

**3R - 0097**

**QUARTERLY  
REPORTS**

**04/25/2008**

**QUARTERLY GROUNDWATER MONITORING REPORT  
JANUARY 2008 SAMPLING EVENT  
CONOCOPHILLIPS  
SHEPHARD & KELSEY #1  
BLOOMFIELD, NM  
OCD # 3R0097**



  
**ConocoPhillips**



**TETRA TECH, INC.**

**APRIL 2008**

**QUARTERLY GROUNDWATER  
MONITORING REPORT  
JANUARY 2008 SAMPLING EVENT**

**CONOCOPHILLIPS  
SHEPHARD & KELSEY #1  
BLOOMFIELD, NEW MEXICO**

OCD # 3R0097

Prepared for:



420 South Keeler Avenue  
Bartlesville, OK 74004

Prepared by:



TETRA TECH, INC.

6121 Indian School Rd NE, Suite 200  
Albuquerque, NM 87110  
Tetra Tech Project No. 8690041.100

April 25, 2008

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# QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS SHEPHARD & KELSEY #1 BLOOMFIELD, NEW MEXICO

## 1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on January 15, 2008, at the ConocoPhillips Shephard & Kelsey #1 Site in Bloomfield, New Mexico.

The site is located on the southwest side of Bloomfield, New Mexico, south of Highway 64 and the San Juan River. The site consists of an abandoned natural gas production well. All associated equipment and installations at the site have been removed. The location and general layout of the Shephard & Kelsey #1 site are shown on Figures 1 and 2, respectively.

## 1.1 Site History

The history of the ConocoPhillips Shepard and Kelsey #1 is outlined on Table 1 and discussed in more detail in the following paragraphs.

In response to landowner concerns following a hydrocarbon release, On Site Technologies (Onsite) conducted a site investigation in the area of a former unlined earthen pit and existing production tank used to store separator waste water. On September 30, 1996, Onsite advanced two test holes with a hand auger to the shallow groundwater table located approximately 3.5 to 4 feet below ground surface (bgs). One test hole was advanced adjacent to the production tank and one at a presumed downgradient location. Samples collected from both test holes were below laboratory detection limits for benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons (TPH). Onsite returned to the site on November 11, 1996, and advanced two additional test holes immediately adjacent to the tank and discovered impacts in both the soil and groundwater on the northeast side of the tank. On February 13, 1997, soils were excavated from the former pit area until delineation of contamination was achieved (to a practical extent due to site equipment placement); confirmatory samples were then collected.

Monitoring wells (MW-NE, DG 1, SB-12, UG 1, UG 2, and DG-MW) were subsequently installed at the site. With the exception of monitor well SB-12, all monitoring wells have reached compliance with concentrations below the New Mexico Water Quality Control Commission (NMWQCC) standards and are no longer sampled on a regular basis. The January 2008 sample collected from SB-12 represents the seventh consecutive quarter of results below the NMWQCC standards for the well.

Results from recent sampling events for monitor well SB-12 are summarized below.

### **May 2006 sampling event**

Benzene was detected at a concentration of 12 micrograms per liter ( $\mu\text{g/L}$ ), which is slightly above the NMWQCC standard of 10  $\mu\text{g/L}$ . Ethylbenzene and xylenes were detected at concentrations of 1  $\mu\text{g/L}$  and 3  $\mu\text{g/L}$ , respectively.

### **August and November 2006 sampling events**

No BTEX constituents were detected. All concentrations were lower than laboratory detection limits.

### **February 2007 sampling event**

Ethylbenzene and xylenes were detected at concentrations of 3 µg/L and 1 µg/L, respectively. Benzene and toluene were not detected.

### **May 2007 sampling event**

Ethylbenzene was detected at a concentration of 2 µg/L. Benzene, toluene, and xylenes were not detected.

### **August and November 2007 sampling events**

No BTEX constituents were detected. All concentrations were lower than laboratory detection limits.

## **2.0 METHODOLOGY AND RESULTS**

The following subsections describe the groundwater monitoring methodology and sampling analytical results.

### **2.1 Groundwater Monitoring Methodology**

#### **Groundwater Elevation Measurements**

On January 15, 2008, groundwater elevation measurements were recorded in monitor wells DG-1, SB-12, UG-1, UG-2, DG-MW, and MW-1. A groundwater elevation measurement could not be taken from monitor well MW-NE due to damage to the casing. Groundwater elevation measurements for monitor wells UG-1 and DG-1 were not used in the formation of the contour map due to possible errors associated with broken casings. Table 1 presents the monitor well specifications and groundwater level data. A groundwater elevation contour map is presented in Figure 3.

#### **Groundwater sampling**

Groundwater samples were collected from monitor well SB-12 during this sampling event. Approximately 2 gallons of water, or three well volumes, were purged from the well before sampling. A 1.5-inch dedicated, clear, poly-vinyl, disposable bailer was used to collect the groundwater samples. The groundwater samples were contained in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Lancaster Laboratories located in Lancaster, Pennsylvania. The samples were analyzed for the presence of BTEX using Environmental Protection Agency (EPA) Method 8260B.

### **2.2 Groundwater Sampling Analytical Results**

The January 2008 analysis of groundwater collected shows concentrations of BTEX were below laboratory detection limits in monitor well SB-12. Table 2 presents the historical laboratory analytical results. The groundwater sampling field form is presented in Appendix A. The laboratory analytical report is included in Appendix B.

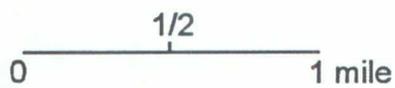
## **3.0 CONCLUSIONS**

The January 15, 2007 sampling event represents the seventh consecutive quarter of results indicating concentrations of BTEX in monitor well SB-12 below NMWQCC standards. Based on the work performed at

this site, Tetra Tech recommends continuation of quarterly sampling until eight consecutive quarters of results below NMWQCC standards are attained. If you have any questions or require additional information please contact Kelly Blanchard at Tetra Tech at 505-237-8440 or [kelly.blanchard@tetrattech.com](mailto:kelly.blanchard@tetrattech.com).

## **FIGURES**

1. Site Location Map
2. Site Layout Map
3. Groundwater Elevation Contour Map



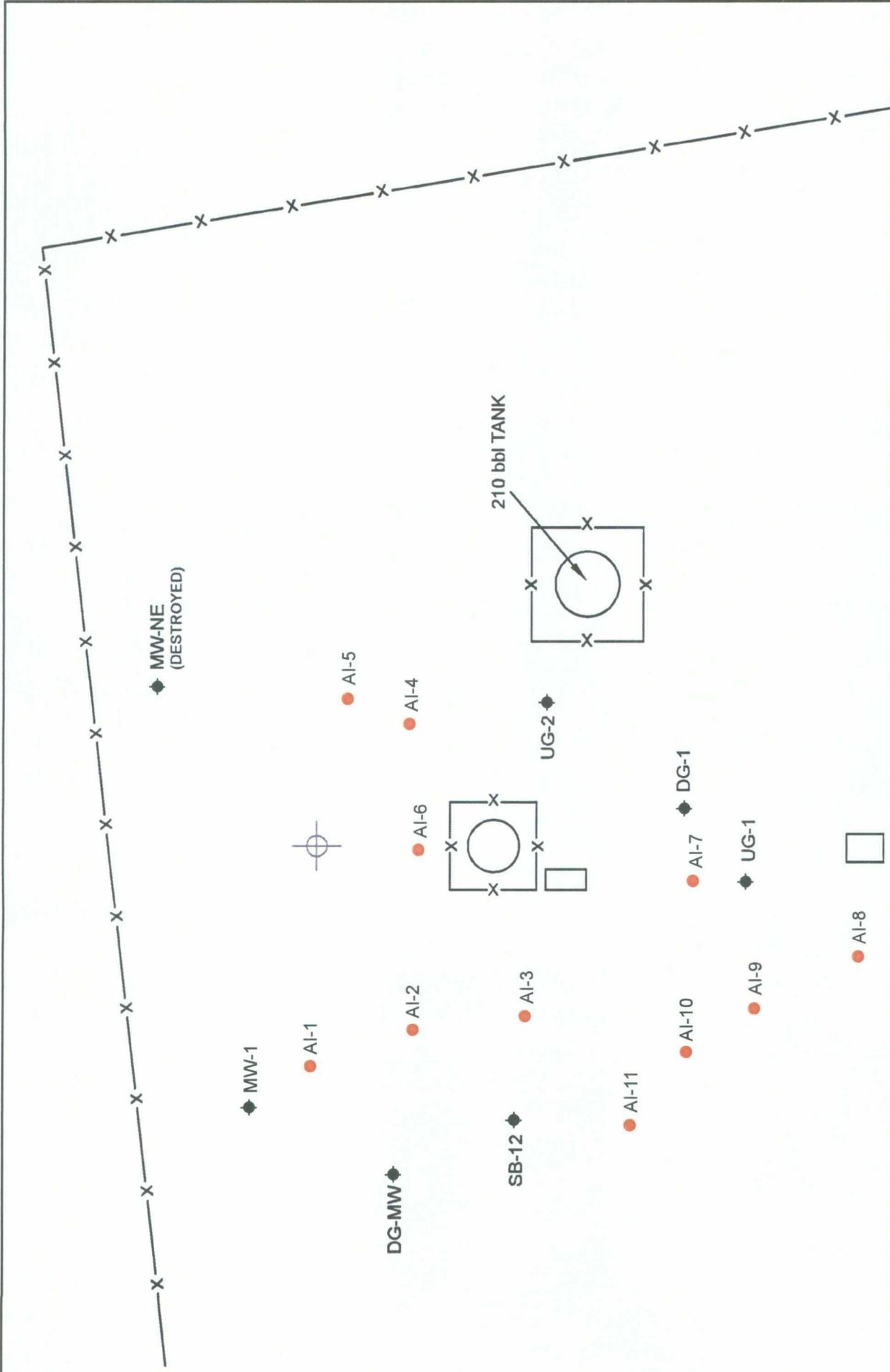
★ = Approximate Site Location



TETRA TECH, INC.



**FIGURE 1.**  
**SITE LOCATION MAP**  
**CONOCOPHILLIPS**  
**SHEPARD & KELSEY #1**  
**Bloomfield, New Mexico**

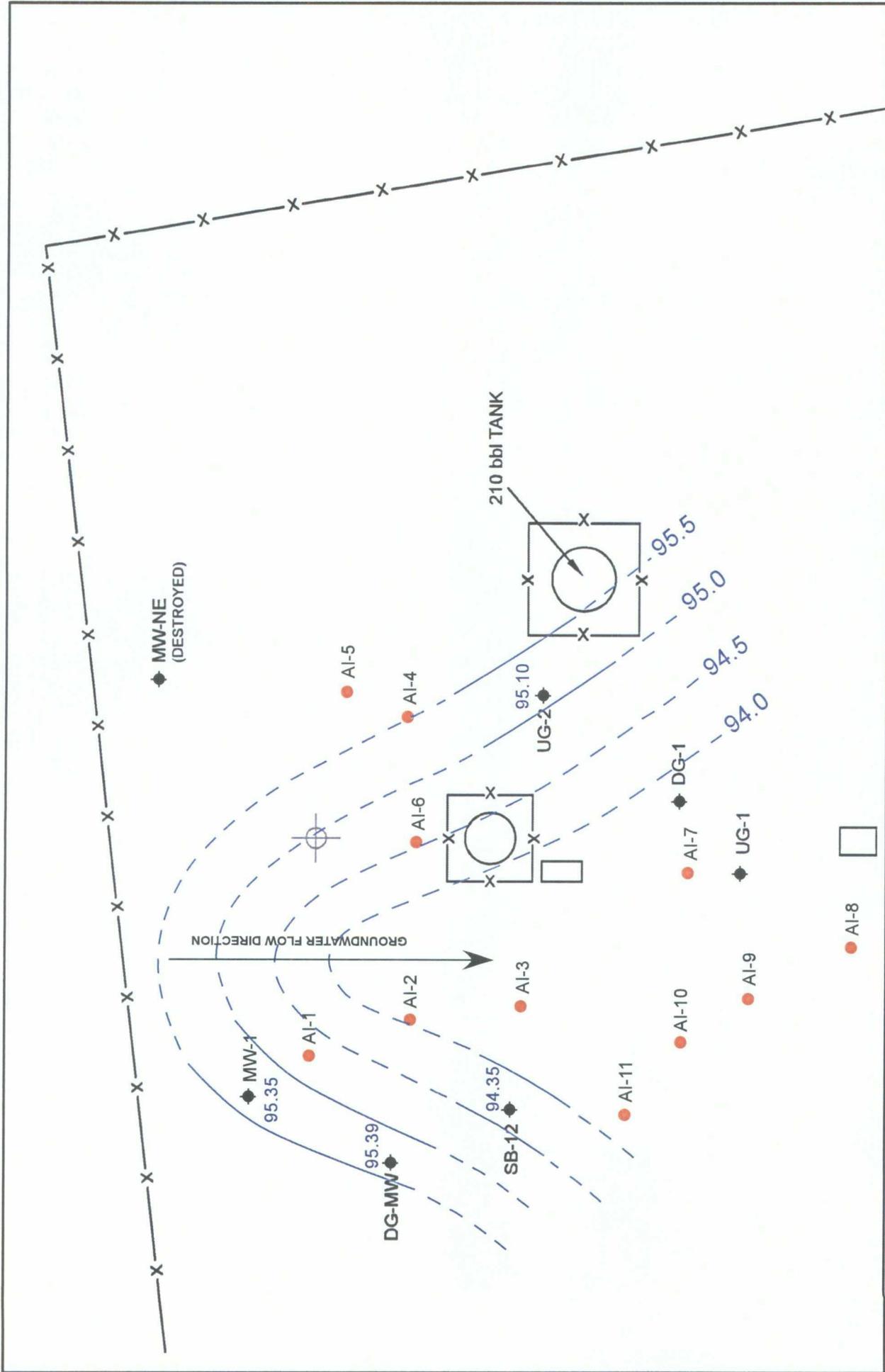


**LEGEND**

- SHEPHARD KELSEY #1 WELLHEAD (plugged and abandoned)
- MONITORING WELL
- AIR INJECTION WELL
- AI-8
- AI-8

Scale: 0 Feet 50  
 N  
 TETRA TECH, INC.

**FIGURE 2:**  
 SITE LAYOUT MAP  
 CONOCOPHILLIPS  
 SHEPHARD KELSEY #1



**FIGURE 3:**  
 GROUNDWATER ELEVATION  
 CONTOUR MAP (1/15/2008)  
 CONOCOPHILLIPS  
 SHEPARD KELSEY #1

**LEGEND**

- SHEPARD KELSEY #1 WELLHEAD (plugged and abandoned)
- MONITORING WELL
- AIR INJECTION WELL
- GROUNDWATER ELEVATION CONTOUR (INTERVAL 0.5FT.)
- (INFERRED)

TETRA TECH, INC.



## **TABLES**

- I. Site History Timeline
2. Groundwater Elevation Summary (May 2005 – January 2008)
3. Laboratory Analytical Data Summary (June 2001 – January 2008)

**Table 1. Site History Timeline - ConocoPhillips Shepard and Kelsey #1**

Date/Time Period	Event/Action	Description
Early 1996	Release Discovered	Hydrocarbon release in the area of a former unlined earthen pit and existing production tank
September 30, 1996	Site Investigation	Two test holes advanced to shallow groundwater near production tank and at a downgradient location; samples collected; no hydrocarbon impacts to soil or groundwater detected
November 11, 1996		Two additional test holes advanced to shallow groundwater adjacent to production tank; samples collected; hydrocarbon impacts to soil and groundwater detected near the northeast side of tank
February 13, 1997	Soil Excavation	Soil was excavated from the former pit area until delineation of contamination was achieved; sample collected to confirm effective remediation
?	Monitor Well Installation	Monitoring wells MW-NE, DG-1, DG-MW, SB-12, UG-1, and UG-2 were installed.
June 14, 2001 to _____, 20__	Monitor Well Sampling	Monitoring wells MW-NE, DG-1, DG-MW, UG-1, and UG-2 sampled quarterly until 8 consecutive quarters with results below NMWQCC standards was achieved
June 14, 2001 to January 15, 2008	Monitor Well Installation	Monitor well SB-12 sampled quarterly; 7 consecutive quarters with results below NMWQCC standards have been achieved

**Table 2. Groundwater Elevation Summary (May 2005 - January 2008)**

Well ID	Total Depth (ft. bgs)	Screen Interval (ft)	Elevation <sup>(1)</sup> (ft.) (TOC)	Date Measured	Groundwater Level (ft TOC)	Relative Groundwater Elevation (ft TOC)
MW-1	10.35	4	100.75	11/6/2007	5.87	94.88
				1/15/2008	5.40	95.35
DG-1	9.05	4	100.23	5/10/2005	5.55	94.68
				11/21/2005	5.95	94.94
				2/17/2006	5.84	94.39
				5/16/2006	5.90	94.33
				8/1/2006	6.73	93.50
				11/16/2006	5.45 <sup>(4)</sup>	unknown
				2/21/2007	5.00 <sup>(4)</sup>	unknown
				5/14/2007	4.89 <sup>(4)</sup>	unknown
				8/20/2007	6.530	93.700
				11/6/2007	5.80 <sup>(2)</sup>	unknown
1/15/2008	4.94 <sup>(2)</sup>	unknown				
SB-12	11.31	4	100	5/10/2005	5.03	94.97
				11/21/2005	6.01	93.00
				2/17/2006	5.76	94.24
				5/16/2006	5.73	94.27
				8/1/2006	7.08	92.92
				11/16/2006	5.78 <sup>(4)</sup>	unknown
				2/21/2007	6.40 <sup>(4)</sup>	unknown
				5/14/2007	5.32 <sup>(4)</sup>	unknown
				8/20/2007	7.06	92.94
				11/6/2007	6.31	93.69
1/15/2008	5.65	94.35				
UG-1	9.83	4	100.49	5/10/2005	4.02 <sup>(2)</sup>	unknown
				11/21/2005	5.00 <sup>(2)</sup>	unknown
				2/17/2006	4.82 <sup>(2)</sup>	unknown
				5/16/2006	5.15 <sup>(2)</sup>	unknown
				8/1/2006	6.32 <sup>(3)</sup>	unknown
				11/16/2006	5.35 <sup>(4)</sup>	unknown
				2/21/2007	4.81 <sup>(4)</sup>	unknown
				5/14/2007	4.84 <sup>(4)</sup>	unknown
				8/20/2007	6.230	94.260
				11/6/2007	5.45 <sup>(2)</sup>	unknown
1/15/2008	5.50 <sup>(2)</sup>	unknown				

**Table 2. Groundwater Elevation Summary (May 2005 - January 2008)**

Well ID	Total Depth (ft. bgs)	Screen Interval (ft)	Elevation <sup>(1)</sup> (ft.) (TOC)	Date Measured	Groundwater Level (ft TOC)	Relative Groundwater Elevation (ft TOC)
UG-2	9.84	4	100.4	5/10/2005	5.79	94.61
				11/21/2005	5.42	95.81
				2/17/2006	5.33	95.07
				5/16/2006	5.13	95.27
				8/1/2006	6.41	93.99
				11/16/2006	5.18 <sup>(4)</sup>	unknown
				2/21/2007	4.71 <sup>(4)</sup>	unknown
				5/14/2007	4.62 <sup>(4)</sup>	unknown
				8/20/2007	6.37	94.03
				11/6/2007	5.65	94.75
DG-MW	5.42	4	100.67	could not locate		unknown
				8/20/2007	6.71	93.96
				11/6/2007	5.80	94.87
				1/15/2008	5.28	95.39

ft = Feet

TOC = Top of casing

bgs = below ground surface

<sup>(1)</sup> Elevation relative to MW-NE TOC

<sup>(2)</sup> Groundwater depth anomolous due to broken casing

<sup>(3)</sup> Casing has been repaired and extended

<sup>(4)</sup> Casing has been repaired and cut down

**Table 3. Groundwater Analytical Data Summary (June 2001 - January 2008)**

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MW-1	8/20/2007	<0.5	<0.7	<0.8	<0.8
DG-MW	8/20/2007	<0.5	<0.7	0.9	7
UG-1	8/20/2007	<0.5	<0.7	<0.8	<0.8
UG-2	8/20/2007	<0.5	<0.7	<0.8	<0.8
DG-1	8/20/2007	<0.5	<0.7	<0.8	<0.8
SB-12	6/14/2001	42	5.5	72	370
	9/19/2001	111	BDL	120	810
	12/13/2001	28	BDL	63	322.9
	3/12/2002	64	BDL	56	211.4
	6/19/2002	130	BDL	76	380
	9/17/2002	40	BDL	51	245.1
	3/20/2003	53	10	41	213
	6/11/2003	370	BDL	19	53.8
	10/6/2003	6.1	BDL	30	182
	1/30/2004	12	BDL	16	74.2
	4/26/2004	45	BDL	21	100
	5/10/2005	24	<0.7	18	140
	11/21/2005	<0.5	<0.7	14	68
	2/17/2006	7	<0.7	4	12
	5/16/2006	12	<0.7	1	3
	8/1/2006	<0.5	<0.7	<0.8	<0.8
	11/16/2006	<0.5	<0.7	<0.8	<0.8
	2/21/2007	<0.5	<0.7	3	1
	5/14/2007	<0.5	<0.7	2	<0.8
8/20/2007	<0.5	<0.7	<0.8	<0.8	
11/6/2007	<0.5	<0.7	<0.8	<0.8	
1/15/2008	<0.5	<0.5	<0.5	<0.5	
<b>NMWQCC Standards</b>		<b>10 (µg/L)</b>	<b>750 (µg/L)</b>	<b>750 (µg/L)</b>	<b>620 (µg/L)</b>

**Explanation**

BDL = Below laboratory detection limits; detection limit not specified

<0.5 = Below laboratory detection limits

NMWQCC = New Mexico Water Quality Control Commission

µg/L = micrograms per liter (parts per billion)



**APPENDIX A**

Water Sampling Field Form



# WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1

Page 1 of 1

Project No. 1158690041

Site Location Bloomfield, NM

Site/Well No. SB-12 Coded/Replicate No. \_\_\_\_\_

Date 1/15/2008

Weather cold Time Sampling Began 11:30

Time Sampling Completed 12:10

### EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface \_\_\_\_\_ MP Elevation NA

Total Sounded Depth of Well Below MP 12.3 feet Water-Level Elevation NA

Held \_\_\_\_\_ Depth to Water Below MP 5.65 feet Diameter of Casing 2 inches

Wet \_\_\_\_\_ Water Column in Well 6.65 feet Gallons Pumped/Bailed Prior to Sampling 3

Gallons per Foot 0.16

Gallons in Well 1.06 Sampling Pump Intake Setting (feet below land surface) NA

Purging Equipment Dedicated disposable polyethylene bailer

### SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	ORP (mV)	TDS (g/L)	DO %	DO (mg/L)
1145	9.81	6.76	1391	-220.1	0.905	17.8	1.97
1150	10.90	7.09	1421	-204.3	0.924	27.7	2.96
1152	11.04	7.28	1444	-200.4	0.938	28.1	3.07

Sampling Equipment Dedicated disposable polyethylene bailer

Constituents Sampled	Container Description	Preservative
<u>BTEX</u>	<u>3 - 40 mL glass VOAs</u>	<u>HCl</u>
_____	_____	_____
_____	_____	_____

Remarks Duplicate sample collected; well water contained large quantities of black sediment and organic matter

Sampling Personnel Mitchell Crooks and Ana Moreno

Well Casing Volumes				
Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

**APPENDIX B**

Laboratory Analytical Report



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

## ANALYTICAL RESULTS

Prepared for:

ConocoPhillips  
PO Box 2200  
Bartlesville OK 74005

Prepared by:

Lancaster Laboratories  
2425 New Holland Pike  
Lancaster, PA 17605-2425

## SAMPLE GROUP

The sample group for this submittal is 1074021. Samples arrived at the laboratory on Saturday, January 19, 2008. The PO# for this group is 4509350120 and the release number is LAUCKE.

### Client Description

SB-12 Grab Water Sample  
Trip Blank Water Sample

### Lancaster Labs Number

5260852  
5260853

ELECTRONIC    Tetra Tech  
COPY TO

Attn: Kelly Blanchard



## ***Analysis Report***

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • [www.lancasterlabs.com](http://www.lancasterlabs.com)

Questions? Contact your Client Services Representative  
Barbara A Weyandt at (717) 656-2300

Respectfully Submitted,

A handwritten signature in cursive script that reads "Marla S. Lord".

**Marla S. Lord**  
**Senior Specialist**



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. 5260852 WW Group No. 1074021

SB-12 Grab Water Sample  
Site# 6083  
Shephard & Kelsey #1 - Bloomfield, NM

Collected: 01/15/2008 12:00 by MC Account Number: 11288

Submitted: 01/19/2008 10:40 ConocoPhillips  
Reported: 02/12/2008 at 20:07 PO Box 2200  
Discard: 03/14/2008 Bartlesville OK 74005

SK-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
02300	GC/MS Volatiles						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	5.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	GC/MS Volatiles	SW-846 8260B	1	01/22/2008 21:06	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/22/2008 21:06	Matthew F Regan	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. 5260853 WW Group No. 1074021

Trip Blank Water Sample  
Site# 6083  
Shephard & Kelsey #1 - Bloomfield, NM

Collected: 01/15/2008 12:15 by MC Account Number: 11288

Submitted: 01/19/2008 10:40 ConocoPhillips  
Reported: 02/12/2008 at 20:07 PO Box 2200  
Discard: 03/14/2008 Bartlesville OK 74005

SK1TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
02300	GC/MS Volatiles						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	5.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	GC/MS Volatiles	SW-846 8260B	1	01/22/2008 19:34	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/22/2008 19:34	Matthew F Regan	1

\*=This limit was used in the evaluation of the final result

## Quality Control Summary

 Client Name: ConocoPhillips  
 Reported: 02/12/08 at 08:07 PM

Group Number: 1074021

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

### Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: T080221AA	Sample number(s): 5260852-5260853								
Methyl Tertiary Butyl Ether	N.D.	0.5	5.	ug/l	105	104	73-119	1	30
Benzene	N.D.	0.5	5.	ug/l	101	96	78-119	5	30
Toluene	N.D.	0.7	5.	ug/l	106	103	85-115	3	30
Ethylbenzene	N.D.	0.8	5.	ug/l	100	101	82-119	1	30
Xylene (Total)	N.D.	0.8	5.	ug/l	103	101	83-113	1	30

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
 Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	BKG CONC	DUP CONC	DUP RPD	Dup RPD Max
Batch number: T080221AA	Sample number(s): 5260852-5260853 UNSPK: P260403							
Methyl Tertiary Butyl Ether	101		69-127					
Benzene	101		83-128					
Toluene	108		83-127					
Ethylbenzene	102		82-129					
Xylene (Total)	103		82-130					

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: GC/MS Volatiles

Batch number: T080221AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5260852	98	95	106	112
5260853	100	97	104	106
Blank	99	97	107	108
LCS	96	96	107	110
LCSD	95	99	108	108
MS	96	97	107	110
Limits:	80-116	77-113	80-113	78-113

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

# ConocoPhillips Analysis Request/Chain of Custody



For Lancaster Labs Use ONLY Acct. #: 11286 Group # 1074081 Sample #: 5260623 SCR#:

008775

Site #: 6083 AOC#: 06083 State: NM  
 Site City: Bloomfield  
 Entos PO# Will Send  
 ConocoPhillips PM: Terry Laucke  
 Samplers Name: Mitch Cooks + Ana Moreno

Analyses Requested  Preservation Codes

List total number of containers in the box under each analysis.

Matrix	Preservation Codes			Remarks
	Water	Soil	Composite	
<input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Air	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>AKX UST 8260</u>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Sample Identification	Date Collected	Time Collected	Grab	Composite
<u>SB-12</u>	<u>11/15/08</u>	<u>1200</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Duplicate</u>	<u>11/15/08</u>	<u>1210</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Trip Blank</u>	<u>11/15/08</u>	<u>1215</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Preservative Codes  
 H = HCl  
 N = HNO<sub>3</sub>  
 S = H<sub>2</sub>SO<sub>4</sub>  
 T = Thiosulfate  
 B = NaOH  
 O = Other

Consultant Information:  
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 Project Manager: Kelly Blanchard  
 Phone Number: 505-231-8410 Fax:  
 Email: Kelly.Blanchard@tetratex.com

Electronic Data Deliverables (Circle One) Yes/No Format pdf

Reporting Requirements (Circle One)  
Standard Reports/QC Summary Full Validation (LLI Type I)  
 NJ Regulatory  NY Reduced  NY ASP-A  NY ASP-B  Other

Turnaround Time Requested in Business Days (TAT) (Circle One):  
 STD  6 day  48 hour  24 hour  Other

Relinquished by:	Date	Time	Received by:	Date	Time
<u>[Signature]</u>	<u>11/16</u>	<u>1500</u>	<u>[Signature]</u>	<u>11/16</u>	<u>1000</u>

Relinquished by Commercial Carrier:  
 UPS  FedEx  Other  Temperature Upon Receipt 17-34 °C

## Lancaster Laboratories Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>N.D.</b>	none detected	<b>BMQL</b>	Below Minimum Quantitation Level
<b>TNTC</b>	Too Numerous To Count	<b>MPN</b>	Most Probable Number
<b>IU</b>	International Units	<b>CP Units</b>	cobalt-chloroplatinate units
<b>umhos/cm</b>	micromhos/cm	<b>NTU</b>	nephelometric turbidity units
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>Cal</b>	(diet) calories	<b>lb.</b>	pound(s)
<b>meq</b>	milliequivalents	<b>kg</b>	kilogram(s)
<b>g</b>	gram(s)	<b>mg</b>	milligram(s)
<b>ug</b>	microgram(s)	<b>l</b>	liter(s)
<b>ml</b>	milliliter(s)	<b>ul</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>fib &gt;5 um/ml</b>	fibers greater than 5 microns in length per ml
<b>&lt;</b>	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers	Inorganic Qualifiers
<b>A</b> TIC is a possible aldol-condensation product	<b>B</b> Value is <CRDL, but ≥IDL
<b>B</b> Analyte was also detected in the blank	<b>E</b> Estimated due to interference
<b>C</b> Pesticide result confirmed by GC/MS	<b>M</b> Duplicate injection precision not met
<b>D</b> Compound quantitated on a diluted sample	<b>N</b> Spike amount not within control limits
<b>E</b> Concentration exceeds the calibration range of the instrument	<b>S</b> Method of standard additions (MSA) used for calculation
<b>J</b> Estimated value	<b>U</b> Compound was not detected
<b>N</b> Presumptive evidence of a compound (TICs only)	<b>W</b> Post digestion spike out of control limits
<b>P</b> Concentration difference between primary and confirmation columns >25%	<b>*</b> Duplicate analysis not within control limits
<b>U</b> Compound was not detected	<b>+</b> Correlation coefficient for MSA <0.995
<b>X,Y,Z</b> Defined in case narrative	

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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