) too low for accurate analysis
15-Jun-09	MW2	8.3	6.6	-39.640	-187.600	Consistent with thermogenic (or mostly thermogenic) formation
15-Jun-09	MW2D	9.2	7.3	-39.590	-189.300	Consistent with thermogenic (or mostly thermogenic) formation
16-Jun-09	MW4	6.8	5.0	-39.530	-185.900	Consistent with thermogenic (or mostly thermogenic) formation
16-Jun-09	MW9	7.2	5.0	-40.840	-191.200	Consistent with thermogenic (or mostly thermogenic) formation
15-Jun-09	MW12	0.25	0.02			Hydrocarbon levels (including methane) too low for accurate analysis
16-Jun-09	MW14	5.6	3.9	-39.830	-190.800	Consistent with thermogenic (or mostly thermogenic) formation
15-Jun-09	MW16	0.076	0.001			Hydrocarbon levels (including methane) too low for accurate analysis
15-Jun-09	MW17	0.0027	<0.0008			Hydrocarbon levels (including methane) too low for accurate analysis
15-Jun-09	MW23	<0.0008	<0.0008			Hydrocarbon levels (including methane) too low for accurate analysis

- Hydrocarbon levels (including methane) too low for accurate analysis
  - Isotech data inconsistent with either thermogenic or biogenic formation
  - Consistent with biogenic formation
- All others consistent with thermogenic (or mostly thermogenic) formation  
 Ratioed data and Raw data show more information regarding results





Appendix E - Ratioed Thermogenic Methane Data for West Divide Creek Seep Study Area

		Water Sample	Percentage, Hydrocarbon only basis												Fraction from Biogenic Source	Biogenic Methane	Thermog Methane	Total Methane
Date	Site ID	Total Methane mg/L	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC <sub>4</sub>	nC <sub>4</sub>	iC <sub>5</sub>	nC <sub>5</sub>	C <sub>6+</sub>	δ <sup>13</sup> C <sub>1</sub> per mil	δDC <sub>1</sub> per mil	C1/(C2 + C3)	Biogenic only?	mg/L	mg/L	(check) mg/L	
16-Jun-09	DCS2	0.0017	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%			>10,000		1.000	0.002	0.000	0.0017
16-Jun-09	DCS3	0.0014	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%			>10,000		1.000	0.001	0.000	0.0014
15-Jun-09	MW2	8.3	83.143%	11.104%	4.146%	0.569%	0.647%	0.152%	0.096%	0.143%	-39.64	-187.6	5.5E+00		0.199	1.652	6.648	8.3
15-Jun-09	MW2D	9.2	83.206%	11.055%	4.137%	0.574%	0.639%	0.153%	0.094%	0.141%	-39.59	-189.3	5.5E+00		0.202	1.859	7.341	9.2
16-Jun-09	MW4	6.8	84.576%	10.385%	3.615%	0.543%	0.526%	0.148%	0.088%	0.119%	-39.53	-185.9	6.0E+00		0.267	1.817	4.983	6.8
16-Jun-09	MW9	7.2	85.253%	9.592%	3.715%	0.572%	0.561%	0.158%	0.081%	0.069%	-40.84	-191.2	6.4E+00		0.299	2.155	5.045	7.2
15-Jun-09	MW12	0.25	97.941%	2.059%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%			4.8E+01		0.902	0.226	0.024	0.25
16-Jun-09	MW14	5.6	85.352%	9.415%	3.658%	0.555%	0.626%	0.164%	0.112%	0.117%	-39.83	-190.8	6.5E+00		0.304	1.703	3.897	5.6
15-Jun-09	MW16	0.076	99.651%	0.349%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0	0	2.9E+02		0.984	0.075	0.001	0.076
15-Jun-09	MW17	0.0027	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0	0	>10,000		1.000	0.003	0.000	0.0027
15-Jun-09	MW23	0.0008	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0	0	>10,000		1.000	0.001	0.000	0.0008

Appendix E - Raw Thermogenic Methane Data for West Divide Creek Seep Study Area

		Water Sample																
		Isotech Gas Data																
Date	Site ID	Methane mg/L	Ar %	O <sub>2</sub> %	CO <sub>2</sub> %	N <sub>2</sub> %	C <sub>1</sub> %	C <sub>2</sub> %	C <sub>3</sub> %	iC <sub>4</sub> %	nC <sub>4</sub> %	iC <sub>5</sub> %	nC <sub>5</sub> %	C <sub>6+</sub> %	δ <sup>13</sup> C <sub>1</sub> per mil	δDC <sub>1</sub> per mil	δ <sup>13</sup> C <sub>2</sub> per mil	δ <sup>13</sup> C <sub>3</sub> per mil
16-Jun-09	DCS2	0.0017	1.34	31.95	0.48	66.15	0.0292	0	0	0	0	0	0	0				
16-Jun-09	DCS3	0.0014	1.34	32.48	0.43	65.56	0.0186	0	0	0	0	0	0	0				
15-Jun-09	MW2	8.3	0.448	0.148	2.35	21.32	62.97	8.41	3.14	0.431	0.49	0.115	0.073	0.108	-39.64	-187.6	-28.22	-25.88
15-Jun-09	MW2D	9.2	0.423	3.48	2.09	20.29	61.34	8.15	3.05	0.423	0.471	0.113	0.0696	0.104	-39.59	-189.3	-28.22	-25.87
16-Jun-09	MW4	6.8	0.658	6.81	2.15	31.45	49.84	6.12	2.13	0.32	0.31	0.0872	0.0516	0.0701	-39.53	-185.9	-28.12	-25.72
16-Jun-09	MW9	7.2	0.697	4.94	5.9	32.48	47.73	5.37	2.08	0.32	0.314	0.0882	0.0454	0.0385	-40.84	-191.2	-28.26	-25.79
15-Jun-09	MW12	0.25	1.37	9.91	14.51	72.06	2.06	0.0433	0	0	0	0	0	0				
16-Jun-09	MW14	5.6	0.833	0.17	6.12	39.03	45.96	5.07	1.97	0.299	0.337	0.0883	0.0601	0.063	-39.83	-190.8	-28.36	-25.96
15-Jun-09	MW16	0.076	1.5	14.94	1.66	79.75	2.14	0.0075	0	0	0	0	0	0				
15-Jun-09	MW17	0.0027	1.71	2.07	9.36	86.77	0.0178	0	0	0	0	0	0	0				
15-Jun-09	MW23	0.0008	1.41	15.07	7.81	75.62	0.0454	0	0	0	0	0	0	0				

## **Appendix F**

### **Lab Reports**

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

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

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

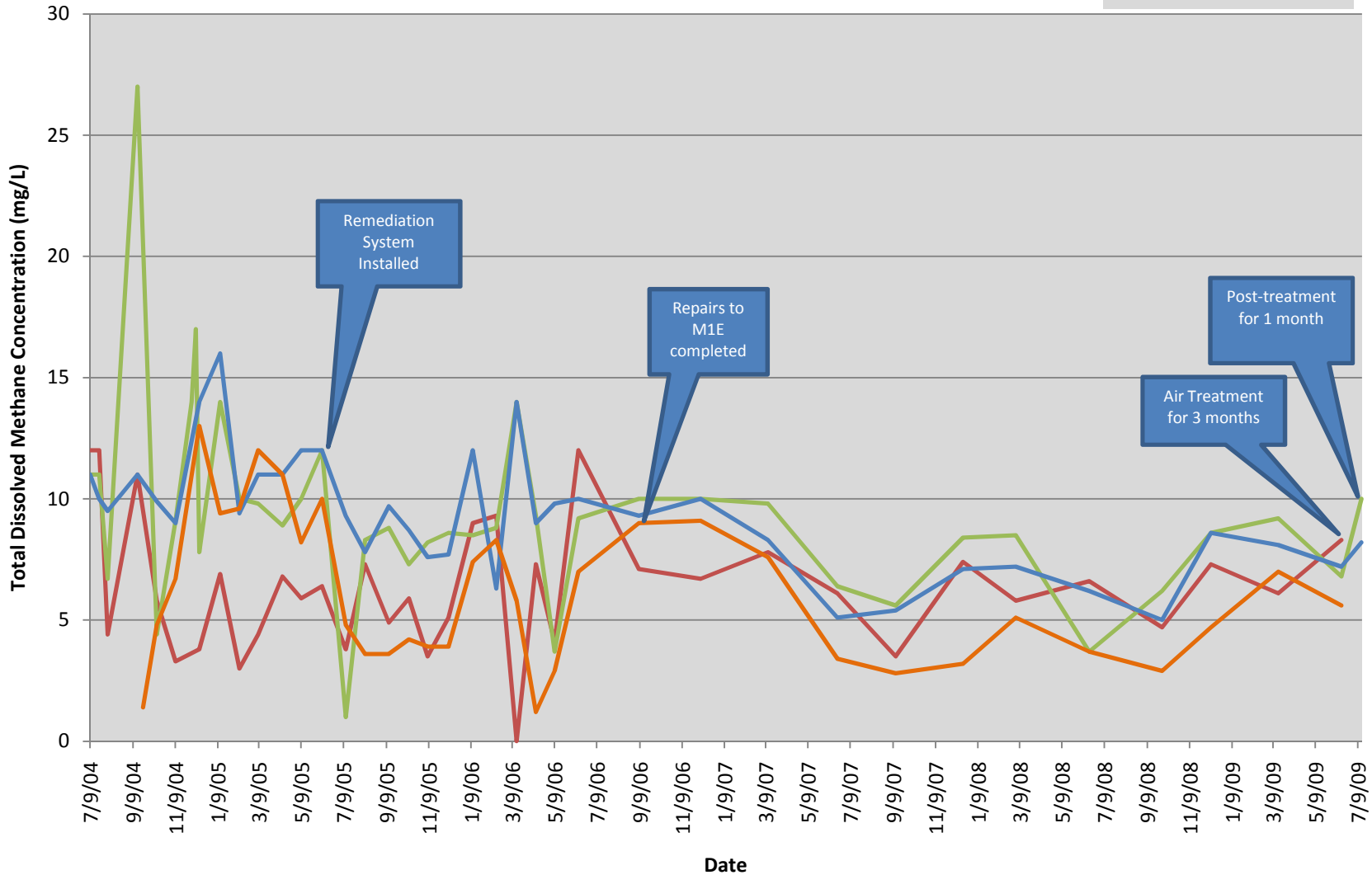
# **Appendix G**

## **Graphs**

# West Divide Creek

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

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

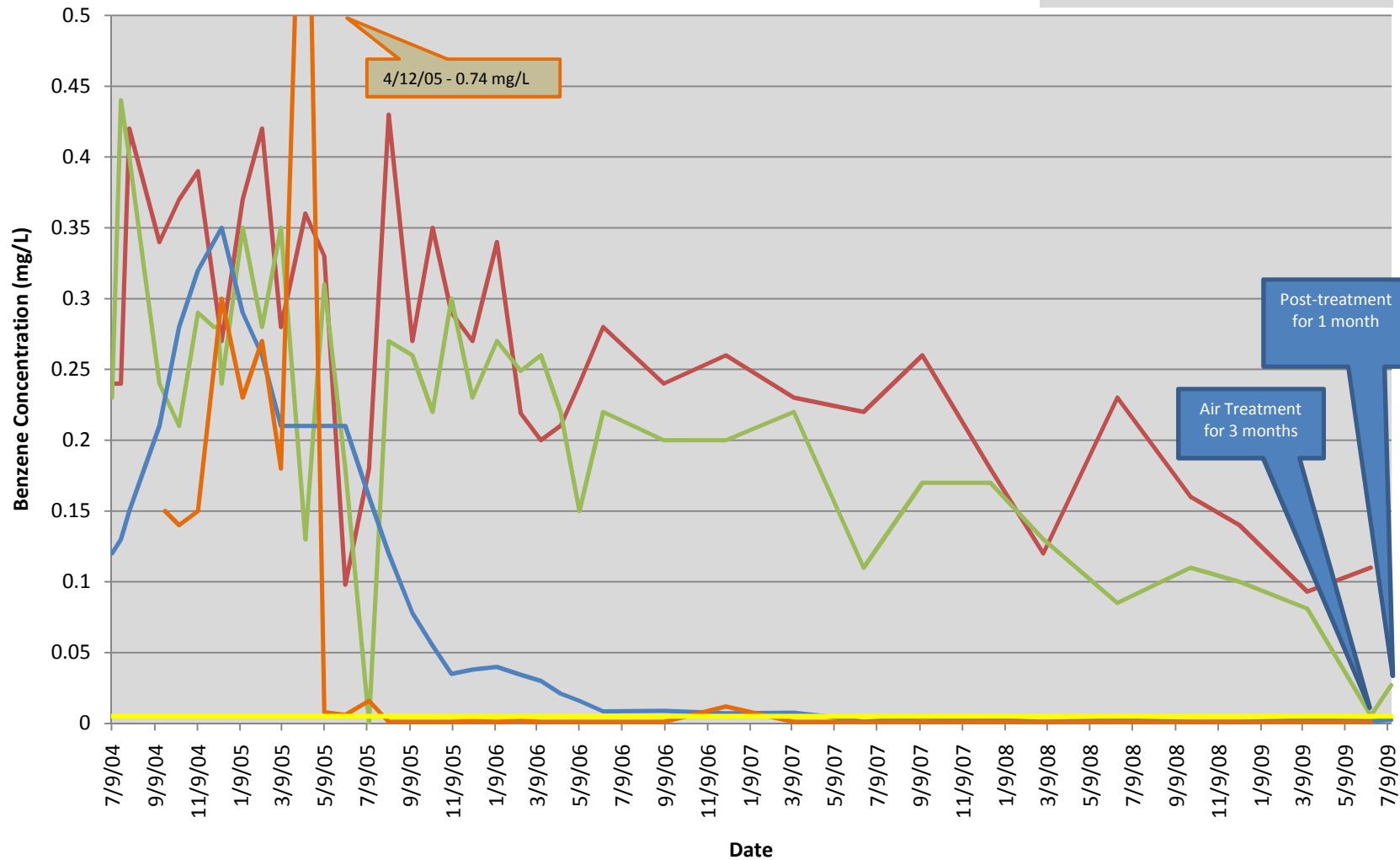


# West Divide Creek

## Benzene Concentrations

### MW2, MW4, MW9, and MW14

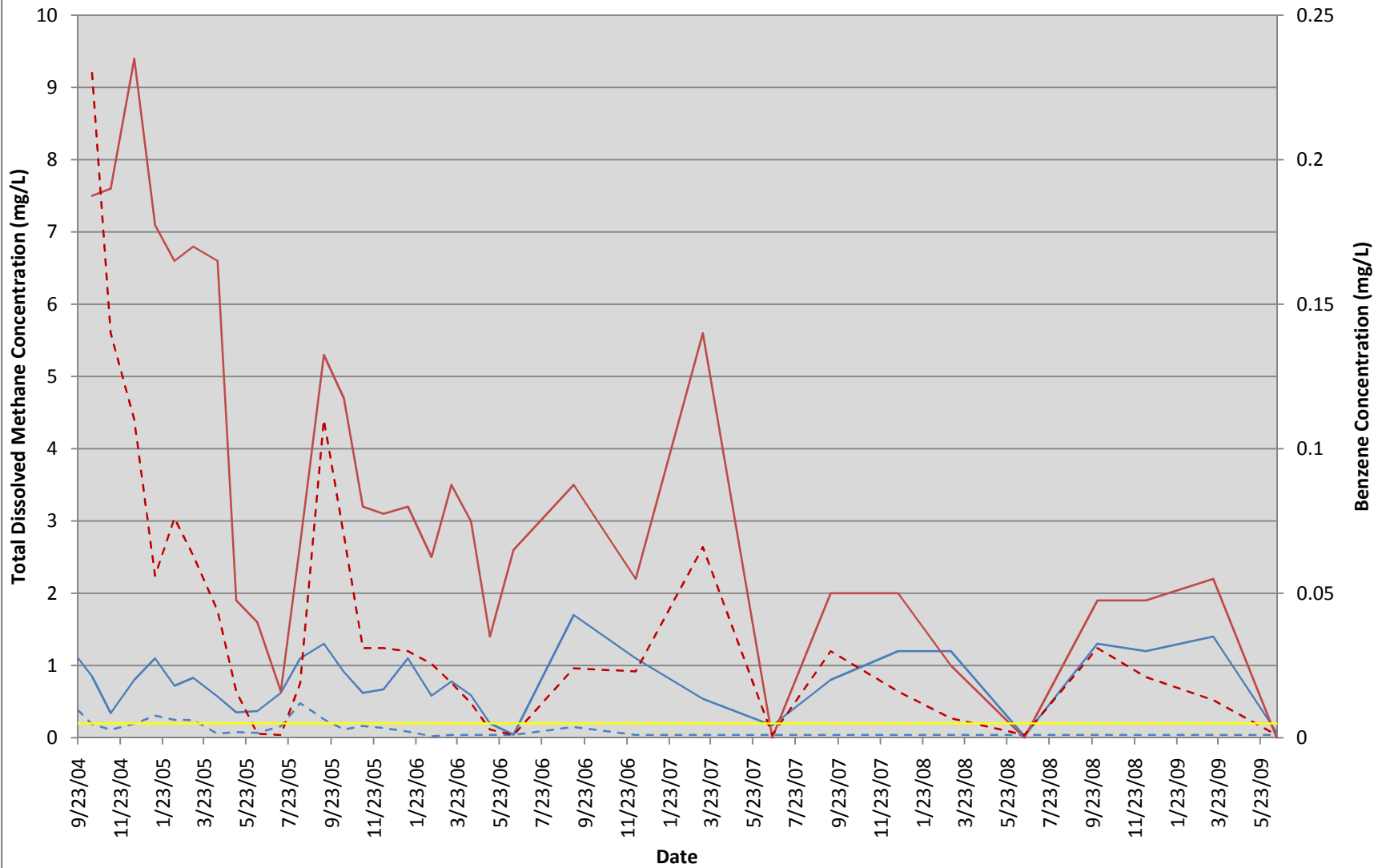
- Benzene - MW2
- Benzene - MW4
- Benzene - MW9
- Benzene - MW14
- Maximum Contaminant Level



# West Divide Creek

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

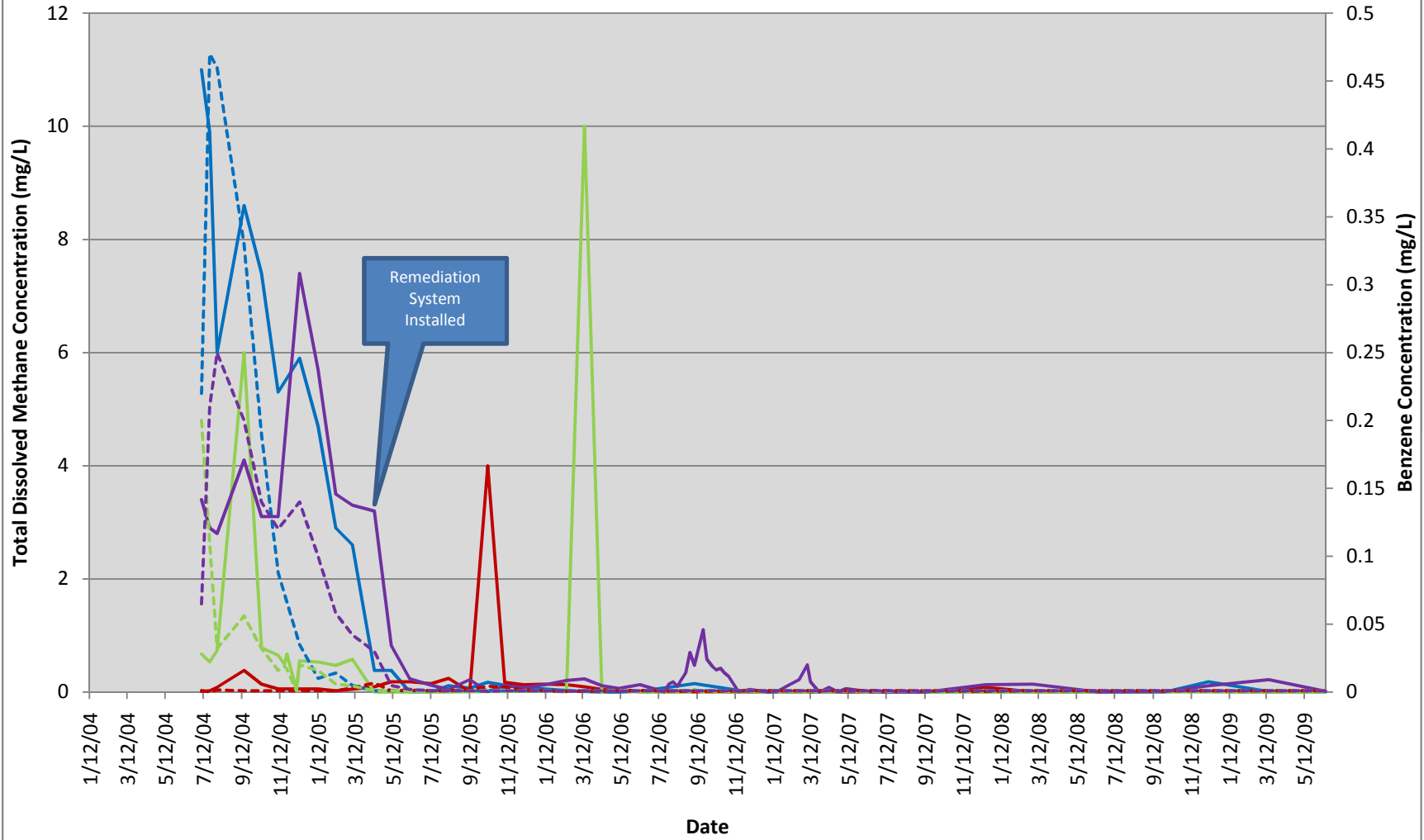
- Methane - MW16
- Methane - MW17
- - - Benzene - MW16
- - - Benzene - MW17
- Maximum Contaminant Level



# 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

