

Rule Engineering, LLCSolutions to Regulations for Industry

August 7, 2012

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

Re: West Divide Creek 2012 Second Quarter Seep Status – Remediation #1815

Dear Mr. Jensen:

Rule Engineering (Rule) prepared this report to present the results of the quarterly monitoring and review of historical data of all groundwater monitoring stations associated with the West Divide Creek Seep for Encana Oil and Gas (USA) Inc. Rule was contracted by Encana to continue monitoring and Operation and Maintenance (O&M) of the existing remediation system at West Divide Creek in July of 2011. This letter report provides a summary of 2nd quarter 2012 sampling results and recommendations for the gas seep associated with Colorado Oil and Gas Conservation Commission (COGCC) Remediation #1815 pursuant to the Schwartz 2-15B well Order No. 1V-276. Figure 1 provides a map of monitoring stations and remediation system locations for this site.

**2012 Second Quarter Monitoring
Groundwater**

During June 19 and 20, 2012 Rule sampled 23 groundwater monitoring wells as part of the quarterly monitoring program. Monitoring well MW-13 is plugged and abandoned. Monitoring well MW-19 is known to be plugged and will be abandoned if possible in the future (as its location is within a marshy area). Prior to sample collection, static water levels were measured at the wells and piezometers to within 0.01 feet (ft) from the top of the north side of the PVC casing using an electronic water level meter. Piezometer 5 and 8 were plugged by sediment therefore DTW was not measured. Prior to collection of the groundwater sample, each well was purged of three casing volumes of water using disposable bailers. Field parameters were obtained during sample collection which included pH, temperature, specific conductance, dissolved oxygen and oxygen reduction potential (ORP) with an YSI® water quality meter. Groundwater field measurement results are provided in Table 1.

A total of three (3) duplicate samples were collected for field and laboratory quality assurance/quality control (QA/QC). Duplicate samples DUP-1-062012, DUP-2-062012 and DUP-3-062012 were collected at monitoring stations MW-17, MW-2, and MW-4, respectively.

All groundwater samples were immediately placed on ice after sample collection and shipped under Chain-of-Custody procedures to Environmental Science Corporation (ESC) for laboratory analysis. Samples were received in good condition within appropriate temperatures by ESC and analyzed for the following parameters:

- Benzene, Toluene, Ethylbenzene, Total Xylene's (BTEX), Method-8260
- Methane, Ethane, Ethene, Method-RSK175
- Chloride, Method-9056

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- Sodium, Method-6010B

A summary of the groundwater analytical results is presented in Tables 2 and 3.

In addition to the groundwater chemistry analysis provided by ESC, samples for isotopic analysis of methane were shipped to Isotech Laboratories (Isotech). Based on historical groundwater analytical results of dissolved methane >1.0 mg/L, samples from monitoring wells MW-2, 4, 9, 14, and 17 were analyzed for isotopes of carbon and hydrogen in methane and stable isotopes of carbon in ethane and propane. Samples were received at the laboratory in good condition within appropriate temperatures. A summary of the isotope analytical results is presented in Table 4.

Surface-Water

Rule collected eight (8) surface-water samples on June 19, 2012 at the established monitoring stations. Field parameters were obtained during sample collection which included pH, temperature, specific conductance, dissolved oxygen, and ORP with an YSI® water quality meter. The surface-water field measurements are provided in Table 5. All surface-water samples were immediately placed on ice after sample collection. Samples were received in good condition within appropriate temperatures by ESC and analyzed for the following parameters:

- BTEX, Method-8260
- Methane, Ethane, Ethene, Method-RSK175
- Chloride, Method-9056
- Sodium, Method-6010B

A summary of surface-water analytical results are presented in Tables 6 and 7.

Remediation System

From March 28, 2012 to June 20, 2012, the air sparging system was operational from 0800 hrs to 1200 hrs daily. The following flow rates were recorded for remediation air sparge wells: AS-2, 3, 8, 9, 10, and 11 each operated at 6.0 standard cubic feet per minute (SCFM) and AS-13 operated at 5 SCFM. Blower 1 was operating at 55 SCFM.

Results

Site Hydrology

During the 2nd quarter 2012 monitoring period, groundwater elevation varied from surface at MW-25, with an elevation 5969.1 feet above mean sea level (AMSL), to 5936.9 feet at MW-23. Figure 2 illustrates the potentiometric surface for the site during this quarter. An average groundwater gradient was determined to be 0.03 with a groundwater flow to the northeast/north consistent with the drainage system of West Divide Creek within the seep area.

Analytical Results

Groundwater analytical results indicate that monitoring stations MW-2, MW-4, and MW-17 had dissolved benzene concentrations of 0.10 mg/L, 0.096 mg/L and 0.021 mg/L, respectively. Dissolved toluene concentrations were below detection levels in all wells. Dissolved ethylbenzene concentrations were below detection levels in all wells except MW-2 and MW-4, which were reported at 0.0014 mg/L and 0.0011 mg/L, respectively. Total dissolved xylenes were detected at MW-2 and MW-4 at concentrations of 0.030 mg/L and 0.026 mg/L,

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respectively. The detections of ethylbenzene and total xylenes are below COGCC Table 910-1 groundwater standards. Figure 3 illustrates dissolved BTEX and dissolved methane results for the second quarter 2012.

Figure 4 illustrates the dissolved benzene impacts greater than 0.005 mg/L. Dissolved benzene concentrations above Table 910-1 allowable limits were detected in wells MW-2, MW-4, and MW-17. Monitoring wells 1, 7, and 16 have been "non-detect" for dissolved benzene since 2005, indicating two separate source areas for these wells. Additionally, MW-2 and MW-4 are outside the radius of influence of the remediation system. This separation of the dissolved benzene impacted area illustrates stabilization of the source area with minimal impact from the remediation system.

The highest concentrations of dissolved methane were observed in MW-2 (13.0 mg/L), MW-4 (12.0 mg/L), MW-9 (5.5 mg/L), MW-14 (6.8 mg/L) and MW-17 (3.4 mg/L). Figure 5 illustrates the dissolved methane concentrations above 1 mg/L, with the highest concentrations of dissolved methane observed within the seep area, consistent with historical data. The separation of the dissolved methane plume within the seep area is consistent with the dissolved benzene plume separation. Isotopic analysis indicate dissolved methane samples from MW-2, 4, 9, 14 and 17 plot as thermogenic (Figure 6). The presence of butane and propane in MW-2, 4, 9 and 17 and the presence of pentane, in all samples but MW-17, are indicators of thermogenic gas.

Figure 7 illustrates dissolved sodium (Na) and chloride (Cl) concentrations in groundwater and surface-water. The highest Na concentration in groundwater was 440 mg/L at MW-23 and the lowest was 11 mg/L at MW-24. The Na concentrations in surface-water ranged from 86 mg/L to 93 mg/L. The highest Cl concentration in groundwater was 59 mg/L at MW-2 and the lowest was 2.7 mg/L at MW-24. The Cl concentrations in surface-water ranged from 14 mg/L to 16 mg/L. Currently there are no primary drinking water standards for chloride or sodium with respect to COGCC or Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission Regulation No. 41. CDPHE does have a secondary drinking water standard for chloride of 250 mg/L.

Figure 7 illustrates the seep area has little to no correlation to higher concentrations of sodium or chloride concentrations. The highest concentrations were observed far downgradient of the seep area and can be attributed to natural groundwater geochemistry conditions.

Analytical results for surface water samples indicate no detections of BTEX, and very limited detections of dissolved methane at or below 0.012 mg/L (Tables 6 and 7).

Discussion of Historical Groundwater Monitoring Results

Since the start of the seep in 2004, Encana has collected 1,345 groundwater samples within the seep area (through daily, weekly, or quarterly sampling). A summary of the historical BTEX and Methane concentrations is provided in the electronic attachment (Appendix B).

Monitoring stations 11, 13, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, Eich1/Eich2, and Lang have not had a detection of BTEX in 96 months. Encana continues to monitor these stations far past a point of compliance. Industry standard for petroleum contaminated sites for clean monitoring stations is 5 quarters. When the analytical results from continued groundwater monitoring show concentrations that are below the COGCC Groundwater Standards in Table

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910-1 for 5 or more consecutive quarters, and given the understanding that the plume is not expanding further, monitoring at these locations should be reviewed. Monitoring using a smaller set of sampling locations downgradient of the source area should be sufficient.

Groundwater monitoring point Eich2 is a lateral extension of well Eich1. Eich1 is the main well and Eich2 has a lateral pipe extending to the east from Eich1 where a spigot is mounted for water usage. So, when Eich1/Eich2 is referenced, it is referring to the same well.

Below is a summary of monitoring stations impacted by the seep, from upgradient to downgradient along the site:

- MW-12: Dissolved benzene concentrations declined dramatically before the system was installed in 2005 (Figure 8) and have remained below the groundwater standard since March 2007. MW-12 is upgradient of the treatment area.
- MW-9: Dissolved benzene concentrations declined dramatically before the system was installed in 2005 (Figure 9) and have remained below the groundwater standard since March 2007. MW-9 is upgradient of the treatment area.
- MW-14: Dissolved benzene concentrations declined dramatically before the system was installed in 2005 (Figure 10) and have remained below the groundwater standard since March 2007. MW-14 was considered to be within the original source area, but is upgradient of the actual treatment area.
- MW-4: Dissolved benzene concentrations remain above the groundwater standard (Figure 11). MW-4 is upgradient of the treatment area, but dissolved benzene concentrations have declined over time.
- MW-2: Dissolved benzene concentrations remain above the groundwater standard (Figure 12). MW-2 is upgradient of the treatment area, but dissolved benzene concentrations have declined over time.
- MW-16: Dissolved benzene concentrations declined dramatically before the system was installed in 2005 (Figure 13) and have remained below the groundwater standard since October 2005. MW-16 is upgradient of the treatment area.
- MW-6: Dissolved benzene concentrations declined dramatically before the system was installed in 2005 (Figure 14) and have remained below the groundwater standard since May 2005.
- MW-1: Dissolved benzene concentrations declined to non-detect levels before the system was installed (Figure 15) and have remained below the groundwater standard since March 2005.
- MW-7: Dissolved benzene concentrations declined to non-detect levels before the system was installed (Figure 16) and have remained below the groundwater standard since April 2005.

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- MW-17: Dissolved benzene concentrations declined before the system start up, and continue to decline (Figure 17), but remain above the groundwater standard.
- MW-8: Dissolved benzene concentrations declined to non-detect levels before the system was installed (Figure 18) and have remained below the groundwater standard since July 2005.

Divide Creek Remediation Analysis

As described in previous West Divide Creek Seep Status Reports, the overall decline in dissolved benzene concentrations are attributed to a reduction in the mass flux of hydrocarbons from the seep. The natural processes of dilution, degradation, dispersion, and volatilization under the current site conditions provide remediation through natural attenuation (RNA), resulting in the observed decline in concentrations. Based on the extensive monitoring conducted to date, the groundwater plume is stable and/or diminishing, and demonstrates no potential for migration towards downgradient groundwater receptors (ie. water wells), without immediate detection within the existing monitoring well network.

Historical and current data, including dissolved oxygen monitoring, indicate the treatment system has minimal or no effect on the current source area. The 2nd quarter results reveal the relative percentage difference in the treatment area compared to background (MW-11, Background vs. MW-25, Treatment Area) is 63% decrease.

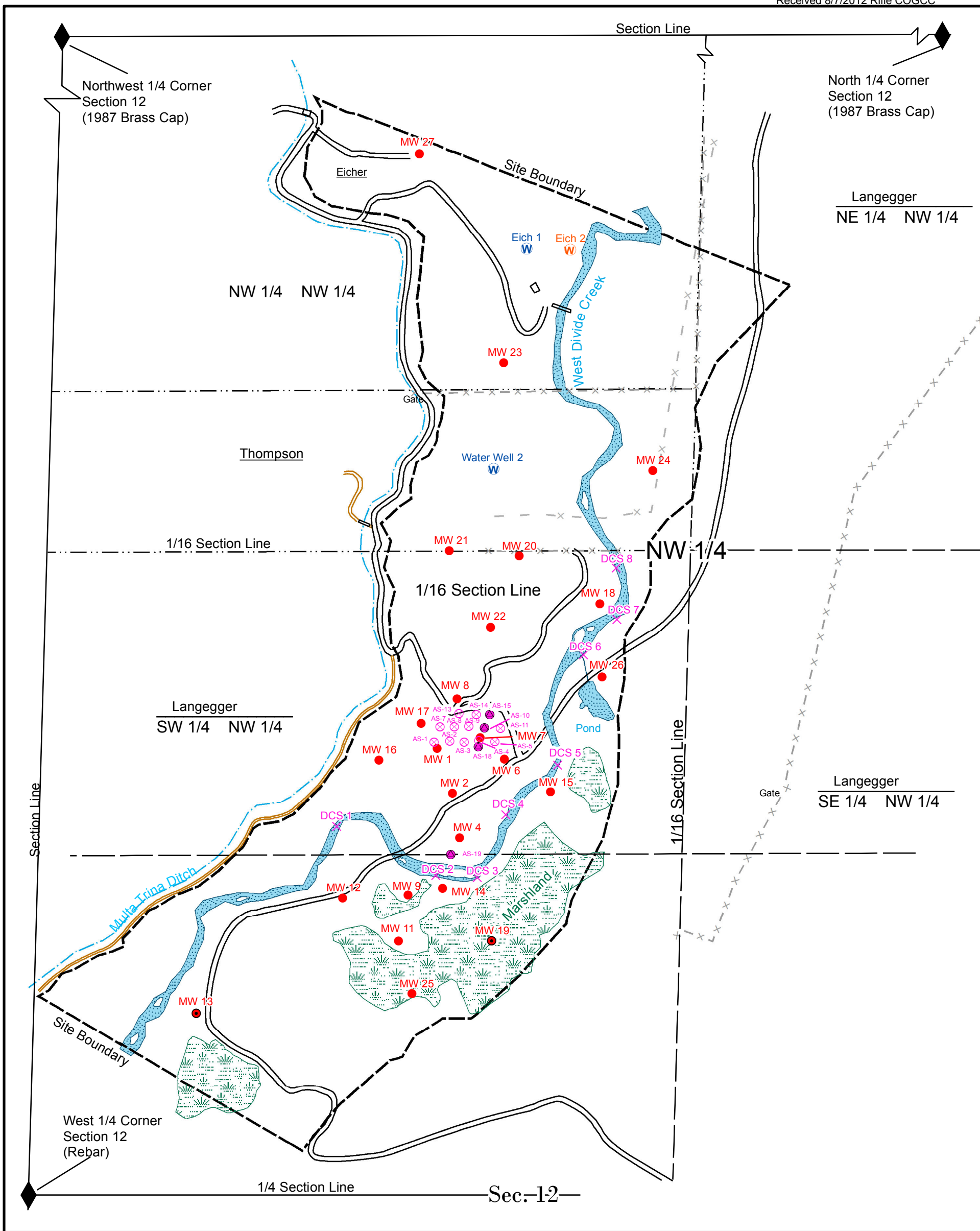
Rule Engineering appreciates the opportunity to provide services to Encana. If you have any questions please contact me at 970-244-8500.

Sincerely,
Rule Engineering, LLC

Scotty Mann
Hydrogeologist/Project Manager

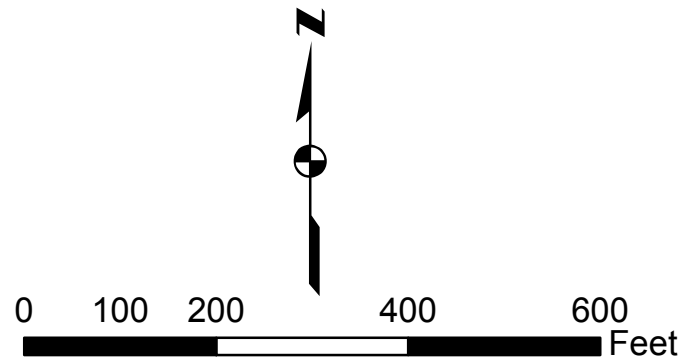
cc: Linda Spry O'Rourke - COGCC
Kathy Friesen-Encana
Pepi Langegger
Steve Thompson
Lisa Bracken

FIGURES



Legend

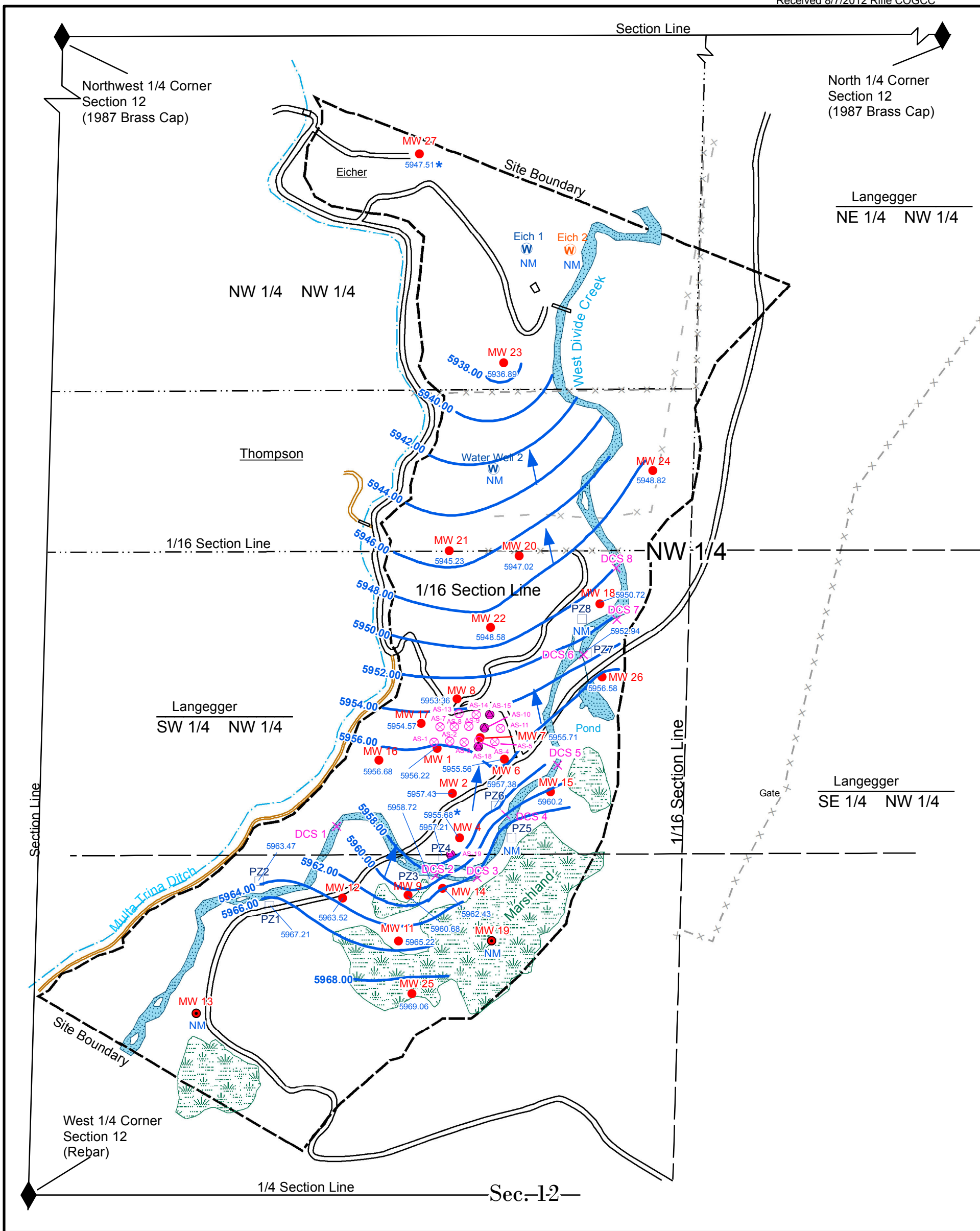
- Site Boundary
- Road
- - - Drainage
- x - x - Fence
- x - - Old Fence
- - - Property Line
- Trail
- Air Sparge
- × Divide Creek Sample Location
- Monitoring Well Location
- Abandoned or Plugged Monitoring Well Location
- Nested Air Sparge Well Location
- Piezometer Location
- ◆ Section Corners



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Site Location Map

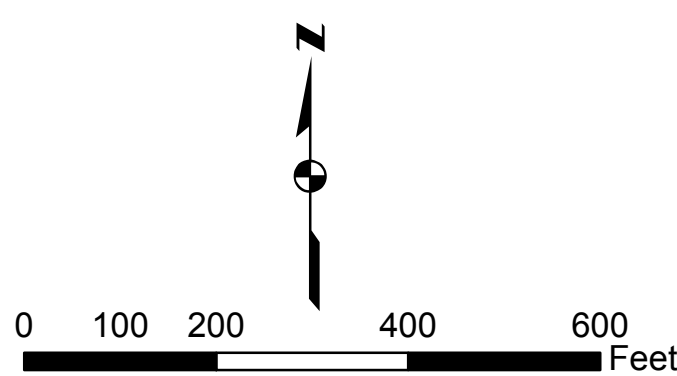


Legend

- Site Boundary
- Road
- Drainage
- × Fence
- × Old Fence
- - - Property Line
- Trail
- Air_Sparge_unconverted
- × Divide Creek Sample Location
- Monitoring Well Location
- Abandoned or Plugged Monitoring Well Location
- Nested Air Sparge Well Location
- Piezometer Location
- ◆ Section Corners

Groundwater Legend

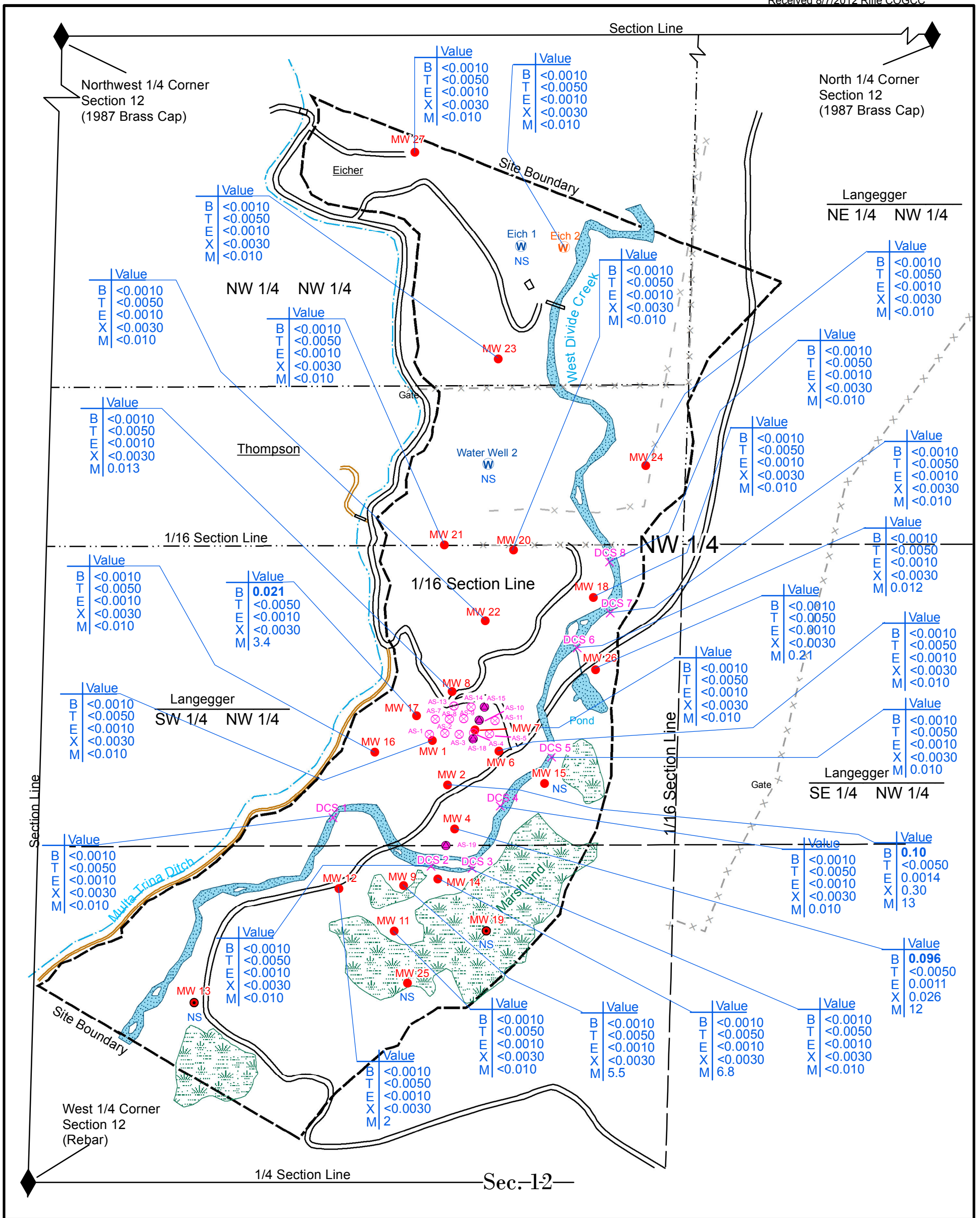
- 5940.00 — = Groundwater Elevation Contour (Feet)
- 5940.17 = Groundwater Elevation (Feet)
- NM = Not Measured
- * = Data not used in contouring
- ↑ = Flow Vector



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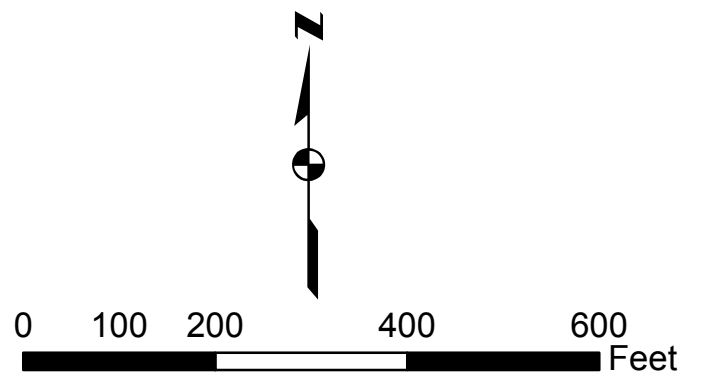
**Groundwater Elevation Map
June 2012**



Legend

- Site Boundary
- Road
- Drainage
- Fence
- Old Fence
- Property Line
- Trail
- Air Sparge
- × Divide Creek Sample Location
- Monitoring Well Location
- Abandoned or Plugged Monitoring Well Location
- Nested Air Sparge Well Location
- Piezometer Location
- ◆ Section Corners

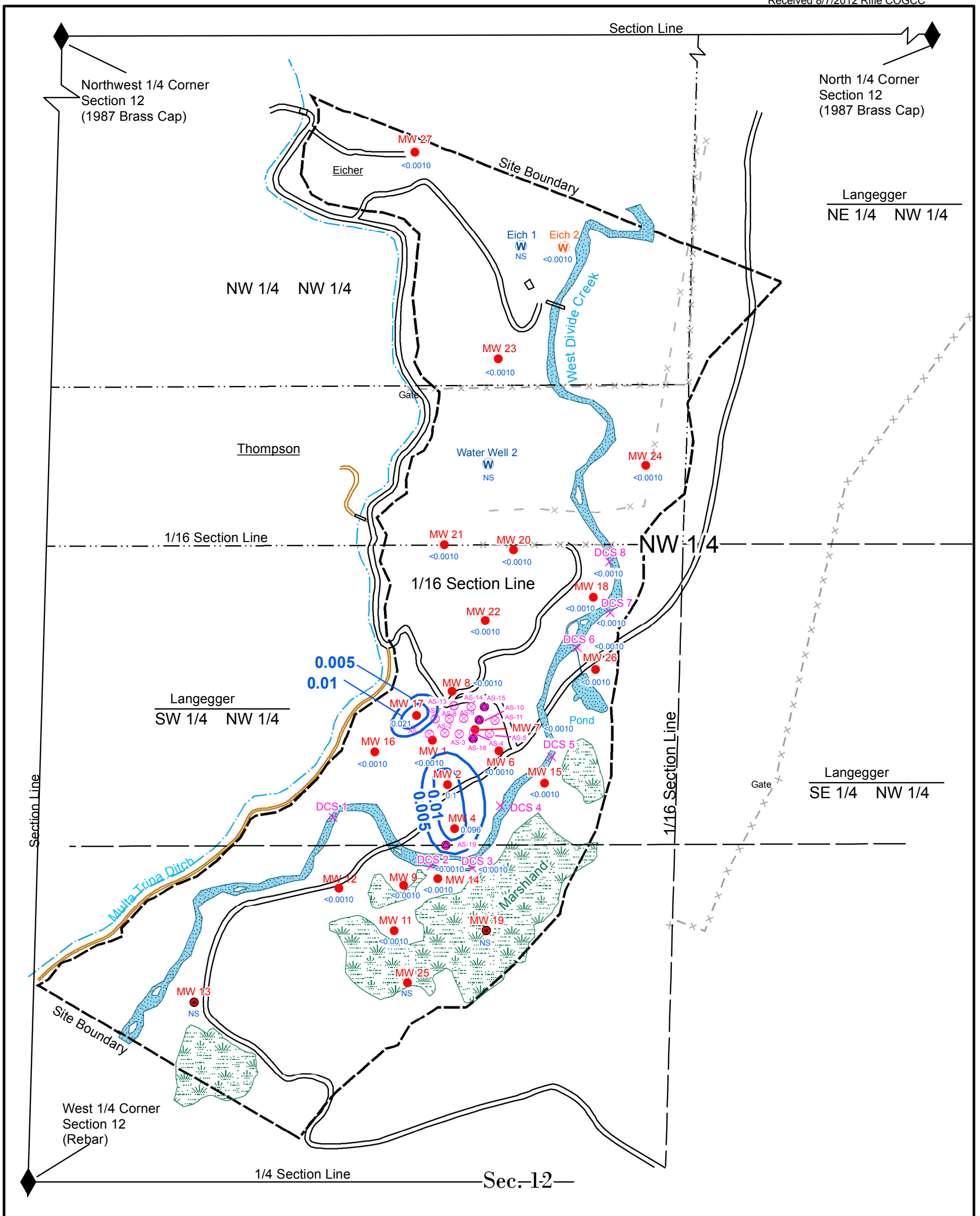
Chemical Data
 B = Benzene (mg/L)
 T = Toluene (mg/L)
 E = Ethylbenzene (mg/L)
 X = Xylenes (mg/L)
 M = Total Methane (mg/L)
 NS = Not Sampled



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Groundwater Analytical Results
 June 2012

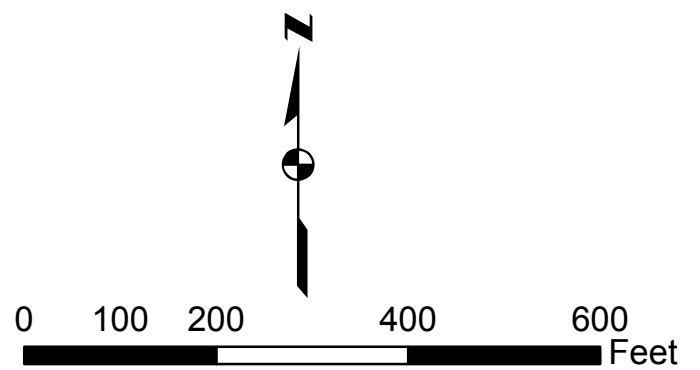


Legend

- Site Boundary
- Road
- Drainage
- × × Fence
- × — Old Fence
- - - Property Line
- Trail
- Air Sparge
- × Divide Creek Sample Location
- Monitoring Well Location
- Abandoned or Plugged Monitoring Well Location
- Nested Air Sparge Well Location
- Piezometer Location
- ◆ Section Corners

Chemical Data

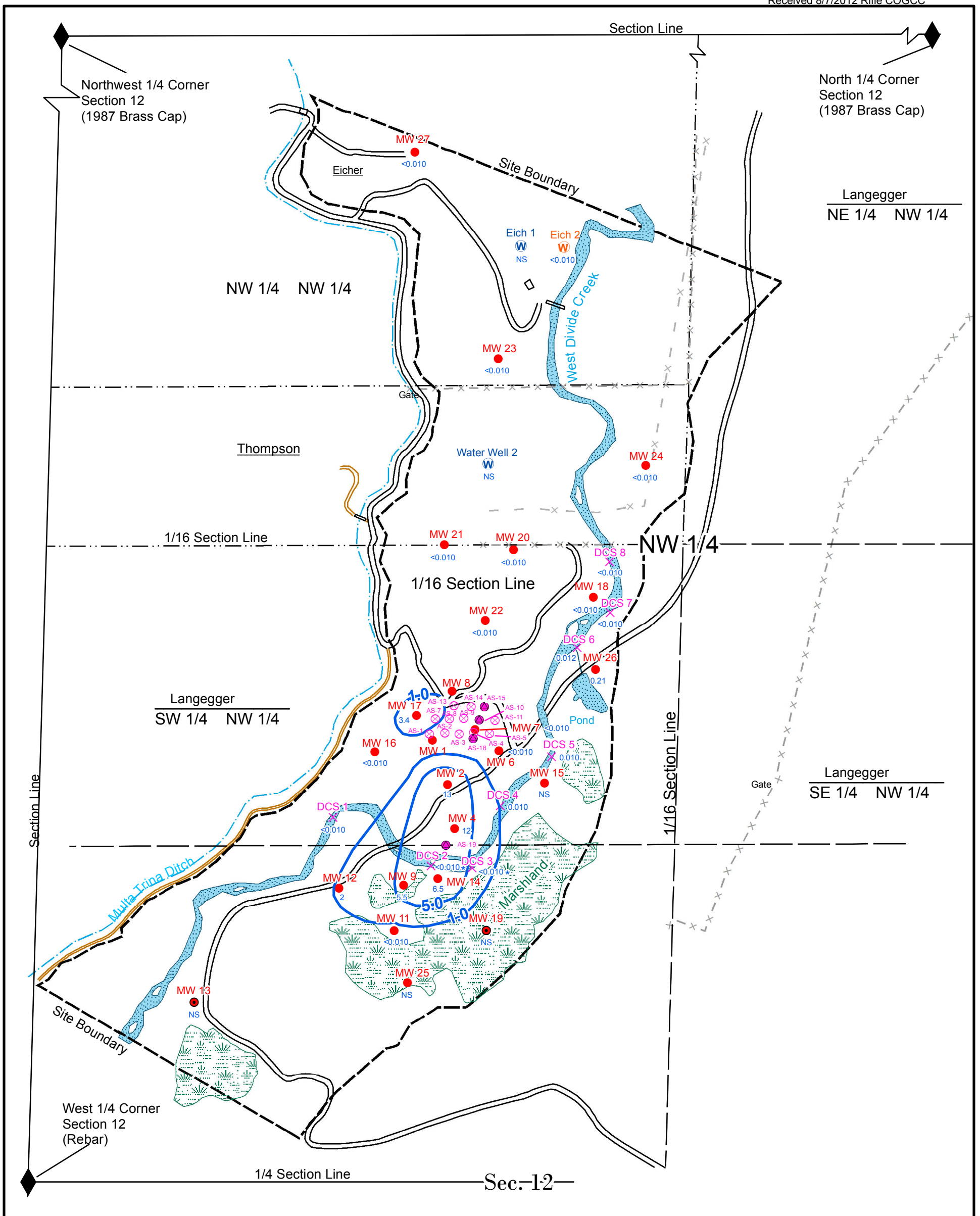
- .005 — = Benzene Concentration Contour (mg/L)
- .096 = Benzene Concentration (mg/L)
- NS = Not Sampled



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**Dissolved Benzene Concentrations
June 2012**

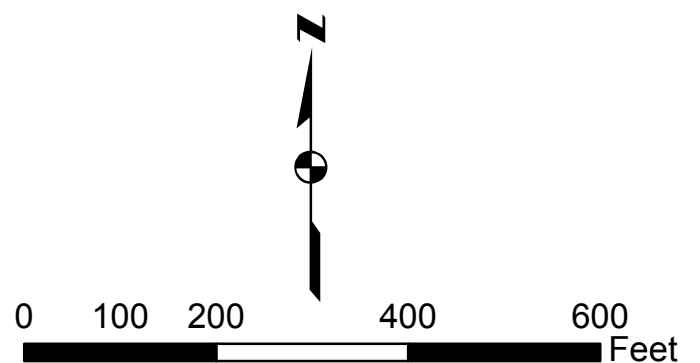


Legend

- Site Boundary
- Road
- Drainage
- × Fence
- × Old Fence
- - - Property Line
- Trail
- Air Sparge
- × Divide Creek Sample Location
- Monitoring Well Location
- Abandoned or Plugged Monitoring Well Location
- Nested Air Sparge Well Location
- Piezometer Location
- ◆ Section Corners

Chemical Data

- 5.0 = Thermogenic & Biogenic Methane Contour In Groundwater (mg/L)
- 3.5 = Thermogenic & Biogenic Methane Concentration In Groundwater (mg/L)
- NS = Not Sampled
- * = Data Not Used In Contour

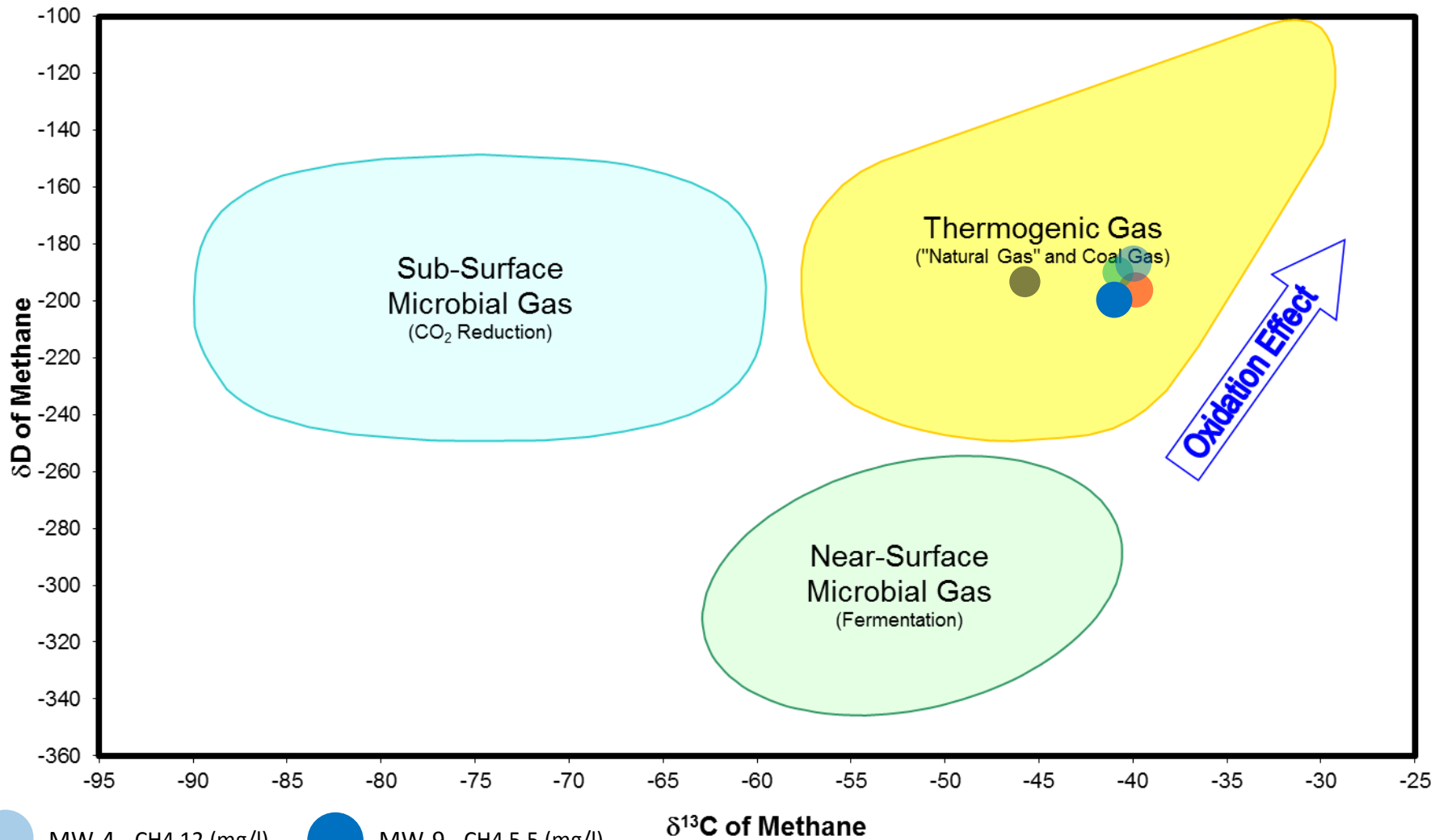


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**Total Dissolved Methane Concentrations
June 2012**

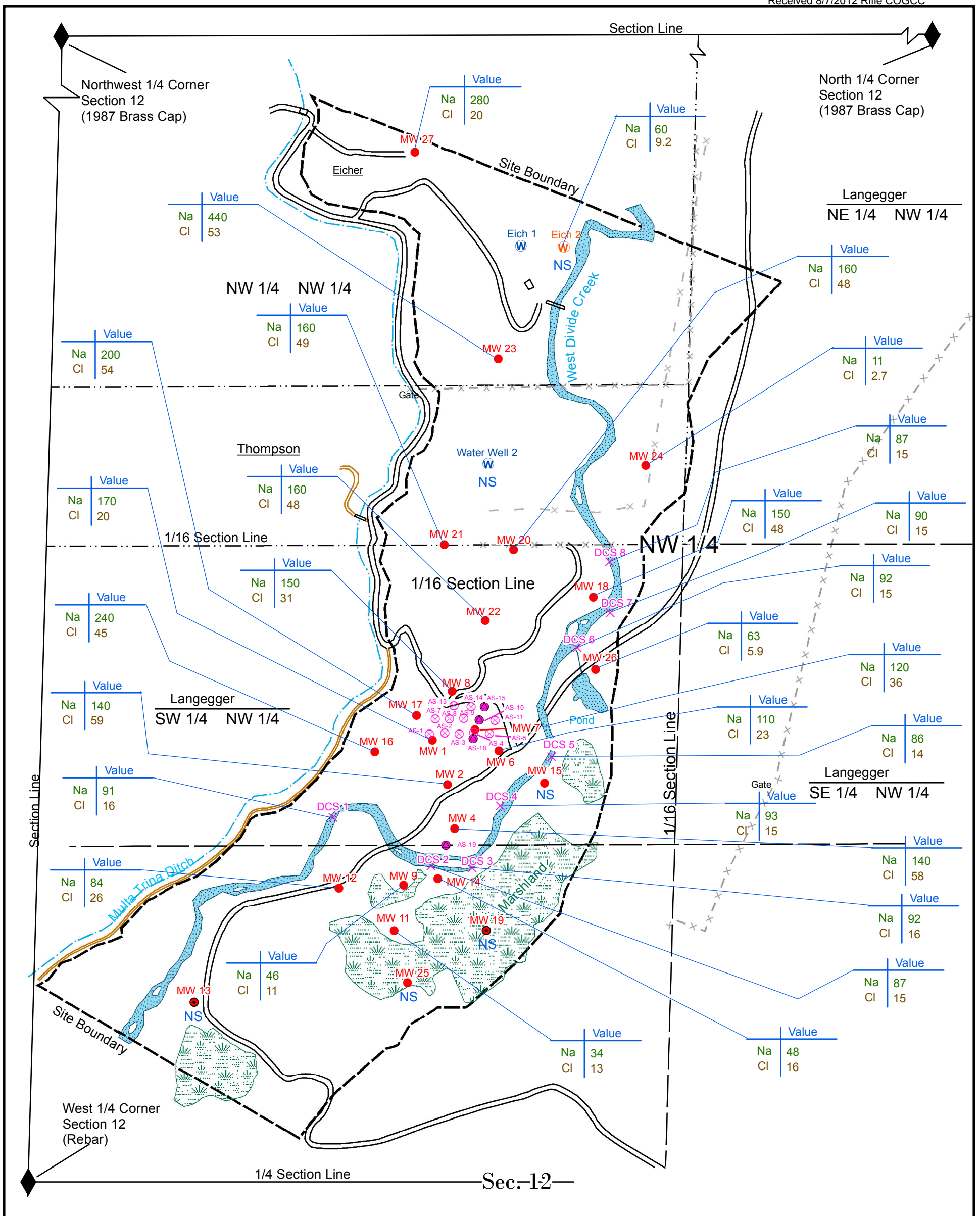
Typical Compositional Ranges of Methanes from Different Sources



- MW-4 CH₄ 12 (mg/l)
- MW-9 CH₄ 5.5 (mg/l)
- MW-2 CH₄ 13 (mg/l)
- MW-14 CH₄ 6.8 (mg/l)
- MW-17 CH₄ 3.4 (mg/l)

Figure 6

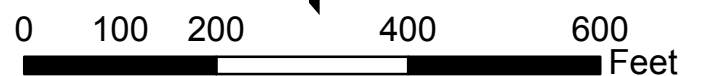
Courtesy of Isotech



Legend

- Site Boundary
- Road
- - - Drainage
- × Fence
- × Old Fence
- · - · Property Line
- Trail
- Air Sparge
- × Divide Creek Sample Location
- Monitoring Well Location
- Abandoned or Plugged Monitoring Well Location
- Nested Air Sparge Well Location
- Piezometer Location
- ◆ Section Corners

Chemical Data
 Na = Sodium (mg/L)
 Cl = Chloride (mg/L)
 NS = Not Sampled



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**Sodium and Chloride Analytical Concentrations
 June 2012**

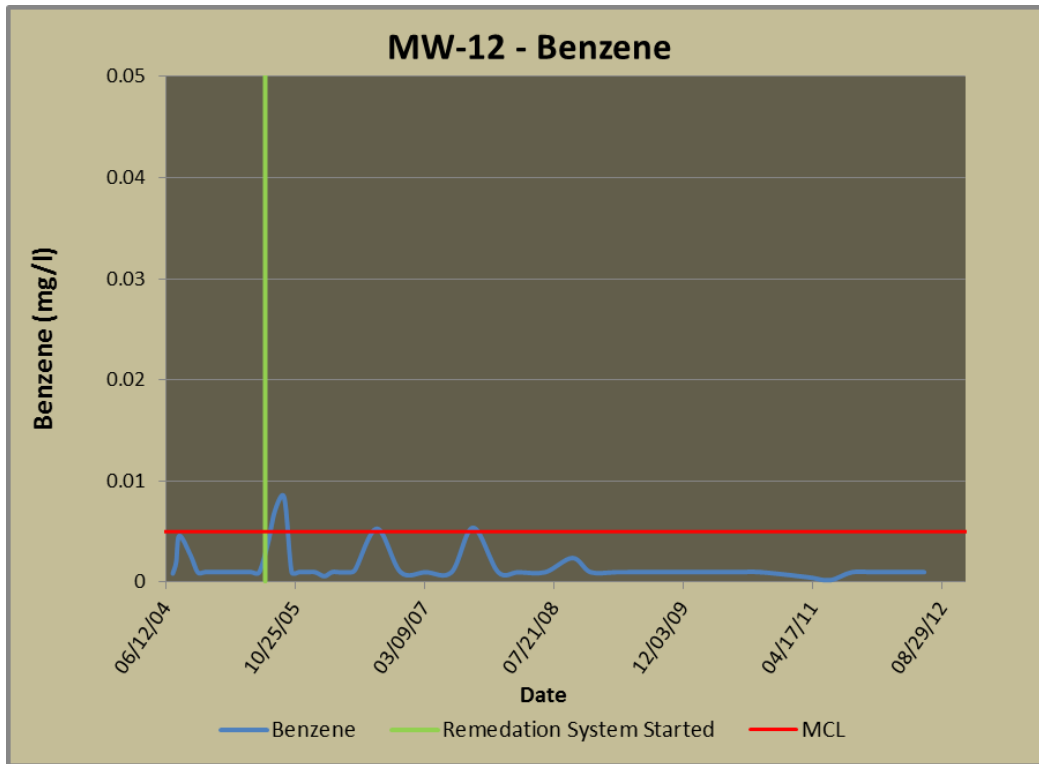


Figure 8 (MW-12 Historical Benzene Concentrations)

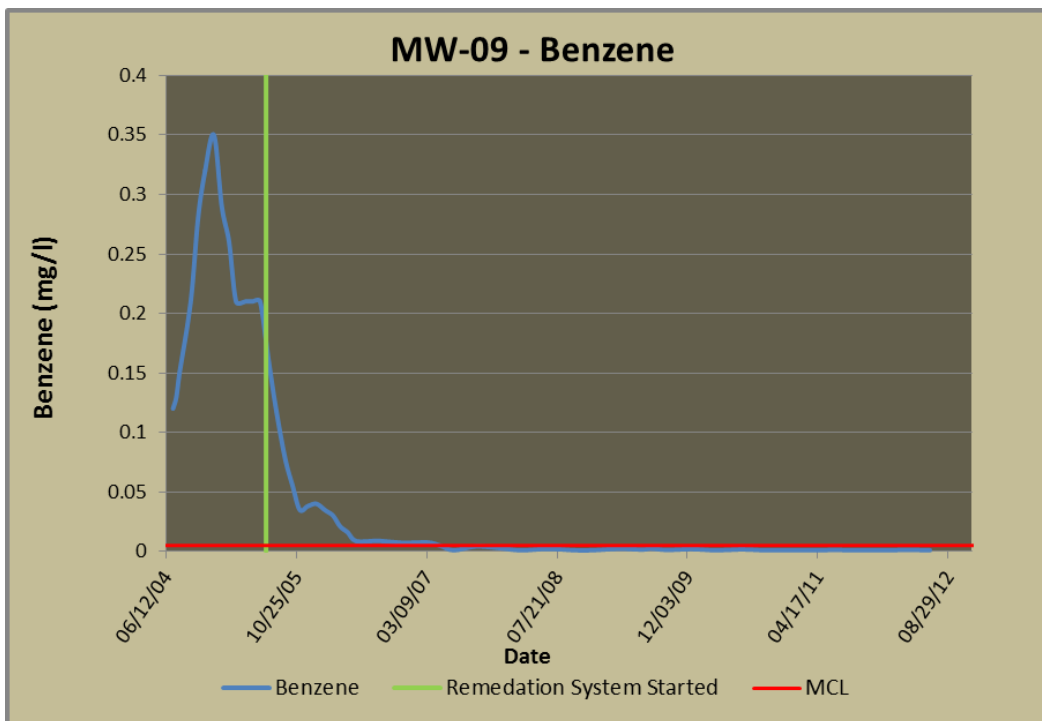


Figure 9 (MW-9 Historical Benzene Concentrations)

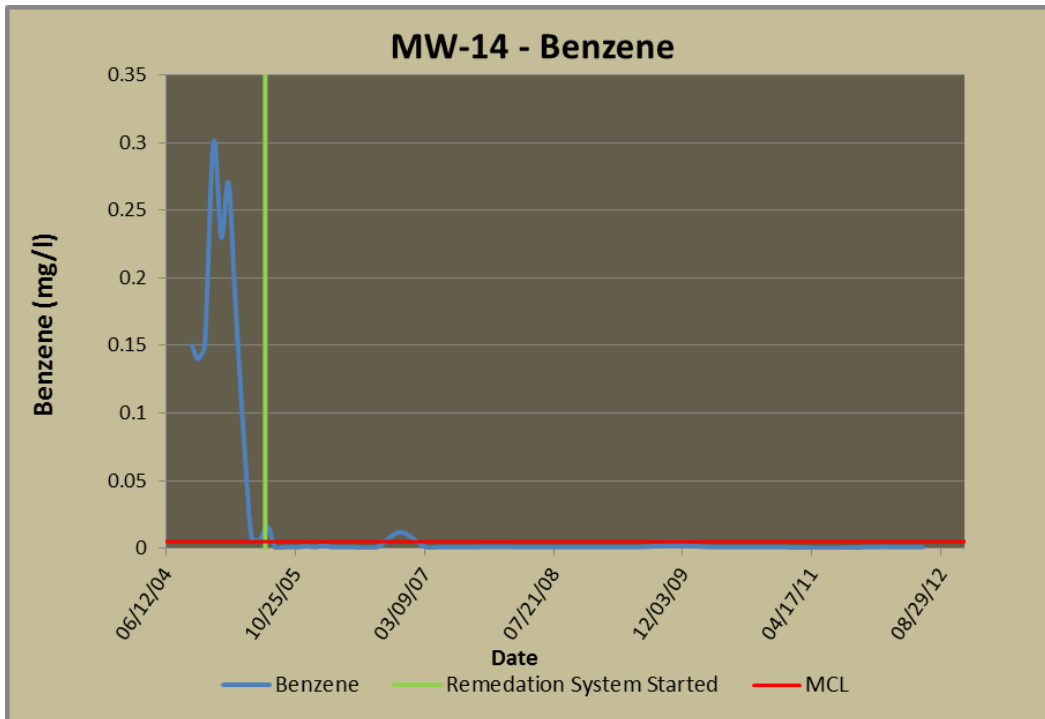


Figure 10 (MW-14 Historical Benzene Concentrations)

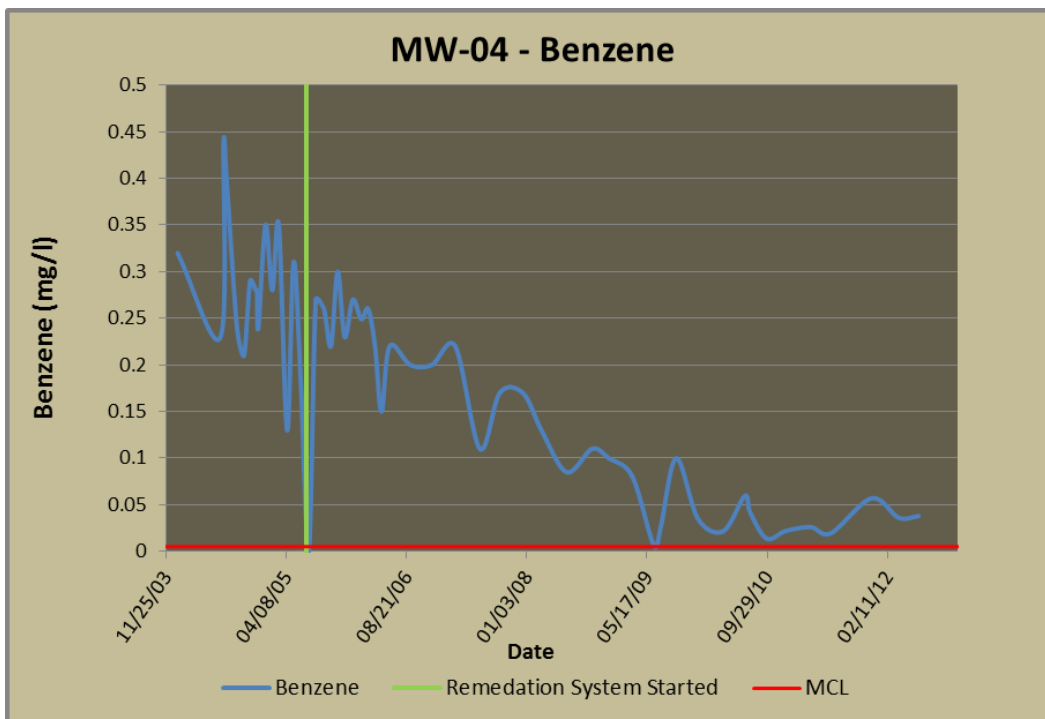


Figure 11 (MW-4 Historical Benzene Concentrations)

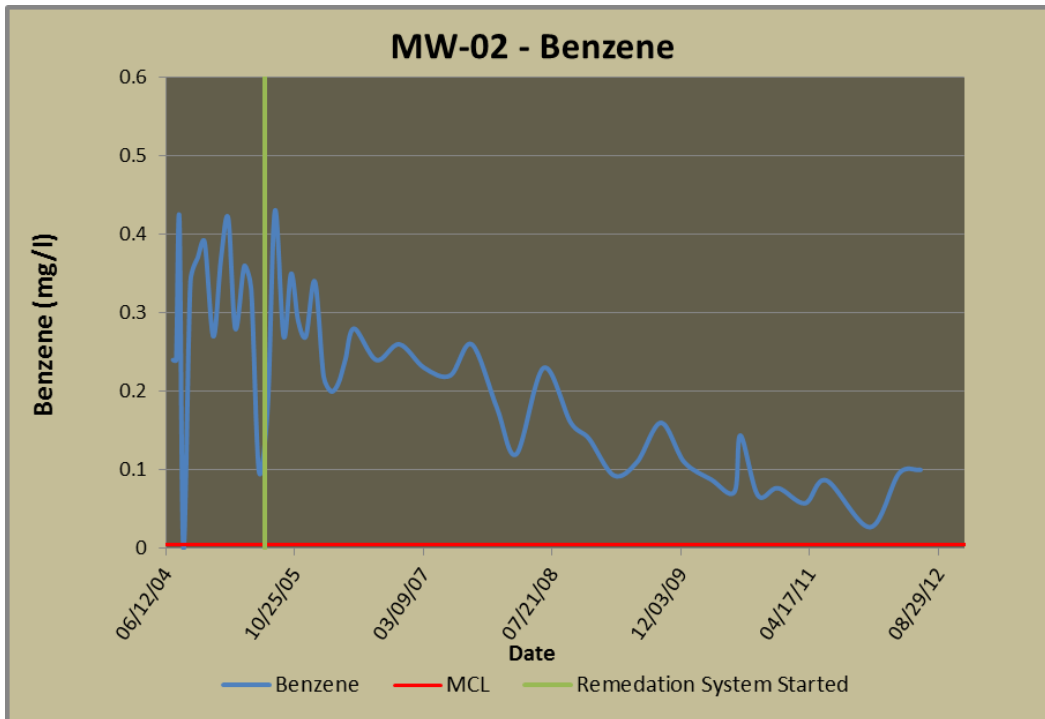


Figure 12 (MW-2 Historical Benzene Concentrations)

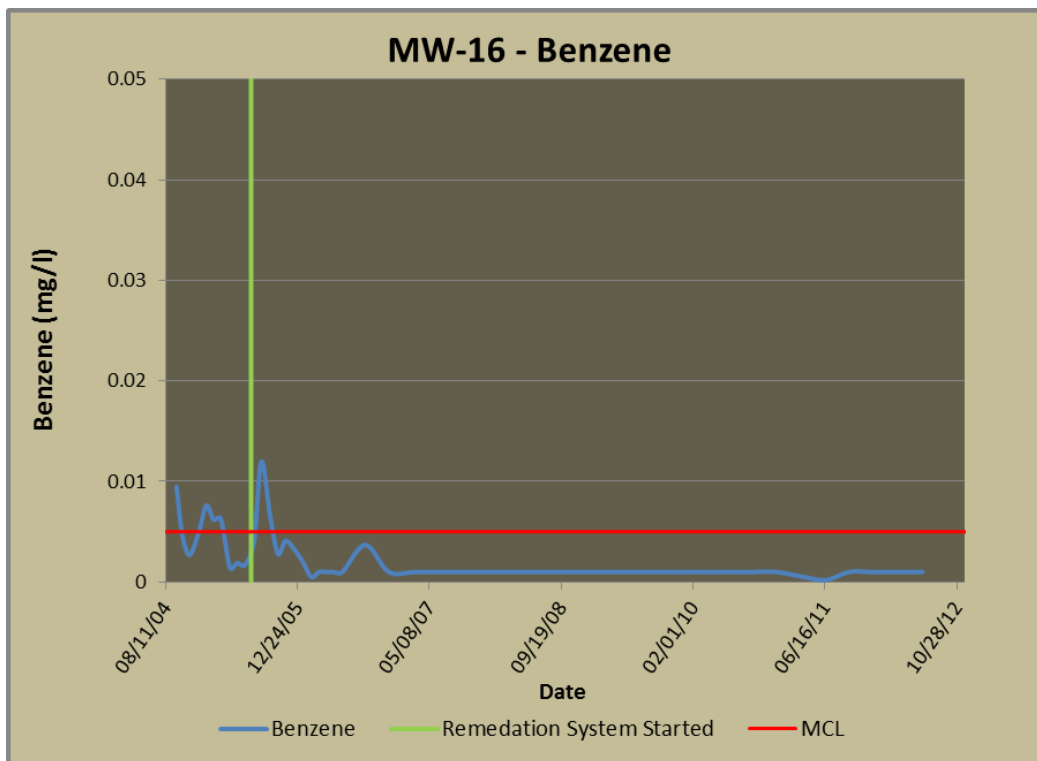


Figure 13 (MW-16 Historical Benzene Concentrations)

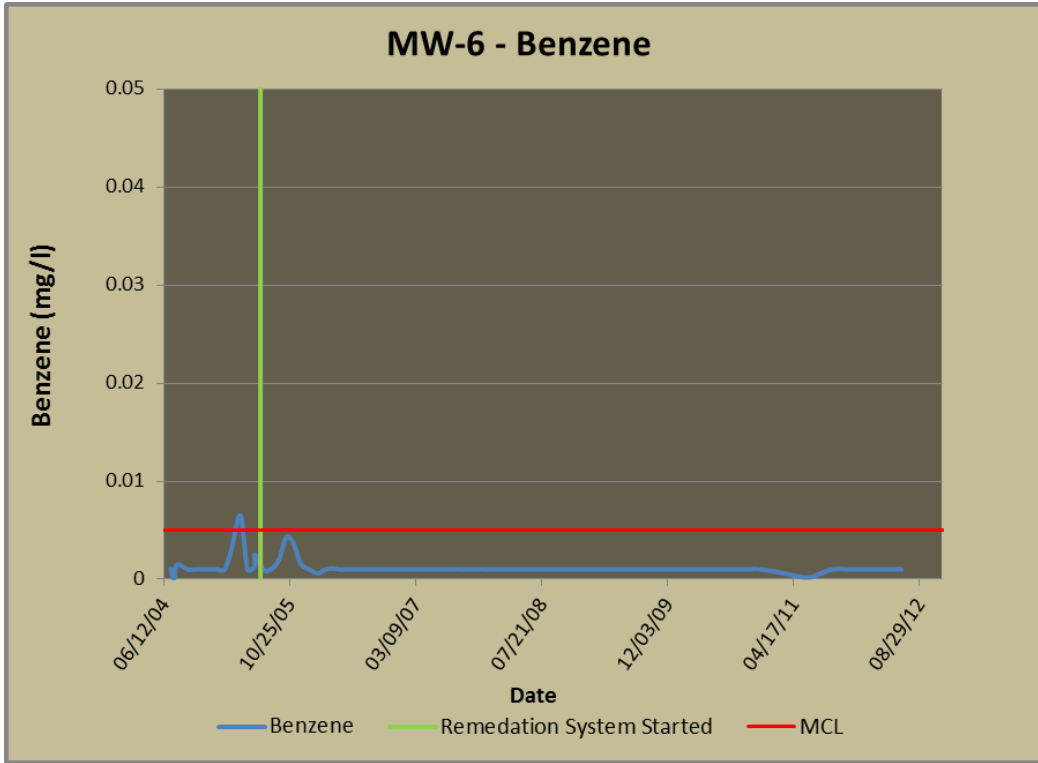


Figure 14 (MW-6 Historical Benzene Concentrations)

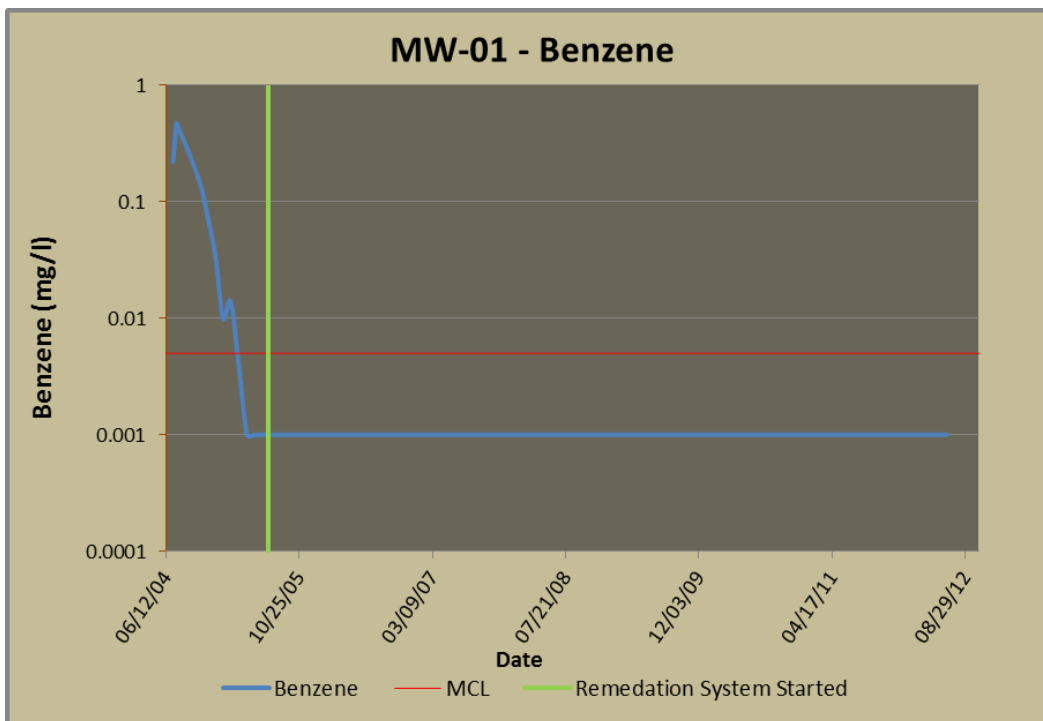


Figure 15 (MW-1 Historical Benzene Concentrations)

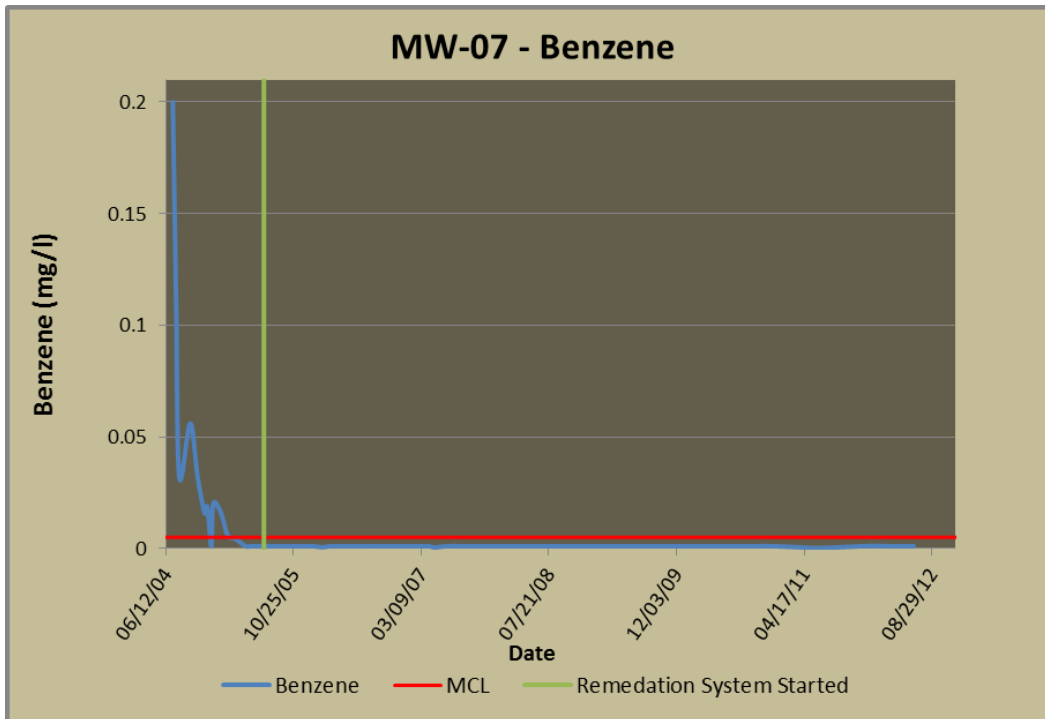


Figure 16 (MW-7 Historical Benzene Concentrations)

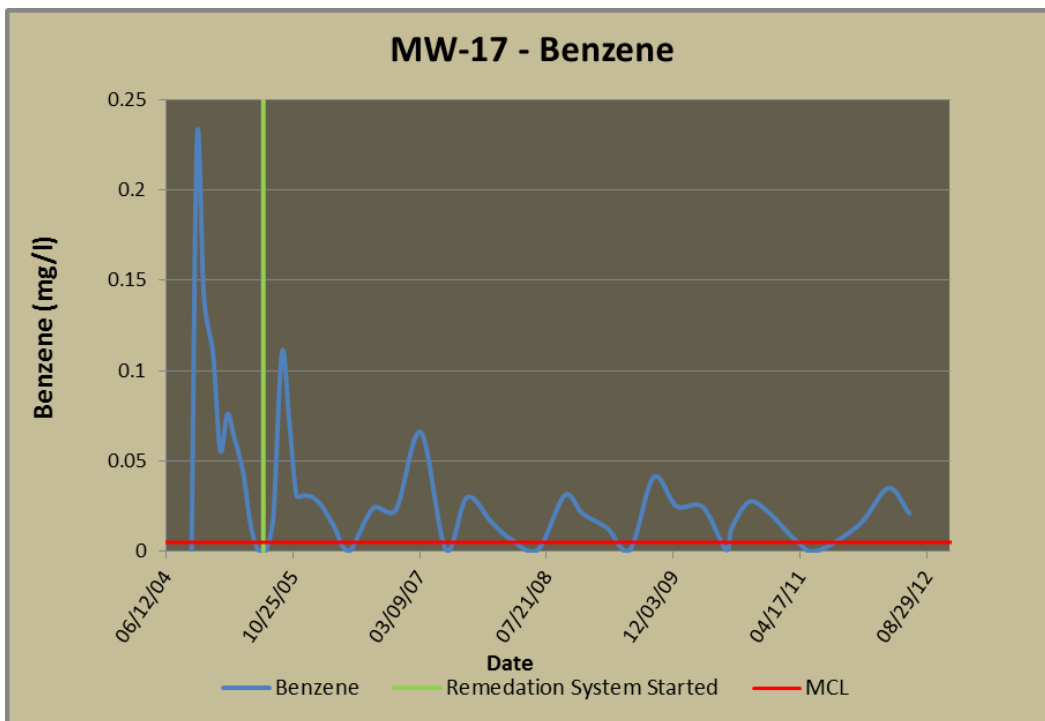


Figure 17 (MW-17 Historical Benzene Concentrations)

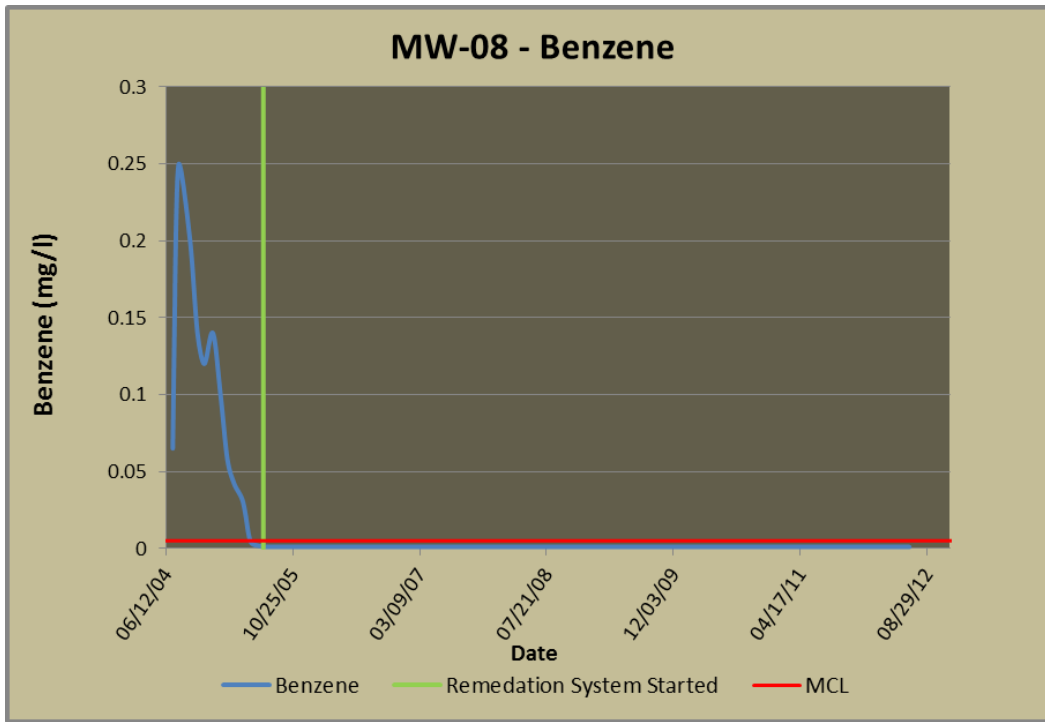


Figure 18 (MW-8 Historical Benzene Concentrations)

TABLES

Table 1. June 2012 Groundwater Field Parameters

Received 8/7/2012 Rifle COGCC

Monitoring Station	DTW (ft)	Temp (°C)	SPC (mS/cm)	DO (mg/L)	pH	ORP (mV)	Water Quality Observations
MW-1	5.98	15.70	0.971	2.71	7.91	-27.10	WQ: Slightly cloudy, no sheen, no odor, no effer.
MW-2	5.27	15.90	0.913	1.63	7.88	-43.90	WQ: Mildly turbid, putrid odor, no sheen, no effer. *DUP-2-062012 *Iso taken
MW-4	7.72	15.70	NR	NR	NR	NR	WQ: Lt. Grey, turbid, slight odor, no sheen, no effer. *DUP-3-062012 *iso taken
MW-6	7.14	15.30	0.976	1.76	7.65	46.70	WQ: Light brown/clear, no sheen, no odor, no effer.
MW-7	6.79	15.70	1.011	2.26	7.64	61.60	WQ: Light brown/clear, no sheen, no odor, no effer.
MW-8	9.24	15.20	1.167	1.46	7.67	-23.70	WQ: Mildly turbid, no sheen, no effervescence
MW-9	4.42	12.60	0.846	1.06	7.80	-36.40	WQ: turbid, grey, no sheen, no odor, no effer. *iso taken
MW-11	4.48	12.80	0.71	2.89	6.48	-19.40	WQ: Mildly turbid, no sheen, no effervescence
MW-12	2.88	15.10	0.93	2.43	6.34	-4.20	WQ: Clear, no odor, no sheen, no effer.
MW-14	4.87	12.30	0.71	0.68	7.51	-98.30	WQ: turbid, grey, no sheen, no odor, no effer. *iso taken
MW-15	TOC	17.60	0.754	1.52	6.80	60.70	WQ: Mildly turbid, no sheen, no effervescence.
MW-16	6.12	15.40	0.971	1.26	8.10	-21.10	WQ: Clear, no odor, no sheen, no effer.
MW-17	6.63	16.00	1.129	1.01	7.76	61.60	WQ: Light tan/clear, no sheen, putrid odor, no effer.. *DUP-1-062012 *iso taken
MW-18	4.58	15.60	0.861	1.25	7.97	16.30	WQ: Mildly turbid, no sheen, no effervescence
MW-20	9.18	16.10	1.021	1.63	7.73	-10.40	WQ: Mildly turbid, no sheen, no effervescence
MW-21	24.27	14.90	1.261	1.23	7.89	46.30	WQ: Clear, no sheen, no effervescence
MW-22	10.92	15.40	1.214	2.46	7.81	-26.30	WQ: Mildly turbid, no sheen, no effervescence
MW-23	15.81	15.80	2.12	1.30	6.61	-67.90	WQ: Mildly turbid, no sheen, no effervescence
MW-24	6.08	14.60	0.861	2.61	8.01	42.60	WQ: Clear, no odor, no sheen, no effer.
MW-25	2.74	12.50	0.515	2.77	6.43	51.70	WQ: Mildly turbid, no sheen, no effervescence
MW-26	0.62	16.30	0.761	2.11	7.93	36.10	WQ: Mildly turbid, no sheen, no effervescence
MW-27	8.69	16.80	1.52	0.91	6.71	154.60	WQ: Mildly turbid, no sheen, no effervescence
Eicher1	7.93	15.90	0.81	0.59	6.68	13.60	WQ: Clear, no odor, no sheen, no effer.

Notes: NR= Not recorded

Table 2. June 2012, West Divide Creek BTEX Groundwater Concentrations

Received 8/7/2012 Rifle COGCC

Monitoring Station	Sample ID	Lab ID	Sample Date	Benzene (mg/L)				Toluene (mg/L)				Ethylbenzene (mg/L)				Total Xylenes (mg/L)			
				RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual
EICH1	EICH-1 062012	L581707-23	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW1	MW-1 062012	L581707-01	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW2	MW-2 062012	L581707-02	6/20/2012	0.001	0.00018	0.100		0.005	0.00017	ND		0.001	0.00027	0.0014		0.003	0.00086	0.030	
MW2	DUP-2 062012	L581707-25	6/20/2012	0.001	0.00018	0.099		0.005	0.00017	ND		0.001	0.00027	0.0012		0.003	0.00086	0.028	
MW4	MW-4 062012	L581707-03	6/20/2012	0.001	0.00018	0.032		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	0.020	
MW4	DUP-3 062012	L581707-26	6/20/2012	0.001	0.00018	0.096		0.005	0.00017	ND		0.001	0.00027	0.0011		0.003	0.00086	0.026	
MW6	MW-6 062012	L581707-04	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW7	MW-7 062012	L581707-05	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW8	MW-8 062012	L581707-06	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW9	MW-9 062012	L581707-07	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW11	MW-11 062012	L581707-08	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW12	MW-12 062012	L581707-09	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW14	MW-14 062012	L581707-10	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW15	MW-15 062012	L581707-11	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW16	MW-16 062012	L581707-12	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW17	MW-17 062012	L581707-13	6/20/2012	0.001	0.00018	0.021		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW17	DUP-1 062012	L581707-24	6/20/2012	0.001	0.00018	0.018		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW18	MW-18 062012	L581707-14	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW20	MW-20 062012	L581707-15	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW21	MW-21 062012	L581707-16	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW22	MW-22 062012	L581707-17	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW23	MW-23 062012	L581707-18	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW24	MW-24 062012	L581707-19	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW25	MW-25 062012	L581707-20	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW26	MW-26 062012	L581707-21	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
MW27	MW-27 062012	L581707-22	6/20/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	

Value exceeds Table 910-1

Table 3. June 2012, Methane, Ethane, Ethene, Chloride Sodium Groundwater Concentrations.

Received 8/7/2012 Rifle COGCC

Monitoring Station	Sample ID	Lab ID	Sample Date	Methane (mg/L)				Ethane (mg/L)				Ethene (mg/L)				Chloride (mg/L)				Sodium (mg/L)			
				RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual
MW1	MW-1 062012	L581707-01	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	20		0.5	0.12	170	
MW2	MW-2 062012	L581707-02	6/20/2012	0.2	0.041	11		0.26	0.081	2.6		0.26	0.11	ND		1	0.053	59		0.5	0.12	140	
MW2	DUP-2 062012	L581707-25	6/20/2012	0.2	0.041	13		0.26	0.081	3.1		0.26	0.11	ND		1	0.053	54		0.5	0.12	140	
MW4	MW-4 062012	L581707-03	6/20/2012	0.2	0.041	8.6		0.26	0.081	2		0.26	0.11	ND		1	0.053	58		0.5	0.12	140	
MW4	DUP-3 062012	L581707-26	6/20/2012	0.2	0.041	12		0.26	0.081	2.7		0.26	0.11	ND		1	0.053	57		0.5	0.12	130	
MW6	MW-6 062012	L581707-04	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	23		0.5	0.12	110	
MW7	MW-7 062012	L581707-05	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	36		0.5	0.12	120	
MW8	MW-8 062012	L581707-06	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	31		0.5	0.12	150	
MW9	MW-9 062012	L581707-07	6/20/2012	0.1	0.021	5.5		0.13	0.04	0.94		0.13	0.057	ND		1	0.053	11		0.5	0.12	46	
MW11	MW-11 062012	L581707-08	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	13		0.5	0.12	34	
MW12	MW-12 062012	L581707-09	6/20/2012	0.05	0.011	2		0.065	0.02	ND		0.065	0.02	ND		1	0.053	26		0.5	0.12	84	
MW14	MW-14 062012	L581707-10	6/20/2012	0.1	0.021	6.8		0.13	0.04	1.2		0.13	0.057	ND		1	0.053	16		0.5	0.12	48	
MW15	MW-15 062012	L581707-11	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	8.4		0.5	0.12	42	
MW16	MW-16 062012	L581707-12	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	45		0.5	0.12	240	
MW17	MW-17 062012	L581707-13	6/20/2012	0.1	0.021	3.4		0.13	0.04	0.62		0.13	0.057	ND		1	0.053	54		0.5	0.12	190	
MW17	DUP-1 062012	L581707-24	6/20/2012	0.05	0.011	3.1		0.065	0.02	0.5		0.065	0.02	ND		1	0.053	43		0.5	0.12	200	
MW18	MW-18 062012	L581707-14	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	48		0.5	0.12	150	
MW20	MW-20 062012	L581707-15	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	48		0.5	0.12	160	
MW21	MW-21 062012	L581707-16	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	49		0.5	0.12	160	
MW22	MW-22 062012	L581707-17	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	48		0.5	0.12	160	
MW23	MW-23 062012	L581707-18	6/19/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	53		0.5	0.12	440	
MW24	MW-24 062012	L581707-19	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	2.7		0.5	0.12	11	
MW25	MW-25 062012	L581707-20	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	11		0.5	0.12	23	
MW26	MW-26 062012	L581707-21	6/20/2012	0.01	0.0021	0.21		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	5.9		0.5	0.12	63	
MW27	MW-27 062012	L581707-22	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	20		0.5	0.12	280	
EICH1	EICH-1 062012	L581707-23	6/20/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	9.2		0.5	0.12	60	

Note: No Methane Standard for Groundwater in COGCC Table 910-1

Table 4. June 2012, Isotech Data.

Received 8/7/2012 Rifle COGCC

Isotech Lab No.	Sample Name	Sample Date	Sample Time	He %	H ₂ %	Ar %	O ₂ %	CO ₂ %	N ₂ %	CO %	C ₁ %	C ₂ %	C ₂ H ₄ %	C ₃ %	C ₃ H ₆ %	iC ₄ %	nC ₄ %	iC ₅ %	nC ₅ %	C ₆ + %	δ ¹³ C ₁ ‰	δDC ₁ ‰	δ ¹³ C ₂ ‰	δ ¹³ C ₃ ‰	Specific Gravity	BTU	Helium dilution factor	
252560	MW-2-062012	6/20/2012	15:30	7/25/2012	na	nd	0.268	4.00	2.29	12.93	0.029	68.45	8.27	nd	2.74	nd	0.401	0.427	0.104	0.0252	0.0708	7/28/2012	-40.60	-187.5	-28.18	-26.03	0.737	
252561	MW-4-062012	6/20/2012	16:00	7/25/2012	na	nd	0.265	3.38	2.51	12.74	0.023	68.68	8.64	nd	2.75	nd	0.395	0.419	0.103	0.0259	0.0693	7/28/2012	-40.68	-188.1	-28.06	-26.19	0.736	
252562	MW-9-062012	6/20/2012	10:20	7/25/2012	na	nd	0.673	0.53	10.30	32.20	nd	49.36	4.62	nd	1.63	nd	0.236	0.287	0.0656	0.0417	0.0532	7/28/2012	-41.01	-203.6	-28.46	-26.20	0.844	
252563	MW-14-062012	6/20/2012	10:40	7/25/2012	na	nd	0.657	1.15	9.71	31.34	nd	50.00	4.72	nd	1.68	nd	0.258	0.298	0.0743	0.0463	0.0629	7/28/2012	-40.71	-202.1	-28.36	-26.27	0.840	
252564	MW-15-062012	6/20/2012	11:00		na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na							0
252565	MW-17-062012	6/20/2012	15:00	7/25/2012	na	nd	1.05	2.40	5.32	53.95	nd	33.69	3.56	nd	0.0275	nd	nd	nd	nd	nd	nd	0.0010	7/28/2012	-45.93	-190.3	-27.90		0.868

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.
nd = not detected, na = not analyzed. * 7/12/12 - Scott Mann contracted sampler from Rule Energy for Encana requesting analyses on MW-15-062012 be cancelled

Table 5. June 2012 Surface Water Field Parameters

Received 8/7/2012 Rifle COGCC

Monitoring Station	Temp (°C)	SPC (mS/cm)	DO (mg/L)	pH	ORP (mV)	Water Quality Observations
DCS-1	22.30	0.870	7.98	6.69	44.30	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-2	21.50	0.860	8.04	6.72	42.10	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-3	21.70	0.870	7.83	6.83	41.00	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-4	20.50	0.870	8.06	6.78	52.70	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-5	19.80	0.850	7.64	6.82	74.20	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-6	19.20	0.870	8.35	6.72	25.10	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-7	18.80	0.870	8.55	6.64	19.90	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.
DCS-8	18.30	0.860	8.12	6.62	130.40	WQ: Clear to Lt. Brown, no sheen, no odor, no effer.

Table 6. June 2012 West Divide Creek Surface Water BTEX Results

Monitoring Station	Sample ID	Lab ID	Sample Date	Benzene (mg/L)				Toluene (mg/L)				Ethylbenzene (mg/L)				Total Xylenes (mg/L)			
				RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual
DCS1	DCS-1-061912	L581288-01	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS2	DCS-2-061912	L581288-02	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS3	DCS-3-061912	L581288-03	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS4	DCS-4-061912	L581288-04	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS5	DCS-5-061912	L581288-05	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS6	DCS-6-061912	L581288-06	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS7	DCS-7-061912	L581288-07	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	
DCS8	DCS-8-061912	L581288-08	6/19/2012	0.001	0.00018	ND		0.005	0.00017	ND		0.001	0.00027	ND		0.003	0.00086	ND	

Qualifiers:

Table 7. June 2012 West Divide Creek Surface Water Methane, Ethane, Ethene, Chloride and Sodium Results. Received 8/7/2012 Rifle COGCC

Monitoring Station	Sample ID	Lab ID	Sample Date	Methane (mg/L)				Ethane (mg/L)				Ethene (mg/L)				Chloride (mg/L)				Sodium (mg/L)			
				RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual	RDL	MDL	Value	Qual
DCS1	DCS-1-062012	L581288-01	6/19/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	16		0.5	0.12	91	
DCS2	DCS-2-062012	L581288-02	6/19/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	15		0.5	0.12	87	
DCS3	DCS-3-062012	L581288-03	6/19/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	16		0.5	0.12	92	
DCS4	DCS-4-062012	L581288-04	6/19/2012	0.01	0.0021	0.01		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	15		0.5	0.12	93	
DCS5	DCS-5-062012	L581288-05	6/19/2012	0.01	0.0021	0.01		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	14		0.5	0.12	86	
DCS6	DCS-6-062012	L581288-06	6/19/2012	0.01	0.0021	0.012		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	15		0.5	0.12	92	
DCS7	DCS-7-062012	L581288-07	6/19/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	15		0.5	0.12	90	
DCS8	DCS-8-062012	L581288-08	6/19/2012	0.01	0.0021	ND		0.013	0.004	ND		0.013	0.0057	ND		1	0.053	15		0.5	0.12	87	

Qualifiers:

Note: No Methane standard for surface-water in COGCC Table 910-1

Table 8. June 2012, Summary of Duplicate Results.

Received 8/7/2012 Rifle COGCC

Monitoring Station	Sample ID	Lab ID	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Methane (mg/L)	Chloride (mg/L)	Sodium (mg/L)
MW2	MW-2 062012	L581707-02	6/30/12	0.1	<0.0050	0.0014	0.03	11	59	140
MW2	DUP-2 062012	L581707-25	6/30/12	0.0999	<0.0050	0.0012	0.028	13	54	140
MW4	MW-4 062012	L581707-03	6/30/12	0.032	<0.0050	<0.0010	0.02	8.6	58	140
MW4	DUP-3 062012	L581707-26	6/30/12	0.096	<0.0050	0.0011	0.026	12	57	130
MW17	MW-17 062012	L581707-13	6/30/12	0.021	<0.0050	<0.0010	<0.0030	3.4	54	190
MW17	DUP-1 062012	L581707-24	6/30/12	0.018	<0.0050	<0.0010	<0.0030	3.1	43	200

APPENDIX A



12065 Lebanon Rd.
Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Charlie Jensen
Encana
2717 Co. Rd. 215, Ste 100
Parachute, CO 81635

Report Summary

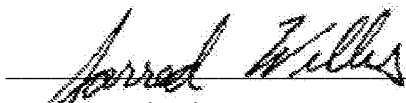
Wednesday June 27, 2012

Report Number: L581288
Samples Received: 06/20/12
Client Project:

Description: West Divide Creek - 02E

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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 Est. 1970

REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS1-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 13:35

ESC Sample # : L581288-01
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	16.	1.0	mg/l	9056	06/23/12	1
Methane	BDL	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	91.	0.50	mg/l	6010B	06/22/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	107.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS2-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 13:15

ESC Sample # : L581288-02
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	15.	1.0	mg/l	9056	06/23/12	1
Methane	BDL	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	87.	0.50	mg/l	6010B	06/22/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS3-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 13:05

ESC Sample # : L581288-03
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	16.	1.0	mg/l	9056	06/23/12	1
Methane	BDL	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	92.	0.50	mg/l	6010B	06/22/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	107.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS4-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 12:45

ESC Sample # : L581288-04
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	15.	1.0	mg/l	9056	06/23/12	1
Methane	0.010	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	93.	0.50	mg/l	6010B	06/27/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	109.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS5-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 12:35

ESC Sample # : L581288-05
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	14.	1.0	mg/l	9056	06/23/12	1
Methane	0.010	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	86.	0.50	mg/l	6010B	06/27/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	101.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	109.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
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June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS6-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 12:15

ESC Sample # : L581288-06
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	15.	1.0	mg/l	9056	06/24/12	1
Methane	0.012	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	92.	0.50	mg/l	6010B	06/27/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
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June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS7-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 12:04

ESC Sample # : L581288-07
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	15.	1.0	mg/l	9056	06/23/12	1
Methane	BDL	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	90.	0.50	mg/l	6010B	06/27/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	98.9		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	103.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	99.4		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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Charlie Jensen
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June 27, 2012

Date Received : June 20, 2012
 Description : West Divide Creek - 02E
 Sample ID : DCS8-061912
 Collected By : Shad Johnson
 Collection Date : 06/19/12 11:45

ESC Sample # : L581288-08
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	15.	1.0	mg/l	9056	06/24/12	1
Methane	BDL	0.010	mg/l	RSK175	06/21/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/21/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/21/12	1
Sodium	87.	0.50	mg/l	6010B	06/27/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/21/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/21/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/21/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	06/21/12	1
Dibromofluoromethane	109.		% Rec.	8260B	06/21/12	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/21/12	1
4-Bromofluorobenzene	109.		% Rec.	8260B	06/21/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 Note:
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Summary of Remarks For Samples Printed
06/27/12 at 11:14:45TSR Signing Reports: 358
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L581288-01 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-02 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-03 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-04 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-05 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-06 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-07 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581288-08 Account: ENCRCO Received: 06/20/12 09:00 Due Date: 06/27/12 00:00 RPT Date: 06/27/12 11:14
V8260BTEX is non-preserved and has 7-day holding time. jw



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 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

Quality Assurance Report
 Level II

June 27, 2012

L581288

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/l			WG599013	06/21/12 02:09
Ethylbenzene	< .001	mg/l			WG599013	06/21/12 02:09
Methyl tert-butyl ether	< .001	mg/l			WG599013	06/21/12 02:09
Toluene	< .005	mg/l			WG599013	06/21/12 02:09
Total Xylenes	< .003	mg/l			WG599013	06/21/12 02:09
4-Bromofluorobenzene		% Rec.	104.8	82-120	WG599013	06/21/12 02:09
Dibromofluoromethane		% Rec.	100.9	82-126	WG599013	06/21/12 02:09
Toluene-d8		% Rec.	102.9	92-112	WG599013	06/21/12 02:09
a,a,a-Trifluorotoluene		% Rec.	104.0	90-116	WG599013	06/21/12 02:09
Ethane	< .013	mg/l			WG599084	06/21/12 13:00
Ethene	< .013	mg/l			WG599084	06/21/12 13:00
Methane	< .01	mg/l			WG599084	06/21/12 13:00
Ethane	< .013	mg/l			WG599085	06/21/12 15:24
Ethene	< .013	mg/l			WG599085	06/21/12 15:24
Methane	< .01	mg/l			WG599085	06/21/12 15:24
Sodium	< .5	mg/l			WG599042	06/22/12 14:30
Chloride	< 1	mg/l			WG599361	06/23/12 06:14
Chloride	< 1	mg/l			WG599362	06/23/12 18:57
Sodium	< .5	mg/l			WG599044	06/26/12 23:58

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Sodium	mg/l	1.10	1.10	0.905	20	L581329-11	WG599042
Chloride	mg/l	16.0	16.0	3.17	20	L581288-01	WG599361
Chloride	mg/l	15.0	15.0	2.63	20	L581288-02	WG599361
Chloride	mg/l	14.0	14.0	3.51	20	L581288-05	WG599362
Chloride	mg/l	15.0	15.0	2.02	20	L581288-06	WG599362
Sodium	mg/l	10.0	10.3	0.976	20	L581246-06	WG599044

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0264	106.	72-119	WG599013
Ethylbenzene	mg/l	.025	0.0260	104.	77-124	WG599013
Methyl tert-butyl ether	mg/l	.025	0.0246	98.5	67-127	WG599013
Toluene	mg/l	.025	0.0247	98.8	75-114	WG599013
Total Xylenes	mg/l	.075	0.0796	106.	77-123	WG599013
4-Bromofluorobenzene				105.8	82-120	WG599013
Dibromofluoromethane				112.0	82-126	WG599013
Toluene-d8				103.2	92-112	WG599013

* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Encana
 Charlie Jensen
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

Quality Assurance Report
 Level II

L581288

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June 27, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
a,a,a-Trifluorotoluene				102.9	90-116	
Ethane	mg/l	.645	0.671	104.	70-130	WG599084
Ethene	mg/l	.635	0.642	101.	70-130	WG599084
Methane	mg/l	.339	0.338	99.8	70-130	WG599084
Ethane	mg/l	.645	0.673	104.	70-130	WG599085
Ethene	mg/l	.635	0.643	101.	70-130	WG599085
Methane	mg/l	.339	0.337	99.4	70-130	WG599085
Sodium	mg/l	11.3	12.1	107.	85-115	WG599042
Chloride	mg/l	40	40.0	100.	90-110	WG599361
Chloride	mg/l	40	40.6	102.	90-110	WG599362
Sodium	mg/l	11.3	12.0	106.	85-115	WG599044

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/l	0.0253	0.0264	101.	72-119	4.34	20	WG599013
Ethylbenzene	mg/l	0.0255	0.0260	102.	77-124	2.01	20	WG599013
Methyl tert-butyl ether	mg/l	0.0234	0.0246	94.0	67-127	5.15	20	WG599013
Toluene	mg/l	0.0242	0.0247	97.0	75-114	2.12	20	WG599013
Total Xylenes	mg/l	0.0791	0.0796	105.	77-123	0.670	20	WG599013
4-Bromofluorobenzene				105.0	82-120			WG599013
Dibromofluoromethane				105.8	82-126			WG599013
Toluene-d8				102.9	92-112			WG599013
a,a,a-Trifluorotoluene				99.71	90-116			WG599013
Ethane	mg/l	0.663	0.671	103.	70-130	1.20	25	WG599084
Ethene	mg/l	0.636	0.642	100.	70-130	0.910	25	WG599084
Methane	mg/l	0.338	0.338	100.	70-130	0.0200	25	WG599084
Ethane	mg/l	0.658	0.673	102.	70-130	2.29	25	WG599085
Ethene	mg/l	0.629	0.643	99.0	70-130	2.18	25	WG599085
Methane	mg/l	0.334	0.337	98.0	70-130	0.920	25	WG599085
Chloride	mg/l	40.0	40.0	100.	90-110	0	20	WG599361
Chloride	mg/l	40.8	40.6	102.	90-110	0.491	20	WG599362

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/l	0.0259	0	.025	104.	51-134	L581282-01	WG599013
Ethylbenzene	mg/l	0.0253	0	.025	101.	64-135	L581282-01	WG599013
Methyl tert-butyl ether	mg/l	0.0244	0	.025	97.4	55-136	L581282-01	WG599013
Toluene	mg/l	0.0241	0	.025	96.5	61-126	L581282-01	WG599013
Total Xylenes	mg/l	0.0783	0	.075	104.	64-133	L581282-01	WG599013

* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Encana
 Charlie Jensen
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

Quality Assurance Report
 Level II

L581288

12065 Lebanon Rd.
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Tax I.D. 62-0814289

Est. 1970

June 27, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
4-Bromofluorobenzene					104.0	82-120		
Dibromofluoromethane					104.5	82-126		
Toluene-d8					102.0	92-112		
a,a,a-Trifluorotoluene					102.9	90-116		
Sodium	mg/l	12.7	1.10	11.3	103.	75-125	L581329-11	WG599042
Sodium	mg/l	5330	5500	.565	0*	75-125	L580549-01	WG599042
Chloride	mg/l	64.4	16.0	50	96.8	80-120	L581288-03	WG599361
Chloride	mg/l	65.4	15.0	50	101.	80-120	L581288-07	WG599362
Sodium	mg/l	22.7	10.3	11.3	110.	75-125	L581246-06	WG599044

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/l	0.0235	0.0259	94.2	51-134	9.67	20	L581282-01	WG599013
Ethylbenzene	mg/l	0.0253	0.0253	101.	64-135	0.140	20	L581282-01	WG599013
Methyl tert-butyl ether	mg/l	0.0219	0.0244	87.4	55-136	10.8	20	L581282-01	WG599013
Toluene	mg/l	0.0220	0.0241	87.8	61-126	9.39	20	L581282-01	WG599013
Total Xylenes	mg/l	0.0774	0.0783	103.	64-133	1.03	20	L581282-01	WG599013
4-Bromofluorobenzene				112.1	82-120				WG599013
Dibromofluoromethane				105.8	82-126				WG599013
Toluene-d8				101.9	92-112				WG599013
a,a,a-Trifluorotoluene				99.79	90-116				WG599013
Sodium	mg/l	12.3	5330	0*	75-125	199.*	20	L580549-01	WG599042
Sodium	mg/l	5720	5330	1950*	75-125	7.06	20	L580549-01	WG599042
Chloride	mg/l	64.6	64.4	97.2	80-120	0.310	20	L581288-03	WG599361
Chloride	mg/l	64.9	65.4	99.8	80-120	0.767	20	L581288-07	WG599362
Sodium	mg/l	21.4	22.7	98.2	75-125	5.90	20	L581246-06	WG599044

Batch number /Run number / Sample number cross reference

WG599013: R2221013: L581288-01 02 03 04 05 06 07 08
 WG599084: R2221473: L581288-01 02
 WG599085: R2221474: L581288-03 04 05 06 07 08
 WG599042: R2224093: L581288-01 02 03
 WG599361: R2225894: L581288-01 02 03 04
 WG599362: R2226793: L581288-05 06 07 08
 WG599044: R2229373: L581288-04 05 06 07 08

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
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June 27, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Charlie Jensen
Encana
2717 Co. Rd. 215, Ste 100
Parachute, CO 81635

Report Summary

Monday July 02, 2012

Report Number: L581707
Samples Received: 06/22/12
Client Project:

Description: West Divide Creek - 02E

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-1-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-01
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	20.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/26/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/26/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/26/12	1
Sodium	170	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	99.6		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-2-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 15:30

ESC Sample # : L581707-02
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	59.	1.0	mg/l	9056	06/25/12	1
Methane	11.	0.20	mg/l	RSK175	06/26/12	20
Ethane	2.6	0.26	mg/l	RSK175	06/26/12	20
Ethene	BDL	0.26	mg/l	RSK175	06/26/12	20
Sodium	140	0.50	mg/l	6010B	06/30/12	1
Benzene	0.10	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	0.0014	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	0.030	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	99.9		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	98.9		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	107.		% Rec.	8260B	06/24/12	1

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REPORT OF ANALYSIS

Charlie Jensen
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 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-4-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 16:00

ESC Sample # : L581707-03
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	58.	1.0	mg/l	9056	06/25/12	1
Methane	8.6	0.20	mg/l	RSK175	06/26/12	20
Ethane	2.0	0.26	mg/l	RSK175	06/26/12	20
Ethene	BDL	0.26	mg/l	RSK175	06/26/12	20
Sodium	140	0.50	mg/l	6010B	06/30/12	1
Benzene	0.032	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	0.020	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	97.9		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	103.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	98.2		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	110.		% Rec.	8260B	06/24/12	1

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REPORT OF ANALYSIS

Charlie Jensen
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 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-6-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 13:00

ESC Sample # : L581707-04
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	23.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/26/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/26/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/26/12	1
Sodium	110	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	102.		% Rec.	8260B	06/24/12	1

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 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
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 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-7-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 13:20

ESC Sample # : L581707-05
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	36.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/26/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/26/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/26/12	1
Sodium	120	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	99.5		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	102.		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
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REPORT OF ANALYSIS

Charlie Jensen
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July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-8-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 13:40

ESC Sample # : L581707-06
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	31.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/26/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/26/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/26/12	1
Sodium	150	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	107.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	108.		% Rec.	8260B	06/24/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
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 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-9-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 10:20

ESC Sample # : L581707-07
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	11.	1.0	mg/l	9056	06/25/12	1
Methane	5.5	0.10	mg/l	RSK175	06/26/12	10
Ethane	0.94	0.13	mg/l	RSK175	06/26/12	10
Ethene	BDL	0.13	mg/l	RSK175	06/26/12	10
Sodium	46.	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	100.		% Rec.	8260B	06/24/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-11-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 10:00

ESC Sample # : L581707-08
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	13.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/26/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/26/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/26/12	1
Sodium	34.	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	98.6		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	108.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	98.4		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	108.		% Rec.	8260B	06/24/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-12-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 09:20

ESC Sample # : L581707-09
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	26.	1.0	mg/l	9056	06/25/12	1
Methane	2.0	0.050	mg/l	RSK175	06/26/12	5
Ethane	BDL	0.065	mg/l	RSK175	06/26/12	5
Ethene	BDL	0.065	mg/l	RSK175	06/26/12	5
Sodium	84.	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	97.2		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	108.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	99.5		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	06/25/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-14-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 10:40

ESC Sample # : L581707-10
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	16.	1.0	mg/l	9056	06/25/12	1
Methane	6.8	0.10	mg/l	RSK175	06/26/12	10
Ethane	1.2	0.13	mg/l	RSK175	06/26/12	10
Ethene	BDL	0.13	mg/l	RSK175	06/26/12	10
Sodium	48.	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	107.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	100.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-15-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 11:00

ESC Sample # : L581707-11
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	8.4	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/26/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/26/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/26/12	1
Sodium	42.	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	108.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	100.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	108.		% Rec.	8260B	06/25/12	1

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Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-16-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:00

ESC Sample # : L581707-12
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	45.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	240	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	111.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	100.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	111.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-17-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 15:00

ESC Sample # : L581707-13
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	54.	1.0	mg/l	9056	06/25/12	1
Methane	3.4	0.10	mg/l	RSK175	06/27/12	10
Ethane	0.62	0.13	mg/l	RSK175	06/27/12	10
Ethene	BDL	0.13	mg/l	RSK175	06/27/12	10
Sodium	190	0.50	mg/l	6010B	06/30/12	1
Benzene	0.021	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	103.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	108.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-18-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 11:40

ESC Sample # : L581707-14
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	48.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	150	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	99.2		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	98.8		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-20-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 12:00

ESC Sample # : L581707-15
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	48.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	160	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	108.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	06/25/12	1

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Charlie Jensen
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 2717 Co. Rd. 215, Ste 100
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July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-21-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 12:20

ESC Sample # : L581707-16
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	49.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	160	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	99.7		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	107.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	102.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-22-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 12:40

ESC Sample # : L581707-17
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	48.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	160	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	107.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-23-062012
 Collected By : Jeff Braden
 Collection Date : 06/19/12 10:30

ESC Sample # : L581707-18
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	53.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	440	0.50	mg/l	6010B	06/30/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	109.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	111.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-24-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-19
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	2.7	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	11.	0.50	mg/l	6010B	07/01/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	98.8		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	111.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	06/25/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-25-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-20
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	11.	1.0	mg/l	9056	06/25/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	23.	0.50	mg/l	6010B	07/01/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/25/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/25/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/25/12	1
Surrogate Recovery						
Toluene-d8	98.5		% Rec.	8260B	06/25/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/25/12	1
a,a,a-Trifluorotoluene	99.1		% Rec.	8260B	06/25/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	06/25/12	1

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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-26-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-21
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	5.9	1.0	mg/l	9056	06/25/12	1
Methane	0.21	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	63.	0.50	mg/l	6010B	07/01/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	99.8		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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 Est. 1970

REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-27-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-22
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	20.	1.0	mg/l	9056	06/26/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	280	0.50	mg/l	6010B	07/01/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	107.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : EICH-1-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-23
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	9.2	1.0	mg/l	9056	06/26/12	1
Methane	BDL	0.010	mg/l	RSK175	06/27/12	1
Ethane	BDL	0.013	mg/l	RSK175	06/27/12	1
Ethene	BDL	0.013	mg/l	RSK175	06/27/12	1
Sodium	60.	0.50	mg/l	6010B	07/01/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-DUP-1-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-24
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	43.	1.0	mg/l	9056	06/25/12	1
Methane	3.1	0.050	mg/l	RSK175	06/27/12	5
Ethane	0.50	0.065	mg/l	RSK175	06/27/12	5
Ethene	BDL	0.065	mg/l	RSK175	06/27/12	5
Sodium	200	0.50	mg/l	6010B	07/01/12	1
Benzene	0.018	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	104.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	99.3		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-DUP-2-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-25
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	54.	1.0	mg/l	9056	06/25/12	1
Methane	13.	0.20	mg/l	RSK175	06/27/12	20
Ethane	3.1	0.26	mg/l	RSK175	06/27/12	20
Ethene	BDL	0.26	mg/l	RSK175	06/27/12	20
Sodium	140	0.50	mg/l	6010B	07/01/12	1
Benzene	0.099	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	0.0012	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	0.028	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	106.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	99.8		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 Note:
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REPORT OF ANALYSIS

Charlie Jensen
 Encana
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

July 02, 2012

Date Received : June 22, 2012
 Description : West Divide Creek - 02E
 Sample ID : MW-DUP-3-062012
 Collected By : Jeff Braden
 Collection Date : 06/20/12 14:40

ESC Sample # : L581707-26
 Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	57.	1.0	mg/l	9056	06/25/12	1
Methane	12.	0.20	mg/l	RSK175	06/27/12	20
Ethane	2.7	0.26	mg/l	RSK175	06/27/12	20
Ethene	BDL	0.26	mg/l	RSK175	06/27/12	20
Sodium	130	0.50	mg/l	6010B	07/01/12	1
Benzene	0.096	0.0010	mg/l	8260B	06/24/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/24/12	1
Ethylbenzene	0.0011	0.0010	mg/l	8260B	06/24/12	1
Total Xylenes	0.026	0.0030	mg/l	8260B	06/24/12	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	06/24/12	1
Dibromofluoromethane	105.		% Rec.	8260B	06/24/12	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	06/24/12	1
4-Bromofluorobenzene	102.		% Rec.	8260B	06/24/12	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 Note:
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Summary of Remarks For Samples Printed
07/02/12 at 08:49:45

TSR Signing Reports: 358
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L581707-01 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-02 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-03 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-04 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-05 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-06 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-07 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-08 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-09 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-10 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-11 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-12 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-13 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-14 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-15 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-16 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-17 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-18 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-19 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-20 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-21 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-22 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-23 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-24 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-25 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw
Sample: L581707-26 Account: ENCRCO Received: 06/22/12 09:00 Due Date: 06/29/12 00:00 RPT Date: 07/02/12 08:48
V8260BTEX is non-preserved and has 7-day holding time. jw



YOUR LAB OF CHOICE

Encana
 Charlie Jensen
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Quality Assurance Report
 Level II

L581707

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July 02, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/l			WG599379	06/24/12 07:15
Ethylbenzene	< .001	mg/l			WG599379	06/24/12 07:15
Methyl tert-butyl ether	< .001	mg/l			WG599379	06/24/12 07:15
Toluene	< .005	mg/l			WG599379	06/24/12 07:15
Total Xylenes	< .003	mg/l			WG599379	06/24/12 07:15
4-Bromofluorobenzene		% Rec.	97.91	82-120	WG599379	06/24/12 07:15
Dibromofluoromethane		% Rec.	104.5	82-126	WG599379	06/24/12 07:15
Toluene-d8		% Rec.	103.8	92-112	WG599379	06/24/12 07:15
a,a,a-Trifluorotoluene		% Rec.	102.5	90-116	WG599379	06/24/12 07:15
Chloride	< 1	mg/l			WG599465	06/25/12 10:21
Benzene	< .001	mg/l			WG599374	06/24/12 20:52
Ethylbenzene	< .001	mg/l			WG599374	06/24/12 20:52
Methyl tert-butyl ether	< .001	mg/l			WG599374	06/24/12 20:52
Toluene	< .005	mg/l			WG599374	06/24/12 20:52
Total Xylenes	< .003	mg/l			WG599374	06/24/12 20:52
4-Bromofluorobenzene		% Rec.	108.1	82-120	WG599374	06/24/12 20:52
Dibromofluoromethane		% Rec.	104.3	82-126	WG599374	06/24/12 20:52
Toluene-d8		% Rec.	99.28	92-112	WG599374	06/24/12 20:52
a,a,a-Trifluorotoluene		% Rec.	100.3	90-116	WG599374	06/24/12 20:52
Chloride	< 1	mg/l			WG599467	06/25/12 10:58
Chloride	< 1	mg/l			WG599466	06/25/12 10:56
Ethane	< .013	mg/l			WG599823	06/26/12 11:23
Ethene	< .013	mg/l			WG599823	06/26/12 11:23
Methane	< .01	mg/l			WG599823	06/26/12 11:23
Chloride	< 1	mg/l			WG599940	06/26/12 22:03
Ethane	< .013	mg/l			WG600067	06/27/12 13:32
Ethene	< .013	mg/l			WG600067	06/27/12 13:32
Methane	< .01	mg/l			WG600067	06/27/12 13:32
Sodium	< .5	mg/l			WG599783	06/30/12 13:41
Sodium	< .5	mg/l			WG599644	06/30/12 12:37
Sodium	< .5	mg/l			WG599784	07/01/12 15:02

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chloride	mg/l	3.60	3.50		1.98	20	L581622-04	WG599465
Chloride	mg/l	11.0	11.0		0.905	20	L581707-07	WG599465

* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Chloride	mg/l	11.0	11.0	0.913	20	L581707-20	WG599466
Chloride	mg/l	54.0	53.0	2.79	20	L581707-13	WG599466
Chloride	mg/l	12.0	10.0	14.0	20	L581880-10	WG599940
Sodium	mg/l	35.0	34.0	3.18	20	L581707-08	WG599783
Sodium	mg/l	44.0	46.0	3.54	20	L581622-14	WG599644
Sodium	mg/l	11.0	11.0	3.57	20	L581707-19	WG599784

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0260	104.	72-119	WG599379
Ethylbenzene	mg/l	.025	0.0264	106.	77-124	WG599379
Methyl tert-butyl ether	mg/l	.025	0.0260	104.	67-127	WG599379
Toluene	mg/l	.025	0.0253	101.	75-114	WG599379
Total Xylenes	mg/l	.075	0.0786	105.	77-123	WG599379
4-Bromofluorobenzene				99.43	82-120	WG599379
Dibromofluoromethane				103.1	82-126	WG599379
Toluene-d8				104.6	92-112	WG599379
a,a,a-Trifluorotoluene				105.3	90-116	WG599379
Chloride	mg/l	40	40.0	100.	90-110	WG599465
Benzene	mg/l	.025	0.0248	99.0	72-119	WG599374
Ethylbenzene	mg/l	.025	0.0266	106.	77-124	WG599374
Methyl tert-butyl ether	mg/l	.025	0.0242	96.7	67-127	WG599374
Toluene	mg/l	.025	0.0234	93.8	75-114	WG599374
Total Xylenes	mg/l	.075	0.0794	106.	77-123	WG599374
4-Bromofluorobenzene				101.6	82-120	WG599374
Dibromofluoromethane				105.4	82-126	WG599374
Toluene-d8				100.8	92-112	WG599374
a,a,a-Trifluorotoluene				99.57	90-116	WG599374
Chloride	mg/l	40	40.1	100.	90-110	WG599467
Chloride	mg/l	40	40.1	100.	90-110	WG599466
Ethane	mg/l	.645	0.729	113.	70-130	WG599823
Ethene	mg/l	.635	0.703	111.	70-130	WG599823
Methane	mg/l	.339	0.376	111.	70-130	WG599823
Chloride	mg/l	40	40.1	100.	90-110	WG599940
Ethane	mg/l	.645	0.733	114.	70-130	WG600067
Ethene	mg/l	.635	0.710	112.	70-130	WG600067

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Methane	mg/l	.339	0.380	112.	70-130	WG600067
Sodium	mg/l	11.3	11.7	104.	85-115	WG599783
Sodium	mg/l	11.3	11.4	101.	85-115	WG599644
Sodium	mg/l	11.3	10.7	94.7	85-115	WG599784

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/l	0.0262	0.0260	105.	72-119	1.05	20	WG599379
Ethylbenzene	mg/l	0.0260	0.0264	104.	77-124	1.57	20	WG599379
Methyl tert-butyl ether	mg/l	0.0264	0.0260	105.	67-127	1.24	20	WG599379
Toluene	mg/l	0.0252	0.0253	101.	75-114	0.720	20	WG599379
Total Xylenes	mg/l	0.0777	0.0786	104.	77-123	1.19	20	WG599379
4-Bromofluorobenzene				96.60	82-120			WG599379
Dibromofluoromethane				103.4	82-126			WG599379
Toluene-d8				103.4	92-112			WG599379
a,a,a-Trifluorotoluene				102.8	90-116			WG599379
Chloride	mg/l	40.0	40.0	100.	90-110	0	20	WG599465
Benzene	mg/l	0.0259	0.0248	104.	72-119	4.58	20	WG599374
Ethylbenzene	mg/l	0.0293	0.0266	117.	77-124	9.71	20	WG599374
Methyl tert-butyl ether	mg/l	0.0253	0.0242	101.	67-127	4.70	20	WG599374
Toluene	mg/l	0.0250	0.0234	100.	75-114	6.53	20	WG599374
Total Xylenes	mg/l	0.0877	0.0794	117.	77-123	9.96	20	WG599374
4-Bromofluorobenzene				101.6	82-120			WG599374
Dibromofluoromethane				103.5	82-126			WG599374
Toluene-d8				100.8	92-112			WG599374
a,a,a-Trifluorotoluene				102.3	90-116			WG599374
Chloride	mg/l	40.1	40.1	100.	90-110	0	20	WG599467
Chloride	mg/l	40.0	40.1	100.	90-110	0.250	20	WG599466
Ethane	mg/l	0.735	0.729	114.	70-130	0.710	25	WG599823
Ethene	mg/l	0.707	0.703	111.	70-130	0.510	25	WG599823
Methane	mg/l	0.380	0.376	112.	70-130	1.21	25	WG599823
Chloride	mg/l	40.1	40.1	100.	90-110	0	20	WG599940
Ethane	mg/l	0.716	0.733	111.	70-130	2.35	25	WG600067
Ethene	mg/l	0.692	0.710	109.	70-130	2.48	25	WG600067
Methane	mg/l	0.367	0.380	108.	70-130	3.35	25	WG600067

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Encana
 Charlie Jensen
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

Quality Assurance Report
 Level II

L581707

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 02, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Benzene	mg/l	0.0269	0	.025	108.	51-134	L581705-02	WG599379
Ethylbenzene	mg/l	0.0275	0	.025	110.	64-135	L581705-02	WG599379
Methyl tert-butyl ether	mg/l	0.0429	0.0160	.025	108.	55-136	L581705-02	WG599379
Toluene	mg/l	0.0258	0	.025	103.	61-126	L581705-02	WG599379
Total Xylenes	mg/l	0.0815	0	.075	109.	64-133	L581705-02	WG599379
4-Bromofluorobenzene					98.65	82-120		WG599379
Dibromofluoromethane					104.4	82-126		WG599379
Toluene-d8					103.8	92-112		WG599379
a,a,a-Trifluorotoluene					105.1	90-116		WG599379
Chloride	mg/l	49.9	0.150	50	99.5	80-120	L581622-10	WG599465
Benzene	mg/l	0.0268	0	.025	107.	51-134	L581707-01	WG599374
Ethylbenzene	mg/l	0.0329	0	.025	132.	64-135	L581707-01	WG599374
Methyl tert-butyl ether	mg/l	0.0263	0	.025	105.	55-136	L581707-01	WG599374
Toluene	mg/l	0.0271	0	.025	108.	61-126	L581707-01	WG599374
Total Xylenes	mg/l	0.0993	0	.075	132.	64-133	L581707-01	WG599374
4-Bromofluorobenzene					106.6	82-120		WG599374
Dibromofluoromethane					106.4	82-126		WG599374
Toluene-d8					101.9	92-112		WG599374
a,a,a-Trifluorotoluene					100.8	90-116		WG599374
Chloride	mg/l	103.	57.0	50	92.0	80-120	L581707-26	WG599467
Chloride	mg/l	79.0	26.0	50	106.	80-120	L581707-09	WG599466
Chloride	mg/l	57.6	9.20	50	96.8	80-120	L581707-23	WG599940
Sodium	mg/l	46.3	34.0	11.3	109.	75-125	L581707-08	WG599783
Sodium	mg/l	54.9	46.0	11.3	78.8	75-125	L581622-14	WG599644
Sodium	mg/l	21.7	11.0	11.3	94.7	75-125	L581707-19	WG599784

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/l	0.0260	0.0269	104.	51-134	3.53	20	L581705-02	WG599379
Ethylbenzene	mg/l	0.0269	0.0275	108.	64-135	2.06	20	L581705-02	WG599379
Methyl tert-butyl ether	mg/l	0.0421	0.0429	104.	55-136	2.05	20	L581705-02	WG599379
Toluene	mg/l	0.0252	0.0258	101.	61-126	2.49	20	L581705-02	WG599379
Total Xylenes	mg/l	0.0810	0.0815	108.	64-133	0.640	20	L581705-02	WG599379
4-Bromofluorobenzene				99.64	82-120				WG599379
Dibromofluoromethane				103.8	82-126				WG599379
Toluene-d8				103.3	92-112				WG599379
a,a,a-Trifluorotoluene				102.3	90-116				WG599379
Chloride	mg/l	50.0	49.9	99.7	80-120	0.200	20	L581622-10	WG599465
Benzene	mg/l	0.0275	0.0268	110.	51-134	2.40	20	L581707-01	WG599374

* Performance of this Analyte is outside of established criteria.
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Encana
 Charlie Jensen
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 Parachute, CO 81635

Quality Assurance Report
 Level II

L581707

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 02, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Ethylbenzene	mg/l	0.0313	0.0329	125.	64-135	4.99	20	L581707-01	WG599374
Methyl tert-butyl ether	mg/l	0.0273	0.0263	109.	55-136	3.61	20	L581707-01	WG599374
Toluene	mg/l	0.0268	0.0271	107.	61-126	1.17	20	L581707-01	WG599374
Total Xylenes	mg/l	0.0933	0.0993	124.	64-133	6.21	20	L581707-01	WG599374
4-Bromofluorobenzene				106.0	82-120				WG599374
Dibromofluoromethane				105.9	82-126				WG599374
Toluene-d8				98.87	92-112				WG599374
a,a,a-Trifluorotoluene				101.2	90-116				WG599374
Chloride	mg/l	100.	103.	86.0	80-120	2.96	20	L581707-26	WG599467
Chloride	mg/l	75.6	79.0	99.2	80-120	4.40	20	L581707-09	WG599466
Chloride	mg/l	57.5	57.6	96.6	80-120	0.174	20	L581707-23	WG599940
Sodium	mg/l	46.9	46.3	114.	75-125	1.29	20	L581707-08	WG599783
Sodium	mg/l	54.4	54.9	74.3*	75-125	0.915	20	L581622-14	WG599644
Sodium	mg/l	21.8	21.7	95.6	75-125	0.460	20	L581707-19	WG599784

Batch number /Run number / Sample number cross reference

WG599379: R2225493: L581707-21 22 23 24 25 26
 WG599465: R2227053: L581707-01 02 03 04 05 06 07
 WG599374: R2227674: L581707-01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
 WG599467: R2227713: L581707-24 25 26
 WG599466: R2227753: L581707-08 09 10 11 12 13 14 15 16 17 18 19 20 21
 WG599823: R2228014: L581707-01 02 03 04 05 06 07 08 09 10 11
 WG599940: R2229553: L581707-22 23
 WG600067: R2230273: L581707-12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
 WG599783: R2235077: L581707-02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18
 WG599644: R2235240: L581707-01
 WG599784: R2235373: L581707-19 20 21 22 23 24 25 26

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



12065 Lebanon Rd.
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Est. 1970

Encana
Charlie Jensen
2717 Co. Rd. 215, Ste 100

Quality Assurance Report
Level II

Parachute, CO 81635

L581707


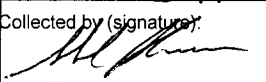
July 02, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

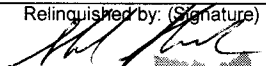
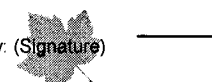


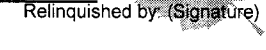

Encana 2717 Co. Rd. 215, Ste 100 Parachute, CO 81635			Billing information:			Analysis/Container/Preservative					Chain of Custody Received 8/7/2012 Rifle COGCC Page 1 of 9				
			Accounts Payable- Brett Middleton 2717 Co. Rd. 215, Ste 100 Parachute, CO 81635								 ESC L.A.B S.C.I.E.N.C.E.S 12065 Lebanon Road Mt. Juliet, TN 37122 Phone: (800) 767-5859 Phone: (615) 758-5858 Fax: (615) 758-5859 G121				
Report to: Charlie Jensen			Email: Charles.Jensen@encana.com;			CHLORIDE 125mlHDPE-NoPres NAICP 500mlHDPE-HNO3 L2 RSK175 40mlAmb-NoPres V8260BTEX 40mlAmb-NoPres V8260BTEX- preserved 40mlAmb-HCI							Acctnum ENCRCO (lab use only) Template/Prelogin T77323 P396105 Cooler #: 6-8-12em Shipped Via: FedEx Ground		
Project Description: West Divide Creek - 02E			City/State Collected								Rush? (Lab MUST Be Notified) ___ Same Day 200% ___ Next Day 100% ___ Two Day 50% ___ Three Day 25%				Date Results Needed Email? ___No ___Yes FAX? ___No ___Yes
Phone: (970) 285-2739 FAX: (970) 625-4636		Client Project #:		Lab Project # ENCRCO-WESTDIVIDE		Collected by (print): Shed Johnson		Site/Facility ID#:		P.O.#:					
Collected by (signature): 			Immediately Packed on Ice N ___ Y <input checked="" type="checkbox"/>												
Sample ID			Comp/Grab	Matrix*	Depth	Date	Time					Remarks/Contaminant	Sample # (lab only)		
DCS1-061912			Grab	GW	—	6/19/12	1335	107	X	X	X	X	X	L581288-01	
DCS2-061912			Grab	GW	—	6/19/12	1315	107	X	X	X	X	X	-02	
DCS3-061912			Grab	GW	—	6/19/12	1305	107	X	X	X	X	X	-03	
DCS4-061912			Grab	GW	—	6/19/12	1245	107	X	X	X	X	X	-04	
DCS5-061912			Grab	GW	—	6/19/12	1235	107	X	X	X	X	X	-05	
DCS6-061912			Grab	GW	—	6/19/12	1215	107	X	X	X	X	X	-06	
DCS7-061912			Grab	GW	—	6/19/12	1204	107	X	X	X	X	X	-07	
DCS8-061912			Grab	GW	—	6/19/12	1145	107	X	X	X	X	X	-08	
				GW				7	X	X	X	X			

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

pH _____ Temp _____

Remarks: V8260BTEX is non-preserved and has 7-day holding time on all samples except any marked as "preserved".


Flow _____ Other _____

Relinquished by: (Signature) 		Date: 6/19/12	Time: 1600	Received by: (Signature) 		Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____		Condition: (lab use only) JR	
Relinquished by: (Signature) 		Date:	Time:	Received by: (Signature) 		Temp: 3.70C		Bottles Received: 80+TB	
Relinquished by: (Signature) 		Date:	Time:	Received for lab by: (Signature) 		Date: 6/20/12		Time: 09:00	
						pH Checked: CR		NCF:	

Encana
 2717 Co. Rd. 215. Ste 100
 Parachute, CO 81635

Billing information:
 Accounts Payable- Brett Middleton
 2717 Co. Rd. 215, Ste 100
 Parachute, CO 81635

Analysis/Container/Preservative

Chain of Custody
 Received 8/7/2012 Rifle COGCC Page 2 of 4
 2013

 L-A-B S-C-I-E-N-C-E-S
 12065 Lebanon Road
 Mt. Juliet, TN 37122
 Phone: (800) 767-5859
 Phone: (615) 758-5858
 Fax: (615) 758-5859

Report to: **Charlie Jensen**

Email: **Charles.Jensen@encana.com**

Project Description: **West Divide Creek - 02E**

City/State Collected

Phone: (970) 285-2739
 FAX: (970) 625-4636


Client Project #:

Lab Project #
ENCRCO-WESTDIVIDE

Collected by (print): **Jeff Braden**

Site/Facility ID#:

P.O.#:

Collected by (signature): 
 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 ___ Same Day 200%
 ___ Next Day 100%
 ___ Two Day 50%
 ___ Three Day 25%

Date Results Needed
 Email? ___No X Yes
 FAX? ___No ___Yes

CHLORIDE 125mlHDPE-NoPres	NAICP 500mlHDPE-HNO3	RSK175 40mlAmb-NoPres	V8260BTEX 40mlAmb-NoPres	V8260BTEX - preserved 40mlAmb-HCI
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Acctnum: **ENCRCO** (lab use only)
 Template/Prelogin **T77323/P396105**
 Cooler #: **6-8126**
 Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	CHLORIDE 125mlHDPE-NoPres	NAICP 500mlHDPE-HNO3	RSK175 40mlAmb-NoPres	V8260BTEX 40mlAmb-NoPres	V8260BTEX - preserved 40mlAmb-HCI
MW-14-062012	Grab	GW		6-20-12	1040	10	X	X	X	X	X
MW-15-062012		GW		1100	10	X	X	X	X	X	X
MW-16-062012		GW		1400	10	X	X	X	X	X	X
MW-17-062012		GW		1500	10	X	X	X	X	X	X
MW-18-062012		GW		1140	10	X	X	X	X	X	X
MW-20-062012		GW		1200	10	X	X	X	X	X	X
MW-21-062012		GW		1220	10	X	X	X	X	X	X
MW-22-062012		GW		1240	10	X	X	X	X	X	X
MW-23-062012	✓	GW		6-19-12	1030	10	X	X	X	X	X









Remarks/Contaminant Sample # (lab only)
LS91707-10
 4
 12
 13
 17
 15
 16
 17
 18


*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

pH _____ Temp _____

Remarks: V8260BTEX is non-preserved and has 7-day holding time on all samples except any marked as "preserved".

Flow _____ Other _____

Relinquished by: (Signature) 	Date: 6-20-12	Time: 1030	Received by: (Signature) 	Samples returned via: <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Courier	Condition: (lab use only) 
Relinquished by: (Signature) 	Date:	Time:	Received by: (Signature) 	Temp: 3.1°C	Bottles Received: 259 & 416
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 6-22-12	Time: 0900
				pH Checked: 	NCF:

Encana 2717 Co. Rd. 215. Ste 100 Parachute, CO 81635			Billing information: Accounts Payable- Brett Middleton 2717 Co. Rd. 215, Ste 100 Parachute, CO 81635			Analysis/Container/Preservative					Chain of Custody Received 8/7/2012 Rifle CO CCC of 6 Page 4 of 6 303	
Report to: Charlie Jensen			Email: Charles.Jensen@encana.com			CHLORIDE 125mlHDPE-NoPres NAICP 500mlHDPE-HNO3 RSK175 40mlAmb-NoPres V8260BTEX 40mlAmb-NoPres V8260BTEX- preserved 40mlAmb-HCI					 L-A-B S-C-I-E-N-C-E-S 12065 Lebanon Road Mt. Juliet, TN 37122 Phone: (800) 767-5859 Phone: (615) 758-5858 Fax: (615) 758-5859	
Project Description: West Divide Creek - 02E			City/State Collected								Acctnum ENCRCO (lab use only) Template/Prelogin T77323/P396105 Cooler #: 6-8-126 Shipped Via: FedEx Ground	
Phone: (970) 285-2739 FAX: (970) 625-4636		Client Project #:		Lab Project # ENCRCO-WESTDIVIDE							Remarks/Contaminant LS81207 - 19	
Collected by (print): Jeff Broder		Site/Facility ID#:		P.O.#:							Sample # (lab only) 20 21 22 23 24 25 26	
Collected by (signature): <i>[Signature]</i>		Rush? (Lab MUST Be Notified) ___ Same Day 200% ___ Next Day 100% ___ Two Day 50% ___ Three Day 25%		Date Results Needed		Email? ___No <input checked="" type="checkbox"/> Yes FAX? ___No ___Yes		No. of Cntrs				
Immediately Packed on Ice N ___ Y <input checked="" type="checkbox"/>												
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time							
MW-24-062012	Grab	GW		6-20-12	1620	10	X	X	X	X	X	
MW-25-062012		GW		6-20-12	0940	10	X	X	X	X	X	
MW-26-062012		GW		6-20-12	1420	10	X	X	X	X	X	
MW-27-061912		GW		6-19-12	0940	10	X	X	X	X	X	
Eich-1-061912		GW		6-19-12	1000	10	X	X	X	X	X	
DUP-1-062012		GW		6-20-12	-	10	X	X	X	X	X	
DUP-2-062012		GW		6-20-12	-	10	X	X	X	X	X	
DUP-3-062012		GW		6-20-12	-	10	X	X	X	X	X	

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

pH _____ Temp _____

Remarks: V8260BTEX is non-preserved and has 7-day holding time on all samples except any marked as "preserved".

Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 6-20-12	Time: 10:30	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 31°C	Bottles Received: 259 of 476
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 6-22-12	Time: 0900
				pH Checked: 6.2	NCF: _____

ANALYSIS REPORT

Lab #: 252560 Job #: 18553
 Sample Name/Number: MW-2-062012
 Company: Encana Oil & Gas
 Date Sampled: 6/20/2012
 Container: Dissolved Gas Bottle
 Field/Site Name: West Divide Creek-02E
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 6/25/2012 Date Reported: 7/31/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.029			
Hydrogen Sulfide -----	na			
Helium -----	na			
Hydrogen -----	nd			
Argon -----	0.268			
Oxygen -----	4.00			
Nitrogen -----	12.93			
Carbon Dioxide -----	2.29			
Methane -----	68.45	-40.60	-187.5	
Ethane -----	8.27	-28.18		
Ethylene -----	nd			
Propane -----	2.74	-26.03		
Propylene -----	nd			
Iso-butane -----	0.401			
N-butane -----	0.427			
Iso-pentane -----	0.104			
N-pentane -----	0.0252			
Hexanes + -----	0.0708			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 946

Specific gravity, calculated: 0.737

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.53

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

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

ANALYSIS REPORT

Lab #: 252561 Job #: 18553
 Sample Name/Number: MW-4-062012
 Company: Encana Oil & Gas
 Date Sampled: 6/20/2012
 Container: Dissolved Gas Bottle
 Field/Site Name: West Divide Creek-02E
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 6/25/2012 Date Reported: 7/31/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	0.023			
Hydrogen Sulfide -----	na			
Helium -----	na			
Hydrogen -----	nd			
Argon -----	0.265			
Oxygen -----	3.38			
Nitrogen -----	12.74			
Carbon Dioxide -----	2.51			
Methane -----	68.68	-40.68	-188.1	
Ethane -----	8.64	-28.06		
Ethylene -----	nd			
Propane -----	2.75	-26.19		
Propylene -----	nd			
Iso-butane -----	0.395			
N-butane -----	0.419			
Iso-pentane -----	0.103			
N-pentane -----	0.0259			
Hexanes + -----	0.0693			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 955

Specific gravity, calculated: 0.736

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.54

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

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

ANALYSIS REPORT

Lab #: 252562 Job #: 18553
 Sample Name/Number: MW-9-062012
 Company: Encana Oil & Gas
 Date Sampled: 6/20/2012
 Container: Dissolved Gas Bottle
 Field/Site Name: West Divide Creek-02E
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 6/25/2012 Date Reported: 7/31/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	na			
Hydrogen -----	nd			
Argon -----	0.673			
Oxygen -----	0.53			
Nitrogen -----	32.20			
Carbon Dioxide -----	10.30			
Methane -----	49.36	-41.01	-203.6	
Ethane -----	4.62	-28.46		
Ethylene -----	nd			
Propane -----	1.63	-26.20		
Propylene -----	nd			
Iso-butane -----	0.236			
N-butane -----	0.287			
Iso-pentane -----	0.0656			
N-pentane -----	0.0417			
Hexanes + -----	0.0532			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 648

Specific gravity, calculated: 0.844

Remarks:

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

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

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

ANALYSIS REPORT

Lab #: 252563 Job #: 18553
 Sample Name/Number: MW-14-062012
 Company: Encana Oil & Gas
 Date Sampled: 6/20/2012
 Container: Dissolved Gas Bottle
 Field/Site Name: West Divide Creek-02E
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 6/25/2012 Date Reported: 7/31/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	na			
Hydrogen -----	nd			
Argon -----	0.657			
Oxygen -----	1.15			
Nitrogen -----	31.34			
Carbon Dioxide -----	9.71			
Methane -----	50.00	-40.71	-202.1	
Ethane -----	4.72	-28.36		
Ethylene -----	nd			
Propane -----	1.68	-26.27		
Propylene -----	nd			
Iso-butane -----	0.258			
N-butane -----	0.298			
Iso-pentane -----	0.0743			
N-pentane -----	0.0463			
Hexanes + -----	0.0629			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 659

Specific gravity, calculated: 0.840

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.69

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

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

ANALYSIS REPORT

Lab #: 252564 Job #: 18553
 Sample Name/Number: MW-15-062012
 Company: Encana Oil & Gas
 Date Sampled: 6/20/2012
 Container: Dissolved Gas Bottle
 Field/Site Name: West Divide Creek-02E
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 6/25/2012 Date Reported: 7/31/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	na			
Hydrogen Sulfide -----	na			
Helium -----	na			
Hydrogen -----	na			
Argon -----	na			
Oxygen + Argon -----	na			
Nitrogen -----	na			
Carbon Dioxide -----	na			
Methane -----	na			
Ethane -----	na			
Ethylene -----	na			
Propane -----	na			
Propylene -----	na			
Iso-butane -----	na			
N-butane -----	na			
Iso-pentane -----	na			
N-pentane -----	na			
Hexanes + -----	na			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:0

Specific gravity, calculated: 0

Remarks:

7/12/12 - Scott Mann contracted sampler from Rule Energy for Encana requesting analyses on this sample be cancelled. No charges will be associated with sample.

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

ANALYSIS REPORT

Lab #: 252565 Job #: 18553
 Sample Name/Number: MW-17-062012
 Company: Encana Oil & Gas
 Date Sampled: 6/20/2012
 Container: Dissolved Gas Bottle
 Field/Site Name: West Divide Creek-02E
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 6/25/2012 Date Reported: 7/31/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	na			
Hydrogen -----	nd			
Argon -----	1.05			
Oxygen -----	2.40			
Nitrogen -----	53.95			
Carbon Dioxide -----	5.32			
Methane -----	33.69	-45.93	-190.3	
Ethane -----	3.56	-27.90		
Ethylene -----	nd			
Propane -----	0.0275			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0010			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 405

Specific gravity, calculated: 0.868

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.69

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

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