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May 16, 2013

Project No. 105521.009005.000010

Mr. Steven Lindblom, P.G.  
Environmental Supervisor, Eastern Colorado  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, Colorado 80203

**RE: 2013 Water Quality Monitoring Program Reports  
Pan Energy Project/Wattenberg Natural Gas Gathering System  
Dogan, Fort Lupton, Hambert, Vollmar, Brighton, Hudson Stations  
COGCC Remediation Nos. 1, 17, 18, 19, 20 and 21**

Dear Mr. Lindblom:

Enclosed are the 2013 Water Quality Monitoring Reports for the Dogan, Fort Lupton, Hambert, Vollmar, Brighton and Hudson Stations in the Wattenberg Natural Gas Gathering System. We have enclosed one hard copy and a CD of each report. TRC Companies, Inc. (TRC) is addressing historical releases at these sites in accordance with the 2001 Exit Strategy® contract between Pan Energy Corporation (PEC) and TRC. The mitigation of these releases is governed by the 1992 Compliance Order between PEC and the Colorado Oil and Gas Conservation Commission (COGCC).

TRC completed the field portion of the 2013 monitoring program April 11 - 29, 2013. Based on the laboratory analytical results, hydrocarbon concentrations in the shallow groundwater continue to decline, and the plumes are stable and/or shrinking. The monitoring results also show that, for sites where small amounts of residual free product have historically been present, the enhanced fluid recovery (EFR) conducted in 2009 and 2010 has either removed or substantially recovered the product present.

Please contact me at 303-395-4088 with any questions about these reports.

Sincerely,

Bill Hendrix  
Sr. Project Manager

Enclosures

cc: Phil Deisch, Spectra Energy: e-copies  
Dana Howard, Anadarko Petroleum: e-copies  
John Hambright, Denver International Airport: e-copy (Brighton only)  
Thomas Cross, Chartis Insurance: e-copies  
William Berig : (Hambert only)  
Ron Bock, TRC: e-copies  
TRC Project File 105521

# 2013 WATER QUALITY MONITORING REPORT



## **Hambert Station** **Wattenberg Natural Gas Gathering System** **Weld County, Colorado** **COGCC Remediation No. 18**

Prepared for:



**Colorado Oil and Gas Conservation Commission**  
**Denver, Colorado**

Prepared by:



**TRC Companies, Inc.**  
**Lakewood, Colorado**

**May 2013**

# **2013 WATER QUALITY MONITORING REPORT**

**Hambert Station  
Wattenberg Natural Gas Gathering System  
Weld County, Colorado  
COGCC Remediation No. 18**

**Prepared for:**



**Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, Colorado 80203**

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**TRC Companies, Inc.  
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Lakewood, Colorado 80401**

**TRC Project No. 105521.0000.0000**

**May 2013**

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## ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylenes
CBSGW	Colorado Basic Standards for Groundwater
COGCC	State of Colorado Oil and Gas Conservation Commission
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ft	feet, or foot
L	liter
LNAPL	light non-aqueous phase liquid
MNA	monitored natural attenuation
ORP	oxidation/reduction potential
TRC	TRC Companies, Inc.
µg	microgram
QA	quality assurance

## **1.0 INTRODUCTION**

This report presents the results of the April 2013 groundwater quality monitoring event at the Hambert Compressor Station (Hambert Station). The Hambert Station is located approximately eight miles south of Greeley, Co. and three miles east of Gilcrest (Figure 1). The scope of work for this fluid level and water quality monitoring program is provided in the Long-Term Monitored Natural Attenuation (MNA) Work Plan (TRC, 2009), and is conducted annually as directed by the Colorado Oil and Gas Conservation Commission (COGCC) in its letter dated August 9, 2010 (COGCC, 2010).

The water quality monitoring program was designed to verify that natural attenuation is continuing to occur, and that the dissolved phase plume is stable and/or shrinking. The data are used to evaluate trends over time and gauge progress towards completing the MNA remedy in the approved Remediation Plan (Golder, 1992).

## 2.0 METHODOLOGY

The 2013 monitoring event included water level gauging and the collection of groundwater samples for laboratory analysis as shown in Figure 2. Groundwater samples were collected from an approved list of wells and analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX). The following wells were sampled: MW009, MW011, MW013, MW014, MW018, and MW019. MW002 was scheduled to be sampled, but was not sampled this year because the well was apparently destroyed during construction activity conducted by Anadarko.

Groundwater samples were collected with a peristaltic pump using the micro-purge method with dedicated tubing. All non-dedicated and non-disposable equipment were decontaminated after use at each well.

Prior to sample collection, field parameters including pH, conductivity, temperature, oxidation/reduction potential (ORP), and dissolved oxygen (DO) were monitored via a flow-through-cell equipped with an YSI-556 multi-meter. Samples were collected after all the field parameters had stabilized. The stabilized field parameter data are presented in Table 1.

All groundwater samples were labeled and preserved as necessary, then placed in an iced cooler and delivered to Environmental Science Corporation in Mount Juliet, Tennessee for analysis. All groundwater samples were analyzed for BTEX using U.S. Environmental Protection Agency (EPA) SW-846 Method 8260B. The samples were collected, analyzed, and the data reduced in accordance with the existing Quality Assurance Plan for the Wattenberg sites (TRC, 2002). The laboratory analytical report is provided as Appendix A with the associated Level 2 data/report. Results of the quality assurance (QA) review indicate the data are suitable for intended use.

### **3.0 RESULTS AND INTERPRETATION**

Annual groundwater monitoring and sampling was completed on April 12, 2013. Groundwater elevation data are presented in Table 2 with a groundwater elevation map presented in Figure 3. There was no LNAPL detected at this site. Groundwater elevation data are similar to past events, no significant changes were noted.

Groundwater samples were collected from the following six wells for laboratory analysis: MW009, MW011, MW013, MW014, MW018, and MW019. Groundwater quality data are presented in Table 3 and Figure 4. Benzene concentrations in the samples collected from MW009, MW011, MW018, and MW019 were below the Colorado Basic Standard for Groundwater (CBSGW) of 5.0 µg/L. Benzene concentrations in MW013 and MW014 were above CBSGW, but continue to demonstrate a decreasing concentration trend over time as illustrated in Figure 5. All TEX concentrations were below the CBSGW.

## **4.0 CONCLUSIONS**

The Hambert Station has been thoroughly investigated as summarized in the Long-Term MNA Work Plan (TRC, 2009) and detailed in reports. The capital improvements and remedial activities that were implemented at the site have been effective in preventing additional releases and in addressing the historical source areas and impacts present.

LNAPL has not been detected at the site since 2003. The current monitoring program documents that the dissolved phase plume is stable and/or decreasing. Therefore, MNA, which is the approved remedy for groundwater at the site (Golder, 1993), continues to be an effective method of remediation. As documented in the Long-Term MNA Work Plan (TRC, 2009a), the risk of impacts to human health and the environment is low. Site conditions do not warrant alternative remedial action measures at this time.

## 5.0 REFERENCES

- COGCC, 2010. *Wattenberg Gas Gathering System, Spring 2010 Water Quality Monitoring Report: Brighton Station – COGCC Remediation No. 20, Dougan Station – COGCC Remediation No. 1, Fort Lupton Station – COGCC Remediation No. 17, Hambert Station – COGCC Remediation No. 18, Hudson Station – COGCC Remediation No. 21, Vollmar Station – COGCC Remediation No. 19.* Letter from Steve Lindblom, Colorado Oil and Gas Conservation Commission, to Scott Reed, TRC Solutions, Inc. August 9, 2010.
- Golder, 1993. *Panhandle Eastern Pipeline Company, Remediation Plan, Brighton Station, Adams County, Colorado.* Prepared by Golder Associates Inc., 200 Union Boulevard, Suite 500, Lakewood, Colorado 80228. Golder Job No. 923-2477. January 1993.
- TRC, 2002. *Quality Assurance Plan.* Prepared for Pan Energy Corporation (PEC) by TRC Environmental Corporation, 7761 Shaffer Parkway, Suite 100, Littleton, Colorado 80127. April 2002.
- TRC, 2009. *Long-Term Work Plan: Monitored Natural Attenuation Program.* Prepared for the State of Colorado Oil and Gas Conservation Commission by TRC Environmental Corporation, 7761 Shaffer Parkway, Suite 100, Littleton, Colorado 80127. November 2009.
- TRC, 2011. *2011 Water Quality Monitoring Report – Hambert Compressor Station.* Prepared for the State of Colorado Oil and Gas Conservation Commission by TRC Companies, Inc., 7761 Shaffer Parkway, Suite 100, Littleton, Colorado 80127. June 2011.

## **TABLES**

**TABLE 1**  
**Field Parameters**  
**Hambert Compressor Station**  
**Weld County, Colorado**

Well ID	Sample Date	Temp (C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MW009	4/12/13	11.60	2.401	0.08	7.00	-127.6
MW011	4/12/13	10.00	1.932	0.14	7.48	-182.9
MW013	4/12/13	11.65	1.84	0.15	7.50	-143.3
MW014	4/12/13	11.99	2.928	0.23	7.21	-155.0
MW018	4/12/13	12.06	3.023	0.30	6.93	-61.8
MW019	4/12/13	12.31	2.102	0.33	7.28	-69.1

mS/cm = milliSiemens per centimeter

mg/L = milligrams per Liter

mV = millivolts

TABLE 2

Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW001	3/16/1992	106.91	ND	20.66		86.25	86.25	
	3/18/1992	106.91	ND	20.69		86.22	86.22	
	3/24/1992	106.91	ND	20.52		86.39	86.39	
	3/31/1992	106.91	ND	20.64		86.27	86.27	
	5/21/1992	106.91	ND	20.16		86.75	86.75	
	6/8/1992	106.91	ND	20.17		86.74	86.74	
	7/21/1992	106.91	ND	19.95		86.96	86.96	
	8/27/1992	106.91	ND	20.19		86.72	86.72	
	9/25/1992	106.91	ND	19.92		86.99	86.99	
	10/20/1992	106.91	ND	19.73		87.18	87.18	
	11/3/1992	106.91	ND	19.66		87.25	87.25	
	6/23/1993	106.91	ND	19.55		87.36	87.36	
	12/15/1993	106.91	ND	18.66		88.25	88.25	
	6/29/1994	106.91	ND	18.60		88.31	88.31	
	12/7/1994	106.91	ND	17.19		89.72	89.72	
	5/31/1995	106.91	ND	17.68		89.23	89.23	
	1/15/1996	106.91	ND	17.43		89.48	89.48	
	7/8/1996	106.91	ND	17.29		89.62	89.62	
	1/30/1997	106.91	ND	17.24		89.67	89.67	
	7/9/1997	106.91	ND	15.82		91.09	91.09	
	9/10/1997	106.91	ND	15.45		91.46	91.46	
	9/19/1997	106.91	ND	15.41		91.50	91.50	
	10/22/1997	106.91	ND	15.26		91.65	91.65	
	11/11/1997	106.91	ND	15.20		91.71	91.71	
	11/19/1997	106.91	ND	15.19		91.72	91.72	
	3/25/1998	106.91	ND	16.22		90.69	90.69	
	1/26/1999	106.91	ND	16.52		90.39	90.39	
	2/25/1999	106.91	ND	16.60		90.31	90.31	
	3/26/1999	106.91	ND	16.41		90.50	90.50	
	4/29/1999	106.91	ND	16.23		90.68	90.68	
	5/27/1999	106.91	ND	15.06		91.85	91.85	
	6/24/1999	106.91	ND	14.59		92.32	92.32	
	7/23/1999	106.91	ND	14.68		92.23	92.23	
	8/26/1999	106.91	ND	14.45		92.46	92.46	
	9/23/1999	106.91	ND	14.77		92.14	92.14	
	10/12/1999	106.91	ND	15.04		91.87	91.87	
	11/29/1999	106.91	ND	15.52		91.39	91.39	
	1/31/2000	106.91	ND	16.14		90.77	90.77	
	4/6/2000	106.91	ND	16.32		90.59	90.59	
	7/12/2000	106.91	ND	15.87		91.04	91.04	
	10/5/2000	106.91	ND	16.89		90.02	90.02	
	1/25/2001	106.91	ND	16.21		90.70	90.70	
	4/17/2001	106.91	ND	16.32		90.59	90.59	
	7/3/2001	106.91	ND	16.58		90.33	90.33	
	11/7/2001	106.91	ND	16.26		90.65	90.65	
	3/19/2002	106.91	ND	17.10		89.81	89.81	
	12/23/2002	106.91	ND	19.81		87.10	87.10	
	2/27/2003	106.91	ND	20.37		86.54	86.54	
	4/2/2003	106.91	ND	20.41		86.50	86.50	
	5/1/2003	106.91	ND	19.91		87.00	87.00	
	6/10/2003	106.91	ND	18.83		88.08	88.08	
	7/2/2003	106.91	ND	18.26		88.65	88.65	
	7/23/2003	106.91	ND	18.12		88.79	88.79	
	8/27/2003	106.91	ND	18.54		88.37	88.37	
	10/7/2003	106.91	ND	18.84		88.07	88.07	
	11/20/2003	106.91	ND	19.18		87.73	87.73	
	2/9/2004	106.91	ND	19.22		87.69	87.69	
	3/4/2004	106.91	ND	18.80		88.11	88.11	
	5/10/2004	106.91	ND	18.01		88.90	88.90	
	6/2/2004	106.91	ND	17.99		88.92	88.92	
	7/19/2004	106.91	ND	17.81		89.10	89.10	
	8/19/2004	106.91	ND	17.69		89.22	89.22	
	10/18/2004	106.91	ND	17.99		88.92	88.92	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW002	3/16/1992	100.03	ND	17.04		82.99	82.99	
	3/18/1992	100.03	ND	16.88		83.15	83.15	
	3/24/1992	100.03	ND	16.74		83.29	83.29	
	3/31/1992	100.03	ND	16.56		83.47	83.47	
	5/21/1992	100.03	ND	15.72		84.31	84.31	
	7/21/1992	100.03	ND	15.29		84.74	84.74	
	8/27/1992	100.03	ND	15.51		84.52	84.52	
	9/25/1992	100.03	ND	14.76		85.27	85.27	
	10/20/1992	100.03	ND	14.71		85.32	85.32	
	11/3/1992	100.03	ND	14.88		85.15	85.15	
	6/23/1993	100.03	ND	15.02		85.01	85.01	
	12/15/1993	100.03	ND	14.10		85.93	85.93	
	6/28/1994	100.03	ND	12.28		87.75	87.75	
	12/7/1994	100.03	ND	12.15		87.88	87.88	
	5/31/1995	100.03	ND	13.07		86.96	86.96	
	1/15/1996	100.03	ND	13.78		86.25	86.25	
	7/8/1996	100.03	ND	12.80		87.23	87.23	
	1/30/1997	100.03	ND	12.42		87.61	87.61	
	7/9/1997	100.03	ND	11.36		88.67	88.67	
	9/10/1997	100.03	ND	10.76		89.27	89.27	
	9/19/1997	100.03	ND	11.22		88.81	88.81	
	10/22/1997	100.03	ND	10.84		89.19	89.19	
	11/11/1997	100.03	ND	11.15		88.88	88.88	
	11/19/1997	100.03	ND	11.22		88.81	88.81	
	3/25/1998	100.03	ND	12.91		87.12	87.12	
	10/6/1998	100.03	ND	11.35		88.68	88.68	
	11/5/1998	100.03	ND	12.11		87.92	87.92	
	1/26/1999	100.03	ND	13.78		86.25	86.25	
	2/25/1999	100.03	ND	13.41		86.62	86.62	
	3/26/1999	100.03	ND	12.90		87.13	87.13	
	4/29/1999	100.03	ND	12.60		87.43	87.43	
	5/27/1999	100.03	ND	11.46		88.57	88.57	
	6/24/1999	100.03	ND	10.76		89.27	89.27	
	7/23/1999	100.03	ND	10.92		89.11	89.11	
	8/26/1999	100.03	ND	10.68		89.35	89.35	
	9/23/1999	100.03	ND	11.51		88.52	88.52	
	10/12/1999	100.03	ND	11.95		88.08	88.08	
	11/29/1999	100.03	ND	12.18		87.85	87.85	*
	1/31/2000	100.03	ND	13.44		86.59	86.59	
	4/6/2000	100.03	ND	13.44		86.59	86.59	
	7/12/2000	100.03	ND	12.41		87.62	87.62	
	10/5/2000	100.03	ND	13.80		86.23	86.23	
	1/25/2001	100.03	ND	12.16		87.87	87.87	
	4/17/2001	100.03	ND	12.72		87.31	87.31	
	7/3/2001	100.03	ND	13.14		86.89	86.89	
	11/7/2001	100.03	ND	12.04		87.99	87.99	
	3/19/2002	100.03	ND	13.41		86.62	86.62	
	12/23/2002	100.03	17.65	18.83	1.18	81.20	82.14	
	1/10/2003	100.03	17.84	18.97	1.13	81.06	81.96	
	2/27/2003	100.03	18.26	19.45	1.19	80.58	81.53	
	4/2/2003	100.03	17.54	18.40	0.86	81.63	82.32	
	4/30/2003	100.04	16.36	16.53	0.17	83.51	83.65	
	6/10/2003	100.04	ND	14.28		85.76	85.76	
	7/2/2003	100.04	ND	13.62		86.42	86.42	
	7/23/2003	100.04	ND	14.30		85.74	85.74	
	8/27/2003	100.04	ND	15.36		84.68	84.68	
	10/8/2003	100.04	ND	15.92		84.12	84.12	
	11/20/2003	100.04	ND	16.12		83.92	83.92	
	2/9/2004	100.04	ND	15.48		84.56	84.56	
	3/4/2004	100.04	ND	14.52		85.52	85.52	
	5/6/2004	100.04	ND	14.02		86.02	86.02	**
	6/2/2004	100.04	ND	13.92		86.12	86.12	
	7/19/2004	100.04	ND	13.81		86.23	86.23	
	8/19/2004	100.04	ND	13.57		86.47	86.47	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW002 (continued)	10/15/2004	100.04	ND	14.48		85.56	85.56	
	4/24/2006	100.04	NM	NM				
	4/30/2007	100.04	ND	12.17		87.87	87.87	
	3/21/2008	100.04	ND	12.12		87.92	87.92	
	4/27/2010	100.04	ND	8.32		91.72	91.72	
	4/14/2011	100.04	ND	10.92		89.12	89.12	
	4/11/2012	100.04	ND	11.06		88.98	88.98	
destroyed by Anadarko								
MW003	3/16/1992	100.00	ND	17.38		82.62	82.62	
	3/18/1992	100.00	ND	17.41		82.59	82.59	
	3/24/1992	100.00	ND	17.11		82.89	82.89	
	3/31/1992	100.00	ND	16.90		83.10	83.10	
	5/21/1992	100.00	ND	15.98		84.02	84.02	
	7/21/1992	100.00	ND	15.57		84.43	84.43	
	8/27/1992	100.00	ND	15.80		84.20	84.20	
	9/25/1992	100.00	ND	14.96		85.04	85.04	
	10/20/1992	100.00	ND	14.96		85.04	85.04	
	11/3/1992	100.00	ND	15.15		84.85	84.85	
	6/23/1993	100.00	ND	15.29		84.71	84.71	
	12/15/1993	100.00	ND	14.38		85.62	85.62	
	6/28/1994	100.00	ND	12.35		87.65	87.65	
	12/7/1994	100.00	ND	12.38		87.62	87.62	
	5/31/1995	100.00	ND	13.36		86.64	86.64	
	1/15/1996	100.00	ND	14.11		85.89	85.89	
	7/8/1996	100.00	ND	13.08		86.92	86.92	
	1/30/1997	100.00	ND	12.58		87.42	87.42	
	7/9/1997	100.00	ND	11.55		88.45	88.45	
	9/10/1997	100.00	ND	11.06		88.94	88.94	
	9/19/1997	100.00	ND	11.52		88.48	88.48	
	10/22/1997	100.00	ND	11.08		88.92	88.92	
	11/11/1997	100.00	ND	11.46		88.54	88.54	
	11/19/1997	100.00	ND	11.54		88.46	88.46	
	3/25/1998	100.00	ND	13.25		86.75	86.75	
	10/6/1998	100.00	ND	11.59		88.41	88.41	
	11/5/1998	100.00	ND	12.47		87.53	87.53	
	1/26/1999	100.00	ND	14.19		85.81	85.81	
	2/25/1999	100.00	ND	13.76		86.24	86.24	
	3/26/1999	100.00	ND	13.21		86.79	86.79	
	4/29/1999	100.00	ND	12.97		87.03	87.03	
	5/27/1999	100.00	ND	11.81		88.19	88.19	
	6/24/1999	100.00	ND	11.10		88.90	88.90	
	7/23/1999	100.00	ND	11.34		88.66	88.66	
	8/26/1999	100.00	ND	11.00		89.00	89.00	
	9/23/1999	100.00	ND	11.87		88.13	88.13	
	10/12/1999	100.00	ND	12.34		87.66	87.66	*
	11/29/1999	100.00	ND	12.54		87.46	87.46	
	1/31/2000	100.00	ND	13.87		86.13	86.13	
	4/6/2000	100.00	ND	13.49		86.51	86.51	
	7/12/2000	100.00	ND	12.79		87.21	87.21	
	10/5/2000	100.00	ND	14.15		85.85	85.85	
	1/25/2001	100.00	ND	12.41		87.59	87.59	
	4/17/2001	100.00	ND	13.05		86.95	86.95	
	7/3/2001	100.00	ND	13.51		86.49	86.49	
	11/7/2001	100.00	ND	12.29		87.71	87.71	
	3/20/2002	100.00	ND	13.74		86.26	86.26	
	12/23/2002	100.00	17.87	19.73	1.86	80.27	81.76	
	1/10/2003	100.00	ND	18.57		81.43	81.43	
	5/1/2003	100.01	ND	16.57		83.44	83.44	
	6/10/2003	100.01	ND	14.41		85.60	85.60	
	6/13/2003	100.01	ND	14.31		85.70	85.70	
	7/2/2003	100.01	ND	13.81		86.20	86.20	
	7/24/2003	100.01	ND	14.59		85.42	85.42	
	8/27/2003	100.01	ND	15.69		84.32	84.32	
	10/7/2003	100.01	ND	16.23		83.78	83.78	
	11/20/2003	100.01	ND	16.43		83.58	83.58	
	2/9/2004	100.01	ND	15.68		84.33	84.33	
	3/4/2004	100.01	ND	14.69		85.32	85.32	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
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N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

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TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW004	6/23/1993	97.91	ND	13.47		84.44	84.44	
	12/15/1993	97.91	ND	12.60		85.31	85.31	
	6/28/1994	97.91	ND	10.31		87.60	87.60	
	12/7/1994	97.91	ND	10.55		87.36	87.36	
	5/31/1995	97.91	ND	11.57		86.34	86.34	
	1/15/1996	97.91	ND	12.41		85.50	85.50	
	7/8/1996	97.91	ND	11.26		86.65	86.65	
	1/30/1997	97.91	ND	10.65		87.26	87.26	
	7/9/1997	97.91	ND	9.88		88.03	88.03	
	9/10/1997	97.91	ND	9.29		88.62	88.62	
	9/19/1997	97.91	ND	9.79		88.12	88.12	
	10/22/1997	97.91	ND	9.28		88.63	88.63	
	11/11/1997	97.91	ND	9.71		88.20	88.20	
	11/19/1997	97.91	ND	9.80		88.11	88.11	
	3/25/1998	97.91	ND	11.57		86.34	86.34	
	10/6/1998	97.91	ND	9.79		88.12	88.12	
	11/5/1998	97.91	ND	10.79		87.12	87.12	
	1/26/1999	97.91	ND	12.60		85.31	85.31	
	2/25/1999	97.91	ND	12.08		85.83	85.83	
	3/26/1999	97.91	ND	11.49		86.42	86.42	
	4/29/1999	97.91	ND	11.30		86.61	86.61	
	5/27/1999	97.91	ND	10.12		87.79	87.79	
	6/24/1999	97.91	ND	9.37		88.54	88.54	
	7/23/1999	97.91	ND	9.51		88.40	88.40	
	8/26/1999	97.91	ND	9.28		88.63	88.63	
	9/23/1999	97.91	ND	10.20		87.71	87.71	
	10/12/1999	97.91	ND	10.68		87.23	87.23	
	11/29/1999	97.91	ND	10.86		87.05	87.05	
	1/31/2000	97.91	ND	12.30		85.61	85.61	
	4/6/2000	97.91	ND	11.81		86.10	86.10	
	7/12/2000	97.91	ND	11.10		86.81	86.81	
	10/5/2000	97.91	ND	12.51		85.40	85.40	
	1/25/2001	97.91	ND	10.62		87.29	87.29	
	4/17/2001	97.91	ND	11.34		86.57	86.57	
	7/3/2001	97.91	ND	11.86		86.05	86.05	
	11/7/2001	97.91	ND	10.52		87.39	87.39	
	3/20/2002	97.91	ND	12.04		85.87	85.87	
	12/23/2002	97.91	16.11	18.37	2.26	79.54	81.35	
	1/10/2003	97.91	16.84	18.44	1.60	79.47	80.75	
	2/27/2003	97.91	16.92	18.47	1.55	79.44	80.68	
	4/2/2003	97.91	16.02	17.05	1.03	80.86	81.68	
	4/30/2003	97.89	14.71	14.73	0.02	83.16	83.18	
	6/10/2003	97.89	ND	12.57		85.32	85.32	
	6/13/2003	97.89	ND	12.43		85.46	85.46	
	7/2/2003	97.89	ND	11.95		85.94	85.94	
	7/24/2003	97.89	ND	12.87		85.02	85.02	
	8/27/2003	97.89	ND	13.97		83.92	83.92	
	10/8/2003	97.89	ND	14.56		83.33	83.33	
	11/20/2003	97.89	ND	14.70		83.19	83.19	
	2/9/2004	97.89	ND	13.86		84.03	84.03	
	3/4/2004	97.89	ND	12.75		85.14	85.14	
	5/6/2004	97.89	ND	12.52		85.37	85.37	
	6/2/2004	97.89	ND	12.37		85.52	85.52	
	7/19/2004	97.89	ND	12.34		85.55	85.55	
	8/19/2004	97.89	ND	12.01		85.88	85.88	
	10/15/2004	97.89	ND	13.03		84.86	84.86	
	4/24/2006	97.89	NM	NM				
	4/30/2007	97.89	ND	10.51		87.38	87.38	
	3/21/2008	97.89	ND	10.49		87.40	87.40	
	4/27/2010	97.89	ND	6.81		91.08	91.08	
	4/14/2011	97.89	ND	9.64		88.25	88.25	
	4/11/2012	97.89	ND	9.74		88.15	88.15	
	4/8/2013	97.89	ND	9.49		88.40	88.40	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW005	6/23/1993	98.08	ND	13.22		84.86	84.86	
	12/15/1993	98.08	ND	12.33		85.75	85.75	
	6/28/1994	98.08	ND	10.20		87.88	87.88	
	12/7/1994	98.08	ND	10.34		87.74	87.74	
	5/31/1995	98.08	ND	11.30		86.78	86.78	
	1/15/1996	98.08	ND	12.09		85.99	85.99	
	7/8/1996	98.08	ND	11.04		87.04	87.04	
	1/30/1997	98.08	ND	10.59		87.49	87.49	
	7/9/1997	98.08	ND	9.62		88.46	88.46	
	9/10/1997	98.08	ND	8.98		89.10	89.10	
	9/19/1997	98.08	ND	9.50		88.58	88.58	
	10/22/1997	98.08	ND	9.10		88.98	88.98	
	11/11/1997	98.08	ND	9.45		88.63	88.63	
	11/19/1997	98.08	ND	9.52		88.56	88.56	
	3/25/1998	98.08	ND	11.23		86.85	86.85	
	10/6/1998	98.08	ND	9.62		88.46	88.46	
	11/5/1998	98.08	ND	10.47		87.61	87.61	
	1/26/1999	98.08	ND	12.18		85.90	85.90	
	2/25/1999	98.08	ND	11.76		86.32	86.32	
	3/26/1999	98.08	ND	11.22		86.86	86.86	
	4/29/1999	98.08	ND	10.89		87.19	87.19	
	5/27/1999	98.08	ND	9.81		88.27	88.27	
	6/24/1999	98.08	ND	8.07		90.01	90.01	
	7/23/1999	98.08	ND	9.23		88.85	88.85	*
	8/26/1999	98.08	ND	8.88		89.20	89.20	*
	9/23/1999	98.08	ND	9.86		88.22	88.22	
	10/12/1999	98.08	ND	10.31		87.77	87.77	
	11/29/1999	98.08	ND	10.54		87.54	87.54	
	1/31/2000	98.08	ND	11.86		86.22	86.22	
	4/6/2000	98.08	ND	11.50		86.58	86.58	
	7/12/2000	98.08	ND	10.73		87.35	87.35	
	10/5/2000	98.08	ND	12.16		85.92	85.92	
	1/25/2001	98.08	ND	10.42		87.66	87.66	
	4/17/2001	98.08	ND	11.05		87.03	87.03	
	7/13/2001	98.08	ND	11.50		86.58	86.58	
	11/7/2001	98.08	ND	10.30		87.78	87.78	
	3/20/2002	98.08	ND	11.71		86.37	86.37	
	12/23/2002	98.08	ND	16.37		81.71	81.71	
	1/10/2003	98.08	ND	16.55		81.53	81.53	
	2/27/2003	98.08	ND	16.97		81.11	81.11	
	4/2/2003	98.08	ND	16.08		82.00	82.00	
	5/1/2003	98.08	ND	14.60		83.48	83.48	
	6/10/2003	98.08	ND	12.43		85.65	85.65	
	7/2/2003	98.08	ND	11.79		86.29	86.29	
	7/24/2003	98.08	ND	12.55		85.53	85.53	
	8/27/2003	98.08	ND	13.65		84.43	84.43	
	10/8/2003	98.08	ND	14.20		83.88	83.88	
	11/20/2003	98.08	ND	14.40		83.68	83.68	
	2/9/2004	98.08	ND	13.68		84.40	84.40	
	3/4/2004	98.08	ND	12.69		85.39	85.39	
	5/10/2004	98.08	ND	12.40		85.68	85.68	
	6/2/2004	98.08	ND	12.13		85.95	85.95	
	7/19/2004	98.08	ND	12.03		86.05	86.05	
	8/19/2004	98.08	ND	11.78		86.30	86.30	
	10/15/2004	98.08	ND	12.74		85.34	85.34	
	4/24/2006	98.08	NM	NM				
	4/30/2007	98.08	ND	10.32		87.76	87.76	
	3/21/2008	98.08	ND	10.32		87.76	87.76	
	4/27/2010	98.08	ND	6.52		91.56	91.56	
	4/14/2011	98.08	ND	9.28		88.80	88.80	
	4/11/2012	98.08	ND	9.40		88.68	88.68	
	4/8/2013	98.08	ND	9.20		88.88	88.88	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW006	6/23/1993	101.23	ND	15.29		85.94	85.94	
	12/15/1993	101.23	ND	15.30		85.93	85.93	
	6/28/1994	101.23	ND	15.08		86.15	86.15	
	12/7/1994	101.23	ND	13.50		87.73	87.73	
	5/31/1995	101.23	ND	14.39		86.84	86.84	
	1/15/1996	101.23	ND	14.62		86.61	86.61	
	7/8/1996	101.23	ND	14.00		87.23	87.23	
	1/30/1997	101.23	ND	13.67		87.56	87.56	
	7/9/1997	101.23	ND	12.52		88.71	88.71	
	9/10/1997	101.23	ND	12.13		89.10	89.10	
	9/19/1997	101.23	ND	12.18		89.05	89.05	
	10/22/1997	101.23	ND	11.82		89.41	89.41	
	11/11/1997	101.23	ND	12.04		89.19	89.19	
	11/19/1997	101.23	ND	12.08		89.15	89.15	
	3/25/1998	101.23	ND	13.59		87.64	87.64	
	10/6/1998	101.23	ND	12.13		89.10	89.10	
	11/5/1998	101.23	ND	12.70		88.53	88.53	
	1/26/1999	101.23	ND	14.23		87.00	87.00	
	2/25/1999	101.23	ND	14.04		87.19	87.19	
	3/26/1999	101.23	ND	13.61		87.62	87.62	
	4/29/1999	101.23	ND	13.46		87.77	87.77	
	5/27/1999	101.23	ND	12.14		89.09	89.09	
	6/24/1999	101.23	ND	11.64		89.59	89.59	
	7/23/1999	101.23	ND	11.72		89.51	89.51	
	8/26/1999	101.23	ND	11.32		89.91	89.91	
	9/23/1999	101.23	ND	11.93		89.30	89.30	
	10/12/1999	101.23	ND	12.42		88.81	88.81	
	11/29/1999	101.23	ND	12.81		88.42	88.42	
	1/31/2000	101.23	ND	13.98		87.25	87.25	
	4/6/2000	101.23	ND	13.81		87.42	87.42	
	7/12/2000	101.23	ND	13.18		88.05	88.05	
	10/5/2000	101.23	ND	14.35		86.88	86.88	
	1/25/2001	101.23	ND	13.07		88.16	88.16	
	4/17/2001	101.23	ND	13.47		87.76	87.76	
	7/3/2001	101.23	ND	13.88		87.35	87.35	
	11/7/2001	101.23	ND	12.98		88.25	88.25	
	3/20/2002	101.23	ND	14.22		87.01	87.01	
	12/23/2002	101.23	17.63	19.45	1.82	81.78	83.24	
	1/10/2003	101.23	17.78	19.70	1.92	81.53	83.07	
	2/27/2003	101.23	18.16	20.22	2.06	81.01	82.66	
	4/2/2003	101.23	17.81	19.29	1.48	81.94	83.12	
	5/1/2003	101.23	17.07	18.38	1.31	82.85	83.90	
	6/10/2003	101.23	ND	15.29		85.94	85.94	
	6/13/2003	101.23	ND	15.18		86.05	86.05	
	7/2/2003	101.23	ND	14.66		86.57	86.57	
	7/23/2003	101.23	ND	14.99		86.24	86.24	
	10/7/2003	101.23	ND	16.31		84.92	84.92	
	11/20/2003	101.23	ND	16.71		84.52	84.52	
	2/9/2004	101.23	ND	16.32		84.91	84.91	
	3/4/2004	101.23	ND	15.55		85.68	85.68	
	5/6/2004	101.23	ND	14.86		86.37	86.37	
	6/2/2004	101.23	ND	14.85		86.38	86.38	
	7/19/2004	101.23	ND	14.62		86.61	86.61	
	8/19/2004	101.23	ND	14.44		86.79	86.79	
	8/27/2003	101.23	ND	15.82		85.41	85.41	
	10/15/2004	101.23	ND	15.16		86.07	86.07	
	4/24/2006	101.23	NM	NM				
	4/30/2007	101.23	ND	13.44		87.79	87.79	
	3/21/2008	101.23	ND	13.08		88.15	88.15	

N/A - Not Applicable ND - Not Detected NM - Not Measured

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\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW007	9/10/1997	97.33	ND	10.98		86.35	86.35	
	9/19/1997	97.33	ND	11.23		86.10	86.10	
	10/20/1997	97.33	ND	10.80		86.53	86.53	
	10/22/1997	97.33	ND	10.68		86.65	86.65	
	11/11/1997	97.33	ND	11.20		86.13	86.13	
	11/19/1997	97.33	ND	11.29		86.04	86.04	
	3/24/1998	97.33	ND	11.47		85.86	85.86	
	10/6/1998	97.33	9.42	9.43	0.01	87.90	87.91	
	11/5/1998	97.33	ND	10.52		86.81	86.81	
	1/26/1999	97.33	ND	12.41		84.92	84.92	
	2/25/1999	97.33	ND	11.98		85.35	85.35	
	3/26/1999	97.33	ND	11.23		86.10	86.10	
	4/29/1999	97.33	ND	11.21		86.12	86.12	
	5/27/1999	97.33	ND	9.85		87.48	87.48	
	6/24/1999	97.33	ND	9.22		88.11	88.11	
	7/23/1999	97.33	ND	9.21		88.12	88.12	
	8/26/1999	97.33	ND	9.01		88.32	88.32	
	9/23/1999	97.33	ND	9.86		87.47	87.47	
	10/12/1999	97.33	ND	10.42		86.91	86.91	
	11/29/1999	97.33	ND	10.41		86.92	86.92	
	1/31/2000	97.33	ND	11.63		85.70	85.70	
	4/6/2000	97.33	ND	11.61		85.72	85.72	
	7/12/2000	97.33	ND	10.92		86.41	86.41	
	10/5/2000	97.33	ND	12.27		85.06	85.06	
	1/25/2001	97.33	ND	10.32		87.01	87.01	
	4/17/2001	97.33	ND	11.08		86.25	86.25	
	7/3/2001	97.33	ND	11.66		85.67	85.67	
	11/7/2001	97.33	ND	10.22		87.11	87.11	
	3/19/2002	97.33	ND	11.72		85.61	85.61	
	12/23/2002	97.33	15.92	18.08	2.16	79.25	80.98	
	2/27/2003	97.33	16.67	18.31	1.64	79.02	80.33	
	4/30/2003	96.32	13.44	14.22	0.78	82.10	82.72	
	6/23/2003	96.32	ND	11.03		85.29	85.29	
	7/28/2003	96.32	ND	11.79		84.53	84.53	
	8/27/2003	96.32	ND	12.72		83.60	83.60	
	10/9/2003	96.32	ND	13.42		82.90	82.90	
	11/20/2003	96.32	ND	13.61		82.71	82.71	
	2/9/2004	96.32	ND	12.87		83.45	83.45	
	3/5/2004	96.32	ND	11.61		84.71	84.71	
	5/10/2004	96.32	ND	11.57		84.75	84.75	
	6/7/2004	96.32	ND	11.48		84.84	84.84	
	7/19/2004	96.32	ND	11.20		85.12	85.12	
	8/19/2004	96.32	ND	10.98		85.34	85.34	
	10/18/2004	96.32	ND	11.93		84.39	84.39	
	4/24/2006	96.32	NM	NM				
	4/30/2007	96.32	ND	9.44		86.88	86.88	
	3/21/2008	96.32	ND	9.36		86.96	86.96	
	4/27/2010	96.32	ND	5.91		90.41	90.41	
	4/14/2011	96.32	ND	8.63		87.69	87.69	
	4/11/2012	96.32	ND	8.76		87.56	87.56	
	4/8/2013	96.32	ND	6.33		89.99	89.99	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW008	10/20/1997	98.34	ND	13.01		85.33	85.33	
	10/22/1997	98.34	ND	12.91		85.43	85.43	
	11/11/1997	98.34	ND	13.92		84.42	84.42	
	11/19/1997	98.34	ND	14.12		84.22	84.22	
	3/24/1998	98.34	ND	14.22		84.12	84.12	
	10/6/1998	98.34	11.71	11.72	0.01	86.62	86.63	
	11/5/1998	98.34	ND	13.73		84.61	84.61	
	1/26/1999	98.34	ND	15.97		82.37	82.37	
	2/25/1999	98.34	ND	14.75		83.59	83.59	
	3/26/1999	98.34	ND	13.80		84.54	84.54	
	4/29/1999	98.34	ND	14.26		84.08	84.08	
	5/27/1999	98.34	ND	12.79		85.55	85.55	
	6/24/1999	98.34	ND	12.15		86.19	86.19	
	7/23/1999	98.34	ND	11.86		86.48	86.48	
	8/26/1999	98.34	ND	12.02		86.32	86.32	
	9/23/1999	98.34	ND	13.20		85.14	85.14	
	10/12/1999	98.34	ND	13.85		84.49	84.49	
	11/29/1999	98.34	ND	13.62		84.72	84.72	
	1/31/2000	98.34	ND	15.68		82.66	82.66	
	4/6/2000	98.34	ND	14.21		84.13	84.13	
	7/12/2000	98.34	ND	14.02		84.32	84.32	
	10/5/2000	98.34	ND	15.43		82.91	82.91	
	1/25/2001	98.34	ND	12.71		85.63	85.63	
	4/17/2001	98.34	ND	13.88		84.46	84.46	
	7/3/2001	98.34	ND	14.64		83.70	83.70	
	11/7/2001	98.34	ND	12.51		85.83	85.83	
	3/19/2002	98.34	ND	14.54		83.80	83.80	
	12/23/2002	98.34	19.63	20.05	0.42	78.29	78.63	
	2/27/2003	98.34	ND	19.98		78.36	78.36	
	4/30/2003	98.34	ND	16.11		82.23	82.23	
	6/23/2003	98.34	ND	12.33		86.01	86.01	
	7/24/2003	98.34	ND	14.16		84.18	84.18	
	8/27/2003	97.10	ND	15.69		81.41	81.41	
	10/8/2003	97.10	ND	16.39		80.71	80.71	
	11/20/2003	97.10	ND	16.54		80.56	80.56	
	2/9/2004	97.10	ND	14.91		82.19	82.19	
	3/5/2004	97.10	ND	12.85		84.25	84.25	
	5/9/2004	97.10	ND	14.00		83.10	83.10	
	6/7/2004	97.10	ND	13.72		83.38	83.38	
	7/19/2004	97.10	ND	13.70		83.40	83.40	
	8/20/2004	97.10	ND	13.11		83.99	83.99	
	10/18/2004	97.10	ND	14.70		82.40	82.40	
	4/24/2006	97.10	NM	NM				
	4/30/2007	97.10	ND	11.18		85.92	85.92	
	3/21/2008	97.10	ND	11.52		85.58	85.58	
	4/27/2010	97.10	ND	8.43		88.67	88.67	
	4/13/2011	97.10	ND	11.75		85.35	85.35	
	4/11/2012	97.10	ND	11.79		85.31	85.31	
	4/8/2013	97.10	ND	10.63		86.47	86.47	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW009	11/11/1997	99.35	ND	13.12		86.23	86.23	
	11/19/1997	99.35	ND	13.26		86.09	86.09	
	3/24/1998	99.35	ND	13.82		85.53	85.53	
	10/6/1998	99.35	11.68	11.68		87.67	87.67	
	11/5/1998	99.35	ND	12.99		86.36	86.36	
	1/26/1999	99.35	ND	14.98		84.37	84.37	
	2/25/1999	99.35	ND	14.22		85.13	85.13	
	3/26/1999	99.35	ND	13.51		85.84	85.84	
	4/29/1999	99.35	ND	13.68		85.67	85.67	
	5/27/1999	99.35	ND	12.25		87.10	87.10	
	6/24/1999	99.35	ND	11.79		87.56	87.56	
	7/23/1999	99.35	ND	11.61		87.74	87.74	
	8/26/1999	99.35	ND	11.45		87.90	87.90	
	9/23/1999	99.35	ND	12.30		87.05	87.05	
	10/12/1999	99.35	ND	12.95		86.40	86.40	
	11/29/1999	99.35	ND	12.93		86.42	86.42	
	1/31/2000	99.35	ND	14.11		85.24	85.24	
	4/6/2000	99.35	ND	13.90		85.45	85.45	
	7/12/2000	99.35	ND	13.40		85.95	85.95	
	10/5/2000	99.35	ND	14.76		84.59	84.59	
	1/25/2001	99.35	ND	12.62		86.73	86.73	
	4/17/2001	99.35	ND	13.45		85.90	85.90	
	7/3/2001	99.35	ND	14.11		85.24	85.24	
	11/7/2001	99.35	ND	12.52		86.83	86.83	
	3/19/2002	99.35	ND	14.14		85.21	85.21	
	12/23/2002	99.35	ND	19.04		80.31	80.31	
	2/27/2003	99.35	ND	19.64		79.71	79.71	
	4/30/2003	99.35	ND	15.43		83.92	83.92	
	6/23/2003	99.35	ND	12.39		86.96	86.96	
	7/28/2003	99.35	ND	13.58		85.77	85.77	
	8/27/2003	97.81	ND	14.42		83.39	83.39	
	10/8/2003	97.81	ND	15.23		82.58	82.58	
	11/20/2003	97.81	ND	15.48		82.33	82.33	
	2/9/2004	97.81	ND	14.61		83.20	83.20	
	3/5/2004	97.81	ND	13.21		84.60	84.60	
	5/6/2004	97.81	ND	13.21		84.60	84.60	
	6/7/2004	97.81	ND	13.19		84.62	84.62	
	7/19/2004	97.81	ND	12.99		84.82	84.82	
	8/19/2004	97.81	ND	12.66		85.15	85.15	
	10/15/2004	97.81	ND	13.91		83.90	83.90	
	4/24/2006	97.81	NM	NM				
	4/30/2007	97.81	ND	11.20		86.61	86.61	
	3/21/2008	97.81	ND	11.12		86.69	86.69	
	4/28/2010	97.81	ND	7.78		90.03	90.03	
	4/13/2011	97.81	ND	10.68		87.13	87.13	
	4/11/2012	97.81	ND	10.83		86.98	86.98	
	4/12/2013	97.81	ND	10.47		87.34	87.34	

N/A - Not Applicable ND - Not Detected NM - Not Measured

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\*\*QA of historical data revealed that incorrect measurements may have been entered.

TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW010	10/20/1997	90.76	ND	5.28		85.48	85.48	
	10/22/1997	90.76	ND	5.20		85.56	85.56	
	11/11/1997	90.76	ND	6.10		84.66	84.66	
	11/19/1997	90.76	ND	6.33		84.43	84.43	
	3/24/1998	90.76	ND	6.75		84.01	84.01	
	6/24/1999	90.76	ND	4.82		85.94	85.94	
	7/23/1999	90.76	ND	4.68		86.08	86.08	
	8/26/1999	90.76	ND	4.90		85.86	85.86	
	9/23/1999	90.76	ND	6.25		84.51	84.51	
	10/12/1999	90.76	ND	6.21		84.55	84.55	
	11/29/1999	90.76	ND	6.50		84.26	84.26	
	1/31/2000	90.76	ND	8.11		82.65	82.65	
	4/6/2000	90.76	ND	7.08		83.68	83.68	
	7/12/2000	90.76	ND	6.97		83.79	83.79	
	10/17/2000	90.76	ND	9.80		80.96	80.96	
	1/25/2001	90.76	ND	5.58		85.18	85.18	
	4/17/2001	90.76	ND	6.75		84.01	84.01	
	7/3/2001	90.76	ND	7.52		83.24	83.24	
	11/7/2001	90.76	ND	5.45		85.31	85.31	
	3/20/2002	90.76	ND	7.50		83.26	83.26	
	12/23/2002	90.76	ND	11.84		78.92	78.92	
	4/30/2003	90.76	ND	8.00		82.76	82.76	
	6/23/2003	90.76	ND	5.02		85.74	85.74	
	7/24/2003	90.76	ND	7.24		83.52	83.52	
	8/27/2003	89.63	ND	8.93		80.70	80.70	
	10/9/2003	89.63	ND	9.36		80.27	80.27	
	11/21/2003	89.63	ND	8.99		80.64	80.64	
	2/9/2004	89.63	ND	6.96		82.67	82.67	
	3/5/2004	89.63	ND	5.15		84.48	84.48	
	5/6/2004	89.63	ND	6.58		83.05	83.05	
	6/7/2004	89.63	ND	6.51		83.12	83.12	
	7/19/2004	89.63	ND	6.53		83.10	83.10	
	8/20/2004	89.63	ND	5.56		84.07	84.07	
	10/18/2004	89.63	ND	6.75		82.88	82.88	
	4/24/2006	89.63	NM	NM				
	4/30/2007	89.63	ND	3.60		86.03	86.03	
	3/21/2008	89.63	ND	4.12		85.51	85.51	
	4/27/2010	89.63	ND	0.45		89.18	89.18	
	4/14/2011	89.63	ND	4.26		85.37	85.37	
	4/11/2012	89.63	ND	4.24		85.39	85.39	
	4/8/2013	89.63	ND	3.10		86.53	86.53	

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TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW011	10/20/1997	92.10	6.10	6.18	0.08	85.92	85.98	
	10/22/1997	92.10	5.99	6.02	0.03	86.08	86.10	
	11/11/1997	92.10	6.81	6.97	0.16	85.13	85.26	
	11/19/1997	92.10	6.97	7.10	0.13	85.00	85.10	
	3/24/1998	92.10	7.55	7.57	0.02	84.53	84.55	
	10/6/1998	92.10	5.44	5.45	0.01	86.65	86.66	
	11/5/1998	92.10	ND	7.11		84.99	84.99	
	1/26/1999	92.10	ND	9.18		82.92	82.92	
	2/25/1999	92.10	ND	8.16		83.94	83.94	
	3/26/1999	92.10	ND	7.35		84.75	84.75	
	4/29/1999	92.10	ND	7.60		84.50	84.50	
	5/27/1999	92.10	ND	6.25		85.85	85.85	
	6/24/1999	92.10	ND	5.42		86.68	86.68	
	7/23/1999	92.10	ND	5.32		86.78	86.78	
	8/26/1999	92.10	ND	5.46		86.64	86.64	
	9/23/1999	92.10	ND	6.66		85.44	85.44	
	10/12/1999	92.10	ND	7.18		84.92	84.92	
	11/29/1999	92.10	ND	7.06		85.04	85.04	
	1/31/2000	92.10	ND	8.86		83.24	83.24	
	4/6/2000	92.10	ND	7.71		84.39	84.39	
	7/12/2000	92.10	ND	7.47		84.63	84.63	
	10/5/2000	92.10	ND	8.91		83.19	83.19	
	1/25/2001	92.10	ND	6.25		85.85	85.85	
	4/17/2001	92.10	ND	7.39		84.71	84.71	
	7/3/2001	92.10	ND	8.08		84.02	84.02	
	11/7/2001	92.10	ND	6.11		85.99	85.99	
	3/19/2002	92.10	ND	8.02		84.08	84.08	
	12/23/2002	92.10	13.52	13.53	0.01	78.57	78.58	
	2/27/2003	92.10	13.50	13.51	0.01	78.59	78.60	
	4/30/2003	92.10	ND	8.80		83.30	83.30	
	6/23/2003	92.10	ND	5.93		86.17	86.17	
	7/28/2003	92.10	ND	7.87		84.23	84.23	
	8/27/2003	90.75	ND	9.46		81.29	81.29	
	10/9/2003	90.75	ND	9.93		80.82	80.82	
	11/20/2003	90.75	ND	9.62		81.13	81.13	
	2/9/2004	90.75	ND	7.88		82.87	82.87	
	3/5/2004	90.75	ND	6.24		84.51	84.51	
	5/6/2004	90.75	ND	7.28		83.47	83.47	
	6/7/2004	90.75	ND	7.23		83.52	83.52	
	7/19/2004	90.75	ND	7.18		83.57	83.57	
	8/20/2004	90.75	ND	6.39		84.36	84.36	
	10/18/2004	90.75	ND	7.53		83.22	83.22	
	4/24/2006	90.75	ND	6.63		84.12	84.12	
	4/30/2007	90.75	ND	4.52		86.23	86.23	
	3/21/2008	90.75	ND	4.89		85.86	85.86	
	4/27/2010	90.75	ND	1.18		89.57	89.57	
	4/13/2011	90.75	ND	4.89		85.86	85.86	
	4/11/2012	90.75	ND	4.87		85.88	85.88	
	4/12/2013	90.75	ND	4.29		86.46	86.46	
MW012	4/29/2003	88.31	ND	5.56		82.75	82.75	
	6/23/2003	88.31	ND	3.22		85.09	85.09	
	7/24/2003	88.31	ND	6.41		81.90	81.90	
	8/27/2003	88.31	ND	8.16		80.15	80.15	
	10/8/2003	88.31	ND	8.50		79.81	79.81	
	11/21/2003	88.31	ND	7.89		80.42	80.42	
	2/9/2004	88.31	ND	5.11		83.20	83.20	
	3/5/2004	88.31	ND	3.06		85.25	85.25	
	5/6/2004	88.31	ND	6.58		81.73	81.73	
	6/7/2004	88.31	ND	5.50		82.81	82.81	
	7/19/2004	88.31	ND	5.47		82.84	82.84	
	8/20/2004	88.31	ND	3.64		84.67	84.67	
	10/18/2004	88.31	ND	4.89		83.42	83.42	
	4/24/2006	88.31	NM	NM				
	4/30/2007	88.31	ND	2.08		86.23	86.23	
	3/25/2008	88.31	ND	2.13		86.18	86.18	

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TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW013	4/29/2003	94.53	ND	13.53		81.00	81.00	
	6/23/2003	94.53	ND	10.11		84.42	84.42	
	7/24/2003	94.53	ND	12.64		81.89	81.89	
	8/27/2003	94.53	ND	14.37		80.16	80.16	
	10/8/2003	94.53	ND	14.97		79.56	79.56	
	11/21/2003	94.53	ND	14.68		79.85	79.85	
	2/3/2004	94.53	ND	12.69		81.84	81.84	
	3/5/2004	94.53	ND	10.16		84.37	84.37	
	5/6/2004	94.53	ND	12.04		82.49	82.49	
	6/7/2004	94.53	ND	12.06		82.47	82.47	
	7/19/2004	94.53	ND	11.96		82.57	82.57	
	8/20/2004	94.53	ND	10.95		83.58	83.58	
	10/18/2004	94.53	ND	12.48		82.05	82.05	
	4/24/2006	94.53	NM					
	4/30/2007	94.53	ND	8.88		85.65	85.65	
	3/21/2008	94.53	ND	8.56		85.97	85.97	
	4/27/2010	94.53	ND	6.42		88.11	88.11	
	4/13/2011	94.53	ND	9.93		84.60	84.60	
MW014	4/29/2003	94.95	14.06	14.28	0.22	80.67	80.85	
	6/23/2003	94.95	10.92	11.19	0.27	83.76	83.98	
	7/24/2003	94.95	14.34	14.55	0.21	80.40	80.57	
	8/27/2003	94.95	16.17	16.50	0.21	78.45	78.62	
	10/9/2003	94.95	16.72	17.03	0.31	77.92	78.17	
	11/20/2003	94.95	ND	16.25		78.70	78.70	
	2/3/2004	94.95	ND	13.44		81.51	81.51	
	3/5/2004	94.95	ND	10.41		84.54	84.54	
	5/10/2004	94.95	ND	13.78		81.17	81.17	
	6/7/2004	94.95	ND	13.69		81.26	81.26	
	7/19/2004	94.95	ND	13.54		81.41	81.41	
	8/20/2004	94.95	ND	11.95		83.00	83.00	
	10/15/2004	94.95	ND	14.75		80.20	80.20	
	4/24/2006	94.95	ND	12.90		82.05	82.05	
	4/30/2007	94.95	ND	9.72		85.23	85.23	
	3/21/2008	94.95	ND	10.79		84.16	84.16	
	4/28/2010	94.95	ND	7.80		87.15	87.15	
	4/14/2011	94.95	ND	11.66		83.29	83.29	
MW14D	5/18/2007		ND	11.50				
	4/28/2010		ND	8.30				
	4/13/2011		ND	12.19				
	4/10/2012		ND	11.98				
	4/12/2013		ND	10.84				
TMW015 (Abaandoned)	4/29/2003	95.57	ND	14.50		81.07	81.07	
	6/23/2003	95.57	ND	12.15		83.42	83.42	
	7/28/2003	95.57	ND	17.15		78.42	78.42	
	8/27/2003	95.57	ND	17.78		77.79	77.79	
	10/9/2003	95.57	ND	19.13		76.44	76.44	
	11/21/2003	95.57	ND	17.47		78.10	78.10	
	2/3/2004	95.57	ND	14.32		81.25	81.25	
TMW016 (Abaandoned)	4/28/2003	95.55	ND	17.23		78.32	78.32	
	6/23/2003	95.55	ND	14.38		81.17	81.17	
	7/30/2003	95.55	ND	18.51		77.04	77.04	
	8/27/2003	95.55	ND	19.13		76.42	76.42	
	10/9/2003	95.55	ND	19.38		76.17	76.17	
	11/21/2003	95.55	ND	18.13		77.42	77.42	
	2/3/2004	95.55	ND	16.47		79.08	79.08	

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TABLE 2

**Historic Groundwater Elevations and LNAPL Thickness  
Hambert Compressor Station, Weld County, Colorado**

Well ID	Date of Measurement	Reference Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	Measured GW Elevation (feet)	Corrected GW Elevation* (feet)	Comments
MW017	4/29/2003	92.96	ND	10.99		81.97	81.97	
	6/23/2003	92.96	ND	7.88		85.08	85.08	
	7/24/2003	92.96	ND	10.80		82.16	82.16	
	8/27/2003	92.96	ND	12.69				
	10/9/2003	92.96	ND	13.35		79.61	79.61	
	11/21/2003	92.96	ND	13.08		79.88	79.88	
	2/3/2004	92.96	ND	10.58		82.38	82.38	
	3/9/2004	92.96	ND	7.25		85.71	85.71	
	5/9/2004	92.96	ND	10.61		82.35	82.35	
	6/7/2004	92.96	ND	10.36		82.60	82.60	
	7/19/2004	92.96	ND	10.18		82.78	82.78	
	8/20/2004	92.96	ND	8.77		84.19	84.19	
	10/18/2004	92.96	ND	10.81		82.15	82.15	
	4/24/2006	92.96	ND	9.81		83.15	83.15	
	4/30/2007	92.96	ND	6.94		86.02	86.02	
	3/21/2008	92.96	ND	7.71		85.25	85.25	
MW018	2/3/2004	95.00	ND	13.51		81.49	81.49	
	3/5/2004	95.00	ND	10.17		84.83	84.83	
	5/9/2004	95.00	ND	14.69		80.31	80.31	
	6/7/2004	95.00	ND	14.06		80.94	80.94	
	7/19/2004	95.00	ND	14.33		80.67	80.67	
	8/23/2004	95.00	ND	11.71		83.29	83.29	
	10/18/2004	95.00	ND	13.27		81.73	81.73	
	4/24/2006	95.00	ND	13.60		81.40	81.40	
	4/30/2007	95.00	ND	9.86		85.14	85.14	
	3/21/2008	95.00	ND	11.48		83.52	83.52	
	4/13/2011	95.00	ND	12.47		82.53	82.53	
	4/10/2012	95.00	ND	12.24		82.76	82.76	
	4/12/2013	95.00	ND	10.98		84.02	84.02	
MW019	2/3/2004	94.93	ND	15.65		79.28	79.28	
	2/10/2004	94.93				94.93	94.93	
	3/5/2004	94.93	ND	13.32		81.61	81.61	
	5/9/2004	94.93	ND	17.54		77.39	77.39	
	6/7/2004	94.93	ND	15.41		79.52	79.52	
	7/19/2004	94.93	ND	15.58		79.35	79.35	
	8/20/2004	94.93	ND	16.23		78.70	78.70	
	10/18/2004	94.93	ND	16.92		78.01	78.01	
	4/24/2006	94.93	NM	NM				
	4/28/2007	94.93	ND	13.10		81.83	81.83	
	3/21/2008	94.93	ND	12.97		81.96	81.96	
	4/27/2010	94.93	ND	9.67		85.26	85.26	
	4/13/2011	94.93	ND	13.44		81.49	81.49	
	4/10/2012	94.93	ND	13.20		81.73	81.73	
	4/12/2013	94.93	ND	12.63		82.30	82.30	

N/A - Not Applicable ND - Not Detected NM - Not Measured

\*Takes LNAPL into account using actual density when available or an estimated value of 0.8 mg/L.

\*\*QA of historical data revealed that incorrect measurements may have been entered.

**TABLE 3**  
**Historical BTEX Concentrations in Groundwater**  
**Hambert Compressor Station**

Well ID	Sample Event Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes
Colorado Basic Standard for GW		5.0	1,000	700	10,000
<b>MW001</b>	3/18/1992	<0.8	<0.78	<0.6	<1.54
	3/24/1992	<0.8	<0.78	<0.6	<1.54
	11/3/1992	<0.8	<0.78	<0.6	<1.54
	6/23/1993	<0.5	<0.5	<0.5	<0.5
	12/15/1993	<0.5	<0.5	<0.5	<0.5
	6/28/1994	<0.5	<0.5	<0.5	<0.5
	12/7/1994	<0.5	<0.5	<0.5	<0.5
	5/31/1995	<0.5	<0.5	<0.5	<0.5
	1/15/1996	<0.5	<0.5	<0.5	<0.5
	7/8/1996	<0.5	<0.5	<0.5	<0.5
	1/30/1997	<0.5	<0.5	<0.5	<0.5
	7/9/1997	<0.5	<0.5	<0.5	<0.5
	1/29/1998	<0.5	<0.5	<0.5	<0.5
	10/12/1999	<0.5	<0.5	<0.5	<2
	4/7/2000	<1	<1	<1	<2
	10/17/2000	<0.5	<0.5	<0.5	<2
	4/19/2001	<0.5	<0.5	<0.5	<2
	11/10/2001	<0.5	<0.5	<0.5	<2
	3/19/2002	<1	<1	<1	<2
	5/1/2003	<0.5	<0.5	<0.5	1.2
	7/23/2003	<0.5	<0.5	<0.5	<1
	10/7/2003	<0.5	<0.5	<0.5	<1
	2/9/2004	1.2	2.9	<0.5	3
	5/10/2004	<0.5	<0.5	<0.5	12.8
	7/19/2004	<0.5	<0.5	<0.5	<0.5
	10/18/2004	<0.5	<0.5	<0.5	<0.5
	5/5/2005	<1.0	<1.0	<1.0	<1.0
<b>MW002</b>	3/18/1992	3	<0.78	3	7
	3/24/1992	19	<0.78	16	32
	11/3/1992	8	<0.78	11	23
	6/23/1993	17	0.81	21	27
	12/15/1993	8.8	<1.2	36	31
	6/28/1994	1	<0.5	3.5	2.5
	12/7/1994	<0.5	<0.5	0.72	0.86
	5/31/1995	6.6	<0.5	140	300
	1/15/1996	<0.5	<0.5	95	200
	7/8/1996	<1.2	<1.2	85	140
	1/30/1997	<0.5	<0.5	15	16
	7/9/1997	52	<0.5	21	160
	1/29/1998	<1	<1	75	120
	10/12/1999	<0.5	3.5	62	66
	4/7/2000	110	<5	68	89
	10/17/2000	3	4.1	63	74
	4/19/2001	<0.5	8.9	88	120
	11/10/2001	1.8	7.4	75	86
	3/19/2002	1.18	<1	46.5	31.29
	4/30/2003	FP	FP	FP	FP
	7/23/2003	51.1	<50	58.5	210
	10/8/2003	170	<50	<50	158
	10/15/2004	<0.5	<0.5	31.5	70.1
	3/21/2008	16	<5.0	3.3	2.8
	4/27/2010	<1.0	<5.0	<1.0	<3.0
	4/14/2011	<1.0	<5.0	<1.0	<3.0
	4/11/2012	<1.0	<5.0	<1.0	<3.0

Well destroyed by Anadarko

**NOTES:**

All "<" values less than the Lab Detection Limit  
 FP - Not sampled; free product present in well  
 D - Diluted Sample  
 J - Analyte detected below quantitation limits  
 1 - Detection limit above CBSGW of 5.0 ug/L

**TABLE 3**  
**Historical BTEX Concentrations in Groundwater**  
**Hambert Compressor Station**

Well ID	Sample Event Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes
Colorado Basic Standard for GW		5.0	1,000	700	10,000
<b>MW003</b>	3/18/1992	2300	3600	600	7000
	3/24/1992	1700	1600	100	2700
	11/3/1992	250	370	<0.6	870
	6/23/1993	860	700	98	1500
	12/15/1993	570	130	75	790
	6/28/1994	79	23	22	300
	12/7/1994	840	130	160	1900
	5/31/1995	350	55	74	770
	1/15/1996	190	25	76	630
	7/8/1996	120	12	48	420
	1/30/1997	33	4.5	24	250
	7/9/1997	<0.5	<0.5	45	79
	1/29/1998	120	9.5	91	670
	10/13/1999	50	<0.5	6.7	790
	4/7/2000	29	<5	87	780
	10/17/2000	130	54	220	2200
	4/19/2001	66	7.3	120	950
	11/10/2001	6.5	8.7	64	520
	3/20/2002	5.58	<1	21	95.9
	5/1/2003	<50	<50	72.7	949
	6/13/2003	<5	<5	30.6	446
	7/24/2003	<33.3	<33.3	43.6	441.1
	10/7/2003	12.1	<5	97.5	770.9
	10/15/2004	9.6	<1	79.7	536.1
	3/21/2008	1.3	<5.0	1.6	2.4
<b>MW004</b>	6/23/1993	14	0.52	<0.5	27
	12/15/1993	<0.5	<0.5	<0.5	0.94
	6/28/1994	0.75	<0.5	<0.5	0.88
	12/7/1994	<0.5	<0.5	<0.5	<0.5
	5/31/1995	2.7	<0.5	<0.5	3.5
	1/15/1996	4.9	<0.5	1.4	4.8
	7/8/1996	0.62	<0.5	<0.5	<0.5
	1/30/1997	<0.5	<0.5	<0.5	<0.5
	7/9/1997	0.73	<0.5	<0.5	0.95
	1/29/1998	9.9	<0.5	12	51
	10/13/1999	37	<0.5	27	160
	4/7/2000	<1	<1	<1	<2
	10/17/2000	<0.5	<0.5	<0.5	<2
	4/19/2001	5	<0.5	6	24
	11/10/2001	2.7	<0.5	0.7	2.1
	3/20/2002	<1	<1	<1	<2
	4/30/2003	FP	FP	FP	FP
	6/13/2003	34.4	<10	62.4	831.5
	7/24/2003	5.7	<5	17	197.5
	10/8/2003	<5	<5	7.6	83.8
	10/15/2004	<0.5	<0.5	<0.5	<0.5
	3/21/2008	6	<5.0	3.3	8.5

**NOTES:**

All "<" values less than the Lab Detection Limit

FP - Not sampled; free product present in well

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J - Analyte detected below quantitation limits

1 - Detection limit above CBSGW of 5.0 ug/L

**TABLE 3**  
**Historical BTEX Concentrations in Groundwater**  
**Hambert Compressor Station**

Well ID	Sample Event Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes
Colorado Basic Standard for GW		5.0	1,000	700	10,000
<b>MW005</b>	6/23/1993	<0.5	<0.5	0.61	<0.5
	12/15/1993	<0.5	<0.5	<0.5	<0.5
	6/28/1994	<0.5	<0.5	<0.5	<0.5
	12/7/1994	<0.5	<0.5	<0.5	<0.5
	5/31/1995	<0.5	<0.5	<0.5	<0.5
	1/15/1996	<0.5	<0.5	<0.5	<0.5
	7/8/1996	<0.5	<0.5	<0.5	<0.5
	1/30/1997	<0.5	<0.5	<0.5	<0.5
	7/9/1997	<0.5	<0.5	<0.5	<0.5
	1/29/1998	<0.5	<0.5	<0.5	0.77
	10/12/1999	<0.5	<0.5	<0.5	<2
	4/7/2000	<1	<1	<1	<2
	10/17/2000	<0.5	<0.5	<0.5	<2
	4/19/2001	<0.5	0.6	<0.5	<2
	11/10/2001	<0.5	<0.5	<0.5	<2
	3/20/2002	<1	<1	<1	<2
	5/1/2003	<0.5	<0.5	<0.5	1
	10/8/2003	<0.5	<0.5	<0.5	<1
	5/10/2004	<0.5	<0.5	<0.5	<0.5
	10/15/2004	<0.5	<0.5	<0.5	<0.5
	5/5/2005	<1.0	<1.0	<1.0	<1.0
	3/21/2008	<0.50	<5.0	3.3	<1.5
<b>MW006</b>	6/23/1993	150	<2.5	4.6	46
	12/15/1993	220	<6	<6	<6
	6/28/1994	460	<5	7.1	34
	12/7/1994	120	<1.2	<1.2	1.4
	5/31/1995	140	<1.2	2.5	11
	1/15/1996	76	<1	1.5	2.2
	7/8/1996	350	<5	7	14
	1/30/1997	140	<2.5	4.1	2.9
	7/9/1997	38	<2.5	<2.5	<2.5
	1/29/1998	17	<0.5	1.6	1.8
	10/12/1999	4.1	<0.5	<0.5	<2
	4/7/2000	21	<1	1.8	<2
	10/17/2000	60	<0.5	5.5	4.6
	4/19/2001	8.9	<0.5	0.9	<2
	11/10/2001	10	<0.5	<0.5	<2
	3/20/2002	<1	<1	<1	<2
	4/30/2003	FP	FP	FP	FP
	6/13/2003	147	<10	<10	18.6
	7/23/2003	98	5.2	6.1	86.2
	10/7/2003	114	<5	13.1	75.9
	5/6/2004	45.1	<0.5	7.3	72.1
	10/15/2004	<0.5	<0.5	<0.5	<0.5
	5/5/2005	<1	<1.0	<1.0	<1.0
	3/21/2008	<0.5	<5.0	<0.50	<1.5
<b>MW007</b>	3/25/1998	240	<6.2	120	1000
	10/13/1999	<0.5	<0.5	<0.5	40
	4/7/2000	46	<10	100	860
	10/17/2000	23	6.8	42	330
	4/19/2001	33	<1	75	650
	11/10/2001	43	<1	39	330
	3/19/2002	1.48	<1	4.32	30.3
	4/30/2003	FP	FP	FP	FP
	7/28/2003	249	<100	136	1180
	10/9/2003	159	<10	253	1951
	2/9/2004	83	<0.5	258.7	2663.5
	5/10/2004	91.1	<1	41	1553
	7/19/2004	48	<0.5	8.3	1321.1
	10/18/2004	83.5	<5	149.5	1499.6
	5/5/2005	12	<1	4.6	713.6

**NOTES:**

All "<" values less than the Lab Detection Limit

FP - Not sampled; free product present in well

D - Diluted Sample

J - Analyte detected below quantitation limits

1 - Detection limit above CBSGW of 5.0 ug/L

**TABLE 3**  
**Historical BTEX Concentrations in Groundwater**  
**Hambert Compressor Station**

Well ID	Sample Event Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes
Colorado Basic Standard for GW		5.0	1,000	700	10,000
<b>MW008</b>	3/25/1998	<b>290</b>	<10	89	790
	10/13/1999	<0.5	<0.5	<0.5	<2
	4/7/2000	<b>870</b>	<25	280	2900
	10/17/2000	<b>700</b>	6	210	2100
	4/19/2001	<b>790</b>	5.4	260	2700
	11/10/2001	<b>37</b>	6.7	210	1600
	3/19/2002	<b>1400</b>	0.26	228	1426
	5/8/2002	<b>356</b>	1.21	181	1231
	4/30/2003	<b>395</b>	<100	170	2683
	7/24/2003	<b>56.5</b>	<10	244	197
	10/8/2003	<b>13.9</b>	<10	137	344
	2/9/2004	<b>47.5</b>	<0.5	221.3	557.3
	5/9/2004	<b>6.5</b>	<0.5	44.5	27.8
	7/19/2004	<b>9.7</b>	<0.5	47.7	174.8
	10/18/2004	<b>50.3</b>	<1	88.7	742.4
	5/5/2005	<b>27.6</b>	<1	96	435.2
	3/21/2008	<b>13</b>	<5.0	18	91
<b>MW009</b>	3/25/1998	<b>1400</b>	<25	240	2300
	10/13/1999	<b>75</b>	<0.5	<0.5	390
	4/7/2000	<b>150</b>	<10	130	1300
	10/17/2000	<b>22</b>	<0.5	10	100
	4/19/2001	<b>56</b>	<0.5	27	270
	11/10/2001	<b>18</b>	0.9	12	94
	3/19/2002	<b>6.69</b>	<1	2.66	23.79
	4/30/2003	<b>470</b>	<100	315	2865
	7/28/2003	<b>130</b>	<100	147	1185
	10/8/2003	<b>35.4</b>	<5	192	655
	10/15/2004	<b>93.6</b>	<5	128.6	827.1
	3/21/2008	<b>71</b>	<25	20	97
	4/28/2010	3.5	<5.0	16	83
	4/14/2011	1.3	<5.0	7.7	25
	4/11/2012	1.8	<5.0	31	82
	4/12/2013	2.3	<5.0	33	140
<b>MW010</b>	3/25/1998	<0.5	<0.5	<0.5	0.52
	10/12/1999	<0.5	<0.5	<0.5	<2
	4/7/2000	<1	<1	<1	<2
	10/17/2000	<0.5	<0.5	<0.5	<2
	4/19/2001	<0.5	<0.5	<0.5	<2
	11/10/2001	<0.5	<0.5	<0.5	<2
	3/20/2002	<1	<1	<1	0.36
	4/30/2003	<b>64.2</b>	<100	316	352
	10/9/2003	<1	<1	1.7	4.2
	3/21/2008	<b>9.9</b>	<5.0	0.55	<1.5

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**TABLE 3**  
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Well ID	Sample Event Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes
Colorado Basic Standard for GW		5.0	1,000	700	10,000
<b>MW011</b>	10/12/1999	300	130	240	2100
	4/7/2000	210	150	280	2500
	10/17/2000	250	72	210	2100
	4/19/2001	150	29	140	1500
	11/10/2001	110	7.2	110	1000
	3/19/2002	1.25	<1	0.58	4.92
	4/30/2003	85	<100	264	3189
	7/28/2003	<100	<100	215	2926
	10/9/2003	68.9	<5	341	3123
	2/9/2004	60.2	1.5	322.4	3366
	5/6/2004	54.6	<5	71.7	2339.8
	7/19/2004	46.5	<5	2.3	2172.8
	10/18/2004	72.7	<5	270.1	2600.3
	5/5/2005	52.8	2	67.2	1769.7
	4/24/2006	66.2	<0.5	287.7	1004.1
	4/30/2007	33.5	382.8	3.5	1373.9
	3/21/2008	170	<5.0	200	580
	4/27/2010	7.6	<5.0	160	480
	4/13/2011	12	<5.0	380	1300
	4/11/2012	7.4	<5.0	270	950
	4/12/2013	<5.0	<25.0	210	600
<b>MW012</b>	4/29/2003	<0.5	<0.5	<0.5	<1
	7/24/2003	<0.5	<0.5	<0.5	<1
	10/8/2003	<5	<5	<5	<10
	2/9/2004	<0.5	<0.5	<0.5	0.6
	5/6/2004	<0.5	<0.5	<0.5	<0.5
	7/19/2004	<0.5	<0.5	<0.5	<0.5
	10/18/2004	<1	<1	<1	<1
	5/5/2005	<1	<1	<1	1.7
<b>MW013</b>	4/29/2003	655	96.7	142	1466
	7/24/2003	1140	253	2230	966
	10/8/2003	1480	<100	383	3675
	2/3/2004	969.5	0.9	262.3	2410.2
	5/6/2004	2278.2	<5	513.3	4726.9
	7/19/2004	46.5	<5	2.3	2172.8
	10/18/2004	1252.4	<5	305.4	3552.3
	5/5/2005	1208.7	<5	100.7	3102.8
	3/21/2008	1200	<50	330	2600
	4/27/2010	1000	<100	470	3700
	4/13/2011	740	<5.0	510	3300
	4/11/2012	440	<5.0	390	2500
	4/12/2013	260	<50	350	1900
<b>MW014</b>	4/29/2003	FP	FP	FP	FP
	7/24/2003	FP	FP	FP	FP
	10/9/2003	FP	FP	FP	FP
	5/10/2004	37.3	<0.5	<0.5	<0.5
	10/15/2004	1563.7	<5	17.9	13780.1
	4/24/2006	199.8	<0.5	221.6	789.2
	4/30/2007	10.1	162.9	<0.5	547.3
	3/21/2008	170	<5.0	89	310
	4/28/2010	100	<25	210	980
	4/13/2011	67	<5.0	170	920
	4/10/2012	38	<50	140	1000
	4/12/2013	15	<50	130	780

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**Hambert Compressor Station**

Well ID	Sample Event Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes
Colorado Basic Standard for GW		5.0	1,000	700	10,000
<b>TMW15</b>	4/29/2003	<50	<50	<50	143.6
<b>(Abandoned)</b>	7/28/2003	<b>65.6</b>	<10	<10	113.7
	10/9/2003	<1	<1	<1	11.1
	2/3/2004	1.5	<0.5	0.7	9.7
<b>TMW16</b>	7/30/2003	<0.5	<0.5	<0.5	<1
<b>(Abandoned)</b>	10/9/2003	<0.5	<0.5	<0.5	<1
<b>MW017</b>	4/29/2003	<0.5	<0.5	<0.5	<1
	7/24/2003	<0.5	<0.5	<0.5	<1
	10/9/2003	<5	<5	<5	<10
	2/3/2004	1.5	<0.5	0.6	5.1
	5/9/2004	<0.5	<0.5	<0.5	<0.5
	7/19/2004	<0.5	<0.5	<0.5	<0.5
	10/18/2004	<1	<1	<1	<1
	5/5/2005	<1	<1	<1	<1
	4/24/2006	<0.5	<0.5	<0.5	<0.5
	4/30/2007	<0.5	<0.5	<0.5	<0.5
	3/21/2008	0.53	<5.0	<0.50	3.8
<b>MW018</b>	2/3/2004	0.5	<0.5	<0.5	5.8
	5/9/2004	<0.5	<0.5	<0.5	<0.5
	7/19/2004	<0.5	<0.5	<0.5	<0.5
	10/18/2004	<0.5	<0.5	<0.5	<0.5
	5/5/2005	<1	<1	<1	<1
	4/24/2006	1.3	<0.5	0.5	1.2
	4/30/2007	<0.5	<0.5	0.5	8.2
	4/13/2011	<b>18</b>	<5.0	8.6	11
	6/16/2011	<1.0	<5.0	<1.0	<3.0
	4/10/2012	<1.0	<5.0	2.0	<3.0
	4/12/2013	<1.0	<5.0	<1	<3.0
<b>MW019</b>	2/10/2004	<0.5	<0.5	<0.5	<0.5
	5/9/2004	<0.5	<0.5	<0.5	<0.5
	10/18/2004	<1	<1	<1	<1
	5/5/2005	<1	<1	<1	<1
	3/21/2008	0.57	<5.0	<0.50	5.2
	4/13/2011	<1.0	<5.0	<1.0	<3.0
	4/10/2012	<1.0	<5.0	<1.0	<3.0
	4/12/2013	<1.0	<5.0	<1.0	<3.0

**NOTES:**

All "<" values less than the Lab Detection Limit

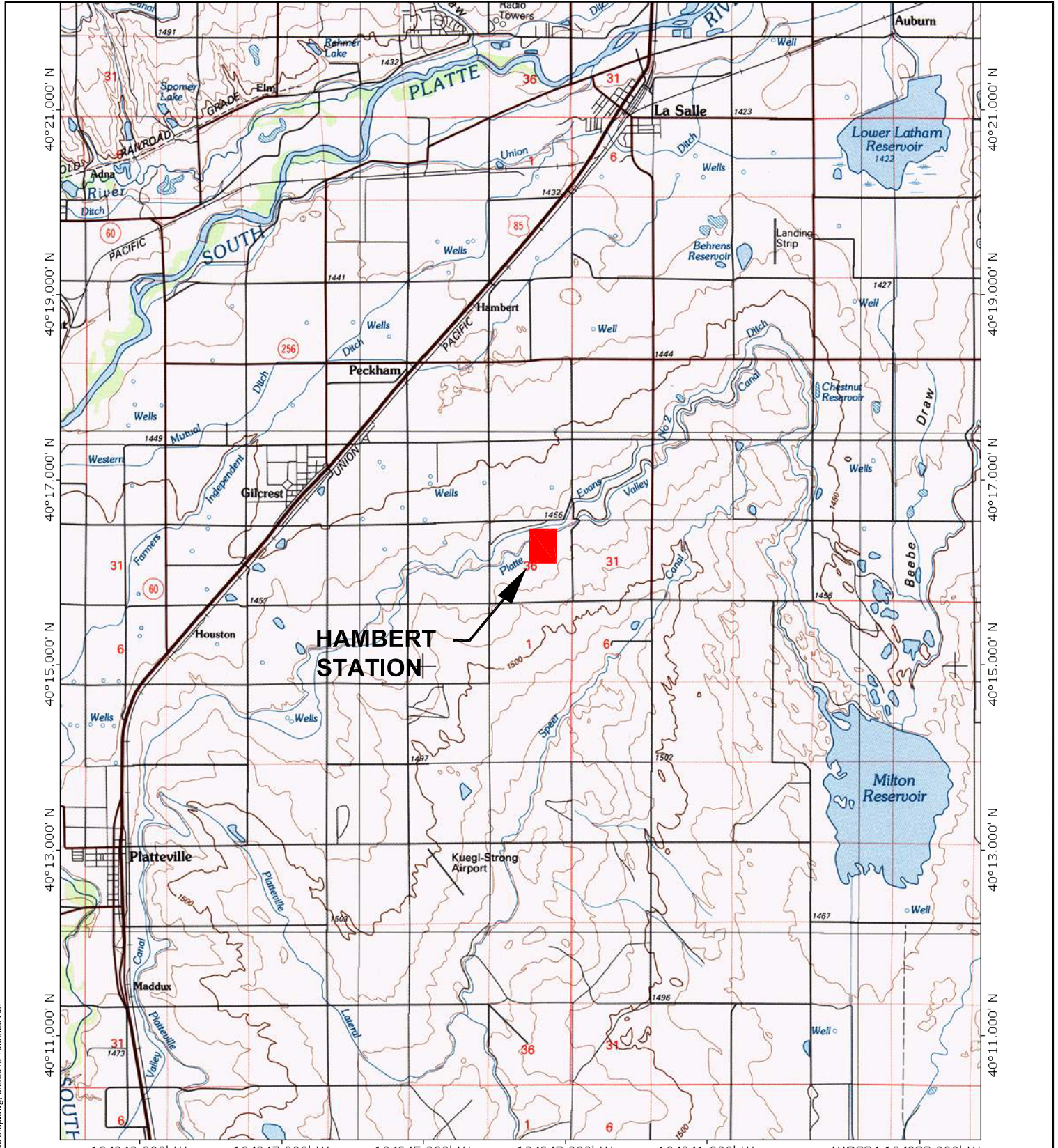
FP - Not sampled; free product present in well

D - Diluted Sample

J - Analyte detected below quantitation limits

1 - Detection limit above CBSGW of 5.0 ug/L

## **FIGURES**



Map from TOPO! (c) 2000 National Geographic Holdings


VICINITY MAP

SECTION 36  
T4N-R66W

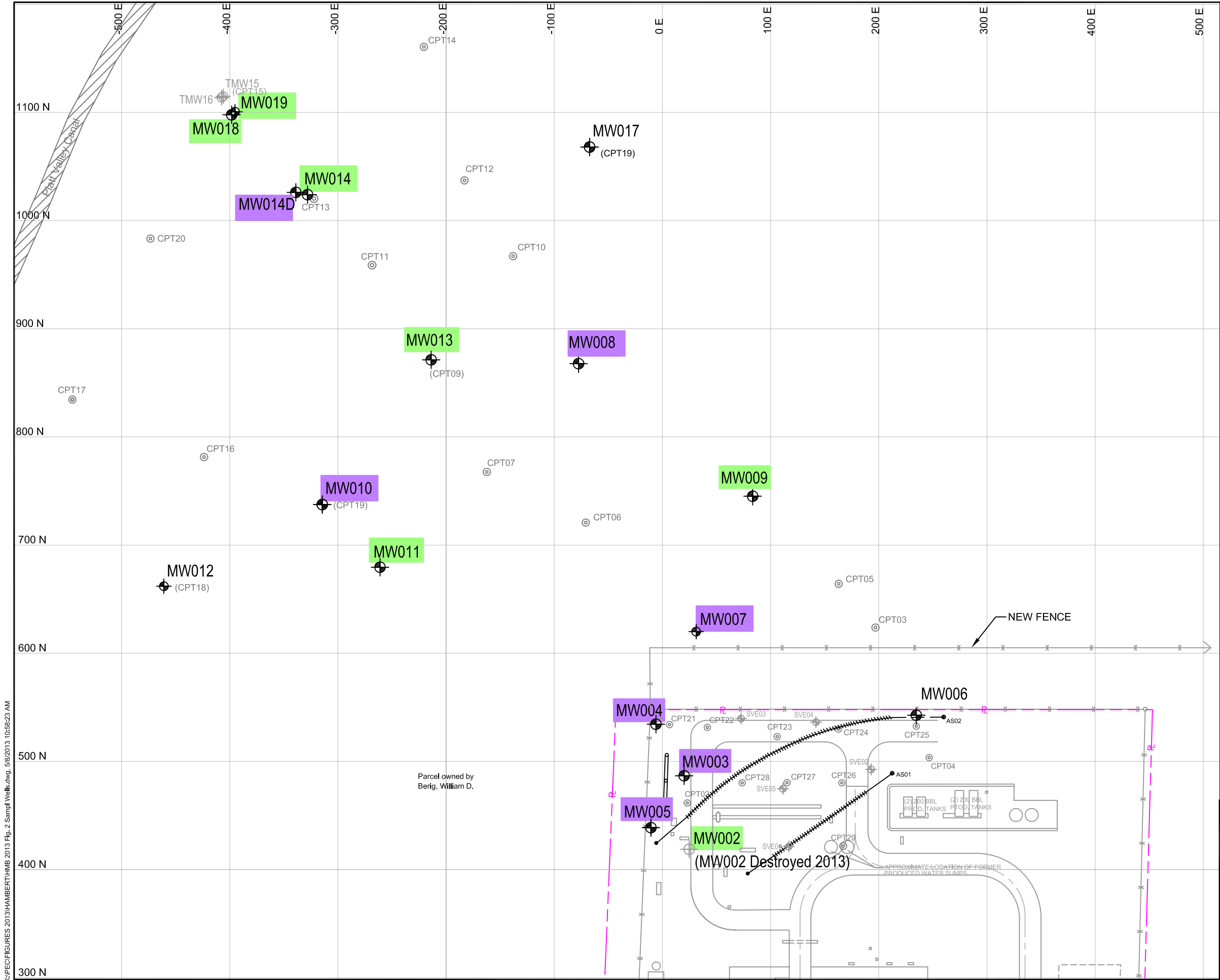


SCALE IN FEET  
1" = 8800'



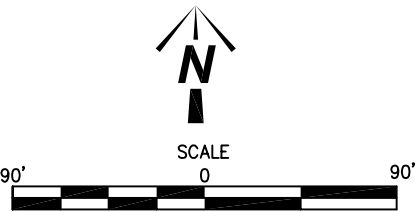
CLIENT/PROJECT:		<b>PAN ENERGY CORP HAMBERT STATION COGCC REMEDIATION NO. 18 Section 36, T.4 N, R.66 W. WELD COUNTY, COLORADO</b>	
TITLE:		<b>SITE LOCATION MAP</b>	
	1526 Cole Boulevard Building 3, Suite 150 Lakewood, CO 80401 303-792-5555	DRAWN BY: KS/ERH REVIEWED BY: MF APPROVED BY: SR	DATE: 04/23/13 PROJECT NO.: 105521
	FIGURE:		<b>1</b>

K:\PROJECTS\2013\HAMBERT\HMB 2013 Fig. 2 Sample Wells.dwg, 5/8/2013 10:56:23 AM



**LEGEND**

- MW002 MONITORING WELL—MNA
- MW007 MONITORING WELL—FLUID LEVEL
- MW006 MONITORING WELL
- TMW16 MONITORING WELL PLUGGED AND ABANDONED
- SVE04 SOIL VAPOR EXTRACTION WELL
- CPT25 CPT PROBE (ABANDONED)
- Slotted Pipe Solid Pipe HORIZONTAL AIR SPARGE WELL (OUT OF SERVICE)
- NS NOT SAMPLED
- R PROPERTY LINE
- APPROXIMATE PARCEL BOUNDARY
- FENCE
- BUILDING, STRUCTURE OR EQUIPMENT
- FORMER LANDFARM AREA




NOTE: THIS SITE MAP DEVELOPED FROM WALSH ENVIRONMENTAL SCIENTISTS AND ENGINEERS BASE MAP. SCANNED BY DDS INC., JANUARY 2002.

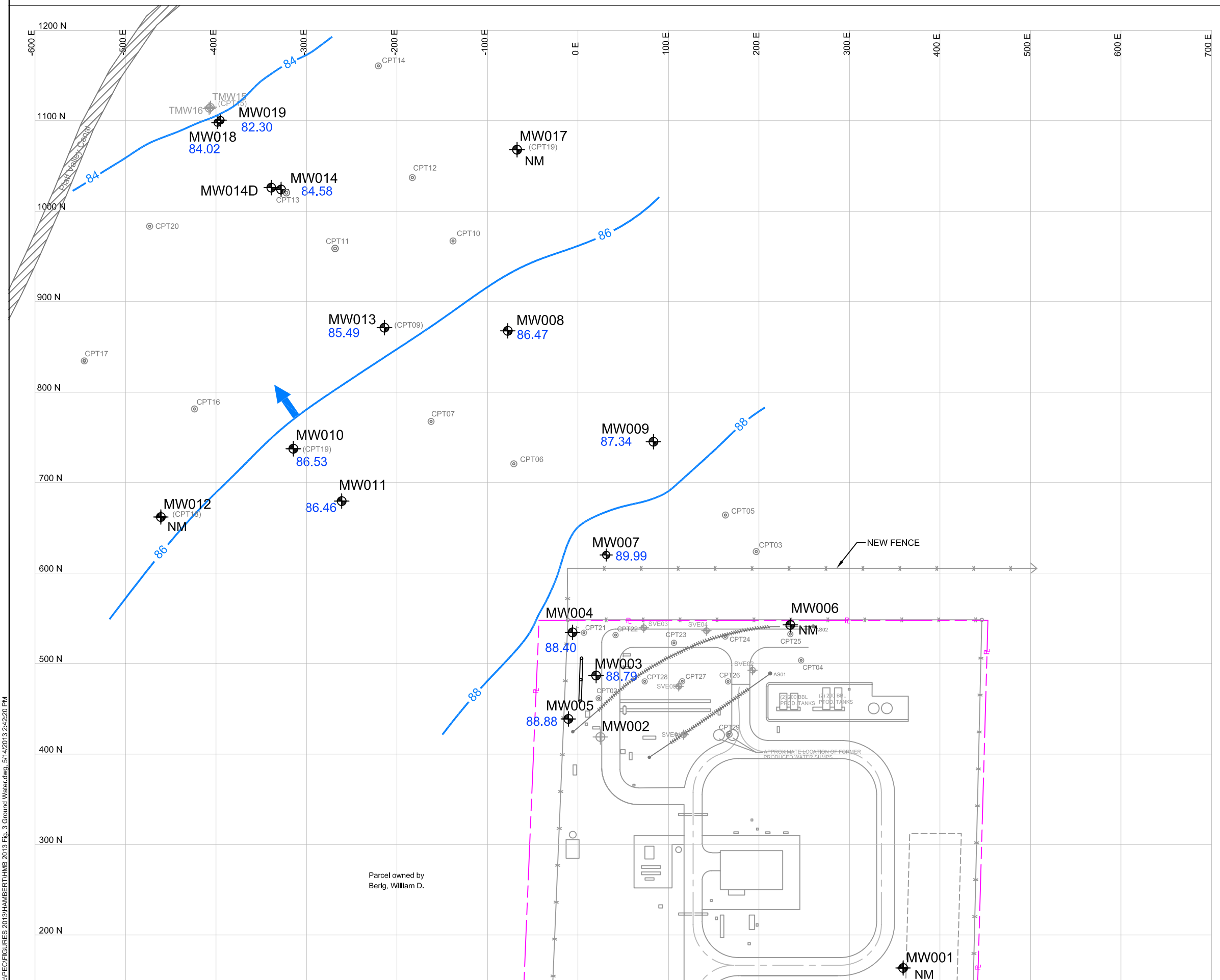
CLIENT/PROJECT:

PAN ENERGY CORP  
HAMBERT STATION  
COGCC REMEDIATION NO. 18  
Section 36, T.4 N, R.66 W  
WELD COUNTY, COLORADO

TITLE:

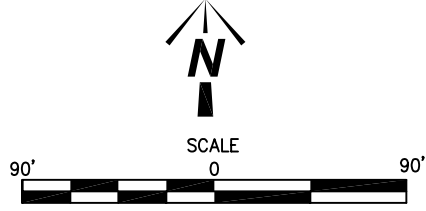
2013 WATER QUALITY SAMPLING WELLS

	1526 Cole Boulevard Building 3, Suite 150 Lakewood, CO 80401 303-792-5555	DRAWN BY: KS/ERH	DATE: 04/22/13	FIGURE:  <b>2</b>
		REVIEWED BY: MF	PROJECT NO.: 105521/009005/000020	
		APPROVED BY: GG		



LEGEND

- MW019 MONITORING WELL LOCATION
- 81.73 GROUND WATER ELEVATION (APRIL 2013)
- TMW16 MONITORING WELL PLUGGED AND ABANDONED
- SVE04 SOIL VAPOR EXTRACTION WELL
- CPT25 CPT PROBE (ABANDONED)
- NM NOT MEASURED
- Horizontal Air Sparge Well (Out of Service)
- Property Line
- Approximate Parcel Boundary
- Fence
- Building, Structure or Equipment
- Ground Water Surface (April 2013)
- Ground Water Flow Direction




NOTE: THIS SITE MAP DEVELOPED FROM WALSH ENVIRONMENTAL SCIENTISTS AND ENGINEERS BASE MAP. SCANNED BY DDS INC., JANUARY 2002.

CLIENT/PROJECT:

PAN ENERGY CORP  
HAMBERT STATION  
COGCC REMEDIATION NO. 18  
Section 36, T.4 N, R.66 W  
WELD COUNTY, COLORADO

TITLE:

2013 GROUND WATER  
ELEVATION MAP



1526 Cole Boulevard  
Building 3, Suite 150  
Lakewood, CO 80401  
303-792-5555

DRAWN BY:  
KS/ERH

DATE:  
04/22/13

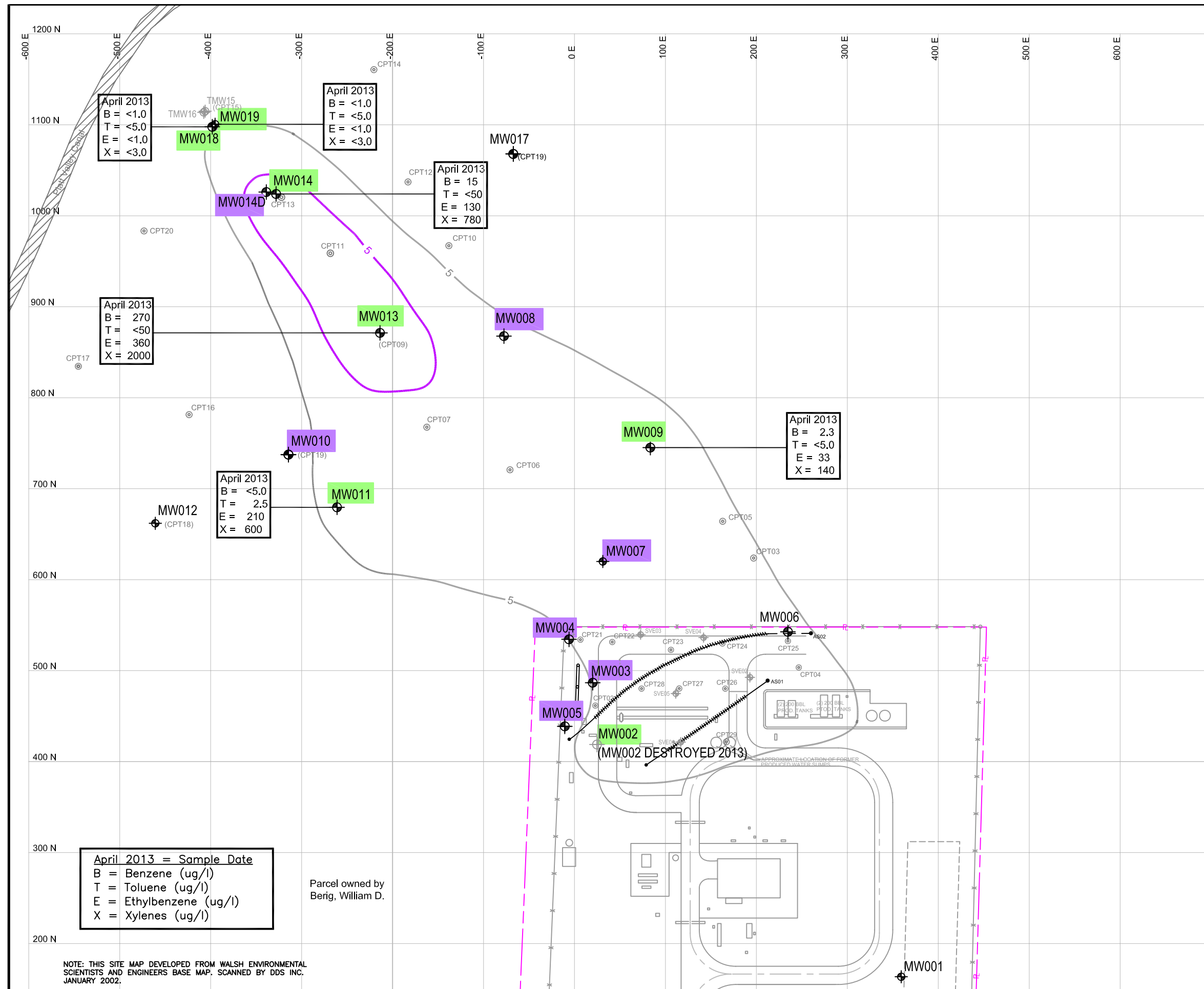
REVIEWED BY:  
MF

PROJECT NO.:  
105521/009005/000020







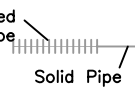





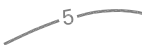

APPROVED BY:  
SR

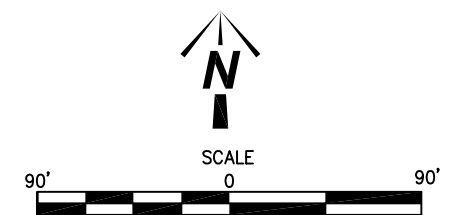
FIGURE:

3



### LEGEND

- |   |       |   |
|---|-------|---|
|  | MW002 | MONITORING WELL—MNA   |
|  | MW007 | MONITORING—FLUID LEVEL  |
|  | MW006 | MONITORING WELL   |
|  | TMW16 | MONITORING WELL PLUGGED AND ABANDONED                                 |
|  | SVE04 | SOIL VAPOR EXTRACTION WELL  |
|  | CPT25 | CPT PROBE (ABANDONED)   |
|  |       | HORIZONTAL AIR SPARGE WELL (OUT OF SERVICE)                           |
|  |       | PROPERTY LINE   |
|  |       | APPROXIMATE PARCEL BOUNDARY   |
|  |       | FENCE   |
|  |       | BUILDING, STRUCTURE OR EQUIPMENT                                      |
|  |       | FORMER LANDFARM AREA  |
|  |       | 2004 BENZENE ISOCONCENTRATION CONTOURS (ug/l)                         |
|  |       | 2013 BENZENE ISOCONCENTRATION CONTOURS (ug/l) (DASHED WHERE INFERRED) |



NOTE: THIS SITE MAP DEVELOPED FROM WALSH ENVIRONMENTAL SCIENTISTS  
AND ENGINEERS BASE MAP. SCANNED BY DDS INC., JANUARY 2002.

CLIENT/PROJECT: **PAN ENERGY CORP  
HAMBERT STATION  
COGCC REMEDIATION NO. 18  
Section 36, T.4 N, R.66 W  
WELD COUNTY, COLORADO**

TITLE: **2013 DISSOLVED PHASE  
BTEX CONCENTRATIONS**


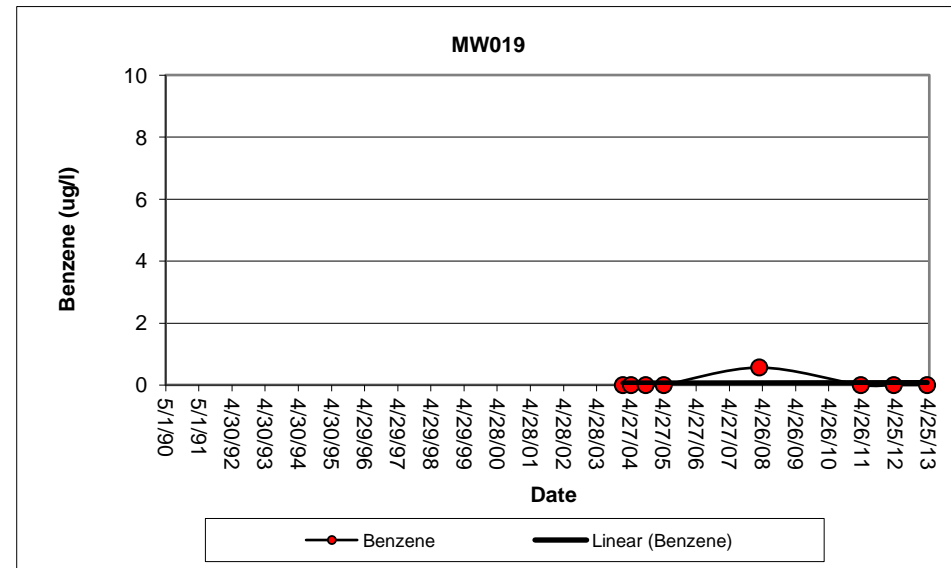
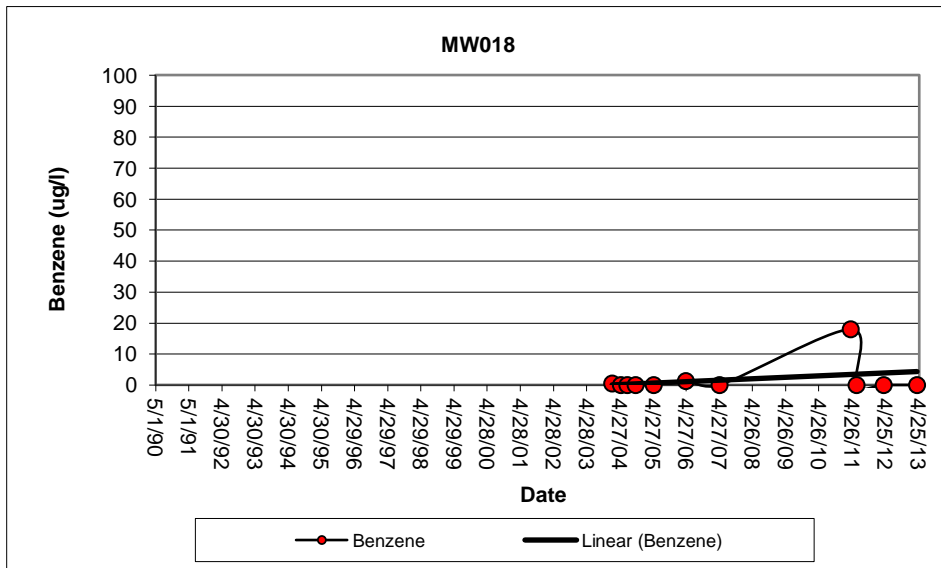
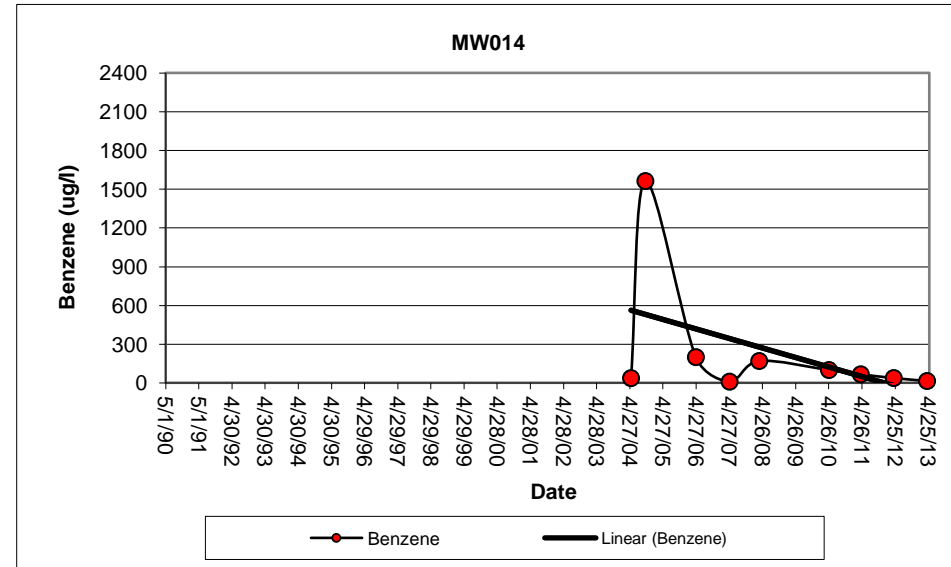
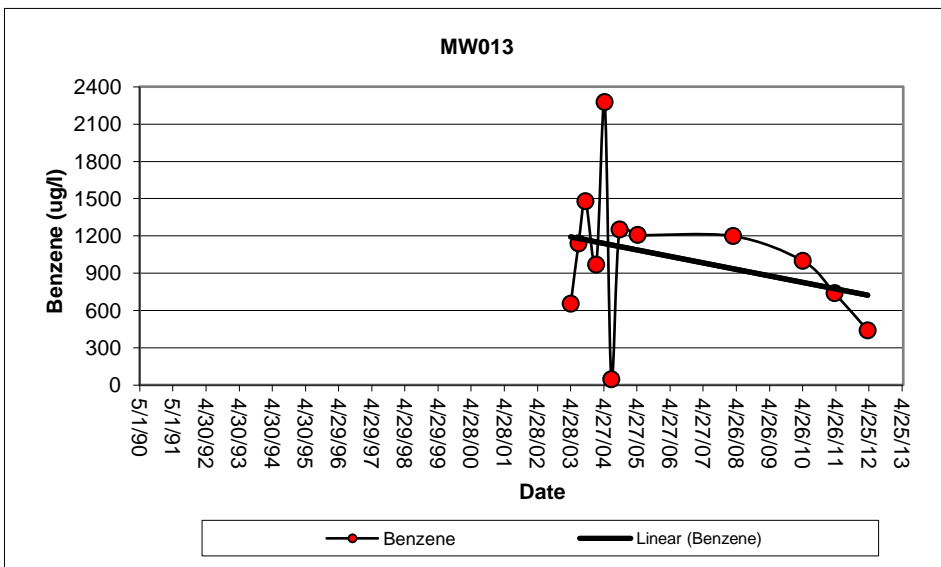
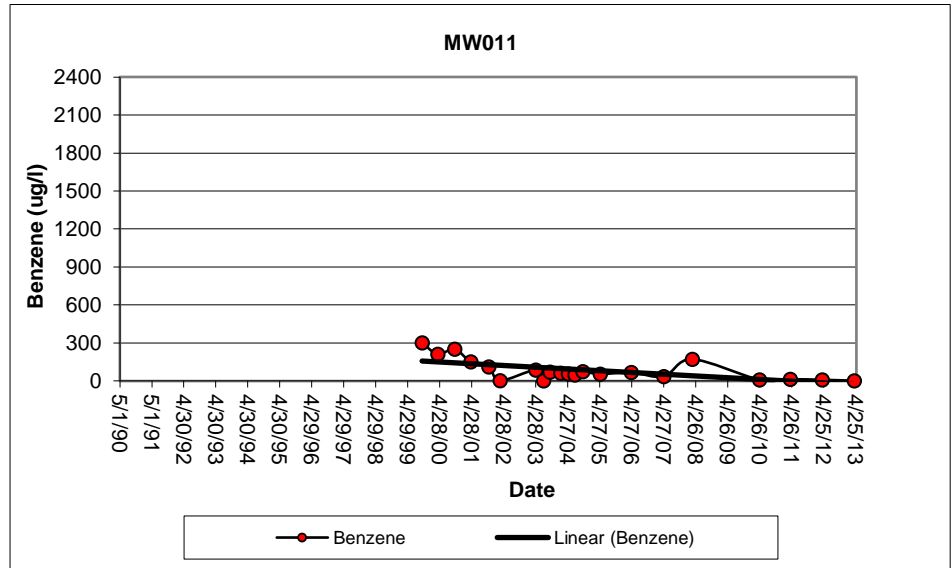
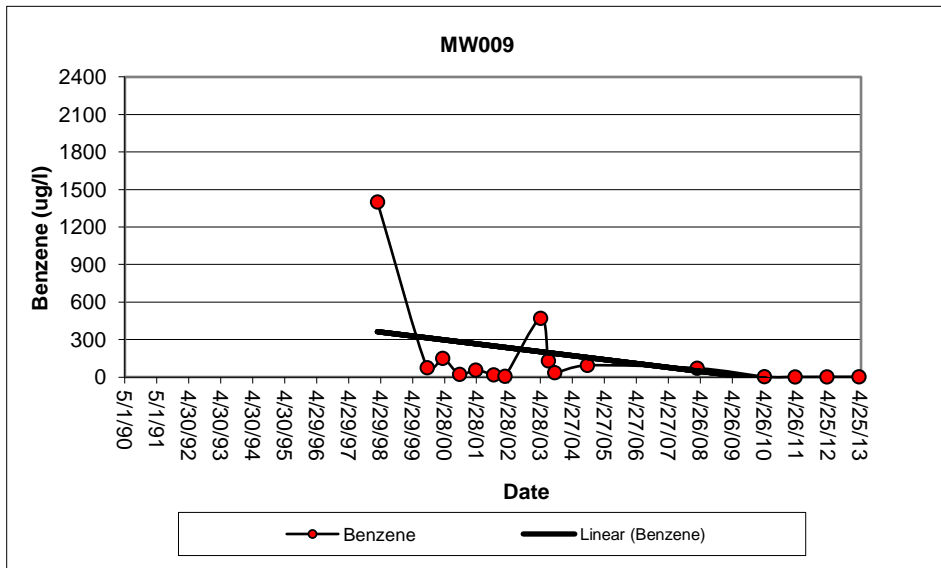
	1526 Cole Boulevard Building 3, Suite 150 Lakewood, CO 80401 303-792-5555	DRAWN BY:	DATE:	<b>FIGURE:</b>  <div style="font-size: 2em; text-align: center;">4</div>
		KS/ERH	04/22/13	
		REVIEWED BY:	PROJECT NO.:	
MF	105521/009005/000020			
APPROVED BY:				
SR				

Figure 5  
Dissolved-Phase Benzene vs. Time Graphs  
Hambert Compressor Station  
Weld County, Colorado



## **APPENDIX A**



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

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

## Report Summary

Thursday April 18, 2013

Report Number: L630452

Samples Received: 04/13/13

Client Project: 105521-0000-0000

Description: PEC Sites (Hambert)

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:

  
Terrie Fudge, 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, IA Lab #364

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

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)  
Sample ID : HMB-MW013 DUP  
Collected By : Jeffrey Wona  
Collection Date : 04/12/13 13:25

ESC Sample # : L630452-01

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.26	0.010	mg/l	8260B	04/14/13	10
Toluene	BDL	0.050	mg/l	8260B	04/14/13	10
Ethylbenzene	0.35	0.010	mg/l	8260B	04/14/13	10
Total Xylenes	1.9	0.030	mg/l	8260B	04/14/13	10
Surrogate Recovery						
Toluene-d8	96.9		% Rec.	8260B	04/14/13	10
Dibromofluoromethane	98.7		% Rec.	8260B	04/14/13	10
a,a,a-Trifluorotoluene	96.6		% Rec.	8260B	04/14/13	10
4-Bromofluorobenzene	100.		% Rec.	8260B	04/14/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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# REPORT OF ANALYSIS

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : HMB-MW009

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 14:33

ESC Sample # : L630452-02

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.0023	0.0010	mg/l	8260B	04/14/13	1
Toluene	BDL	0.0050	mg/l	8260B	04/14/13	1
Ethylbenzene	0.033	0.0010	mg/l	8260B	04/14/13	1
Total Xylenes	0.14	0.0030	mg/l	8260B	04/14/13	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	04/14/13	1
Dibromofluoromethane	97.5		% Rec.	8260B	04/14/13	1
a,a,a-Trifluorotoluene	100.		% Rec.	8260B	04/14/13	1
4-Bromofluorobenzene	96.6		% Rec.	8260B	04/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : HMB-MW011

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 15:13

ESC Sample # : L630452-03

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0050	mg/l	8260B	04/14/13	5
Toluene	BDL	0.025	mg/l	8260B	04/14/13	5
Ethylbenzene	0.21	0.0050	mg/l	8260B	04/14/13	5
Total Xylenes	0.60	0.015	mg/l	8260B	04/14/13	5
Surrogate Recovery						
Toluene-d8	99.1		% Rec.	8260B	04/14/13	5
Dibromofluoromethane	96.9		% Rec.	8260B	04/14/13	5
a,a,a-Trifluorotoluene	99.9		% Rec.	8260B	04/14/13	5
4-Bromofluorobenzene	101.		% Rec.	8260B	04/14/13	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L630452-03 (V8260BTEX) - Hits are too high to run lower



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REPORT OF ANALYSIS

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : HMB-MW013

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 13:25

ESC Sample # : L630452-04

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.27	0.010	mg/l	8260B	04/14/13	10
Toluene	BDL	0.050	mg/l	8260B	04/14/13	10
Ethylbenzene	0.36	0.010	mg/l	8260B	04/14/13	10
Total Xylenes	2.0	0.030	mg/l	8260B	04/14/13	10
Surrogate Recovery						
Toluene-d8	97.7		% Rec.	8260B	04/14/13	10
Dibromofluoromethane	98.7		% Rec.	8260B	04/14/13	10
a,a,a-Trifluorotoluene	98.2		% Rec.	8260B	04/14/13	10
4-Bromofluorobenzene	99.8		% Rec.	8260B	04/14/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : HMB-MW014

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 11:00

ESC Sample # : L630452-05

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.015	0.010	mg/l	8260B	04/14/13	10
Toluene	BDL	0.050	mg/l	8260B	04/14/13	10
Ethylbenzene	0.13	0.010	mg/l	8260B	04/14/13	10
Total Xylenes	0.78	0.030	mg/l	8260B	04/14/13	10
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	04/14/13	10
Dibromofluoromethane	94.0		% Rec.	8260B	04/14/13	10
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	04/14/13	10
4-Bromofluorobenzene	108.		% Rec.	8260B	04/14/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

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7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : HMB-MW018

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 12:42

ESC Sample # : L630452-06

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l	8260B	04/14/13	1
Toluene	BDL	0.0050	mg/l	8260B	04/14/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/14/13	1
Total Xylenes	BDL	0.0030	mg/l	8260B	04/14/13	1
Surrogate Recovery						
Toluene-d8	92.0		% Rec.	8260B	04/14/13	1
Dibromofluoromethane	96.2		% Rec.	8260B	04/14/13	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	04/14/13	1
4-Bromofluorobenzene	110.		% Rec.	8260B	04/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 04/18/13 11:27 Printed: 04/18/13 12:16



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# REPORT OF ANALYSIS

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TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : HMB-MW019

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 12:06

ESC Sample # : L630452-07

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l	8260B	04/14/13	1
Toluene	BDL	0.0050	mg/l	8260B	04/14/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/14/13	1
Total Xylenes	BDL	0.0030	mg/l	8260B	04/14/13	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	04/14/13	1
Dibromofluoromethane	103.		% Rec.	8260B	04/14/13	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	04/14/13	1
4-Bromofluorobenzene	115.		% Rec.	8260B	04/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Est. 1970

# REPORT OF ANALYSIS

Bill Hendrix  
TRC Solutions - Littleton  
7761 Shaffer Pkwy, Ste 100  
Littleton, CO 80127

April 18, 2013

Date Received : April 13, 2013  
Description : PEC Sites (Hambert)

Sample ID : BLANK

Collected By : Jeffrey Wona  
Collection Date : 04/12/13 00:00

ESC Sample # : L630452-08

Site ID :

Project # : 105521-0000-0000

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l	8260B	04/14/13	1
Toluene	BDL	0.0050	mg/l	8260B	04/14/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/14/13	1
Total Xylenes	BDL	0.0030	mg/l	8260B	04/14/13	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	04/14/13	1
Dibromofluoromethane	101.		% Rec.	8260B	04/14/13	1
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	04/14/13	1
4-Bromofluorobenzene	110.		% Rec.	8260B	04/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L630452-05	WG656165	SAMP	Total Xylenes	R2622980	J6

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/l			WG656144	04/14/13 08:05
Ethylbenzene	< .001	mg/l			WG656144	04/14/13 08:05
Toluene	< .005	mg/l			WG656144	04/14/13 08:05
Total Xylenes	< .003	mg/l			WG656144	04/14/13 08:05
4-Bromofluorobenzene		% Rec.	97.33	82-120	WG656144	04/14/13 08:05
Dibromofluoromethane		% Rec.	100.1	82-126	WG656144	04/14/13 08:05
Toluene-d8		% Rec.	95.76	92-112	WG656144	04/14/13 08:05
a,a,a-Trifluorotoluene		% Rec.	97.73	90-116	WG656144	04/14/13 08:05
Benzene	< .001	mg/l			WG656165	04/14/13 14:37
Ethylbenzene	< .001	mg/l			WG656165	04/14/13 14:37
Toluene	< .005	mg/l			WG656165	04/14/13 14:37
Total Xylenes	< .003	mg/l			WG656165	04/14/13 14:37
4-Bromofluorobenzene		% Rec.	113.2	82-120	WG656165	04/14/13 14:37
Dibromofluoromethane		% Rec.	98.06	82-126	WG656165	04/14/13 14:37
Toluene-d8		% Rec.	104.0	92-112	WG656165	04/14/13 14:37
a,a,a-Trifluorotoluene		% Rec.	101.8	90-116	WG656165	04/14/13 14:37

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0218	87.2	72-119	WG656144
Ethylbenzene	mg/l	.025	0.0238	95.3	77-124	WG656144
Toluene	mg/l	.025	0.0224	89.5	75-114	WG656144
Total Xylenes	mg/l	.075	0.0718	95.8	77-123	WG656144
4-Bromofluorobenzene				100.8	82-120	WG656144
Dibromofluoromethane				95.30	82-126	WG656144
Toluene-d8				98.97	92-112	WG656144
a,a,a-Trifluorotoluene				100.3	90-116	WG656144
Benzene	mg/l	.025	0.0226	90.2	72-119	WG656165
Ethylbenzene	mg/l	.025	0.0271	108.	77-124	WG656165
Toluene	mg/l	.025	0.0247	98.9	75-114	WG656165
Total Xylenes	mg/l	.075	0.0871	116.	77-123	WG656165
4-Bromofluorobenzene				107.6	82-120	WG656165
Dibromofluoromethane				90.51	82-126	WG656165
Toluene-d8				102.7	92-112	WG656165
a,a,a-Trifluorotoluene				96.70	90-116	WG656165

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/l	0.0221	0.0218	88.0	72-119	1.52	20	WG656144
Ethylbenzene	mg/l	0.0222	0.0238	89.0	77-124	7.06	20	WG656144
Toluene	mg/l	0.0215	0.0224	86.0	75-114	4.08	20	WG656144
Total Xylenes	mg/l	0.0670	0.0718	89.0	77-123	6.99	20	WG656144
4-Bromofluorobenzene				96.60	82-120			WG656144
Dibromofluoromethane				100.5	82-126			WG656144
Toluene-d8				97.57	92-112			WG656144
a,a,a-Trifluorotoluene				97.47	90-116			WG656144
Benzene	mg/l	0.0200	0.0226	80.0	72-119	12.2	20	WG656165
Ethylbenzene	mg/l	0.0255	0.0271	102.	77-124	6.19	20	WG656165
Toluene	mg/l	0.0207	0.0247	83.0	75-114	17.9	20	WG656165
Total Xylenes	mg/l	0.0790	0.0871	105.	77-123	9.69	20	WG656165
4-Bromofluorobenzene				112.6	82-120			WG656165

\* 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	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Dibromofluoromethane				90.54		82-126		
Toluene-d8				103.5		92-112		
a,a,a-Trifluorotoluene				108.7		90-116		

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Benzene	mg/l	0.179	0.198	.025	0*	51-134	L630382-01	WG656144
Ethylbenzene	mg/l	0.172	0.185	.025	0*	64-135	L630382-01	WG656144
Toluene	mg/l	0.456	0.505	.025	0*	61-126	L630382-01	WG656144
Total Xylenes	mg/l	0.823	0.890	.075	0*	64-133	L630382-01	WG656144
4-Bromofluorobenzene					88.98	82-120		WG656144
Dibromofluoromethane					98.02	82-126		WG656144
Toluene-d8					96.20	92-112		WG656144
a,a,a-Trifluorotoluene					95.44	90-116		WG656144
Benzene	mg/l	0.219	0.0151	.025	81.6	51-134	L630452-05	WG656165
Ethylbenzene	mg/l	0.359	0.127	.025	92.6	64-135	L630452-05	WG656165
Toluene	mg/l	0.220	0.000889	.025	87.8	61-126	L630452-05	WG656165
Total Xylenes	mg/l	1.41	0.785	.075	83.3	64-133	L630452-05	WG656165
4-Bromofluorobenzene					99.79	82-120		WG656165
Dibromofluoromethane					94.56	82-126		WG656165
Toluene-d8					101.2	92-112		WG656165
a,a,a-Trifluorotoluene					96.06	90-116		WG656165

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/l	0.188	0.179	0*	51-134	5.07	20	L630382-01	WG656144
Ethylbenzene	mg/l	0.179	0.172	0*	64-135	4.13	20	L630382-01	WG656144
Toluene	mg/l	0.461	0.456	0*	61-126	1.15	20	L630382-01	WG656144
Total Xylenes	mg/l	0.843	0.823	0*	64-133	2.44	20	L630382-01	WG656144
4-Bromofluorobenzene				91.59	82-120				WG656144
Dibromofluoromethane				99.91	82-126				WG656144
Toluene-d8				96.71	92-112				WG656144
a,a,a-Trifluorotoluene				96.70	90-116				WG656144
Benzene	mg/l	0.235	0.219	87.9	51-134	6.93	20	L630452-05	WG656165
Ethylbenzene	mg/l	0.320	0.359	77.2	64-135	11.4	20	L630452-05	WG656165
Toluene	mg/l	0.246	0.220	98.0	61-126	10.9	20	L630452-05	WG656165
Total Xylenes	mg/l	1.23	1.41	59.7*	64-133	13.4	20	L630452-05	WG656165
4-Bromofluorobenzene				93.20	82-120				WG656165
Dibromofluoromethane				89.79	82-126				WG656165
Toluene-d8				106.6	92-112				WG656165
a,a,a-Trifluorotoluene				100.2	90-116				WG656165

Batch number /Run number / Sample number cross reference

WG656144: R2617201: L630452-01 02 03 04  
WG656165: R2622980: L630452-05 06 07 08

\* \* 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.'



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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.